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# **THREE ESSAYS ON AFRICA**

**PART 1: CLIMATE CHANGE, URBANIZATION, AND GOVERNMENT  
RESPONSES IN SUB-SAHARAN AFRICA**

**PART 2: CINDERELLA COUNTRY: CHARCOAL VS. CLEAN ENERGY IN THE  
DR CONGO**

**PART 3: TANGLED! PATRONAGE POLITICS AND PROVINCIAL ELITES IN THE  
DR CONGO**

by

Lisa Jené Piergallini

Claremont Graduate University  
2019

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## **APPROVAL OF THE DISSERTATION COMMITTEE**

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Lisa Jené as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Political Science.

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## **ABSTRACT**

Three Essays on Africa

by

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Claremont Graduate University, 2019

### **Part 1: Climate Change, Urbanization, and Government Responses in Sub-Saharan Africa**

This paper examines the relationship between climate change, rising urbanization rates, and regime types in the countries of sub-Saharan Africa (SSA). This project uses the national-level ND-GAIN (Notre Dame Global Adaptation Initiative) score and a selection of its sub-variables. The ND-GAIN score is a composite index that grades a country's *vulnerability* to climatic disruptions (exogenous) as well as its *readiness* in terms of adaptation investment (endogenous); sub-variables used here include Governance Readiness, Vulnerability, and Adaptive Capacity. Data are used for all 49 SSA countries, over the years 1995-2016, in a set of panel regression analyses to empirically support the literature that links climate change to decreased agricultural viability and, as a result, increased urban growth rates.

This paper also offers the unique finding that democratic regimes (measured by Polity IV) tend to be more responsive to climate change compared to their autocratic counterparts. Competing explanations are offered. One possible explanation follows the democratic rural bias theory, whereby democratic governments are expected to be more responsive to rural, agrarian constituents (Lipton 1977; Bates 1981) who are suffering

from climate change. The second potential explanation suggests that as democratic leaders seek to collect votes by expanding their winning coalition (Bueno de Mesquita et al. 2001) of local patrons in exchange for patronage, these local patrons are sometimes required to funnel down targeted benefits that address problems brought about by climate change (Poulton 2014).

This project presents a series of interaction terms that explore the nuances and dynamics of ND-GAIN climate scores, agricultural productivity, urbanization, and regime type. Findings suggest that democratic regimes are especially incentivized to address climate change when agriculture is very important to their economies. Results also suggest that democratic governments are responding to rising urbanization rates by improving their climate change adaptability. Policy recommendations include designing policies similar to those enacted by the country models of Rwanda and Botswana. Investing in targeted subsidies and innovation is also recommended.

## **Part 2: Cinderella Country: Charcoal vs. Clean Energy in the DR Congo**

The informal charcoal production industry in the Democratic Republic of the Congo (DRC) is growing. Charcoal harvesting, production, and use have detrimental effects on the environment and health, particularly for women and children. International organizations and NGOs have dedicated numerous policies and programs toward the transition to cleaner energy sources in the DRC and Central Africa more generally, yet these cleaner energies (including electricity and solar) have struggled to take root. Given the detrimental effects of charcoal and the engagement by international actors, why has

charcoal persisted as such an entrenched source of energy in Congo? The answer is partially political, partially economic, and partially cultural.

Politically, the Congolese government has failed to provide modern energy services to an overwhelming majority of its citizens, and informal charcoal production is a reaction to this. Relatedly, the nation desperately lacks navigable roads, rendering the vast majority of the country unreachable by anyone intending to build energy infrastructure (whether domestic or foreign). Economically, charcoal and woodfuel continue to stand as the cheapest sources of energy. Even in areas where electricity is available (in a handful of larger cities), and even when electric stoves are provided free of charge by NGOs, the cost of running electric stoves outweighs the cost of running charcoal stoves, particularly with staples foods, like beans, which take much time to cook. Informal charcoal production is also economically important because it provides a much-needed source of income to producers and traders—a factor often overlooked by NGOs seeking to replace charcoal with cleaner energies. Culturally, many Congolese have a strong preference for the taste provided by charcoal cooking. Moreover, households wealthy enough to afford electricity often hire rural cooks for their homes, and these cooks may only be familiar with charcoal cooking techniques. All of these factors combine and interact to entrench charcoal as the primary source of energy used in the DRC.

This project utilizes survey data from *Enquête 1-2-3* to analyze energy consumption habits of Congolese citizens. This paper also draws on experience, interviews, and anecdotal evidence from fieldwork in the DRC. Policy recommendations

for more effective and conscious energy transition strategies are offered in the conclusion section of this paper.

### **Part 3: Tangled! Patronage Politics and Provincial Elites in the DR Congo**

Expectations that Congolese decentralization would result in improved provincial governance were predicated upon an understanding of provincial elites as autonomous from Kinshasa. In reality, they are deeply embedded in informal patronage networks that reach out across the country, emanating from the presidency outwards. These networks are highly centralized, weaving a web that largely neutralizes the political, financial, and administrative autonomy of provinces. Drawing on fieldwork evidence based primarily on elite interviews conducted over 2017-2018, we investigate the intricate workings of this patronage web and we find that its main features—including a set of mechanisms that allowed for the continuation and even strengthening of central control over provincial politics—demonstrate the resilience of Congo's informal patronage structures in the face of formal institutional changes. Under such conditions, effective decentralization remains elusive. We propose policy recommendations that may work within this existing system.

## **DEDICATION**

To Linda Rouzer and Laura Jean Brantley.

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**PART 1:**

**CLIMATE CHANGE, URBANIZATION, AND  
GOVERNMENT RESPONSES IN SUB-SAHARAN  
AFRICA**



*Gisenyi (Rwanda)–Goma (DRC) border. Photo credit: Jené, 2017*

## **1. INTRODUCTION**

This project seeks to examine how climate change is making agriculture a less viable source of income in the nations of sub-Saharan Africa (SSA), how this is contributing to the increasing urbanization rates across SSA, and how different government types are responding to these changes. The first goal is to empirically investigate the relationship between climate change and urbanization in SSA, and the contexts in which this relationship is strongest (e.g., in contexts where agriculture is especially important to the economy). The next step—and the most unique contribution of this project—is to then look at how different regime types are responding to the phenomena of climate change and urbanization in different ways.

SSA is especially vulnerable to the adverse effects of climate change because (1) the high dependence of the economy on agricultural, which is itself dependent on rainfall (i.e., lack of irrigation), and (2) a limited capacity to adapt (Collier et al. 2008; Cook 2018). Climate change has exacted an especially harsh toll on agriculture in Africa, and this, in turn, has sparked massive rural to urban migration (Barros et al. 2006). As agriculture becomes less viable as a source of income due to volatile rainfall and other climatic irregularities, rural residents flee to cities in search of new employment. Yet, many cities in SSA are ill-prepared to support and incorporate these rural-to-urban migrants in terms of employment, housing, infrastructure resources, etc., and this leads to its own set of challenges in the urban areas.

Climate change is thus predicted to reinforce a host of existing problems across SSA. These include increasing poverty and hunger, depleting water sources and increasing the prevalence of droughts, reducing crop yields, increasing the spread of

disease-carrying insects, adding further stress to poor infrastructure, raising displacement rates and expanding slums, and augmenting obstacles of low state capacity. Nonetheless, certain adaptation strategies may help to mitigate these negative effects (WESO 2018). Political responses to rural-to-urban migration will be an important mediating factor and can alter the trajectory of urbanization resulting from climate change in their country, as will be discussed in the following pages.

This project also contributes to theoretical debates within the literature. Regime type may be an important factor in the adoption of such adaptation strategies. This logic follows Lipton (1977) and Bates (1981, 1993), who posit that leaders in democratic regimes will be incentivized by electoral competition to be most concerned about problems affecting the areas where the largest portions of the population (and thus highest percentage of voters) reside—and in SSA, this typically means rural, agricultural areas. By contrast, leaders in autocratic regimes will be most concerned about, and thus favor, urban residents, as they pose the biggest threat of rebellion, coups, etc. since these residents tend to be better educated and have greater potential for collective action.

Following this theory of rural biases among democracies, it is expected that more democratic governments will respond to concerns over changing climates among their constituencies in the rural, agricultural areas than will their authoritarian counterparts. State capacity is likely another important governmental factor necessary for implementing policies and strategies for climate adaptation.

However, this theory has been widely criticized for not accurately assessing African political contexts (Van de Walle 2001). A second theory explaining the relationship between democracy and better climate readiness still rests on the assumption

that democratic leaders in Africa are vote-seekers, but it frames this within a system based on clientelism. Democratic leaders will seek votes *through* an expansion of local patrons, who act as intermediaries between national elites and voters. Exchanging patronage for votes through these local patrons is a way for democratic leaders to expand their winning coalition (Bueno de Mesquita et al. 2001). In some cases, though not all, voters will demand that their local patrons deliver goods back to them, and in some cases these good will come in the form of targeted benefits that address problems associated with climate change. While these targeted goods likely come at the expense of national policy dedicated to addressing climate change, they tend to work because they fit well within clientelistic systems (Poulton 2014). In the aggregate, this may translate into the better performance of democracies to climate change that is observed in this paper.

There has been a long-standing debate in the literature between the “institutions hypothesis” (Acemoglu et al. 2000; Easterly and Levine 2003; Rodrik, Subramanian, and Trebbi 2004) and the “geography hypothesis” (Diamond 1997; Sachs, Mellinger, and Gallup 2001; Collier 2007). A few studies have incorporated greater complexity and dynamism into their theories of geography and institutions (see for example: Dell, Jones, and Olken 2009; Parent and Zouache 2012), yet there remains a dearth of research on precise interactions between institutions and geography, which inevitably interact and have profound consequences for human populations and for the environment.

This study hopes to help fill that gap by providing (1) an examination of urbanization in SSA that results, in part, from climate vulnerability and lack of adaptive capacity in highly agricultural areas, and (2) an analysis of how political regimes in SSA are reacting and responding to climate change and urbanization. While there are a number

of studies that focus on the varied problems caused by climate change in Africa, there has been little research conducted on how different government types and political institutions are responding to these problems. Moreover, scholars tend to prescribe ambitious policy recommendations for combating the adverse effects of climate change, yet they do so without consideration of political incentives or motivations. A better understanding of how political factors interact with climate change and urbanization is therefore needed.

The following pages will first provide background information on climate change and urbanization in SSA. Next, the data and methodologies used in this project will be explained. A theoretical section will follow, outlining possible explanation for why regime type will likely matter for climate change readiness. Results and findings will be presented in the analysis section. Within the analysis section, this project will first endeavor to confirm the effects of climate change on urbanization in SSA, and it will provide support that this is occurring in some contexts (e.g., in highly agricultural-dependent economies) more than in others. Subsequently, the analysis section will show that democratic regimes tend to be better prepared for the adverse effects of climate change. This paper will then conclude with a brief summary, an overview of some possible adaptive strategies. Finally, policy recommendations will be offered, first with focus on the model countries of Rwanda and Botswana, and second with suggestions for investment by donors and domestic governments in subsidies and innovation.



## **2. BACKGROUND: CLIMATE CHANGE IN SUB-SAHARAN AFRICA**

SSA is already, and will likely to continue to be, more severely affected by climate change than any other region (Collier et al. 2008; Barrios et al. 2010; Henderson et al. 2017; Cook 2018). SSA is especially hard hit by the effects of climate change due to a number of factors. Geographically, the African continent is unfortunately highly susceptible to the adverse effects of climate change. For example, the continent on average is warming faster than the global average. There is, however, important variation across the continent, as some areas of Africa are getting wetter and others are getting drier (Collier et al. 2008). Other geographical disadvantages include fragile soils, which have difficulty retaining moisture (Barrios et al. 2006; Mastrorillo et al. 2016), and the high degree of endemic diseases (Collier et al. 2008; Annez et al. 2010; Serdeczny et al. 2017).

African economies are also overwhelmingly dependent on agriculture, which accounts for approximately 60% of employment and, in some cases, over 50% of a nation's GDP (Collier et al. 2008), yet a majority of the continent lacks widespread irrigation systems, leaving farms and farmers largely dependent on rainfall (Barrios et al. 2006; Collier et al. 2008; Henderson et al. 2017; Amuakwa-Mensah and Adom 2017). Indeed, only about 4% of agricultural land is irrigated across SSA, compared to the global average of 18% (You et al. 2010). As a result, even merely a few days of excessive temperatures during the flowering season can drastically affect wheat, fruit, groundnut, and soybean yields (Collier et al. 2008).

Agricultural productivity in SSA is expected to become increasingly unsteady and unpredictable as climate volatility rises, and this will expose evermore people to poverty.

Estimates from Tanzania predict that between 90 thousand (0.26% of the population) and 1.17 million (3.4% of the population) additional poor will result from climate-induced poverty in the 21<sup>st</sup> century (Ahmed et al. 2009).

Moreover, many of those working in the agricultural sector in SSA are small-scale or subsistence farmers, rendering them particularly vulnerable (Morton 2007; Collier et al. 2008). Given the informality of these types of farmers, the effects of climate change on their livelihoods and behaviors will be difficult to monitor and predict, and they may likely be locally specific. Other rural industries that offer alternative vocations may also be underdeveloped, thereby limiting the available options.

Extreme climatic events, such droughts and floods, are also on the rise, and they bring their own forms of devastation. In the coming years, it is predicted that droughts will force marginal agriculture out of production in many regions (Collier et al. 2008). The increased presence of droughts, depleted water sources, uncertain crop responses to changing climates, and fluctuating food prices (particularly staples grains) make exacerbated poverty, hunger, malnutrition and poor health likely ramifications of climate change (Ahmed et al. 2009; Annez et al. 2010; Serdeczny et al. 2017).

Conflict may also be triggered by climate change, especially as natural resources (e.g., freshwater and viable land) become scarcer. While Hendrix and Salehyan (2012) contend that organized political violence may in fact be reduced in the presence of resource scarcity—since larger-scale military operations require water and food abundance, not scarcity, in order to meet the basic needs of soldiers—droughts, famine, and the like may spark disjointed, smaller-scale, and informal fighting. For example, conflicts between nomadic herders and farmers over the use of land has risen as the

negative effects of climate change become felt more severely; Somalia and Nigeria, for instance, have seen land-related conflicts rise between different tribes (Kuele and Miola 2018; Nugent 2018). However, contrary to the neo-Malthusian conventional wisdom that environmental and resource scarcity will inevitably lead to conflict, Gizelis and Wooden (2010) maintain that political institutions, particularly democratic institutions, are able to mitigate the likelihood and incidence of scarcity-induced conflict (the role of political institutions as a mitigating factor will be discussed in more depth later on).

In general, the economic and political contexts in most SSA countries lack the capacity to sufficiently protect their citizens against vulnerability to the adverse effects of climate change (Barrios et al. 2006). In most countries, government safety nets and securities against shocks to protect citizens remain very limited or even nonexistent (Barrios et al. 2006). This, in part, stems back to a lack of resources—whether due to limited funds, corruption, or both—being devoted to such securities (Collier et al. 2008). Furthermore, the lack of property rights protection may lead to “tragedy of the commons” situations regarding environmental management (Barrios et al. 2006).

These factors make African populations and economies more acutely exposed to climatic variations, despite the continent’s negligible contributions to the global carbon emissions problem. Thus, while other regions’ environmental focus is often on the reduction of carbon emissions, SSA’s immediate concern is adapting its modes of production to an increasingly precarious environment and uncertain set of opportunities (Collier et al. 2008).

### **3. MIGRATION AND URBANIZATION**

Urbanization has spiked across SSA in recent years, and much of this has been attributed to rural-to-urban migrations induced by climate change (Barrios et al. 2006, 2010; Backhaus et al. 2015; Henderson et al. 2017). Barrios et al. (2006), in investigating the role climate change plays in urbanization patterns, use rainfall as a proxy for climate change, and, importantly, they find that rainfall variation, and climate change more generally, have affected urbanization rates in SSA but not in the rest of the developing world. While there are certainly multiple causes contributing to the increased urban influx across SSA, many scholars agree that climate change is among the most important drivers of rural-to-urban migration (Warner 2010; Black et al. 2011; Seto 2011; Parnell and Walawege 2011; Backhaus 2015).

These rural-to-urban migrants have been labeled “eco refugees” or “environmental refugees,” as they flee their rural homes due to socio-economic strains resulting from changing environmental conditions. Yet, as climate-induced rural to urban migration exceeds the “natural” growth rate of cities, urban destinations often lack the capacity to absorb the massive influx of new people, in terms of employment, housing, infrastructure, etc. (Parnell and Walawege 2011).

Brighter economic prospects may motivate migration to urban areas even when these areas have high unemployment and poverty rates, as migrants may base their decisions to move on expectations of better incomes. Even when urban destinations suffer from high unemployment and poverty, these perceptions may still motivate rural to urban migration. Many migrants believe (perhaps in vain) that cities will offer more economic opportunities, including jobs, education, and basic service provision (Barrios et

al. 2006). Thus, while the rural, agricultural areas in SSA are at the greatest risk of the damaging effects of climate change, the urban destinations of the eco refugees are beginning to buckle under the pressure of the population influx, thereby emerging as the indirect locational casualties of climate change.

Urbanization without the supporting infrastructure may in fact reinforce the negative effects of climate change (Zhu et al. 2007), such as the spread of disease, the rise of inequality and unemployment, and the increase of poverty and hunger. Douglas et al. (2008) emphasize the vulnerability of the urban poor in Africa to the negative effects of climate change, as they typically live in the slums with poor infrastructure (unpaved roads, lack of indoor plumbing) and as they already struggle to compete for jobs with limited education or skills training.

Flooding, in particular, poses a dangerous threat to African urban dwellers. Most cities are ill-equipped to handle increasingly volatile rains, and this problem is compounded by rural migrants flocking to cities in order to flee their own climate-related troubles. During floods, local urban authorities tend to focus attention on the commercial and wealthier areas of towns and cities, leaving poorer communities to fend for themselves (Douglas et al. 2008; Collier et al. 2008). Insufficient resources and funding are key issues, of course, but there are also fundamental political and institutional factors that impede adequate adaptation policies and measures from being adopted by local governments.

### ***3.1. Push and Pull Drivers of Urbanization***

Rural-to-urban migration is a combination of push and pull factors, but is one motivator stronger than the other? One hypothesis presented here is that climate change functions as a powerful push factor in urbanization across SSA—that is, climate change is posited to be a stronger driver of urbanization in SSA compared to pull factors, such as industrialization or urban labor demands.

The standard *pull* factors drawing rural migrants into cities are based on the attraction of existing (or, perceived) advantages and opportunities that urban areas offer over those in rural locations. As Barrios et al. (2006) suggest, even though there tends to be persistent unemployment in urban areas, the *perception* of economic opportunities encourages rural people to flee to cities with hopes of obtaining employment. Other pull factors include better service delivery and relatively higher economic prosperity (Annez et al. 2010; Parnell and Walawege 2011), human capital investment and trade opportunities (Henderson et al. 2017), and resource rent windfalls, which are typically spent in cities (Gollin et al. 2015; Henderson et al. 2017).

Rural-to-urban *push* factors are based, not the appeal of cities, but on the unviability of the countryside. As Annez et al. (2010: 222) state, “[u]rbanization in Africa is ‘flight,’ reflecting choices made under duress, rather than migration to unduly attractive cities.” Such push factors include water shortages and displacement from conflict and civil war (Barrios et al. 2016; Henderson et al. 2017), land degradation and lack of alternatives to agricultural sector employment (Parnell and Walawege 2011), and poor rural infrastructure (Collier et al. 2008; Henderson et al. 2017). A growing body of literature also points to climate change as a push factor driving rural residents into the

cities, and a number of empirical studies have found supporting evidence that climate change and its resulting adverse effects are indeed among the main push factors spurring rural-to-urban migration (Barrios et al. 2006, 2010; Backhaus 2015; Mastrorillo et al. 2016; Henderson et al. 2017).

While this project will focus on climate change as one of the primary push factors inducing rural-to-urban migration across SSA, Parnell and Walawege (2011) offer the important reminder that climate change is not an isolated driver of rural-to-urban migration, but rather interacts with many other drivers. They suggest that migration is not simply a steady flow of rural migrants into cities, but that it rather follows a circular, oscillating, and often dynamic pattern. As they put it, “[s]implistic notions of push and pull models of migration and urbanization belie the great complexity of human movement and settlement in Africa” (Parnell and Walawege 2011: 1). In their view [P&W], many push and pull factors interact. For example, if and when urban areas prove inadequate at providing jobs, migrants may return to their rural homes. Moreover, conflict is certainly not limited to rural areas, and so urban conflict and political instability may in fact induce people to migrate out of cities. In short, people likely move both directions to some degree.

Temporary relocation may also be common, and can be due to short-term food shortages or crop failures. There may also be informal networks of migrants linked into perpetual motion; for example, traders in the informal production of charcoal may spend much time in the urban areas, but may still consider their rural lodgings to be their true homes. Furthermore, certain family members may move to mining areas for work, or to cities for university educations, for extended but ultimately limited periods of time.

Serdeczny et al. (2017) further suggest that migrants sometimes initially move into informal settlements, and there they can be exposed to a variety of risks—such as higher incidence of hunger and infectious diseases—which may proven to be even worse compared to their place of origin. This could make migration temporary, even in cases where the migrant did not expect to return.

Even in the presence of powerful push and pull factors, mobility constraints likely limit their impact. For instance, remoteness and distance from urban centers, lack of roads and transportation, and lack of financial resources may dampen migration rates, even if the push impulses are there. As Mastrorillo et al. (2016) point out, while climate change is an especially strong push among lower-income individuals and agricultural workers, the most vulnerable among them may be the least able to afford migration. This, along with incidences of temporary migration, should therefore be kept in mind as caveats when examining rural-to-urban migration patterns. Nevertheless, urbanization across SSA is indeed rising, so it is worthwhile to look at what happens in cities as their populations expand. The following section will discuss this.

### ***3.2. What Happens in Cities?***

What happens when rural migrants move to cities? The short answer is: it depends. Some scholars insist that a city's prior level of industrialization is the most important factor; specifically, more industrialized cities will be better equipped to absorb rural-to-urban migrants (Barrios et al. 2006; Henderson et al. 2017). While industrialization is low across the African continent, even a slight industrial advantage may affect a city's ability to incorporate rural migrants. Specifically, the ability of cities to successfully absorb



migrants will depend on the nature of the urban sector into which rural residents are migrating.

Barrios et al. (2006) offer two urban scenarios: (1) where there is demand for labor in manufacturing export sectors, and (2) where the primary sector is servicing and supplying goods for the surrounding rural areas. In the first context, rural migrants are more easily absorbed, as they are more likely able to find work; in this scenario, the city's overall income is expected to increase. In the second context, rural-to-urban migrants with not only deplete the demand for goods and services produced in the urban areas, it will also flood the job market, thereby doubly undermining the chances of successful absorption; in this scenario, overall income will decrease.

However, most cities in SSA have low industrialization (only 20-25% in Henderson et al.'s (2017) sample), and are thus unable to adequately absorb migrants. Many migrants will then default to seeking employment in informal sectors. This partially explains why urbanization in SSA does not correlate highly with increased economic growth or incomes, as it tends to do in other regions (Annez et al. 2010). Instead, urbanization is occurring in a “second-best” context, rather than a “first-best” scenario whereby real demand for labor is the primary pull enticing migrants to cities.

Many scholars therefore argue that advancing industrialization and sector diversification away from agricultural dependence may prove to be among the most important policy responses to climate change in SSA (Barrios et al. 2006; Collier et al. 2008; Seto 2011; Henderson et al. 2017). Collier et al. (2008) encourage SSA governments to respond to climate change primarily by cultivating business-friendly environments—i.e., through the provision of information, incentives, and infrastructure

investments. Seto (2011) maintains that the biggest challenge going forward will involve augmenting the skills of the labor force and promoting technological innovation and adoption. Fostering economic growth in African cities “will require substantial investment in education and capacity building and the ability of urban centers to absorb the migrant labor pool” (Seto 2011: S94). Yet, as will be discussed in the following section, urbanization in SSA has not overwhelmingly corresponded to economic growth.

Another element to consider is ethnic fractionalization. Migrants who travel to areas without ancestral linkages may be excluded from certain types of jobs, particularly those that generate higher incomes. Being “non-autochthonous” implies a lack of legitimate right to the resources and benefits of the location, and this often extends to jobs, patronage, and political offices (Jackson 2006; Gobbers 2016). Moving from one’s place of origin may thus be risky beyond logistical concerns; relocating to a new area may present compounding challenges of being considered an “outsider,” even if the migrant does not leave her own country but merely moves to a new province or territory.

On the other hand, urbanization may in fact alleviate ethnic exclusion, as urban areas tend to naturally be more diverse. Green (2013) finds that urbanization is associated with greater attachment to national over ethnic identity. This is inspired in part by exposure, education, and nationalist propaganda. Moreover, urbanization removes the isolation of rural areas, which is a key driver of ethnic fractionalization. Migrants to urban areas will tend to assimilate into larger and/or broader ethnic groups in order to gain security and perhaps even prestige (ibid.). Thus, over time, higher levels of urbanization should contribute to lower levels of ethnic diversity. Green uses the analogy of Russian (*Matryoshka*) dolls to describe the various layers of ethnically based identities

present in a given person. Upon migrating to a city, one will likely shift the primary identity from a smaller to larger “doll,” thereby contributing to a process of homogenization and a diminishing of non-autochthonous exclusion. Yet, as we have observed around the world, an influx of migrants looking for jobs in contexts of high unemployment and limited resources tends to spark anti-migrant reactions and a rise of “outsider” vs. “insider” sentiments.

### ***3.3. Lack of Economic Growth with Rising Urbanization***

Historically, urbanization has corresponded to an increase in economic prosperity. This has predominantly been due to the fact that urbanization in such cases has been sparked by industrialization or technology revolutions and the concomitant demands for labors—that is, cities have *pulled* people in from the surrounding countryside with realistic employment opportunities and financial incentives. The recent surge in urbanization across SSA, conversely, has been largely based on *push* factors, many of which stem from the adverse effects of climate change (volatile rainfall, droughts, lower crop yields, higher foods prices, uncertain incomes, increases in hunger and poverty, etc.). Since a demand for labor is not the principal driving force bringing people to cities, rural residents may flock to cities with aspirations of finding better employment, but these hopes are not always fulfilled. As a result, urbanization in SSA, often far from ushering in economic booms, has instead in many cases brought higher incidences of unemployment, homelessness, urban poverty, and stress on already poor urban infrastructure.

Thus, while SSA is urbanizing faster than any other region in the world (Resnick 2012), this has been accompanied by limited industrialization and only moderate increases in economic growth. As stated, many cities in SSA lack the capacity to absorb the massive inflow of new people, on the one hand, and they lack the capacity to manage their own climate-induced challenges, on the other.

Figure 1.1 shows the upward progression of the percent of the population living in urban areas for all SSA countries over the years 1960 to 2017. Djibouti stands out as having an early spike in urbanization between 1960 and 1980, and Gabon stands out as currently having the highest percent of its population living in urban areas.

Figure 1.1

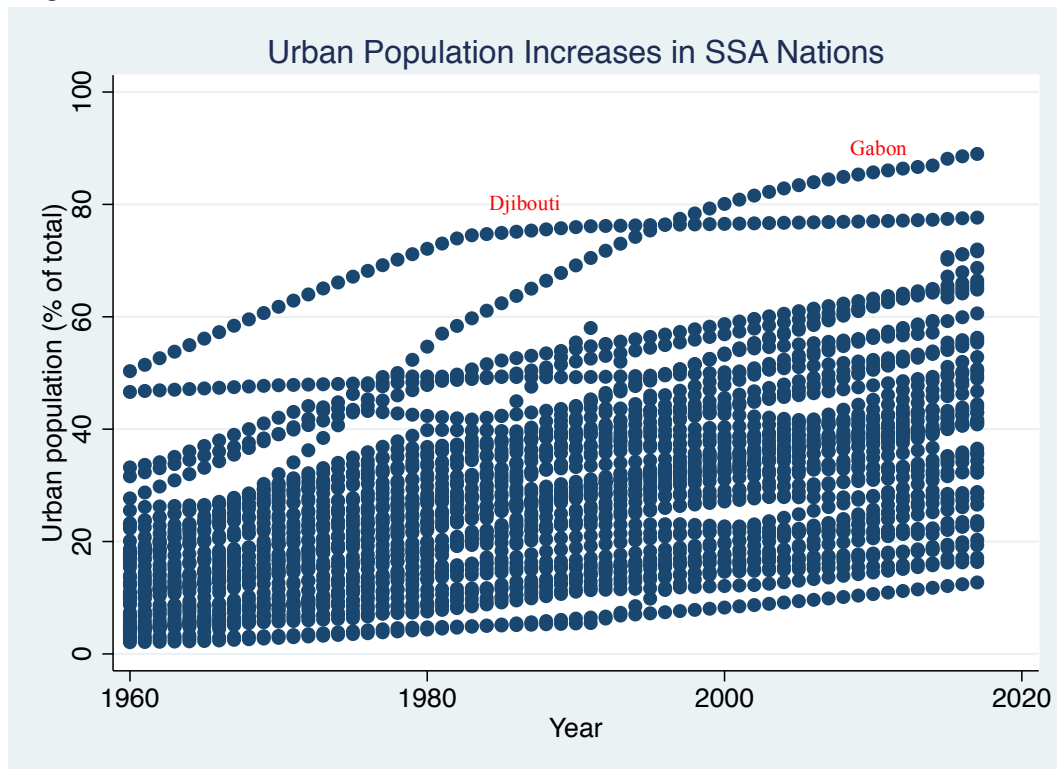
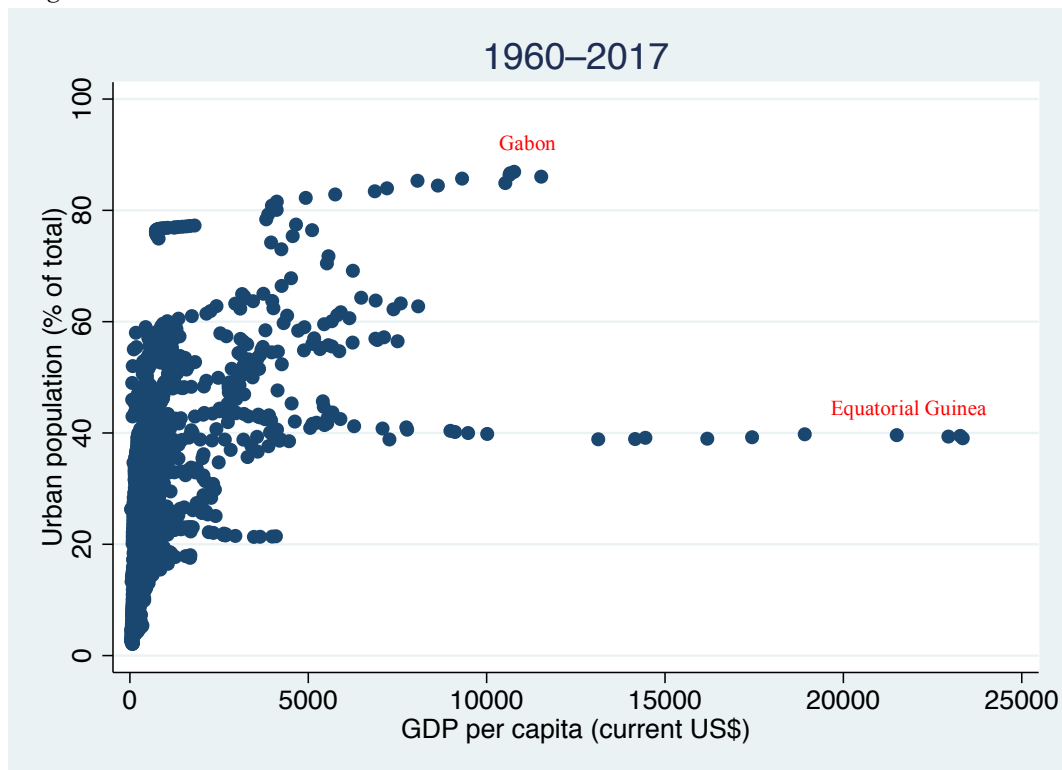


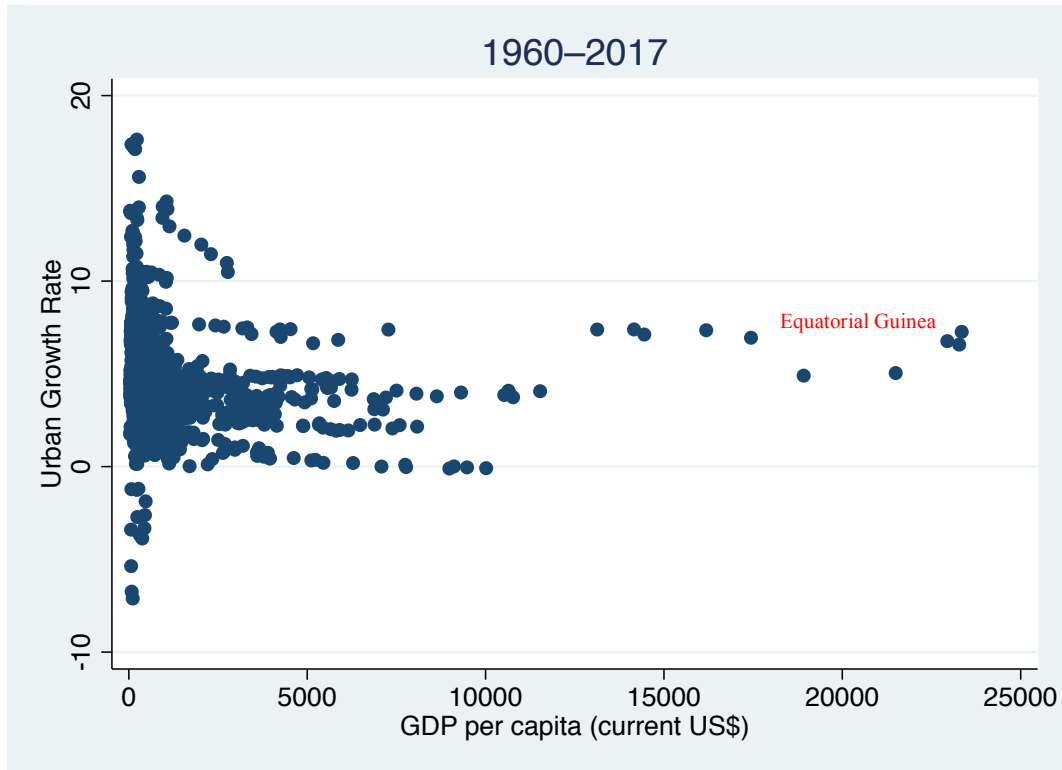
Figure 2.1 presents the relationship between urban population (percent of total) and GDP per capita (in current US\$); aside from the outlier of Gabon, there is a slight positive correlation between the two (though not an overwhelming one) with a high incidence of heteroskedasticity. Figure 3.2 shows the relationship between GDP per capita and urban growth rate; here, there is virtually no observable relationship. In both Figures 2.1 and 3.1, Equatorial Guinea even stands out as increasing its GDP per capita impressively over the years while keeping a fairly steady urban population rate<sup>1</sup>. The lack of a strong correlation between urbanization and economic prosperity makes the escalating rates of urban growth across SSA highly concerning.

Figure 2.1



<sup>1</sup> Equatorial Guinea's GDP per capita spike began in the second half of the 1990s, following a discovery of oil reserves in 1994.

Figure 3.1



### 3.4. So, Why Should We Care?

Climate change is fundamentally a global problem, and the effects are not restricted by any borders. Accelerated urbanization is only one of the many ways in which SSA is experiencing the effects of climate change. Urbanization that is not motivated by labor demands and corresponding economic prosperity is almost certainly fated to exacerbate existing problems rather than alleviate them. The tragic irony is that SSA is responsible for only a minuscule amount of the greenhouse gas emissions that have led to climate change as we know it today, yet SSA is suffering the effects in many ways worse than any other region. The limited capacity of SSA governments to adapt and respond to

climate change has led a number of humanitarians and scholars alike to declare it the responsibility of wealthy nations (who have benefited from *and* contributed most to climate change) to help suffering developing countries in their adaptation strategies, both financially and technologically (Collier et al. 2008; Cao et al. 2010; Liu 2015; Owoeye 2016).

Beyond the humanitarian argument is the global economy argument. SSA nations have the potential to be powerful producers and consumers, and the global market will certainly suffer as SSA remains mired in situations of poverty and environmental degradation. Moreover, there has been a strong reaction against immigrants and refugees around the world. While this project focuses on internal migration related to climate change, there is also a large outflow of eco refugees who flee to other countries. Yet, the rise of extreme rightist and nationalist movements in Europe, the United States, and elsewhere has made much of the world inhospitable to refugees of all kinds, and this includes eco refugees. Paradoxically, the rightist movements that rally against incoming immigrants and refugees and encourage policies to block them also tend to deprioritize, or altogether deny, climate change as a global affliction that demands global solutions.

