DEPTARTMENT OF POLITICAL SCIENCE

POLITICAL WILL, NO FREE WILL?

A Quantitative Analysis of the Influence of Contextual Factors on Leaders' Political Will to Fight HIV/AIDS in Sub-Saharan Africa

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Abstract

Political will has become a 'silver bullet' in political science to explain the outcomes of public policy reforms. While success is seen as proof of its existence, failure is regularly attributed to a lack of political will. Political will is typically understood as originating from the personal characteristics and voluntary decisions of individual political leaders. In researching this still ambiguous concept, so far only few studies have attempted to systematically analyze the underlying factors that influence political will. Using a theoretical framework based on political economy, this large-N study argues that the incentive structure leaders face is crucial for building political will. Looking at the fight against the HIV/AIDS epidemic in 33 Sub-Saharan African countries, it is therefore examined which and to what extend country-specific factors influence political will. The study finds that in particular the scale of the epidemic, i.e. the degree to which political leaders are personally affected by the disease, exerts significant positive influence on their response. While the data provides some evidence that a higher degree of legitimacy of and stronger identification with the nation state increase political will as well, no support can be found for the hypothesis that the threats leaders face influence their political will. Democracy even turned out to have a negative impact on the political will to fight HIV/AIDS.

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1. Introduction

In recent years, the presence of political will has been identified as a precondition for a broad range of policy outcomes which are generally regarded as normatively desirable. Even more, political will has more and more become the "silver bullet in the fight against weak development performance" (Persson & Sjöstedt 2012, 617). However, whereas some countries always seem to bring up responsible leaders, other countries appear to be constantly doomed with kleptocratic ones.

Stemming from this observation, scholars have argued that political will is shaped not only by voluntary, intrinsic motives and priorities, but to a considerable extent also by contextual factors which differ across countries, thus serving as an enabling environment for 'good' leaders. It has therefore been pointed out that to fully make sense of leaders' political will, it is necessary to look into the "complex array of political, institutional, economic, social and cultural factors" (Brinkerhoff 2016, 481) which possibly have an influence on it. A better understanding of the determinants of political will can provide crucial help for researchers as well as well as practitioners who are confronted with the puzzle of how to build political will to pass and implement public policies (Fox et al. 2011).

The present study therefore moves beyond these "personal idiosyncrasies" (Bor 2007, 1590). This is not to say that they are not important – quite obviously there are good and bad leaders. However, they seem not to be sufficient in explaining the variation in leadership qualities that can be observed empirically. The aim of this research is therefore to analyze, which factors influence leaders' political will to conduct reform?

In order to answer the question "why do political leaders respond differently to a similar problem" (Dionne 2011, 57), it is necessary to first identify such a similar problem; for the countries in Sub-Saharan Africa, HIV/AIDS is such a problem. It is by far the region with the highest prevalence rates in the world, even though there are of course differences within the region. Of the 45 African countries which reported prevalence rates, only the Comoros and Madagascar reported rates of less than 0.5% in 2010. Out of these 45, all but eight pass the 1% threshold of a 'generalized epidemic' [1]. In comparison, outside of the region only 24 other countries reported a prevalence rate of 0.5% or more in 2010, of which only ten were above 1%. Furthermore, the 20 countries with the highest prevalence rates are without exception located in Sub-Saharan Africa (UNAIDS

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[1] Generalized epidemics stand in contrast or come together with 'concentrated epidemics' where HIV is well established (prevalence over 5%) in high-risk subpopulations but not in the general population (WHO 2013).

2017b). In 2016, despite representing only 13% of the world's total population, it is thus home to more than two thirds of the people living with HIV (UNAIDS 2017c).

This study is limited to Sub-Saharan Africa[2] not only because of the situation regarding HIV/AIDS, but also since the problem of seemingly unwilling leaders is particularly grave in this region. These countries seem to "produce poor leader after poor leader" (Goldsmith 2001, 77). Despite progress in recent years, many countries are still ruled by authoritarian, kleptocratic, neo-patrimonial leaders who appear to show little willingness to advance the lives of their citizens (Persson & Sjöstedt 2012). From a methodological point of view, including only the 48 Sub-Saharan Africa countries reduces the risk of disregarded regional differences. Research suggests that regarding HIV/AIDS, the situation on the African continent is somewhat unique compared to other world regions (Gizelis 2009).

Ever since the onset of the AIDS epidemic in the 1980s, political will has been identified as a main precondition for fighting it (Goldberg et al. 2012). It has been recognized as a political crisis that therefore requires a political solution (Bor 2007). Despite knowledge on how to curb the epidemic as well as the availability of financial resources to do so, there has been substantial variation across countries in the way political leaders respond to the crisis (Scott 2000). Even as the spreading of the epidemic has passed its peak, "political commitment to confront AIDS in developing countries remains tragically uneven and on the whole inadequate" (Bor 2007, 1585). In fact, in fighting the disease political will is becoming more important than ever. As international donors are gradually decreasing their HIV funding, national governments have to take more responsibility for providing resources as well as initiating and sustaining programs (Brinkerhoff 2016).

Even among countries with similar structural conditions, responses have been highly uneven. While some countries exceed expectations, others have fallen short of the performance that could be expected from them (Gore et al. 2014). While it is not denied that "much of the variation in AIDS leadership stems from the inspiration, skill, and charisma of individual leaders […] Structural factors are critical to understanding what are often taken to be the voluntary actions" (Bor 2007, 1598) of political leaders. It is therefore highly doubtful "whether a different person faced with the same AIDS epidemic operating under the same institutional constraints on political leadership would pursue a different path" (Dionne 2011, 56). This thesis therefore seeks to answer the question, which and to what extent contextual factors influence the political will of leaders to fight HIV/AIDS?

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[2] The classification of Sub-Saharan African countries is according to the United Nations Statistics Division (2017).

The units of observation in this study are the chief executives of countries in Sub-Saharan Africa. In most cases this is the president but depending on the country it may also be the prime minister or another government official. Scholars have repeatedly stressed the importance and critical role of the national top-level government when it comes to curbing HIV/AIDS (Putzel 2004; Bor 2007; Goldberg et al. 2012; Gore et al. 2014). They formulate policies, distribute resources and negotiate donor cooperation. This is especially the case for developing countries where the state is typically the primary funder and in many cases primary provider of health services (Kruk & Freedman 2008). This is not to say that success or failure of any action (or the absence thereof) can solely be attributed to a single political leader, not least since most responses to the epidemic include both governmental and nongovernmental actors (Zalmanovitch & Cohen 2015), however "national governments enjoy sovereignty, and ultimately hold responsibility for what goes on within their territories" (Desmond et al. 2008, 109).

By using a theoretical framework based on political economy and running multivariate regressions, this paper analyzes how contextual factors, namely the threats political leaders face, the level of democracy, legitimacy of and identification with the nation state as well as the scale of the epidemic shape the political will to fight HIV/AIDS. The dependent variable, political will, is operationalized as the change in coverage with AIDS medication. The study finds that the scale of the epidemic and to some extent the legitimacy of and identification with the nation state exert a positive influence on political will. For the other two hypotheses regarding the threats to leaders and the level of democracy the data offer no or too little support.

The thesis proceeds as follows: after giving some general information on HIV/AIDS and the unique features of the epidemic, the existing literature on political will in general and in relation to the disease in particular will be reviewed. Following this, the theoretical framework is expounded, out of which four hypotheses are developed. I will then elaborate on the research design as well as the choice of variables and their measurement, before presenting the results of the regression analysis. The study will finish with some concluding remarks as well as the limitations of the study and avenues for future research.

2. HIV/AIDS in Sub-Saharan Africa

The Acquired Immune Deficiency Syndrome (AIDS) is a communicable disease, caused by infection with the human immunodeficiency virus (HIV). For the remainder of this paper therefore the term HIV/AIDS is used, to refer to both conditions. Globally, 1.0 million AIDS-related deaths were reported in 2016. However, this number has fallen by nearly 50% since the peak around 2005,

when almost 2 million people died of the disease. In the last three to four decades since its outbreak, the epidemic has cost the lives of 35 million people. Almost 37 million more people are currently living with the disease, with 1.8 million new infections in 2016 – a number which has been relatively stable since 2010. Even though substantial progress has been made during the last decade, for all these numbers Sub-Saharan Africa still occupies a sad first place: 25.5 million people in the region are currently living with the disease. 1.2 million people got newly infected in 2016 and 730,000 died due to it (all UNAIDS 2017c). The urgency of the issue is further underlined by the fact that combating the disease is an explicit target of Goal 6 of the Millennium Development Goals (MDGs) and Goal 3 of the Sustainable Development Goals (SDGs).

One reason for the sharp decrease in the number of deaths and the increase in the number of people living with the disease is the progress in coverage and effect of so-called antiretroviral therapy (ART[3]). This 'cocktail' of medical drugs can increase life expectancy and life quality of people with HIV/AIDS considerably (Justesen 2012). The drugs suppress the growth of the virus and therefore the progression of the disease. However, even though ART also prevents mother-to-child transmission of the virus and reduces the infectivity of people receiving treatment, this should not mislead over the fact that, once infected, there is still no cure for the disease.

Due to the very long period of latency of HIV, infected people can live without any symptoms for eight to nine years, before the outbreak of AIDS (Poku & Whiteside 2004; Dionne 2011). Therefore, even in rural areas with no access to treatment, people can on average live for ten years after the infection. This stands in sharp contrast to diseases like malaria or Ebola which take considerably shorter time to manifest. This feature also contributes to the rapid spreading of the virus, especially in the early years of the epidemic. Globally, still almost a third of those who are infected are not aware of their status and therefore unconsciously transmit the virus to others over an extended period of time (UNAIDS 2017a; Gizelis 2009).

However, for the countries affected by the disease it is not merely an individual health problem. It is the devastating economic, social and political consequences for societies at large that it entails which make it such a disaster (Scott 2000; Gizelis 2009). As the disease disproportionately affects younger people, societies plagued by it get robbed of their most productive parts of the population which are the hardest to replace and it prevents the accumulation of human capital (Gizelis 2009; Justesen 2012). This therefore has the potential to deteriorate a country's economic base and ham-

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[3] Antiretroviral therapy is sometimes also referred to as ARV (antiretroviral) drugs or HAART (highly active antiretroviral therapy). However, ART is the term used by most actors, including UNAIDS.

pers economic growth. Besides these economic implications, there are also severe social consequences. With life expectancy dropping sharply, orphans grow up unsupported on their own or under the care of relatives who are often in need of care themselves.

A main challenge when it comes to fighting the epidemic is that there is still stigma surrounding the disease, as it is "associated with behaviors frequently viewed as immoral and/or socially undesirable" (Brinkerhoff 2016, 481). People infected are therefore subject to fears and prejudices. Much of the stigma is around the act of getting tested itself, as this is understood as a sign of a sexually promiscuous lifestyle, drug usage or homosexuality (Putzel 2004). Many people, especially in traditional, rural communities, are therefore reluctant to reach clarification on their status.

Fighting HIV/AIDS is a complex endeavor, as it involves various components on different levels like preventive measures, testing and counseling facilities, blood banks and blood safety as well as providing and correctly conducting treatment with ART and PMTCT (Prevention of Mother-to-Child Transmission[4]) (Gore et al. 2014). However, in spite of these rather technical challenges, the real difficulty to fighting it is posed by social and cultural aspects. Many policies to stop the spreading of the disease are personally demanding, as they infringe on very personal and private aspects of life and require profound changes in behavior, especially with regard to sexual activities (Lieberman 2007; Brinkerhoff 2016). As people have to deal with information and practices they may perceive as embarrassing, disturbing and thus undesirable, there may be resistance to such policies, even if they are 'right' (Zalmanovitch & Cohen 2015).

Ever since its onset, political will has been identified as being crucial in the fight against the HIV/AIDS epidemic. One reason for this is that due to the long wave nature of the disease, there are only few public health issues that demand the same kind of long-term commitment by governments (Brinkerhoff 2016). Facing scarce resources and capacities, any such commitment might come at the expense of fighting other causes of death that are much more immediate (Putzel 2004).

Despite the complexity described here, fighting the epidemic is not "rocket science" (Kjørven 2010). Unlike for other reform projects, e.g. the fight against corruption, there is a clear path towards success. Whenever there is sufficient and genuine political will, results should follow (Fox et al. 2011). Not least because best practices have been established after almost 30 years of fighting the epidemic, which, again, is not the case for anti-corruption efforts. Furthermore, unlike for other policy interventions, the necessity of fighting the epidemic is now universally accepted on the global level. This stands in sharp contrast to controversial issues like economic policy or bureaucratic

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[4] Occasionally PMTCT is also referred to as MTCTP (Mother-to-Child Transmission Prevention).

reforms, as for example experienced with structural adjustment programs in the 1990s which were often perceived as being prescribed by donor organizations (Goldsmith 2001; Brinkerhoff 2016).

3. Literature review

3.1. Political will

Failure by governments to take action has regularly been blamed on a lack of political will (Post et al. 2010; Persson & Sjöstedt 2012). Similarly, the few success stories in the developing world like Botswana, Singapore or Hong Kong "are commonly attributed to the deft guidance of 'a handful of heroes'" (Persson & Sjöstedt 2012, 626). This pattern can be observed for the reactions to the AIDS epidemic as well. As will be seen later, especially the comparison between Uganda's president Museveni and president Mbeki from South Africa is a popular theme in the literature. Despite the growth of literature in recent years, political will remains an ambiguous concept and it is still not clear what this "magical, missing ingredient" (Scott 2000, 577) exactly is. This ambiguity of the term makes "it ideal for achieving political aims and for labeling political failures when the diagnosis is unclear" (Post et al. 2010, 654).

While there is agreement on the centrality of the concept for policy-making and policy outputs, scholars (as well as practitioners) have been struggling to agree on a common definition of political will due to its complexity and multidimensionality (Brinkerhoff 2016; Post et al. 2010). Even though it is sometimes treated as a dichotomous concept which one either does or does not have (Putzel 2004), Post et al. (2010) as well as Youde (2007) point out that political will is something continuous. This is of importance for measuring it. However, often there is a certain threshold of a 'big enough' political will which needs to be reached in order to achieve certain binary outcomes, e.g. passing a public policy. As Post et al. (2010) furthermore note, there is nothing like a 'general political will'. Political will always relates to a particular problem and the particular policy solution for this. However, leaders often tend to resort to "short-term fixes" (Post et al. 2010, 666) which do not address the problem at hand properly. Any definition of political will therefore needs to include the criteria of long-term commitment (Brinkerhoff 2000; 2016; Persson & Sjöstedt 2012; Post et al. 2010).

