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Profits from Peace: The Political Economy of Power-Sharing and Corruption

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Summary. — Does power-sharing drive corruption in post-conflict countries? We conceptualize government elites in any post-conflict situation as rent-seeking agents who need to ensure the support of their key constituencies to remain in power. Power-sharing institutions—especially cabinet-level, executive power-sharing institutions—systematically shape these rent-seeking motives. Power-sharing cabinets create political coalitions dominated by small circles of government and rebel elites with direct access to state resources and low levels of loyalty toward the government leader. Also, the provisional nature of many power-sharing institutions increases rent-seeking incentives: facing a limited time horizon in office, rent-seeking elites within the power-sharing coalition are likely to capture as many rents as possible before they have to leave office. Thus, post-conflict countries with power-sharing institutions should exhibit higher aggregated levels of rent-seeking measured as the level of corruption in a country. In a statistical analysis of all post-conflict situations during 1996–2010, we find that power-sharing cabinets substantively increase corruption in post-conflict countries and that this effect is stronger in the presence of natural resource rents. These findings add quantitative evidence to the debate about drivers of post-conflict corruption. Moreover, they highlight a trade-off between short-term stability and long-term negative effects of corruption for post-conflict political and economic development.

Key words — power-sharing, post-conflict institutions, corruption, rent-seeking

1. INTRODUCTION

Systemic corruption is an endemic problem in countries emerging from violent conflict (Cheng & Zaum, 2013; Lindberg & Orjuela, 2014). Higher corruption is negatively related to the quality of post-conflict peace (Global Peace Index, 2015), it increases the risk of renewed ethnic conflict (Neudorfer & Theuerkauf, 2014) and is generally assumed to have negative effects on long-term economic development (Aidt, 2003). The weakly institutionalized environments of many contemporary post-conflict states are an ideal breeding ground for practices that allow the use of public office for private gain—the common definition of corruption that we follow (Svensson, 2005). Given this substantive significance of corruption in post-conflict situations, we observe a surprisingly wide variation in corruption practices across post-conflict states. Although all post-conflict countries score, on average, lower on corruption indices than countries without a history of violent conflict, there are stark differences in the level of corruption within the group of post-conflict countries. States such as Rwanda, Peru, or Croatia are less affected by systematic bribery, patronage, and clientelism than, for instance, the Democratic Republic of the Congo or Liberia. What accounts for this variation?

We argue that one of the main drivers of systematic post-conflict corruption is the presence of political power-sharing institutions in a country. We conceptualize government elites in any post-conflict situation as individual rent-seeking agents that need to ensure the support of their key constituencies to remain in power (Bueno de Mesquita, Smith, Siverson, & Morrow, 2003). We expect power-sharing institutions—particularly cabinet-level, executive power-sharing institutions—to systematically shape these rent-seeking motives. Power-sharing cabinets create political coalitions dominated by small circles of government and rebel elites with direct access to state resources and low levels of loyalty toward the government leader (Bueno de Mesquita *et al.*, 2003). Also, the provisional nature of many power-sharing institutions increases rent-seeking incentives: facing a limited time horizon in office, rent-seeking elites within the power-sharing coalition are likely to capture as many rents as possible before they have to leave office (Levi, 1989). Based on this logic, we argue that post-conflict countries with power-sharing institutions are on average associated with higher aggregate levels of rent-seeking conceptualized and measured as the overall level of corruption in a country. We also suspect that power-sharing institutions are more likely to increase corruption when there are higher levels of resources that are easy to capture, such as natural resources or foreign aid.

We test these predictions with a statistical time-series cross-sectional analysis of post-conflict situations during 1996–2010. Our dependent variable measures the extent of corruption in a country using data from the Worldwide Governance Indicators (Kaufmann, Kraay, & Mastruzzi, 2010). We rely on the

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Power-Sharing Event Dataset (PSED) (Ottmann & Vüllers, 2015) to capture the practices of executive power-sharing in the aftermath of negotiated settlements. In contrast to the large majority of existing data collections on power-sharing, PSED moves beyond the coding of the mere promises of power-sharing found in peace agreements. Instead, PSED explicitly records whether and when power-sharing between the government and former rebels has taken place in a post-conflict period and when it was abolished again. PSED therefore provides us with time-variant data on actual rebel access to state resources. Consistent with our predictions, we find empirical support for our hypothesis that executive power-sharing increases the level of corruption in a post-conflict country. Our analysis also finds this rent-seeking behavior to be more pronounced in countries with higher levels of natural resource wealth. Our empirical results are robust to a range of alternative model specifications and treatment selection models that account for the endogenous selection of power-sharing governments.

This article makes several notable contributions. First, we advance the literature on power-sharing after civil conflict. Most scholars and practitioners assume that power-sharing functions by mitigating commitment problems between government and rebels (Hartzell & Hoddie, 2007). Building on this theoretical assumption, they explore how power-sharing affects civil war recurrence. In contrast, we shed light on the mechanisms through which power-sharing works by exploring the relationship between executive power-sharing and corruption using new data on the implementation and duration of these arrangements (Ottmann & Vüllers, 2015). We identify a specific channel through which such commitment may be secured: the buying off of violent actors and the distribution of spoils from the state. We also add quantitative evidence to the largely case-study-based research on post-conflict corruption (Cheng & Zaum, 2013; Lindberg & Orjuela, 2014). By statistically isolating the effect of power-sharing on corruption, we identify a major driver of corruption in post-conflict settings beyond single cases.

Second, we make a more general contribution to the broader study of the institutional determinants of corruption in developing countries. In this line of research, scholars typically investigate the long-term effects of structural changes in key institutions—such as the democratization of political institutions or improvements to the rule of law—on corruption (Billger & Goel, 2009; Iwasaki & Suzuki, 2012; Jetter, Agudelo, & Hassan, 2015). Taking this research further, we focus on an important subset of countries in the developing world, post-conflict countries, and show that even short-lived transitional power-sharing governments in these countries can have a substantial effect on corruption levels.

These academic contributions enable us to inject new empirical evidence into a critical policy debate. Notwithstanding its mixed track record (Binningsbø, 2013), power-sharing remains a popular conflict-resolution method for policy-makers at the United Nations and foreign ministries around the world. Most recently, it has been discussed as a key element of a prospective negotiated settlement to the Syrian conflict (Groarke, 2016). Executive power-sharing was also central in the recently failed peace agreement in South Sudan (Kindersley & Rolandsen, 2016). But our findings highlight an inconvenient trade-off inherent to these arrangements. Power-sharing between government and rebels might be necessary to halt continued bloodshed. At the same time, power-sharing is also a main driver of corruption in post-conflict countries. While this corruption might be a necessary element of securing the peace, it threatens the long-term perspectives of post-conflict countries. Policy-makers should therefore focus not only on how to design successful power-sharing deals but also on how a country can transition away from power-sharing once the risk of civil war recurrence has substantially subsided.

2. CORRUPTION IN POST-CONFLICT COUNTRIES

Scholars and practitioners increasingly recognize corruption as one of the key challenges faced by countries emerging from violent conflict (Cheng & Zaum, 2013; Lindberg & Orjuela, 2014; Transparency International, 2014; Working Group on Corruption and Security, 2017). This recognition builds on the insight that post-conflict countries are, on average, more corrupt than countries not affected by conflict (see left panel in Figure 1). Typically, the effects of corruption in post-conflict contexts are characterized as a trade-off between short-term stability and long-term negative effects on political and economic development (Cheng & Zaum, 2013; Lindberg & Orjuela, 2014). Cheng and Zaum (2013, p. 10) observe that "[w]hen the proceeds of corruption flow through [patronage] networks during a period of political instability, then these funds can be used to cement loyalties and relationships which can, in turn, help to stabilize the emerging post-war order." These expectations are in line with the more general finding that elites in corrupt countries can use oil rents to "buy peace" by co-opting regime opponents (Fjelde & Soysa, 2009). In the long-term, however, rampant corruption can deepen inter-group mistrust, particularly if one societal group is perceived to benefit more from corruption than any other group. Citing evidence from Sri Lanka, Orjuela (2014, p. 760) reports substantial differences in corruption perceptions across ethnic groups. This finding is echoed by quantitative evidence showing corruption to be a driver of ethnic civil war onset (Neudorfer & Theuerkauf, 2014). More generally, the negative long-term effects of corruption in post-conflict countries stem from the insight that corruption hampers economic growth (d'Agostino, Dunne, & Pieroni, 2016; Serritzlew, Sønderskov, & Svendsen, 2014) and democratic development (Fukuyama, 2014, chap. 5; Warren, 2004), by entrenching established elites and their patronage networks.

These effects are particularly interesting since we observe much variation in the degree of corruption across post-conflict countries (see the right panel in Figure 1). One potential driver of corruption is the influence of natural resource abundance on corruption in certain post-conflict contexts. Billon (2014) argues that natural resources, such as oil, diamonds, timber, or coal can feed post-conflict corruption, but this relationship is mediated by the quality of existing institutions and socio-economic inequalities (see also Rustad, Lujala, & Le Billon, 2012). This insight is linked to quantitative evidence on the conditional effect of resource income on democracy and conflict in the context of high-quality and/or high-capacity institutions (Basedau & Lay, 2009; Dunning, 2008; Ross, 2015).