#### **4. DATA AND METHODOLOGY**

This project incorporates data from all 49 SSA countries, given data availability. Some variables include data from as far back as 1960 (e.g., urban population), however the central climate variable used here provides data from 1995 to 2016. This climate variable is ND-GAIN (Notre Dame Global Adaptation Initiative); it is a composite index that scores a country's *vulnerability* to climatic disruptions (exogenous) as well as its

*readiness* in terms of adaptation investment (endogenous) (Chen 2015). A higher overall ND-GAIN score is preferable (meaning the country is better prepared and/or less vulnerable). Among SSA countries, it ranges from 16 (Somalia) to 56 (Mauritius). Norway currently possesses the highest worldwide score at 76.

*Vulnerability* is defined as the “propensity or predisposition of human societies to be negatively impacted by climate hazards,” and is based on measures of exposure, sensitivity, and adaptive capacity (Chen 2015: 3). Six sectors are taken into account for vulnerability: ecosystem, health, food, water, human habitat, and infrastructure. *Adaptive capacity* is a component of the Vulnerability score that is isolated in this project, and it is defined as the “ability of society and its supporting sectors to adjust to reduce potential damage and to respond to the negative consequences of climate events” (ibid.: 4). These variables range from 0-1, with higher scores being worse (i.e., indicating higher vulnerability and/or lower adaptive capacity).

*Readiness* is defined as making “effective use of investments for adaptation actions thanks to a safe and efficient business environment,” and is based on economic, governance, and social components (ibid.). *Governance readiness* is a component of the Readiness score that is isolated in this project, and is defined as the “stability of the society and institutional arrangements that contribute to the investment risks,” and is a measure of “governance capacity” (ibid.). These variables also range from 0-1, with higher scores being better (i.e., higher levels of governance readiness).

The World Bank provides data for: urban population, urban population growth rate, foreign direct investment (FDI), gross domestic product (GDP) per capita, industry value-added, agriculture value-added, unemployment rate, and resource rents.



Polity IV is used as a measure of regime type. It is a scale of -10 to 10, with 10 representing the most democratic governments, and -10 the most autocratic governments. The use of this variable is supported by a number of other similar studies that examine regime type in SSA (Gizelis and Wooden 2010; Adams et al. 2016 (who use Polity 2); Amuakwa-Mensah and Adom 2017).

Afrobarometer 2016 supplies responses to survey questions about climate change<sup>2</sup>. Travels through the Democratic Republic of the Congo, Senegal, and Rwanda (between 2016-2018) provide anecdotal support, including interviews, stories, and photos.

This project uses the above data in a series of panel regression analyses, controlling for country and year fixed effects (tables with year fixed effects are available in the Appendix). Interaction terms are also used to provide more nuanced and dynamic analyses of the relationships among the variables under investigation.

#### *HYPOTHESES:*

1. Higher vulnerability to climate change will push people into the cities, especially in countries with larger agricultural sectors.
2. A higher Climate (ND-GAIN) score will mitigate the rate of urbanization in a given country.
3. A higher Governance Readiness score will mitigate the rate of urbanization in a given country.

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<sup>2</sup> Countries included in this sample: Benin, Botswana, Burkina Faso, Cabo Verde, Cameroon, Côte d'Ivoire, Eswatini, Gabon, Gambia, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Namibia, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe (Tunisia has been excluded, as it is not in SSA).

4. More democratic regimes will, on average, be better prepared to adapt to climate change.

Possible explanatory theories for the relationship between regime type and climate change readiness are offered in the following section.

## **5. THEORY: WHY DEMOCRACIES MIGHT BE BETTER PREPARED FOR CLIMATE CHANGE**

This section discusses some possible theories explaining the relationship between democracy and climate change readiness.

Why might democracies respond to climate change better than non-democracies? Generally, democratic nations in SSA produce fewer CO<sub>2</sub> emissions compared to non-democratic regimes, and democratic governments are also more likely to enact pro-environmental policies (Adams et al. 2016; Amuakwa-Mensah & Adom 2017). The presence of strong rule of law institutions will enable better enforcement of environmental regulations (Amuakwa-Mensah & Adom 2017) and democratic regimes are also more likely to agree to international environmental agreements (Adams et al. 2016).

Furthermore, Amuakwa-Mensah & Adom (2017) argue that the “pollution haven hypothesis”—which suggests that international corporations will leave their home countries where environmental regulations are strict, and relocate to developing countries where environmental regulations are weak, hence polluting the host countries—can be effectively prevented by good institutional settings (that is, democratic regimes with high capacity and rule of law). Adams et al. (2016) maintain that the ability of democratic

institutions to moderate the negative effects of climate changes translates to urbanization as well, as urbanization in democratic contexts will likely be accompanied by pro-environment policies.

Gizelis and Wooden (2010) go further to argue that political institutions are a mitigating factor in the relationship between environmental scarcity and conflict. They construct an interaction term with Polity IV, environmental variables, and the probability of conflict. They find that conflict resulting from environmental scarcity is more likely in contexts of low state capacity and non-democratic governance. They argue that democratic governments are more responsive to citizens' anxieties over resource scarcity and other environmental concerns. They also argue that democratic governments are better at resolving conflicts—including conflicts over water scarcity, for instance—both domestically (with court systems) and internationally (with diplomacy versus war).

Survey data from the 2016 Afrobarometer demonstrate that respondents (on average across the SSA countries in the sample) recognize and are concerned about the effects of climate change (see Table 1.1). On average, about 58% report having previously heard the term “climate change” (compared to 39% who have not); 77% believe that climate change needs to be stopped (vs. about 23% who do not); approximately 51% consider the climate to be worse or much worse than it was 10 years ago (compared to 17% who view it as the same and 18.6% who view it as better or much better); and around 70% believe that climate change is making life in their country worse or much worse (compared to 8.6% who see no effect and 17.8% who view it as better or much better).

*Table 1.1: SSA Averages*

<b>Question</b>	<b>Yes</b>	<b>No</b>	<b>Worse/Much Worse</b>	<b>Same</b>	<b>Better/Much Better</b>
<b>Previously Heard of Climate Change</b>	58.2%	39.3%			
<b>Climate Change Needs to be Stopped</b>	77.1%	22.9%			
<b>Climate Compared to 10 Years Ago</b>			50.9%	17.3%	18.6%
<b>How Climate is Affecting Life in the Country</b>			70.2%	8.6%	17.8%

Despite the recognition of a changing climate, information and education regarding solutions appear to be lacking. For example, one Congolese professor lamented changing rainfall patterns and deforestation, while at the same time littering habitually. Adams et al. (2016) suggest that as environmental protection becomes more and more integrated into public policy, a virtuous cycle will occur whereby the public's perception about the environment will be positively changed. However, incorporating environmental studies into school curricula and spreading information on how to contribute to environmental protection will also likely be productive strategies.

Institutions—both formal and informal—no doubt matter for how a government responds (or not) to the rising presence of problems brought about by climate change. Sections 5.2. and 5.3. below will discuss in more depth two possible explanations for correlation between climate change responsiveness and regime type. First, the democratic rural bias theory will be explored. Second, a theory of patronage-based winning coalition expansion will be proposed.

### ***5.1. Urban vs. Rural Biases***

It has long been argued that, among the SSA nations that adopted multiparty democracy beginning in the early 1990s, the introduction of political competition has redirected the attention of political elites from urban to rural constituents (Lipton 1977; Bates 1981, 1993; Stasavage 2005; Raleigh 2014). According to this logic, authoritarian governments favor urban residents, as they possessed a stronger credible threat of protests and coups. Multiparty democracy, by contrast, has directed vote-seeking politicians' attentions toward rural areas, where the majority of the population continues to live despite the ever-growing urbanization rates. Rural communities boast the population numbers that appeal to vote-seeking democratic politicians, whereas authoritarian regimes seek to appease urban communities that pose greater threats of anti-government collective action.

It is argued that this is due to the fact that democratic leaders will respond to and be held accountable by citizens concerned about environmental degradation. In democratic regimes it is the median voter who decides on environmental policies, and the median voter will prefer stricter environmental policies, since she will not bear the highest costs of stringent environmental policies (rather, it will be economic and political elites who bear the brunt of these costs) (Adams et al. 2016).

Of course, demographic balances do shift over time. Will urban area begin to attract greater attention of democratic leaders as their population numbers rise? Resnick (2012) explains how Africa's urban poor are increasingly becoming a key constituency for opposition parties, and she notes that such opposition parties have gained many electoral wins at municipal levels (particularly with city councils). Yet, Raleigh (2014) points out that these councils have been rendered ineffective by being denied funds from

the central government. She further suggests that democratic political elites are trying to maintain power by actively suppressing the rising political potential of growing urban populations. This includes tactics that disenfranchise migrants and the urban poor, such as vote buying, gerrymandering, and requiring migrants to return to their rural home villages to vote.

These factors help explain the still limited attention given to the urban poor and migrants, despite their growing numbers and their litany of pressing needs. It may also help explain why urbanization in SSA has not yet been accompanied by large-scale industrialization efforts, which would conceivably benefit current urban residents and help cities absorb environmental refugees. If urbanization rates continue at their current pace, city populations may indeed hit a critical mass and reach a demographic tipping point, whereby democratic governments may pivot their attention away from the countryside and toward their urban constituents. But for now rural populations still vastly outnumber urban dwellers in numerical terms.

The theory of democratic rural bias suggests that the more democratic governments in SSA will likely devote greater resources toward the alleviation of climate-related hardships in rural areas and will overall be better prepared for the effects of climate change. The basis of the rural bias theory is that democratic leaders will listen to and actively work to address the leading concerns of their rural populations. This theory has been challenged by large number of scholars, however (see for example: van de Walle 2001; Jones & Corbridge 2010; Poulton 2014; Poulton & Kanyinga 2014; Pierskalla 2016; Waldner et al. 2017), and an alternative explanation—centered on

patronage politics rather than pro-rural policies—will be discussed in the following section.

### ***5.2. Expansion of Patronage-Based Winning Coalitions***

Many scholars of African politics have challenged Bates' theory of the relationship between regime type and urban and rural biases in Africa (van de Walle 2001; Jones & Corbridge 2010; Poulton 2014; Poulton & Kanyinga 2014; Pierskalla 2016; Waldner et al. 2017). In terms of the correlation between democratic governance and better climate change readiness, an alternative explanation is the notion that African democracies seek to expand their patronage-based winning coalition (Bueno de Mesquita et al. 2001) of local patrons. While political competition has largely failed to bring about pro-poor, pro-rural, and pro-agricultural policymaking at the national level (Poulton 2014), it has induced political leaders to devise ways to procure votes within the existing systems based on patronage exchange and clientelism.

In contexts where the majority of the population has limited education and low levels of information, voters tend to rely on ethnic and regional affiliations instead of casting votes based on policies, issues, or performance evaluations (Chandra 2007). Popular demand for national, broad-based policies therefore remains quite limited, even in the presence of democratic electoral competition (Poulton 2014). Nonetheless, in some cases political competition can result in an expansion of *targeted* benefits aimed at a wider selection of rural communities.

The need to collect votes encourages national political elites to assemble coalitions of local patrons who act as intermediaries between their constituencies and the

central government (van de Wall 2001; Leonard et al. 2009; Baldwin 2011; Poulton 2014; Poulton & Kanyinga 2014). The local patrons deliver votes in exchange for various forms of patronage, and portions of this may be redistributed downward.

Voters' expectations of returns are often quite low (Leonard et al. 2009; Poulton 2014), but in some cases local patrons are expected to deliver benefits and these may come in the form of climate change adaptation, response, or prevention (perhaps without the overt intention of tackling climate change, as such). For example, regional or ethnic patrons may entice or reward voters with fertilizer subsidies, construction of irrigation infrastructure, or research into specific crops or livestock that are important to that region (Poulton 2014). It may come in the form of "insurance" during tough times, e.g., crop failures or low yields (Leonard et al. 2009).

The extent to which citizens expect their local patrons to deliver benefits in exchange for votes depends on the local context, and there will likely be variation even within countries. In Kenya, for example, more hierarchical societies, such as the Luo, tend to expect less, yet local patrons can readily count on their loyal support; in other parts of the country, however—such as areas with greater independence from leaders (e.g., in the Rift Valley) and in areas where citizens are wealthier and more educated (e.g., the Kikuyu)—there is greater citizen demand for benefits to be delivered in exchange for votes (Poulton & Kanyinga 2014).

While this multi-layered system of exchange weakens incentives to develop national policies (Baldwin 2011), an expanded network of local patrons means that a larger segment of the population may be receiving targeted benefits and club goods. In contexts where votes are required to gain and maintain power, national elites are



motivated to expand their network of local patrons because this is a reliable and proven method for collecting votes, as it conforms to the embedded pattern of ethno-regional voting. As elites cobble together a larger winning coalition of local patrons, at least some of the local communities are demanding solutions to problems—even if short-term and exclusionary. Moreover, as this winning coalition of local patrons expands, it almost inevitably expands to include more rural and agricultural communities, as these represent the majority of the population.

Thus, while not an outright rejection of Bates' theory of democratic rural bias, this is a significant tweak. Democratic leaders' attention is directed to the concerns of rural constituents indirectly; national elites need local patrons to deliver votes, and these local patrons will seek patronage in return—and in some situations (though, certainly not all) this comes in the form of targeted benefits that help citizens in their district adapt to and/or deal with the consequences of climate change.

Subsidies and club goods fit quite well with patronage-based systems (Poulton 2014), and, even though these come at the expense of national policies (Baldwin 2011; Poulton & Kanyinga 2014), in the aggregate this could result in the overall better performance of democracies with regard to climate change readiness that has been observed in this paper.

In Kenya, for example, an ambitious and rather radical reform of national agricultural policy was initially passed, but was ultimately thwarted by the formidable force of patronage politics in the country (Poulton & Kanyinga 2014). However, as power in Kenya is maintained through regional coalitions, this has sometimes successfully translated into region-specific support for certain crops (Poulton 2014).

As problems related to climate change become more common and severe, there may be more instances of localized collective action whereby small groups of citizens demand that their local patron bring back specific forms of assistance if he wants to continue being able to deliver their votes. An increase in the frequency of natural disasters has driven some African citizens to demand government responses, as happened in Senegal and in Uganda, for instance (Tall 2012). While African governments' responses to climate disasters tend to be reactive and short-lived (ibid.) and localized and targeted (Poulton 2014), small advances toward climate change adaptation are worth noting and commending.

Patronage transfers have been shown to increase during election years (Boone & Kriger 2010; Fumey & Egwaikhide 2018), which suggests that political leaders manipulate and adapt electoral politics in ways to fit within the more entrenched system of clientelism, rather than the other way around. An expanded winning coalition of local patrons—some of whom must deliver benefits back to their constituents in rural, agricultural, and climate-affected areas in order to ensure their votes are delivered upward—is one way political competition might incentivize better governmental responses to climate change, even if these responses are disjointed, localized, and somewhat ad hoc. The aggregate collection of these responses may therefore explain the correlation between democracy and climate change readiness.

The next section will explore the relationships between climate change, urbanization, and political regime, and will present novel analyses using the ND-GAIN variable and sub-variables discussed previously in the data and methodology section.

## 6. RESULTS AND FINDINGS

### *6.1. Urbanization and Climate Preparedness*

Table 2.1 shows that urban growth rate is negatively associated with a higher ND-GAIN score. This suggests that countries which are less prepared and/or more vulnerable to climate change are experiencing higher rates of urbanization increases. This negative correlation between a country's ND-GAIN score and its urban growth rate suggests that climate change is at least partially driving urbanization in SSA nations, which supports the virtual consensus in the literature.

Governance Readiness is also negatively correlated with urban growth rate, whereas Vulnerability and Lack of Adaptive Capacity are both positively correlated with urban growth rate. These results are expected, since a higher degree of vulnerability to climate change will likely drive people from the countryside into the cities, and since a higher degree of climate preparedness will allow people to remain on farms and weather through climate disruptions.

The lack of significance for industry and unemployment suggest that push factors are driving urbanization more so than are pull factors. The significant positive correlation between agriculture (value added) and urbanization is a bit puzzling at first glance, as one might expect a healthy agricultural sector to keep people from moving to urban centers from rural areas. This relationship is explored in more depth below. All variables retain the same signs and levels of significance when controlling for year fixed effects (see Appendix).

Table 2.1

VARIABLES	(1) Urban Growth Rate	(2) Urban Growth Rate	(3) Urban Growth Rate	(4) Urban Growth Rate
FDI(%GDP)	0.0208*** (0.00407)	0.0189*** (0.00419)	0.0216*** (0.00408)	0.0187*** (0.00411)
GDPpc(log)	0.402*** (0.106)	0.288** (0.121)	0.225** (0.101)	0.633*** (0.131)
Agriculture	0.0195** (0.00969)	0.0338*** (0.00978)	0.0173* (0.00977)	0.0264*** (0.00967)
<b>Industry</b>	<b>0.00219</b> (0.00979)	<b>0.0133</b> (0.00996)	<b>0.00101</b> (0.00983)	<b>0.0104</b> (0.00979)
<b>Unemployment</b>	<b>-0.0123</b> (0.0230)	<b>-0.0120</b> (0.0239)	<b>-0.0213</b> (0.0230)	<b>-0.00367</b> (0.0234)
<b>ND-GAIN</b>	<b>-0.284***</b> (0.0395)			
<b>Vulnerability</b>		<b>10.43**</b> (4.958)		
<b>Governance Readiness</b>			<b>-15.74***</b> (2.222)	
<b>[Lack of] Adaptive Capacity<sup>3</sup></b>				<b>15.62***</b> (2.702)
Constant	10.89*** (1.568)	-4.991 (3.341)	6.322*** (1.123)	-12.35*** (2.608)
Observations	824	824	824	824
R-squared	0.094	0.039	0.092	0.073
Number of id	44	44	44	44

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Country Fixed Effects

<sup>3</sup> “Lack of” is added here for clarity, given that a lower Adaptive Capacity score is preferable to a higher one.

I use a series of interaction terms to try and tease out the relationships between climate scores (ND-GAIN, Governance Readiness, and Lack of Adaptive Capacity) and urban growth rate by observing how these relationships change in different agricultural contexts (i.e., when the value added growth of the agricultural sector is higher, negligible, and negative). (All interaction terms included here control for logged GDP per capita.)

Figure 4.1

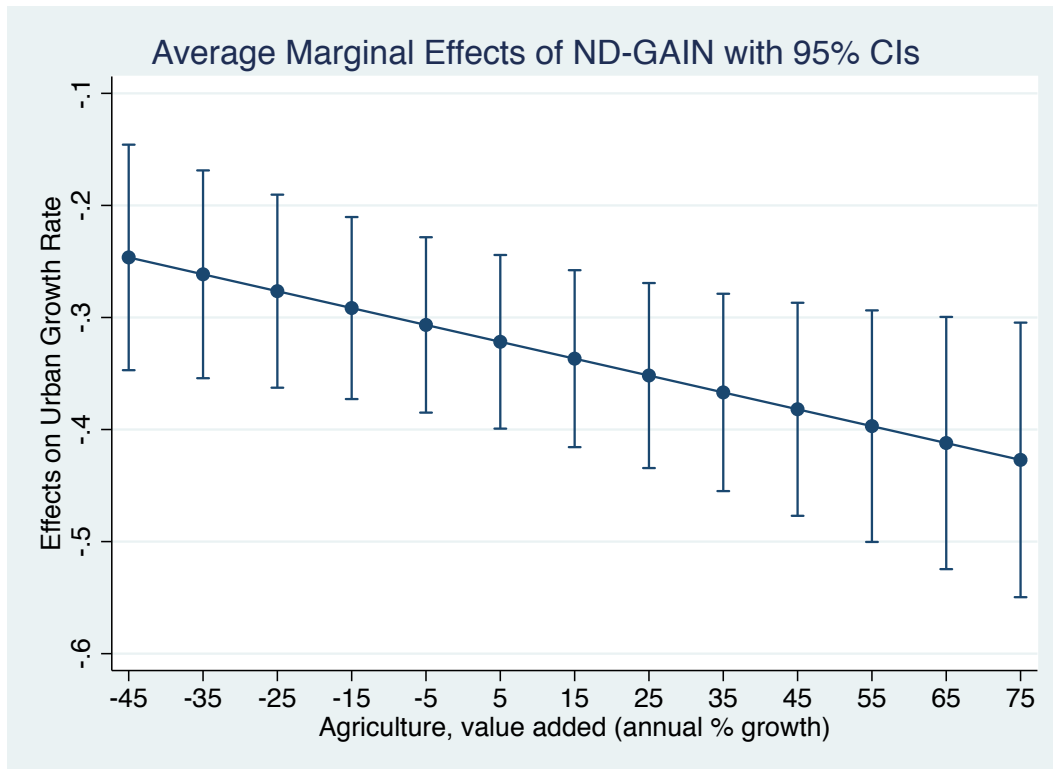


Figure 4.1 shows the relationship between ND-GAIN score and urban growth rate, and how this relationship changes depending on different agricultural contexts. As can be seen, the ND-GAIN climate score negatively correlates with urbanization growth rate, and the magnitude of this negative correlation increases as the growth rate of agriculture (value added) increases. This means that as ND-GAIN scores increase, urbanization rates will be lower; and this is especially the case when the agriculture

sector is doing well. This suggests that fewer peoples are leaving rural, agricultural areas for cities when the agricultural sector is doing well. There is less need to migrate to cities in contexts of high adaptability (high ND-GAIN scores) and higher agricultural productivity (high Agriculture value added growth rate). Thus, *higher ND-GAIN + higher agriculture (value added) = lower urbanization rates*.

Similarly, Figure 5.1 indicates that higher Governance Readiness corresponds to lower urban growth rates, even in contexts of poorer Agricultural sectors (negative growth rates), but to a greater extent (higher magnitude) in contexts of higher agricultural value added growth. Thus, *Governance Readiness + agriculture (value added) = lower urbanization*.

Figure 5.1

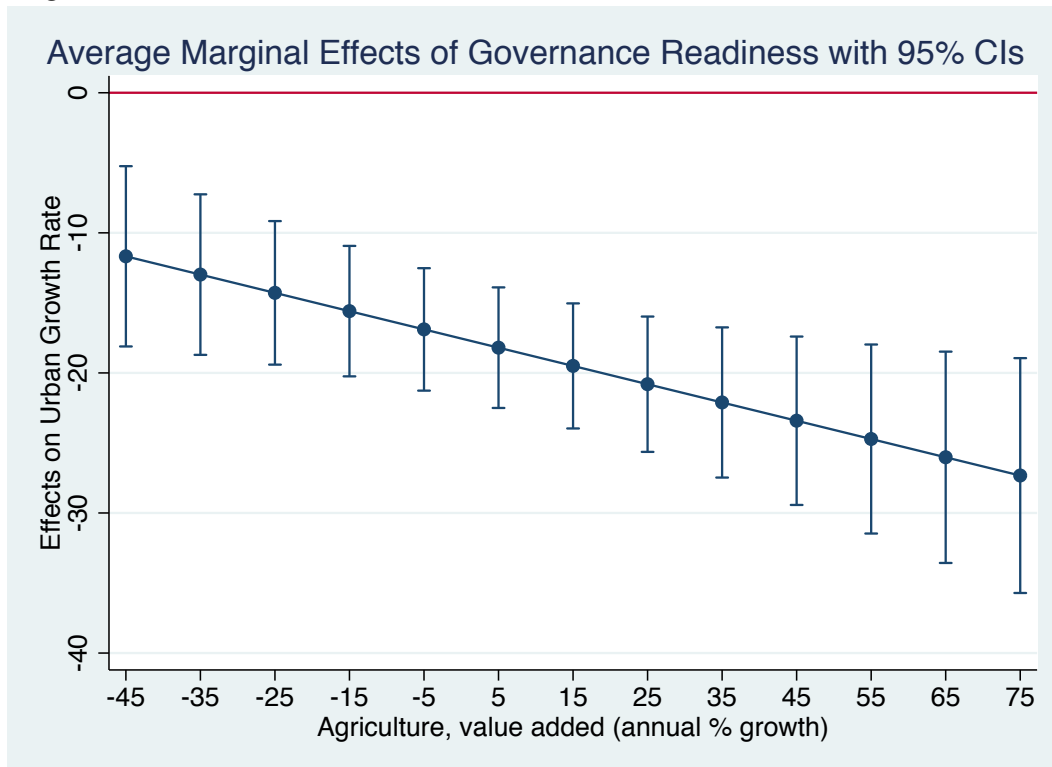


Figure 6.1 shows the relationship between Vulnerability and urban growth rate, in different agricultural contexts. While the relationship between urban growth rate and Vulnerability is insignificant when agriculture (value added) growth rate is negative and when it is relatively low (up to 15%), the relationship becomes significantly positive when agriculture (value added) growth rate is higher (above 15%). This suggests that a higher degree of vulnerability to climate change will induce people to flock to the cities when agriculture is an important sector of the economy.

Figure 6.1

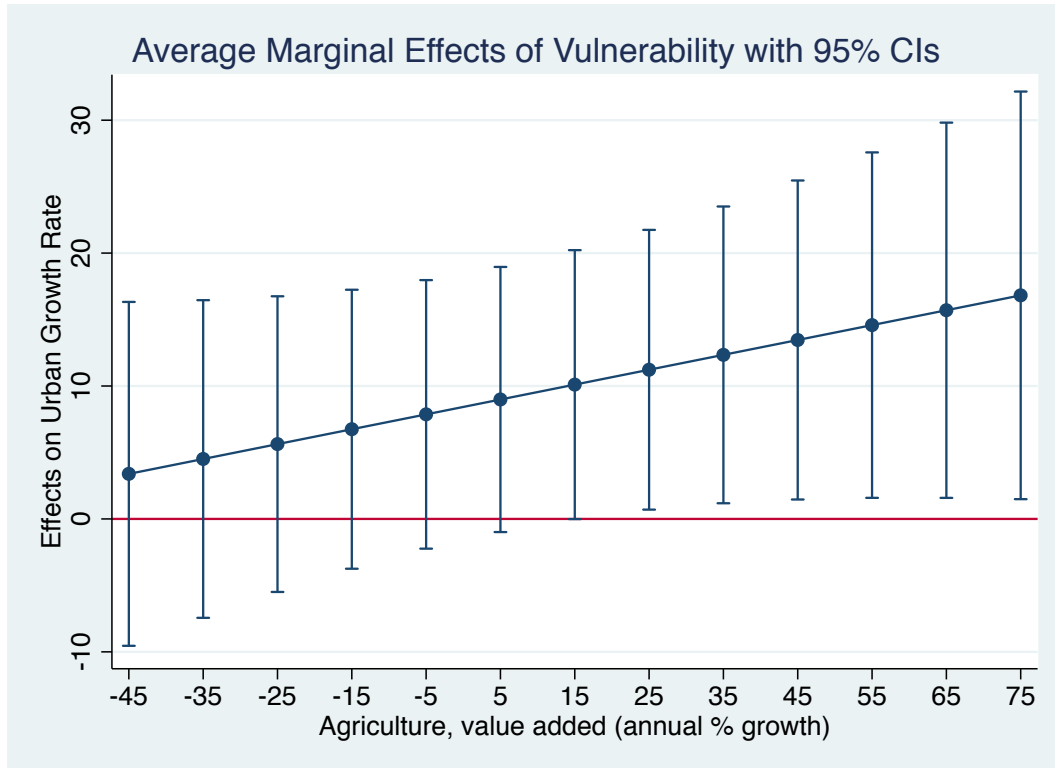


Figure 7.1

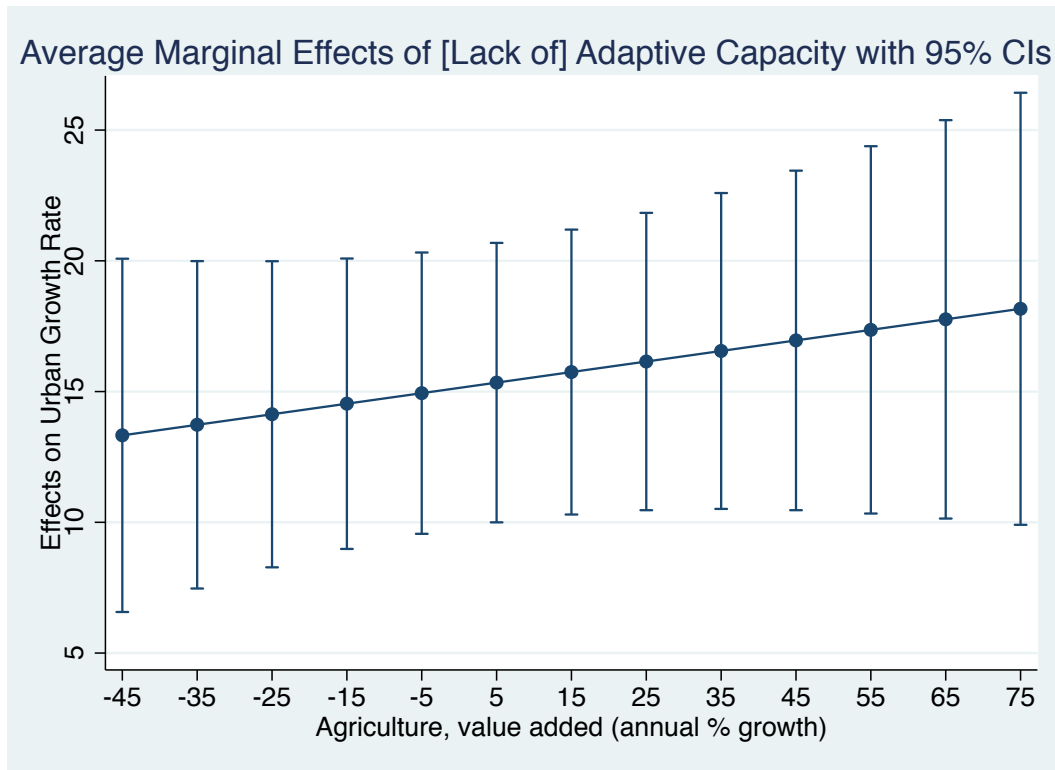


Figure 7.1 suggests that Lack of Adaptive Capacity is positively correlated with urban growth rate, and that the magnitude of this increases as agriculture (value added) growth rate increases. This makes sense, as lacking the capacity to adapt to climate change will encourage people to move from the countryside into cities in all agricultural contexts, but this will especially be the case when a larger sector of the economy depends on agriculture. Having adaptive capacity may therefore offset the negative effects of climate change and limit the need to flee to cities. Thus, *Lack of Adaptive Capacity + agriculture (value added) = higher urbanization*.



## 6.2. Regime Type and Climate Preparedness

As Table 3.1 shows, Polity score is positively related to both the overall ND-GAIN climate score and the Governance Readiness score, yet both have quite small coefficients (yet, it must be kept in mind that the sub-variables operate on scales of 0-1). Lack of adaptive capacity is negatively correlated with Polity IV, as expected, though this relationship is not statistically significant<sup>4</sup>.

Urbanization is negatively correlated with ND-GAIN and governance readiness, and is negatively correlated with lack of adaptive capacity. These findings all support the hypothesis that a country's level of preparedness for climate change will correspond to lower rates of urbanization.

A one unit increase in Polity IV score corresponds to approximately a 0.034 unit increase in a country's overall ND-GAIN climate score, a 0.002 increase in the country's Governance Readiness score, and there is no significant relationship between a nation's Polity and Lack of Adaptive Capacity score. Of course, regime type will be able to affect the *Readiness* portion of the ND-GAIN score, but it will not affect the exogenous *Vulnerability* portion of the score. We should therefore expect Polity to have a greater effect on Governance Readiness, and keeping in mind that Governance Readiness operates on a scale of 0-1, we see this to be the case.

As expected, urban growth rate is negatively correlated with both the overall ND-GAIN climate score and the Governance Readiness score, and is positively correlated with Lack of Adaptive Capacity.

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<sup>4</sup> Note that the relationship between Polity and Lack of Adaptive Capacity becomes positive and significant when year fixed effects are controlled for, yet the coefficient is extremely low (0.000559); even considering the 0-1 scale of Lack of Adaptive Capacity, this is negligible.

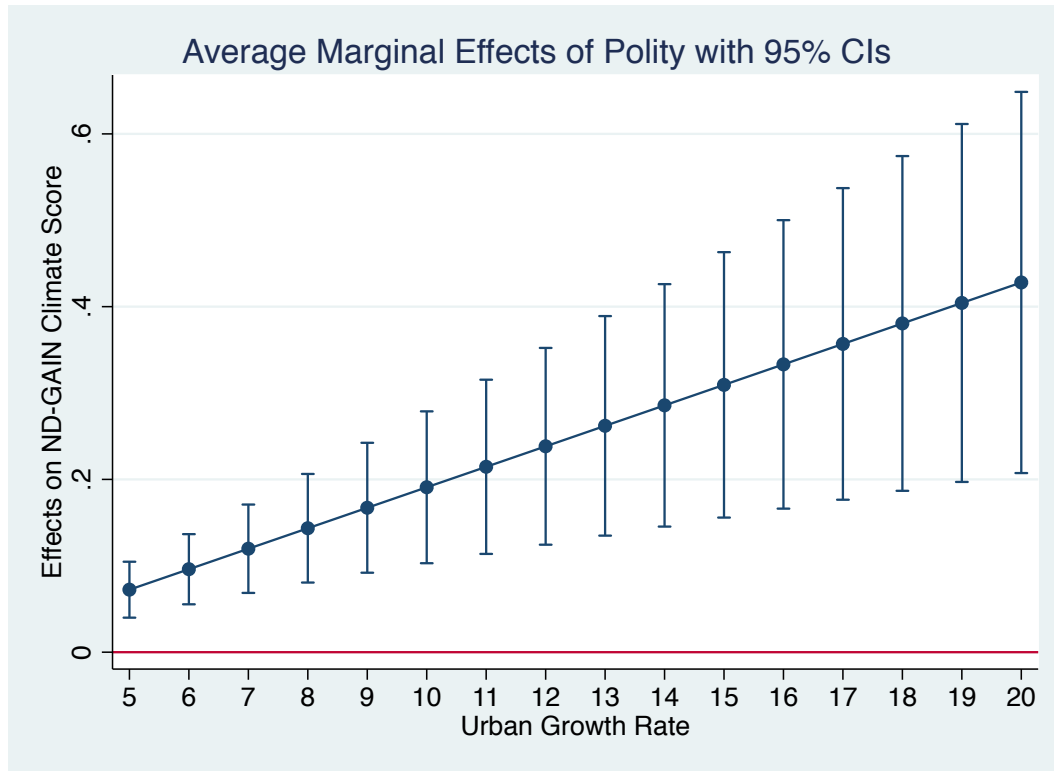
Table 3.1

VARIABLES	(1) ND-GAIN Score	(2) Governance Readiness	(3) [Lack of] Adaptive Capacity
<b>Polity IV</b>	<b>0.0359**</b> (0.0147)	<b>0.00186***</b> (0.000558)	<b>-7.80e-05</b> (0.000207)
GDPpc(log)	0.866*** (0.0913)	0.0158*** (0.00346)	-0.0113*** (0.00128)
<b>Urban Growth</b>	<b>-0.219***</b> (0.0315)	<b>-0.00780***</b> (0.00119)	<b>0.000972**</b> (0.000442)
Urban Pop	0.0410** (0.0162)	-0.00234*** (0.000614)	-0.00349*** (0.000228)
FDI(%GDP)	0.0137*** (0.00299)	0.000675*** (0.000113)	-9.85e-05** (4.20e-05)
Resource Rents (%GDP)	-0.0185*** (0.00567)	-0.00127*** (0.000218)	-7.11e-05 (7.97e-05)
Constant	29.65*** (0.531)	0.402*** (0.0202)	0.908*** (0.00746)
Observations	870	850	870
Number of id	46	45	46
R-squared	0.296	0.137	0.542

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Country Fixed Effects

I use another series of interaction terms to try and clarify the relationships between regime type (Polity IV) and climate scores (ND-GAIN, Governance Readiness, and Lack of Adaptive Capacity), by observing these relationships in different urban growth rate contexts. (All interaction terms included here control for logged GDP per capita.)

Figure 8.1



As shown by Figures 8.1, 9.1, and 10.1 the relationships between Polity and (1) the ND-GAIN climate score, (2) Governance Readiness, and (3) Lack of Adaptive Capacity are all stronger as the urban growth rate increases. Specifically, the magnitude of the positive relationship between Polity and ND-GAIN increases as urban growth rate increases. Similarly, the magnitude of the positive relationship between Polity and Governance Readiness increases as urban growth rate increases. And lastly, the magnitude of the negative relationship between Polity and the Lack of Adaptive Capacity and increases as urban growth rate increases.

These graphs seem to suggest that countries with higher Polity scores (i.e., more democratic regimes) are reacting to increasing urbanization by improving their adaptation to climate change. That is, more democratic regimes tend to have better climate change

scores, especially in contexts of higher urbanization rates. Thus, *Polity IV + higher urbanization rates = better climate preparedness*.

These relationships either remain the same or, as is true in most cases, become even stronger when urban growth rate is lagged one and two years (see Figures 11.1-16.1 in the Appendix).