One issue regarding political will is whether the focus should be on individuals, or if it is a group-level concept. Brinkerhoff (2016; 2000) identifies both individuals and collectives as possible bearers of political will. Yet he notes that when the impetus for policy action does not come from the political leader himself or herself, it is always doubtful whether the political will is genuine or not. According to Post et al. (2010), it is always a group phenomenon, since the aggregation of different

actors' preferences is key in the process. Unless someone was a totalitarian dictator, one individual's personal intentions and interests would never be sufficient to implement them and therefore to qualify as political will. While there is some merit to this assessment, it is incomplete as it ignores the fact that there are always actors who have more power than others and whose 'personal political will' therefore has a bigger weight. Bor (2007) for example therefore clearly limits his understanding of political will to the highest level of political decision-making. However, Gore et al. (2014) also stress the crucial role of the bureaucracy, as the state cannot be limited to the role of political leadership. The institutional arrangements of a country remain intact, even when individuals change. That being said, especially in developing countries, where these institutions are not as deeply entrenched, changes tend to be bigger and more prevalent in the event of a new leadership. The degree to which they can constrain the actions of individual leaders is therefore comparatively low.

Related to this, there has been some discussion, whether a state's capacity should be included in the concept of political will. Post et al. argue that an "outcome-based concept must incorporate capacity" (2010, 656), as otherwise mere rhetoric would be a sufficient condition for political will. Fox, Goldberg, Gore and Bärnighausen on the other hand have repeatedly argued against this (Gore et al. 2014; Goldberg et al. 2012; Fox et al. 2011), stressing that it is rather important to clearly distinguish between the two concepts. Instead of being part of it, they postulate that "state capacity modifies or mediates" (Fox et al. 2011, 7) the effects of political will. I agree with this understanding that capacity should be expected to have an influence on the outcome, but that it has to be separated from political will. Post et al. are right that for genuine political will, initiatives have to be provided with appropriate resources. Denying these resources – assuming they are available, which can be expected to pose a problem particularly in the Sub-Saharan African context – would mean intentionally undermining the program. However, some of the most important aspects of state capacity (e.g. the capacity of the bureaucracy), cannot reasonably be expected to be easily changed by a leader in the short term (Geddes 1994). This will be picked up again later, when discussing the research design.

Stemming from these considerations, the definition proposed by Brinkerhoff (2016, 472) will be used for the purpose of this thesis, according to which political will is understood as "the commitment of actors to undertake actions to achieve a set of objectives […] and to sustain the costs of those actions over time". Brinkerhoff (2000; 2016) also disaggregates his definition of political will into different components. Regarding anti-corruption measures his model comprises five compo-

nents and, to fit the specific demands for HIV/AIDS programs, was later expanded to seven components. However, these models are more apt for usage in qualitative studies, as they consider specific technicalities of particular campaigns.

Political will is usually understood as stemming from personal characteristics, this is the leaders' individual values, courage or motivations (Zalmanovitch & Cohen 2015; Youde 2007; Brinkerhoff 2016). However, this focus on personal traits has been criticized as an "excessively voluntaristic view of leaders" (Persson & Sjöstedt 2012, 618), since it ignores the structural factors which exert considerable influence on their behavior and therefore makes any further analysis of the origins redundant. By neglecting the context, one has to arrive at the simplistic and deceptive conclusion of labelling every leader who failed to implement reforms as a liar who never had genuine political will in the first place (Persson & Sjöstedt 2012). This argument, however, does not offer an explanation for the observation that some countries seem to always bring up responsible leaders, while other countries are constantly doomed with poor ones. While much of the variation regarding political will stems from personal factors, environmental factors are central "to understanding what are often taken to be the voluntary actions of government leaders" (Bor 2007, 1598). Youde (2007, 2–3) accounts it to the widespread dichotomous understanding of political will that "blinds us to understanding the origins of political will and the incentive structures that may encourage or discourage action on a particular issue" and therefore why countries eventually experience different policy outcomes.

Yet, even though the importance of the origins of political will has been stressed repeatedly, little research has been conducted to actually explore these. A meaningful contribution comes from Persson and Sjöstedt (2012, 618) who come up with a theoretical framework, based on principal-agent theory and state theory, with which they "move away from the voluntaristic and circular approach" that ignores those factors beyond leaders' personal traits. In particular, the framework highlights the crucial role of the underlying social contract in shaping leadership behavior.

3.2. HIV/AIDS and political will

The lack of studies on the origins of political will can be noticed for the subject of HIV/AIDS as well. A further and related issue with the literature on responses to the epidemic is that it is predominated by qualitative studies. The main problem with this is that they tend to focus on the same group of countries. For Sub-Saharan Africa it is in particular the "iconic cases" (Gore et al. 2014, 108) of Uganda as an example of bright and South Africa as an example of poor leadership (e.g. Putzel 2004; Gauri & Lieberman 2006; Brinkerhoff 2016; Youde 2007; Campbell 2010; Parkhurst & Lush 2004). For this reason, it is at least questionable, to what degree these findings are generalizable for the other countries in the region. Considering this lean towards case studies and the

dearth of systematic tests in the existing literature, a quantitative cross-country analysis could provide additional generalizable evidence and thus help filling an important gap. In his case study on Uganda, Putzel (2004) for example carves out some of the reasons, why president Museveni showed such a strong political will to fight the epidemic. It was the incentive structure he faced at the time that permitted action against the disease. Since the government had little to lose from doing so, the benefits outweighed the political costs of the intervention.

Bor (2007) is one of the few authors studying the origins of political will quantitatively. He includes some independent variables that are also included in this study, namely when it comes to political institutions. However, in his analysis, he also includes many variables, for which he does not offer a convincing and coherent theoretical explanation on how they influence the formation of political will. This is particularly true for factors like the income-level or government effectiveness. As will be outlined later, these rather constitute control variables, instead of explanatory variables themselves. Besides that, some parts of the literature have used quantitative methods to examine countries "relative responses" (Desmond et al. 2008) to the epidemic, given their structural conditions and capabilities (Nattrass 2008; Gizelis 2009; Desmond et al. 2008). Yet none of these papers is directly related to the question of political will. Instead, they just compile a set of variables that might modify the response, without a particular underlying theoretical framework.

Despite this lack of focus on the origins of political will, studies from recent years have looked into what factors influence the responses to HIV/AIDS in general. A lot of attention has been paid to the impact of democracy, respectively the regime type, on fighting HIV/AIDS. So far, these studies have produced mixed results. Whereas Gizelis (2009) finds a relationship between the level of the democracy and better responses to the epidemic, other authors have more qualified results. According to Justesen (2012), the effect of democracy only differs substantially from autocracies in those countries which have a proportional electoral system. The results by Nattrass (2008) become insignificant, once controlled for regional effects. The same is true for Bor (2007) who measures "electoral accountability" – the main feature of democratic systems. Once controlled for other factors, the variable becomes insignificant. For the case of Uganda, Putzel (2004) even argues that the lack of competitive elections was one of the reason for the government's successful campaign to tackle the epidemic. Relating to the issue of elections, Zalmanovitch and Cohen (2015) claim that it is the characteristics of health promotion policies in general that curb politicians' motivation to become active, as quick and tangible achievements are rare and political cost high. However, they do not test this proposition empirically.

Another well-established branch within the literature deals with time horizons leaders are facing. Unlike with democracy, there is largely agreement among scholars. Dionne (2011) for the specific

case of HIV/AIDS and Goldsmith (2001) when it comes to economic liberalization and corruption find that countries with leaders expecting to stay in office longer perform better. Putzel (2004) makes similar observations regarding the successful campaign to fight HIV/AIDS in Uganda, since the power of president Museveni and his military organization was essentially undisputed. These findings are also in with the argument put forward by Olson (1993).

Lieberman (2007) stresses the importance of ethnic politics. In ethnically divided societies, leaders are more likely to attribute the disease to other groups and/or downplay the risk for the own group in order not to be connected to the stigma and uphold the own group's reputation. In turn, decreasing demand for action and potentially increasing resistance to it negatively affect governments' responses to the epidemic.

This thesis expands the on existing research by analyzing the origins of political will. Using a coherent theoretical framework, it will bring together various factors that are likely to influence political will. Unlike previous works, this will involve a clear, theoretically grounded distinction between factors influencing political will and those factors modifying the outcome *after* political will has been built. It will furthermore contribute to the literature by using quantitative methods. This will add to the question, whether the results from previous case studies are generalizable for the large group of countries that have not been covered in such.

4. Theory

To explain the variety in the responses to the HIV/AIDS epidemic that can be observed empirically, the present study draws on a theoretical explanation based on political economy. As not even the most powerful leaders operate in a political vacuum, their political will and eventually their behavior is influenced by the incentive structure they face (Persson & Sjöstedt 2012). From this perspective, the countries' political leaders are understood as rational actors who seek to maximize their own self-interests (Goldsmith 2001). First and foremost that means ensuring their own political survival by preserving their power and authority (Geddes 1994; Zalmanovitch & Cohen 2015; Dionne 2011). Maybe even more important than incentives are disincentives. The institutional and circumstantial context can create disincentives which may not only lead to a lack of political will, but even to negative political will (Brinkerhoff 2010; Geddes 1994). That means the question is less, why some leaders have the political will to pursue certain policies, in this case to fight HIV/AIDS, but much more, why others do not. Leaders' political will, and thus the strategies they chose, is therefore subject to careful political cost-benefit calculations, while also keeping in mind the possible risks involved (Lohmann 2008; Goldsmith 2001). However, in no way does this imply

that their calculations are always correct due to misperceptions or imperfect information (bounded rationality) (Simon 1957). The total extent of the political will therefore depends on the specific incentive structure which a leader is facing, yet still and, as previously mentioned, to some extent also on the leader specific qualities.

Virtually every policy choice produces a new set of winners, who benefit from the change, and losers, who will be worse off afterwards (Acemoglu & Robinson 2006). While the beneficiaries often do not know how much they win, the other side is well aware of their potential losses (Mette Kjaer 2004). Reformers therefore face more opposition than support. Mustering political will can be expected to be particularly difficult, when the planned actions would produce powerful losers on the one hand, but only weak winners on the other. Whereas the losers in this case can mobilize their resources to oppose the change, the winners do not have equal capacity to back the plans (Brinkerhoff 2000). In the particular case of broad-based HIV/AIDS policies, the winners often belong to groups that are stigmatized and relatively powerless. Political will therefore needs to "clear a high motivational hurdle that other policies that create widely distributed and non-controversial benefits do not face" (Brinkerhoff 2016, 482).
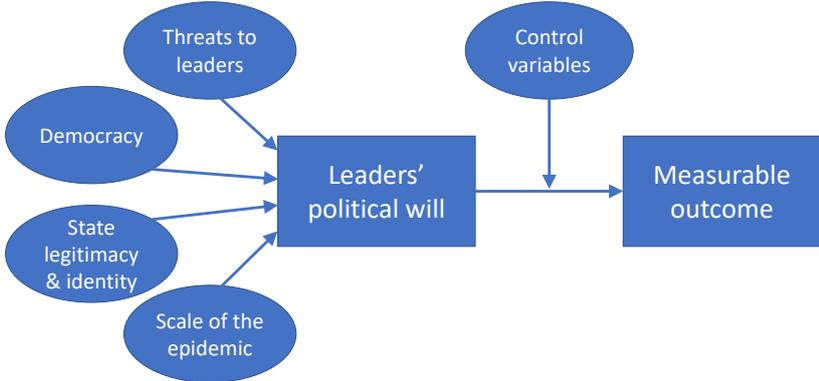
Figure 1. Theoretical mechanism on the effect of contextual factors on political will

In the following, three possible channels are presented how political will is shaped: leaders' time horizon, legitimacy of and identification with the nation state, as well as the scale of the epidemic (see Figure 1), resulting in four hypotheses. Some of them overlap to a certain extent, however, the way how the incentives work is different, for which reason it makes sense to analytically differentiate between them. Similar to the work by Persson and Sjöstedt (2012), these will include both macro (e.g. national identity) and micro (e.g. leaders' time horizon) explanations, whereas the macro level refers to the "broader social and political forces [that] affect the opportunity and incentive structure leaders face" (Persson & Sjöstedt 2012, 622). However, this sharp distinction cannot always be upheld throughout the analysis as boundaries between both dimensions can be fluid.

4.1. Political leaders' time horizon

According to Olson (1993), time is key, as time horizons are an integral part of the incentive structure leaders are facing. The shorter leaders can reasonably expect to stay in power, meaning the shorter their time horizon is, the more likely they are to refrain from actions which will not yield benefits during their time in office. Instead, with such little certainty about their future they have strong incentives for short-term enrichment, by taking their pay-offs while still in office and as much as possible (Dionne 2011; Bor 2007; Goldsmith 2001). Olson hypothesizes that leaders in such situations not only enrich themselves, but also favor members of their own ethnic group, as it is now their 'turn to eat' in office. The possible influence of ethnicity will be discussed in more detail later again. A lack of political will therefore is not necessarily a sign that the leader is a malevolent liar, but, depending on the context, it can rather be understood as rational behavior, if not even the only possible rational behavior (Persson & Sjöstedt 2012). There are at least two distinct ways how time horizons are shaped, by the threats leaders face to their rule and the incentives posed by democracy. These will now be presented in more detail.

4.1.1. Threats to political leaders

Despite improvements in the last decade, compared to other world regions office holders in Sub-Saharan Africa in general still face shorter time horizons, as for most of them the risk of being ousted through a coup is a threat they have to acknowledge (Barka & Ncube 2012). Most worrisome for them is that they do not know when that day may come. As history shows, whereas some leaders are overthrown already after a couple of weeks or months, others manage to cling to power for multiple decades (Goldsmith 2001), most recently Robert Mugabe who was removed after ruling Zimbabwe for 37 years. This threat can for example be posed by the military, but also by religious authorities or ultimately public rebellion (Gandhi & Przeworski 2007; Post et al. 2010). Even when being de jure out of any formal government power, these actors can have substantial threat potential for the sitting government as they are powerful and often resistant to change (Post et al. 2010; Brinkerhoff 2000). It is thus these "exigencies of political survival" (Geddes 1994, 19) which should be expected to deter planning for the long term and cause them to undermine development goals.

In this regard, it is important to also consider the avenues of exit from power leaders have at their disposal. This means that they can anticipate what happens to them when they lose office. Again, the situation in Sub-Saharan Africa is particularly grave, as in the large majority of cases, leaders who fall to coups get murdered, jailed or exiled (Goldsmith 2001). In functioning democracies, elections contribute to giving leaders certainty about their future. Not only do regular and institutionalized elections provide them with a clear date, on when and how transition might occur and

they lose power, they also soften the punishment that comes with this loss (Goldsmith 2001; Brinkerhoff 2000). Unlike with falling to a coup, the risk for the loser of a democratic election of getting executed, prisoned or exiled is pretty much nonexistent. Leaders who have a safe way out of power and prospect of a life as 'normal' citizen after their term should therefore be expected to behave less kleptocratic while in office, as well as more likely to invest in the long-term, since they have to worry less about how to cling to power. However, this is not the main mechanism, how I expect democracy to shape the incentive structure for political leaders. It will therefore be discussed again, in more detail below.