Another variable that features prominently in the studies on drivers of post-conflict corruption is international engagement, particularly the sudden inflow of foreign aid and its impact on corruption. Aid in post-conflict contexts, argues von Billerbeck (2013, p. 82), implies a "sudden availability of rents, combined with [...] distorted economic conditions [that] makes post-conflict settings rife with opportunities for corruption." In 2008, for instance, aid to post-conflict Liberia peaked at almost 200% of the national gross-domestic product, dwarfing the local economy. But it is not only reconstruction and humanitarian aid inflows that increase

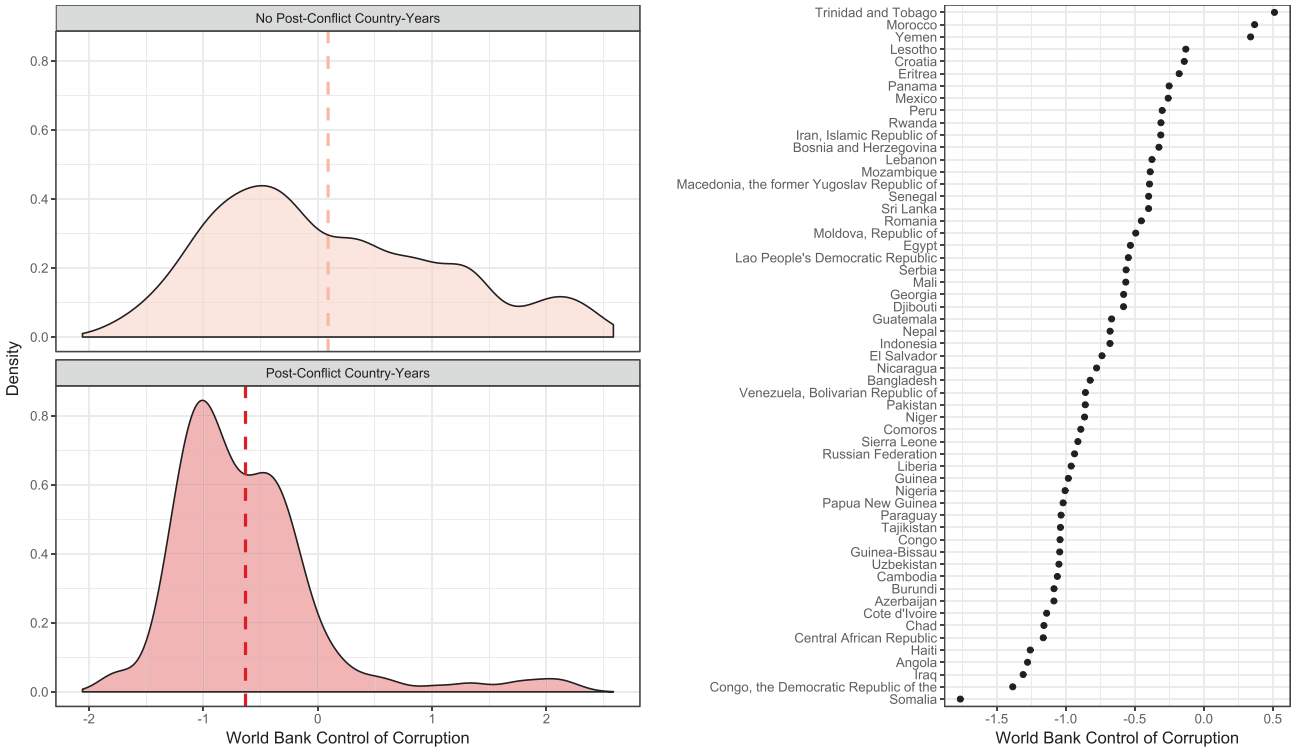


Figure 1. *Corruption in (non-)post-conflict countries in comparison. Note: Lower values on the World Bank's Control of Corruption Index indicate higher corruption. Dashed lines in the left panel indicate group means. The right panel displays the mean level of corruption in the post-conflict countries listed on the y-axis. Data Source: World Governance Indicators (2015), authors' graphic. For details on the sample of post-conflict countries, see below.*

opportunities for corruption. The deployment of large-scale peace operations, too, is often accompanied by the establishment of a "peacekeeping economy" that not only exceeds the conflict-ridden national economy by orders of magnitude, but also provides a multitude of opportunities for corruption for both national and international personnel (cf. Cheng & Zaum, 2013, p. 13; see also, for instance, Beber, Gilligan, Guardado, & Karim, 2017 on transactional sex between UN peacekeepers and the local population).

Besides natural resources and international involvement, other causes of post-conflict corruption remain underresearched and at the level of scattered single case studies or anecdotal evidence. One variable often mentioned in this context is power-sharing arrangements, that is institutions that incorporate former battlefield adversaries (or, more precisely, their elites) in joint formal political institutions, such as the cabinet or territorial autonomy structures (Hartzell & Hoddie, 2007). As Cheng and Zaum (2013, p. 8) posit, "in some post-conflict settlements, it has been the opportunities for corruption and patronage that were negotiated as part of the power-sharing agreements that have literally helped to 'buy out' potential spoilers in a conflict." This observation is bolstered by qualitative evidence of a positive relationship between power-sharing and corruption from countries such as Liberia (Reno, 2013), the Democratic Republic of the Congo (Wolters & Kaiser, 2013), Bosnia and Herzegovina (Belloni & Strazzari, 2014), or Aceh in Indonesia (Aspinall, 2009).

Given the substantive research program on power-sharing institutions, it is notable, however, that no systematic, quantitative evidence exists as to whether or not power-sharing arrangements indeed drive post-conflict corruption. Most scholars regard power-sharing primarily as a tool to end protracted violent conflict between the government of a state and rebel groups (Hartzell & Hoddie, 2007; Jarstad & Nilsson, 2008; Walter, 2002). Building on bargaining theory (Fearon, 1995; Walter, 2002), researchers argue that power-sharing provides an institutional framework that allows governments as well as rebels to overcome their security dilemma and credibly commit to a peace deal without fearing the defection of the other side. However, empirical research on the relationship between power-sharing on the one hand and conflict management and democratization on the other has brought about contradictory results. Some find empirical support for a relationship between these factors (Norris, 2008) while others do not (Horowitz, 1985). Likewise, some scholars present evidence for a violence-reducing and democracy-enhancing effect of power-sharing (Hartzell & Hoddie, 2007, 2015), while others argue against such a relationship (Jarstad, 2008; Tull & Mehler, 2005). None of these studies, however, address the question of whether and under which circumstances power-sharing institutions systematically shape the extent of post-conflict corruption.

3. THE POLITICAL ECONOMY OF POWER-SHARING

Our argument about the relationship between power-sharing and corruption starts from the general observation that government elites are the central political actors in all post-conflict situations—regardless of whether a power-sharing arrangement is implemented or not. We conceptualize these elites as rent-seeking agents who use public political office to generate private income (Krueger, 1974). However, corrupt or rent-seeking behavior serves the purpose not only of maximizing the purely private economic benefits of political leaders, but also of maximizing their private political benefits: rents from political office provide political leaders with the

financial means to stay in power (Acemoglu, Verdier, & Robinson, 2004; Bueno de Mesquita *et al.*, 2003). Politicians, in this view, distribute public funds from taxes, natural resources, and foreign aid through patronage networks to buy political support from key constituencies, whose backing is essential for leaders to stay in office.

The assumption of rent-seeking government elites is based on scholarship about the political economy of historical state development–a situation very similar to contemporary state building processes in post-conflict situations (Bates, 2008; Herbst, 2000; North, Wallis, & Weingast, 2009). A stylized and condensed version of the argument in the state development literature about the relationship between government elites and rent-seeking goes as follows: Political order in the form of states provides elites with a mechanism to generate rents from taxation. In turn, internal violent conflict decreases returns from rents because it negatively affects production. Therefore, elites form dominant coalitions—governments—t o limit violence between their respective groups and ensure rent generation. In this process, elites become "stationary bandits" (Olson, 1993) of a different sort, providing basic state functions as state agents in exchange for the opportunity to receive tax income (North *et al.*, 2009; North, Wallis, Webb, & Weingast, 2012).

In a post-conflict situation, the rent-seeking behavior of government elites also assumes such a central role due to another core feature of post-conflict politics: the elite-constituency relationship between former conflict actors and their support groups. Although the relationship between political elites and their political support networks is a central feature of any political system (Bueno de Mesquita *et al.*, 2003), it is particularly pronounced in post-conflict settings. Whereas in all political systems elites rely on their constituencies to ensure their political survival, in post-conflict settings elites rely on constituency support for political and physical survival. Post-conflict settings are inherently unstable and elites cannot be certain that conflict will not recur (Walter, 2009). If they lose the support of their political networks, they are unlikely to be able to mobilize enough resources to survive the resurgence of conflict. Thus, government elites depend critically on their constituencies which provided the necessary recruits and political and material support during the conflict (Kalyvas, 2006; Ottmann, 2017). These constituencies also form the electorate of the related political parties in peace times (Utas, 2012).

We understand this selective resource allocation in post-conflict countries in close reference to political patronage as the politically motivated distribution of selected private benefits to relevant constituencies by political elites (Erdmann & Engel, 2007). These resources can take the form of public infrastructure investments, such as electrification, the building of road networks, construction, the implementation of foreign aid projects, or any other public service. However, such preferential resource allocation is rarely directly observable. We therefore focus on the general level of rent-seeking in a society—namely the extent to which a society is able to control corruption. Corruption is defined as the "misuse of public office for private gain" (Svensson, 2005, p. 207). The term therefore subsumes these allocation procedures, but remains on a more general level.

Why should power-sharing institutions increase elite corruption? Post-conflict power-sharing establishes rules mandating joint control of power and sets up institutions dividing power between the involved actors. Power-sharing thus defines the shape of the dominant coalition elites can build to limit violence between them and ensure their privileged access to rents (North *et al.*, 2009, 2012). This is especially the case when power-sharing takes place on a national executive level. In this form of power-sharing, rebel representatives are explicitly granted seats in a joint government cabinet, typically in the context of a transitional "grand coalition." These executive power-sharing governments promote elites' rent-seeking behavior and the subsequent selective distribution of rents to their constituencies in three distinct ways.

First, executive power-sharing arrangements restrict membership to the small circle of government and rebel elites who have signed the peace agreement and deliberately exclude all other elites and social groups (Jarstad, 2008; Ottmann & Vüllers, 2015). At least until the first national elections these signatories have agreed upon, this coalition cannot be enlarged without threatening the stability of the settlement and a return to full-scale civil war (Reilly, 2008). While executive power-sharing arrangements might increase the overall number of cabinet positions in a national government, empirical studies indicate that executive power-sharing does not necessarily equate with an enlargement of the overall winning coalition (Joshi & Mason, 2011; Roeder & Rothchild, 2005). [1] It is therefore safe to assume that executive power-sharing merely replaces government elites with rebel elites. Executive power-sharing thus creates (or simply maintains) what is called a small winning coalition in the literature (Bueno de Mesquita *et al.*, 2003) by effectively preventing other elites and larger segments of the population from participating in government. [2] Generally, a winning coalition is the subset of a country's selectorate able to provide the necessary support to maintain the leader's rule over the larger selectorate and disenfranchised members of the society. In exchange for support, the leader distributes private and public goods to the members of the winning coalition. In winning coalitions composed of large sections of the selectorate, it is too costly to dole out private benefits. Leaders therefore reduce the provision of private goods in favor of providing public goods for the wider selectorate. In small winning coalitions, however, it is cheaper to distribute private benefits to the members which, in turn, allow these elites to engage in corrupt behavior. As countries with power-sharing governments solidify a small winning coalition by restricting access to political power for all groups outside the agreement, these countries should also see an increase in corruption.