Figure 9.1

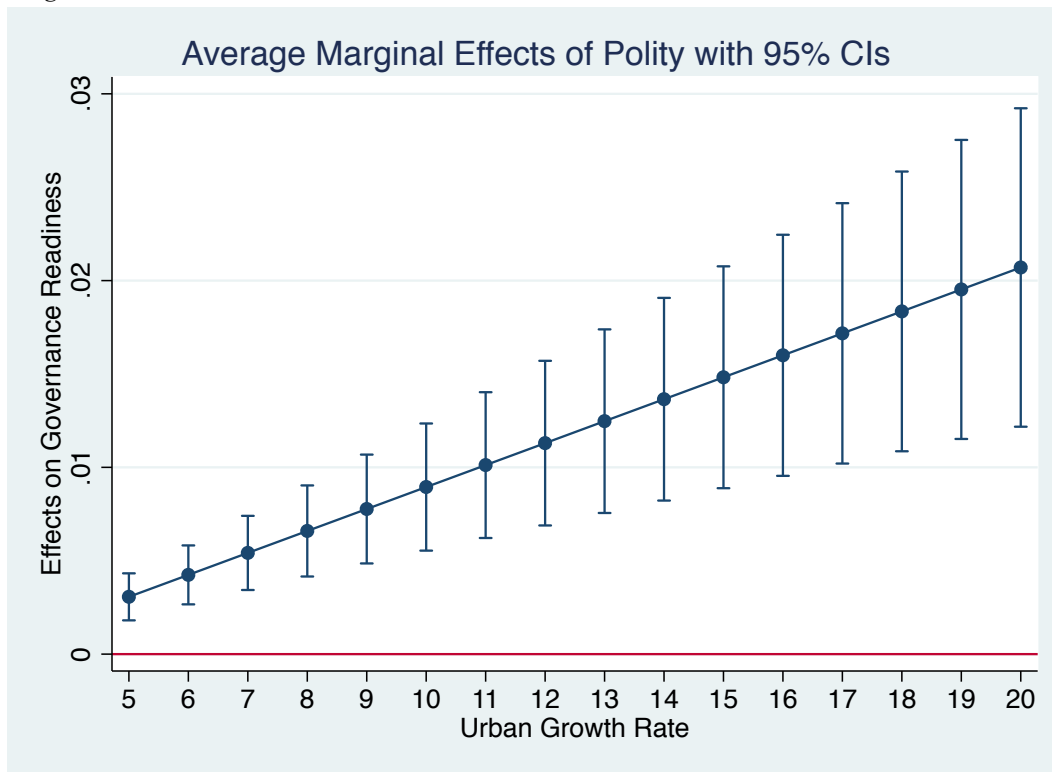
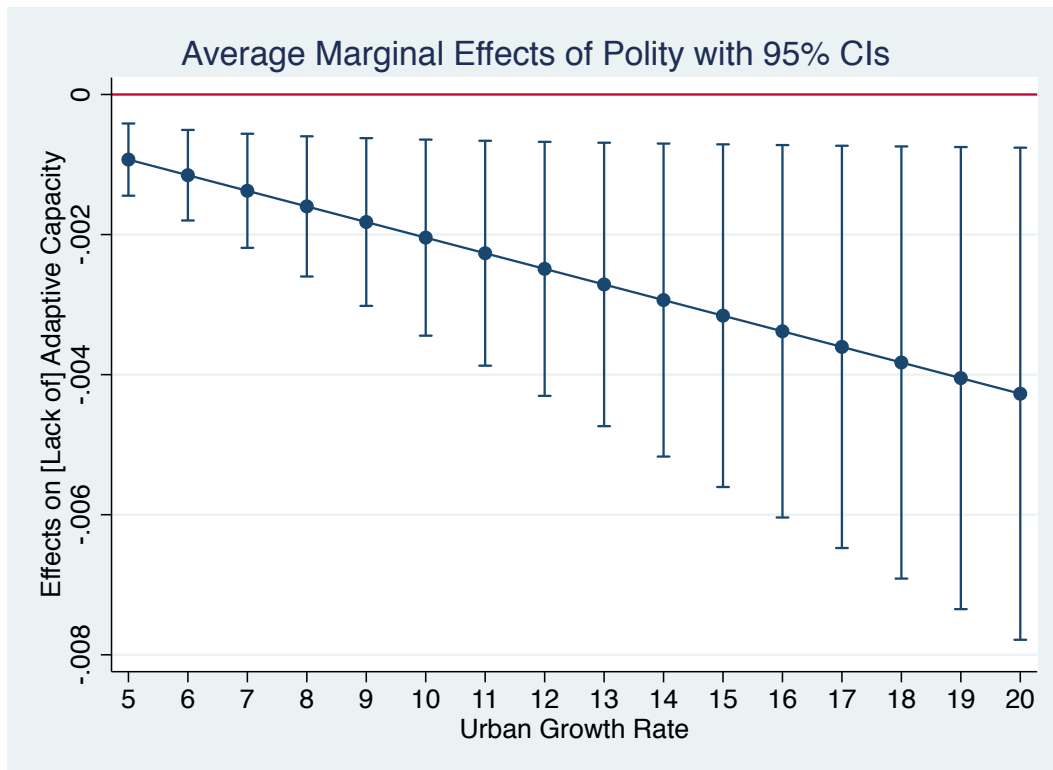


Figure 10.1



## 7. CONCLUSION

To briefly sum up, the findings here support the idea that climate change is indeed a push factor contributing to rising urbanization rates across SSA. Good political institutions—namely, democratic regimes and higher state capacity—appear to be mitigating factors that are able to improve a country’s preparedness for the adverse effects of climate change, which in turn may reduce the need for rural residents to migrate to cities, thereby moderating urbanization rates. The findings also support the rural bias theory that democratic governments will actively seek to address the most pressing concerns of their rural constituencies.

The question remains, however, as to what governments can do to improve their adaptive capacity and readiness for climate change, if they are inclined to do so. The following section offers some strategies proposed by the literature, as well as some original policy recommendations.

### ***7.1. Possible Adaptation Strategies and Policy Recommendations***

Collier et al. (2008) assert that the direct adverse effects of climate change on SSA nations are aggravated by high agricultural dependence and low adaptation capacity. These authors argue that climate change adaptation primarily involves a private-sector response that includes the relocation of people, changes to the sectorial structure of production, and changes to crop patterns. For them, the government's primary role is to provide information and incentives, and to promote a business-friendly economic environment.

Musah-Surugu et al. (2018) suggest that NGOs can effectively help promote climate change preparedness through three primary mechanisms: direct climate service provisions, climate advocacy, and local empowerment. They emphasize the last, and argue that assisting in local adaptive capacity building may be especially beneficial when the most marginalized people are targeted. They stress that such interventions ought to resonate with local interests and that local project caretakers should be trained before the NGO leaves.

Other scholars look at what SSA governments themselves can do, often by focusing on addressing the indirect results of climate change (e.g., urbanization and reduced income). The International Labor Organization (ILO), for example, promotes

government provision of greater social protections as an adaptation strategy (WESO 2018), whereas Henderson et al. (2017) urge industrialization as the best way to absorb incoming rural-to-urban migrants. Dell et al. (2014) suggest that expanded integration into global markets will increase technology transfers and innovation, thereby leading to better adaptation. The critical and often missing factor in all of these strategies, however, is possessing adequate funding; the institutional capacity required for implementing these strategies is also critical and often lacking among SSA governments.

## ***7.2. Policy Recommendation #1: Rwanda and Botswana as Country Models***

Another strategy for SSA governments who want to augment their climate change adaptive capacity is to look to country models with similar contexts. Country models serve as common policy recommendations in comparative politics and in the African politics literature, yet this has not been emphasized amongst climate change scholars who focus on SSA. Rwanda and Botswana are offered here as two country models that other SSA countries could seek to emulate, incorporating modifications and adjustments as their specific contexts prescribe.

Rwanda has very publicly committed itself to promoting sustainable development and has put climate change at the heart of its policymaking (World Economic Forum 2016). The Director of the United Nations Environment Program (UNEP), Achim Steiner, has asserted that Rwanda stands as an example that other African nations can follow (*The New Times* 2011). He commended President Paul Kagame's regime, leadership, and determination to address environmental issues, and specifically praised Rwanda's ban on plastic bags (ibid.). This ban on plastic bags is taken very seriously, as

*Image 1*



*Photo credit: Jené, 2017*

officers are stationed at the borders to confiscate contraband bags upon entry. Image 1 shows a collection of plastic bags seized at the border of Gisenyi (on the Rwandan side) and Goma (on the DRC side). Rwanda also engages in monthly locally-organized “volunteer” (which are more mandatory than optional) days; activities range from community

construction projects to cleanup endeavors.

Other pro-environment policies include Kigali’s bi-monthly “no car days,” where certain parts of the capital city are closed to motor vehicles from 7am to 10pm (Mbabazi 2018); the country’s Green Fund, which boasted an investment fund of around \$100 million as of 2016 (the largest of its kind in Africa) and which is earmarked for efforts to achieve the 2050 goal of a low-carbon and climate-resilient economy (World Economic Forum 2016); and efforts to plant trees and restore depleted land (ibid.). There even also been a positive change in forest coverage (+6.9% in 2008) thanks to active plantation efforts; this contrasts to neighboring nations which suffer from forest coverage losses (Bogaert et al. 2008).

There is also legal acknowledgement of environmental rights and duties. Rwanda’s Constitution stipulates in Article 22 that “Everyone has the right to live in a clean and healthy environment,” and Article 53 states “Everyone has the duty to protect, safeguard and promote the environment. The State ensures the protection of the environment. A law determines modalities for protecting, conserving and promoting the



environment (Rwanda 2003 Constitution). Moreover, Rwanda's Environment Management Authority (REMA) displays impressive capacity, with an interactive website<sup>5</sup> that offers transparency (e.g., lists of relevant laws, regulations, policies, protocols, and conventions) as well as a wealth of information (e.g., publications, reports, guidelines, and other useful resources).

The Rwanda model has been praised by other African policymakers, including the *Ministre de l'Environnement et Tourisme*<sup>6</sup> of the Lualaba province in the DRC. He commended the ban on plastic bags specifically, as he lamented his country's significant environmental problems (including deforestation and pollution) without offering any concrete plans to address them. Certainly, the Rwanda model cannot simply be transplanted to other countries; Rwanda's success has been based the leadership's dedication to commit finances and enforce policies. Rwanda is hardly a democracy (indeed, its latest Polity IV score is -3), yet it has comparatively high levels of state capacity. Kagame is a unchecked executive (having been in office sine 2000), and while many scholars and citizens alike criticize him for being repressive and strict—and the lack of civil liberties in the country should certainly not be discounted or overlooked—in terms of environmental policies his administration has generally proven to take a progressive approach to environmentally protection.

Botswana offers another potential model for climate change adaptation in SSA. The country boasts relatively high ND-GAIN scores (47.65 in 2016) compared to the rest of SSA, and it has the highest average Governance Readiness score over the years (with a peak of nearly 0.7 in 2003, and most currently with 0.66 in 2016). Botswana also has

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<sup>5</sup> [www.rema.gov.rw/index.php?id=2](http://www.rema.gov.rw/index.php?id=2)

<sup>6</sup> Daniel Kapend Kapend, *Ministre de l'Environnement et Tourisme*; interviewed: October 20, 2017.

consistently had high Polity scores (currently an 8), as well as comparatively high GDP per capita, which are both likely contributors to its high climate scores.

Botswana also has a long history of enacting environmental protection policies. For example, it passed the Atmospheric Pollution Prevention Act in 1971, and more recently the Environmental Impact Assessment (EIA) in 2010 (Akinola et al. 2017). The EIA is under the purview of the Ministry of Environment, Wildlife and Tourism (MEWT), and “is a process and technique used to predict and evaluate the environmental consequences of human development activities and to plan appropriate measures to eliminate or reduce adverse effects and to augment positive effects<sup>7</sup>.” It also established the National Committee on Climate Change, which is under the direction of the Department of Meteorological Services (DMS) (Gwebu 2002).

Botswana has also been a signatory of a number of international environmental agreements, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Southern African Development Community (SADC), which is a commitment to the development of environmentally sustainable energy technologies (Gwebu 2002). The country has also taken part in a number of pilot programs, including the Industrial Energy Management and the Industrial Energy Conservation projects (Gwebu 2002). Furthermore, the mineral sector is hugely important to Botswana’s economy, and Botswana has created a unique policy that provides for the reinvestment of

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<sup>7</sup> Republic of Botswana, Ministry of Environment, Wildlife and Tourism (MEWT): [www.gov.bw/en/Ministries--Authorities/Ministries/Ministry-of-Environment--Wildlife-and-Tourism/Tools--Services/Services--Forms/Application-for-Environmental-Impact-Assessment-Clearance/](http://www.gov.bw/en/Ministries--Authorities/Ministries/Ministry-of-Environment--Wildlife-and-Tourism/Tools--Services/Services--Forms/Application-for-Environmental-Impact-Assessment-Clearance/). Accessed February 27, 2019.

its resource rents back into the national economy, thereby avoiding a fall into the “resource curse” trap (Lange et al. 2003).

While Rwanda and Botswana provide general models of countries with pro-environmental policies and which are actively seeking to prepare their countries and citizens for climate change, it is important to remember that each country, and in some cases even sub-regions of countries, will have different contexts that require different adaptation strategies. While country models within SSA may be the most applicable to fellow SSA nations (rather than importing models from other regions, for example), creating country-specific programs of adaptation will likely prove to be the most successful approach. International organizations and NGOs may best be able to aid SSA countries by facilitating scientific, economic, and political research surrounding the various current and future-projected impacts of climate change. Following this, such organizations may further help by working closely with local actors and assisting in the development and implementation of adaptation plans once the local context is understood in terms of the specific vulnerabilities to climate change and existing capabilities for preparation. Future research ought to focus on orchestrating such country-specific research and designing country-specific plans.

### ***7.3. Policy Recommendation #2: Invest in Targeted Subsidies and Innovation***

Donors and national governments alike may be able to chip away at the negative effects of climate change across Africa by providing subsidies to affected areas. While donors may lament the fact that targeted subsidies fall short of being broad-based, nationwide policies, they should take solace in the realistic potential for subsidies to have real impact

(albeit localized and exclusionary). Domestic governments, for their part, have in some cases learned (and others would do well to learn) that votes may be bought—indirectly, through local patrons—with subsidized irrigation installments, for instance. In time, such a strategy would expand, piecemeal, climate resiliency.

Malawi’s Farm Input Subsidy Programme (FISP), for example, has contributed to the incremental improvement of the country’s agricultural sector and has bolstered its climate adaptiveness by promoting crop diversification in some areas (Kankwamba et al. 2018). Rwanda and Ethiopia have also experienced some success with agricultural subsidies, and indeed there is a growing trend toward the provision of agricultural subsidies across SSA (Poulton 2014). This trend may be due to the compatibility between subsidies and clientelistic systems.

Subsidies and other forms of targeted transfers have the potential to combat climate change, and even though this may be done in a gradual and piecemeal manner, and may come at the expense of national, broad-reaching policies, their compatibility with patronage-based system (ibid.) may be their biggest strength. As democratic governments may be especially inclined to deliver such subsidies as patronage to their local patrons, this method of address climate change may prove to be a “second best” (Thomas 2015) version of promoting climate resilience.

Entrepreneurship and innovation are also worthy of donor and government funding, though donors especially may in a position to actively promote such processes. Local communities may be best posed to develop locally-specific modes of climate change adaptation and context-specific forms of adaptation (Walter et al. 2017).

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## APPENDIX

Figure 11.1

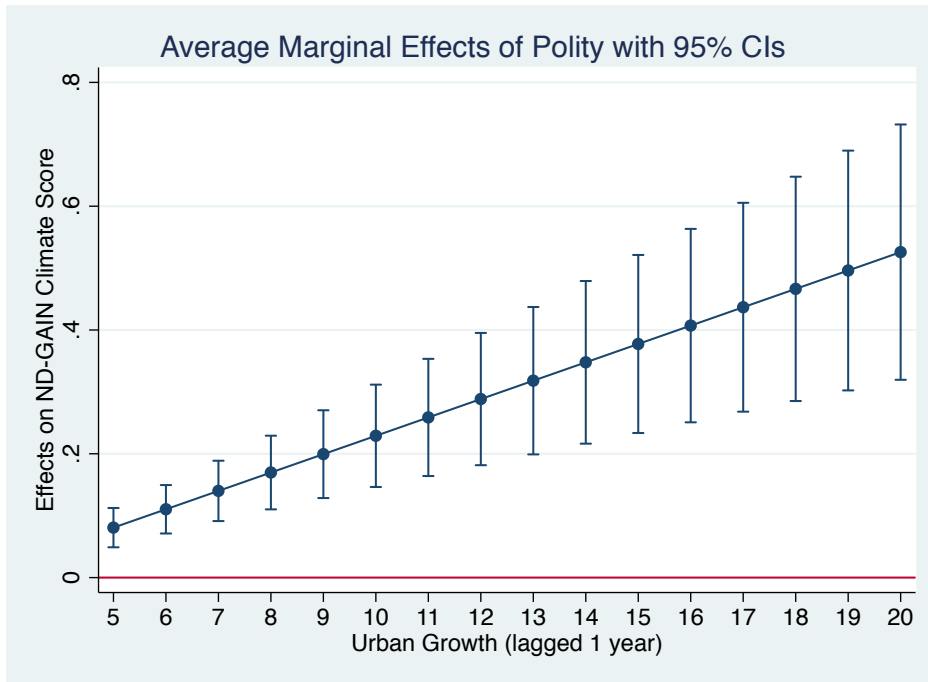


Figure 12.1

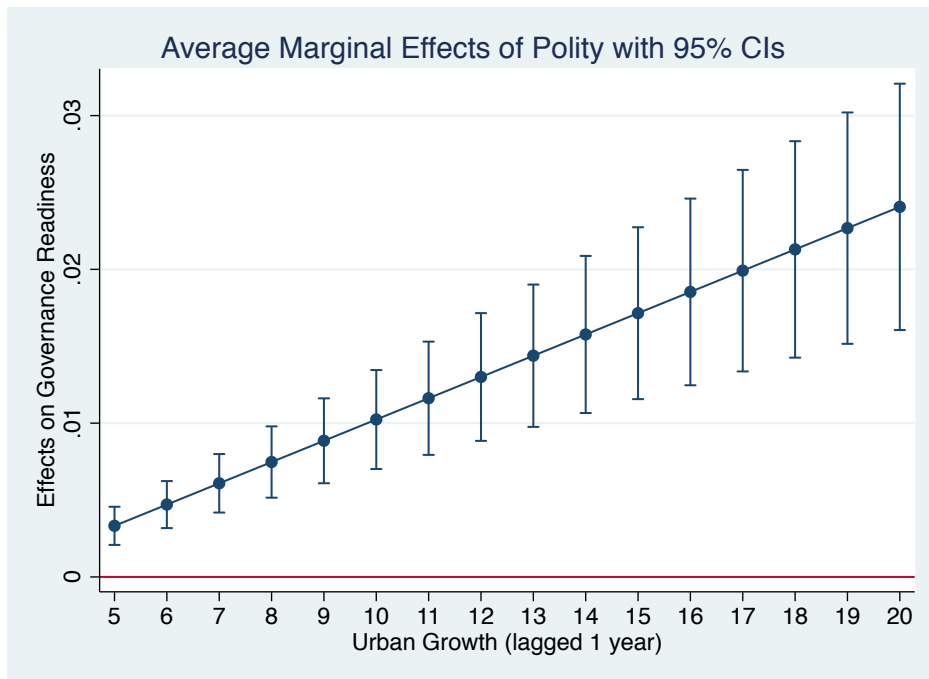


Figure 13.1

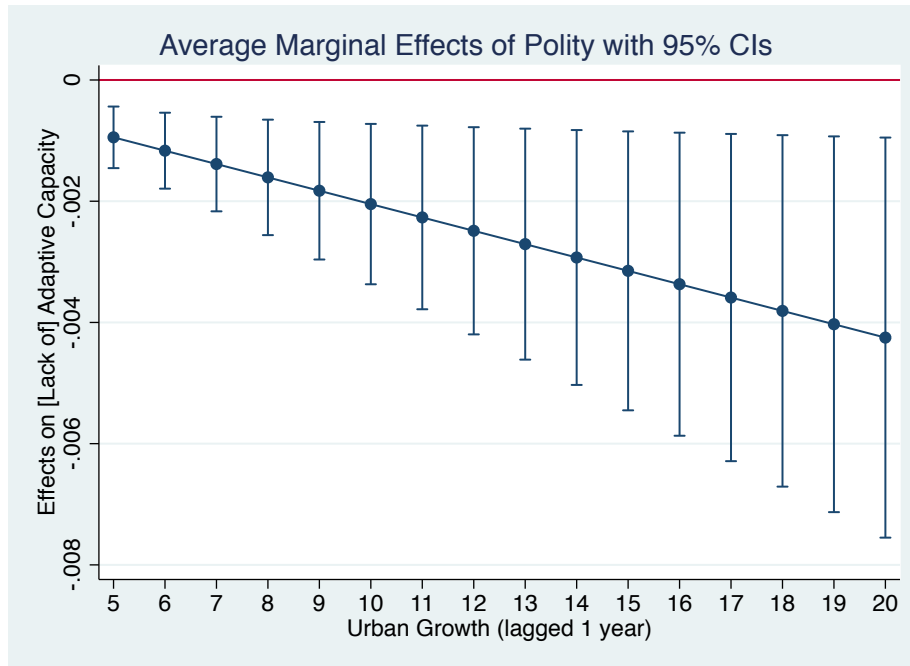


Figure 14.1

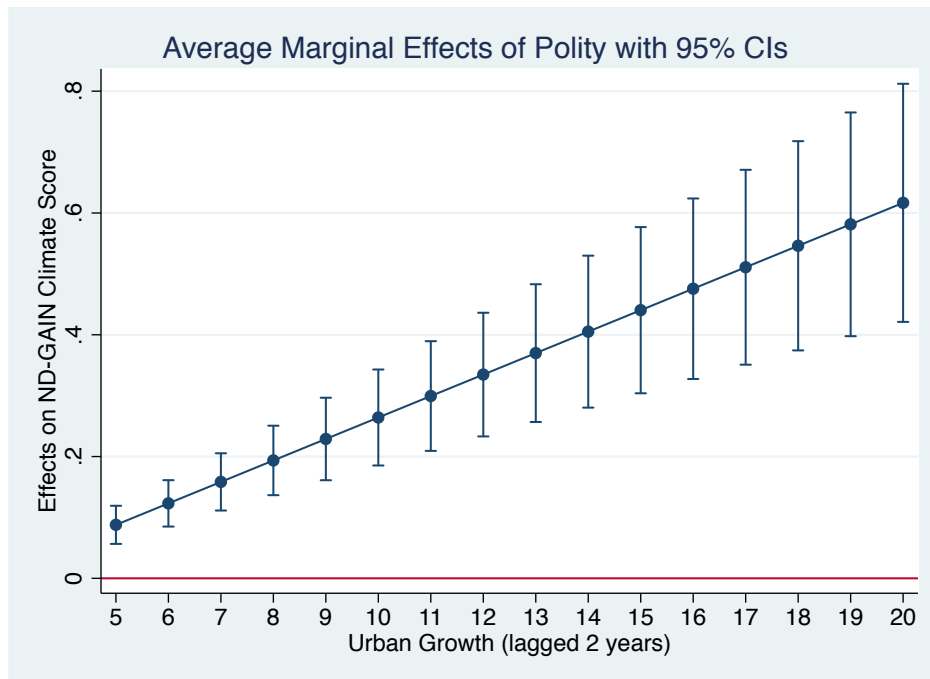


Figure 15.1

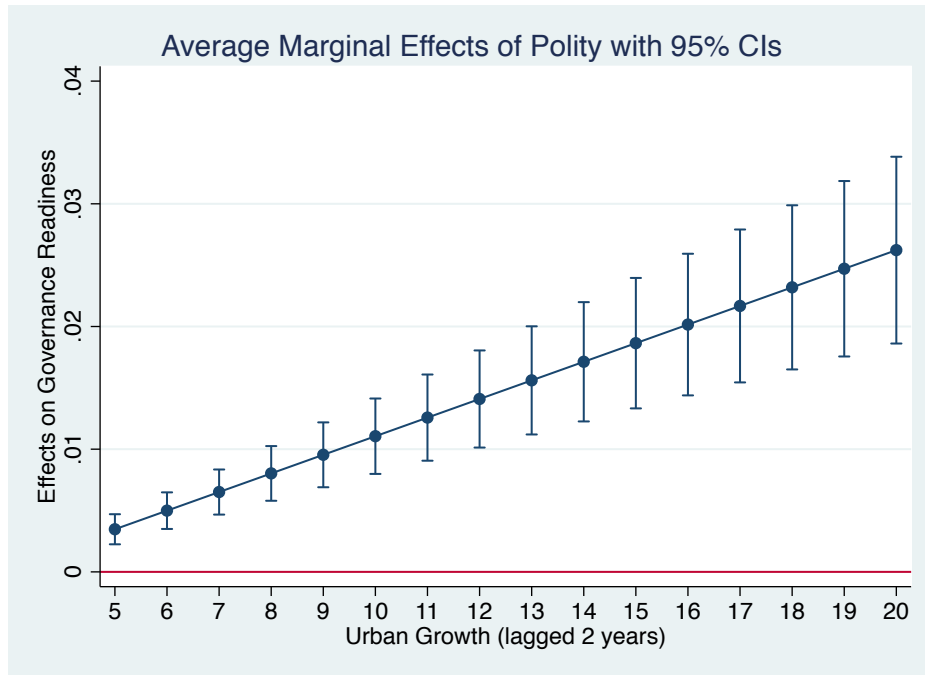


Figure 16.1

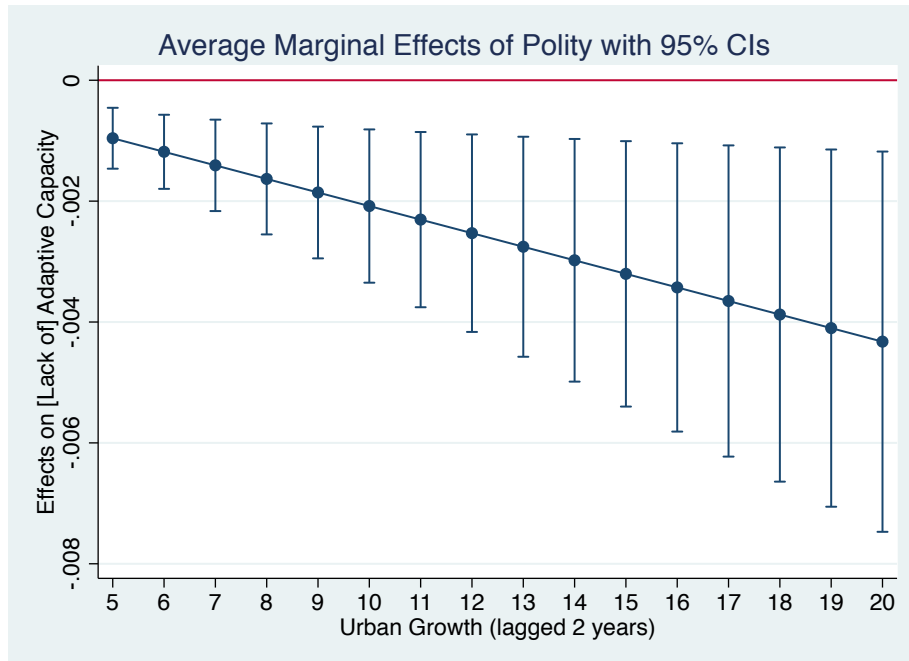




Table 4.1

VARIABLES	(1) Urban Growth Rate	(2) Urban Growth Rate	(3) Urban Growth Rate	(4) Urban Growth Rate
FDI(%GDP)	0.0214*** (0.00413)	0.0195*** (0.00427)	0.0223*** (0.00413)	0.0189*** (0.00423)
GDPpc(log)	1.129*** (0.189)	0.902*** (0.199)	0.985*** (0.186)	0.842*** (0.189)
Agriculture	0.0152 (0.00990)	0.0300*** (0.0101)	0.0116 (0.00998)	0.0265*** (0.00999)
Industry	0.00294 (0.00986)	0.0140 (0.0101)	0.000959 (0.00989)	0.0120 (0.0100)
Unemployment	-0.00911 (0.0231)	-0.0127 (0.0241)	-0.0196 (0.0230)	-0.00238 (0.0240)
<b>ND-GAIN</b>	-0.299*** (0.0399)			
1995b.year	0 (0)	0 (0)	0 (0)	0 (0)
1996.year	0.0175 (0.238)	0.00574 (0.246)	0.0345 (0.237)	0.0347 (0.244)
1997.year	0.0744 (0.238)	0.0617 (0.246)	0.0841 (0.238)	0.128 (0.244)
1998.year	0.00769 (0.239)	-0.0169 (0.248)	0.0315 (0.239)	0.0886 (0.246)
1999.year	-0.0206 (0.239)	-0.0548 (0.247)	-0.0128 (0.239)	0.0916 (0.248)
2000.year	-0.0378 (0.240)	-0.0722 (0.248)	-0.0391 (0.240)	0.101 (0.250)
2001.year	0.0472 (0.240)	-0.00826 (0.248)	0.0178 (0.239)	0.171 (0.250)
2002.year	0.0165 (0.243)	-0.0501 (0.252)	-0.0284 (0.242)	0.149 (0.255)
2003.year	-0.304 (0.244)	-0.329 (0.253)	-0.333 (0.244)	-0.0909 (0.258)
2004.year	-0.470* (0.245)	-0.404 (0.254)	-0.496** (0.245)	-0.142 (0.260)
2005.year	-0.581** (0.249)	-0.485* (0.257)	-0.588** (0.248)	-0.188 (0.264)
2006.year	-0.548** (0.253)	-0.506* (0.262)	-0.558** (0.253)	-0.175 (0.272)
2007.year	-0.628** (0.262)	-0.559** (0.271)	-0.653** (0.261)	-0.195 (0.283)
2008.year	-0.725*** (0.272)	-0.640** (0.282)	-0.738*** (0.272)	-0.218 (0.298)
2009.year	-0.689**	-0.598**	-0.726***	-0.135

	(0.270)	(0.279)	(0.270)	(0.300)
2010.year	-0.790***	-0.695**	-0.834***	-0.183
	(0.279)	(0.289)	(0.279)	(0.314)
2011.year	-0.923***	-0.831***	-0.958***	-0.249
	(0.290)	(0.300)	(0.290)	(0.331)
2012.year	-0.912***	-0.867***	-0.983***	-0.240
	(0.291)	(0.302)	(0.291)	(0.339)
2013.year	-0.903***	-0.892***	-0.982***	-0.260
	(0.293)	(0.304)	(0.293)	(0.342)
2014.year	-0.840***	-0.837***	-0.936***	-0.136
	(0.294)	(0.306)	(0.294)	(0.353)
<b>Vulnerability</b>		8.736*		
		(5.067)		
<b>Governance</b>			-16.96***	
<b>Readiness</b>			(2.232)	
<b>[Lack of] Adaptive Capacity</b>				14.16***
				(3.453)
Constant	7.223***	-7.546**	2.310	-12.64***
	(1.794)	(3.508)	(1.427)	(2.931)
Observations	824	824	824	824
R-squared	0.125	0.063	0.127	0.080
Number of id	44	44	44	44

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Year Fixed Effects

Table 5.1

VARIABLES	(1) ND-GAIN	(2) Governance Readiness	(3) [Lack of] Adaptive Capacity
<b>Polity IV</b>	<b>0.0416***</b> (0.0156)	<b>0.00246***</b> (0.000549)	<b>0.000559***</b> (0.000201)
GDPpc(log)	1.184*** (0.134)	0.0431*** (0.00471)	0.00128 (0.00173)
<b>Urban Growth</b>	<b>-0.248***</b> (0.0328)	<b>-0.00997***</b> (0.00115)	<b>0.000907**</b> (0.000422)
Urban Pop	0.0742*** (0.0199)	0.00116* (0.000700)	-0.00154*** (0.000257)
FDI(%GDP)	0.0170*** (0.00350)	0.000848*** (0.000123)	-1.72e-05 (4.51e-05)
Resource Rents (%GDP)	-0.0113* (0.00643)	-0.000632*** (0.000227)	2.21e-06 (8.28e-05)
1995b.year	0 (0)	0 (0)	0 (0)
1996.year	-0.154 (0.216)	-0.00367 (0.00760)	-0.00137 (0.00279)
1997.year	-0.0805 (0.216)	-0.000496 (0.00757)	-0.00415 (0.00278)
1998.year	-0.180 (0.223)	-0.00120 (0.00783)	-0.00631** (0.00287)
1999.year	-0.248 (0.225)	-0.00355 (0.00789)	-0.00838*** (0.00289)
2000.year	-0.146 (0.222)	-0.00355 (0.00778)	-0.0107*** (0.00285)
2001.year	-0.0809 (0.226)	-0.00582 (0.00792)	-0.0117*** (0.00290)
2002.year	-0.0527 (0.227)	-0.00880 (0.00795)	-0.0131*** (0.00292)
2003.year	-0.165 (0.229)	-0.0143* (0.00805)	-0.0146*** (0.00295)
2004.year	-0.480** (0.234)	-0.0298*** (0.00821)	-0.0160*** (0.00301)
2005.year	-0.735*** (0.238)	-0.0423*** (0.00836)	-0.0171*** (0.00306)
2006.year	-0.588** (0.242)	-0.0379*** (0.00852)	-0.0191*** (0.00311)
2007.year	-0.647*** (0.251)	-0.0449*** (0.00883)	-0.0224*** (0.00323)
2008.year	-0.769*** (0.261)	-0.0499*** (0.00919)	-0.0254*** (0.00336)

2009.year	-0.714*** (0.261)	-0.0494*** (0.00921)	-0.0286*** (0.00336)
2010.year	-0.829*** (0.272)	-0.0576*** (0.00957)	-0.0311*** (0.00350)
2011.year	-0.949*** (0.283)	-0.0637*** (0.00996)	-0.0347*** (0.00364)
2012.year	-0.683** (0.288)	-0.0623*** (0.0101)	-0.0383*** (0.00370)
2013.year	-0.576* (0.295)	-0.0675*** (0.0104)	-0.0391*** (0.00380)
2014.year	-0.571* (0.295)	-0.0701*** (0.0104)	-0.0447*** (0.00380)
Constant	27.02*** (1.065)	0.131*** (0.0374)	0.770*** (0.0137)
Observations	823	814	823
R-squared	0.328	0.228	0.639
Number of id	46	45	46

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Year Fixed Effects

**PART 2:**

**CINDERELLA COUNTRY:  
CHARCOAL VS. CLEAN ENERGY IN THE  
DR CONGO**



*Lubumbashi, DRC. Photo credit: Jené, 2017*

## 1. INTRODUCTION

The Democratic Republic of the Congo (henceforth DRC or Congo), like many other countries in sub-Saharan Africa (SSA), suffers from extreme poverty, endemic diseases, perpetual conflict, failed government, and environmental degradation. One particularly salient health and environmental issue in the DRC is the reliance on charcoal for household needs, especially cooking (Longombe et al. 2016). As can be seen from Figure 1.2<sup>8</sup>, the production of charcoal has steadily increased over the decades, along with population. Consumption of charcoal has accelerated across Central Africa, generally, and this has brought about a relatively new set of problems (Trefon et al. 2010).

While charcoal—or *makala* (the Swahili and Lingala word for charcoal)—is an incredibly important commodity to Congolese residents, it has a number of negative health and environmental consequences. Not only does it add to air pollution and deforestation, the use of charcoal for cooking leads to premature deaths, especially among women and children (Ezzati 2005; World Energy Outlook 2017; Lam et al. 2018). Yet, given these detrimental effects, why has charcoal persisted as such an entrenched source of energy in Congo? And why have concerted efforts by international organizations and non-governmental organizations (NGOs) struggled to lead an effective

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<sup>8</sup> A note must be said about data for the DRC. While much data on and from SSA ought to be taken with a grain of salt, this is especially true for data on Congo. This is largely due to the remoteness of the vast majority of its residents, the lack of transportation infrastructure (which renders most areas virtually inaccessible), perpetual conflict in some areas (particularly the east), an often inhospitable environment (including the presence of endemic diseases), the wide variety of languages spoken, and a government that lacks the capacity and, seemingly, the interest to collect data on its citizens. As a telling example, the last time a national census was conducted was in 1984. Thus, population data and, indeed, all national-level data must be taken with a handful of salt. That being said, this project works with the data that are available and operates with the assumption that they are accurate enough for analysis. Data from *Enquête 1-2-3* are based on surveys collected on the ground, and are not estimations, and so they should be considered among the most reliable datasets from the DRC.

strategy for transition to cleaner energy sources? The answer is partially political, partially economic, and partially cultural.

The political economy of the informal charcoal production industry in DRC is characterized by a widespread, bottom-up, and highly industrious survival response to a failed state. The charcoal production sector remains exceedingly informal and unregulated in Congo, and this is due to several reasons: (1) officials at all levels of government (central to local) tend to ignore it; (2) it is a relatively easy activity to practice (only a few tools, in addition to hard labor, are required); and (3) the state does not provide widespread or reliable energy alternatives or infrastructure (Trefon 2019<sup>9</sup>).