These considerations have important implications for the case of HIV/AIDS, with the specific features of the disease even exacerbating the problem of short time horizons. As mentioned above, one of the characteristics is the long latency phase between the HIV infection and the outbreak of the AIDS disease – even without ART treatment. Leaders with a short time horizon, can therefore assume that they will neither reap the benefits of such a long-term intervention during their term, nor the negative long-term consequences of not addressing the problem (Bor 2007; Dionne 2011). At best, activities and resources can be expected to be focused on areas which yield faster results for them (Geddes 1994). Limited to the field of public health, those could for example be other diseases with much shorter latency periods compared to AIDS, such as malaria, Ebola or tuberculosis (Putzel 2004). However, due to short-term enrichment of the leaders, money devoted to intervening against the epidemic, or at least parts of it, regularly also ends up in the pockets of the ruling elite.

My first hypothesis therefore is as follows:

H1   The higher the threat for political leaders to be overthrown, the lower is their political will to fight HIV/AIDS.

4.1.2. Democratic incentives

As already touched upon, turnovers as the result of elections in established democracies give leaders more certainty about their future and therefore extend their time horizon. However, this is not the main mechanism how I expect democracy to shape political will. The main characteristic of democratic countries is that leaders have to get re-elected to stay in office. To maximize their chances for this to happen, they therefore have incentives to cater for the needs of the population and be responsive to their demands (Justesen 2012). This facilitates a "bottom-up convergence of public opinion and political will" (Post et al. 2010, 664). Authoritarian leaders do not face this kind of incentive. This is not to say that leaders in non-democracies can ignore the needs of their population completely. Yet, whereas they usually base their political survival on the support of just a

small and powerful elite, democratic leaders need to accommodate a much bigger part of the population to remain in office (Bueno de Mesquita et al. 2002; Gizelis 2009; Brinkerhoff 2016; Dionne 2011). Therefore, it can be expected that they have incentives to provide public goods to the general population. Leaders in more authoritarian states on the other hand do not have to fear electoral repercussion. It can therefore be expected that particular goods are only targeted at a small elitist circle as well as loyal supporters (Justesen 2012).

In terms of the principal-agent based framework of Persson and Sjöstedt, citizens therefore take on the role of a "principled principal" (2012, 622) and are thus able to shape the incentive structure of political leaders to a considerable extent. In a well-functioning democracy, especially the poorer and less powerful segments of the population should be expected to have a bigger influence on political will. This is even more so, when they pose a large number of the electorate which is the case in many countries in Sub-Saharan Africa. This should be of particular importance for the issue of HIV/AIDS in the region, since in recent years the disease more and more has become a disease disproportionally affecting the poor (Bor 2007). Another typical feature that can be found in democracies is the existence of a free press and operating space for civil society organizations. The media can "generate transparency of crisis conditions and inescapable incentives for leaders to intervene" (Bor 2007, 1590), as well as serve as a catalyst, by putting the issue on the public's and therefore the government's agenda (Justesen 2012; Putzel 2004). Civil society activists on the other hand can represent otherwise marginalized and vulnerable groups and advocate for their cause (Brinkerhoff 2016). Due to the stigma surrounding HIV/AIDS, this channel should be particularly important. In addition to that, civil society can back reform-oriented leaders which is of particular importance for sustaining political will over time (Brinkerhoff 2000, 246).

All these considerations suggest the following hypothesis:

H2   The more democratic a country, the higher are the incentives for leaders to engage in the fight against HIV/AIDS.

However, for electoral accountability to work in the theorized way, it is necessary that fighting HIV/AIDS actually is an issue of importance for the voters. There is evidence from some Sub-Saharan African countries that this is not the case. Even for people who are most affected by HIV/AIDS, fighting it tends not to be among the most pressing issues (Dionne 2011; Bor 2007). Citizens especially tend to fail to see the link between the disease and broader economic and social issues described before – paradoxically those are the very issues named the top priorities in surveys (Gizelis 2009). Post et al. (2010, 664) add that "not all constituents know what they want or communicate those desires [and] not all constituents want the same thing". According to Zalmanovitch and Cohen (2015), this is not unique to HIV/AIDS and developing countries, but rather a general

feature of the field of public health that can also be observed in established western democracies. As such policies tend not to be popular with the voters and political benefits therefore are low, it is only rational for leaders not to get involved in them too much. The observation that the electorate tends to have a short memory, therefore being unlikely to reward long-term commitments such as the fight against HIV/AIDS further adds to the problem (Dionne 2011). Especially social problems "appear on and disappear from the public agenda rapidly" (Post et al. 2010, 662).

4.2. Legitimacy of and identification with the nation state

As already touched upon, ethnicity should be expected to have an influence on political will. There are at least two channels, through which this factor can incentivize leaders' political will to respond to the disease.

Firstly, ethnic fractionalization often goes together with little legitimation of and identification with the nation state, respectively the central government as its representative. Due to its colonial history, this is particularly the case in Sub-Saharan Africa. States that are not considered legitimate by all its citizens, lack a shared social contract between these two parties (Persson & Sjöstedt 2012). In such states, citizens therefore fail to coordinate due to different interests and experiences and leaders face only very little incentive to pursue the public good. Instead, the state is regarded by them as a mere "'alien' institution to be appropriated" (Persson & Sjöstedt 2012, 625) and to serve the own ethnic group while holding the office.

It should be noted that even though ethnicity is the most common reason for the lack of a shared social contract in Sub-Saharan Africa, it is not necessarily the only one. For the case of HIV/AIDS this means that government spending as well as (possible) donor aid should be expected not to be devoted to programs fighting the epidemic, but instead going into the pockets of the ruling elite. Alternatively, it is thinkable that spending is targeted towards certain ethnic groups, instead of benefiting the general population.

The other pathway is through the construction of risks in ethnically strongly divided societies. In such settings, different groups do not regard their risks as shared risks, but instead try to distance themselves from other groups, in order not to be associated with the problem (Lieberman 2007). Such societies generally tend to capture social issues along these lines, even when the risk in fact is not related to certain ethnicities at all. This is not only because of perceived emotional costs, but also due to material benefits, like better jobs, that are expected when being member of an ethnic group with a good reputation. Again, this is even more true due to special characteristics of HIV/AIDS. Out of fear that their own ethnic group is associated with the stigma surrounding the disease and in order to avoid repercussions, ethnic groups may seek to promote their own group's

status by pointing out that it is limited to other groups, due to "their behavior and (lower) sense of morality and decency" (Lieberman 2007, 1412).

Broad policies to fight the epidemic are unwanted as well as regarded unnecessary in the first place, not to deprive individuals from the help they need, but rather to avoid shame through association. Political leaders need to calculate whether the benefits of any such policies, even for those groups opposing them, are worth the resistance they are most likely to face. Due to the little demand, respectively the high resistance, leaders in such countries therefore have strong disincentives for large scale-efforts to fight HIV/AIDS. The underlying logic is therefore similar to the first mechanism – citizens fail to overcome the collective action problem.

With all this being said, it is important to point out that ethnic fragmentation does not equal ethnic division, i.e. there does not necessarily have to be some kind of conflict (Youde 2007). In countries that are ethnically fragmented – but not as divided – citizens share a common identity. They therefore tend to understand risks as shared and are less likely to actively resist policies to fight the epidemic on the grounds of ethnicity (Lieberman 2007; Putzel 2004).

Stemming from the two mechanisms explained here, the third hypothesis follows:

H3   The more legitimate the nation state and the higher the identification with it, the higher leaders' political will to fight HIV/AIDS.

4.3. Scale of the epidemic

Finally, it is the scale of the epidemic itself that can be expected to give leaders incentives to respond to the epidemic. The more spread the disease is in a country, the higher should be demand by the population for the government to act (Justesen 2012; Dionne 2011). Though it initially seems similar to the democracy argument, I also expect authoritarian leaders to show more political will in the face of a large-scale epidemic. Since the virus largely ignores existing privileges, the more widespread it is, the higher is the chance that also members of the political elite, or from the direct environment of the (authoritarian) leader are personally affected by the disease. So even the most malevolent dictator conceivable who would otherwise not care about the needs of the population should be expected to have some interest in fighting the epidemic, as soon as family members, friends or important members of staff are dying because of the disease. As Putzel (2004, 26), points out for the case of Uganda,

> "there were few families in the country, including the families of most major political actors, who were not affected by HIV/AIDS […] everyone knew someone who had died as a result of the virus and the images of its impact, at least in the urban areas, were pervasive. Doctors could not cure their own brothers and, money and privilege was no shield to the virus."

A similar story can be told for Zambia, where the son of then-president Kaunda died of AIDS and the fight against the disease in turn became an import issue on the presidential agenda (Bor 2007).

This suggests my fourth and last hypothesis:

H4   The larger the scale of the HIV/AIDS epidemic, the bigger the political will of leaders to fight it.

HIV prevalence has previously been used as control variable (e.g. Desmond et al. 2008; Bor 2007; Nattrass 2008). While high prevalence is associated with increased efforts to tackle the disease in most of these studies, they offer no theoretically compelling reason why this is the case. By making it an independent variable, this study is able to achieve this.

5. Method and data

5.1. Dependent variable

Even more difficult than defining political will is measuring it. Due to the nature of the concept, revolving around intent and willingness, it is impossible to measure political will directly. As it thus remains a latent concept, "researchers have struggled to find workable measures" (Bor 2007, 1587) for quantitative analyses. One common approach in the literature has therefore been to measure political will in terms of policy outcomes (Brinkerhoff 2000; 2016; Post et al. 2010). A positive outcome therefore serves as an ex post indicator that political will existed at a prior point.

In general, policies on HIV/AIDS can be divided into two categories: prevention of infection and treatment of the disease (Gizelis 2009; Dionne 2011). However, when it comes to political will, measures based on preventive policies (e.g. the number of new infections) are problematic. Since the exposure to risks of infection largely depends on the individual behavior, it is to a meaningful degree out of the governments' direct control (Justesen 2012). This is further complicated by the sensitivity of many preventive policies to local culture and traditions (Gizelis 2009). Besides that, measuring political will for example by the number of distributed condoms has also been criticized as reflecting a "Western bias" (Bor 2007, 1587), as it does not account for other, possibly contro-versial methods of prevention which might be pursued by national governments. Also, simply counting the number of deaths caused by AIDS is deceptive. Due to the long time between infec-tion and eventual death, this measure is more apt for long-time studies, with different aims and research questions.

Using measures of treatment therefore appears to be the better option. As national governments are the key actor in assuring access to and availability of treatment, they also have a bigger and

more direct role in 'producing' the outputs (Justesen 2012). Partly, this is also because provision with treatment does not face the same resistance based on culture as many of the preventive policies. In recent years, the provision with ART has become one, if not the central pillar in the fight against HIV/AIDS (Desmond et al. 2008; Lieberman 2007). Whereas such a therapy in the beginning was only affordable for the rich, especially in the western countries, since the mid-2000s there has been a sharp increase in the developing world as well, including Sub-Saharan Africa. This is exactly the time period of observation in this study. Globally, between 2010 and 2015 alone, the number of people living with HIV who have access to ART has more than doubled from 7.5 million to 17.0 million (UNAIDS 2016). In this study, ART coverage, the percentage of all people living with the virus who have access to such a therapy, is therefore facilitated as the dependent variable (see next chapter, for how exactly the variables is employed). The data on ART coverage come from UNAIDS, but was retrieved from the World Bank (2017a), as their database covers all years since 2000.[5] For some countries, UNAIDS does not provide country estimates. While most of them are very small countries, with Ethiopia and Nigeria also Africa's two most populated countries are missing.

Justesen (2012) has pointed out the crucial role of governments, when it comes to providing access and funding to ART. It is also due to already decreasing donor funding for HIV/AIDS that political will has become more and more important to sustain and expand ART coverage (Goldberg et al. 2012). From a methodological standpoint, it is furthermore of importance that the provision with ART is a sufficiently complex task, requiring skilled staff, technical and administrative guidelines as well as a functioning system for the distribution of medication. It is thus not subject to "easy fixes" (Mette Kjaer 2004, 391), but instead requires profound changes and genuine political will by political leaders (Desmond et al. 2008). It is for these reasons that ART coverage has also been used by other authors as a proxy for political will (see e.g. Justesen 2012; Desmond et al. 2008; Nattrass 2008). It should therefore be a valid measure. Furthermore, in an exploratory factor analysis conducted by Gore et al. (2014) ART coverage turned out as a strong indicator for political will. Yet, ART is only one aspect of the policy response that is necessary to combat HIV/AIDS and therefore possibly provides only an incomplete picture of the underlying political will. Botswana for example is successful in providing treatment to people living with the disease, yet is considered only substandard when it comes to preventing new infections in the first place (Fox et al. 2011). Furthermore, coverage "says nothing about the overall quality of treatment" (Desmond et al. 2008, 111). However, ART coverage "has the advantage of being the most widely reported outcome variable available" (Nattrass 2008, 399). Another possible measure which has been used

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[5] Due to improved methods for estimating HIV/AIDS data, these numbers are updated frequently. All numbers used in this study are as of May 2017.

in multiple studies is the prevention of mother-to-child transmission. Yet, whereas data on ART treatment is available from 2000, data on PMTCT coverage is only available from 2010 and therefore cannot be used for the research design of this study. Furthermore, the data are less reliable than those on ART (Nattrass 2008).

However, it should not be left out that there has been some justified criticism of using outcomes as measure for political will. The main issue is that it can be seen as tautological, measuring political will "in terms of the output it is supposed to foster" (Gore et al. 2014, 103). While there is definitely some truth to this argument, it is more of a concern when political will is the independent variable, explaining the variance in ART coverage (or any other outcome). Because then, it "simply becomes a synonym for success" (Youde 2007, 2), without providing an explanation why success occurred. In this study, however, political will is the dependent variable, analyzing exactly these origins of political will. Much more, I take the positive relationship between political will and favorable outcomes for granted and rather concentrate my study on what influences political will in the first place. The problem of tautology is thus largely avoided. Still, this does not imply that political will and the output are equated. By controlling for various factors which are "beyond the control of governments" (Bor 2007, 1586), it should be possible to isolate the effect of political will on the outcome (see Figure 1).

More generally, Post et al. (2010) note that political 'will' by definition is only intentional. Measuring outcomes would extend this definition to action. Similarly, other studies (e.g. Lieberman 2007) use the frequency the topic was mentioned in speeches. Despite not being feasible for the scope of this study, "talk is cheap" (Mearsheimer 2010, 383). Often, verbal commitments and public announcement do not translate into appropriate action (Fox et al. 2011). Especially in the context of Sub-Saharan Africa, there should be some concern regarding approaches that ignore the actual consequences. Not least as these are some of the same leaders who keep promising to fight corruption and economic development to their citizen as well as the international donor community. An outcome-based measure is not prone to such "political ploys" (Post et al. 2010, 656). Another common strategy is to commit institutionally by setting up agencies or programs to fight HIV/AIDS but underfund them, so they only remain empty shells. However, there is not sufficient data to use this budgetary dimension of political will as measurement for a quantitative study. Similarly, differentiating between the expressed, budgetary and institutional dimension, Fox et al. (2011) develop a measure of political will. Yet they do not provide data for this purpose, as it is rather intended as a guide for qualitative researchers.