Second, the rebel elites in a power-sharing government have only recently stopped fighting the incumbent leadership. Trust between the former adversaries will therefore understandably be low (Walter, 2009). Both sides often also still possess the outside option of resorting to arms again should they feel that the peace agreement does not serve their interests. That is, they do not depend critically on the incumbent leader but could instead try again to depose him or her. Executive power-sharing therefore creates winning coalitions with elites who have relatively low levels of loyalty toward the government leader. Scholars understand loyalty as the extent to which elites have the opportunity to successfully switch their allegiance to a challenger putting together a competing winning coalition (Bueno de Mesquita *et al.*, 2003). Elites who do not have this option to defect are fiercely loyal to the incumbent leader as they face the risk of losing their privileged access to rents should they be excluded from the winning coalition. Knowing this, the leader can afford to offer fewer private benefits to these elites (Bueno de Mesquita *et al.*, 2003, p. 66). Executive power-sharing arrangements, however, replace some of these highly loyal elites with less loyal rebels. To

counter these low levels of loyalty, the incumbent leadership has to pay a higher price and provide more private benefits to rebel elites to keep them within the winning coalition.

Finally, executive power-sharing creates a limited time horizon for rent-seeking elites. Executive power-sharing arrangements are often temporally limited, because transitional governments are replaced by elected governments (Schmidt & Galyan, 2016). Rebel participation in power-sharing is largely a function of their strength on the battlefield (or at least their ability to inflict costs on the government). It is not necessarily a result of their popular support, and thus electoral success is uncertain. Rational elites facing the strong possibility of a temporal limit in office discount the future more steeply (Levi, 1989). Facing uncertainty over their involvement in the future government once power-sharing ends or, worse, the possibility of renewed violence if the other side reneges on the agreement, rebel and government elites become what Mancur Olson has famously labeled "roving bandits"—that is rulers who are not concerned with the future welfare of their citizens, but who prey on these citizens instead: "when an autocrat has no reason to consider the future output of the society at all, his incentives are those of a roving bandit and that is what he becomes" (Olson, 1993, p. 571). This discounting of the future is echoed by Bates, Greif, and Singh (2002, p. 621) (see also Bates, 2008): "in the early stages of democratization, an increase in uncertainty for incumbent elites can be expected to bring, ceteris paribus, increased levels of political predation." Thus, the limited time horizon of power-sharing arrangements further increases elites' incentives to engage in short-term, private rent-seeking behavior.

Against this background of small winning coalitions with rebel elites who exhibit low levels of loyalty toward the leader and only have a limited time horizon, we expect that executive power-sharing arrangements should be associated with higher levels of corruption.

Hypothesis 1. Executive power-sharing in post-conflict countries increases the level of corruption.

The impact of executive power-sharing on elite corruption is moderated by the level and type of resources available to elites. First and foremost, a leader draws on government revenue generated through taxation. But this is not the only source of government income. Leaders can also rely on revenue generated from natural resources and foreign aid. Bueno de Mesquita and Smith (2009) regard such non-tax government income as "free resources" that are easy to capture: They do not require citizens to participate in the economy and, consequently, the government does not have to provide public goods to the population in order to facilitate their exploitation. If a post-conflict power-sharing government has access to more resources that elites can capture more easily, we consequently expect elites to be engaged in higher levels of corruption.

Rents from natural resources can be captured more easily than foreign aid, because they are highly fungible, not attached to political conditions, and typically more constant than foreign aid (Altincekic & Bearce, 2014). Resource rents provide political elites with a source of windfall revenues that substitute for government income obtained via taxation of the population. Since governments with access to non-tax income do not rely on taxing their population they have reduced incentives to respond to their citizens' needs. This allows elites to distribute non-tax government income through patronage networks instead of publicly investing in socially beneficial outcomes (Ahmadov, 2014; Djankov, Montalvo, & Reynal-Querol, 2008; Dunning, 2008; Ross, 2004). That means that elites in power-sharing arrangements with access to high levels of natural resource income have access to more resources overall, which, in turn, enables them to direct and implement more preferential policies.

Hypothesis 2. The larger the windfall gains from natural resources in a post-conflict country, the stronger the positive relationship between power-sharing and corruption.

We also regard foreign aid as a source of non-tax government income.[3] This holds true both for more fungible types of aid such as budget support or debt relief as well as for more sector-specific projects, such as the provision of health services, infrastructure projects, or technical cooperation on agricultural support. Fungible aid allows elites to capture aid money more easily and divert it to their patronage networks, through salaries, jobs or simply bribes (Svensson, 2000). Specific aid projects are much more difficult to capture directly. But they do require an allocation decision which elites will try to influence in order to steer more valuable projects to the regions on whose political support they rely to stay in power (Hodler & Raschky, 2014). In addition, higher aid flows typically indicate the presence of numerous donors. If many donors compete over the policy concessions of the recipient, rent-seeking recipient government elites—such as elites in power-sharing governments—can reap the surplus benefits of such donor competition for their own political purposes (Bueno de Mesquita & Smith, 2016).

Hypothesis 3. The larger the windfall gains from international aid in a post-conflict country, the stronger the positive relationship between power-sharing and corruption.

4. DATA

To test these hypotheses we turn to a statistical analysis. The unit of analysis is the post-conflict country in a given year. We start out by constructing a sample of the country-years after civil war as recorded by the Uppsala Conflict Data Program (UCDP) during 1990–2010 (Themnér & Wallensteen, 2013).[4] We restrict our sample to the first five post-conflict years, given the data limitations of our power-sharing variable (see below) and the convention in the literature.[5] For any given country-year to be included in our sample there have to be at least two consecutive years of no armed conflict.[6] This ensures a minimum of post-conflict development and excludes one-year post-conflict periods, which typically indicate a cessation of hostilities, but not necessarily the end of the conflict. Because our dependent variable is only available for 1996 and later, we also exclude all country-years prior to 1996. These selection criteria result in 70 distinct post-conflict periods in 51 countries.[7]

To measure corruption, we include data on the level of corruption in a post-conflict country in a given year. Corruption can take many different forms, including vote-buying, preferential policy treatment, or the clientelistic distribution of public offices (Svensson, 2000; van de Walle, 2001). However, data on these phenomena are scarce, since they typically do not take place in the open. We therefore measure corruption using the Worldwide Governance Indicators (WGI) (Kaufmann *et al.*, 2010), which aggregate expert opinions on corruption levels in a country. The WGI measure *Control of Corruption*

"captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests" (World Governance Indicators, 2015, p. 4). This measure is based on a wide variety of sources, predominantly expert assessments of countries. The WGI quantifies these assessments. The *Control of Corruption* measure ranges between −2.5 and 2.5 and measures a country's level of corruption relative to the global average in a given year. Mexico, for instance, has a value of −0.15 for 2003, whereas the Democratic Republic of the Congo has a *Control of Corruption* score of −1.43 for 2003. This indicates that both countries were more corrupt than the global average in 2003, but that the Democratic Republic of Congo was substantially more corrupt than Mexico. Unfortunately, the *Control of Corruption* measure is not available for all country-years in our sample. It starts with biannual measures in 1996 and becomes available annually only from 2002. [8]

We rely on the Power-Sharing Event Dataset (PSED) to assess the impact of power-sharing on the level of corruption in a post-conflict country (Ottmann & Vüllers, 2015). Among other things, PSED includes detailed information on the type and timing of our central explanatory variable, power-sharing on the national executive level. It records when the representatives of a rebel signatory to a peace agreement joined the national government of the country by taking over particular cabinet positions and when these rebel representatives left these positions again. In doing so, PSED offers one of the first dynamic measures of government-rebel power-sharing arrangements in the aftermath of civil wars. For our subsequent statistical analysis, we construct a binary variable—*Executive Power-Sharing*—which takes the value of "1" when former rebels have taken over positions in the national government in a given year. For all post-conflict years without such power-sharing, the binary variable takes the value of "0." Overall, there are 13 post-conflict countries with a total of 47 country-years with executive power-sharing.

We also suggest that the effect of power-sharing on corruption should be stronger in the context of resources that can be captured. We measure the level of resources available to the power-sharing elites with two variables. First, we include a variable that captures the share of natural resource rents as a percentage of the national gross domestic product: *Natural Resource Wealth*. Natural resource rents are "the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents" (World Bank, 2015c). The idea behind this measure is that natural resource rents are direct income to the state that—in contrast to tax income, for instance—government elites can capture directly (Morrison, 2009). Second, we include a measure of foreign aid flows. We utilize data from the AidData project and construct the variable *Foreign Aid Income*, which captures aid income as a percentage of national GDP (Tierney *et al.*, 2011). Similarly to our measure of natural resource rents, our aid variable captures non-tax income available to the government.

To account for potential confounding factors, we also include control variables in our analysis. Past research indicates that more democratic countries show lower levels of corruption (Chang & Golden, 2010; Kunicová & Rose-Ackerman, 2005; Montinola & Jackman, 2002). At the same time, democracy and power-sharing might be related: power-sharing might obstruct democratic accountability by obscuring political responsibility (Schedler, 1999; Tavits, 2007), [9] while higher levels of democracy might be associated with a propensity for establishing power-sharing governments. To isolate the effect of power-sharing from these effects of democratic accountability, we therefore include the *Polity2* score measuring the level of democracy in a country. These scores are taken from the Polity IV Project (Marshall, Jaggers, & Gurr, 2015). Further, ethnic fractionalization has been found to be negatively correlated with corruption (Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziarg, 2003), but we expect it to also be positively associated with power-sharing (Hartzell & Hoddie, 2015). We therefore include the *Ethnic Fractionalization* score from Alesina *et al.* (2003). We also expect countries with higher *GDP Per Capita* to exhibit lower levels of corruption (Treisman, 2007, 236ff). Finally, we control for the effect that foreign aid flows are systematically higher to countries with a smaller population (Hoeffler & Outram, 2011). Table 1 provides information on the operationalization and data source for each variables. Table 2 reports descriptive statistics.