The Congolese state is characterized by uncertainty (Englebert & Kasongo 2016), informality, extractive clientelism (Jené & Englebert 2019), and low state capacity (Bezares & Englebert 2019). Expecting the national government to be address environmental concerns of any kind is unrealistic and doomed to fail. The priorities of environmental protection in Congo are thus often established by international organizations, often without full understanding of the local context.

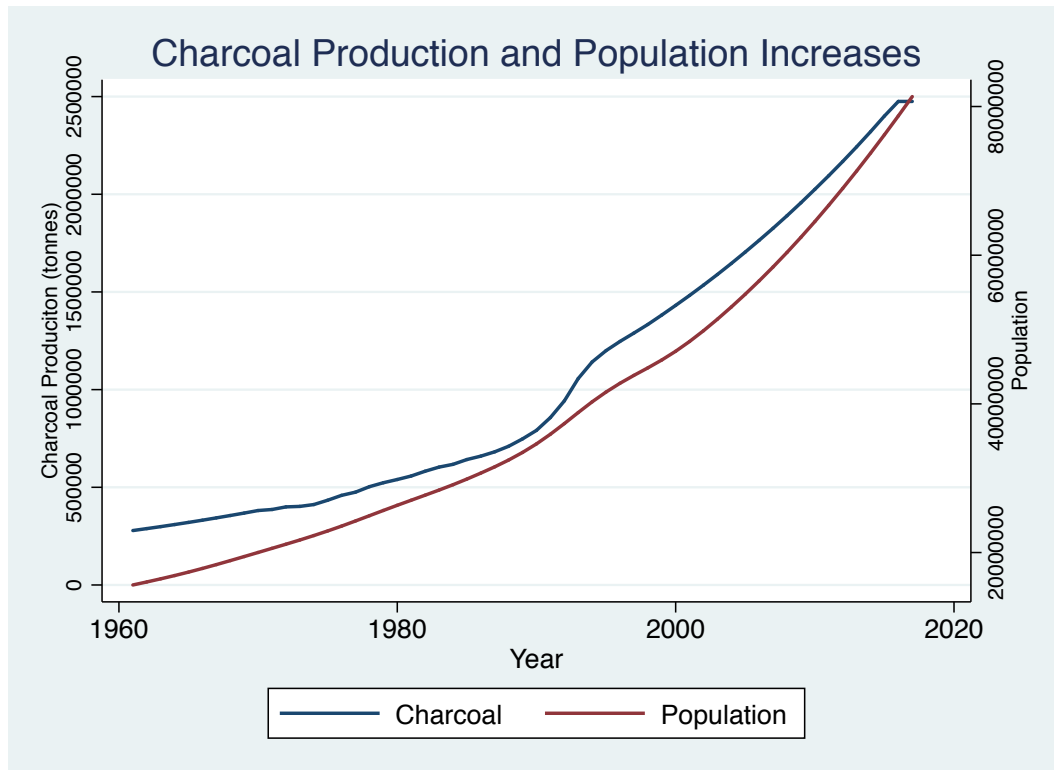
A number of international organizations, non-governmental organizations (NGOs), and donor agencies have sought to transition residents of Central Africa to cleaner sources of energy, but they have struggled to make significant inroads. This is in part due to logistical challenges, such as lack of roads and other implementation obstacles. Beyond these, however, are more fundamental challenges. These organizations have largely failed to fully understand the importance of the income generated by the informal charcoal industry and the extent of the cultural preference for charcoal use,

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<sup>9</sup> Interview with Théodore Trefon, April 22, 2019.

especially for cooking (Trefon & Kabuyaya 2018). Residents are unlikely to accept programs that seek to replace charcoal-burning stoves outright. A slower or more innovative approach at energy transition is more advisable, as will be discussed.

Figure 1.2



Data source: Food and Agriculture Organization of the UN (FAOSTAT)

Increasing access to efficient and sustainable sources of energy could dramatically improve lives and the local environment. Reliance on charcoal can be offset by improving access to electricity and clean cooking materials (two of the United Nations' Sustainable Development Goals (SDGs)). Yet, most international organizations have not recognized that promoting these goals in a non-contextualized way could disrupt charcoal production as a source of income.



For instance, Mercy Corps piloted a program for distributing biomass briquettes (made from leaves, bark, fruit peelings, and farm waste). While admirable for its intended goals—since these briquettes supply 70% more energy than charcoal—this program did not fully consider that such a program would “crowd out” a large number of informal charcoal producers (Africa Research Bulletin 2009). Furthermore, the international community tends to have a blind spot regarding the driving forces within Congolese politics—i.e., patronage and extraction (discussed more below; see also Jené & Englebert 2019).

Moreover, when charcoal production is addressed, it tends to get relegated by NGOs to their forest or energy programs—two already neglected sectors (Trefon et al. 2010). A few international programs do target the charcoal industry without seeking to fully eliminate it. For example, the European Union’s Global Climate Change Alliance has a program for training citizens for planting charcoal-producing tree plantations, yet these have yet to become widespread (Trefon 2016). Suggestions for other possible policy approaches are made in the Policy Recommendation section of this paper.

The primary data used here are survey responses from *Enquête 1-2-3* (2012). This project also uses data from the United Nations (UN), the World Health Organization (WHO), the World Bank, Our World in Data, NationMaster, and Aid Data. Travels through parts<sup>10</sup> of the DRC between 2017-2018 provide supplementary support, including interviews, anecdotal stories, and photos.

Section two of this project will provide a review of the relevant literature, and section three will outline the data and methodology used here in more depth. Section four

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<sup>10</sup> Haut-Katanga, Haut-Lomami, and Lualaba provinces, and the capital city Kinshasa

will describe the state of the environment in the DRC, and section five will discuss health in relation to charcoal production. Section six will discuss the culture and industry surrounding charcoal in Congo, and section seven will provide a broader overview of widely used energy sources and energy access across the provinces and areas (rural vs. urban) in the DRC. Section eight will explain the role of the government in the charcoal industry, with a special focus on permits and taxes. Section nine will then explore a new possible theoretical approach to expanding energy access in Congo—specifically, a “second best” strategy. Finally, section ten will briefly conclude and provide a set of policy recommendations.

## **2. REVIEW OF RELEVANT LITERATURE**

The DRC is currently mired in the “charcoal trap” (Kutch et al. 2011), in that a large portion of its population relies on charcoal use, but the country lacks the resources required to transition to a more sustainable source of energy, like solar or electricity. Yet, it is more than simply a matter of resources. Many cooks simply prefer the taste that charcoal provides, which has entrenched it in the culture (much like many Americans adamant about barbequing on the Fourth of July). Even wealthy families that can afford electric stoves do not tend to use them; this is due to a number of reasons, including frequent power outages, staple beans that require long cooking (making electricity all the more expensive), and hired cooks who typically come from rural villages where charcoal or woodfuel is the only method they know. Charcoal is thus a part of Congolese culture, and is unlikely to vanish anytime soon (Trefon 2019).

Charcoal production has also become an important source of income for many people. It is a popular trade because it is relatively low-skilled and requires only a few tools; it is therefore an opportunity to earn income in a context of limited alternative options (ibid.). That being said, charcoal production is a full-time job (Kutsch et al. 2011) that requires intensive, backbreaking labor, and selling the product typically involves long-distance travels over treacherous roads and the uncertainty of informal markets (e.g., there is no fixed price) (Trefon & Kabuyaya 2018) and a number of informal “taxes” along the way, which are typically paid in charcoal (thereby reducing what can be sold) (Trefon 2019). The rising demand for charcoal will likely draw more people into the informal charcoal production industry, especially as the population and urbanization continue to increase.

However, though charcoal provides needed income and harbors cultural significance, there are also causes for concern. Charcoal production is among the biggest drivers of forest degradation (in some areas it is second only to agricultural expansion) (Food and Agriculture Organization (FAO) 2011; Sedano et al. 2016). Deforestation contributes to a negative cycle, as it reduces soil humidity and thus pushes farmers to expand their agricultural lands, contributing to more deforestation and ecosystem disruption (Ulrichs and Slater 2016).

Charcoal use and production are also associated with negative health ramifications. The combustion of biomass emits a variety of pollutants that have been associated with causing “acute respiratory infections, chronic obstructive pulmonary disease, lung cancer (for coal smoke), asthma, nasopharyngeal and laryngeal cancers, tuberculosis, and diseases of the eye” (Ezzati 2005: 104). The health risks of indoor

biomass are intensified when open or poorly ventilated stoves are typically used. Cooking outdoors would help with ventilation, and while it is not an uncommon practice it is mainly possible in rural areas (less so in crowded urban areas) and during the dry season. Compounding the problems is that fact that many charcoal users are unaware of the negative health effects (Longombe et al. 2016).

Women and children tend to experience higher exposure to unclean cooking fuels, while all members of the household are exposed to similar degrees of biomass fuels when they are used for heating (Ezzati 2005; World Energy Outlook 2017; Lam et al. 2018). Mishra et al.'s (2005) study in Zimbabwe demonstrates that the use of biomass for cooking fuel is correlated with lower birth weights. They find that mothers using biomass for cooking gave birth to babies 175g lighter, on average, versus babies born to mothers using natural gas, petroleum, or electricity. Low birth weight can also make one susceptible to a host of health problems later in life, and continued exposure to indoor air pollution will only exacerbate such problems resulting from low birth weight (Ezzati 2005).

The links between charcoal (and other forms of biomass) use and poor health are a motivating factor for many IGOs and NGOs to promote clean energy and clean cooking. For example, the UN's SDGs and the International Energy Agency (IEA) emphasize these health consequences of household biomass use. Similarly, forest and environmental protection have been the driving force behind many donor-led initiatives in the DRC (Trefon 2016). Organizations such as the Centre for International Forestry Research (CIFOR) and New Generation Plantations have developed program dedicated

specifically toward the production of sustainably produced charcoal in efforts to save Virguna National park from illegal tree harvesting for charcoal purposes.

Promoting health and environmental protection cannot be disassociated from economic development, particular when charcoal is at the heart of these issues. Yet, environmental protection, especially, is likely to be contradictory to economic growth (via agricultural expansion, charcoal production, urbanization, industrialization, etc.) without careful planning and consideration. Sustainable development—that is, economic growth that is environmentally sound (Sachs & Reid 2006)—has become a high priority among the international development community, and much attention has been directed toward promoting sustainable development throughout SSA (Cao et al. 2010; Lin et al. 2016; Death 2016; *World Employment Social Outlook* (WESO) 2018). However, striking the right balance between economic growth and environmental protection is difficult in practice and is inevitably context-specific.

### ***2.1. The Role of the International Community***

The majority of the sustainable development literature urges the international community, especially wealthy nations, to provide funding for developing countries to enable them work toward achieving sustainable development goals (Sachs & Reid 2006; Angelsen et al. 2009; Mosnier et al. 2014; Death 2016). Beyond the practical logistics of having richer countries finance sustainable development programs in developing countries, many scholars also maintain that wealthy nations have a moral responsibility to developing countries to do just this, since they are the ones who have benefited from environmental degradation whereas many developing countries suffer the negative consequences, often

in extreme ways, without enjoying the rewards (Collier et al. 2008; Cao et al. 2010; Liu 2015; Owoeye 2016).

Beyond just reaping the benefits of polluting, Cao et al. (2010) make the case that wealthier nations have also become the primary beneficiaries of conservation programs, whereas poorer nations suffer the majority of the costs. For example, it is more likely that residents in affluent countries can afford pricier environmentally-friendly products, in addition to receiving the “feel-good” effect of supporting such environmentally conscious products. The majority of “green” jobs fall in wealthy countries, partially due to the location, popularity, and skills required of green technologies. Poorer communities, for their part, may lose employment and income to such green jobs, and may lose out in revenue to “green certified” products. These benefits arguably reinforce the financial responsibility affluent regions owe to developing regions.

Going further, Owoeye (2016: 284) contends that energy access has become a human rights issue. He argues that energy access is fundamental to the full realization of economic and social as well as civil and political rights. The human rights argument is supported by the multitude of negative health repercussions stemming from the use of unclean energy sources.

Yet, a general (if not universal) consensus regarding the responsibility and merits of financing and supporting clean energy programs does not, however, mean there is agreement on the best mode of providing such assistance.

## ***2.2. Possible Strategies for Transitioning Employment Away from Charcoal***

### ***Production***

A country's political, economic, cultural, and environmental context will be all-important for policy formation. If the economic situation of the poor is ignored when forming environmental and energy policies, it is likely that people living in poverty will circumvent regulations or turn to other forms of survival out of desperation (Sachs & Reid 2006). This ultimately may cause the environmental and energy policies to backfire and may end up harming the most vulnerable people in the process, both of which are perverse effects of the original intention. This has happened in China, as the national government implemented environmental policies and regulations without offering affected poor citizens adequate subsidies or compensation (Cao et al. 2010). Moreover, while enhanced environmental regulations may undermine employment in informal industries, environmental degradation can diminish some employment opportunities, especially jobs with more fair and secure incomes (WESO 2018).

Poor, rural residents may find themselves “locked into” environmentally damaging jobs like charcoal production as their only viable source of both fuel and income (WESO 2018: 105). The fact that many people across the continent find themselves “stuck” in the informal sectors presents a formidable challenge to transitioning to a green economy (Death 2016: 191).

Charcoal production is harmful to forests, but it is also overwhelmingly an informal industry, lacking regulations and even government interest in the sector (Trefon 2019). Some agencies, such as the International Labor Organization (ILO), encourage governments to facilitate a smooth transition away from employment based on

environmental degradation by providing social protections and by formalizing (and thus regulating) these industries (ILO 2015; WESO 2018).

Unemployment programs are a potential strategy, but such programs are often underdeveloped or nonexistent in developing countries, and, even among those that are in place, it is unlikely that these would extend to informal sectors. This is particular true in a context like that found in the DRC, where the provision of social benefits is sparse, uneven, and often nonexistent. Indeed, only about one third of the global labor force (38.6%) is covered by unemployment protection, and the SSA region ranks on the lower end of this with a mere 4.2% of its labor force covered (WESO 2018: 107), and the DRC is below even this.

DRC's government has extremely low service delivery capacity; state resources are instead distributed informally through a vast and complex patronage network. Furthermore, state actors in Congo function and survive via this patronage network (more on this below), and so are not incentivized to operate outside of it (quite the opposite). It is therefore unrealistic to expect the Congolese government, in its current state, to provide social protections for those reliant on charcoal, whether consumers or producers. Indeed, the informal charcoal industry in Congo is itself a symptom of poverty and a reaction to the government's failure to provide services such as sustainable and affordable energy (Trefon et al. 2010).

Social protections, entrepreneurial investment, and other incentives (all discussed more below) would no doubt help charcoal producers transition to other sectors. Yet, such policy prescriptions presume a government replete with the resources, capacity, intentions, and priorities to pursue such goals. However, arguably none of these



assumptions can currently be applied to Congo. Donors may step in to fund and direct such programs, but this would require nuanced attention and the development of context-specific plans and training to foster employment and entrepreneurship in and for a greener economy.

Some scholars advocate providing direct funding to national governments for them to invest in sustainable development (Sachs & Reid 2006; Angelsen et al. 2009). However, such a strategy does not fully consider that environmental protection may be perceived as a lower priority (Death 2016), that these governments lack implementation and monitoring capacities (Khanna & Liao 2014), and it does not take into account that high levels of corruption plague a large portion of governments in developing nations (Liu 2015). Hence, political contexts are just as important to consider as are domestic environmental and economic circumstances.

Cash transfer (CT) and conditional cash transfer (CCT) programs offer another strategy for bolstering the adaptive capacity of industries and individuals, and for protecting vulnerable people from possible income loss from a transition to a greener economy (WESO 2018). CT and CCT programs financed by external grants can be especially impactful in developing countries where national social protections are lacking. Yet, CTs and CCTs are forms of assistance primarily aimed at reducing the short-term vulnerability of poor people, and typically are not designed to address longer-term vulnerability to climate change, or more embedded sources of poverty (Johnson et al. 2013).

CT and CCT programs aimed at informal and environmentally-unfriendly industries do not have an overwhelming success rate (for cases in Mexico, see Blackman

& Sisto 2006; Johnson et al. 2013; Khanna & Liao 2014). Nevertheless, CTs and CCTs should not be dismissed entirely. It stands to reason that, if carefully constructed, CTs and CCTs indeed may be able to target individuals and households dependent on environmentally damaging industries and may be able to facilitate long-term adaptive capacity, in particular by assisting in livelihood transitions (Wood 2011). CTs can reduce the “locked in” nature of employment from charcoal production by opening up options. This is done by easing dependence on income from charcoal and by reducing costs of otherwise riskier behaviors, such as innovation, migration, and investment in other skills and/or tools. Subsidies for clean cooking stoves, for example, have also been suggested (Batabyal & Beladi 2002; Grimm et al. 2016).

Within SSA, Ethiopia and Kenya offer examples of pro-poor CT programs that have incorporated climate-sensitive features, but which focus on emergency relief rather than long-term economic transitions (WESO 2018: 109). In Ethiopia, the Productive Safety Nets Program (PSNP) provides preemptive CTs to beneficiaries when droughts or floods are expected to occur, based on meteorological monitoring. Evaluation of this program suggests that it has diminished the initial shock of drought and that it has reduced subsequent food insecurity (WESO 2018: 109).

Kenya’s Hunger Safety Net Program (HSNP) is an unconditional CT program. It provides regular payments of \$50 every two months to households in areas with high levels of extreme poverty, but it also targets drought-affected households with onetime emergency payments when drought conditions reach severe levels. However, while evaluation evidence suggests that the HSNP has improved many Kenyan’s standard of living (particularly for women) and has increased immediate shock resiliency, the

majority of emergency beneficiaries reported using their transfer funds almost exclusively for basic goods rather than using them to invest in assets that would improve long-term resilience (WESO 2018: 109).

Uganda provides an example of a program directed to promoting the use of improved charcoal- and wood-based stoves, which are more efficient in that they require less fuel. Like the DRC, the vast majority of Uganda's citizens rely on charcoal and other woodfuel<sup>11</sup> for cooking. Manufacturing these more efficient stoves require special ceramic skills training. The private sector has largely been responsible for providing this training, and it is often offered for free by the companies that sell the stoves. Uganda's Directorate of Industrial Training has not approved this kind of training, and so it therefore remains informal and not an officially recognized credential (WESO 2018: 143). Conceivably, charcoal producers and traders who are displaced by the reduction in demand for charcoal brought about by these more efficient stoves could be targeted and incentivized to train in this and similar programs.

Investing in innovation is another possible strategy. The Congolese have an impressive entrepreneurial spirit (Trefon 2019), yet they find themselves trapped in an environment that thwarts rather than nourishes this spirit. Donors may help fund projects that are uniquely adapted to specific contexts, such as the development of stoves that still use charcoal but in a more efficient and sustainable manner.

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<sup>11</sup> Woodfuel is "defined as wood or wood transformed into charcoal" (Bailis et al. 2005: 99).

### 3. DATA AND METHODOLOGY

This project analyses trends and patterns using health, economic, and energy data. The UN's FAOSTAT (Food and Agricultural Organization) provided data for charcoal production. The World Bank provides data on infant mortality rate and life expectancy. Access to clean cooking fuels and access to electricity were also provided by the World Bank, supplemented by Our World in Data. Data for mortality rate attributed to household and ambient air pollution were provided by the World Bank and the World Health Organization. NationMaster supplied data for CO<sub>2</sub> emissions from solid fuels, and Aid Data provided data on environmental foreign aid.

The majority of the data used here comes from the *Enquête 1-2-3* survey. This is a national household survey conducted in the DRC, and it focuses on employment, the informal sector, household expenditures, and political opinions. In 2012, 21,454 respondents representing households were asked a series of questions in their own languages. The *Institut National de la Statistique* (INS) conducted this extensive survey, and financial and technical support were provided by the World Bank, the African Development Bank, the University of Antwerp, and other partners (Institute of Development Policy 2019). This project uses responses to questions related to types of fuel used for household cooking and lighting, electrification, and environmental policy opinions. Data on location of respondents (province<sup>12</sup> and rural vs. urban area) are also reported.

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<sup>12</sup> In 2015, six of the 11 provinces in the DRC were cut into smaller ones in a reform known as *découpage*, bringing the total number of provinces to 26. Provinces listed in the 2012 *Enquête 1-2-3* dataset are the pre-*découpage* provinces, and these were converted in this project to post-*découpage* provinces using district-level data.

Travels in the DRC over 2017-2018 offer further support via interviews, contextual evidence, and anecdotal experiences. The methodology employed here is largely descriptive using data visualizations, with the intention of supplying a richer understanding of the role charcoal plays in Congo in comparison with other forms of energy, and in light of the environmental, social, and political context in the DRC.

#### **4. THE STATE OF THE ENVIRONMENT IN DRC**

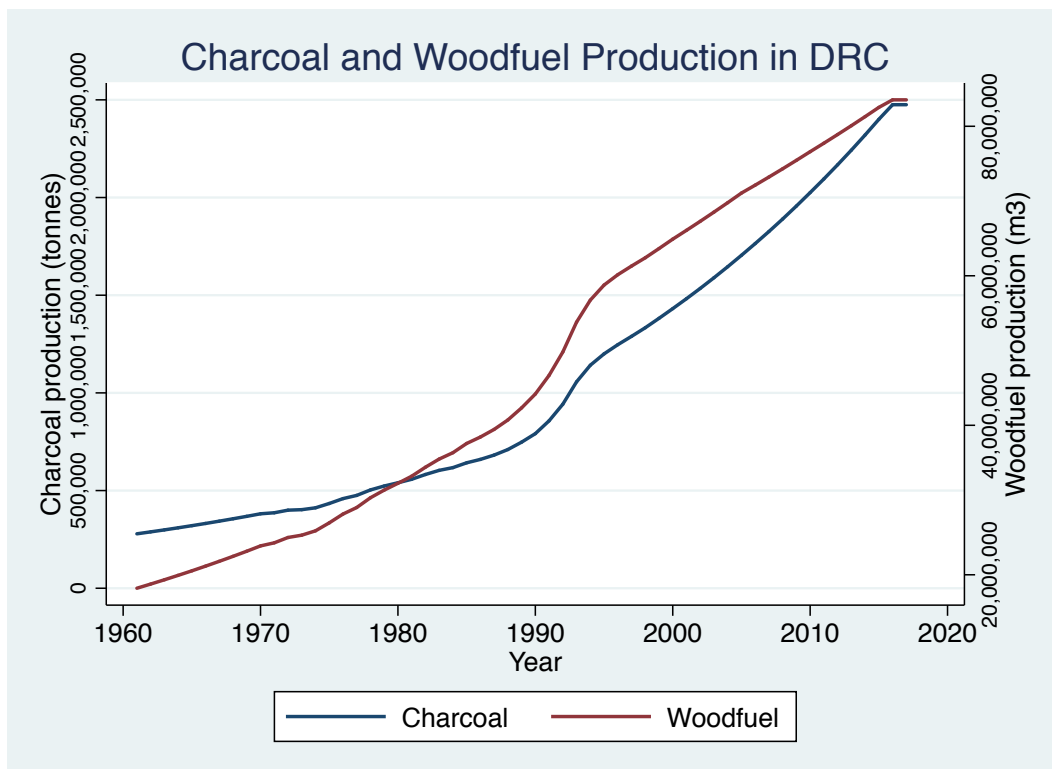
Sub-Saharan African (SSA) is especially vulnerable to the adverse effects of climate change due to the high dependence of the economy on agriculture that is itself dependent on rainfall (i.e., lack of irrigation), and because of the relative limited capacity to adapt (Collier et al. 2008; Cook 2018). Climate change is predicted to reinforce existing problems across SSA, including increasing poverty and hunger, depleting water sources and increasing the prevalence of droughts, reducing crop yields, increasing the spread of disease-carrying insects, and adding further stress to poor infrastructure (Collier et al. 2008). In addition to these factors, SSA populations remain largely dependent on biomass (e.g., charcoal, other forms of woodfuel, agricultural waste, and animal dung) for household cooking, lighting, and heating needs (Malyshev 2009). This reliance on biomass is not sustainable in the long term, as it produces severe effects on health, the environment, and economic development (ibid.). SSA emits roughly the same amount of greenhouse gases from charcoal production and consumption as Europe does annually from transportation (Chaix 2010).

Modern charcoal production and consumption in Congo developed little by little beginning in the 1960s, but has expanded at an accelerated rate since the end of the 1980s

(Trefon et al. 2010). This expansion is due to population growth, increased urbanization, the spread of know-how, and a continually absent state in terms of energy provision (Trefon 2019). Figure 2.2 shows the steady increase of charcoal and woodfuel production since the 1960s. Figure 3.2 shows the rise in CO<sub>2</sub> emissions from solid fuel consumption beginning in the 1980s.

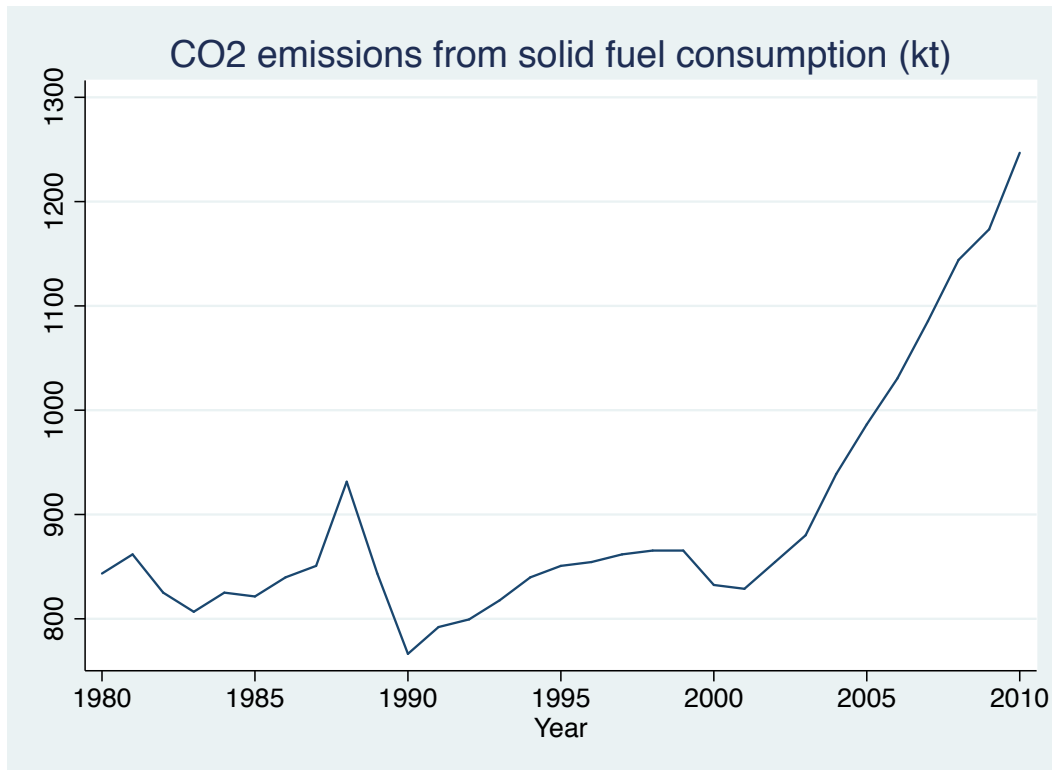
While this has severe adverse effects on health and the environment, charcoal production has become an important component of the Congolese economy, particularly for poorer and rural residents (Schure et al. 2011; Schure et al. 2014; Schure et al. 2015). There is also a growing demand for charcoal in urban areas as urbanization rates continue to rise (Schure et al. 2014; Trefon 2016), and this demand is rising in rural areas as well (Bogaert et al. 2008). Due to the informal nature of the charcoal production sector (though some is produced commercially), it is difficult to know exactly how many individuals and households depend on it for income.

Figure 2.2



Data source: FAOSTAT

Figure 3.2



Data source: NationMaster

The Congo Basin loses around 23% of forest area per year (Food and Agriculture Organization (FAO) 2011). Rainfall data on the region tends to be inaccurate and often contradictory, depending on the source, due to the sparse use of rainfall gauge networks and varying simulation models (Farnsworth et al. 2011; Washington et al 2013), however some studies note that rainfall variability has increased in recent decades (Farnsworth et al. 2011; Diem et al. 2014).

Academic and political interviewees in the DRC have also noted that the effects of climate change have already become noticeable, particularly in terms of observable

rainfall changes and deforestation.<sup>13</sup> The Directeur de l'Environnement de la Province de Haut-Katanga explained that deforestation and air pollution (from industries, cars, and smoke) are among the leading environmental concerns in the province (water pollution was also mentioned). He noted that the majority of the population uses charcoal for domestic energy for heating and cooking. According to him, only 30-40% of the population in the provincial capital city of Lubumbashi has access to electricity, and he added that this number is vastly lower in peri-urban and rural communities. The widespread use of charcoal, he emphasized, is causing major health problems, and he urged the need to phase out charcoal use and create alternative forms of energy. Yet, for the time being there does not appear to be any concrete plans to do so.

## **5. THE STATE OF HEALTH IN RELATION TO CHARCOAL IN DRC**

Despite improvements in the DRC regarding access to medications and health facilities and fewer conflict-related deaths, the adverse health effects related to the use of unclean fuels inside the home (particularly charcoal, other woodfuel, and kerosene) is rising. Perhaps unsurprisingly, this corresponds to a concurrent rise in charcoal production. Charcoal production is thus an environmental as well as a health concern.

Solar energy use has made some inroads in Congo, especially for household lighting purposes in rural areas. Small solar panels and Pico-Photovoltaic kits offer low-cost alternatives to expensive investments in electric power grids (Grimm et al. 2016). However, solar energy is not a realistic replacement for charcoal and firewood (Grimm et

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<sup>13</sup> Germain Kanahu Kayombo, Vice-Président de l'Assemblée Provinciale du Lualaba, 19-6-17; Professor Balthazar Ngoy, University of Lubumbashi (UNILU), 23-6-17; Directeur de l'Environnement de la Province de Haut-Katanga, 27-6-17; Daniel Kapend Kapend, Ministre de l'Environnement et Tourisme, 20-10-17.



al. 2017). This is primarily because solar power is not a viable source of cooking fuel, given the limited capacity of small solar panels and kits (which do work well for other activities, e.g., room lighting and phone charging) and given the types of cooking stoves available and affordable to rural residents (Lam et al. 2018). Image 1.2 shows a single solar panel outside of a hut in rural Haut-Lomami that appears to be connected to a stereo inside. Electrification is therefore often championed as offering the best replacement for unclean energy, as it can be used for lighting, heating, and cooking purposes—though replacing cooking fuels is proving to be the most difficult, due to preferences, habits, and the unaffordability and lack of access to electric cooking appliances (Kutsch et al. 2011; Grimm et al. 2013; Chaplin et al. 2017; Lam et al. 2018). The main challenges of electrification, generally speaking, are financing and reaching remote areas.

*Image 1.2*

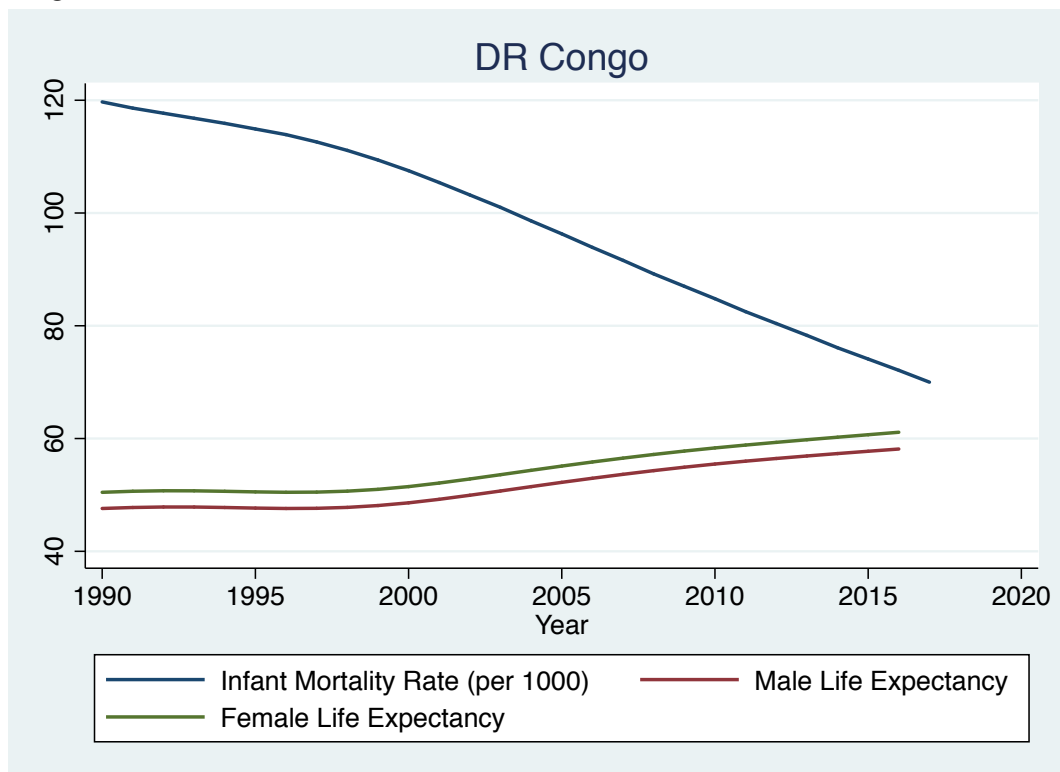


*Photo credit: Jené, 2018.*

Figure 4.2 shows that overall health in the DRC has been improving in recent decades. Infant mortality rate has been steadily declining, while both female and male life expectancies have been increasing. Figure 5.2, however, paints a grimmer picture. Using national averages for Congo, it demonstrates that deaths from household air pollution have been rising, despite the overall positive trends in health; and, importantly, this rise in deaths from indoor air pollution corresponds to a rise in charcoal production. Indeed, the statistical correlation between charcoal production and deaths related to indoor air pollution is 0.98. Kerosene is another toxic source of indoor fuel and is therefore another

important contributor to deaths from indoor air pollution; kerosene also poses additional health risks, such as burning and poisoning (see WHO 2014 and Lam et al. 2018 for further discussion of the negative health effects of kerosene use).

Figure 4.2

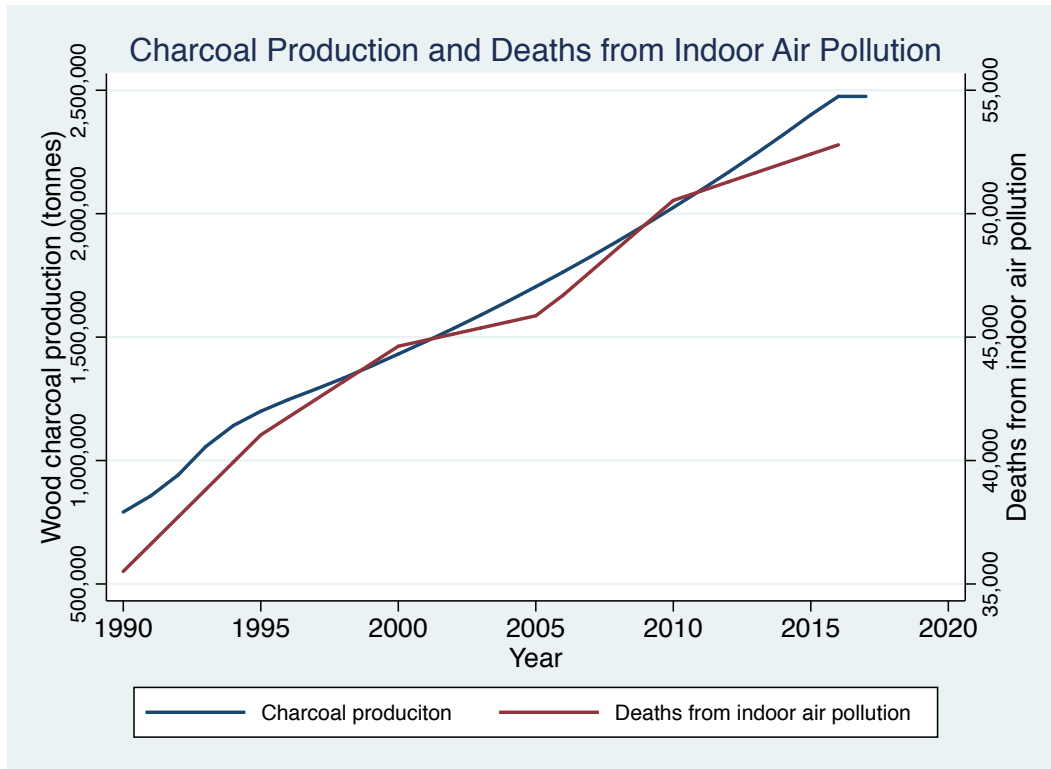


Data source: World Bank

There is also a gender disparity, as females experience higher levels of exposure to indoor air pollution. For instance, in 2016 there were 166 female deaths (per 100,000 female population) attributed to indoor air pollution compared to 160 male deaths (per 100,000 male population) in the DRC.<sup>14</sup> The negative health effects of charcoal use within the home undoubtedly affect women and children at higher rates, as they tend to be in the kitchen during meal preparation.