Besides outcome-based measures of political will, there have been attempts for more sophisticated ones. The most prominent one is the AIDS Program Effort Index (API) which for example has

been used by Bor (2007) or Dionne (2011). Besides being only conducted in two waves in 2000 and 2003, and therefore not covering enough years necessary for this study, it also has some major methodological drawbacks (Goldberg et al. 2012; Gore et al. 2014; Bor 2007). The index largely relies on subjective judgements of a small group of local informants, mainly government officials and civil society activists which make it vulnerable to bias, misperceptions and misinterpretations. Due to local contexts, respondents may have different expectations which in turn influence their judgements. In lack of common standards, richer countries thus tend to be held to higher standards and rated harsher when it comes to questions like the adequacy of the response to the epidemic. Comparisons across countries are therefore barely possible. Informants could furthermore feel pressured or motivated to over- or underestimate their country's performance, in order to protect its reputation, respectively to criticize the government. It is for these reasons that both the validity and reliability of the measure have been seriously questioned (Gore et al. 2014; Goldberg et al. 2012). The API is therefore sufficient for its original purpose, serving as basis for evaluation and monitoring of national policies, but not for cross-country scholarly research. Another more recent measure (data collected in three rounds in 2010, 2012 and 2014) is the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) National Commitments and Policies Instrument (NCPI) (UNAIDS 2014). It is based on the API and therefore shares many of its flaws, even though to a lesser extent, due to some revisions (Goldberg et al. 2012; Gore et al. 2014). However, due to the previous difficulties of ranking countries using the API, no index is computed anymore, thus making the NCPI impractical for a quantitative study (Gore et al. 2014). Despite the flaws that come with using an outcome-based measure of political will, the alternatives are not convincing either. Instead, they pose some even bigger problems regarding validity and reliability.

5.2. Research design

As previously laid out, political will has to be sustained over time. For this reason, a research design was developed that accounts for long-term commitment. Measurement of ART coverage is not only taken at a single point in time, but instead at t_1 and again at t_2 which is three years later.[6] The dependent variable used for the analysis is therefore the absolute change in coverage during this time. Not only is this important for conceptual reasons, but it also accounts for the fact that policies need some time for implementation and to show effect. Furthermore, in order not to 'mix up' political will of different leaders and to account for changes that come as a consequence of changes in government, the timing of measurement is different for each country. Previous studies have

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[6] The time span of three years was chosen for reasons of measurement, mainly to assure that the respective leader is still in office.

failed to account for this by only measuring at a single point in time and this point in time being the same for all countries.

When working with changes over time, the question arises whether to use absolute or relative changes. As there is no generally right answer, it is a rather subjective decision on what to use; both have their pros and cons (Desmond et al. 2008). It would be reasonable to argue that when country A doubles coverage from 25% to 50%, it is more impressive than a likewise increase by 25% from 60% to 85% in country B. However, extending coverage from 1% to 2% is not that impressive, even though it is a change by 100%. On the other hand, due to diminishing marginal returns, once coverage is already high, further expanding it by a certain percentage becomes more difficult. In this study, I opt for absolute changes. This is not least because the global increase in ART coverage has been following a linear trend instead of an exponential one, indicating that relative changes are negligible. Desmond et al. (2008) do the same when using ART coverage in their study.

The starting date for measuring (t_1) is the year when elections were held and therefore a new government took office, or the existing government was confirmed. In presidential systems, which constitute the majority in Sub-Saharan Africa, this is therefore the date of the presidential elections, whereas for the few parliamentary systems the date of the parliamentary elections is taken. For semi-presidential systems, the date of the election of the president is chosen, as the holder of this office tends to be more powerful than the prime minister (Jahn 2013). The years of the elections come from the National Elections across Democracy and Autocracy (NELDA) dataset (Hyde & Marinov 2012).[7] This is also the time of measurement for the independent variables, as well as the control variables. Their measurement differs slightly compared to that of the dependent variable, as they are only measured once at the time of the elections. While it would have been best to always begin the analysis in the year a completely new government took office, due to the many long-time rulers in the region, this would have reduced the number of possible cases too much. I am furthermore aware that quite many of these elections can hardly be labelled 'democratic'. However, research from the field of democratization studies suggests that having flawed elections is still better than having no elections at all (Edgell et al. 2017; Lindberg 2009).

Following this approach, the base years for this analysis vary between 2006 (one case) and 2012 (six cases). Starting from around 2005, there is steady increase in ART coverage both globally and in the region (World Bank 2017a). However, as already mentioned this increase is almost perfectly linear. It should therefore not matter, whether the timing of measurement for a country was for example between 2006 and 2009 or 2011 and 2014. This is confirmed through further checks, as

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[7] For South Sudan, the 2011 independence referendum was chosen as the starting date. In Eritrea, no elections took place on the national level since its independence in 1993. The country was therefore, excluded from the analysis.

there is no significant correlation between the base year and the change in ART coverage. The choice of the base year should therefore not influence the results.

As already explained, the reason for choosing the year of election as the starting date is to have a clear cut between different office holders. An additional benefit of this approach is that times of change, like after elections, tend to be conductive to reform, as they can open a window of opportunity (Fox et al. 2011; Brinkerhoff 2000; Mette Kjaer 2004). Even though "old brooms can sweep too" (Mette Kjaer 2004), i.e. they can possess political will as well, the likelihood for reforms is higher with new governments. This can be for reasons that they are granted a "honeymoon" (Mette Kjaer 2004, 390) period by the public after taking office or the fact that they are less entangled in patronage networks – at least in the beginning. A prominent example is the case of South Africa, where newly-elected president Zuma drastically turned away from former president Mbeki's controversial position on HIV/AIDS (Brinkerhoff 2016).[8]

To test the hypotheses laid out above for linear relationships, I am using multivariate regression by employing the method of ordinary least squares (OLS). All statistical analyses were conducted using IBM SPSS Statistics 24. Even though the factor time is of importance in this analysis, a cross-sectional time-series analysis does not seem necessary, as the focus here is only the difference between two times of measurement and not the developments in the time between.

5.3. Independent variables

Based on the theoretical considerations above, four independent variables are included in the regression models: the threats to leaders, the level of democracy, state identity and the scale of the epidemic.

To test the first hypothesis, I am including the variable "exit" from the Archigos dataset (version 4.1) (Goemans et al. 2009; Goemans et al. 2016). This variable indicates whether a political leader lost power through regular means or whether he/she "was removed in contravention of explicit rules and established conventions" (Goemans et al. 2016, 3). To give an assessment of the threat a leader is facing, for every country the number of irregular removals that took place in the past is used. The higher this number, the shorter the time horizon can be expected to be. To acknowledge the increasing number of peaceful transitions due to democratization processes in the region in recent years, and therefore an on average reduced threat of coups, only irregular removals which took place in the 20 years before measurement are taken into account. This should approximate the risk assessments of the leaders more precisely. The advantage of this measure is its wider scope,

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[8] In fact, the government's position already began to change during transitional president Motlanthe's seven-month tenure.

compared to just counting the number of successful coups. By accounting for all types of irregular exits from power, it includes for example irregular, yet peaceful removals by other government actors, or popular protest that brought down leaders. The number of incidents is therefore considerably higher than for measures solely based upon the number of coups. Nevertheless, it does still not capture all possible threats. In established democracies, the time horizon of elected leaders is largely determined by the public and political support. Dionne (2011) therefore uses the margin by which the most recent election was won as a measure for the time horizon. However, in non-democracies this number is meaningless. Accounting for this would therefore require splitting the dataset and use different measures for democracies and autocracies, as done by Dionne. Making a sharp cut between countries that are considered democratic and those ones that are authoritarian is always difficult. In the context of Sub-Saharan Africa, where most countries are somewhere in the middle this is barely possible, as any dichotomous separation would be more or less arbitrary. A further drawback of the measure used here is that it does not account for the fate of the leader after leaving office. As outlined earlier, the prospect of death, jail or exile can be expected to alter political will as well. Bor (2007) previously used the World Bank's 'political stability' indicator. However, the focus of this measure is not on the leader itself, but rather on the country as a whole (Kaufmann & Kraay 2016). It therefore also includes general security aspects, making its scope too broad.

One possible reason for the varying results of the impact of democracy outlined above, could be due to the differences in measurement. Often, democracy is just a dichotomous variable and therefore it is not accounted for different levels of democracy. Again, especially in the context of Sub-Saharan Africa, with most countries being medium-level democracies, such a distinction is problematic. I measure the level of democracy by using the 'electoral democracy index' from the V-Dem dataset (version 7) (Coppedge et al. 2017). Here, democracy is a continuous variable, based on Dahl's (1989) understanding of democracy. This rather thin definition focuses on free and fair competitive elections, as well as freedom of expression and freedom of the press, since the latter two are necessary to ensure the former. Stemming from the theoretical considerations, these are the very aspects I am interested in, as I expect them to have an effect on the formation of political will. Another advantage of the measure is that it accounts for tactics of vote-buying and clientelism which effectively distort the will of the voters and are particularly wide-spread in Sub-Saharan Africa (van Ham & Lindberg 2015). The variable runs from 0 through 1, whereas higher values indicate a higher level of democracy.

To operationalize the concept of ethnic division and the existence of a social contract (hypothesis 3), I employ the variable 'state identity' from the Bertelsmann Transformation Index (BTI). The

scores themselves were retrieved from the Quality of Government Standard Dataset (version Jan17) (Teorell et al. 2017). The variable is a good fit for the concept, as it approximates the degree to which all major societal group accept the nation state as legitimate and agree about questions of citizenship (Donner et al. 2016). As already laid out when explaining the theoretical mechanism, ethnic fragmentation does not equal ethnic division. This is why this measure captures the theoretical concept better than those measures, focusing solely on the degree of fragmentation, e.g. based on language or religion. The biggest problem with the measure is that it is not available for all countries. Some of the region's smaller countries therefore could not be included in the analysis. Since state identity is a categorical variable, it is recoded into three dichotomous dummy variables for low, medium and high state identity. Based on the frequency distribution (see Appendix 1), values of 9 and 10 are coded as high state identity and values of 7 and 8 as medium state identity. Countries with values between 3 and 6 form the reference group of low state identity which is left out of the regression models.[9] The coefficients for medium, respectively high state identity therefore show the difference to low state identity, the reference category. According to the theoretical considerations, both coefficients should be positive, that is ART coverage is higher when state identity is higher. Furthermore, the coefficient for high state identity should be bigger than the one for medium state identity. The BTI is only published bi-annually, therefore there are many cases in which the election was in a year in between, missing data therefore had to be interpolated. However, since identification with the nation station is something rather sticky, in most cases the value for the year before and the year after (e.g. 2010 and 2012) is the same. For the few cases, in which the value is different, the value from the year before is always taken, as it seemed more likely that identification changed after the elections, instead of before them.[10] Other available measures of state legitimacy that were deemed adequate are either too old (Englebert 2000; Posner 2004) or only cover a few Sub-Saharan African countries (Gilley 2006).

Measurement for the final independent variable is more straightforward. As measure for the scale of the epidemic, the log-transformed HIV prevalence is facilitated. This is an estimate of the percentage of adults, aged between 15 and 49 who are infected with HIV. The data come from UN-AIDS (2017b).

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[9] There is no country in this sample with a score of 2 or lower. Even in the global Quality of Government dataset (1946-2016), there are only two country-years with a score of 2 – Côte d'Ivoire 2011 and Libya 2015.
[10] For South Sudan and Madagascar, the value from the year after was chosen, since no earlier measurement exists.

5.4. Control variables

To make sure that any correlations between the policy outcome and the independent variables are due to differences in political will, this variable has to be isolated. To achieve this, six control variables are included in the regression. Furthermore, this accounts for the fact that societies do not "face the AIDS epidemic on a 'level playing field'" (Desmond et al. 2008, 118), as countries have different abilities and preconditions, independent of their leaders' political will. The control variables in this study are those country-specific factors which can be expected to be on the pathway from political will to ART coverage yet are not theorized to influence the formation of political will in the first place, as they only affect the outcome once political will has formed (see Figure 1). The control variables used here have frequently been used in other studies regarding development policy more generally and regarding AIDS policy in particular and/or have been suggested by other works discussed in the literature review. However, as already touched upon when reviewing the existing literature, some of these control variables have been used as independent variables before, thus suggesting they have an influence on political will. Yet, authors have not provided convincing theoretical explanations why leaders should be expected to stand back and watch the epidemic ravage their country, only because e.g. state capacity is low. Furthermore, when looking at the cases of Uganda and South Africa, this is also empirically doubtful.

In general, wealthier countries perform better on many developmental indicators, as they tend to possess higher "human, financial, and infrastructural resources" (Bor 2007, 1592). It should therefore be expected that a higher gross domestic product (GDP) per capita is also linked to more extensive ART coverage. The log-transformed GDP per capita is included based on purchasing power parity (PPP) in constant 2011 international dollars. The data come from the World Bank (2017b).[11] Despite ensuring normal distribution of the data, the log transformation also accounts for the diminishing marginal returns of ART provision that come with higher income (Desmond et al. 2008). Even though there is a point in using averages of the GDP over the past few years in order to account for short-term fluctuations, this effect is likely to be offset by the fluctuations in prices for drugs and other goods that are necessary to fight the epidemic (Desmond et al. 2008).

Not least because providing universal access to ART was one of three targets of MDG 6, most countries have received substantial foreign assistance to fight HIV/AIDS in general and expand treatment specifically (Nattrass 2008). Differences between countries regarding their success in doing so could therefore be rather due to these financial flows than due to political will (Post et al. 2010). However, there is also research suggesting that levels of donor aid are actually driven by political will. This is, it is those countries which signal commitment to tackle the epidemic that

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[11] Somalia had to be excluded from the analysis at this stage, as no numbers on its GDP based on PPP are available.

receive additional support (Goldberg et al. 2012; Desmond et al. 2008). Furthermore, despite the substantial sources donors have at their disposal, they still require access to local communities which cannot be provided without the government (Dionne 2011; Desmond et al. 2008). Nevertheless, despite these concerns I chose to include donor aid in my regression models. Since the numbers on aid that is specifically earmarked to combat HIV/AIDS are only available for a few countries, I use the logged net official development assistance (ODA) received per capita. The data are coming from the World Bank (2017c). Another drawback of this measure is that it leaves out aid provided by nongovernmental actors. However, it should still provide an adequate picture.

The problem brought up in the literature review, that the state apparatus has the potential to constrain government action, will be controlled for through two variables for state capacity and corruption in the public sector. Countries may indeed have a leader with sufficient political will, but lack the capacity to implement the necessary policies (Brinkerhoff 2016). States with higher capacity should do better at developing, coordinating and enforcing programs to fight HIV/AIDS and more specifically should perform better at providing ART treatment to all its citizens (Gore et al. 2014). According to Gizelis (2009), state capacity is of particular importance, when established social practices and human behavior is challenged – as is clearly the case for the issue at hand. To measure state capacity, I will employ the indicator for 'government effectiveness', from the World Bank's Worldwide Governance Indicators (WGI) (Kaufmann & Kraay 2016). This measure has been used before by Bor (2007) and is also recommended by Gizelis (2009). It uses a scale from -2.5 to +2.5, whereas higher values indicate higher effectiveness of the public service. Authors have also used the percentage of births attended by skilled health professionals as a proxy for the capacity of the health care systems. Countries with an already good health infrastructure should be expected to have an advantage when it comes to delivering ART. The measure, however, has shown not to be significant and also strongly correlates with the GDP per capita (Nattrass 2008; Bor 2007). It is therefore not included in the analysis.