5. EMPIRICAL STRATEGY

The objective of our statistical analysis is to estimate the effect of executive power-sharing on the level of corruption in a post-conflict country. We therefore begin our empirical analysis with a simple ordinary least squares (OLS) regression model in the form of

$$CC_{ij} = \alpha + \beta_1 PS_{ij} + \beta_2 Resources_{ij} + \beta_3 Aid_{ij} + \beta_4 Controls_{ij} + \epsilon_{ij} \quad (1)$$

where *Control of Corruption* (CC_{ij}) is predicted by our main variable of interest *Executive Power-Sharing* (PS_{ij}), and the variables *Natural Resource Wealth* ($Resources_{ij}$) and *Foreign Aid Income* (Aid_{ij}). The vector of control variables $Controls_{ij}$ serves to isolate the effect of executive power-sharing from context factors previously found to be associated with the level of corruption in a country. [10]

In the first stage of our empirical analysis, we begin with this basic regression model. To explore potentially interactive relationship between executive power-sharing, non-tax government income and corruption, we then add multiplicative interaction terms between PS_{ij} and $Resources_{ij}$ and Aid_{ij} to our covariates. In the second stage of our empirical analysis, we consider alternative model specifications of these three OLS regression models to assess the robustness of our findings. Specifically, we investigate the concept validity of our dependent variable and the effect of alternative explanatory factors. We use robust standard errors clustered on the post-conflict country to account for heteroskedasticity and serial correlation.

The final stage of our empirical analysis addresses endogeneity concerns. Executive power-sharing is likely not randomly allocated to post-conflict countries. Instead, power-sharing could be the result of a strategic interaction between rebels and the government. For example, endogeneity could occur because more corrupt countries may be more likely to adopt executive power-sharing institutions (reverse causality) and/or unobserved factors might affect both the adoption of power-sharing and determine the level of corruption in a country. Thus, the coefficient estimate of interest β_1 in Eqn. (1) might be biased. We estimate an endogenous treatment regression model to address this issue. This type of model allows us to model the exogenous selection of executive power-sharing empirically and account for the selection effects in the outcome equation (Wooldridge, 2010). Specifically, the model estimates a linear model for the outcome equation and an auxiliary probit model for the selection process of the binary treatment

Table 1. *Main variables, operationalization, and data sources*

Variable	Operationalization	Data source
Control of corruption	Score measuring a country's level of corruption in relation to the global average on a scale ranging from −2.5 to 2.5	Worldwide Governance Indicators (Kaufmann *et al.*, 2010)
Executive power-sharing	Binary variable taking the value of '1' when a rebel groups has taken over positions in the national government after a peace agreement.	PSED (Ottmann & Vüllers, 2015)
Natural resource wealth	A country's share of natural resource rents as a percentage of its national gross domestic product. Data are log transformed	World Development Indicators (World Bank, 2015c)
Foreign aid income	A country's foreign aid income as per cent of national gross domestic product. Data are log transformed	AidData Project (Tierney *et al.*, 2011)
GDP per capita	A country's gross domestic product divided by midyear population in 2005 US dollar. Data are log-transformed	World Development Indicators (World Bank, 2015a)
Polity2	A 21-point indicator ranking a country's regime type from −10 (strongly autocratic) to +10 (strongly democratic).	Polity IV Project (Marshall *et al.*, 2015)
Ethnic fractionalization	Herfindahl index of a country's ethnic fractionalization ranging from 0 to 1. The higher the value, the more fractionalized a country, the lower the value, the more ethnically homogeneous. This variable is time-invariant	Alesina *et al.* (2003)
Population	Midyear estimate of a country's total population. Data are log-transformed	World Development Indicators (World Bank, 2015b)

Table 2. *Summary statistics*

	Obs	Mean	SD	Min	Max
Control of corruption	183	−0.82	0.41	−1.8	0.6
Executive power-sharing	183	0.19	0.39	0.0	1.0
Natural resource wealth (ln)	183	2.20	1.24	0.0	4.5
Foreign aid income (ln)	176	−2.42	1.26	−6.9	0.7
GDP per capita (ln)	178	7.03	0.96	5.3	9.4
Polity2	180	1.21	5.48	−9.0	9.0
Ethnic fractionalization	181	0.59	0.25	0.0	0.9
Population (ln)	183	16.07	1.34	13.2	19.3

variable. The information from the selection equation on the propensity of treatment is then included in the outcome regression to compute consistent estimates of the treatment variable. Because of the continuous nature of our dependent variable (*Control of Corruption*), as well as the binary nature of our independent/treatment variable (*Executive Power-Sharing*), this model is best suited for this type of analysis.

The endogenous treatment regression model is implemented using Stata 14's `etregress` command (StataCorp, 2013) and is a variant of the Heckman selection models (Heckman, 1979). This command fits two equations, one for the outcome CC_{ij} and one for the treatment PS_{ij}:

$$\begin{aligned} \text{Outcome equation}: \quad & CC_{ij} = \alpha + \beta_1 PS_{ij} + \beta_2 Resources_{ij} \\ & + \beta_3 Aid_{ij} + \beta_4 Controls_{ij} + \epsilon_{ij} \\ \text{Selection equation}: \quad & PS_j = \begin{cases} 1, & \text{if } w_j + u_j \\ 0, & \text{otherwise} \end{cases} \end{aligned} \tag{2}$$

where PS_{ij} represents the potentially endogenous treatment *Executive Power-Sharing* and w_{ij} are the covariates in the selection equation. The errors ϵ_{ij} and v_{ij} are assumed to be correlated. The model estimates a correlation coefficient ρ that indicates to what extend unobservables in the selection equation correlate with unobservables in the outcome equation.

6. RESULTS

Table 3 reports the results from our first three OLS regression models.[11] The coefficient measuring the effect of *Executive Power-Sharing* on the level of corruption is negative and statistically significant in model 1. This supports Hypothesis 1. Power-sharing arrangements in the national executive are likely to increase corruption in a post-conflict country. In terms of substantive effects, the existence of executive power-sharing in a post-conflict country reduces the *Control of Corruption* scale by 0.17, on a scale that ranges from −1.8 to 0.6 with a standard deviation of 0.41.[12]

The effect of power-sharing on corruption is estimated while we control for the shares of natural resources and the country's foreign aid income relative to its GDP—that is, the two main government income sources which can be easily captured by government elites. While both variables point in a negative direction, only *Natural Resource Wealth* is also statistically significant. With a one percent increase in *Natural Resource Wealth* relative to GDP, the *Control of Corruption* scale decreases by 0.14. Apparently, higher levels of natural resource wealth also substantially increase corruption in a post-conflict country, in line with existing findings on the "resource curse" (Ross, 2015, 249). Of our control variables, only *GDP Per Capita* is a positive and statistically significant predictor of the level of corruption in model 1 and model 3. However, we caution against overinterpreting the substantive effects of control variables which are only intended to isolate our key relationship of interest.

Models 2 and 3 assess the interactive relationships between power-sharing and natural resource wealth and foreign aid income summarized in Hypothesis 2 and 3. Before discussing our results in greater detail, it is important to point out that the coefficients of the interaction terms as well as their constitutive terms should not be used for any meaningful interpretation. Berry, Golder, and Milton (2012) and Brambor, Clark,

Table 3. *OLS regression*

	Model 1	Model 2	Model 3
Executive power-sharing	−0.17*	0.03	−0.06
	(0.09)	(0.16)	(0.16)
Natural resource wealth (ln)	−0.13**	−0.11**	−0.13**
	(0.05)	(0.05)	(0.05)
Executive PS * Natural resource wealth		−0.09*	
		(0.05)	
Foreign aid income (ln)	0.02	0.02	0.01
	(0.06)	(0.06)	(0.06)
Executive PS * Foreign aid income			0.05
			(0.06)
GDP per capita (ln)	0.08*	0.08	0.08*
	(0.05)	(0.05)	(0.05)
Polity2	−0.00	−0.00	−0.00
	(0.01)	(0.01)	(0.01)
Ethnic fractionalization	0.20	0.20	0.20
	(0.24)	(0.24)	(0.24)
Population (ln)	0.00	0.01	−0.00
	(0.04)	(0.04)	(0.04)
Constant	−1.14	−1.26*	−1.12
	(0.69)	(0.71)	(0.69)
Observations	171	171	171
Adjusted R^2	0.16	0.17	0.16

Robust standard errors clustered by country in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

and Golder (2006) explain that the magnitude, direction or statistical significance of the coefficients of interaction terms can be misleading. As a matter of fact, a statistically significant interactive relationship is often only present at particular values of its constitutive terms. Assessing the statistical significance of coefficients will not reveal this. The aforementioned scholars therefore recommend using marginal effect plots to assess the presence of interactive relationships.

Following this advice, we plot the marginal effect of *Executive Power-Sharing* on *Control of Corruption* at the full range of the values of *Natural Resource Wealth* and *Foreign Aid Income*. The upper plot of Figure 2 shows that the interactive relationship between executive power-sharing and natural resources is indeed negative. With increasing levels of *Natural Resource Wealth* in a post-conflict country, the negative marginal effect of *Executive Power-Sharing* on *Control of Corruption* increases. This effect becomes statistically significant when *Natural Resource Wealth* is at 2.2 and the upper bound of the confidence interval falls below zero. At this point, the point estimate of the marginal effect of *Executive Power-Sharing* on *Control of Corruption* is −0.17 and it further decreases to −0.38 once the *Natural Resource Wealth* measure has reached its maximum value in our sample. The underlying histogram in our plot also reveals that this statistically significant interactive relationship applies to a sizable proportion of the observations in our sample. Almost 53% of all observations have a *Natural Resource Wealth* score of 2.2 or more. This finding lends empirical support to Hypothesis 2. [13]

Substantively, this means that executive power-sharing has a negative effect on corruption if the natural resource rents share of a post-conflict country's GDP is greater than approximately 8%. Such a share of resource rents in a country's GDP is roughly equivalent to the size of Cote d'Ivoire's natural resource rent income in 2005. This indicates that the negative effect of power-sharing kicks in even at relatively low levels of natural resource dependency. At high levels of resource income, the effect of power-sharing becomes much more pernicious: at 68% of GDP in natural resource rents—roughly equivalent to Liberia's resource income levels in 2003—the coefficient for the effect of cabinet level power-sharing becomes more than twice the size of the coefficient in the main model. It appears that executive power-sharing in countries where government income is heavily based on natural resources substantially intensifies the corrupt scramble for such windfall resources.