<sup>14</sup> These data are only available for this year (2016).

Figure 5.2



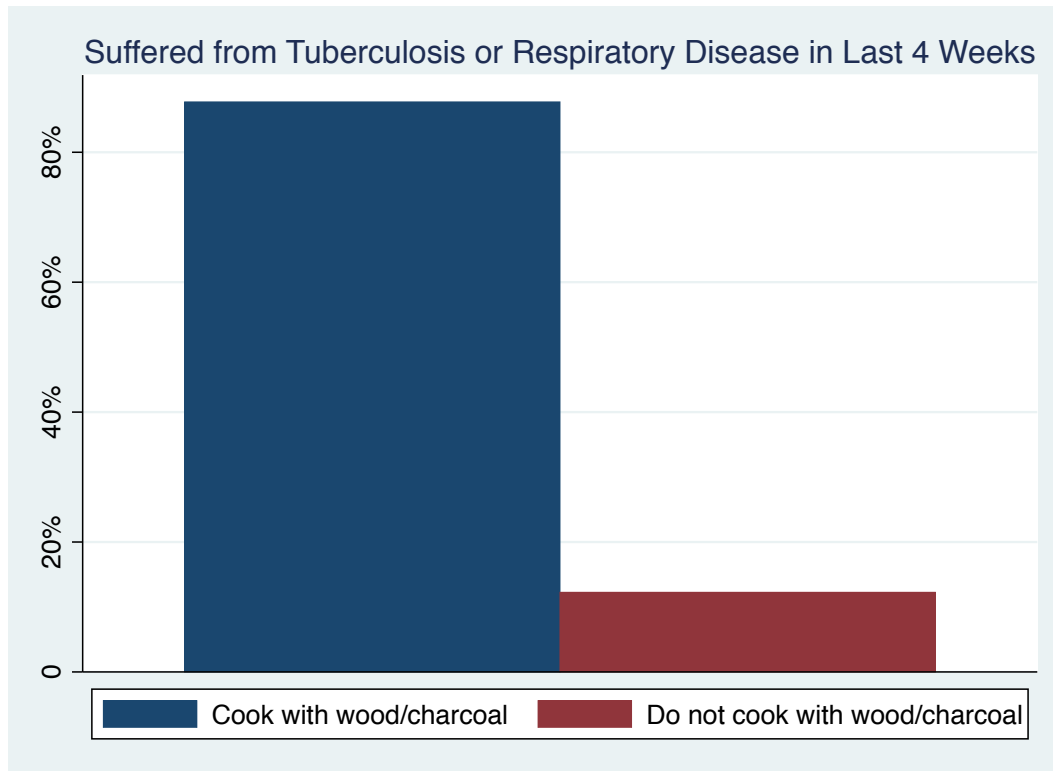
Data source: FAOSTAT and WHO

Improving access to electricity will likely help alleviate indoor air pollution from unclean fuels used for lighting and heating, yet a study of rural Tanzania suggests that this benefit of electricity is less likely to translate to cooking (Chaplin et al. 2017). These scholars found that improved access to electricity in rural Tanzania did provide a number of benefits for residents, yet they found that there was no significant reduction in the use of solid fuels (including charcoal, other woodfuels, animal dung, and agricultural waste) for cooking purposes (ibid.). This is partly due to habits and preferences and partly due to the unaffordability of electric cooking appliances (Trefon & Kabuyaya 2018).

These numbers suggest that while overall health is improving—thanks largely to improved access to medications and health services, health-related education, the building of more hospitals and health centers, and fewer violent deaths from conflict—

charcoal is continuing to have negative health effects on users and producers. As the popularity of using charcoal fuel for home heating, lighting, and especially cooking has increased, so have deaths attributable to the pollution produced by the use of charcoal as fuel within the home.

Figure 6.2



Data source: *Enquête 1-2-3*

As can be seen from Figure 6.2, of the 506 *Enquête 1-2-3* survey respondents who reported having suffered from tuberculosis or respiratory disease within the last four weeks, 87.75% of them also reported using woodfuel or charcoal as their main source of cooking fuel, while only 12.25% of those who suffered tuberculosis or respiratory disease reported cooking with other energy sources. Those who experienced respiratory disease

or tuberculosis within the last four weeks were 16.8% of the survey sample who experienced any sort of illness, and 7% of the total sample.

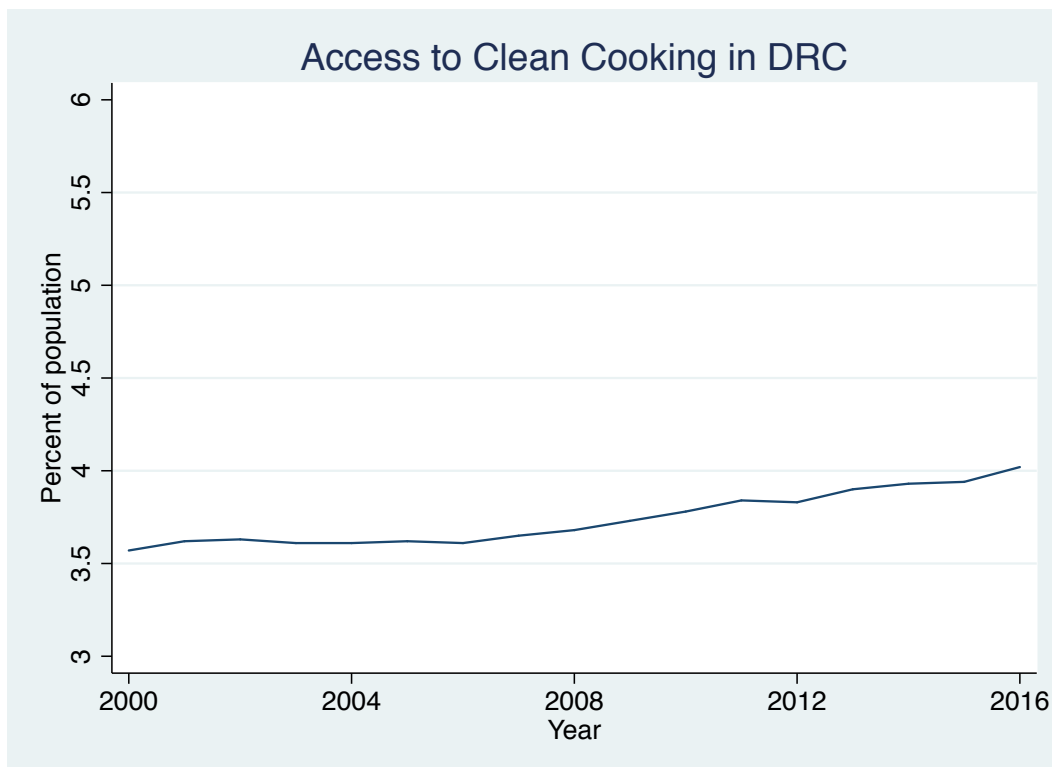
Of all the survey respondents who reported using woodfuel/charcoal as their primary source of energy for cooking, 7.23% also reported suffering from tuberculosis or respiratory disease within the last four weeks. This contrasts to the 5.75% of those who do not primarily cook with woodfuel/charcoal who suffered from tuberculosis or respiratory disease within the last four weeks. If these estimates are representative of the averages, then it suggests that when charcoal is used for cooking it increases the rate of respiratory disease by 1.48 percentage points each month. Yet, it is difficult to know who representative this sample is, for it is just a single snapshot in time. However, it is worth noting that beyond using charcoal in and near the house, the charcoal production process itself also has negative health effects on the producer. The smoldering process can take up to two weeks and requires diligent monitoring, which means high exposure to smoke (Trefon & Kabuyaya 2018).

Of the typical household uses of charcoal (cooking, heating, and lighting), cooking is by far the activity that consumes the most charcoal, as many people are able to find alternative sources of lighting energy (e.g., solar panels) and because heating, unlike cooking, is not always necessary. As Figure 7.2 shows, access to clean cooking materials in the DRC has slightly risen in recent years, yet the magnitude of this increase is very low. From 2000 to 2016, the percent of the population with access to clean cooking materials increased by less than half a percentage point (3.57 to 4.02). Nonetheless, access to clean cooking is a key component of the UN's Sustainable Development Goals (SDGs) related to energy access, and it stands to reason that access to clean cooking

devices and fuels would greatly diminish the number of deaths linked to household air pollution.

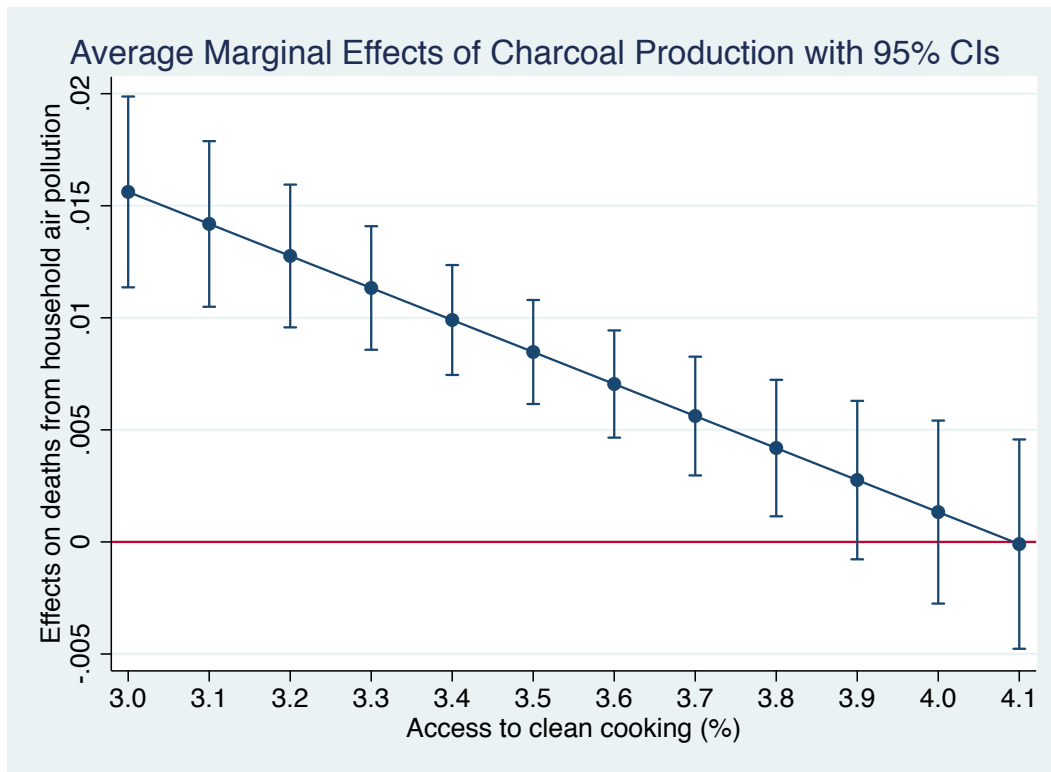
Figure 8.2 uses an interaction term between charcoal production, deaths attributable to household air pollution, and access to clean cooking materials to explore the intricacies of the relationship between these three variables. As can be seen, access to clean cooking is indeed a mitigating factor. The magnitude of the positive correlation between charcoal production and deaths diminishes as access to clean cooking increases. In fact, the relationship becomes insignificant when access to clean cooking reaches 3.9% percent of the total population. The distribution of access to clean cooking is, of course, uneven across the country, and clean cooking tends to be concentrated in affluent households (i.e., those that can afford not only electric stoves but also backup generators to account for frequent power outages (Trefon & Kabuyaya 2018)).

*Figure 7.2*



*Data source: World Bank and Our World in Data*

Figure 8.2



These findings support further efforts to improve access to clean cooking devices and fuels. Yet, what these figures do not reveal are the families and individuals who have become economically dependent on small-scale charcoal production, which has recently exploded as an enormous informal industry in the Congo. The next section discusses this phenomenon.

## 6. MAKALA CULTURE AND THE INFORMAL CHARCOAL INDUSTRY IN DRC

A charcoal producer is reported to have stated that “*makala* is life” but that “*makala* is a necessary evil” (Trefon & Kabuyaya 2018<sup>15</sup>: 71). In other words, *makala* (the Swahili

<sup>15</sup> See Chapter 3: “Charcoal is Life” in Trefon & Kabuyaya (2018) for the full interview with Liboko, the charcoal producer from the Goma area.

and Lingala word for charcoal) is a daily essential for families who rely on it for cooking and is an economic lifeblood for those who produce it, despite the harms it effects on health and the environment.

Woodfuel production—particularly charcoal production—has become an important component of many people’s livelihoods and has contributed substantially to

*Image 2.2*



*Photo credit: Jené, 2017*

poverty reduction (Schure et al. 2014; Woollen et al. 2016). The Directeur de l’Environnement de la Province de Haut-Katanga described how the informal production of charcoal continues to rise and how this is contributing to deforestation, but he added that this is also an important source of income for many people, especially the poor.

People “keep cutting and cutting,” he noted, “but they need to eat.”

One can hardly avoid the ubiquitous presence of charcoal and its production in both the cities and countryside in the DRC. In urban areas, markets have become seas of charcoal bags for sale, stacked high and black in seemingly endless rows (see Image 2.2). Sellers pile bags of charcoal onto bicycles and transport these goods over long distances (see Image 3.2). Views from roads leading from cities into the countryside are lined with more bags of charcoal

*Image 3.2*



*Photo credit: Jené, 2017*



for sale, and grassy horizons are peppered with plumes of billowing smoke rising from controlled ground fires tasked with producing charcoal (see Images 4.2 and 5.2).

Cooking with charcoal is a part of Congolese culture. Citizens use on average one cubic meter of woodfuel/charcoal per year, and approximately 80% of domestic energy needs are supplied by charcoal (Trefon et al. 2010). Even households with the luxury of

*Image 4.2*



*Photo credit: Jené, 2017*

being connected to electric grids still often prefer to cook with charcoal-burning rather than electric stoves. This is due in part to the fact that, despite having electricity, the household is unable to afford an expensive electric stove, or because frequent power outages make electric stoves unreliable.

Moreover, beyond the affordability and reliability of charcoal, many citizens maintain that charcoal provides a better taste for meals (Trefon & Kabuyaya 2018).

The employment and poverty reduction brought about by charcoal production ought to be kept in mind as environmental and energy access policies are developed. Schure et al. (2011: 1) advice policymakers to “recognise the size and value of the woodfuel sector and its importance to many people,” suggesting that greater attention

*Image 5.2*



*Photo credit: Jené, 2017*

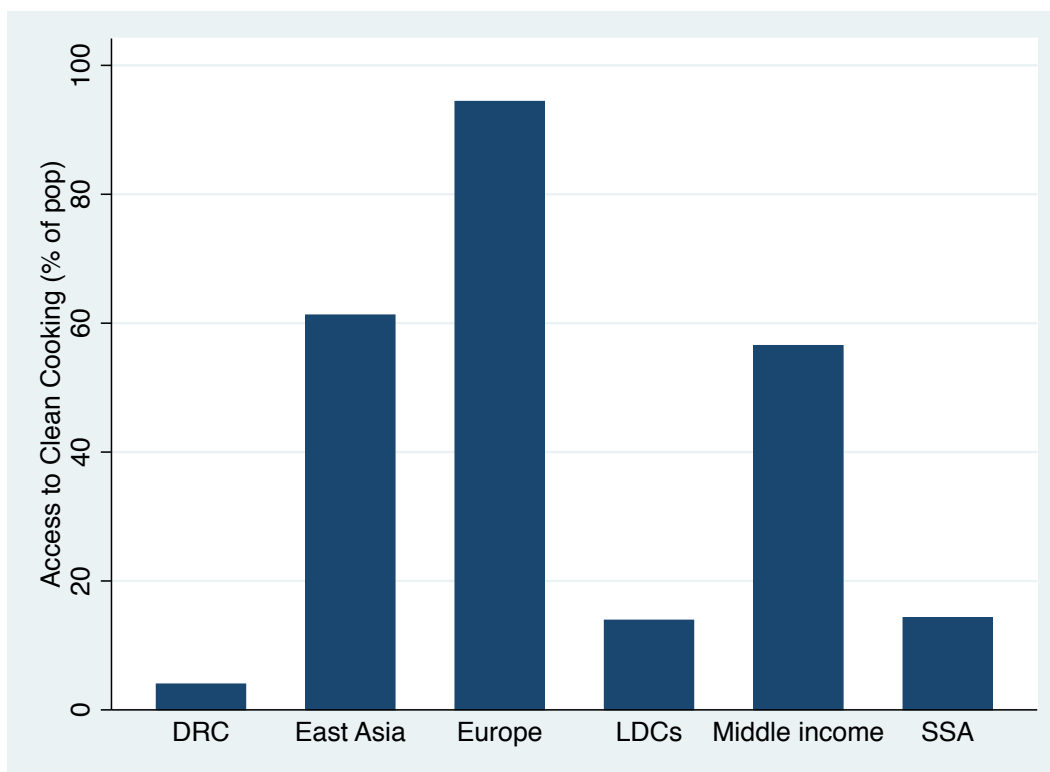
needs to be paid to promoting the adoption and use of energy-efficient stoves and kilns. Schure et al. (2014) maintain that there are methods by which woodfuel can be produced in a sustainable and renewable manner.

Regulations regarding charcoal production and trade that are in place are hardly enforced, and are often avoided with bribes or payoffs (Schure et al. 2015; Trefon & Kabuyaya 2018). This has only worked to contribute to the informality of the charcoal production and trade industries (see section 8.1 below on permits and taxes). Yet, there are some benefits to the informality of these industries, especially for poor and rural populations who benefit financially from the unregulated trade and production of charcoal. Nonetheless, problems related to health and the environment are exacerbated by the lack of regulation and the informality of charcoal-related industries. There is therefore an urgent need for a comprehensive policy that takes into account the various nuances and dynamics of the consequences and components of the charcoal industry in the DRC.

## **7. THE STATE OF ENERGY ACCESS ACROSS DRC**

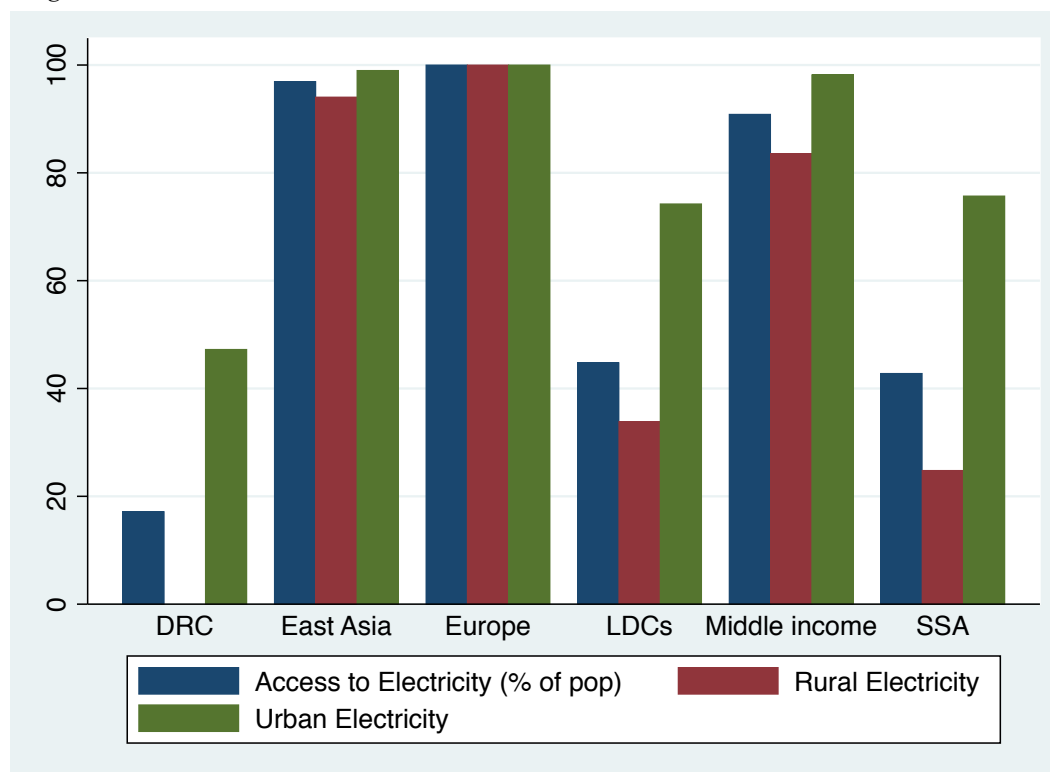
Improving access to clean cooking materials (i.e., devices and fuels) and access to electricity are two of the UN's Sustainable Development Goals (SDGs), and while much progress has been made globally, successes have been concentrated primarily in Southeast and East Asia (World Energy Outlook 2017). Sub-Saharan Africa lags tragically behind, and the DRC ranks low in all categories compared to SSA as a region (see Figures 9.2 and 10.2).

Figure 9.2



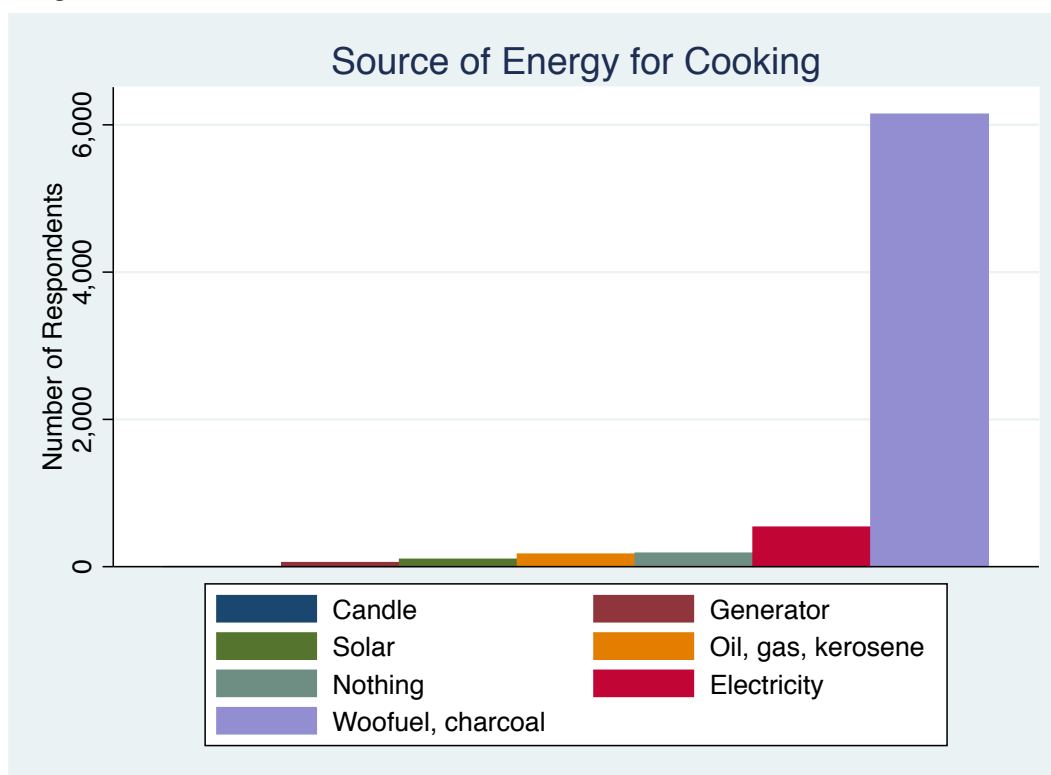
Data source: World Bank and Our World in Data

Figure 10.2



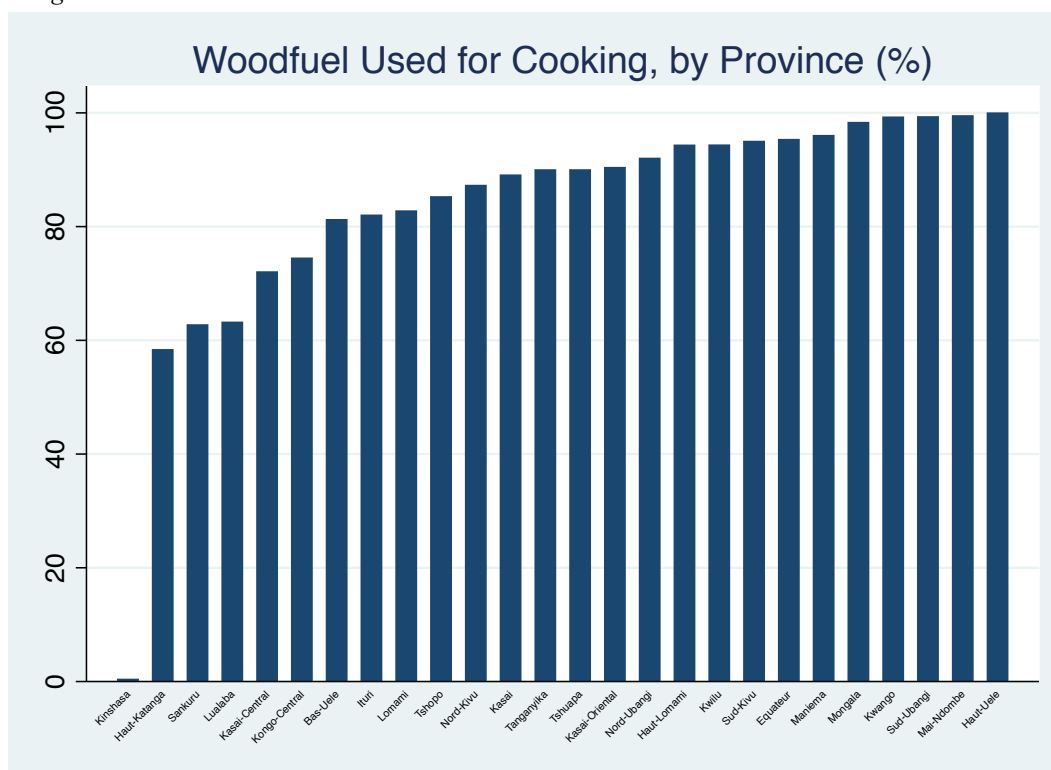
Data source: World Bank and Our World in Data

Figure 11.2



Data source: Enquête 1-2-3

Figure 12.2



Data source: Enquête 1-2-3

Congolese citizens rely heavily on charcoal and other forms of woodfuel for cooking purposes. Figure 11.2 is based on survey data from *Enquête 1-2-3* and displays responses for the main source of energy used for cooking in one's household<sup>16</sup>. It is clear that woodfuel is by far the dominant source of energy used for cooking in the DRC.

As can be seen from Figure 12.2, nearly 100% of respondents in the provinces of Haut-Uele, Mai-Ndombe, Sub-Ubangi, Kwango, and Mongala reported using woodfuel as their primary source of cooking fuel (see Table 1.2 for a breakdown of the details). Woodfuel for cooking is much lower in Haut-Katanga and it is almost negligible in Kinshasa (see Table 2.2 for details). This is likely due to the presence of alternative options. Interestingly, electric stoves have not taken over even here.

The primary fuel used for cooking in Kinshasa is oil (including kerosene, palm oil, and petrol). Lubumbashi (the second largest city in the country after Kinshasa) is located in Haut-Katanga, and despite being the second lowest user of woodfuel for cooking, woodfuel is still the most commonly used fuel for cooking within the province (electricity is the second most common source of energy used for cooking in Haut-Katanga, with nearly 33% of respondents).

Table 1.2

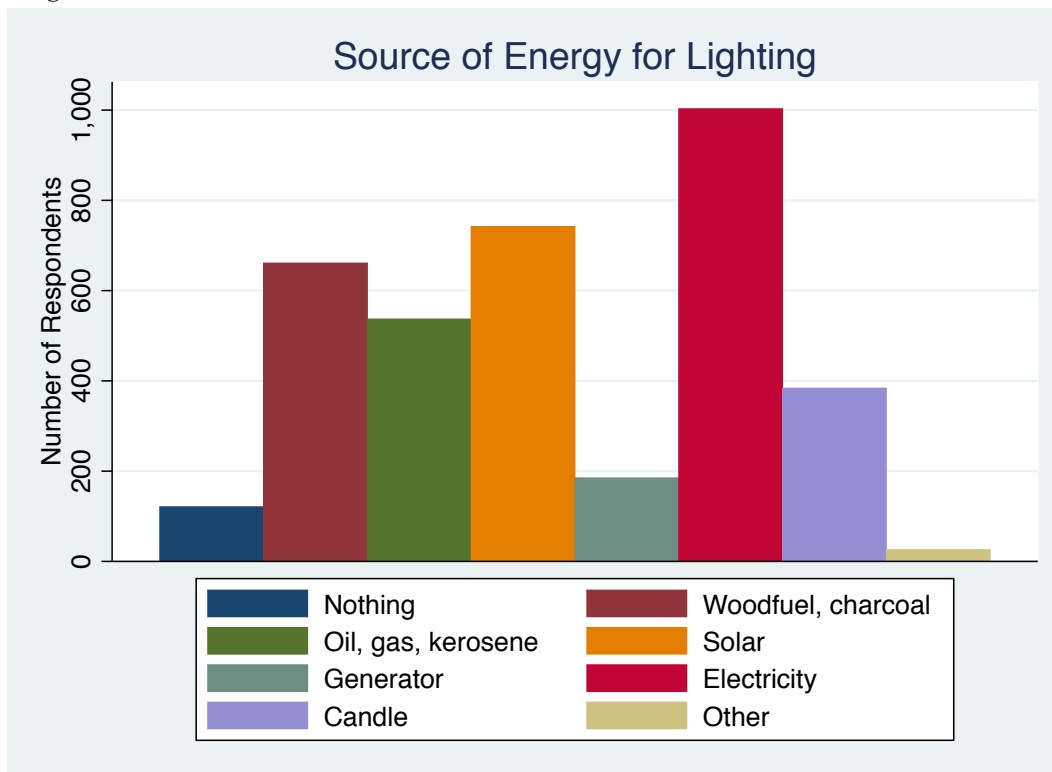
Province	Woodfuel for Cooking	Number of Respondents	Rural Population
Haut-Uele	100%	207	85.02%
Mai-Ndombe	99.51%	205	84.39%
Sub-Ubangi	99.33%	301	94.68%
Kwango	99.28%	417	99.28%
Mongala	98.33%	181	90.60%

<sup>16</sup> Quelle source d'énergie de combustible votre ménage utilise-t-il principalement pour cuisiner?

Table 2.2

Province		Woodfuel for Cooking	Number of Respondents	Urban Population
Kinshasa		0.41%	487	99.59%
Haut-Katanga	58.38%	365	68%	

Figure 13.2



Data source: *Enquête 1-2-3*

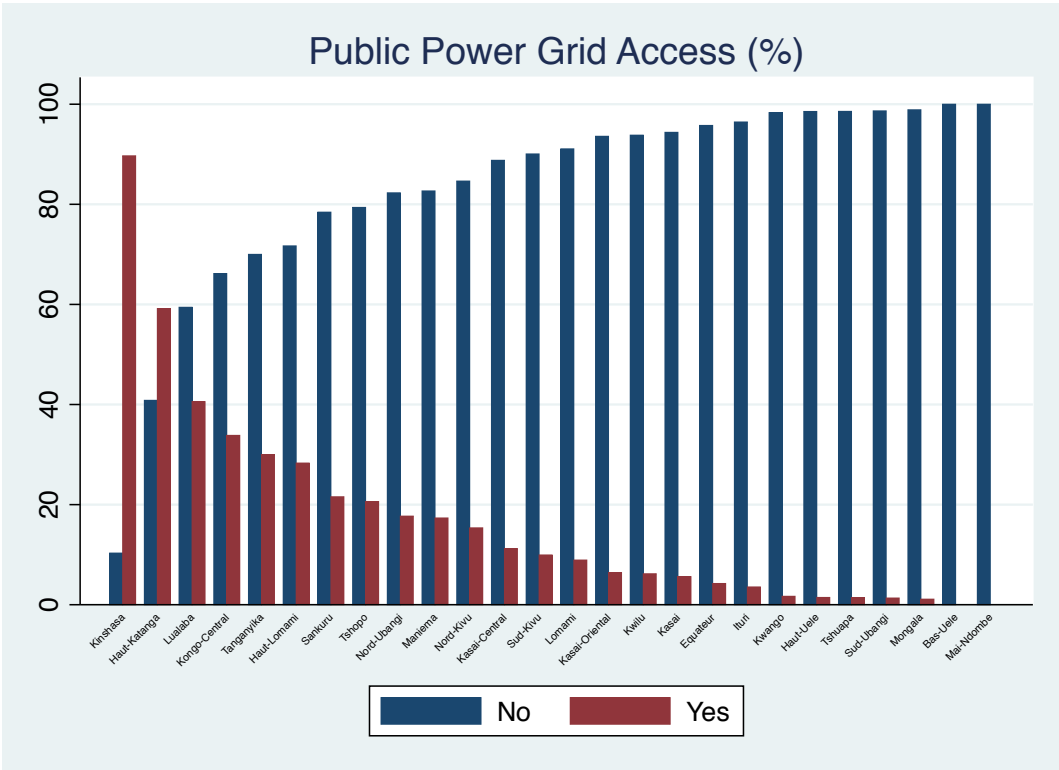
In terms of energy used for household lighting<sup>17</sup>, *Enquête 1-2-3* respondents' answers were more varied and even encouraging (see Figure 13.2). Electricity stood out as the most popular response (more on this below), followed by solar. Woodfuel came in third, followed by various forms of oil and gas (including kerosene, palm oil, and petrol).

Availability and access to electrification will of course be a key determinant of energy choice. Figure 14.2 displays the percent of respondents connected to a public

<sup>17</sup> Quelle source d'énergie type de combustibles votre ménage utilise-t-il principalement pour l'éclairage?

power grid, by province<sup>18</sup>. Unsurprisingly, Kinshasa has the highest number of residents connected to electric grids, followed by Haut-Katanga. In the majority of provinces, fewer than 20% of respondents reported having access to public power grids. As shown by Figure 15.2, Kinshasa and Haut-Katanga also stand out as having the highest percent of electricity users (more for home lighting purposes than for cooking).

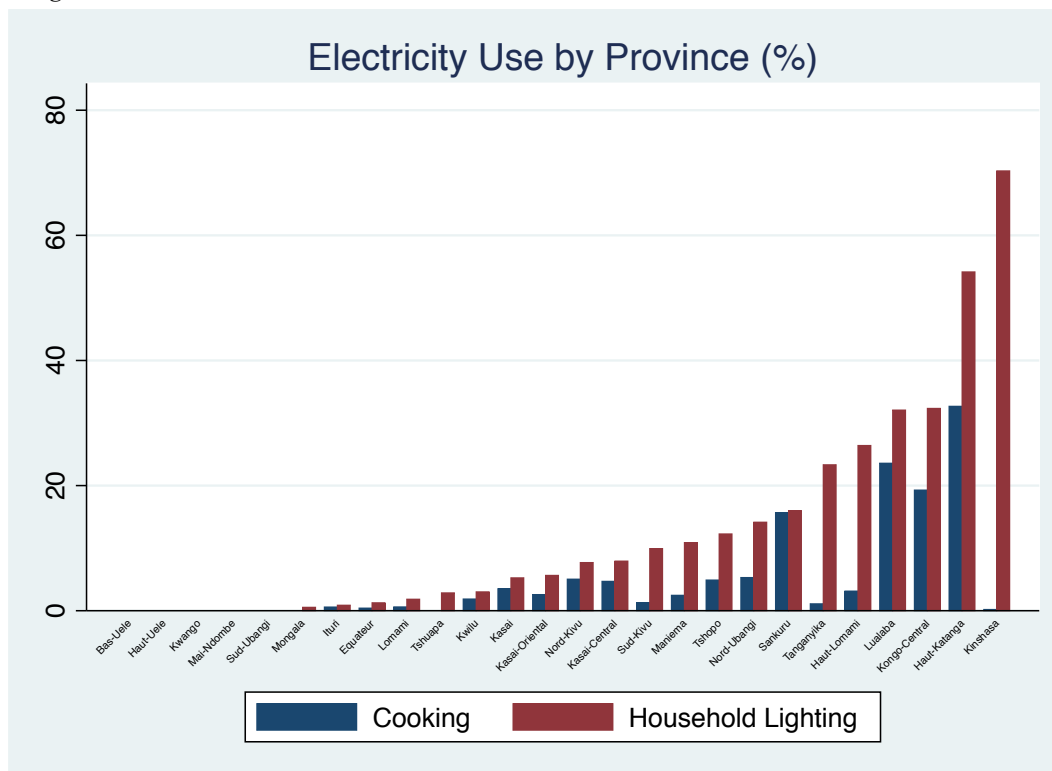
Figure 14.2



Data source: Enquête 1-2-3

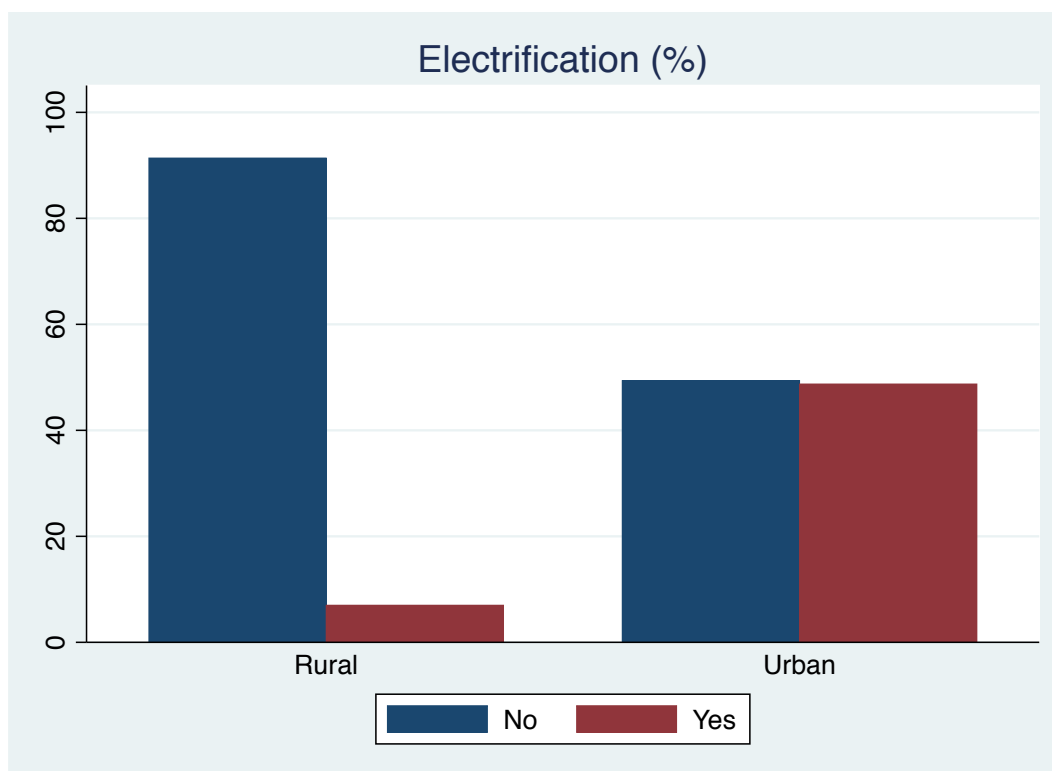
<sup>18</sup> Votre ménage est-il connecté à un réseau public de distribution d'électricité?