Corruption has been identified to have negative effects on a broad range of developmental outcomes and is rampant in particular in the health care sector (Rothstein 2011). In this regard, the fight against HIV/AIDS is no exception. In sufficiently corrupt societies, resources earmarked for AIDS treatment do not reach those targeted – people in need of treatment (Gizelis 2009). Instead, access to treatment is distributed highly "unequally, based on favours, bribes and political privilege, rather than need" (Justesen 2012, 379). In order to control only for corruption in the state apparatus and exclude possibly corrupt behavior by the leaders themselves, I use the 'public sector corruption index' from the V-Dem dataset (Coppedge et al. 2017). As higher values indicate more corruption, a negative relationship should be expected.

It is generally more difficult to provide public services to people living in rural areas than to those living in urban centers (Desmond et al. 2008). This should be particularly true, for a task as complex and time-sensitive as ART treatment. Operating in urban areas is not only easier and cheaper from a logistic point of view, but also is this where donors tend to be located (Campbell 2010; Scott 2000; Nattrass 2008). It can therefore be expected that ART coverage is higher in countries where people are concentrated in big cities, compared to countries where they are scattered over wider areas. The data on the urban population as percentage of the total population, come from the United Nations' World Urbanization Prospects and are retrieved from the World Bank (2017d).

Finally, I control for the colonial past. On many indicators of development, former British colonies tend to perform better, especially in comparison to former French colonies. I therefore include a dichotomous variable which is coded '1' if the country is a former British colony, '0' if the country had another or no colonizer.[12]

6. Diagnostics

Before running the regressions, respectively interpreting the results, it is tested whether the OLS assumptions are met.[13] As could be expected, there is a very strong correlation between the control variables public sector corruption and government effectiveness. The Pearson's r coefficient of -.799 is significant and only marginally below the threshold of .8 (Field 2013). I therefore included two versions of the respective models that contain all control variables; one with the variable for government effectiveness and another one (labelled with the suffix '-a'), in which I dropped it. Correlations between all other variables are within the acceptable range (see Appendix 2). Especially the level of democracy as well as the GDP per capita moderately correlate with multiple other variables. Further checks for multicollinearity reveal no alarming values for the variance inflation factor (VIF) or tolerance (Appendix 3) (Field 2013).

As can be seen in Appendix 4, the residuals are normally distributed. Their mean is pretty much 0 and the standard deviation is less than 1 (.810). There are some deviations from the ideal line in the P-P plot, however, they are still within the range that is deemed acceptable. To test for homoscedasticity, the residuals are plotted against the predicted values (see Appendix 5). Some of the values are far off the y=0 line, meaning that the spread in the residuals for the predicted values varies. However, this variance follows no clear pattern. The assumption of homoscedasticity can therefore be regarded as being met. When testing for outliers, there is some concern regarding South Sudan

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[12] The coding is based on the work of Teorell and Wahman (2017).
[13] These tests were conducted using model 14, containing all variables.

and Rwanda (Appendix 6). The former is above -3 on studentized deleted residual, but its leverage is sufficiently close to the average. The latter on the other hand, has a leverage slightly above the calculated threshold of .73.[14] However, not only is the leverage of no concern when using a less conservative cut-off, Rwanda's residual is also unproblematic. Therefore, none of the countries exerts undue influence on the model.

7. Analysis and results

The scatterplots (Figure 2) only indicate a strong linear relationship between the HIV prevalence and the change in ART coverage, respectively a moderate relationship between the number of irregular exits and ART coverage. For the two other independent variables, the effect is only very weak. In the case of the level of democracy, it is even negative. However, as laid out previously and presented in Figure 1, this lack of a direct relationship does not pose a problem itself, as other factors are expected to intervene after political will has been formed and therefore to offset the effect of political will on ART coverage.

In the following, each of the four hypotheses is tested separately, before being combined (model 13 to 15). To allow for comparison between the different models, all models include only those cases, for which data on all variables is available. As mentioned before, the reduction to 33 cases is mainly caused by missing HIV/AIDS data and for state identity.

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[14] The threshold is calculated using the formula *(2(k+1)/n)* (Hoaglin & Welsch 1978); the less conservative formula according to Stevens (2009) is *(3(k+1)/n)*.
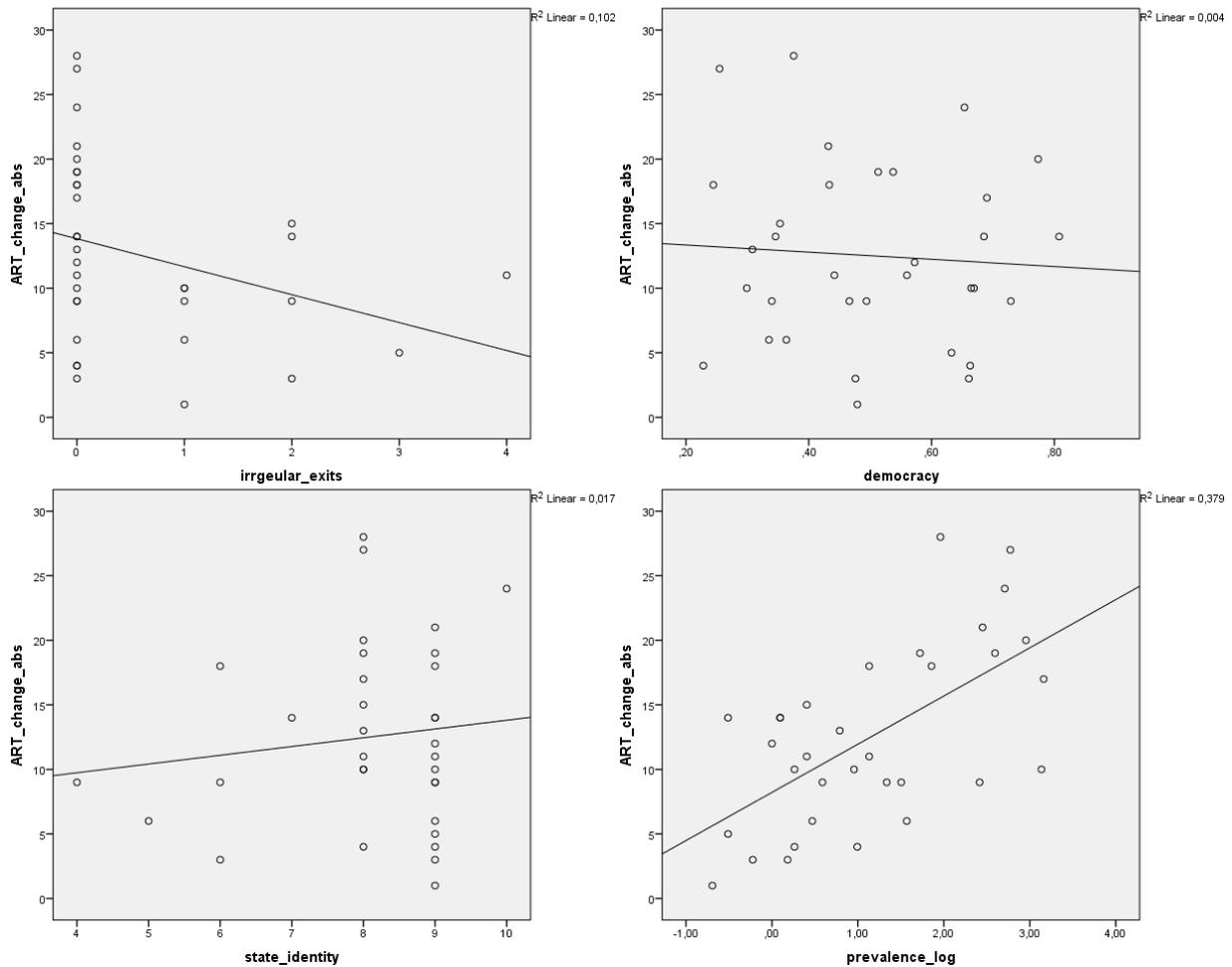
Figure 2. Scatterplots of the dependent and the four independent variables.

Table 1 presents the results of four different regression models. For the first model, a bivariate regression was run, testing only the effect of the independent variable on the change in ART coverage. In model 2 and 2a the six control variables are added; as explained above, once including government effectiveness (model 2) and once without it (model 2a). The last model then includes only those control variables that were significant in the previous models. This approach is kept for the other hypotheses as well.

In all four models, a higher number of irregular exits in the previous 20 years is related to less political will. However, only in the first model, when no control variables are included, the variable to measure the threat leaders face reaches significance on the .1-level. H1 can therefore only be accepted with some reservations. With each irregular exit of a political leader in the previous 20 years, ART coverage on average decreases by 2.2% (model 1).

Table 1. Multiple regressions (OLS). The effect of the number of irregular exits in the last 20 years on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 1	Model 2	Model 2a	Model 3
Irregular exits	-2.164*	-1.285	-1.269	-1.170
	(1.155)	(1.048)	(1.027)	(1.026)
GDP per capita logged		-2.633	-2.824	
		(2.183)	(2.030)	
ODA per capita logged		-2.714	-2.693	
		(2.071)	(2.032)	
Government effectiveness		-.778		
		(2.876)		
Public sector corruption		-15.283	-13.721*	-4.947
		(9.187)	(7.016)	(5.482)
Urbanization		-.033	-.030	
		(.098)	(.096)	
Former British colony		7.746***	7.826***	6.719***
		(2.595)	(2.532)	(2.249)
Constant	13.826***	52.156**	52.891**	13.701***
	(1.364)	(22.357)	(21.793)	(4.222)
Adjusted R²	.073	.353	.376	.339
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

As presented in Table 2, in all models the level of democracy is negatively correlated with leaders' political will to fight the epidemic, i.e. political will to fight HIV/AIDS is higher in less democratic countries. Except for the bivariate regression, this negative relation is significant at least on the .1-level. Therefore, the independent variable reaches significance only once control variables are added. A stepwise regression reveals that while almost all control variables have a diminishing effect on the p-value, it is public sector corruption and government effectiveness which render the variable significant and therefore offset the effect of democracy on ART coverage. This suggests that there might be an interaction between democracy and these two variables relating to the state apparatus.

These results are the opposite of what was to be expected beforehand. H2 must therefore be rejected. However, given the magnitude of a complete change from democratic (score of 1) to authoritarian (score of 0), the additional increase in ART coverage of 18.7% (model 6) seems not very big. In this sample, the range is .58 between South Sudan (.23) and Mauritius (.81), suggesting a maximum increase in coverage of less than 11%.

Table 2. Multiple regressions (OLS). The effect of the level of democracy on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 4	Model 5	Model 5a	Model 6
Level of democracy	-2.779	-19.780**	-15.571*	-18.730***
	(7.565)	(9.128)	(7.849)	(6.692)
GDP per capita logged		-2.607	-1.996	
		(2.048)	(1.929)	
ODA per capita logged		-1.478	-1.850	
		(2.060)	(2.013)	
Government effectiveness		2.867		
		(3.144)		
Public sector corruption		-14.240	-19.014**	-14.829**
		(8.696)	(6.920)	(5.695)
Urbanization		.040	.015	
		(.100)	(.096)	
Former British colony		8.169***	7.849***	6.887***
		(2.460)	(2.427)	(2.032)
Constant	13.903***	55.090**	52.056**	28.920***
	(3.974)	(21.189)	(20.858)	(6.599)
Adjusted R²	-.028	.423	.426	.456
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

Moving on to H3 which states that political will is higher in states that are more legitimate and are identified with to a larger degree, in model 7 the influence of medium state identity is significant on the .1-level (Table 3). High state identity on the other hand fails significance and only in model 7 its effect points in the expected direction at all. Furthermore, the adjusted R² is only .075, this is, even less than 1% of the variance in the increase of ART coverage is explained by the model. Once the control variables are added to the model, neither medium nor high state identity are significant any longer. At this stage, H3 would therefore need to be rejected.

Table 3. Multiple regressions (OLS). The effect of state identity on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 7	Model 8	Model 8a	Model 9
Medium state identity	6.667*	1.835	1.844	3.128
	(3.576)	(3.215)	(3.148)	(3.260)
High state identity	2.250	-2.992	-2.966	-1.034
	(3.442)	(3.073)	(2.989)	(2.998)
GDP per capita logged		-2.253	-2.207	
		(2.066)	(1.909)	
ODA per capita logged		-3.136	-3.141	
		(1.974)	(1.933)	
Government effectiveness		.187		
		(2.772)		
Public sector corruption		-18.037*	-18.406**	-8.868
		(8.792)	(6.751)	(5.394)
Urbanization		-.081	-.082	
		(.097)	(.095)	
Former British colony		6.642**	6.622**	5.768**
		(2.671)	(2.602)	(2.420)
Constant	9.000***	55.678**	55.464**	15.396***
	(3.004)	(21.697)	(21.032)	(4.618)
Adjusted R²	.075	.410	.433	.365
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

The only hypothesis that can be accepted without limitations is H4. As can be seen in Table 4, throughout all four models, HIV prevalence is significant at least on the .05-level. In the final model even at .01. As expected, the harder a country is hit by the epidemic, the more political will is mustered by leaders to expand coverage of ART. Since HIV prevalence was logged, a 1% increase in HIV prevalence, leads to a 0.033% increase in ART coverage. All other variables constant, for example a 20% increase in coverage would therefore require prevalence to be roughly 615% higher. As much as 615% sound initially; a country at the lower end of the sample like Madagascar, would still be on a lower level than Côte d'Ivoire (prevalence of 3.8%) by such an increase which is also still below the mean of 5.9%. The median in this sample is 2.7%. Departing from there, a 615%-increase would equal the HIV prevalence in South Africa (19.2%), the third-highest in the sample. It is furthermore noteworthy that unlike in the other regressions, British colonial heritage fails significance.