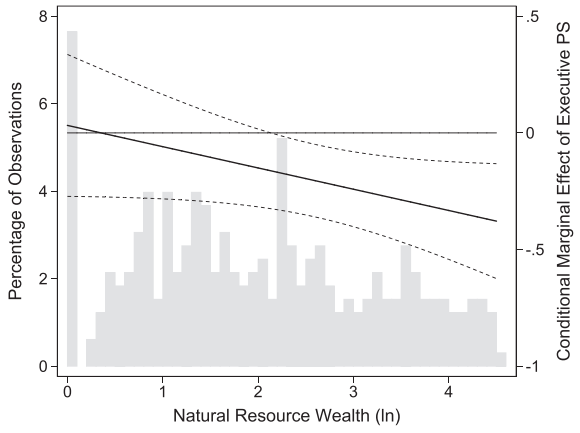
The opposite is true for the interactive relationship between executive power-sharing and foreign aid income. The lower plot in Figure 2 shows that the marginal effect of *Executive Power-Sharing* on *Control of Corruption* increases when *Foreign Aid Income* increases. That is, power-sharing in the national government is affiliated with lower levels of corruption when the international community invests heavily in a post-conflict country. Except for the *Foreign Aid Income* scores that are between −4 and −2.4, however, the confidence interval of the estimated marginal effect covers positive as well as negative values rendering the marginal effect statistically insignificant. Within this small stretch of values, the marginal effect of *Foreign Aid Income* on *Control of Corruption* increases from −0.26 to −0.18. But the logarithmic values of −4 and 2.4 on the *Foreign Aid Income* range only correspond to an increase in the real world foreign aid share of a post-conflict country's GDP from 0.004 to 0.1. Altogether, therefore, we do not find empirical support for Hypothesis 3. [14]

(a) *Alternative model specifications*

We also consider alternative model specifications to explore the robustness of our findings. In particular, we investigate the concept validity of our dependent variable and explore the effect of alternative determinants of corruption. [15]

Data on corruption is notoriously difficult to come by and fraught with data quality issues (for a recent review, see Heywood & Rose, 2014). As we have explained in the data section, the WGI measure *Control of Corruption* is the best choice

(a) Interaction Between Executive Power-Sharing and Natural Resource Wealth



(b) Interaction Between Executive Power-Sharing and Foreign Aid Income

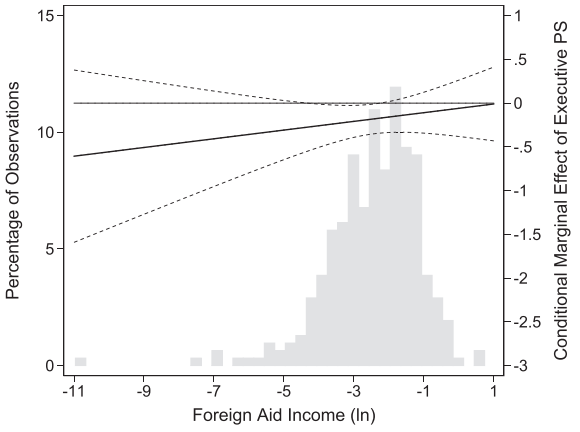


Figure 2. *Marginal effects of executive power-sharing on control of corruption at different levels of non-tax government income. Note: Dashed lines indicate 95% confidence intervals. The underlying histogram depicts the distribution of observations of the variable on the x-axis in the sample.*

for the present analysis. Nevertheless, it is worth exploring whether the limitations of this measure bias our findings. First, we turn to the possibility that the *Control of Corruption* measure is not independent of our key explanatory variable, *Executive Power-Sharing*. The WGI measure captures perceptions of the extent to which public power is exercised for private gain at the end of a given year. Our *Executive Power-Sharing* measure, in contrast, records the average number of rebel-held seats over the entire year. If power-sharing indeed makes it easier for elites to capture the state, the *Control of Corruption* measure might code the presence of power-sharing over the course of a year as an indicator of higher levels of corruption. To ensure that our dependent variable is measured independently from our central explanatory variable, we therefore run our models with *Executive Power-Sharing* taking the value of "1" if in January of a given country-year at least one cabinet post was given to rebels. In doing so, we create a temporal sequence between *Executive Power-Sharing* and the yearly assessment provided by the WGI measure of corruption. Importantly, our empirical findings are not affected by this alternative version of *Executive Power-Sharing* (see Table 2 and Figure 1 in our Online Appendix).

Next, scholars emphasize that year-to-year changes in the WGI measure might not necessarily indicate systematic change due to external drivers of corruption (Kaufmann *et al.*, 2010; Heywood & Rose, 2014). Yearly changes in *Control of Corruption* can also be caused by changes in the underlying data sources and how these individual sources are aggregated. To account for this possibility, we estimate our models using year fixed effects. We thereby greatly reduce the chance that any statistical relationships are driven by a year-specific "shock" as, for example, the inclusion of a previously unused data source measuring corruption. The results of OLS regressions with year fixed effects do not differ substantially from the main findings presented above (see Table 3 and Figure 2 in the Appendix).

As a final test of the concept validity of our dependent variable, we estimate our regression models using an alternative measure of corruption: the corruption scale of the International Country Risk Guide (PRS Group, 2015). [16] The *ICRG Corruption* measure provides quarterly assessments of the level of corruption within a country. [17] The measure denotes very high levels of corruption with 0 and then moves in 0.5 decimal steps up to 6 which indicates very low levels of corruption. The ICRG data have more limited geographical coverage than the WGI measures but provides annual measures from 1984 onward and thus allows us to test our hypotheses using a longer time-span. [18] As in our main statistical analysis, we rely on OLS with robust standard errors clustered on post-conflict countries. [19] Again, the results of this robustness check corroborate the findings our main analysis (see Table 4 and Figure 3 in the Appendix).

The omission of potentially influential independent variables from our regression models constitutes another threat to the robustness of our findings. We therefore investigate whether the estimated effects remain stable in terms of statistical significance and substantive effects when we control for different context factors. Specifically, we control for non-linear effects of regime type, an alternative fractionalization measure and additional power-sharing variables. To begin with, the relationship between regime type and corruption might be nonlinear affecting our hypothesized relationships between executive power-sharing, resources and foreign aid on the one side and corruption on the other. When we include a squared term of the *Polity2* variable, our main results hold but it appears that corruption is indeed less likely in more democratic and more autocratic countries (Table 5 and Figure 4 in the Appendix). The interactive relationships nevertheless hold when the nonlinear effects of regime type are controlled for. Next, we rerun our OLS regressions controlling for an alternative dimension of a country's societal fractionalization—that is, we replace the *Ethnic Fractionalization* measure with a *Religious Fractionalization* score. Again, all our key findings hold and the *Religious Fractionalization* score turns out not to be statistically significant (see Table 6 and Figure 5 in our Online Appendix).

The next series of models controls for the establishment of additional power-sharing institutions in a post-conflict country. While our theory hypothesizes that it is primarily executive power-sharing which negatively affects the level of corruption in a post-conflict country, there might still be the possibility that other common types of power-sharing exert similar effects. We therefore include a binary variable that takes the value of "1" when a territorial power-sharing arrangement granting autonomy or enacting regional devolution has been passed by the national parliament. We also include a binary variable that takes the value of "1" when an electoral law promising proportional representation has

been passed. Both variables keep the value "1" as long as the laws are active. The data come from the PSED (Ottmann & Vüllers, 2015). As with our other robustness checks, our empirical findings hold. Moreover, neither the presence of territorial power-sharing nor the introduction of proportional representation in the national legislature affects the dependent variable *Control of Corruption* (Table 7 and Figure 6 in the Appendix).

Finally, we explore whether our estimation results continue to hold if we move beyond the common practice in power-sharing research of only looking at the first five years of a post-conflict period (Hartzell & Hoddie, 2007; Jarstad & Nilsson, 2008; Walter, 2002). There is the possibility that the effect of executive power-sharing on corruption disappears and other factors gain importance if we consider longer post-conflict periods. We therefore estimate our models using a sample with seven post-conflict years and ten post-conflict years. We also include a variable measuring the number of years since executive power-sharing has ended to account for time dependency. However, our key findings remain stable in this robustness check as well (see Table 8 and Figure 7 in the Appendix).

(b) *Addressing endogeneity*

To further increase confidence in a causal interpretation of the effect of power-sharing on corruption, we also estimate a treatment effect model where we account for the endogenous selection of power-sharing in post-conflict countries. The challenge of correctly estimating such a selection model stems from the need to find an exogenous variable, the so-called "exclusion restriction". This exclusion restriction must be correlated with the treatment variable, but not with the outcome variable.

We use two variables as exclusion restrictions: per cent of country territory in conflict (*Conflict Area*) and power parity between rebel and government troops (*Gov't-Rebel Parity*). These two variables proxy the nature of government-rebel power relations in a civil war. Past research (Gent, 2011) sees these power relations as a central determinant of the emergence of power-sharing in post-conflict situations. The idea behind *Conflict Area* as an exclusion restriction is that we expect power-sharing to become more likely when more territory is engulfed by the conflict. A greater conflict area can be seen as a rough proxy for rebel success on the battlefield: although the variable does not directly capture rebel territorial gains, a larger conflict area nevertheless indicates a higher chance of loss for the incumbent regime because it indicates that the government does not have full control over its state territory. Conversely, if the conflict area is small, we should expect the chances of power-sharing to decrease since the government will be more likely to expect to win the war, as it can concentrate its forces. At the same time, *Conflict Area* is unlikely to be correlated with post-conflict corruption. It is a conflict-level variable that captures the military strategy objectives of both parties and should therefore be exogenous to the level of corruption.

We use the PRIO Conflict Site Dataset (Hallberg, 2012) to generate our *Conflict Area* variable. The PRIO Conflict Site Dataset captures the "area of the conflict zone in square kilometers" (Hallberg, 2011, p. 4). We divide this area by a country's territorial size (taken from the `cshapes` R package (Weidmann, Kuse, & Gleditsch, 2010)) to generate a value between 0 and 1 that indicates the total territorial share of the conflict area. A first glance at the data reveals that there is indeed a positive relationship between conflict area and power-sharing: many countries with power-sharing arrangements—such as Bosnia and Herzegovina, the Democratic Republic of Congo, Nepal, or Liberia—all have *Conflict Area* scores above 0.5. The relationship is not deterministic however. A number of countries—such as Azerbaijan, Haiti or Mozambique—also have large *Conflict Area* values, but did not establish power-sharing arrangements.

The second exclusion restriction we employ is the variable *Gov't-Rebel Parity*. The idea behind this variable is that power parity between rebels and government is a proxy for a military stalemate between both parties which in turn makes power-sharing more likely. At the same time, power parity is unlikely to be related to national post-conflict levels of corruption, since it, too, is a conflict-level variable that captures the short-term tactical balance between the adversaries. It is a dummy variable that captures whether rebels and government forces are roughly equal in size or not. Data on government and rebel troop strength are taken from the Non-State Actor Dataset (Cunningham, Gleditsch, & Salehyan, 2013).