Figure 15.2



Data source: Enquête 1-2-3

Figure 16.2

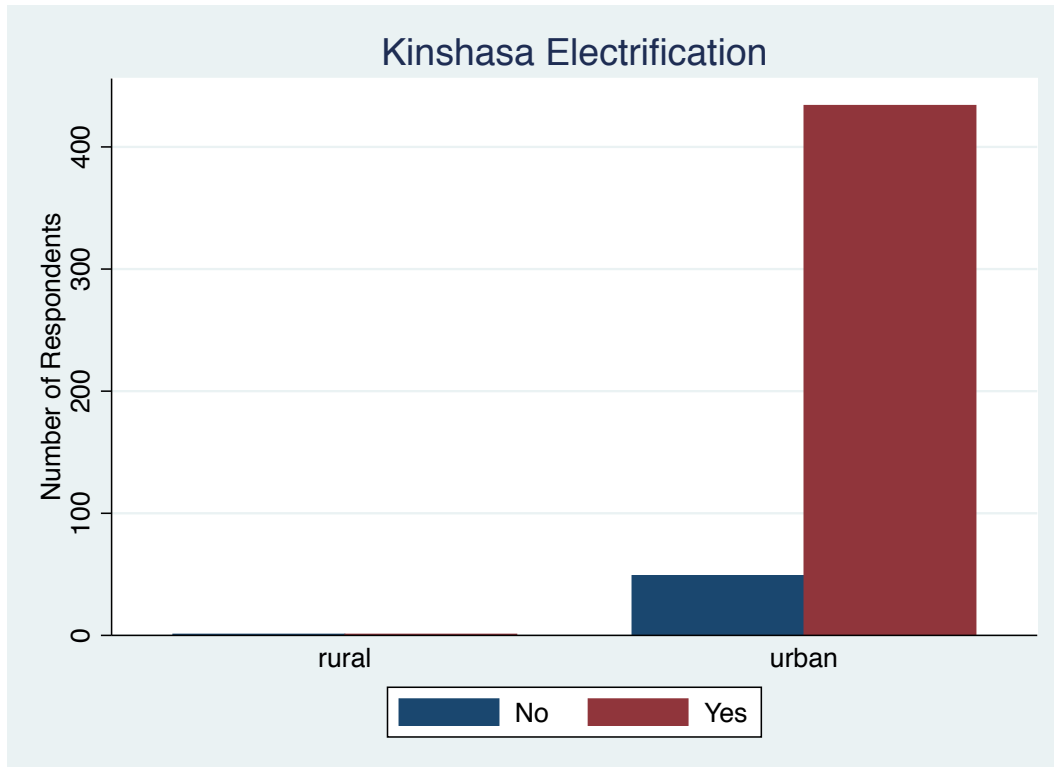


Data source: Enquête 1-2-3



The divide between rural and urban access to electricity is unsurprisingly quite vast. Figure 16.2 shows that, in the DRC, rural residents (i.e., the majority of Congolese citizens) are severely lacking in access to electricity. Figures 17.2 and 18.2 show that access to electrification is concentrated in Kinshasa and Haut-Katanga.

Figure 17.2

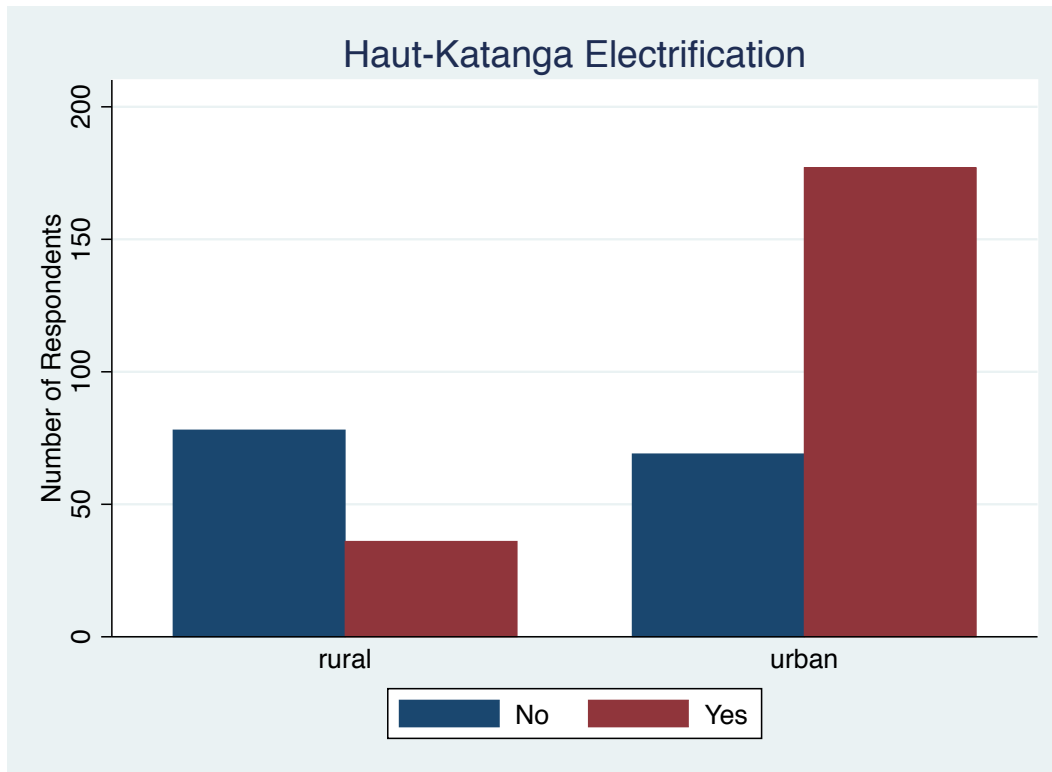


Data source: *Enquête 1-2-3*

Rural communities in Congo are isolated and remote. Even when their geographical proximity to urban areas is relatively close, the appalling quality or total lack of roads in most of the DRC renders most rural villages virtual islands. The lack of transportation infrastructure is partially by design. Colonizers built transportation for the sole purpose of exporting goods out of the country, and former dictator Mobutu Sese Seko infamously proclaimed in an interview that he had avoided building roads during

his long tenure (1965-1997) because he believed rebels would only use them to stage a coup against him (Prunier 2001).

Figure 18.2



Data source: Enquête 1-2-3

Beyond access to remote areas, increasing clean energy access faces a host of other obstacles, including the “high capital costs for the infrastructure needed to generate, process, and deliver clean energy, and the volatility of petroleum-based fuel prices and supplies, both internationally and as a consequence of national energy policies” (Ezzati 2005: 105). These challenges make improving rural citizens’ access to electricity and clean cooking a daunting task. These goals are nonetheless achievable, particularly with *highly informed* assistance from international organizations.

Electrification, however, should not be viewed as a panacea or as necessarily associated with clean cooking. As discussed, this is rooted in a preference for cooking

with charcoal and in the unreliability of electricity in its current state. Urban areas, despite their much higher rates of electrification, are still the most demanding markets for charcoal as a source of cooking fuel (Trefon 2016). Furthermore, electrification alone is not income generating (Moss 2018). Nevertheless, expanding access to electricity and other forms of clean power (such as solar) is a worthwhile goal in itself, as is improving grid capabilities and reliability across the country.

## **8. THE STATE OF THE STATE IN DRC**

Nearly all aspects of the Congolese government are tinged with clientelistic practices, and the environmental and energy sectors are no exception. The administration of the forestry sector is riddled with ambiguities (Trefon et al. 2010) and inflated transaction costs. Resources are funneled upward (with some then redistributed downward) and are devoured by the patronage machine, which functions through an inflated bureaucracy and predatory practices (Baaz & Olsson 2011; Malukisa 2017; Jené & Englebert 2019).

The formal system in Congo, which based on laws and official institutions, coexists with a parallel, informal system that is based on hierarchical and highly-centralized extractive clientelism (see Jené & Englebert 2019). Formal policies and reforms typically bend to the will of the informal system, as elites coopt the implementations and operations of formal rules in ways that serve their persistent need for resources that fund the extensive network of patron-client relations. Existing policies and departments must therefore be considered in light of this context.

A broader result of the dominant informal extractive clientelistic system that permeates all political endeavors in Congo is that official programs get drained of

resources and national attention. The Directeur de l'Environnement de la Province de Haut-Katanga lamented the lack of environmental regulation, and, importantly, he explained that many environmental policies and regulation remain largely centralized, despite recent decentralization reforms. However, officials in Kinshasa tend to be more concerned with maintaining good relations with foreign mining companies than with addressing real environmental problems.

In a country based on informal extractive clientelism, the central government's primary concern is with extraction to fund its extensive patronage network (Jené and Englebert 2019). Formalizing and regulating the charcoal industry would bring in taxes (however, this would likely be low relative to other industries), but it seems that the central government does not deem the efforts to be worth it. The poor charcoal producers may have few representatives in office who plead their case, and indeed they may fear that formalization would disrupt their practice.

The limited capacity of the Directeur's station was palpable, as the office (the Ministère de l'Environnement Conservation de la Nature et Développement Durable Coordination Provinciale du Haut-Katanga) was located in a small cottage (see Image 6.2), and there was not even one computer among the Directeur or his staff. Similarly, the Ministry of Urban

Image 6.2



Photo credit: Jené, 2017.

Image 7.2



Photo credit: Jené, 2017.

Planning (Ministère de l'Urbanisme et de l'Habitat) in the provincial capital of Kolwezi in the Lualaba province operates out of a relatively small cottage office with limited capacity (see Image 7.2). Directeur de l'Environnement also pointed out that environmental concerns vary widely across the large, ecologically diverse country, and that environmental

policies ought therefore to be decentralized. The DRC's central government, however, remains reluctant to decentralize the environmental sector because it prioritizes retaining control over mining activities. The political response to environmental concerns in the DRC thus remains, in his words, "*une catastrophe*."

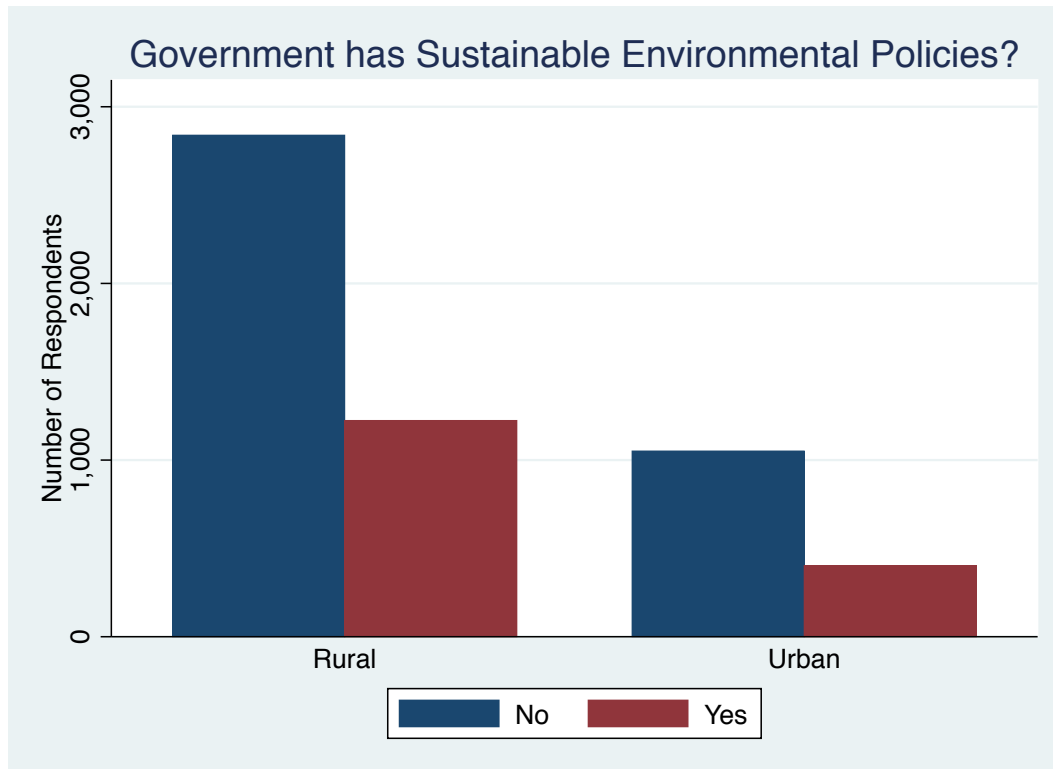
The decentralized offices and positions associated with the environment that do exist lack resources and capacity, and often are even incentivized to give environmental concerns a low priority. For instance, in the Lualaba province the Minister of the Environment is also in charge of tourism (his official title being Le Ministre de l'Environnement et Tourisme), and his attention was clearly directed toward the tourism portion—understandably, as this brings in revenue. The Ministre readily acknowledged problems of unregulated deforestation and air pollution—mainly from trucks and informal charcoal production—and praised Rwanda's newly enacted ban on plastic bags, but he did not offer any specific policies of his own to address such environmental

problems (though he provided detailed information on policies related to promoting tourism). Similarly, the Directeur Provincial de la Fédération des Entreprises noted that his organization had plans for reforestation and other environmental projects, but conceded that these plans were still only “on paper” and had not yet been put into practice.

The national Ministère de l’Environnement lacks sufficient means to manage the vast forests of the country, and so largely depends on the international community for this. Indeed, there are a host of donor-led conservation projects and programs, particularly in Virunga National Park where much illegal charcoal production takes place (Africa Research Bulletin 2009; Trefon 2016; Trefon & Kabuyaya 2018). Yet, as Trefon (2016) stresses, poor forest governance in the DRC is a political challenge above all else. There is no cohesive vision for how to properly manage the forestry sector in coming decades, nor for how it could potentially contribute to development.

Congo is considered by most to be a failed state, and Trefon et al. (2010) maintain that the informal charcoal production industry has largely been a popular reaction to the failure of the Congolese state to provide energy access and, more generally, to provide a realistic plan for sustainable development. Much of central Africa has experienced similar trends (Trefon 2019).

Figure 19.2



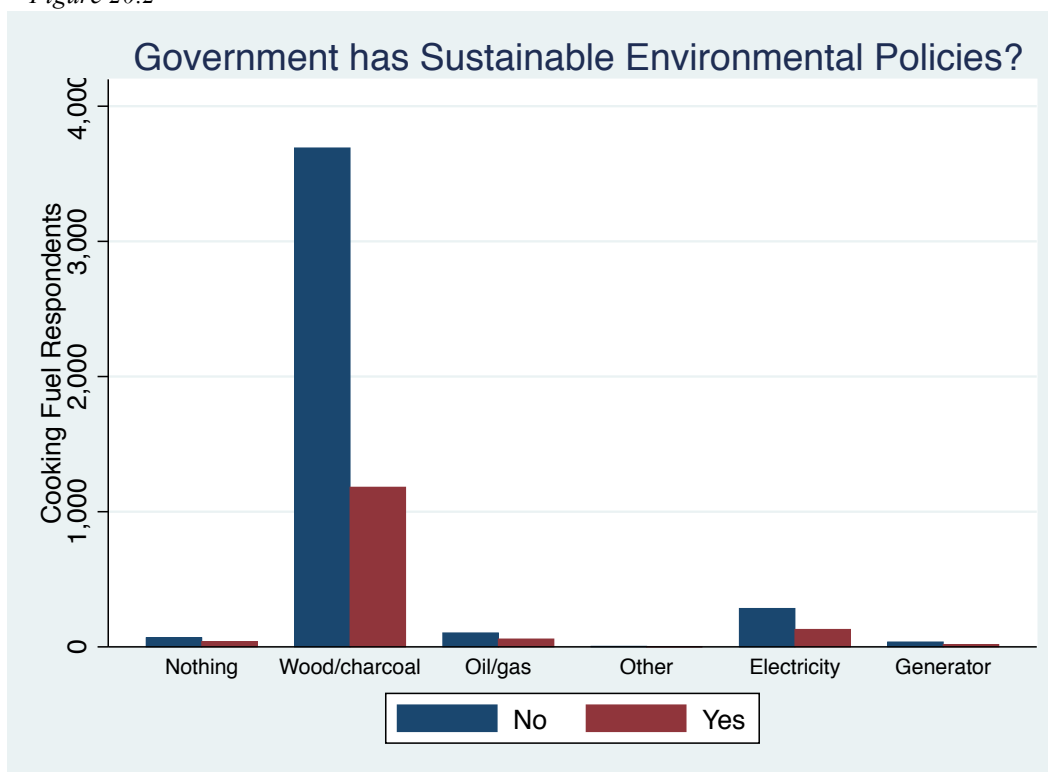
Data source: Enquête 1-2-3

This sentiment is supported by popular opinions regarding the government and its environmental platforms. Figure 19.2 shows that most rural and urban resident alike believe that the government is not doing enough to protect future generations with sustainable environmental policies<sup>19</sup>. Figure 20.2 reveals that this opinion is especially prominent among those who use woodfuel/charcoal for cooking. Similarly, Figure 21.2 shows that most who cook with woodfuel/charcoal believe that the government's policies are not likely to preserve the country's ecosystem for future generations<sup>20</sup>. Of course, the Congolese primarily view their state as failed in nearly every way, so this is not surprising.

<sup>19</sup> Croyez-vous que les décisions prises par le gouvernement prennent suffisamment en compte les droits des générations futures (environnement durable)?

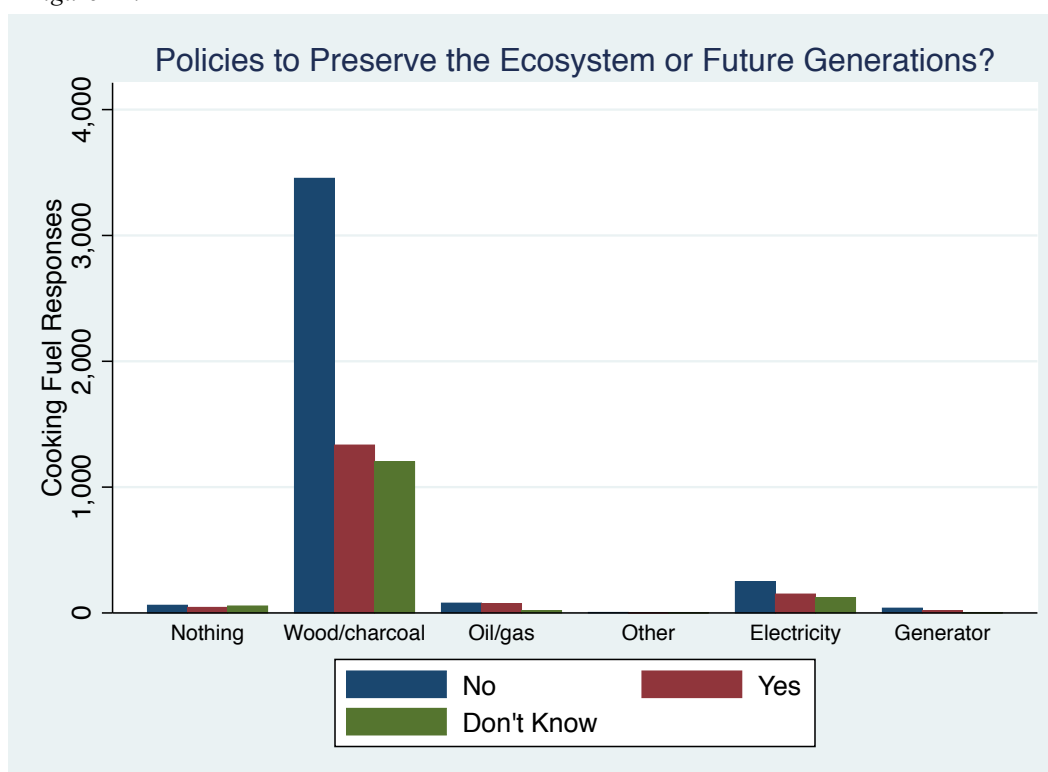
<sup>20</sup> Estimez-vous que les lois et politiques du pays sont de nature à préserver notre écosystème ou à penser aux générations futures?

Figure 20.2



Data source: Enquête 1-2-3

Figure 21.2



Data source: Enquête 1-2-3



Of course, in the wake of a stolen presidential election (which had been postponed for two years) that was manipulated by the camp of “former”-President Joseph Kabila (Englebert 2019; Berwouts & Reyntjens 2019), and reflecting on a history of cruel colonial rule followed by brutal dictatorship, civil war, and “competitive authoritarianism” (Matti 2010) characterized by extractive clientelism (Jené & Englebert 2019), it is unsurprising that the Congolese have little faith that their government is doing enough with regard to any policy area. Sustainable development policies are just one area on a long list of state failures.

### ***8.1. Permits and Taxes in the Charcoal Industry: Protecting the State as a Resource above all else***

Permits and taxes for charcoal production are examples of the often overly complicated, and arbitrarily enforced, system of environmental governance in the DRC. Despite the convoluted permit and tax systems, the wood energy sector remains very informal, and thus unregulated, in Congo (Mvula and Schure 2012). Yet, this complexity and informality helps ensure the continued existence of a number of government offices and helps fund the patronage machine.

In Congo, uncertainty and informal practices based on patronage plague all formal institutions, rules, and laws (Englebert & Kasongo 2016). Rational policymaking gets subverted to the demands of this informal system, and sustainable resource management is one of the many casualties. The DRC actually possesses immense capacity for

hydroelectric power, thanks to the Congo River, yet this remains vastly underutilized, thus reinforcing the dependence on charcoal (Trefon 2016).

While forestry management is centralized, there are a number of ambiguities for obtaining wood-related industry permits to access and exploit these forests. There is a good deal of complexity and lack of clarity regarding the permits, including a number of different authorizing agencies, laws, decrees, and amendments thereof. The confusion surrounding the process for obtaining a permit inevitably adds to the informality of the industry, and this informality—combined with the arbitrary and often harassing actions by state actors toward charcoal producers and traders—ultimately undermines the functioning of the formal system and laws (Mvula and Schure 2012). Producing charcoal from trees in protected areas—e.g., Virunga National Park—further subverts the formal permit and regulatory systems. This is significant, as approximate 92% of charcoal in North Kivu is produced from trees from Virunga Park (Africa Research Bulletin 2009).

The 2006 Constitution does not mention charcoal (neither *charbon*, nor *makala*, nor firewood or woodfuel), but the 2002 *Code Forestier* sets out the most explicit laws regarding permits. Article 12 of the 2002 *Code Forestier* stipulates that firewood and *carbonisation* permits may only be issued to rural residents; urban residents are restricted from obtaining permits. It also limits the validity of the permits to one year (extended from the mere three months allotted by the 1979 law), and indicates that the volume may be restricted by the issuing authority.

There are several different types of permits relevant for the forestry and wood industries, each with their own issuing administrations and specificities. Some permits are issued by the central government (e.g., industrial woodcutting), some by the central

government as well as the provincial governor (e.g., deforestation (*déboisement*) permits), some solely by the provincial governor (e.g., tree cutting for artisanal purposes), but the permit for firewood and charcoal production (a single permit) is the only wood-related industry whose permit is issued by the local government (l'Administrateur du Territoire, and in Kinshasa the Division Urbaine de l'Environnement)<sup>21</sup>.

There are also a series of taxes associated with the different licenses and permits (Mvula and Schure 2012), each collected by different agencies. For example, there are taxes collected by both the Ministère de l'Environnement and the Ministère de l'Energie (Mvula and Schure 2012), in addition to taxes placed on the selling and transport of charcoal (Trefon et al. 2010). However, having the right connections may result in tax reeducations, looking the other way on permits, or other favors (Trefon et al. 2010).

The series of official documents and taxes, and the multitude of government actors involved<sup>22</sup> therein, presents substantial obstacles for sustainable charcoal production (Trefon et al. 2010). While most people are at least aware of the permit requirement, hardly any charcoal producer obtains one. Mvula and Schure (2012) of the *Makala Project* find that between 53-60% of surveyed charcoal producers are aware of permits, but that zero percent of respondents from Kinshasa and Bas-Congo currently held a permit. The main reasons given were the cost (\$130 in Kinshasa), that the producer did not know the process for obtaining a permit, or that the government office no longer

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<sup>21</sup> Resource Extraction Monitoring (2011); Loi n° 011/2002 du 29 août 2002 (Code Forestier); Arrêté ministériel n° 035 /cab/ min/ecn-ef/2006 du 05 Octobre 2006; Arrêté ministériel n° 025/cab/min/ecn-t/15/jeb/2008 du 07 août 2008.

<sup>22</sup> This includes: le Service de l'Environnement, le Service National de Reboisement, le Service de l'Urbanisme et de l'Habitat, l'inspection Agricole, le Service des Petites et Moyennes Entreprises, le Service de l'Energie, le Service de l'Hygiène, la Police Routière, l'Agence Nationale de Renseignements, l'Armée Nationale, les Gardes Présidentielles, and la Direction Générale des Migrations (Trefon et al. 2010: 102).

sold them. Illegal wood harvesting is no doubt another reason to forgo applying for a permit, though this often comes with its own set of payoffs. Thus, there remains a very large gap between the formal laws and the daily practices of charcoal producers and state agents (Trefon et al. 2010).

According to the Division Urbaine de l'Environnement (which issues charcoal permits in Kinshasa), in 2008 a mere 150 permits were issued (Trefon et al. 2010), and between 2009 and 2011 only 318 permits were issued in Kinshasa (Mvula and Schure 2012). Lacking a permit means that, in order to avoid penalties, transporters must pay extra at official stops along the way (Mvula and Schure 2012), or take long and risky detours to (Trefon & Kabuyaya 2018).

Beyond the burden of obtaining permits (or penalties for the lack thereof) lie a host of other headaches, obstacles, and risks for charcoal producers and traders, ranging from formal taxation to informal harassment by state actors—including demands for bribes in cash and/or charcoal by police, presidential guards, and soldiers—to serious threats by militia and rebel forces in some parts of the country (particularly North Kivu) (Trefon et al. 2010; Africa Research Bulletin 2009).

Interventions, both formal and informal, by the state into the charcoal industry are ongoing throughout the entire process (from cutting the trees to making the charcoal to transportation to selling the finished product). As Trefon et al. (2010: 102) quip, a “failed” state by no means suggests an “absent” state. The plethora of state actors and agencies involved in the charcoal industry presents obstacles for producers and traders, yet it guarantees the continued existence of these agencies and offices, even as effective state presence remains very limited. Emblematic of most other sectors in Congo,

patronage is evident in all aspects of the charcoal industry, exemplified by the (often informal) permit and tax systems (Trefon et al. 2010).

## **9. THEORY FOR A NEW APPROACH: “SECOND BEST” FOR CLEAN ENERGY?**

Programs that promote access to clean forms of energy have been linked to improvements in human well-being (including health and educational benefits), environmental sustainability, and even poverty alleviation in some contexts (Jörg & Maximiliane 2016). Promoting clean energy access is undoubtedly a noble endeavor, but it is also an expensive and challenging one. In 2011, the International Energy Agency (IEA) estimated that achieving the UN’s goal of universal electricity access would require a \$640 billion investment (IEA 2011). Reaching remote populations and establishing viable sources of renewable energy (mainly, electric and solar) are daunting tasks that are aggravated by challenges of changing people’s preferences and habits, ensuring affordability, and training local installation and maintenance workers. Nonetheless, many international organizations and donor agencies are dedicated to reaching the UN’s universal electrification goal along with the other SDG clean energy access goals.

This project emphasizes the paramount necessity of understanding the livelihoods and situations of the poor when forming energy access and related environmental protection strategies. Sustainable development is only possible only when the intricacies of local contexts are understood and incorporated. The best approach to promoting sustainable development and clean energy access will therefore be nuanced and

contextualized, which negates a one-size-fits-all model (Grimm et al. 2013; Chen et al. 2015).

There has been a movement among scholars to embrace a “second best” approach to political and economic development (Kelsall 2011; Booth 2012; Börzel and Hackenesch 2013; Thomas 2015; Trefon 2016). Thomas (2015: 206) asserts that it is foolish to insist on “best practices” strategies “in governance, laws, institutions, or ethics codes” when governments are poor. Trefon (2016) applies this to the environmental realm in his criticism of applying REDD+ (a plan to reduce carbon emissions and deforestation in developing countries) in the DRC. He contends that “REDD+ architects have fallen into the trap of adopting a one-size-fits-all template” and have not fully recognized the poor governance and weak institutions in the DRC, which pose substantial obstacles (ibid.: 11).

Thomas (2015: 178) also cautions against the “missionary impulse” of promoting moral imperatives in developing countries. She explains how donors and international organizations often fall into this line of thinking when promoting ideals of democracy, egalitarianism, and human rights. This caution may need to be applied to organizations promoting environmental and energy policies as well.

International organizations and donors that promote environmental programs and energy access in developing countries may thus need to consider applying a “second best” approach to promoting their goals. Two core components of this are (1) developing country-specific strategies and (2) understanding that working with the system that exists and achieving incremental successes is preferable to rigid moral standards and ideals because the former is more manageable and realistic. This could include avoid seeking to

eradicate charcoal use all at once by investing in cleaner and more sustainable charcoal stoves. It could also include a joint program with the province of North-Kivu to expand sustainable plantations to direct charcoal production away from illegal harvesting in the Virunga National Park.

In terms of promoting clean energy in the DRC, this may mean a slow easing away from the informal production of charcoal rather than a plan for immediate fuel replacement. The SDGs' vision of widespread clean energy by 2030 may be too ambitious, and, moreover, it does not sufficiently take into account the economic situation of informal charcoal producers and traders. While the goals and values should not be utterly abandoned, it ought to be remembered that achieving such goals at all costs (e.g., at the expense of local citizens' livelihoods) is myopic and will likely backfire.

## **10. CONCLUSION AND POLICY RECOMMENDATIONS**

Congo's informal charcoal industry is growing as its population increases. International efforts to transition the population toward cleaner energy sources have struggled to take root. The entrenched nature of charcoal as the primary energy source in the DRC is due to political, economic, and cultural factors. Politically, the informal charcoal industry is a reaction to the failed Congolese state. Economically, charcoal and woodfuel remain the cheapest sources of cooking fuel, and the informal production and trade of charcoal provides many citizens with much-needed income. Culturally, there is a strong preference for charcoal over other forms of energy. All of these factors combine and interact to keep charcoal as the primary source of energy used in the DRC.

Long-term adaptive capacity and smooth livelihood transitions must constitute a core component of conservation and sustainable development strategies (Wood 2011). Donor-sponsored environmental and energy programs ought to consider communities that may become economically displaced by their initiatives. Efforts must be taken to reduce the number of financially disrupted individuals and households, and incentives—such as CCTs for training and courses—should be made available to those populations to help ease the transition to “greener jobs.” In doing so, health improvements would undoubtedly be another benevolent ramification of such policies.

### ***10.1. Policy Recommendations***

The international community can play an important role for developing an effective strategy for addressing the environmental, health, economic, and policy problems related to charcoal production and consumption in the DRC, and for improving access to clean cooking materials, especially in rural areas. The Directeur de l’Environnement de la Province de Haut-Katanga and the Ministre de l’Environnement et Tourisme both noted that international organizations—including the UN, EU, OECD, World Bank, African Development Fund, DFID, USAID, and foreign embassies—are overwhelmingly responsible for environmental and health improvements compared to the Congolese government. This is confirmed by foreign aid data, as the Congolese government spent a mere 4% of total funds directed toward the DRC’s environmental sector over the years 2000-2013 (see Table 3.2).

It is debatable whether programs led by IGOs, NGOs, and aid donors offer the most desirable and effective strategies, and indeed the international community has lost



some of its clout in Congo over the years, but this is outside the scope of the current project. Policy recommendations here are made in light of the information discussed in the preceding sections, and are directed primarily toward international aid and development organizations.

*Table 3.2*

<b>Environmental Funds from the Congolese Ministry of Finance</b>	<b>Environmental Funds from International Organizations &amp; Embassies</b>	<b>Total Funds (2000-2013)</b>
\$3,4162,936.10	\$734,123,063.00	\$768,285,999.10
4.4%	95.6%	100%

*Policy Recommendation #1:* International organization should collaborate with local actors to gain a better understanding of local economic, political, environmental, and social contexts. Local actors should be given a voice in energy access program development.

*Policy recommendation #2:* International organizations can assist by easing the transfer from charcoal-dependence to the use of other forms of fuel by providing cash transfers to individuals who train in the production and maintenance of electric (especially hydroelectric for the DRC, given the large potential), solar, and wind power. Providing economic benefits to those who train in these fields will provide an incentive for informal charcoal-producers to switch sectors without losing vital income.

*Policy recommendation #3:* International organizations should work directly with provincial and local governments, rather than with the national government, to develop strategies relevant to local contexts.

*Policy recommendation #4:* Invest in local entrepreneurship and innovation. Programs targeted to innovation should also be emphasized, as investment in local

innovators and entrepreneurs will provide direct funding to individuals and will likely produce solutions that are most suited to local environments, economies, cultures, traditions, and habits.

*Policy recommendation #5:* Rural areas ought to be targeted for achieving the two SDGs discussed here: access to electricity and access to clean cooking materials. This will certainly present a host of logistical challenges, as the DRC is severely lacking in viable roads. Nonetheless, if such logistical challenges can be overcome, improving sustainable energy access would undoubtedly usher in immense progress. Access to clean cooking would benefit both the local environment (by curbing deforestation and air pollution) and would vastly improve health, particularly that of women and children. Access to electricity, for its part, would do wonders for education by connecting people to the rest of the world and to the resources it has to offer. Electrification could also improve health beyond encouraging electric cooking appliances, as health centers could incorporate electric technologies, such as refrigeration, which is required for some medications, such as many vaccines.

*Policy recommendation #6:* International organizations dedicated to promoting health, economic development, rural development, environmental protection, and energy access in developing countries should collaborate to create united or at least compatible programs and policies. The African Union, African Development Bank, and other Africa-based organizations should be consulted for support in formulating such programs and policies for the DRC and other SSA nations

Areas for further research could focus on developing specific strategies and programs for delivering electricity and clean cooking in sustainable and economically

non-disruptive ways. Other country specific case studies in SSA would also be useful for the continent as a whole. Determining what works and what does not will be vital. Innovation, policy, and technology transfers are most effective when they come from areas with similar environments, economies, and societies.

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**PART 3:**

**TANGLED!**

**PATRONAGE POLITICS AND PROVINCIAL  
ELITES IN THE DR CONGO**



*Haut-Lomami Provincial Assembly. Photo credit: Jené, 2018*

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## 1. INTRODUCTION

It is well documented that the decentralization reforms in the Democratic Republic of Congo (henceforth Congo or DRC) have largely failed to bring about desired results, such as improved accountability and greater public service delivery (Trefon 2011; Gaynor 2014; Boshwaa 2016; Englebert and Kasongo 2016). Less well documented is why this is the case.

Decentralization has been widely prescribed, particularly in the 1980s and 90s, as a near-panacea for the various economic and political woes in African countries, and indeed in developing countries around the world (including many in Latin America). Yet, recent scholarship has become more critical of this blanket policy recommendation after examining the lackluster effects such reforms have brought about (Dickovick and Wunsch 2014), often because incumbent regimes have done their best to empty them of their substance. This is partly the case in Congo too, but it is not the whole story.

