

UNDERSTANDING STATE RESPONSES TO THE HIV/AIDS CRISIS
IN SUB-SAHARAN AFRICA

by

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ABSTRACT

This dissertation seeks to understand the factors that influence government responses to HIV/AIDS among sub-Saharan African countries. Specifically, I hypothesize that 1) under certain circumstances, countries with democratic institutions are more likely to fight the epidemic aggressively and 2) there are multiple pathways to strong government action. By examining government performance in 29 sub-Saharan African countries, I find strong support for both hypotheses. A case study of Botswana shows that various aspects of a democratic society, from the competitiveness of the political arena to an active civil society, shape government responses to HIV/AIDS.

This research has both theoretical and practical implications. It contributes to the existing knowledge about the effects of democracy on public well-being by highlighting that, even in regions where democratic institutions may not be well-established, their dynamics are still powerful enough to encourage governments to adopt policies that benefit their populations. Additionally, it expands our understanding of HIV/AIDS policy-making in sub-Saharan Africa and in other areas of the world by specifying the different environments which lead governments to be aggressive in addressing the epidemic, a finding of interest to those involved in the field of development.

CHAPTER 1

INTRODUCTION

Since the existence of an AIDS epidemic in several African countries was recognized in the late 1980s, African governments have responded in different ways and with varying degrees of urgency. Some governments ignored the problem and did nothing for several crucial years. In South Africa, post-apartheid political leaders debated whether antiretroviral drugs are effective and necessary. Elsewhere, the question of whether AIDS is an African disease or whether HIV was purposely or accidentally made by the West occupied public discourse. Other governments, on the other hand, reacted swiftly and forcefully. The Ugandan government for example, launched a national campaign of education and prevention very early on that was spearheaded by the head of state himself, President Yoweri Museveni. Another government that reacted with similar aggressiveness was Senegal, although the infection rates were low. In addition to these proactive governments, others (such as Botswana or Tanzania) launched national programs when it became clear that their countries were faced with a public health crisis that threatened to overturn the development gains of the last several decades. These leaders, although they were late in joining the game, also took steps to address the HIV/AIDS epidemic in a forceful manner.

As theoreticians of politics one of the central questions we seek to answer is why political regimes respond or behave in the manner that they do when they are faced with a given situation. My research seeks to help us understand why sub-Saharan African states, faced with the challenge of HIV/AIDS, mapped out the responses that they did. Why are some governments more committed to fighting HIV/AIDS than others? A look at the governments which are doing the best (in terms of effort, if not necessarily in immediate success) reveals no clear pattern in the characteristics or factors that explain this course of action. Rather, governments with various regime types, levels of development and ideologies seem to engage aggressively in this fight. The current state of the literature provides few conclusive answers about the factors that help predict which political leaders and governments will address the crisis. Different studies have proposed state capacity (Patterson 2006; Price-Smith et al. 2004), the personal commitment of the chief executive (Putzel 2004), freedom of the press (Bor 2007) or ideology (Youde 2007) as important elements in explaining government responses, coming to different and sometimes conflicting conclusions.

Surprisingly missing from the mix is the type of political regime in place. Indeed, the research reviewed for this study show that regime type has only been used in one piece (Bor 2007), in which democracy did not appear to be significant. However, evidence in many other contexts shows that a democratic regime matters for policy inputs and outcomes. This analysis therefore includes

the level of democracy in countries, measured both in procedural terms (the holding of regular competitive elections) and in substantive terms (the presence of civil liberties) as an explanatory factor alongside the other aforementioned factors in an effort to show that the type of regime in place does matter, under certain circumstances, in determining the level of aggressiveness a government shows in responding to the HIV/AIDS crisis.

This research goes further than just propose to examine the effect of regime type on HIV/AIDS responses, however. In an effort to recognize the causal complexity that is evident in social phenomena, it also explores the various combinations of factors (including, but not limited to, a democratic regime) that lead governments to address HIV/AIDS forcefully.

Thus the contribution that this study makes is two-fold. Firstly, it contributes to the vast literature on the effects of a democratic regime on public well-being outcomes by illuminating the conditions under which a democratic regime matters in fostering aggressive HIV/AIDS policies. Secondly, it adds to our knowledge of the determinants of policy-making in sub-Saharan Africa, a process which is poorly understood, by focusing on the case of AIDS. In particular, it specifies the different environments which lead governments to be aggressive in fighting HIV/AIDS, which is useful for governments, organizations and individuals interested in identifying and supporting good performers.