Table 4 reports the results from our endogenous treatment models. Model 1 in Table 4 shows that the coefficient for *Executive Power-Sharing* is negative and statistically significant from zero. This confirms our findings from the previous section. Interestingly, the coefficient is more than twice as large as in the models without accounting for selection bias. This means that if we account for the endogenous selection of power-sharing, the effect of power-sharing on corruption becomes even more pronounced. And selection indeed seems to be an issue: both *Conflict Area* and *Gov't-Rebel Parity* are positive and statistically significant predictors of implemented executive power-sharing in the selection equation. Also, the correlation coefficient ρ between the error terms of the selection and the outcome equation is 0.54 and statistically significant. This means that unobservables in the selection model are systematically correlated with unobservables in the outcome equation. Models 2 and 3 replicate the previous models with interaction between *Executive Power-Sharing* and *Natural Resource Wealth* and *Foreign Aid Income*, respectively. Although the coefficient of the interaction term is not statistically significant, marginal effects plots reveal that there are meaningful areas of statistically significant interaction between *Executive Power-Sharing* and *Natural Resource Wealth* roughly in line with the marginal effects estimated in our simple OLS regression (see Figure 8 in our Online Appendix). Thus, even if we account econometrically for systematic selection, power-sharing leads to more corruption at higher levels of natural resource income.

7. DISCUSSION

Do power-sharing institutions drive corruption in the aftermath of civil war? Viewed through the lens of political economy theory, power-sharing institutions offer rent-seeking elites an opportunity to access rents from state resources. In addition, many rebel elites may feel—now that they can access state revenues—that they are entitled to privately compensate themselves and their supporters for the perceived injustices they suffered during the conflict. Further, since elites within the power-sharing arrangement cannot be certain that they will be represented in the post-transitional political order, they have strong incentives to capture as many state resources as possible. As a consequence, power-sharing institutions increase a post-conflict country's level of corruption. Evidence from a range of statistical models provides support for this hypothesis: post-conflict countries with power-sharing exhibit

Table 4. *OLS regression with endogenous treatment effects*

	Model 1	Model 2	Model 3
DV: Control of Corruption			
Executive power-sharing	−0.38**	−0.27	−0.37*
	(0.16)	(0.25)	(0.22)
Natural resource wealth (ln)	−0.13**	−0.12**	−0.13***
	(0.05)	(0.05)	(0.05)
Executive PS * Natural resource wealth		−0.05	
		(0.06)	
Foreign aid income (ln)	0.01	0.01	0.01
	(0.06)	(0.06)	(0.06)
Executive PS * Foreign aid income			0.00
			(0.06)
GDP per capita (ln)	0.08	0.07	0.08
	(0.05)	(0.05)	(0.05)
Polity2	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)
Ethnic fractionalization	0.30	0.29	0.30
	(0.25)	(0.25)	(0.25)
Population (ln)	−0.01	−0.01	−0.01
	(0.04)	(0.04)	(0.04)
Constant	−0.90	−0.97	−0.90
	(0.66)	(0.69)	(0.66)
DV: Executive Power-Sharing			
Natural resource wealth (ln)	−0.33*	−0.33*	−0.33*
	(0.20)	(0.20)	(0.20)
Foreign aid income (ln)	−0.35**	−0.35*	−0.35**
	(0.18)	(0.18)	(0.18)
GDP per capita (ln)	−0.27	−0.27	−0.27
	(0.38)	(0.38)	(0.38)
Polity2	0.06	0.06	0.06
	(0.05)	(0.05)	(0.05)
Ethnic fractionalization	3.46**	3.45**	3.46**
	(1.41)	(1.41)	(1.41)
Population (ln)	−0.39*	−0.39*	−0.39*
	(0.21)	(0.21)	(0.21)
Gov't-rebel parity	1.18**	1.19**	1.18**
	(0.51)	(0.52)	(0.51)
Conflict area (ln)	0.44***	0.43***	0.44***
	(0.15)	(0.15)	(0.15)
Peace years	2.78*	2.76*	2.78*
	(1.46)	(1.46)	(1.47)
Peace years (squared)	−1.10**	−1.09**	−1.10**
	(0.53)	(0.53)	(0.54)
Peace years (cubed)	0.12**	0.12**	0.12**
	(0.06)	(0.06)	(0.06)
Constant	3.05	3.14	3.04
	(4.03)	(4.07)	(4.03)
ρ	0.54**	0.50*	0.54**
	(0.27)	(0.29)	(0.27)
Observations	168	168	168

Robust standard errors clustered by country in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

a higher degree of corruption as compared to post-conflict countries without this institutional arrangement in place. Also, this relationship depends on the resources available to the elites within the power-sharing cabinet. In a context of natural resource abundance, the corruption-inducing effect of power-sharing becomes stronger.

The findings presented here open up important avenues for further inquiry. As our main focus was to establish the link between power-sharing and corruption as an indicator for elites' rent-seeking behavior, we have not analyzed whether it is indeed the economic function of power-sharing institutions that drives their success in upholding peace after violent civil conflict. We are confident that future studies that try to disentangle the complicated relationship between power-sharing and peace would benefit from including the political economy of this institutional arrangement in their theoretical and empirical models.

Another key avenue for further research is the relationship between power-sharing governments and accountability. While we have controlled for the quality of democratic institu-

tions to isolate the independent effect of executive power-sharing on corruption from broader accountability factors, future research should explicitly incorporate democratic accountability into its theoretical and empirical models of power-sharing governments and further explore its implications. Norris (2008) has already discussed how constitutional power-sharing mechanisms (e.g., parliamentarism, proportional representation electoral systems, and federalism) are capable of improving democracy. Our findings indicate that it is also important to analyze how the political economy of executive power-sharing arrangements affects the quality of democratic accountability in post-conflict countries. In this regard, a promising avenue for future research is the investigation of the patron-client relationships between elites in power-sharing governments and their constituencies and their impact on conceptions of vertical accountability between elites and citizens, citizen engagement, and the public responsiveness of the post-conflict state—particularly once the interim period of power-sharing ends. Ultimately, such research has the potential to contribute to existing debates in development studies on how to improve and promote the voice of citizens in post-conflict countries (Fox, 2015).

Our findings are also relevant to the policy and academic debate about power-sharing and the effects of corruption on post-conflict peacebuilding (Transparency International, 2014; Working Group on Corruption and Security, 2017). The qualitative literature has long promoted a nuanced view of corruption in post-conflict situations (Cheng & Zaum, 2013). On the one hand, some argue that corruption can have a stabilizing effect in post-conflict situations: "[Corruption] can be used in the short term to craft a peace where the spoils of war are divided amongst the fighting factions; in some cases, it may be the only way to provide the stability needed to achieve other peacebuilding objectives" (Cheng & Zaum, 2013, 22f). However, corruption also undermines economic development and thus reduces economic peace dividends for large parts of the population. If post-conflict elites divert public resources, both from aid and from natural resources, into their own pockets, post-conflict development is hampered. Yet this view has largely been based on qualitative and anecdotal case study evidence. Using novel data on power-sharing and rebel participation in post-conflict governance, we show that this pattern is generalizable to a wider set of post-conflict countries. Further, while the level of corruption is generally higher in post-conflict countries than in other countries, our statistical results suggest that it is the institution of power-sharing that particularly drives political corruption in the aftermath of civil conflicts. Policy-makers and academics should therefore be cautious when promoting power-sharing as go-to solution for terminating civil conflicts: while it may offer the possibility to buy off former opponents in the short term and thus stabilize volatile post-conflict situations, power-sharing might undermine economic development and peacebuilding in the long run by institutionalizing corruption.

NOTES

1. While not the focus of this study, it might nevertheless be worthwhile to further probe the impact of executive power-sharing on the size of winning coalitions in future research. For example, it could be possible that such power-sharing arrangements do not enlarge the winning coalition per se but rather the increase the number of clients who elites in the winning coalition have to accommodate. In such a case, we would probably also see an increase in elite corruption.

2. In essence, power-sharing governments formalize what North *et al.* (2012) have called a "Limited Access Order:" they limit the access of other social groups to the governing coalition—the power-sharing coalition between rebels and the government—thus creating material benefits in the form of rents from the state for the participating elites and their clients.

3. Following the general definition, we understand foreign aid not only as financial aid, but also as technical transfers in the form of loans, grants, or equity investments by governments (or their aid agencies), intergovernmental organizations and private foundations (cf. Tierney *et al.*, 2011).

4. UCDP defines civil war as a "contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths" (Themnér & Wallensteen, 2013).

5. For a similar approach, see Binningsbø, Loyle, Gates, and Elster (2012).

6. Unless this procedure resulted in a country-year in 2010 which we then included. An example of this is Sri Lanka, where UCDP records a conflict in 2009, but not in 2010. Consequently, we include the country-year Sri Lanka in 2010 in our sample, even though this period is not two years long.

7. See Table 1 in the Online Appendix for a list of countries and post-conflict country-years included in our analysis.

8. We do not replace missing values in our empirical analysis. However, we test the robustness of our findings using two strategies. First, we replace missing *Control of Corruption* values with the previous non-missing values. Second, we replace missing values with a linear interpolation of *Control of Corruption* on year using Stata 14's `ipolate` command (StataCorp, 2015). The results do not change substantially and the findings remain robust.

9. Almost by definition, power-sharing undermines the separation of powers and therefore weakens horizontal accountability (Lijphart, 1977). Similarly, post-conflict power-sharing arrangements are interim or transitional arrangements which are not the result of electoral competition but agreed upon during peace negotiations (Schmidt & Galyan, 2016). Only once interim arrangements end do national elections take place. Vertical accountability in the form of elections is therefore also absent during this transition period. We are grateful to an anonymous reviewer for highlighting this argument and discuss its implications for future research in the conclusion of this paper.

10. This logic follows the general advice by Angrist and Pischke (2009) that control variables make the conditional independence assumption of a treatment (power-sharing) more credible. The control variables themselves, however, are unlikely to have a causal interpretation, since we do not specifically control for other factors that might make their interpretation causally credible.

11. The statistical analysis was performed with Stata Statistical Software Version 14.2 (StataCorp, 2015).

12. The effect size of *Executive Power-Sharing* and all other statistically significant predictors remains roughly the same in the alternative specifications of our models presented below.