Table 4. Multiple regressions (OLS). The effect of the prevalence rate on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 10	Model 11	Model 11a	Model 12
Prevalence rate logged	3.732***	2.409**	2.414**	3.260***
	(.858)	(1.026)	(1.006)	(.873)
GDP per capita logged		-1.849	-1.940	
		(2.022)	(1.872)	
ODA per capita logged		-2.462	-2.450	
		(1.933)	(1.895)	
Government effectiveness		-.366		
		(2.678)		
Public sector corruption		-14.398	-13.651**	-8.379*
		(8.566)	(6.474)	(4.766)
Urbanization		-.071	-.070	
		(.092)	(.090)	
Former British colony		4.144	4.175	
		(2.855)	(2.792)	
Constant	8.221***	44.137**	44.480**	14.399***
	(1.386)	(20.984)	(20.437)	(3.762)
Adjusted R²	.359	.438	.459	.399
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

Finally, in models 13 through 15 all independent variables are included. Along the lines of the previous models, the first model in the table includes only the independent variables and dependent variable, whereas in the other models a varying number of control variables are added. As can be seen from Table 5, the previous results are largely confirmed. Except for model 14 and 14a, HIV prevalence continues to be significant. As could be expected, due the higher number of variables in the model the size of the effect is smaller (2.260 in model 15, compared to 3.260 in model 12). In all models, the direction of the effect for the level of democracy (H2) continues to be in the opposite direction as hypothesized. In model 15 this is even significant. The variable measuring irregular exits points in the right direction in all models, yet it fails to reach significance. This therefore gives further reason to decline H1. Thus, both hypotheses relating to the leaders' time horizon have to be rejected. However, some new support is lent to H3. In model 15 medium state identity is not only significant on the .05-level, also the size of the coefficient is bigger than in those models including state identity as the only independent variable. On average, in countries with medium state identity, the increase in ART coverage can be expected to be almost 7% higher than in countries with low state identity (reference category). Turning to high state identity, even though the

direction of the effect is in the expected direction in all models except 14a, it still not only fails to be significant (p-value of .176 in model 15), the coefficient is also smaller than the one for medium state identity. This suggests that medium state identity is more conducive to political will than high state identity. H3 can therefore still only be accepted with some serious caveats.

Table 5. Multiple regressions (OLS). The effect of the number of irregular exits, the level of democracy, state identity and the prevalence rate on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 13	Model 14	Model 14a	Model 15
Irregular exits	-.709	-.503	-.729	-.020
	(1.132)	(1.189)	(1.135)	(1.014)
Level of democracy	-3.386	-15.070	-9.574	-16.900**
	(6.461)	(12.636)	(10.007)	(7.161)
Medium state identity	5.280*	4.570	3.775	6.898**
	(3.102)	(3.679)	(3.474)	(2.760)
High state identity	2.953	.927	-.023	3.921
	(3.208)	(4.162)	(3.908)	(2.819)
Prevalence rate logged	3.169***	1.259	1.322	2.260**
	(1.018)	(1.206)	(1.190)	(.937)
GDP per capita logged		-2.370	-1.977	
		(2.009)	(1.914)	
ODA per capita logged		-1.606	-2.026	
		(2.079)	(1.975)	
Government effectiveness		2.375		
		(3.272)		
Public sector corruption		-15.138*	-18.427**	-17.632***
		(8.392)	(6.988)	(5.751)
Urbanization		.006	-.028	
		(.117)	(.105)	
Former British colony		4.554	4.379	
		(3.125)	(3.082)	
Constant	7.639*	51.173**	49.789**	25.815***
	(3.916)	(21.352)	(21.038)	(6.845)
Adjusted R²	.348	.474	.485	.503
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

In these models, public sector corruption is the only control variable that achieves significance. British colonial history, which was significant in some of the previous models, fails to achieve significance once including multiple independent variables. Besides these two, no other control variable is significant in any of the models. Comparing the standardized regression coefficients (see

Appendix 7), the beta of -.533 for public sector corruption suggests that its effect is stronger than the effect of HIV prevalence (beta of .373) and medium state identity (.483). The question is therefore, whether political will is sufficient in highly corrupt societies. However, to gauge the size of the effect more adequately, the standardized coefficient is only of limited help. Looking at the unstandardized coefficient instead, the scale of the variable for public sector corruption has to be kept in mind, as it only runs from 0 to 1. If for example a country like Mali (.70) managed to reduce corruption by .5 and therefore ended up on the same level as Botswana (.20) – the least corrupt country in this sample – it could expect to increase ART coverage by an additional 8.8%. However, given what a big accomplishment such a reduction in corruption would be and how few countries have managed something similar in the recent past, the effect of corruption on ART coverage seems not too big. Since corruption in the public sector is the one control variable being significant in most of the regression models, I tested its effect in a bivariate regression, in order to eliminate the possibility that all observed effects are only due to this variable. As can be seen in Appendix 8, not only is the regression coefficient smaller than in model 15 (-13.9 compared to -17.6), also is the adjusted R^2 only .149. The explanatory power of corruption therefore only increases together with other independent variables.

Finally, despite dropping four respectively five (model 14a) variables, in model 15 the adjusted R^2 increases to .503 and the coefficient of the constant is cut by half (from 51.2 to 25.8). This implies that even though half of the variance in ART coverage is explained by the model, it still leaves room for other factors which were not accounted for in this analysis. This could also include the idiosyncratic aspects of political will.

Given the previous literature, the weak results regarding threats to leaders (H1) are surprising. To test for robustness, the regressions are therefore repeated with a different measure to make sure these results are not due to a flawed operationalization. Despite the concerns voiced earlier, I am using the number of successful coups in a country. Like with the initial variable, only the past 20 years are taken into consideration. This data come from Powell and Thyne (2011; 2017). As can be seen in Table 6, the number of coups is significant in all models but the last one. The original measure on the other hand only achieved significance in the first model. The regression coefficient is also higher (-3.0 compared to -2.2). Since this measure also fails significance in the final model, it does not lend sufficient support to accept H1 now, however, it gives a more nuanced picture, suggesting that the results on the influence of the threats to leaders on political will are not conclusive yet.

Table 6. Multiple regressions (OLS). Robustness check on the effect of the number of coups d'état in the last 20 years on political will, measured as change in ART coverage.

DV: Change in ART coverage over three years	Model 16	Model 17	Model 17a	Model 18
Coups	-3.001**	-2.255*	-2.202*	-1.884
	(1.404)	(1.245)	(1.217)	(1.219)
GDP per capita logged		-2.873	-3.137	
		(2.120)	(1.982)	
ODA per capita logged		-2.647	-2.620	
		(2.003)	(1.970)	
Government effectiveness		-1.122		
		(2.796)		
Public sector corruption		-17.600*	-15.316**	-6.120
		(8.885)	(6.713)	(5.241)
Urbanization		-0.31	-.028	
		(.095)	(.093)	
Former British colony		7.330***	7.454***	6.252***
		(2.520)	(2.460)	(2.247)
Constant	14.061***	55.525**	56.487**	14.949***
	(1.361)	(21.778)	(21.294)	(4.204)
Adjusted R²	.100	.394	.413	.362
N	33	33	33	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.

8. Conclusion

This study analyzed how contextual factors influence the political will of leaders in Sub-Saharan Africa to fight HIV/AIDS. Political will was operationalized as the expansion of ART coverage during the first three years after elections took place. The thesis contributes to the literature on political will and HIV/AIDS in at least three ways. First, to the best of my knowledge it is the first attempt to systematically analyze the factors that influence political will, by coming up with a coherent underlying theoretical framework that distinguishes between factors that influence political will and those which only affect the outcome after political will has already been formed. Secondly, since most of the existing work dealing with political will and HIV/AIDS has been of qualitative nature, this large-N study adds to the question whether these results can be generalized. Finally, in doing so, by adjusting the year of measurement for every country, a methodology was chosen that does not 'mix up' the political will of different leaders within a country. Previous studies have not accounted for this.

Building on political economy, the threats political leaders face (H1), level of democracy (H2), legitimacy of and identification with the nation state (H3) as well as the scale of the epidemic (H4) were hypothesized to influence the political will of leaders to fight HIV/AIDS. Out of the four hypotheses, only H4 could be accepted unconditionally, H3 only with some caution. Both hypotheses relating to the leaders' time horizon, H1 and H2, had to be rejected, therefore contradicting previous findings. However, using a different operationalization, the robustness check for H1 relativized the initial results, suggesting that the findings on the influence of the threats to leaders on political will are not conclusive yet and more research needs to be done on this, beginning with new measures to better capture the concept. However, the fact that H2 had to be rejected, while H4 was accepted provides additional evidence that the micro-mechanism linking higher prevalence rates and higher political will is not simply driven by popular demand, something implicitly suggested in the previous literature. Instead, this supports the idea that it is the personal stake of leaders that increases their political will. As H3 could only be accepted with some caveats, a puzzle is posed by the finding that medium state identity appears to be more conducive to political will than high identification with and legitimacy of the nation state. A possible explanation could be that there is a certain threshold of state identification, only below which the negative effects unfold. State identity would therefore have to be treated as a dichotomous concept, rather than a continuous one.

H2 had to be rejected as the results for the influence of democracy were not only negative but also significant. They therefore further add to the inconclusive and at times contradictory literature on the effect of democracy on fighting HIV/AIDS. There are several possibilities for this being the case. As pointed out, for electoral accountability to create political will, HIV/AIDS has to be on the agenda of the voters. Surveys suggest that often this is not the case. Further studies should therefore account for these preferences, even though there might be limitations in the availability of data. Even more, the characteristics of the disease could be counterproductive for building political will for fighting it. As Scott (2000, 588) puts it:

> "there are votes to be gained from dramatically feeding people who are in danger of starving, while there are no votes to be gained from constantly reminding people that certain enjoyable private activities are eroding their life-expectancy."

Leaders in less democratic countries on the other hand are able to enforce unpopular decisions, without having to worry about electoral repercussions limiting their time horizon. This would be in line with the findings by Putzel (2004) for Uganda. Another avenue for future research could be to take a closer look at whether the choice of the system of government, this is presidential or parliamentarian, has an influence on building pollical will, as the degree to which minorities are represented varies between these systems. Such a study would have to be extended beyond Sub-

Saharan Africa, as only five countries in the region have a parliamentarian system. From a statistical point of view, the explanatory power of the results might be impaired due to the small range of .58 of the variable measuring democracy in this sample. Even more, according to the ordinal version of V-Dem's electoral democracy index, only Mauritius qualifies as 'democratic' by having a score above .8.

In this analysis, contextual factors were able to explain half of the variance in political will when it comes to fighting HIV/AIDS (model 15). Notwithstanding other factors that were not accounted for, this suggests that still a considerable share of political will stems from the personal traits of individual leaders. To fully grasp political will, qualitative studies looking into personal motives and preferences therefore continue to be necessary.

From a policymaker's perspective, these results are rather disappointing, as it seems there is little that can be done from the outside to overcome the limiting factors of political will. Raising HIV prevalence in order to raise ART coverage clearly is against all logic. However, the results indicate that leaders show commitment once they are personally affected. In a wider sense, this suggests that actors trying to bring forward policy change should work much more on the individual level, pointing out personal benefits. Even though this is not necessarily in line with the typical under-standing of a public service ethos. Democracy, which is considered a universal remedy in some development circles, turned out to be counterproductive. But as the case with HIV prevalence, reducing democracy aid is not an option either. Even if it as in impediment to expanding ART coverage, there are other intrinsic values. Out of all independent variables, identification with the nation state, by (re-)constructing a shared social contract might be the hardest one to achieve (Persson & Sjöstedt 2012). In the long term, practitioners who seek to increase access to ART therefore might be best off when aiming to tackle corruption, as it poses an enormous stumbling block on the pathway from political will to increased coverage.

One of the biggest limitation of this study is that due to the availability of data, only 33 countries could be analyzed. While from a statistical point of view, this is still a sufficient number of cases to generalize from the sample to the population, the relatively small sample size makes it harder to find significant results in the data. A logical next step would therefore be to increase the number of cases by extending the scope to other regions where HIV/AIDS poses a problem, in particular Asia and Latin America. Alternatively, e.g. all countries with a generalized epidemic could be stud-ied. However, in these cases it would be necessary to account for regional differences.

Another limitation of this study is that it does not look into specific features of the various polities, as each of them have different and unique party system and veto players (Tsebelis 2002). Also, aspects of fragmentation or polarization within the government could play a role (Mette Kjaer

2004; Post et al. 2010). However, by limiting the study to countries within Sub-Saharan Africa, these factors were mitigated to some extent, as differences within the region should be smaller than in comparison to countries from different regions.

However, the biggest limitation is the measurement of political will itself. I am aware that measurement of political will is the principal flaw of any such study, as it can by definition only be approximated and not measured directly. However, given the importance of political will for public policy, despite these limitations scholars should not shy away from researching it and instead come forward with new, innovative ways to operationalize the concept. Even though, much like in previous studies measurement of political will has been "indirect and retrospective" (Post et al. 2010, 670), the results could be as a first step to help estimating political will beforehand in the future. At least to some extent, the approach could therefore serve as an ex ante "assessment tool" (Brinkerhoff 2000, 248) to identify the presence of political will in advance. To make statements about the degree to which the results of the present study can be generalized, further studies covering other policy areas for which political will is a crucial prerequisite seem necessary.

References

Acemoglu, D. & Robinson, J. A. 2006. *Economic Origins of Dictatorship and Democracy*. Cambridge: Cambridge University Press.

Barka, H. Ben & Ncube, M. 2012. *Political Fragility in Africa: Are Military Coups d'Etat a Never-Ending Phenomenon?* African Development Bank.

Bor, J. 2007. "The Political Economy of AIDS Leadership in Developing Countries: An Exploratory Analysis," *Social Science and Medicine* 64, 1585–99.

Brinkerhoff, D. W. 2000. "Assessing Political Will for Anti-Corruption Efforts: An Analytic Framework," *Public Administration and Development* 20, 239–52.

Brinkerhoff, D. W. 2016. "Building Political Will for HIV Response: An Operational Model and Strategy Options," *International Journal of Health Planning and Management* 31, 470–87.

Brinkerhoff, D. W. 2010. *Unpacking the Concept of Political Will to Confront Corruption*. Bergen: Chr. Michelsen Institute, U4 Brief No. 1.

Bueno de Mesquita, B. et al. 2002. "Political Institutions, Policy Choice and the Survival of Leaders," *British Journal of Political Science* 32, 559–90.

Campbell, C. 2010. "Political Will, Traditional Leaders and the Fight Against HIV/AIDS: A South African Case Study," *AIDS care* 22, 1637–43.

Coppedge, M. et al. 2017. *V-Dem Country-Year Dataset v7*. Varieties of Democracy (V-Dem) Project.

Dahl, R. A. 1989. *Democracy and Its Critics*. New Haven: Yale University Press.

Desmond, C. et al. 2008. "Relative Response: Ranking Country Responses to HIV and AIDS," *Health and Human Rights* 10, 105.

Dionne, K. Y. 2011. "The Role of Executive Time Horizons in State Response to AIDS in Africa," *Comparative Political Studies* 44, 55–77.

Donner, S., Hartmann, H. & Schwarz, R. 2016. *BTI 2016: Codebook for Country Assessments*. Transformation Index of the Bertelsmann Stiftung 2016.

Edgell, A. B. et al. 2017. "When and Where Do Elections Matter? A Global Test of the Democratization by Elections Hypothesis, 1900–2010," *Democratization*, 1–23.

Englebert, P. 2000. "Solving the Mystery of the AFRICA Dummy," *World Development* 28, 1821–

35.

Field, A. 2013. *Discovering Statistics Using IBM SPSS Statistics*. 4th ed., London: SAGE Publications.

Fox, A. M. et al. 2011. "Conceptual and Methodological Challenges to Measuring Political Commitment to Respond to HIV," *Journal of the International AIDS Society* 14.