There is more to the failure of decentralization in Congo than the reluctance of central authorities to share power, and indeed DRC stands as an extreme example of failed decentralization. This article helps explain why, with focus given to the resiliency of the informal system that operates in parallel to the formal structure of the government, and which is based on extractive clientelism.

In this paper, we show that provincial elites—who one would expect to be the champions of the decentralization reforms—are caught in a highly centralized and informal patronage system that is based on predatory extraction, and which ultimately deprives them of any real autonomy. The embedded nature of these extractive parallel



patronage relations ends up neutralizing formally decentralized institutions by subsuming them into a much more centralized informal structure.

Our argument is consistent with Lewis' (2014) finding that central governments attempt to recentralize power through various mechanisms. However, we find that in Congo the centralizing outcome is also the result of the collective functioning of the parallel system rather than the power plays of central elites alone. Our findings also echo those of Englebert and Kasongo (2016) who suggest that the instrumentalization of Congolese decentralized institutions by local actors yield predatory rather than welfare-enhancing institutions. However, while their argument is based on the behavior of otherwise autonomous municipal authorities, ours stresses the entanglement of provincial elites into networks, both formal and informal, that link them to their national counterparts.

This extensive web of patronage is characterized by: (1) the informal control of local-level political appointments, which should be provincially allocated, by elites in the central government; (2) financial poaching of provincial actors; (3) predatory extractive pressures by central elites; (4) the use of political “godfathers” to maintain indirect oversight of provincial elites; and (5) the use of provincial legislative authorities as tools for sanctioning unreliable or disloyal governors. These patron-client relations run deep across all these dimensions of informal governance.

Our findings are based on fieldwork carried out over 2017–2018 in three of the four provinces of former Katanga: Haut-Katanga, Haut-Lomami, and Lualaba; we also visited the national capital, Kinshasa. We interviewed around 80 respondents, including provincial political actors, civil servants, civil society activists, ethnic representatives,

and academics. We also gathered data on budgets, transfers, and employment from provincial executives and assemblies.

We begin with a review of relevant literature that discusses decentralization in Africa. We then give an overview of Congo's decentralization reforms and their formal limits, illustrating the more general argument that incumbents try to reduce the scope of decentralization. We then move to the functioning of Congo's informal patronage system and highlight how its main features undermine decentralization. We focus on: (1) control by central elites; (2) financial poaching and patronage incentives; (3) financial and extractive pressures; (4) the political godfather system; (5) sanctions against governors. We then conclude with a discussion of the effects of the system on decentralization and some policy recommendations directed at donors that seek to build on the existing patronage structure rather than seeking its elimination.

## **2. REVIEW OF RELEVANT LITERATURE: DECENTRALIZATION IN SUB-SAHARAN AFRICA**

Political and administrative decentralization is praised by advanced democracies, NGOs, aid donors, and many in the academic community for improving nearly all aspects governance. Decentralization is expected to usher in a host of positive political outcomes, including: increases in accountability and transparency, bringing officials closer to the public, reducing corruption and predation, undermining personal rule, allowing citizens' voices to be better heard, empowering grassroots civil society organizations, providing more opportunities for citizen participation in public affairs, ameliorating conflict, allowing for more tailored local reforms, strengthen rule of law, improving public goods

provision, and overall strengthening democracy. Decentralization is also purported to improve economic conditions, particularly in developing contexts, by promoting local development and reducing poverty and unemployment (Crawford and Hartman 2008; Cammack et al. 2006; DFID 2006; Brinkeroff 2011; World Bank 2011).

Decentralization was prescribed for many African countries as a remedy to what was generally seen to be their detrimental holdover from colonial pasts and post-colonial strongman regimes—namely, highly centralized governments based on top-down control (Reddy and Sabelo 1997). Reddy and Sabelo (1997: 6) write that the “need for decentralization in African countries is undeniable,” thereby falling in line with the policy recommendation *de jour*.

Congo certainly suffered from one of the harshest and most centralized forms of colonial rule, and its post-colonial period was dominated by the ruthless dictatorship of Mobutu Sese Seko (1965–1997). Congo has limited experience with functioning democratic institutions, it hosts a very heterogeneous population (with over 350 ethnic groups, by some estimates (see Ndaywel è Nziem 1998)), and in terms of land size it is the largest nation in sub-Saharan Africa (second only to Algeria on the entire African continent). It also suffers from extreme poverty, perpetual conflict, and endemic diseases. On paper, it may seem like a prime candidate for decentralization reforms. Yet, decentralization in the DRC has largely failed to achieve any of the purported benefits, and in many ways decentralization reforms have backfired to produce some perverse effects (Hamann 2012; Gaynor 2014; Boshwaa 2016; Englebert and Mungongo 2016).

While DRC stands as an example of an extreme failure of decentralization, it has not been uncommon for decentralization to bring about disappointing results across

Africa and elsewhere. Boone (2003) describes how the actual unfolding of decentralization in many African counties has overwhelmingly failed to live up to the theorized and purported benefits of decentralization reforms. She attributes this disjuncture to governments' lack of commitment to reforms and to institutional structures and center-local relationships already in place. For example, following its 2010 decentralization reform, Kenya's new governors found themselves constrained by a number of factors, including the persistence of patronage politics, the informalized local bureaucracy, and the central government's efforts to diminish the role of governors by "de-politicizing" decentralization (Chome 2015).

Ghana's decentralization, for its part, has been frustrated by a slow and confusing rollout, contradictory laws, ambiguous roles, lack of capacity, and continued dependence on the central government for finances (which tend to be erratically disbursed, and other sharply reduced), as provinces have only limited powers for raising revenue (Ayee 2011). Decentralized local governance in Ghana, much like that in South Africa before it, has proven to provide opportunities for expanded patronage, rather than aligning to expectations of improved service delivery and accountability (ibid.).

Like many other African states, Congo has a dual structure of governance, with both formal and informal institutions (Terray 1986; Andrews 2013). More often than not it is the informal structure that presides when the formal institutions are weak and the informal system is deeply embedded in the society (Lemarchand 1972; North 1990; O'Donnell 1996; Van de Walle 2003; Kpundeh 2004; Hyden 2006; Bratton 2007). Other scholars have noted the relationship between informal systems based on patronage and failed decentralization but they all highlight very different arguments and observe

different empirical realities. Kraxberger (2004), Green (2010), Grossman and Lewis (2014), and Hassan and Sheely (2016) all more or less argue that incumbent regimes create additional decentralized units as tools of patronage, thereby undermining local autonomy.

Though Congo's decentralization (*découpage*) of 2015 was a case of decentralized unit proliferation, it was not a government initiative intent on achieving perverse effects but instead harkened back to the negotiations of the 2003–06 transition, the National Sovereign Conference of the early 1990s, and even the first five years of the country's independence when a similar experiment in provincial multiplication took place. Riedl and Dickovick (2014) stress that *de jure* decentralization can be undermined by the *de facto* patronage opportunities presented by the reforms, but their argument is that it is the reforms themselves that are instrumentalized, rather than their implementation stifled by an underlying informal system. Lewis (2014) has also shown that unit proliferation can lead to recentralization as the rapid creation of subnational administrative divisions affects the balance of power between central and local government. While all these arguments are not without relevance to Congo, they differ from ours and are not necessarily helpful in understanding the fundamental roots of decentralization failure in Congo.

While we link decentralization's failure to Congo's informal patronage-based system, we do not advocate seeking to completely overhaul it. We follow Mueller's (2018) proposition that there are better and worse forms of patronage and clientelism. She argues that some forms of personalize politics can provide a source of accountability. Similarly, Anciano (2018) suggests that clientelism may fulfill certain democratic

functions, such as increasing participation and accountability at the local level of governance. And Kelsall and Booth (2010) maintain that, under certain conditions, neopatrimonialism can potentially be good for economic development and even poverty reduction (what they refer to as “developmental neopatrimonialism”).

The “better” forms of patronage may result, at least in part, from the redistributive moral norms and obligations that often accompany hierarchical agrarian societies dominated by patron-client relations and which tend to exert social pressures for “sharing the wealth” (Platteau 2014). In Nigeria, for example, bad patrons (i.e., those who do not adequately share) are viewed as bad people—and indeed these bad patrons are condemned to a greater degree than are, for instance, societal inequalities *per se* or the embedded structures that perpetuate them (Smith 2001). Reforms promoted by international organizations and donor agencies that gloss over or completely overlook these social and moral contexts are virtually doomed to fail (ibid.).

The resounding takeaway from these and similar studies is that *context matters* and must be fully taken into account for the successful development and implementation of any reforms, including those related to decentralization (Smith 2001; Boone 2003; Kelsall 2011; Thomas 2015; Chome 2015; Anciano 2018; Mueller 2018). Thus, it is important to pinpoint the more detrimental features of Congo’s informal patronage-based system, which we believe are what ultimately brought about decentralization’s perverse effects in that country. While Congo may represent an extreme example of failed decentralization, it has implications for other African and developing countries around the world. Before decentralization is proposed, one should consider the extent to which

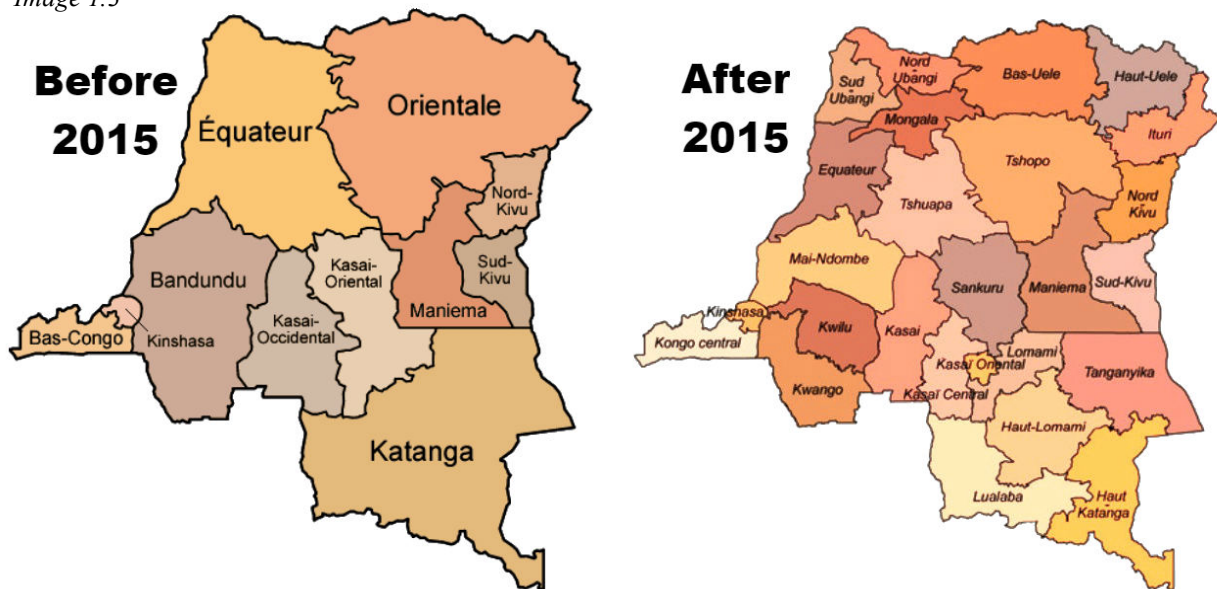
local elites are autonomous from the central government, or at least their potential for autonomy, in light of the existing informal system.

### 3. CONGO'S LIMITED DECENTRALIZATION

#### 3.1. *Découpage: Background*

Congo's 2006 Constitution—adopted in the wake of the 2003–2006 post-conflict transition as a result of a widespread consultative process—provided for a general policy of decentralization, and granted the country's 11 provinces significant administrative, fiscal, and political autonomy in a number of areas, including exclusive jurisdiction in health, education, agriculture, and rural development. The Constitution also provided for the partition of six of the provinces into 21 new ones for a total of 26<sup>23</sup> (see Image 1.3) in

*Image 1.3*



*Source: Africa Center for Strategic Studies (2016)*

<sup>23</sup> Some existing provinces were not subdivided—i.e., Bas-Congo (renamed Kongo-Central with the reform), North and South Kivu, Maniema, and Kinshasa. Equateur was split into five provinces—namely, Equateur, Mongala, Nord-Ubangi, Sub-Ubangi, and Tshuapa. Province Orientale was subdivided into four—Bas-Uele, Haut-Uele, Ituri, and Tshopo. Kasai Occidental was cut in two—Kasai and Kasai Central; Kasai Oriental into three—Kasai-Oriental, Lomami, and Sankuru; and, finally, Katanga was divided into four new provinces—Haut-Katanga, Haut-Lomami, Lualaba, and Tanganyika. These four provinces of former (or Grand) Katanga will be the focus of this study.

a process known as *découpage* (“cutting up” in French). The plan further divided provinces into Decentralized Territorial Entities (ETDs), which include cities, communes, sectors, and chiefdoms (*chefferies*) (Gaynor 2014).

While it was originally prescribed that *découpage* would be completed by 2009, for various reasons (mainly political) *découpage* was not implemented until 2015, when it was rushed through for political expediency. According to many accounts, the time that elapsed between the original 2009 deadline and the eventual 2015 implementation date was not extra time prudently allotted for preparations, such as skills training for professional staff, capacity development, financial investment, or strategic planning. Instead, the reforms remained largely forgotten until the specter of an upcoming election (scheduled for 2016, but eventually postponed until December 2018) and an oppositional stronghold in the populous Katanga province (where the majority of citizens were expected to support former Governor and presidential hopeful Moïse Katumbi), among other reasons, made *découpage* politically expedient for the Joseph Kabila regime.

*Découpage* is hardly a new concept, and Congolese administrations have been increasing and decreasing its number of provinces since independence. In 1962, for example, the idea for increasing the number of provinces from six to 21 was first proposed, and laws specifying the criteria for such a project were devised. A 1988 reform established the ten provinces, along with the capital city Kinshasa, that lasted until 2006; this reform originally aimed for more provinces, but this was not achieved (Boshwaa 2016).



### 3.2. *Découpage: In Practice*

Each of Congo's province has a governor and vice governor, an executive cabinet, and a provincial assembly. The provincial assemblies, whose members are elected by universal suffrage, elect the governors and vice governors (however, assembly elections did not take place between 2006 and 2018). Provinces adopt their own budgets and develop policies in their areas of jurisdiction. The Constitution aims for them to have significant autonomy from Kinshasa<sup>24</sup> in order to create a political system that would reduce incentives for power personalization and centralization as existed under Mobutu.

However, fears that too much local power might re-awaken the country's secessionist ghosts (particularly in the Katanga region) led the constitutional writers to shun a more fully federal system and opt for what the Congolese often refer to as a "highly decentralized unitary state" (see Zongwe 2016). Yet, more than ten years after the launch of decentralization, Congo's system could more appropriately be labeled a "hardly decentralized unitary state," considering the overly parsimonious, reticent, and ill-willed nature of Kinshasa's implementation of the reforms.

Prior to the implementation of *découpage*, a 2008 law that set out the details of the reform already contained stringent limits to the autonomy it otherwise granted provinces. For instance, it made clear that provincial governors, in addition to heading the executive branch of their province, also are the representatives of the national government at the provincial level and remain answerable to the central government.

Practically, the acts of governors may be modified or annulled by the central government,

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<sup>24</sup> We use the expression "Kinshasa" to refer to the elites at the top of the parallel system, differentiate it from the government in its formal capacity, and acknowledge the reality that the president is not alone in control of the top but is engaged in a dynamic relationship with other central elites. We elaborate on this below.

which can also remove and replace the governors. The latter are specifically accountable to the national ministers of decentralization, interior and security (*Loi principes fondamentaux* (LPF) 2008: Art. 65, 66).

To be sure, provincial governors are also accountable to their assemblies, which have the power to remove them by a vote of no confidence. But here, again, the central government has a constitutionally recognised ability to encourage the provincial assemblies to enact such a measure (Democratic Republic of Congo (DRC) 2006: Art. 198; LPF, 2008: Art. 41, 42, 67). Specifically, the law stipulates that, in the event of serious misconduct by a governor while carrying out decentralised public services, the central government may “seize” (*saisir*) the provincial assembly to enforce a motion of no confidence, suggesting that provincial autonomy is not even guaranteed on paper, let alone in practice (LPF 2008: Art. 67). The central government can also bring accused governors before the courts in criminal matters or refer their administrative acts and decisions to the Administrative Court of Appeal (LPF 2008: Art. 67(3)).

Moreover, a 2011 constitutional amendment took the central government’s powers even further by allowing for the removal of a governor or the dissolution of a provincial assembly by Kinshasa. Removal is allowed when “severe and persistent tensions undermine the stability of provincial institutions” (DRC 2006: Art. 197, as amended in 2011) or when “severe and persistent crises weaken provincial institutions” (DRC 2006: Art. 198), conditions which could be said to affect at least half of the provinces on a regular basis and which were left largely undefined in the constitutional

revision (Hamann 2012: 7). The Government must, however, consult the Senate and National Assembly before dissolving a provincial assembly.<sup>25</sup>

The hierarchy of laws, edicts, and decrees also undermines the autonomy of provinces. As noted by Kasongo (2018), provincial governments exist through an edict from the provincial governor appointing them. However, such edicts are legally inferior to presidential ordinances and to the decrees of national ministers appointing public administration staff. As a result, provincial governments always serve at the mercy of the central government, which severely reduces their autonomy and undermines their willingness to confront Kinshasa on policy or fiscal grounds.

Hence, as Vundua we te Pemako (2011: 654) wrote, “the political regionalism organized by the new constitution...should not be confused with ‘local sovereignty’.” Moreover, the examples provided by the formal legal limitations of Congolese decentralization and the stunting of provincial autonomy and authority hint at the extent to which Kinshasa authorities have been willing to defy the ostensible intentions of the constitution drafters. Nevertheless, it is in the parallel system of governance that exists in the margins, yet permeates these formal laws and institutions, where effective recentralization and central concentration of control have unfolded in ways that highlight the workings of the Congolese political system.

#### **4. INFORMAL EXTRACTIVE CENTRALISM**

Congo’s official system coexists with an informal, parallel system of exchange of power and resources between the President’s entourage and provincial elites that functions in a highly centralized manner and erodes the actual impact of formal reforms. This parallel

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<sup>25</sup> Note that the dissolution provision was not in the original version of the 2006 Constitution.

system is largely predicated upon the circulation of resources, official positions, and political loyalty and influence. By expanding the number of government positions at the provincial level and the possibilities for resource extraction by provinces, the break-up of existing provinces in 2015 has strengthened this parallel system and thus, paradoxically, undermined the furthering of the decentralization it was expected to bring about. In the end, Kinshasa has used decentralization to effectively expand its network of loyal agents at the provincial level. This has increased central dominance vis-à-vis the provinces. In the following sections, we review the dimensions of this informal system and the manners in which it prevents effective decentralization.

#### ***4.1. Elite Control***

The most straightforward dimension of this parallel system is the control of the appointment of top political and administrative personnel in the provinces by Kinshasa. In law, it is the provincial assemblies that elect the governor and vice governor, and the governors appoint their cabinet, legally capped at ten ministers. The governors are also responsible for the appointment of top provincial administrators in the areas under decentralized governance, while the central government remains responsible for the appointment of staff in the provincial divisions of non-decentralized national ministries, who are national civil servants.

In reality, however, Kinshasa has considerable control over the appointments of all provincial authorities, starting with governors. It systematically interferes, directly or indirectly, not just in the selection of governors and vice governors, but also frequently in the appointment of other members of provincial cabinets. Moreover, there is evidence

that Kinshasa at times successfully influences the selection of the provincial assembly bureaus, including their presidents, vice presidents, and rapporteurs. Several sources mentioned that people in provincial governments were directly chosen by Kinshasa (interviews 1-21 and 3-16).

Direct intervention did not begin with *découpage* but started with the earlier stages of decentralization, at least among provinces under the control of the ruling *Parti du Peuple pour la Reconstruction et la Démocratie* (PPRD) or the Presidential Majority (MP) coalition of parties. For example, when Moïse Katumbi, an ethnic Bemba, decided to run for Governor of Katanga in 2007, he had to receive the approval of Gabriel Kyungu, a former governor and influential Katanga politician from the Lubakat ethnic group (the same ethnic group as then-President Joseph Kabila). Kabila reportedly instructed Kyungu to “give a southerner a chance” (interview 1-17).

A similar scenario unfolded almost ten years later in 2016 with Haut-Katanga Governor Jean-Claude Kazembe. Once again, the Lubakat ethnic group made a claim to control the province, in which they are a plurality of the population (although they are largely considered non-autochthonous to the new province). All the candidates were reportedly brought to Kinshasa and met with the President. The President, or one of his advisers, allegedly said “you are all brothers so none of you will complain if we give something to one of you.” After they agreed, the President then announced that the post would go to Kazembe, a Bemba, reportedly adding, “let the autochthonous manage their corner” (interview 1-17).<sup>26</sup> There is little doubt that, in addition to deferring to autochthony, choosing a Bemba also represented an attempt by Kinshasa to undermine

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<sup>26</sup> We were told that Kazembe still had to apologize to the Lubakat leadership for some of his past writings deemed injurious to them before the deal could be consummated.

the local support among the Bemba for Katumbi, who had by then become an opponent (see Omasombo 2018: 611).

Little secret is made of the role Kinshasa plays in the selection of provincial leaders. When Marc Manyanga was elected governor of Kasai in April 2016, for example, he thanked “the Secretary General of the PPRD, Henry Mova, for the choice of his candidacy for the governor’s election” (ACP 2016). Similarly, when the first Governor of Haut-Lomami, Célestin Mbuyu, was impeached in May 2017, he appointed an interim governor—apparently without the political clearance to do so. The Provincial Assembly then asked Kinshasa to appoint a new governor and the Provincial Assembly President went to Kinshasa “to consult with his direction” (Radio Okapi 7/7/17).

In most new provinces, Kinshasa had an advantage in the selection of candidates for governor because of its appointment of special commissioners immediately following the 2015 *découpage*. Kinshasa had argued that, because provincial elections could not be organised rapidly enough in the 21 new provinces, these special commissioners would act as governors until elections took place in March 2016 (however, given that governors are elected by provincial assemblies, which count at most a few dozen members, it is hard to fathom why these elections could not take place, short of it being a spurious argument by Kinshasa to seize control of the process). All of the special commissioners appointed were from the MP. There is no constitutional or other legal provision for these commissioners who, in effect, suspended the authority of the previous governors and of the provincial assemblies. They were originally selected by Kinshasa as allies or people who would likely obey instructions (interview 3-15). According to Kasongo (2018: 9), once appointed, many special commissioners stayed in Kinshasa hotels while awaiting

their directives from the MP coalition. Of the 21 of them, 14 ran for governor in March 2016 and 13 won.

Kinshasa also largely controls the appointment of provincial ministers. The formation of the provincial cabinet is formally the prerogative of the governor, but these appointments are typically vetted by Kinshasa. Specific individuals can be promoted, or imposed, upon governors by high-ranking politicians (see section below on *parrains*), although competition among some of these politicians and their networks might give governors a little bit of leeway. In addition, however, a practical norm requires that governors from the MP coalition replicate in their government the weighted distribution of political parties that exists in the MP in the national assembly (interview 3-16). As a result, some provincial ministers are from parties that do not have a single seat in the provincial assembly, while some provincial assembly parties have no representative in provincial government. This norm, deemed by some to be “informal cheating” by Kinshasa (interview 3-16), creates an incentive for parties at the provincial level to encourage their national counterpart to join the MP. MP governors are forced to apply this norm to the extent that they are politically and legally beholden to Kinshasa.

Once they are appointed, provincial ministers are also constrained by Kinshasa in terms of what they can do. In the words of a provincial minister, “everything we do, we await directions from Kinshasa. We must present problems to Kinshasa and they might answer” (interview 3-4). In the words of Lualaba’s Vice Governor Fifi Masuka Saini: “We are an emanation of the central government. We follow the instructions we are given. We report to the Government the situation here. These are our leaders...Free-administration is not independence. We respect the hierarchy” (interview 2-13).

#### ***4.2. Financial and Patronage Incentives***

Beyond direct control, and largely underpinning it, lies financial control, which can operate as “carrot” or “stick.” In terms of “carrot,” *débauchage* is the prevalent indirect mechanism through which Kinshasa seeks to exercise control over provinces. Our findings suggest that, typically, individuals from the entourage of the President will travel to a province, meet with members of the provincial assembly, and communicate voting instructions to them for the election of the governor and vice governor. These instructions are then “motivated” by financial incentives (interview 3-16). Examples of individuals from the presidential entourage engaging in this practice include the Interior Minister and the head of the PPRD<sup>27</sup>, as well as the head of the MP Aubin Minaku (who is also speaker of the national assembly), but it may also be other high-ranking or closely connected individuals.

Haut-Katanga province provides a case in point. According to at least three unrelated interviews we carried out in Lubumbashi, Minaku (who is from Kwilu) flew down to Lubumbashi to secure the election of Jean-Claude Kazembe to the governorship in April 2016. According to one provincial deputy:

Minaku gathered the members of the Provincial Assembly at the Karavia hotel the night before the [official] vote. All the *honorables* [the official title of provincial assembly deputies] were given blank ballots and instructed to vote for Kazembe. We received \$5,000 for writing Kazembe’s name on the ballot. After showing the ballot to Minaku, we kept it and brought it with us the next day to the Assembly for the [actual] vote. We

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<sup>27</sup> These two individuals are Henry Mova and Emmanuel Ramazani Shadary, who later became Kabila’s chosen successor to run for president, but was ultimately sacrificed for a Felix Tshisekedi win in a rigged election. Mova and Shadary switched positions with each other in 2017.



then substituted the ballot for the official one when we went into the voting booth. Once we returned the blank ballot to Minaku, we got another \$5,000 (interview 1-12).

Kazembe was elected with 22 of 24 votes. As another deputy suggests, this was a transactional decision for some:

Yes, we elected [Kazembe], but he was imposed on us by Kinshasa. These people came with all their arsenal and imposed him on us. This cannot be hidden. I am from PPRD [Kazembe's original party] but I must tell you the truth. They convinced us and we elected him (interview 1-12; also referred to in interview 3-16).

We were also told similar stories of payments to provincial deputies for the election of Richard Muyej in Lualaba (interview 1-29). There was significant local resistance to his appointment as residents of the eastern part of the province, mostly ethnic Sanga, opposed the apparent domination of the province by the Lunda, Muyej's ethnic group. Muyej was elected with 22 out of 24 votes. By our count, there are four Sanga, one Sanga-Luba and one Sanga-Yeke deputies in the Lualaba provincial assembly. At least four of them must have voted for Muyej.

The *débauchage* of provincial assembly members can also be used to get rid of governors, as Kazembe himself found out in April 2017. After he was accused of not properly sharing the material benefits of his position with local and national politicians (on which more below), Kinshasa allegedly brought the deputies of the MP together once more. Each again received \$5,000 in two similar installments (interview 1-17). Kazembe was dismissed by 24 votes out of 24 voting deputies.

While members of the MP coalition and even of the dominant PPRD party seem to expect such payments to accompany voting instructions, they can also be directed at

opposition deputies. When the pre-*découpage* Equateur province, for example, was under opposition *Mouvement de Liberation du Congo* (MLC) control, Kinshasa allegedly engineered the *débauchage* of deputies to undermine governors. MLC Governor Jose Makila was thus removed by his provincial assembly in January 2009.<sup>28</sup> After *découpage*, when the pre-*découpage* Equateur province was split into several smaller provinces, the same thing happened to Tony Cassius Bolamba, the independent governor of the newly formed, smaller, post-*découpage* Equateur province, that retained the name of the old, larger province. It also happened to the independent governor of Mongala, Bienvenu Essimba Baluwa Bolea, another province formed from pre-*découpage* Equateur. Most of the provinces formed from pre-*découpage* Equateur have now switched to PPRD or MP governors. In post-*découpage* Equateur, where most of the deputies were elected as MLC party members, the Provincial Assembly bureau is nonetheless MP. According to a Congolese scholar, “central power has much to do with these outcomes,” and here too we heard the story of Aubin Minaku going to the province to provide voting instructions and incentives (interviews 1-16 and 3-18).

Irrespective of the additional incentives they might receive for crucial votes, provincial deputies generally benefit from material conditions that far exceed those of their constituents and at least partly reflect the patronage dimensions of their position. In former Katanga provinces, *honorables* make between \$3,000 and \$8,000 a month (interviews 1-29 and 3-1). In contrast, the monthly equivalent of the average annual per capita income for the country is about \$33. In former Katanga at least, it is Kinshasa that takes on these expenses for the provinces, while the provincial government merely “assists” with occasional bonuses.

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<sup>28</sup> He later switched to PPRD himself.

Aware of their power to remove governors, provincial deputies also demand gifts from the latter, which governors might concede to in the hope of securing a little bit of wiggle room from Kinshasa (before *découpage*, Governor Katumbi reportedly matched Kinshasa's payments to provincial deputies each month from provincial tax revenues (Interview 3-9)). If the gifts (such as bonuses) are not forthcoming, the deputies "exploit real management problems to force the governor out" (interview 1-4).

Provincial politicians are not only potential clients of national elites. They are also themselves provincial patrons who seek opportunities to take care of their own clients. Decentralization and *découpage* present such opportunities, as they generate new local-level government positions (Green 2010; Riedl and Dickovick 2014), thereby further embedding local politicians into patronage webs. New provincial staff members are appointed under the guidance of provincial and national patrons and are incorporated, through these patronage networks, into the national political system (Dickovick and Riedl 2010). The opportunity to provide public employment is an important foundation of the attachment of provincial politicians to the system as it helps reproduce their own status as local patrons (Lewis 2014). By expanding the number of provinces, *découpage* has magnified these opportunities, increasing the size of the informal (and still transactional) ruling coalition, and, paradoxically, the dependence of provincial elites on Kinshasa.

It is not easy to quantify the additional employment provided by *découpage* as civil servants who work in provinces are a mix of national and provincial bureaucrats. Altogether, before *découpage*, Grand Katanga had an estimated 3,000 staff (interview 1-21). As of May 2017, Haut-Katanga alone had 1,787.<sup>29</sup> Of the 1,787, there were 400

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<sup>29</sup> Interview 1-23, Max Mpande, *Directeur du Personnel Provincial - Direction de la Fonction Publique Provinciale et Locale*. 6/15/17.

police officers, 65 division chiefs, 25 territorial inspectors, and an unspecified number of deconcentrated civil servants as well as hospital and school staff, all of whom are national civil servants.<sup>30</sup> On the provincial payroll were political appointees, decentralized civil servants, and the staff of provincial agencies such as the *Division des Ressources du Haut-Katanga* (DRHKat), the provincial tax agency.

According to its 2017 annual report, the Haut-Katanga provincial assembly had a staff of 250 (not including the 30 deputies themselves). At the cabinet level, each provincial ministerial position comes with a chief of staff, one staff secretary, one personal secretary, three advisers, one *chargé de mission*, two hostesses, one protocol staff member, two typists, one sweeper, one maid, and one driver, for a total of 15. Some ministries, like infrastructure, also have technical cells, and their staff can reach 23. Based on 15 staff per minister and ten ministers, total employment in the provincial government can be estimated conservatively at 160. From our interviews (1-17 and 1-21), we estimate employment in the governor's office and in provincial agencies like the DRHKat at about 390, for a total provincial staff of about 800.<sup>31</sup>

The 800 provincial civil servants represent about 45% of all civil servants in the province (1,787). If we use the same ratio, then there would be 1,350 provincial civil servants in former Katanga (45% of 3,000). If each new province from former Katanga has the same number of civil servants as Haut-Katanga, then the new total number of provincial civil servants would be 3,200, or an increase of 1,850 (137%) over the period before *découpage*.

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<sup>30</sup> The transfer of authority to provinces in the health and education sectors had not yet occurred as of 2017.

<sup>31</sup> Additional employment-producing provincial agencies include the *Brigade Anti-Fraude*, the *Centre d'Excellence*, the *Coordination de Contrôle*, and the *Agence Provinciale des Petits Travaux* (interview 2-23).

It is unlikely, however, that the poorer and more remote provinces, such as Haut-Lomami and Tanganyika, have been able to recruit as generously as Haut-Katanga, which also benefits from the pre-existing Grand Katanga staff. In Haut-Lomami (interviews 3-8, 3-12, and 3-14), we estimate the total number of provincial civil servants at 500: 60 staff in the provincial assembly, 216 in provincial ministries (of which there are 12 with a staff of up to 23), and 224 in the *Gouvernorat*, or gubernatorial cabinet (including those working for the *Division des Ressources du Haut-Lomami*). A few of these people worked for the district before *découpage*, and a few were transferred from Lubumbashi, but the large majority were hired locally, in the capital city of Kamina. If we use the estimate of 500 for Haut-Lomami, Tanganyika, and Lualaba, we get a total figure for provincial civil servants after *découpage* of 2,300. This figure would mark an increase of 950 over the previous employment level, or an increase of 70%. In either case, *découpage* appears to have brought about substantial new employment opportunities and, accordingly, new occasions for patronage-based recruiting.<sup>32</sup> As the president of the Haut-Lomami provincial assembly told us, “there has been a reduction in local unemployment as the province has been hiring our brothers” (interview 3-8).

The apparent heavy recruitment of provincial staff also appears to follow a national trend that began with the appointment of Michel Bongongo as Minister of *Fonction Publique* (Public Service) in 2016, possibly connected to the then approaching national elections. As Bongongo sought to regularize the situation of thousands of civil servants who had been hired as “*nouvelles unités*” (new units), i.e., those without recognized statuses (and thus without pay), he reportedly opened the door to a nation-

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<sup>32</sup> According to Lutumbue (2016: 15), who takes into account all administrative levels down to chiefdoms, the appointed personnel of Congolese local institutions totals 21,533.

wide wave of hiring of *nouvelles unités* by national and provincial patrons, hoping to have them blend with existing ones in the regularization process. What was meant to increase the official public service by some 10,000 units, seems to have mushroomed well beyond that. Journalistic accounts speak of 13,000 new recruits in Haut-Katanga, and 16,000 in Sud-Ubangi, for example (*Forum Des As* 2016; ACP 2018; RD-Congoleaks 2018). Although the majority of these hires are national civil servants, observers believe that provincial patrons are also participating in the recruitment wave, seizing the opportunity to have their clients taken care of by Kinshasa (interview 4-3).<sup>33</sup>

*Découpage* has also likely led to job creation outside of public service, although this is harder to document. In Haut-Katanga, for example, Governor Kazembe embarked upon the construction of a new and very large executive building (*Gouvernorat*), lasting a couple of years. While the project was under Chinese management, it hired many locals, and reportedly largely benefitted the companies of Kazembe himself. We did not see similar construction projects in Lualaba (there are, however, some ongoing road projects) or in Haut-Lomami. Nonetheless, Green (2010) offers widespread evidence that district creation in Uganda led to construction job creation benefitting locals, and a similar process might be at work in some Congolese provinces.

It is important, however, to understand the patron-client system as one that relates to more than just employment. Assistance and services are crucial dimensions too. Former Congolese districts becoming provinces with a greater concentration of politicians and civil servants offer more opportunities for people to seek help for their problems. *Découpage* thus increases the number of people who can benefit from the

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<sup>33</sup> We are grateful to Stylianos Moshonas for bringing this recruitment wave to our attention. It should be noted that registration does not guarantee the payment of a salary but is a required step towards such a payment.

patronage system and thereby stands to increase the legitimacy of the system and its social foundations. For every official appointment we visited that required spending some time in a waiting room, we could not help but notice the large number of individuals awaiting an opportunity to meet with officials. People also expect payments to participate in official events (interview 1-29). This demand for patronage also puts pressure on local politicians, such as provincial deputies, and leads them in turn to seek to extract more from Kinshasa or the governor. At any rate, the expectations of the population constitute an endogenous factor in the reproduction and the spread of the patronage system.

#### ***4.3. Financial and Extractive Pressures***

Despite occasional *débauchage*, the Kinshasa-province relationship occurs under a certain degree of duress for provincial clients, as Kinshasa expects them to facilitate the extraction of their own provinces' resources to Kinshasa's benefit. And, while it can be generous in handing out material benefits to provincial elites, it can also exercise significant financial pressure for them to deliver. Whereas conventional patron-client relations see the exchange of resources from the top for loyalty from the bottom, in DRC, resources are expected to flow both ways (see Baaz and Olsson 2011; Malukisa 2017). But while the Kinshasa networks hand out payments and enrichment opportunities to *individuals*, it extracts resources from *provinces*, as public entities, with the result that provincial finances, and development more broadly, are severely strained by the functioning of the political system.

Starving provinces of financial resources seems to be the main tool of control over their elites as it leaves them in a situation of dependence. If the central government

respected the constitutional provision that requires leaving 40% of tax revenue in the hands of the provinces from which they originate, most provinces might be able to obtain the resources they require. Instead, central government appropriates 100% of these resources and then returns small and irregular amounts to the provinces, in a process referred to as “*retrocession*” (see Englebert and Kasongo 2016 for detailed figures). In 2017, actual transfers (investments, salaries, and functioning costs) amounted to 61% of budgeted amounts, largely because salaries include those of deconcentrated personnel in provinces and were paid close to budget. For public investments, the 2017 ratio of executed to budgeted transfers was only 7%.