13. In this particular case, the interaction term in model 2 is actually also statistically significant. Regarding its constitutive elements, it is important to remember that they only measure the effect of each coefficient conditional on the other constitutive term being "0" (Brambor *et al.*, 2006). In the case of model 2, this means that the coefficient of *Executive Power-Sharing* only measures the effect of executive power-sharing if *Natural Resource Wealth* is "0." This applies to 19 observations in our sample. Interestingly, *Natural Resource Wealth* still exerts a negative effect on our dependent variable *Control of Corruption* in model 2. That is, post-conflict countries with a larger share of natural resource wealth relative to GDP are also more likely to be more corrupt when there is no executive power-sharing.

14. Turning to the constitutive elements of this interactive relationship, it needs to be stressed again that the coefficient of *Executive Power-Sharing* only measures the effect of executive power-sharing if *Foreign Aid Income* is "0." There is no instance where *Foreign Aid Income* equals "0." The coefficient of *Executive Power-Sharing* in model 3 is therefore meaningless. As explained previously, the interpretation of our non-tax government income coefficients is restricted to those cases where *Executive Power-Sharing* is "0." *Foreign Aid Income* remains statistically insignificant in model 3.

15. Our Online Appendix presents the results of our robustness checks in greater detail.

16. We use the replication dataset from Hegre and Nygård (2015) to conduct this robustness check.

17. The *ICRG Corruption* score is "a measure of corruption within the political system that is a threat to foreign investment by distorting the economic and financial environment, reducing the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability, and introducing inherent instability into the political process" (PRS Group, 2015).

18. We did not opt to use the PRS measure as our main dependent variable since it lacks data on a number of countries that are of interest to us—for example, Afghanistan, Burundi or Nepal.

19. While the ordinal nature of the *ICRG Corruption* measure would normally best be explored with ordinal logit or probit models, past research has shown that OLS estimates of the ICRG data are reasonably close to those obtained through ordinal logit or probit models (Treisman, 2007, p. 221). Moreover, using OLS instead of ordinal logit/probit gives us a direct relationship between a one unit change in the independent variable and changes to the dependent variable.

REFERENCES

Acemoglu, D., Verdier, T., & Robinson, J. A. (2004). Kleptocracy and divide-and-rule: A model of personal rule. *Journal of the European Economic Association, 2*, 162–192.

Ahmadov, A. K. (2014). Oil, democracy, and context a meta-analysis. *Comparative Political Studies, 47*, 1238–1267. http://dx.doi.org/10.1177/0010414013495358.

Aidt, T. S. (2003). Economic analysis of corruption: A survey. *The Economic Journal, 113*, 632–652. http://dx.doi.org/10.1046/j.0013-0133.2003.00171.x.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth, 8*, 155–194. http://dx.doi.org/10.1023/A:1024471506938.

Altincekic, C., & Bearce, D. H. (2014). Why there should be no political foreign aid curse?. *World Development, 64*, 18–32. http://dx.doi.org/10.1016/j.worlddev.2014.05.014.

Angrist, J. D., & Pischke, J.-S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton: Princeton University Press.

Aspinall, E. (2009). Combatants to contractors: The political economy of peace in Aceh. *Indonesia*, 1–34.

Basedau, M., & Lay, J. (2009). Resource curse or rentier peace? The ambiguous effects of oil wealth and oil dependence on violent conflict. *Journal of Peace Research, 46*, 757–776.

Bates, R. (2008). *When things fell apart. State failure in late-century Africa*. Cambridge: Cambridge University Press.

Bates, R., Greif, A., & Singh, S. (2002). Organizing violence. *Journal of Conflict Resolution, 46*, 599–628. http://dx.doi.org/10.1177/002200202236166.

Beber, B., Gilligan, M. J., Guardado, J., & Karim, S. (2017). Peacekeeping, compliance with international norms, and transactional sex in Monrovia, Liberia. *International Organization, 71*, 1–30. http://dx.doi.org/10.1017/S0020818316000242.

Belloni, R., & Strazzari, F. (2014). Corruption in post-conflict Bosnia-Herzegovina and Kosovo: A deal among friends. *Third World Quarterly, 35*, 855–871. http://dx.doi.org/10.1080/01436597.2014.921434.

Berry, W. D., Golder, M., & Milton, D. (2012). Improving tests of theory positing interaction. *Journal of Politics, 74*, 653–671.

Billger, S. M., & Goel, R. K. (2009). Do existing corruption levels matter in controlling corruption?. *Journal of Development Economics, 90*, 299–305. http://dx.doi.org/10.1016/j.jdeveco.2008.07.006.

Billon, P. L. (2014). Natural resources and corruption in post-war transitions: Matters of trust. *Third World Quarterly, 35*, 770–786. http://dx.doi.org/10.1080/01436597.2014.921429.

Binningsbø, H. M. (2013). Power sharing, peace and democracy: Any obvious relationships?. *International Area Studies Review, 16*, 89–112. http://dx.doi.org/10.1177/2233865912473847.

Binningsbø, H. M., Loyle, C. E., Gates, S., & Elster, J. (2012). Armed conflict and post-conflict justice, 1946–2006: A dataset. *Journal of Peace Research, 49*, 731–740. http://dx.doi.org/10.1177/0022343312450886.

Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis, 14*, 63–82. http://dx.doi.org/10.1093/pan/mpi014.

Bueno de Mesquita, B., & Smith, A. (2009). Political survival and endogenous institutional change. *Comparative Political Studies, 42*, 167–197. http://dx.doi.org/10.1177/0010414008323330.

Bueno de Mesquita, B., & Smith, A. (2016). Competition and collaboration in aid-for-policy deals. *International Studies Quarterly, 60*, 413–426. http://dx.doi.org/10.1093/isq/sqw011.

Bueno de Mesquita, B., Smith, A., Siverson, R. M., & Morrow, J. D. (2003). *The logic of political survival*. Cambridge: MIT Press.

Chang, E., & Golden, M. A. (2010). Sources of corruption in authoritarian regimes. *Social Science Quarterly, 91*, 1–20. http://dx.doi.org/10.1111/j.1540-6237.2010.00678.x.

Cheng, C., & Zaum, D. (2013). Selling the peace? Corruption and post-conflict peacebuilding. In C. Cheng, & D. Zaum (Eds.), *Corruption and post-conflict peacebuilding: Selling the peace?* (pp. 1–25). London: Routledge.

Cunningham, D. E., Gleditsch, K. S., & Salehyan, I. (2013). Non-state actors in civil wars: A new dataset. *Conflict Management and Peace Science, 30*, 516–531. http://dx.doi.org/10.1177/0738894213499673.

d'Agostino, G., Dunne, J. P., & Pieroni, L. (2016). Government spending, corruption and economic growth. *World Development, 84*, 190–205. http://dx.doi.org/10.1016/j.worlddev.2016.03.011.

Djankov, S., Montalvo, J., & Reynal-Querol, M. (2008). The curse of aid. *Journal of Economic Growth, 13*, 169–194.

Dunning, T. (2008). *Crude democracy: Natural resource wealth and political regimes*. Cambridge: Cambridge University Press.

Erdmann, G., & Engel, U. (2007). Neopatrimonialism reconsidered: Critical review and elaboration of an elusive concept. *Commonwealth &*