Gandhi, J. & Przeworski, A. 2007. "Authoritarian Institutions and the Survival of Autocrats," *Comparative Political Studies* 40, 1279–301.

Gauri, V. & Lieberman, E. 2006. "Boundary Institutions and HIV/AIDS Policy in Brazil and South Africa," *Studies in Comparative International Development* 41, 47–73.

Geddes, B. 1994. *Politician's Dilemma. Building State Capacity in Latin America.* Berkeley: University of California Press.

Gilley, B. 2006. "The Meaning and Measure of State Legitimacy: Results for 72 Countries," *European Journal of Political Research* 45, 499–525.

Gizelis, T. I. 2009. "Wealth Alone Does Not Buy Health: Political Capacity, Democracy, and the Spread of AIDS," *Political Geography* 28, 121–31.

Goemans, H. E., Gleditsch, K. S. & Chiozza, G. 2016. *Archigos: A Data Set on Leaders 1875–2015. Version 4.1.*

Goemans, H. E., Gleditsch, K. S. & Chiozza, G. 2009. "Introducing Archigos: A Dataset of Political Leaders," *Journal of Peace Research* 46, 269–83.

Goldberg, A. B. et al. 2012. "Indicators of Political Commitment to Respond to HIV," *Sexually Transmitted Infections* 88, e1–e1.

Goldsmith, A. A. 2001. "Risk, Rule and Reason: Leadership in Africa," *Public Administration and Development* 21, 77–87.

Gore, R. J. et al. 2014. "Bringing the State Back in: Understanding and Validating Measures of Governments' Political Commitment to HIV," *Global Public Health* 9, 98–120.

van Ham, C. & Lindberg, S. I. 2015. "From Sticks to Carrots: Electoral Manipulation in Africa, 1986–2012," *Government and Opposition* 50, 521–48.

Hoaglin, D. C. & Welsch, R. E. 1978. "The Hat Matrix in Regression and ANOVA," *The American Statistician* 32, 17.

Hyde, S. D. & Marinov, N. 2012. "Which Elections Can Be Lost?," *Political Analysis* 20, 191–210.

Jahn, D. 2013. *Einführung in die vergleichende Politikwissenschaft*. 2nd ed., Wiesbaden: Springer VS.

Justesen, M. K. 2012. "Democracy, Dictatorship, and Disease: Political Regimes and HIV/AIDS," *European Journal of Political Economy* 28, 373–89.

Kaufmann, D. & Kraay, A. 2016. *Worldwide Governance Indicators*. World Bank.

Kjørven, O. 2010. "Press Conference on Millennium Development Goals," Available at: http://www.un.org/press/en/2010/100621_MDGs.doc.htm [Accessed May 3, 2017].

Kruk, M. E. & Freedman, L. P. 2008. "Assessing Health System Performance in Developing Countries: A Review of the Literature," *Health Policy* 85, 263–76.

Lieberman, E. 2007. "Ethnic Politics, Risk, and Policy-Making," *Comparative Political Studies* 40, 1407–32.

Lindberg, S. I. ed. 2009. *Democratization by Elections. A New Mode of Transition*. Baltimore: Johns Hopkins University Press.

Lohmann, S. 2008. "Rational Choice and Political Science," in Durlauf, S. N. & Blume, L. E., eds. *The New Palgrave Dictionary of Economics*. 2nd ed., Basingstoke: Palgrave Macmillan.

Mearsheimer, J. J. 2010. "The Gathering Storm: China's Challenge to US Power in Asia," *The Chinese Journal of International Politics* 3, 381–96.

Mette Kjaer, A. 2004. "'Old Brooms Can Sweep Too!' An Overview of Rulers and Public Sector Reforms in Uganda, Tanzania and Kenya," *Journal of Modern African Studies* 42, 389–413.

Nattrass, N. 2008. "Are Country Reputations for Good and Bad Leadership on AIDS Deserved? An Exploratory Quantitative Analysis," *Journal of Public Health* 30, 398–406.

Olson, M. 1993. "Dictatorship, Democracy, and Development.," *American Political Science Review* 87, 567–76.

Parkhurst, J. O. & Lush, L. 2004. "The Political Environment of HIV: Lessons From a Comparison of Uganda and South Africa," *Social Science and Medicine* 59, 1913–24.

Persson, A. & Sjöstedt, M. 2012. "Responsive and Responsible Leaders: A Matter of Political Will?," *Perspectives on Politics* 10, 617–32.

Poku, N. & Whiteside, A. 2004. *The Political Economy of AIDS in Africa*. Poku, N. & Whiteside, A., eds., Aldershot: Ashgate.

Posner, D. N. 2004. "Measuring Ethnic Fractionalization in Africa," *American Journal of Political*

Science 48, 849–63.

Post, L. A., Raile, A. N. W. & Raile, E. D. 2010. "Defining Political Will," *Politics and Policy* 38, 653–76.

Powell, J. M. & Thyne, C. L. 2017. *Global Instances of Coups From 1950 to 2010, v2016.07.20.*

Powell, J. M. & Thyne, C. L. 2011. "Global Instances of Coups From 1950 to 2010: A New Dataset," *Journal of Peace Research* 48, 249–59.

Putzel, J. 2004. "The Politics of Action on AIDS: A Case Study of Uganda," *Public Administration and Development* 24, 19–30.

Rothstein, B. 2011. *The Quality of Government: Corruption, Social Trust and Inequality in a Comparative Perspective.* Chicago: University of Chicago Press.

Scott, G. 2000. "Political Will, Political Economy & the AIDS Industry in Zambia," *Review of African Political Economy* 27, 577–82.

Simon, H. A. 1957. *Models of Man, Social and Rational: Mathematical Essays on Rational Human Behavior in a Social Setting.* New York: Wiley.

Stevens, J. P. 2009. *Applied Multivariate Statistics for the Social Sciences.* 5th ed., London: Taylor and Francis.

Teorell, J. et al. 2017. *The Quality of Government Standard Dataset, version Jan17.* University of Gothenburg: The Quality of Government Institute.

Teorell, J. & Wahman, M. 2017. "Appendix: Institutional Stepping Stones for Democracy: How and Why Multipartyism Enhances Democratic Change," Available at: https://www.researchgate.net/profile/Michael_Wahman/publication/316091489_FDEM-2016-0198R1_Wahman_appendix/data/58efe429a6fdcc11e569dc16/FDEM-2016-0198R1-Wahman-appendix.docx [Accessed May 2, 2017].

Tsebelis, G. 2002. *Veto Players: How Political Institutions Work.* Princeton: Princeton University Press.

UNAIDS 2014. "2014 National Commitments and Policies Instrument (NCPI) - Countries," Available at: http://www.unaids.org/en/dataanalysis/knowyourresponse/ncpi/2014countries [Accessed May 4, 2017].

UNAIDS 2017a. "Ending AIDS: Progress Towards the 90–90–90 Targets," Available at:

http://www.unaids.org/sites/default/files/media_asset/Global_AIDS_update_2017_en.pdf [Accessed April 26, 2017].

UNAIDS 2016. "Global HIV Statistics. Fact Sheet November 2016," Available at: http://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf [Accessed April 13, 2017].

UNAIDS 2017b. "HIV Prevalence," Available at: http://aidsinfo.unaids.org?did%3D554ca08005b5b281750af20a%26r%3Dworld%26t%3D2015%26tb%3Dd%26bt%3Ddnli%26ts%3D0%2C0%26tr%3Dworld%26aid%3D577bfcca880284565dfd2ebf%26sav%3DPopulation%3A Adults (15-49)%26tl%3D2 [Accessed April 24, 2017].

UNAIDS 2017c. "UNAIDS Data 2017," Available at: http://www.unaids.org/sites/default/files/media_asset/20170720_Data_book_2017_en.pdf [Accessed April 26, 2017].

United Nations Statistics Division 2017. "Methodology. Standard Country or Area Codes for Statistical Use (M49)," Available at: https://unstats.un.org/unsd/methodology/m49 [Accessed April 17, 2017].

WHO 2013. "Definition of Key Terms. Consolidated ARV Guidelines, June 2013," Available at: http://www.who.int/hiv/pub/guidelines/arv2013/intro/keyterms/en/ [Accessed April 27, 2017].

World Bank 2017a. "Antiretroviral Therapy Coverage (% of People Living with HIV)," Available at: http://data.worldbank.org/indicator/SH.HIV.ARTC.ZS [Accessed April 17, 2017].

World Bank 2017b. "GDP per Capita, PPP (Constant 2011 International $)," Available at: http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD [Accessed May 9, 2017].

World Bank 2017c. "Net ODA Received Per Capita (current US$)," Available at: http://data.worldbank.org/indicator/DT.ODA.ODAT.PC.ZS [Accessed April 17, 2017].

World Bank 2017d. "Urban Population (% of Total)," Available at: http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS [Accessed April 18, 2017].

Youde, J. 2007. "Ideology's Role in AIDS Policies in Uganda and South Africa," *Global Health Governance* 1.

Zalmanovitch, Y. & Cohen, N. 2015. "The Pursuit of Political Will: Politicians' Motivation and Health Promotion," *International Journal of Health Planning and Management* 30, 31–44.

Appendices

Appendix 1: Frequency distribution of state identity
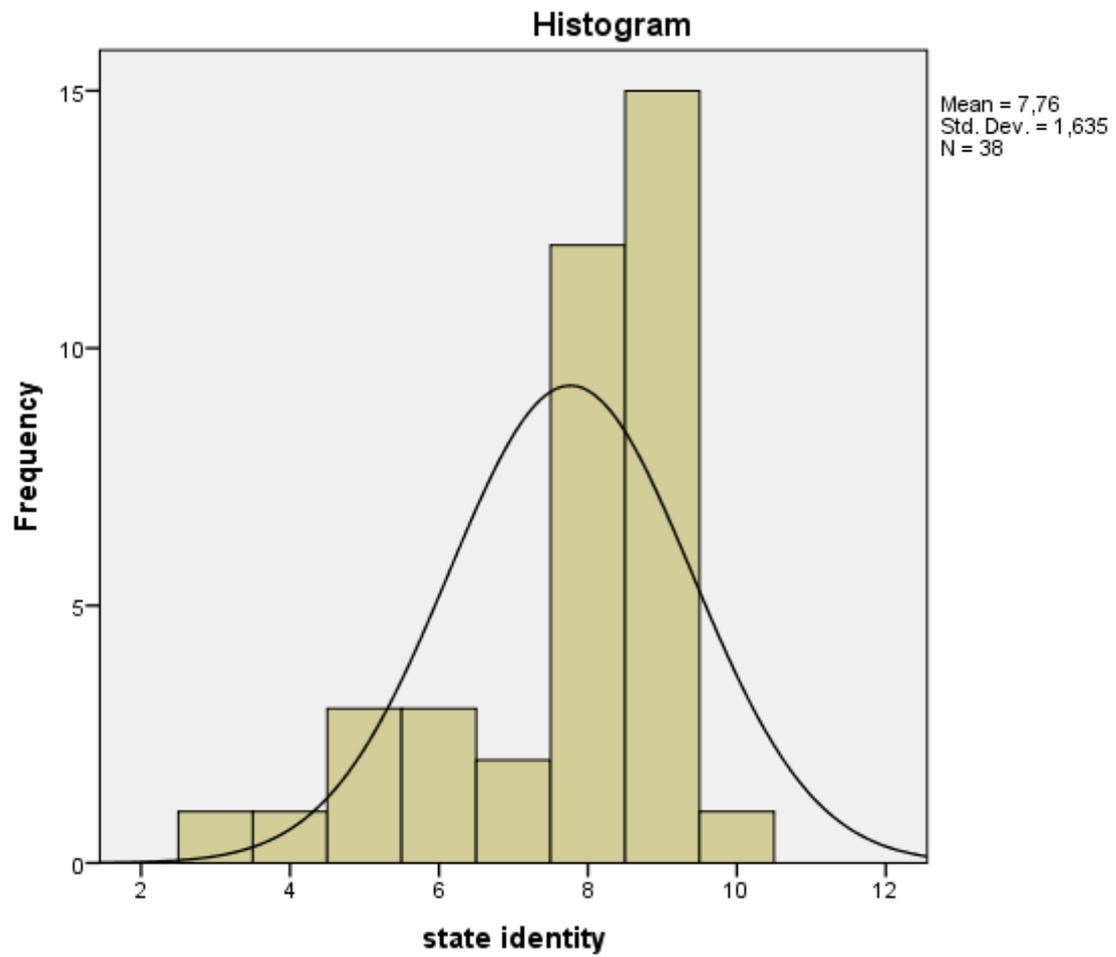
Appendix 2: Correlations between the independent and control variables

Correlations

		irrgeu-lar_ex-its	de-moc-racy	si_me-dium	si_hi-gh	preva-lence_l-og	gdp_-log	oda_-log	state_c-apacity	corrup-tion_ps	urban-ization	brit-ish_col-ony
irrgeu-lar_exits	Pearson Correlation	1	-,005	,107	-,221	-,396	-,329	,020	-,322	,299	-,046	-,211
	Sig. (2-tailed)		,979	,552	,216	,023	,062	,914	,068	,091	,799	,239
	N	33	33	33	33	33	33	33	33	33	33	33
democ-racy	Pearson Correlation	-,005	1	-,075	,288	-,039	,452	,418	,674	-,569	,446	,249
	Sig. (2-tailed)	,979		,679	,105	,831	,008	,016	,000	,001	,009	,163
	N	33	33	33	33	33	33	33	33	33	33	33
si_me-dium	Pearson Correlation	,107	-,075	1	-,733	,267	,019	-,021	-,124	,106	-,011	,243
	Sig. (2-tailed)	,552	,679		,000	,133	,917	,909	,490	,558	,950	,172
	N	33	33	33	33	33	33	33	33	33	33	33
si_high	Pearson Correlation	-,221	,288	-,733	1	-,234	,012	,015	,205	-,173	-,199	,026
	Sig. (2-tailed)	,216	,105	,000		,190	,945	,933	,254	,336	,268	,886
	N	33	33	33	33	33	33	33	33	33	33	33
preva-lence_lo g	Pearson Correlation	-,396	-,039	,267	-,234	1	,318	,054	,246	-,308	,048	,610
	Sig. (2-tailed)	,023	,831	,133	,190		,071	,767	,167	,081	,791	,000
	N	33	33	33	33	33	33	33	33	33	33	33
gdp_log	Pearson Correlation	-,329	,452	,019	,012	,318	1	-,041	,633	-,547	,496	,508
	Sig. (2-tailed)	,062	,008	,917	,945	,071		,821	,000	,001	,003	,003
	N	33	33	33	33	33	33	33	33	33	33	33
oda_log	Pearson Correlation	,020	,418	-,021	,015	,054	-,041	1	,249	-,455	,090	,130
	Sig. (2-tailed)	,914	,016	,909	,933	,767	,821		,162	,008	,618	,470
	N	33	33	33	33	33	33	33	33	33	33	33
state_ca pacity	Pearson Correlation	-,322	,674	-,124	,205	,246	,633	,249	1	-,799	,231	,393