Although the provinces in which we did fieldwork were all under PPRD governors, authorities in all of them complained to us in 2017 and 2018 about how few resources they were getting from Kinshasa. According to a Haut-Katanga civil servant in 2017:

The central government is killing us; it is not right. We are no longer getting retrocession although the resources come from here. We are maybe getting 5% of what we are due and sometimes three or four months late (interview 1-11).

A provincial deputy confirmed in 2018:

We are no longer getting retrocession.<sup>34</sup> It has been eight months now without transfer. Deputies are not being paid by Kinshasa and we have to substitute our own resources. We will only be able to achieve 30% of our budget this year [because of these shortfalls]. This will only cover functioning costs (interview 3-16).

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<sup>34</sup> It is not clear whether he was referring to the entire province or to the provincial assembly alone.



In Haut-Lomami too, we found that payments from Kinshasa to provincial assemblies were becoming more irregular, delayed, or even not arriving at all, with one interviewee saying it had been six months since the last salary payment to deputies (interviews 3-1 and 3-9).<sup>35</sup> In Lualaba, a province whose governor is very close to the Kabila regime, at least two officials in Kolwezi, the provincial capital, expressed frustration over the lack of retrocession and lamented that the province had to find alternative sources of revenue, which in practice meant taxing just one city, the resource-rich Kolwezi (interviews 1-30 and 2-12).

Painful as it is, a lack of disbursements from the central government pales in comparison to the degree of extraction Kinshasa is exerting upon the provinces. Kinshasa seems to be carrying this out via its local political clients. The evidence suggests a process of recentralization of resources by Kinshasa authorities, in parallel to the system whereby elected and appointed provincial politicians are expected to send resources to their benefactors in Kinshasa, a practice known as “*operation retour*” (interview 1-12) or “*rapportage*.”

Although we were unable to verify this specific claim, we were told, for example, that a provincial division chief, in a revenue-generating division, transferred \$400 every evening to his patron in Kinshasa (interview 4-1). Other sources told us that provincial politicians who are in the position of being able to provide public employment to their clients usually reclaim 10% of the latter’s salary to finance their political party or the MP (interviews 1-11 and 4-3). Kinshasa’s dependence for resources on politically-appointed

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<sup>35</sup> One interviewee added that deputies did not receive payments for the last two governors elections. These elections are considered extraordinary sessions and, provided they last at least three days, are paid a full month salary. One can imagine how the lack of salary can make deputies more sensitive to side payments during elections.

personnel was illustrated by a letter sent in September 2018 to all administrators of state-owned enterprises by the Secretary-General of the MP, requesting their support in organizing for the electoral campaign of MP candidate Emmanuel Ramazani Shadary and reminding each one of them of their obligation to send \$1,500 monthly to the MP (Leclerc 2018).

Moreover, Kinshasa seems to systematically be trying to subvert and appropriate provincial resources, with local politicians seemingly unable or unwilling to stand up to this racket. For example, under Governor Katumbi, Katanga imposed a tax on copper concentrates of \$100/ton, which was reissued by the new provincial administration of Haut-Katanga. It was reported that Kinshasa made a deal with some of the mining companies operating in Haut-Katanga, which allowed them to reduce their payments to the province, allegedly to no more than \$20/ton, a move that might have cost the province's budget \$3.2 million per year. In a similar arrangement, there is a \$100 tax per truck on the Kolwezi-Kasumbalesa road, which was initially divided 60% for Haut-Katanga and 40% for Lualaba after *découpage*. But, according to our source, Lualaba made a deal with Kinshasa, with the result being that the new distribution is now 30% for Lualaba and 70% for Haut-Katanga (interview 3-16). Each of these cases shows the fact that Kinshasa can impose deals at variance with local laws, suggesting the effective centralization of the system and the relative insignificance of laws and formal rules.

The “\$27 million affair” provides another example (AFN 360 2017). In this case, it is alleged that then Governor Kazembe of Haut-Katanga placed a provincial tax payment of \$27 million, incurred by Glencore for the purchase of Mutanda Mining, into his own private bank account. Kazembe argued that he did so because the province's

official account could not accept deposits in dollars (an odd situation in a largely dollarized economy). The apparent private appropriation of the payment irritated local and national politicians alike, as well as Governor Muyej of neighboring Lualaba, who thought his province should get the tax revenue as Mutanda Mining's operations are located there (its headquarters, however, are in Lubumbashi, Haut-Katanga). What is interesting for our purpose is that Joseph Kabila reportedly sent his Chief of Staff, Néhémie Mwilanya, to seize the money (AFN 360 2017). It is unclear how he did so but Kazembe himself confirmed to us that this happened. Kazembe told us that he later saw Kabila and was told by him that he was keeping the money for the province and would give it back at an opportune time. Kazembe also told us he had later asked the new Governor where the money was and was told "it is already gone" (interview 3-16). Another informant suggested that Kazembe, along with the new governor, Célestin Pande, and members of the Provincial Assembly all received a cut of the \$27 million and so will stay quiet about it (interview 3-18).<sup>36</sup>

What this story shows is a process of the extraction of resources from the decentralized official system (the initial payment by the mining company for a provincial tax) that then flowed upward through the informal extractive centralized system and accrued to Kinshasa networks, with perhaps a degree of informal provincial redistribution to secure the necessary allegiances. Of course, the province, as a public collective entity, is the victim.

Among the other examples we found is the case of one provincial agency in Haut-Katanga that collects taxes and sends some of the revenue to DRHKat, the Katangese tax

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<sup>36</sup> Much of the story as reported by Jean-Claude Kazembe was also confirmed to us by interview 1-11 with an influent provincial assembly member.

agency, and some to the national Treasury. They get back 1% in commissions from DRHKat and 5% from the Treasury as “motivation” for their service, a legal incentive system. However, agents of the national agency, *Direction Générale des Recettes Administratives*, are alleged to illegally take half of the commission redistributed from the Treasury. This creates a conflict with the provincial agency that its leadership, otherwise ingratiated to Kinshasa, has not been able to solve (interview 3-17). In another case, the *Fonds National d’Entretien Routier*, a national agency in charge of road maintenance, has reportedly appropriated the provincial road tolls from Haut-Katanga and only retrocedes a small part to the province (interview 3-15). In Haut-Lomami, provincial authorities hope to get some local revenue from the artisanal mines in Malemba-Nkulu territory but complain that the little that has been exploited so far goes directly to Kinshasa instead (interviews 3-4 and 3-9).

The frustration of local actors is palpable, yet they are caught in the system from which they also derive some benefits. In the words of a Haut-Katanga politician:

They [elites in Kinshasa] take everything we have, everything that should be ours. All our revenues are hijacked by the power and they threaten us. I am from the power. But it is falling apart. It is desolation. It is looting. They are not ruling. When the people from Kinshasa come here it is to eat (interview 1-11).

A Lualaba provincial assembly member contended that “the structures of Kinshasa are very rotten. They pillage without distributing and without offering any real leadership” (interview 2-15). “Everything stays in Kinshasa,” a Lualaba senior civil servant complained (interview 1-31). And a Haut-Lomami provincial deputy confirmed: “the country is managed by Kinshasa alone...we do not live together with those who are

in power. There are people in Kin[shasa] who take us hostage. We suffer here” (interview 3-9).

The resulting system is highly extractive of local resources and constitutes a form of fiscal asphyxiation for provinces. Local authorities are unable to resist because they are in a dependent clientelist relationship with Kinshasa. Their response is to seek more provincial revenue, which leads to an additional increase in extraction. In Haut-Lomami, for example, each ministry has its own “budgetary goal,” whereby it must reach a certain percentage of the budget with its own tax collections. Provincial authorities are thus deployed as revenue-generating machines. Even the provincial sports minister has to raise taxes (interview 3-5).

In general, the extraction of resources by Kinshasa forces local authorities to augment their taxes or to extract in turn from the administrative level below them, such as cities, a practice which has ignited tensions among local levels of government. Both the Mayor and Deputy Mayor of Kolwezi (the capital city of the Lualaba province, and a wealthy mining district) complained that as Kinshasa continues to withhold promised resource distributions from Lualaba, the provincial government has dipped into the city’s tax coffers (interviews 2-4 and 2-5). The Deputy Mayor even placed much of the blame on the provincial leaders themselves, stating that they have “consented to sacrifice vis-à-vis Kinshasa” (interview 2-4). Hence, a possible consequence of the informal extractive centralism engineered by Kinshasa-based networks is to turn official provincial authorities into more predatory extractors themselves.

#### ***4.4. Godfatherism: The “Parrains” System***

Despite our frequent reference to “Kinshasa,” the networks that underpin the system of informal extractive centralism should not be construed as monolithic or even necessarily coordinated. Personnel and extractive decisions are usually communicated as the “President’s wish” or on account of “party discipline,” but there seems to be significant jockeying among regime elites, known as *parrains* or political godfathers, for these appointments and extractions, with the result that the system is relatively unstable and unsettled.

Political godfatherism is not unique to DRC. In Nigeria, it operates as a hierarchical and pyramidal system of elite recruitment and placement (Albert 2005; Omotola 2007), in which a “godfather” is a person with the power to personally determine both who gets nominated as a candidate for local elections, and often who wins (Ibrahim 2006). Godfathers are thus “political gatekeepers” who “dictate who participates in politics and under what conditions” (Albert 2005: 82). Godfathers may rise to their powerful roles as a result of a weak party system, a long-standing and deep-seeded culture of clientelism and prebendalism (Omotola 2007), low levels of voter mobilization (Olarinmoye 2008), and a divided society, particularly if divided along ethnic lines (Albert 2005). Typically, godfathers are individuals with extensive connections who have knowledge of the local political landscape, influence over security forces, the capacity to enforce voter compliance, and financial weight. They may rise to prominence from political dynasties (Ojo and Lawal 2013), or they may begin their careers by holding prominent positions within political parties (Albert 2005).

Nigerian godfathers typically do not assume office themselves, but rather rule by proxy (Ojo and Lawal 2013). In the words of Reverence Jolly Nyame, Governor of Taraba State, “Whether you like it or not, as a godfather you will not be governor, you will not be president, but you can make a governor, you can make a president” (Ibrahim 2006: 69). Nigerian godfathers have proven immensely successful at this power placement. For example, the now-deceased godfather of Kwara State, Dr. Abubakar Olusola Saraki, and his political machine were able to install five governors, including his own son (Ojo and Lawal 2013). The godfather of Anambra State, Chris Uba, boasted that he was the “greatest godfather in Nigeria because” he was the first “individual [to] single-handedly put in position every politician in the state” (Ibrahim 2006: 69).

Godfatherism is far from being as established and public in Congo as it is in Nigeria. It also seems more centralized in Congo.<sup>37</sup> Most Congolese godfathers, as far as we can tell, derive their power from their close personal connection with Joseph Kabila combined with some degree of local status, usually acquired through leadership in ethno-cultural associations or political parties. Finally, Congolese godfathers are more likely to hold public office than are their Nigerian counterparts. Despite these differences, godfathering seems to have become an important element in the edifice of Congo’s informal rule. It is, however, not a new phenomenon. Guy Aundu Matsanza notes that, already under Mobutu’s *Mouvement pour la Révolution*, state agents were recruited or promoted based on the recommendation of “big men” or ethnic leaders within the party (2010: 120). He also notes that, before becoming an opposition politician, Etienne

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<sup>37</sup> Although political *parrains* are centralized, the practice of godfatherism is generalized and more diffused. Having someone higher up than you protecting you is often a necessity. It can also be referred to as having a “*parapluie*” (umbrella) or a “*branchement*” (connection).

Tshisekedi played the role of godfather for the Kasai Luba within the Mobutu regime (2010: 116).

Until his accidental death in 2012, Augustin Katumba Mwanke appeared to have been the main *parrain* and was able to keep a fairly centralized system in operation around Kabila. John Numbi, currently General Inspector of the Armed Forces, and Chief of National Police until 2010 (but without an official position in the system between 2010 and 2017), is another influential *parrain*, who supposedly benefited from Kabila's trust because he promised Laurent Kabila, Joseph Kabila's father, that he would take care of his son after his death. Numbi had to take a backseat in state institutions after he was accused of killing journalist Floribert Chebeya in 2010, but retained his access and leverage. Both are from Grand Katanga, with Katumba Mwanke a Bemba and Numbi a Lubakat.

With Katumba Mwanke dead and Numbi weakened in the wake of Chebeya's death, a few other individuals rose as influential *parrains*. Among them are Henry Mova (a Bemba from Haut-Katanga who, as Minister of Interior, is officially in charge of the oversight of provinces),<sup>38</sup> Emmanuel Ramazani Shadary (a Bangubangu from Maniema, like Joseph Kabila's mother, who was formerly head of the PPRD and was Kabila's chosen candidate in the December 2018 presidential elections), and Aubin Minaku (a Dzing from Kwilu who is the President of the National Assembly). Through their loyalty, these three individuals seem to have earned the trust of Kabila over time. The head of the national intelligence agency, the ANR (*Agence Nationale de Renseignements*), Kalev Mutond (a Lunda), and the President's Chief of Staff, Néhémie Mwilanya Wilondja (a

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<sup>38</sup> Having a Bemba in the "inner sanctum" of power allows Joseph Kabila to penetrate Bemba circles and arbitrate disputes in Haut-Katanga. Mova was on Jean-Claude Kazembe's balcony celebrating the announcement of the latter's election by the provincial assembly in 2016.



Lega from South Kivu) probably also make the list. The former Director of the Central Bank of Congo, Jean-Claude Masangu Mulongo (a Lubakat) is also influential at the Katangese level.

According to one of our informants, “having Kabila’s ear gives them great powers as they can speak in his name—‘The president says’—to give instructions,” which makes the placement of their protégés harder to reject (interview 3-18). There are other *parrains* who are influential outside of Katanga, like Evariste Boshab, the former President of the PPRD, and lesser *parrains* whose influence is limited to a province or two, acting as the main brokers/gatekeepers for these provinces in Kinshasa.<sup>39</sup>

Together with ethnic associations (see Gobbers 2016), *parrains* are an important cog of the system. They help reduce the regime’s informational asymmetry with local actors and concurrent uncertainty regarding how best to recruit state agents. However, the multiplicity of *parrains* creates instability in the system. Possible lack of sufficient influence in Kinshasa or competition among two or more *parrains* sometimes makes it harder for Kinshasa to select loyal acolytes or to rein in local elites.

Jean-Claude Kazembe, the first Governor of Haut-Katanga, for example, benefitted from the *parrainage* of Ramazani Shadary, who was from the same school cohort as him (education is an important factor in seeking advancement to higher office in Congo) and lobbied for him with Aubin Minaku, who reportedly convinced Kabila to support his candidacy (interview 1-17). Yet, in the end, Kazembe turned out to be insufficiently docile and allegedly ignored recommendations by Shadary and Minaku for

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<sup>39</sup> Similarly, there are *parrains* in other walks of life. A young university assistant, for example, might seek the support of an ethnic or political *parrain* to advance his career.

the formation of his government and cabinet. He had to be removed (more on this in the following section).

In Haut-Lomami, we were told that Governor Célestin Mbuyu Kabango Mukolwe, presumably protected by someone else, refused to take on some ministerial candidates who were preferred by John Numbi (who is Lubakat from Haut-Lomami and a notable local *parrain*). Mbuyu's *parrain* might not have been strong enough compared to Numbi as he was removed in 2017.

Kinshasa and *parrains* cannot act without consideration for local politics, particularly ethnicity (which remains highly politically salient in DRC). Ethnic associations, known as *mutuelles*—like Buluba I Bukata, the Lubakat Association—help identify candidates for jobs from among their ranks, who are then submitted to *parrains* for endorsements. *Mutuelles* thereby play a facilitative role in the reduction of information costs for Kinshasa and other political players (Gobbers 2016). In addition to highlighting the central role of Kinshasa, a 2018 report by the Congo Research Group (CRG) also shows both the degree of competition among some *parrains* and the extent to which ethnicity matters. It is worth quoting at some length:

In October 2015, PPRD politicians from the future Kasai province met in Kinshasa at the Centre Nganda to decide, among other things, how the province would be run... The key clause in the set of resolutions that emerged from the meeting concerned the [equitable] distribution of posts in the new province... among the different communities... The competition for these lucrative and powerful positions has pitted coalitions of ethnic groups from the north of the province against those from the south. With some exceptions, ethnic elites from the north—from Lele, Kuba, and Kete groups—have allied under [Evariste] Boshab's umbrella, while the southern Chokwe, Pende, and Nyambi

groups have formed a coalition under [Maker] Mwangu. Both sides have scored points in their favor since this power struggle broke out in 2015. The decision to make Tshikapa the provincial capital instead of Luebo, for example, constituted a victory for Mwangu. Meanwhile, the decision by the ruling coalition in Kinshasa to make Marc Manyanga, a Lele, the provincial governor was a victory for Boshab...At the same time, Governor Manyanga's position is being openly contested by the vice-governor, Hubert Mbingho, a Pende who is Mwangu's ally. Moreover, the provincial assembly president, François Madila Kalamba, a Mwangu ally, has been hamstrung by the central government's decision to close the assembly. This has been considered a victory for Boshab (CRG 2018: 24-25).

The *parrainage* system undermines provincial autonomy, redirecting governors' accountability upwards rather than to their populations. It also removes accountability from the formal public domain and displaces it into a more shadowy realm. When a *parrain* calls up his protégé, the latter comes running. As a result, governors spend an inordinate amount of time in Kinshasa, awaiting or receiving instructions (interview 3-16) and displaying loyalty. Governor Abdallah of Ituri, for example, spent a whole month in Kinshasa in July 2018 while his provincial staff were on strike for not having been paid in more than a year. Some governors return from these trips with gifts, for example a vehicle, and display those as favours to their province from their benefactors (interview 3-15). It is clear that godfatherism subverts popular participation and undermines decentralization. It forces local communities to invest in seeking their own *parrains*, thereby promoting local competition, diverting popular mobilisation from collective goods and sidetracking political participation away from formal institutions of

representation (for a similar critique in Nigeria, see: Ojo and Lawal 2013; Omotola 2007; Albert 2005).

#### **4.5. Sanctions**

Sanctions are meted out by Kinshasa to those who do not comply with the system. In contrast to sanctions for those who defect politically, which can be violent, the main sanction for failure to comply within the extraction system—by, for example, sharing insufficiently or building too strong of a local base that siphons funds—is dismissal from office. In the case of provincial governors, dismissal can be legally imposed by the President in certain circumstances (see Section 3.2 above). More frequently, however, the dismissal occurs through mechanisms intrinsic to the informal system itself, specifically through *débauchage* and the manipulation of provincial deputies to rise against governors (and, more rarely, governors themselves stifling provincial assemblies).

Sanctions against governors who are seen as insufficiently loyal to Kinshasa account for some of the 17 no-confidence motions that provincial assemblies have passed against governors since 2016 (see Table 1.3). Thirteen of these motions affected new governors in new provinces (two concerned governors in non-*découpage* provinces, and two affected subsequent governors after the departure of the first one in the Mongala province). Of these 13, nine were aimed at governors who were PPRD or MP, of whom there were 15 altogether in 2016. Two of these survived the motion, and seven were replaced. The four other motions were aimed at independent governors, of whom there were six. None of them survived their motion.

*Table 1.3: Provincial No-Confidence Motions against Governors since 2016*

Province	Governor	Party	Date	Outcome
Equateur	Tony Cassius Bolamba	Independent	Sep 2017	Replaced
Mongala	Bienvenu Essimba Baluwa Bolea	Independent	Oct 2017	Replaced
	Aimé Bokungu (Acting VG)	MP	Jan 2017	Replaced
	Louis Mbonga Magalu Egbanda	MP	Jul 2018	Survived
Nord-Ubangi	Marie-Thérèse Gerengbo	PPRD	Jun 2017	Survived
Sud-Ubangi	José Makila Sumanda	Independent	Dec 2016	Replaced
Tshuapa	Cyprien Lomboto	MP	Oct 2016	Replaced
Kasai Central	Alex Kande Mupompa	Independent	Oct 2017	Replaced
Lomami	Patrice Kamanda Tshibangu Muteba	MP	Dec 2017	Survived
Sankuru	Berthold Ulungu Ekunda	MP	N.A.	Survived
Haut-Katanga	Jean-Claude Kazembe Musonda	PPRD	Apr 2017	Replaced
Haut-Lomami	Célestin Mbuyu Kabango Mukolwe	PPRD	May 2017	Replaced
Kwango	Larousse Kabula Mavula	MP	Jul 2017	Replaced
Kwilu	Godel Kinyoka Kabalumuna	MP	Jul 2017	Replaced
Tshopo	Jean Ilongo Tokole	MP	Aug 2017	Replaced
Maniema	Pascal Tutu Salumu	PPRD	Dec 2017	Replaced
South Kivu	Marcellin Cishambo	PPRD	Oct 2017	Replaced

The main victims of these motions were governors associated with the regime, which indicates a fair amount of pushback by provincial elites against the attempts of Kinshasa to control provincial politics. This observation calls, however, for some degree of qualification. First, the motions against independents were typically arranged by Kinshasa. Second, quite a few of the motions against MP or PPRD governors did not

represent an attack against the regime but were rather organized jointly between Kinshasa and provincial assemblies to get rid of insufficiently loyal governors (Kasongo 2018; see also Cros 2017). It should come as no surprise therefore that, after this first round of motions, the number of PPRD/MP governors was the same as before. Thus, most had been replaced by other regime clients, suggesting the problem was one of individual allegiance rather than political confrontation.

However, the number of independent governors did not change either, showing the limits of Kinshasa's capacity to reorganize local politics (we expand on this below). Yet, it should be noted that PPRD/MP governors were generally better able to withstand the motions than were their independent counterparts, some surviving them and some being reinstated afterward. By contrast, the Equateur and Mongala provinces, which originally had pro-MLC independent governors, are now under MP governors. After 2016, it was important for Kinshasa to secure the loyalty of governors, as their help would be needed when presidential elections, originally scheduled for 2016, took place.

The dismissal of Jean-Claude Kazembe in Haut-Katanga illustrates the logic of the motion-based sanction regime. When he was originally campaigning to become governor, Kazembe sought to be well liked by Kabila. He lobbied Shadary and Minaku and was designated the PPRD candidate. The regime then managed to invalidate the candidacies submitted by allies of former-governor Katumbi and cleared the way for his victory (with financial incentives for deputies, as discussed earlier). However, as noted, once in office, Kazembe proved hard to control and resistant to sharing. In addition to failing to take recommendations from *parrains* for hiring certain individuals, he did not butter up the provincial deputies as Katumbi used to do, and allocated numerous

provincial public contracts to his own companies (interviews 1-11, 1-17, and 3-18). The aforementioned deposit of the \$27 million tax payment from the Mutanda Mining into his own account was apparently the straw that broke the camel's back for both Kinshasa and the Provincial Assembly. Accusations surfaced against his management methods and some reported his "lack of respect for the authorities of his party the PPRD and of the presidential majority" (Geopolis Magazine 2017<sup>40</sup>). Kazembe's perceived arrogance towards the Provincial Assembly did not help. He rejected both their accusation as well as the competence of the Assembly to question him when it sought to do so. This is how Kazembe himself assessed the situation to us:

My friends from Kinshasa...created problems. They did not like that I was successful...I had not read in the intentions of my backers in Kinshasa that their agenda was that I help them get rich. A Minister from Kinshasa said after visiting Lubumbashi: "are we going to eat the new *gouvernorat* building?" When they saw that I was erecting a new executive building, the folks in Kinshasa said I had money. The motion came because they thought I was not being generous. I was told that Joseph Kabila wanted me to resign.<sup>41</sup> I went to Kinshasa and he exonerated me. But then his entourage started vilifying me until he changed his mind. Someone then told the President of the Provincial Assembly that Kabila wanted me out and to make a motion, even though my budget had passed with 100% approval two weeks earlier. After I was voted out, the constitutional court invalidated [the destitution] and said there was no power vacancy in Haut-Katanga. Yet, the CENI (*Commission Electorale Nationale Indépendante*) [went ahead and] organized elections anyway and said they did so under instructions of the Ministry of Interior...In short, they got rid of me because they said I ate alone. Then I could not even recover my

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<sup>40</sup> <https://geopolismagazine.com/haut-katanga-destitution-de-jean-claude-kazembe-larbre-qui-cache-la-foret>.

<sup>41</sup> Note the indirect and informal relaying of directions, allegedly from Kabila.

seat at the National Assembly. The PPRD withdrew its confidence. Then I created my own party (interview with Kazembe).<sup>42</sup>

There was indeed a fair amount of confusion over Kazembe's dismissal. The Constitutional Court invalidated the no-confidence motion against him because it was passed when Kazembe was in Kinshasa and thus unable to attend the session and defend himself. Yet, the Court's decision to reinstate the governor allegedly required promulgation by the president to be executory.<sup>43</sup> Some suggest that Kinshasa's idea was only to make him afraid so that he would behave in the manner they desired but that his self-assured reaction to the Court's decision convinced Kinshasa that he would remain a liability (interview 1-17).

The result of all this was that Kabila abstained from signing the necessary document, Kazembe found himself stuck in Kinshasa (he may even have been physically prevented from boarding a plane to Lubumbashi), and the Provincial Assembly elected a new governor. In the words of a provincial deputy, Kazembe "was not sufficiently weak towards Kinshasa so they wanted to get rid of him" (interview 3-16). Omasombo (2018) suggests instead that Kinshasa wanted him back in power but the resistance of the Provincial Assembly was too strong, but this interpretation does not fit well with our information.

However, while the impeachment of Kazembe illustrates the willingness of Kinshasa to instrumentalize provincial assemblies so as to retain control of provincial elites, several no-confidence votes also emanated from legitimate push-back by

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<sup>42</sup> Governor Kazembe authorised us to quote him openly.

<sup>43</sup> We are not sure this is a constitutional requirement, as it seems to undermine the separation of power, but this lack of presidential endorsement seems to have prevented Kazembe from returning to Lubumbashi after the court's decision.



provincial assemblies upset at the candidates imposed on them by Kinshasa, illustrating the incomplete hegemony Kinshasa exercises over provinces and the instability intrinsic in the extractive *parrain* system.

It is particularly telling that, of the 13 special commissioners appointed by Kinshasa in 2015 who were then elected governors in 2016, eight subsequently faced votes of no confidence by their provincial assemblies. Six of these eight were PPRD/MP governors. Although Kazembe was one of them, most others did not display the same attitude toward Kinshasa and were instead sanctioned by their own provincial elites, either because they acted as if only Kinshasa mattered, because they shared insufficiently, or because they belonged to the wrong ethnic group or came from the wrong territory within the province. The goal of provincial assemblies was thus, in part, to let Kinshasa know that the provinces' wishes had to be taken into account. This illustrates a degree of local collective action possibly facilitated by the greater ethnic homogeneity of new provinces. Englebert et al. (2018) found that the ethnic heterogeneity index averaged 0.60 for the new provinces that had motions, versus 0.72 for those that did not.<sup>44</sup>

Having opened the Pandora's box of motions, the regime sought to put a lid back on it and called all the provincial assembly presidents to Kinshasa in May 2017 in the hope of reining things in. The presidents were "called to order," as someone who participated in the meeting put it (interview 3-18). According to the president of the Haut-Lomami Provincial Assembly, the meeting was:

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<sup>44</sup> Englebert et al. 2018 calculated Herfindahl indices (the probability that two randomly selected individuals belong to different ethnic groups) using recoded data from the *Institut National de la Statistique*. The formula is Ethnic Heterogeneity =  $1 - \sum (n^2)$ , where  $n$  is the size of each group in proportion of the province's population.

...to listen to us, to know what was going on [with the motions]. We looked for solutions together. There was bad management, financial recklessness. They asked us to do our job properly to build the provinces and not to be nuisances. Since then, things have changed (interview 3-8).

There were more motions later in 2017 but there have not been any in 2018, suggesting that the system may have found a precarious balance on the eve of national elections.

## 5. CONCLUSIONS AND POLICY IMPLICATIONS

Decentralization reforms are expected to transfer authority downward, improve accountability, enhance public goods provision, and usher in a host of other advantages for citizens. Yet these expectations are predicated on assumptions of formal institutions unencumbered by a countervailing informal system that is ever-hungry for upward-flowing resources and that exerts varied strategies of local control. In Congo's system of informal extractive centralism, the authority of Kinshasa, which bypasses constitutional constraints, is fed by the distribution of financial opportunities to provincial elites, including local patronage opportunities.

The ultimate goal of Kinshasa appears to be the extraction of resources, which it pays for through the patronage of provincial politicians. Provincial politicians participate as they see their own patronage opportunities expanded by *découpage*. In practice, however, they compete with Kinshasa for resource appropriation and must take into account provincial pressures for a greater share of resources, more autonomy and ethnic balancing. Provincial elites, like governors, are kept in check by the *parrain* system, which provides screening for their selection, and by the *débauchage* of provincial

assembly members, which can sanction errant governors. However, competition among *parrains* and the self-interests of provincial assemblies can sometimes lead to suboptimal outcomes for Kinshasa, whose incomplete hegemony occasionally smacks of amateurism.

This system produces two important effects. First, all its dimensions militate for ever-renewed resource extraction. Networks based in Kinshasa are intent on maximizing the benefits of their access to power and demand that their provincial clients send resources upwards. These clients receive their own patronage benefits and seek to maximize provincial employment but their provinces, as formal institutions, are starved of resources. Provincial assembly members make financial demands on provincial authorities under the threat of destabilization. Provincial administrations respond by seeking all sorts of local fiscal opportunities and deploy their agents as tax farmers rather than as public good providers. Citizens—the intended beneficiaries of decentralization reforms, which are theoretically meant to bring governance closer to the public and render it more accountable—end up on the losing end of this extractive racket.

Second, the system is structurally unstable because it is fundamentally transactional. While it can absorb opponents with relative ease, no deal is permanent, and its own members must constantly be fed. As a result, Kinshasa's power, while it seems ubiquitous, is far from absolute. It must take local realities into account, which does reintroduce a dimension of accountability, however informal and elite-based. Despite all the motions and direct interventions by Kinshasa, the PPRD/MP (itself far from a homogeneous or stable coalition) did not appear to control more than 19 out of 26

provinces as of 2018. The current system stands thus in contrast with the more hegemonic one that prevailed under Mobutu (see Marijsse 2018 for a similar point).

Rather than providing an additional African example of decentralization as recentralization through unit proliferation (Lewis 2014) and/or elite capture of reforms (Crook 2003), Congo stands as an extreme example of the failure of decentralization to bring about theorized results, thanks largely to the formidability of the informal extractive system that operates in parallel—and indeed often overpowers—the country’s formal institutions. Nowhere else, to our knowledge, has a similar system of informal extractive centralism been identified and its effects analyzed as the one we unearth in DRC.

Below, we offer a set of policy recommendations to international organizations and donors, with this current Congolese political context in mind.

### ***5.1. Policy Recommendation #1: Work with Patronage, Not Against It***

What is a policy reformer, a decentralization proponent, or a donor to do with our findings? It is one thing to recommend “going with the grain” (Kelsall, 2011) in donor-recipient relations, but it is quite another to do so when the grain is predatory due to the entrenchment of informal extractive centralism. Nonetheless, decades of failed reforms in Congo suggest that it might be useless trying to promote formal reforms based on behavioral and normative assumptions that are at odds with actual praxis. As Thomas (2016: 6) wrote about US policy in another failed state, “The idea of building a strong central government in Afghanistan that operates under the rule of law and delivers public goods and services to all citizens was flawed from the start.”

While it is not generally developmental, patronage is an effective mode of rule for countries facing resource constraints, post-colonial institutional weakness, and high degrees of socio-cultural diversity (ibid.). In Congo, its ultimate achievement is to have preserved the country (a feat in itself) by giving its constituent groups and their elites a vested interest in it. Given the immediate breakdown that followed independence, this is a signal achievement (provided one finds more utility in having Congo than not). It presently seems both unrealistic and impractical for foreign actors to go forcefully against the entrenched system of patronage. To be sure, the Congolese themselves might aspire to more universalistic, transparent, and accountable forms of rule, but they have not proven willing or able to get there, embedded as they are in clientelistic obligations and expectations.

## ***5.2. Policy Recommendation #2: Invest in Provincial Governments***

Donors might have a small degree of leverage in tweaking the manifestations and outcomes of patronage in ways that may reduce its predatory effects and provide provinces with a relative boost in autonomy. The degree of extraction by Kinshasa and its monopolization of resources at the expense of provincial elites has become a problem within the functioning of the patronage system itself. The Congolese do not begrudge Joseph Kabila the wealth he has amassed in office; it is his stinginess in disposing of it that they lament.<sup>45</sup>

Providing direct funding to provincial governments and assemblies in the mode of unconditional budget support could increase the level of effective decentralization and autonomy for provincial elites. It is true that, at a national level, budget support has gone

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<sup>45</sup> On Kabila's wealth, see CRG (2017).

out of fashion in part because it was unable to secure genuine policy commitments and prevent corruption scandals linked to patronage politics (Swedlund 2017: 97-121).

However, the goal here is not to support specific policies or to prevent and dismantle the patronage system, but rather to provide provincial elites with resources that could free them up from Kinshasa's stifling embrace. If donors covered the functioning costs or public investment goals of provinces, say by making up shortfalls in *rétrocession*, they would reduce provincial elites' dependence on Kinshasa and their vulnerability to *débauchage*.

To some extent, this recommendation might seem like it runs counter to the first one as greater financial autonomy for provinces might threaten existing patronage networks. Kinshasa might seek to create obstacles in the path of donors to prevent this rebalancing of relations with the province from taking place. But the purpose of the recommendation is to reduce the predatory nature of patronage, not undermine patronage itself. Under such donor financing, Kinshasa might reduce its own rate of extraction from the provinces or increase its redistribution to their elites so as to maintain its leverage over them (but one cannot rule out that Kinshasa would find ways to extract the donor funds from the provinces). Thus, the donor intervention would take place within the logic of patronage. The result could be a net reduction in predation and greater opportunities for provincial elites to respond to provincial demands. That these would be mainly clientelistic could be bemoaned; but it could also be understood as the local adaptation or appropriation of an externally-inspired reform, with tangible welfare benefits.

Indeed, untethered by conditionality, the funds are likely to feed intra-provincial relations of patronage. We recommend that this is not to be fought off. Providing local

elites with the means to take care of local clients with less interference from Kinshasa can nurture the foundations of a patronage-based decentralized system. Such a system might be a far cry from the lofty expectations of donors and the Congolese Constitution alike, but it would nevertheless be a form of accountable governance, with the advantage of building upon local norms of political legitimacy. Relatively freed from its earlier budget constraints, this system would also be less dependent on local taxation, providing relief to local citizens.

Certainly, there are obvious risks associated with this recommendation, including the possibility that all the funds could disappear without any corresponding improvements in public services or greater delivery of public goods, and that local taxation could remain punitive. There is also the risk that provincial elites would not alter their behaviors, as they would not find the commitment of donors to maintain this policy credible. Yet, without a long-term guarantee from donors, such budget support cannot be expected to lead to behavioral adjustments.

One possible way to mitigate the likelihood of these undesirable outcomes could be to limit the intervention to one or two pilot provinces at first. It would be easier for donors to commit to a longer time period in this reduced context. Other provinces might be encouraged to emulate the results of the sponsored ones if they could be next. Ideal provinces would be those where provincial elites have more tenuous links with Kinshasa, like those run by independent rather than MP/PPRD governors, and those with more limited mineral resources.

Another possibility might be to reduce the scope of the policy and, instead of providing full provincial budget support, to provide constituency funds for provincial

*honorables*. Keeping these unconditional might help strengthen provincial assemblies against both Kinshasa and governors. But conditional funds aimed at infrastructural developments might also be an option, although they have had mixed success at best in Kenya (Hickey 2010).

### ***5.3. Policy Recommendation #3: Invest in Provincial Infrastructure***

A third option could be to recognize the ineffectiveness of provinces as public-service delivery mechanisms and providers of development, bypassing them altogether to finance instead more centralized public investments, particularly with regard to transport infrastructure. To some extent, this approach is equivalent to giving up on decentralization. But that is not necessarily the case. One could recognize that the legitimization function of decentralization is important for the peaceful reproduction of Congo as a state, but that it is not developmental and might actually undermine development. Thus, donors might want to substitute more centralized policies in some areas to mitigate the negative developmental externalities of the system.

Moreover, investing in infrastructure—particularly roads and river transport—could help reduce the isolation and vulnerability of many remote areas, and this could have direct positive welfare effects on local citizens. Indeed, numerous local officeholders, particularly in the more remote Haut-Lomami province, pointed to lack of infrastructure, especially roads, as a singular problem afflicting their provinces. Because roads fall under national jurisdiction, provincial authorities fear that investing in them would be seen by Kinshasa as threatening attempts at autonomy. Only well-connected governors, like Richard Muyej of Lualaba, with direct access to the President, can hazard



such a risk. Donors picking up the slack here might improve the provincial lot while preventing provincial elites from falling into disgrace with Kinshasa.

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