Comparative Politics, 45, 95–119. http://dx.doi.org/10.1080/14662040601135813.
Fearon, J. D. (1995). Rationalist explanations for war. *International Organization, 49*, 379–414.
Fjelde, H., & Soysa, I. D. (2009). Coercion, co-optation, or cooperation? State capacity and the risk of civil war, 1961–2004. *Conflict Management and Peace Science, 26*, 5–25. http://dx.doi.org/10.1177/0738894208097664.
Fox, J. A. (2015). Social accountability: What does the evidence really say?. *World Development, 72*, 346–361. http://dx.doi.org/10.1016/j.worlddev.2015.03.011.
Fukuyama, F. (2014). *Political order and political decay: From the industrial revolution to the globalization of democracy*. New York: Farrar, Straus and Giroux.
Gent, S. E. (2011). Relative rebel strength and power sharing in intrastate conflicts. *International Interactions, 37*, 215–228. http://dx.doi.org/10.1080/03050629.2011.569239.
Global Peace Index (2015). *Peace and corruption*. New York: Institute for Economics and Peace.
Groarke, E. (2016). Mission impossible: Exploring the viability of power-sharing as a conflict-resolution tool in Syria. *International Journal of Conflict Management, 27*, 2–24. http://dx.doi.org/10.1108/IJCMA-12-2014-0090.
Hallberg, J. D. (2011). *PRIO conflict site 1989–2008 codebook: A geo-referenced dataset on armed conflict*. Oslo: Peace Research Institute Oslo.
Hallberg, J. D. (2012). PRIO conflict site 1989–2008: A geo-referenced dataset on armed conflict. *Conflict Management and Peace Science, 29*, 219–232. http://dx.doi.org/10.1177/0738894211433168.
Hartzell, C., & Hoddie, M. (2007). *Crafting peace. Power-sharing institutions and the negotiated settlement of civil wars*. University Park: Pennsylvania State University Press.
Hartzell, C., & Hoddie, M. (2015). The art of the possible: Power-sharing and post-civil war democracy. *World Politics, 67*, 37–71.
Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica, 47*, 153–161. http://dx.doi.org/10.2307/1912352.
Hegre, H., & Nygård, H. M. (2015). Governance and conflict relapse. *Journal of Conflict Resolution, 59*, 984–1016. http://dx.doi.org/10.1177/0022002713520591.
Herbst, J. (2000). *States and power in Africa: Comparative lessons in authority and control*. Princeton, N.J.: Princeton University Press.
Heywood, P. M., & Rose, J. (2014). "Close but no cigar": The measurement of corruption. *Journal of Public Policy, 34*, 507–529. http://dx.doi.org/10.1017/S0143814X14000099.
Hodler, R., & Raschky, P. A. (2014). Regional favoritism. *The Quarterly Journal of Economics, 129*, 995–1033. http://dx.doi.org/10.1093/qje/qju004.
Hoeffler, A., & Outram, V. (2011). Need, merit, or self-interest—What determines the allocation of aid?. *Review of Development Economics, 15*, 237–250. http://dx.doi.org/10.1111/j.1467-9361.2011.00605.x.
Horowitz, D. L. (1985). *Ethnic groups in conflict*. Berkeley: University of California Press.
Iwasaki, I., & Suzuki, T. (2012). The determinants of corruption in transition economies. *Economics Letters, 114*, 54–60. http://dx.doi.org/10.1016/j.econlet.2011.08.016.
Jarstad, A. K. (2008). Dilemmas of war-to-democracy transitions: Theories and concepts. In A. K. Jarstad, & T. D. Sisk (Eds.), *From war to democracy. Dilemmas of Peacebuilding* (pp. 17–36). Cambridge: Cambridge University Press.
Jarstad, A. K., & Nilsson, D. (2008). From words to deeds: The implementation of power-sharing pacts in peace accords. *Conflict Management and Peace Science, 25*, 206–223.
Jetter, M., Agudelo, A. M., & Hassan, A. R. (2015). The effect of democracy on corruption: Income is key. *World Development, 74*, 286–304. http://dx.doi.org/10.1016/j.worlddev.2015.05.016.
Joshi, M., & Mason, T. D. (2011). Civil war settlements, size of governing coalition, and durability of peace in post-civil war states. *International Interactions, 37*, 388–413. http://dx.doi.org/10.1080/03050629.2011.622645.
Kalyvas, S. N. (2006). *The logic of violence in civil war*. Cambridge: Cambridge University Press.
Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). The worldwide governance indicators: Methodology and analytical issues.http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-5430.
Kindersley, N., & Rolandsen, Ø. H. (2016). Prospects for peace and the UN regional protection force in South Sudan. *African Affairs, Online First*. http://dx.doi.org/10.1093/afraf/adw067.
Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American Economic Review, 64*, 291–303.
Kunicová, J., & Rose-Ackerman, S. (2005). Electoral rules and constitutional structures as constraints on corruption. *British Journal of Political Science, 35*, 573–606.
Levi, M. (1989). *Of rule and revenue*. Berkeley: University of California Press.
Lijphart, A. (1977). *Democracy in plural societies*. New Haven: Yale University Press.
Lindberg, J., & Orjuela, C. (2014). Corruption in the aftermath of war: An introduction. *Third World Quarterly, 35*, 723–736. http://dx.doi.org/10.1080/01436597.2014.921421.
Marshall, M. G., Jaggers, K., & Gurr, T. R. (2015). Polity IV project. Political regime characteristics and transitions, 1800–2014. Dataset User's Manual.http://www.systemicpeace.org/inscr/p4manualv2015.pdf.
Montinola, G. R., & Jackman, R. W. (2002). Sources of corruption: A cross-country study. *British Journal of Political Science, 32*, 147–170.
Morrison, K. M. (2009). Oil, nontax revenue, and the redistributional foundations of regime stability. *International Organization, 63*, 107–138. http://dx.doi.org/10.1017/S0020818309090043.
Neudorfer, N. S., & Theuerkauf, U. G. (2014). Buying war not peace: The influence of corruption on the risk of ethnic war. *Comparative Political Studies, 47*, 1856–1886. http://dx.doi.org/10.1177/0010414013516919.
Norris, P. (2008). *Driving democracy: Do power-sharing institutions work?*. Cambridge: Cambridge University Press.
North, D. C., Wallis, J. J., Webb, S. B., & Weingast, B. R. (2012). Limited access orders: Introduction to the conceptual framework. In D. C. North, J. J. Wallis, S. B. Webb, & B. R. Weingast (Eds.), *In the shadow of violence: Politics, economics, and the problems of development* (pp. 1–23). Cambridge: Cambridge University Press.
North, D. C., Wallis, J. J., & Weingast, B. R. (2009). *Violence and social orders: A conceptual framework for interpreting recorded human history*. Cambridge: Cambridge University Press.
Olson, M. (1993). Dictatorship, democracy, and development. *American Political Science Review, 87*, 567–576. http://dx.doi.org/10.2307/2938736.
Orjuela, C. (2014). Corruption and identity politics in divided societies. *Third World Quarterly, 35*, 753–769. http://dx.doi.org/10.1080/01436597.2014.921426.
Ottmann, M. (2017). Rebel constituencies and rebel violence against civilians in civil conflicts. *Conflict Management and Peace Science, 34*, 27–51. http://dx.doi.org/10.1177/0738894215570428.
Ottmann, M., & Vüllers, J. (2015). The power-sharing event dataset (PSED): A new dataset on the promises and practices of power-sharing in post-conflict countries. *Conflict Management and Peace Science, 32*, 327–350.
PRS Group (2015). Country Data Online (CDO).http://epub.prsgroup.com/the-countrydata-gateway/.
Reilly, B. (2008). Post-war elections: Uncertain turning points of transition. In T. D. Sisk, & A. K. Jarstad (Eds.), *From war to democracy. Dilemmas of peacebuilding* (pp. 157–181). Cambridge: Cambridge University Press.
Reno, W. (2013). Anti-corruption efforts in Liberia: Are they aimed at the right targets?. In C. Cheng, & D. Zaum (Eds.), *Corruption and post-conflict peacebuilding: Selling the peace?* (pp. 126–161). London: Routledge.
Roeder, P. G., & Rothchild, D. (Eds.) (2005). *Sustainable peace: Power and democracy after civil wars*. Ithaca: Cornell University Press.
Ross, M. L. (2004). What do we know about natural resources and civil war?. *Journal of Peace Research, 41*, 337–356.
Ross, M. L. (2015). What have we learned about the resource curse?. *Annual Review of Political Science, 18*, 239–259. http://dx.doi.org/10.1146/annurev-polisci-052213-040359.
Rustad, S. A., Lujala, P., & Le Billon, P. (2012). Building or spoiling peace? Lessons from the management of high-value natural resources. In S. A. Rustad, & P. Lujala (Eds.), *High-value natural resources and post-conflict peacebuilding* (pp. 571–621). New York, NY: Earthscan.
Schedler, A. (1999). Conceptualizing accountability. In A. Schedler, L. Diamond, & M. F. Plattner (Eds.), *The self-restraining state: Power and accountability in new democracies* (pp. 13–28). Boulder: Lynne Rienner Publishers.

Schmidt, R., & Galyan, A. (2016). Introducing institutional reform: The role of sunset clauses in post conflict power-sharing arrangements. In N. Ansorg, & S. Kurtenbach (Eds.), *Institutional reforms and peace-building: Change, path-dependency and societal divisions in post-war communities* (pp. 113–136). London: Routledge.

Serritzlew, S., Sønderskov, K. M., & Svendsen, G. T. (2014). Do corruption and social trust affect economic growth? A review. *Journal of Comparative Policy Analysis: Research and Practice, 16*, 121–139. http://dx.doi.org/10.1080/13876988.2012.741442.

StataCorp (2013). *Stata treatment-effects reference manual: Potential outcomes/counterfactual outcomes. Release 13*. College Station, TX: StataCorp LP.

StataCorp (2015). *Stata statistical software: Release 14*. College Station, TX: StataCorp LP.

Svensson, J. (2000). Foreign aid and rent-seeking. *Journal of International Economics, 51*, 437–461.

Svensson, J. (2005). Eight questions about corruption. *The Journal of Economic Perspectives, 19*, 19–42.

Tavits, M. (2007). Clarity of responsibility and corruption. *American Journal of Political Science, 51*, 218–229. http://dx.doi.org/10.1111/j.1540-5907.2007.00246.x.

Themnér, L., & Wallensteen, P. (2013). Armed conflicts, 1946–2012. *Journal of Peace Research, 50*, 509–521. http://dx.doi.org/10.1177/0022343313494396.

Tierney, M. J., Nielson, D. L., Hawkins, D. G., Roberts, J. T., Findley, M. G., Powers, R. M., ... Hicks, R. L. (2011). More dollars than sense: Refining our knowledge of development finance using AidData. *World Development, 39*, 1891–1906.

Transparency International (2014). *Corruption as a threat to stability and peace*. Berlin: Transparency International Deutschland e.V.

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.

Tull, D. M., & Mehler, A. (2005). The hidden costs of power-sharing: Reproducing insurgent violence in Africa. *African Affairs, 104*, 375–398. http://dx.doi.org/10.1093/afraf/adi034.

Utas, M. (Ed.) (2012). *African conflicts and informal power: Big men and networks*. London, New York: Zed Books.

van de Walle, N. (2001). *African economies and the politics of permanent crisis, 1979–99*. Cambridge: Cambridge University Press.

von Billerbeck, S. (2013). Aiding the state or aiding corruption? Aid corruption in post-conflict countries. In C. Cheng, & D. Zaum (Eds.), *Corruption and post-conflict peacebuilding: Selling the peace?* (pp. 1–25). London: Routledge.

Walter, B. F. (2002). *Committing to peace: The successful settlement of civil wars*. Princeton, NJ: Princeton University Press.

Walter, B. F. (2009). Bargaining failures and civil war. *Annual Review of Political Science, 1*, 243–261. http://dx.doi.org/10.1146/annurev.polisci.10.101405.135301.

Warren, M. (2004). What does corruption mean in a democracy?. *American Journal of Political Science, 48*, 328–343. http://dx.doi.org/10.1111/j.0092-5853.2004.00073.x.

Weidmann, N. B., Kuse, D., & Gleditsch, K. S. (2010). The geography of the international system: The CShapes dataset. *International Interactions, 36*, 86–106. http://dx.doi.org/10.1080/03050620903554614.

Wolters, S., & Kaiser, K. (2013). Fragile states, elites, and rents in the democratic Republic of the Congo. In D. C. North, J. J. Wallis, S. B. Webb, & B. R. Weingast (Eds.), *In the shadow of violence. Politics, economics, and the problems of development* (pp. 70–111). Cambridge: Cambridge University Press.

Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data* (2nd ed.) Cambridge, Mass: MIT Press.

Working Group on Corruption and Security (2014). *Corruption: The unrecognized threat to international security*. Washingon, DC: Carnegie Endowment for International Peace.

World Bank (2015a). GDP (current US).http://data.worldbank.org/indicator/NY.GDP.MKTP.CD.

World Bank (2015b). Population.http://data.worldbank.org/indicator/SP.POP.TOTL.

World Bank (2015c). Total natural resource rents (% of GDP). http://data.worldbank.org/indicator/NY.GDP.TOTL.RT.ZS.

World Governance Indicators (2015). Control of corruption.http://info.worldbank.org/governance/wgi/pdf/cc.pdf.

APPENDIX A. SUPPLEMENTARY DATA

Supplementary data associated with this article can be found, in the online version, athttp://dx.doi.org/10.1016/j.worlddev.2017.07.006.