	Sig. (2-tailed)	,068	,000	,490	,254	,167	,000	,162		,000	,197	,024
	N	33	33	33	33	33	33	33	33	33	33	33
corruption_ps	Pearson Correlation	,299	-,569	,106	-,173	-,308	-,547	-,455	-,799	1	-,194	-,451
	Sig. (2-tailed)	,091	,001	,558	,336	,081	,001	,008	,000		,279	,008
	N	33	33	33	33	33	33	33	33	33	33	33
urbanization	Pearson Correlation	-,046	,446	-,011	-,199	,048	,496	,090	,231	-,194	1	-,036
	Sig. (2-tailed)	,799	,009	,950	,268	,791	,003	,618	,197	,279		,840
	N	33	33	33	33	33	33	33	33	33	33	33
british_colony	Pearson Correlation	-,211	,249	,243	,026	,610	,508	,130	,393	-,451	-,036	1
	Sig. (2-tailed)	,239	,163	,172	,886	,000	,003	,470	,024	,008	,840	
	N	33	33	33	33	33	33	33	33	33	33	33

Appendix 3: Collinearity statistics

	Tolerance	VIF
Irregular exits	.536	1.866
Level of democracy	.184	5.447
Medium state identity	.248	4.026
High state identity	.180	5.563
Prevalence rate logged	.416	2.405
GDP per capita logged	.278	3.595
ODA per capita logged	.499	2.004
Government effectiveness	.188	5.318
Public sector corruption	.256	3.907
Urbanization	.338	2.962
Former British colony	.326	3.066

Appendix 4: Distribution of the residuals

Histogram

Dependent Variable: Absolute change in ART coverage between t2 and t1 (t2-t1)

Mean = -9,45E-16
Std. Dev. = 0,810
N = 33
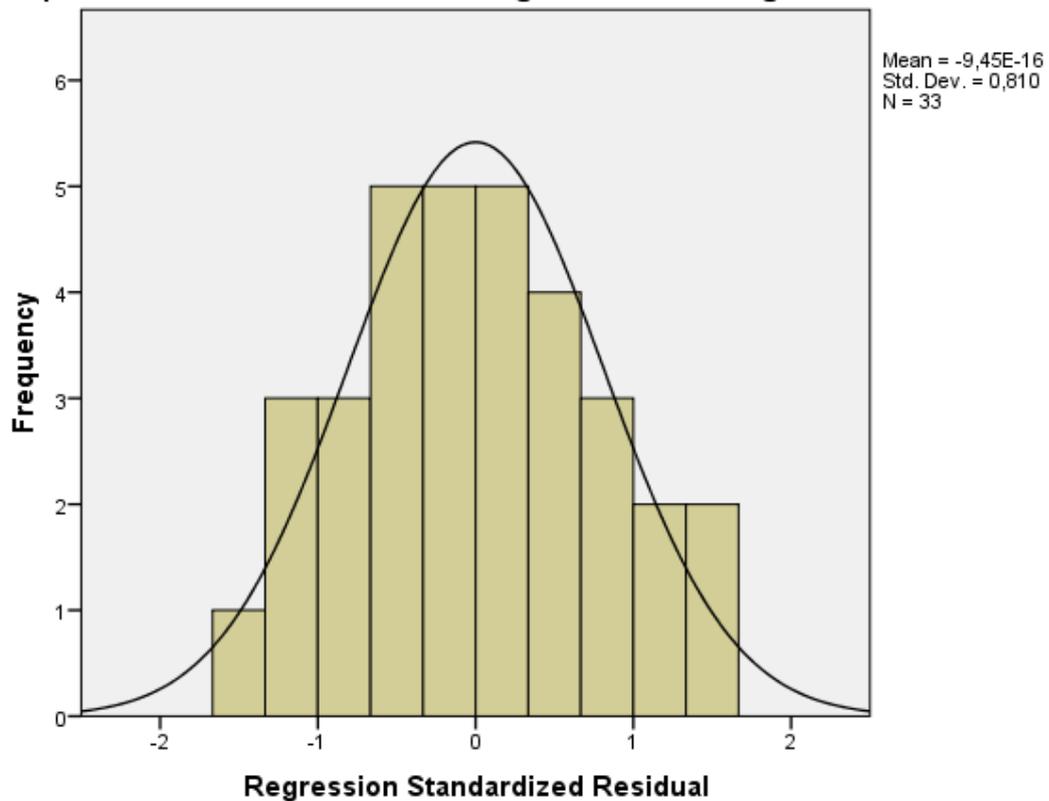
### Normal P-P Plot of Regression Standardized Residual

**Dependent Variable: Absolute change in ART coverage between t2 and t1 (t2-t1)**
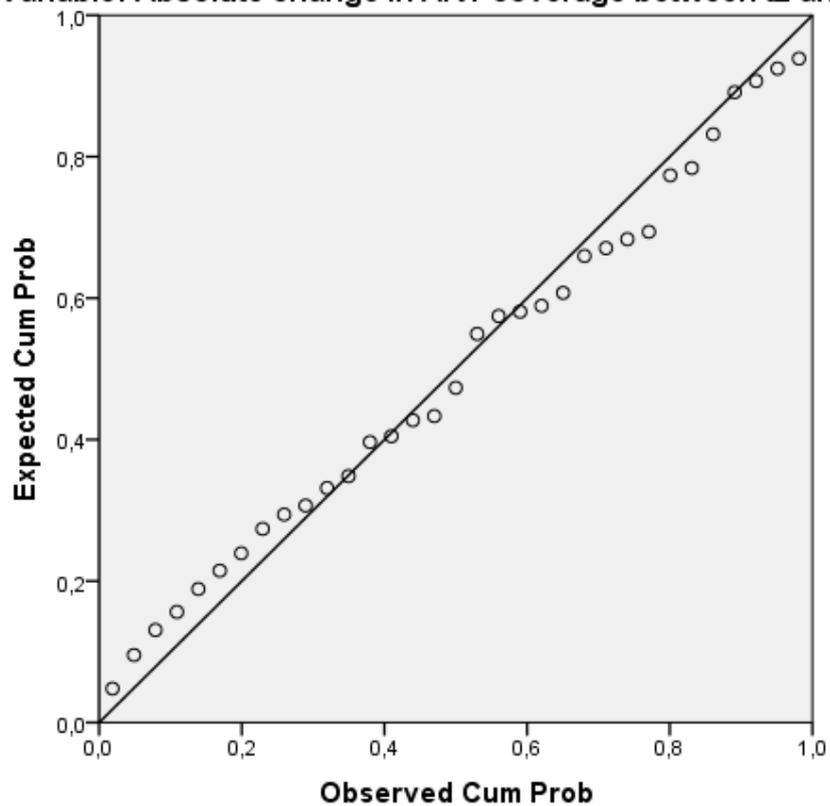
Appendix 5: Test for heteroscedasticity

Scatterplot

Dependent Variable: Absolute change in ART coverage between t2 and t1 (t2-t1)
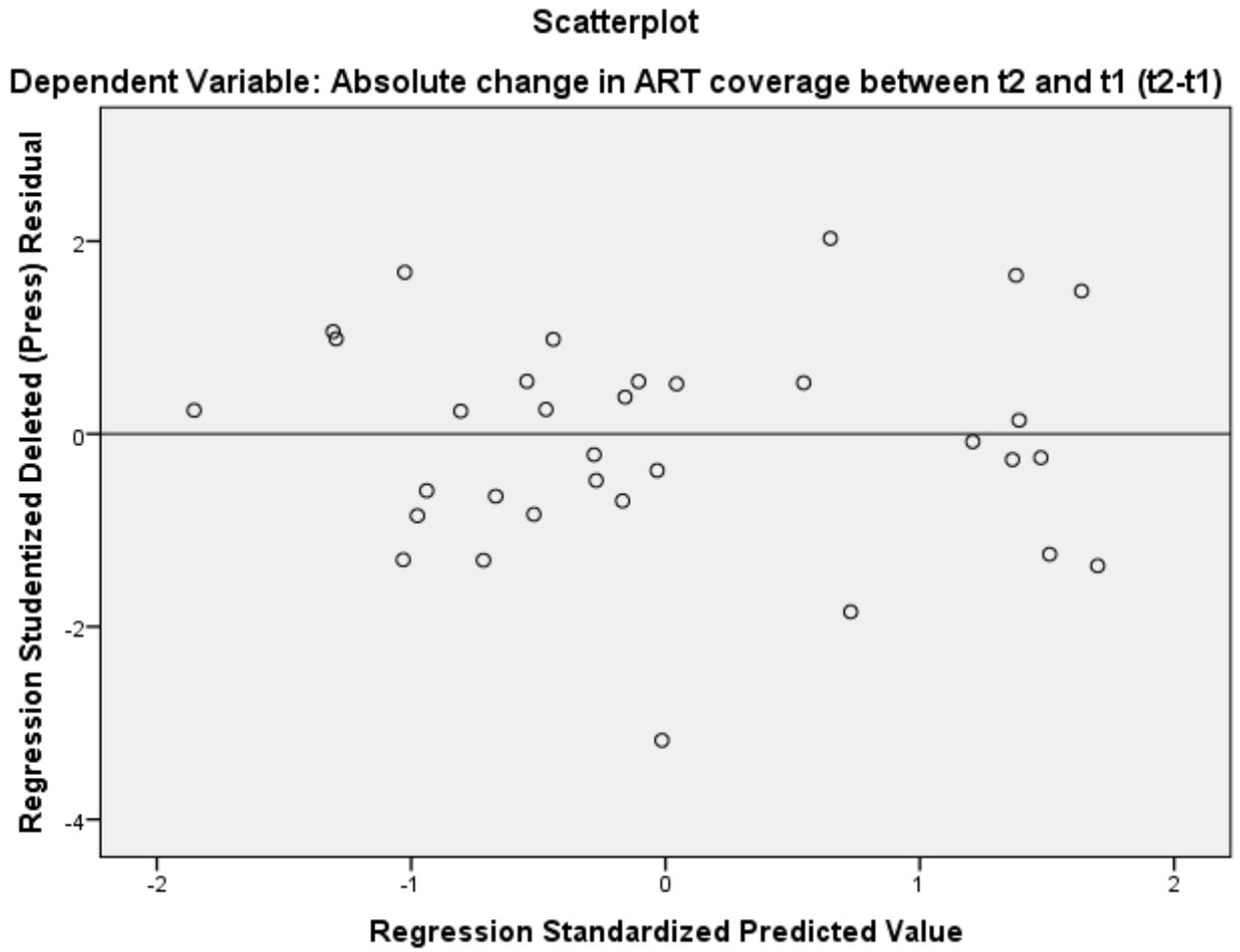
Appendix 6: Test for outliers
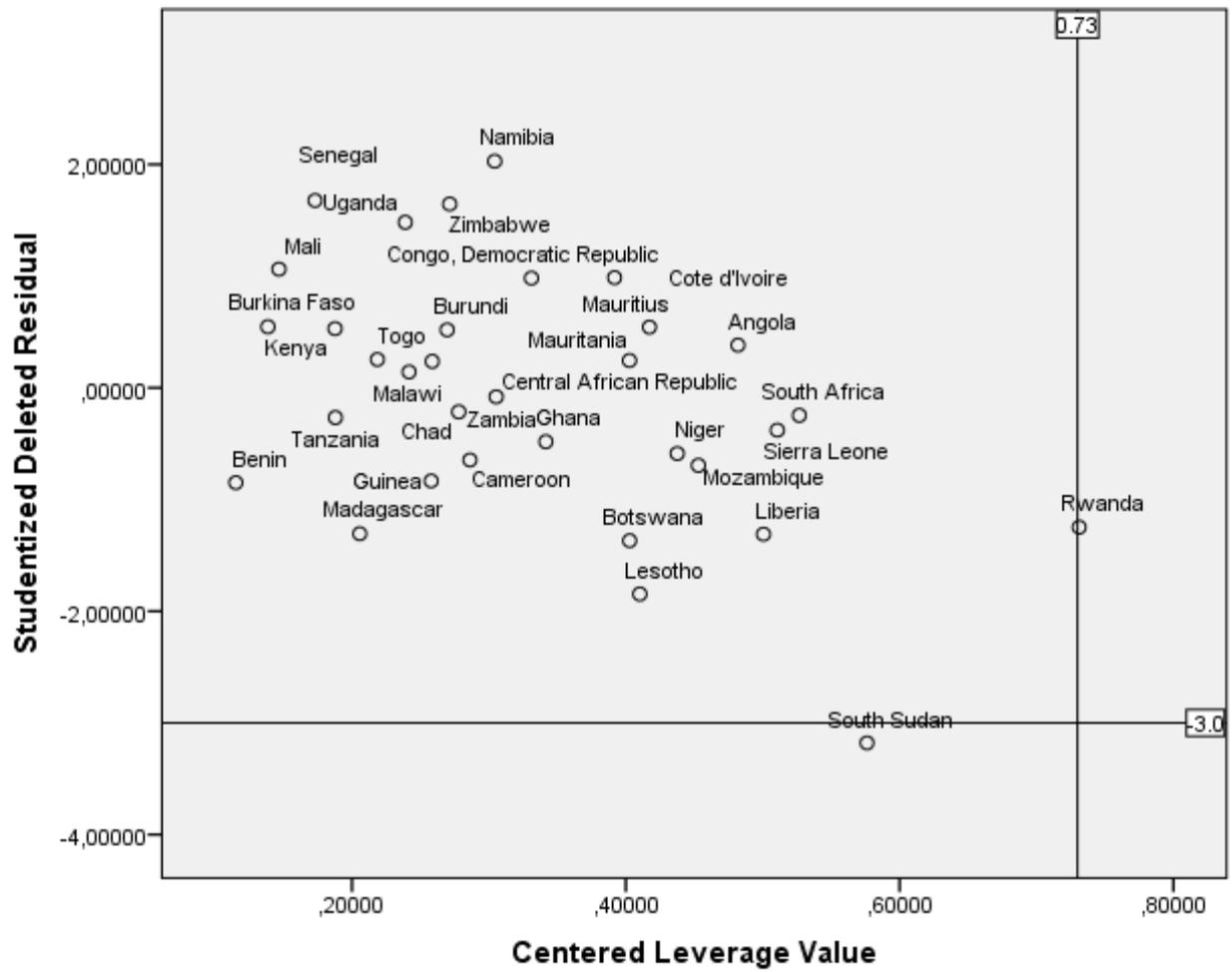
Appendix 7: Standardized regression coefficients

	Standardized regression coefficients
	Beta
Irregular exits	-.003
Level of democracy	-.400
Medium state identity	.483
High state identity	.285
Prevalence rate logged	.373
Public sector corruption	-.533

Appendix 8: Bivariate regression public sector corruption – ART coverage

DV: Change in ART coverage over three years	
Public sector corruption	-13.858**
	(5.400)
Constant	21.835***
	(3.801)
Adjusted R²	.149
N	33

Standard errors in parentheses. *p ≤ .1 **p ≤ .05 ***p ≤ .01.