The Problem and the Policies

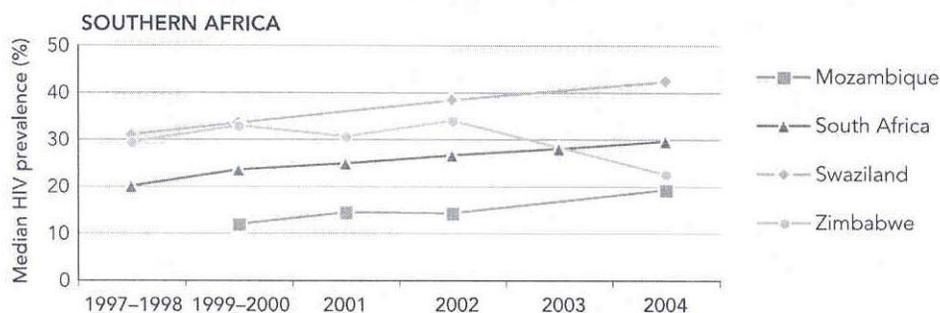
There is widespread recognition that AIDS and the virus that causes it, HIV, represent a problem of epidemic proportions in developing countries in general and in sub-Saharan Africa in particular. According to the latest UNAIDS report (Joint United Nations Program on HIV/AIDS 2006: 688)¹, sub-Saharan Africa is home to 10% of the world's population, but to almost 65% of those infected with HIV/AIDS worldwide. By the end of 2005, 24.5 million people on the continent were infected with HIV, two million of whom were children younger than fifteen. In the year 2005 alone, 2.7 million people across the continent are estimated to have become newly infected and 2 million died of causes to AIDS. Two main differences set the African epidemic apart from that in other countries/ regions of the world. The first is that the mode of transmission is primarily heterosexual, as opposed to the United States, for example, where the disease was first detected in homosexual men and has therefore been seen as a "gay disease." The second difference is that the epidemic is not confined to high-risk groups such as sex workers, but is now generalized, i.e. it has spread to the general population, and no one can really feel totally safe from contracting it. Women are much more affected than men,

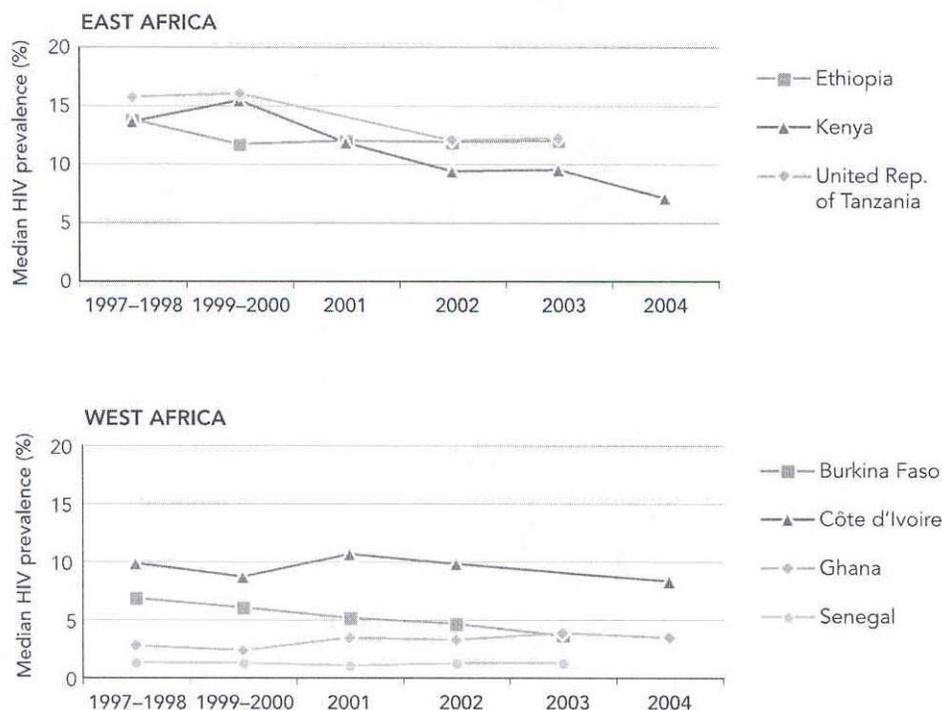
¹ Unless otherwise indicated, all statistics and facts in this section are obtained from the UNAIDS' 2006 Global Report on AIDS.

representing 59% of infections. Physiological and biological differences as well as social and socioeconomic inequality explain this discrepancy.

While the epidemic seems to have leveled off in some countries, it shows no signs of abating in several other countries. Regional variation is stark, as can be seen in the figures below. From the beginning of the epidemic, western Africa has suffered relatively low rates of infection which have remained more or less stable. Eastern and southern Africa, meanwhile, have been heavily hit, with infection rates reaching the 25% mark in the active population (15-49) and 40% among women attending antenatal clinics in some countries.

Figure 1.1 Trends in HIV prevalence (%) among women attending antenatal clinics in sub-Saharan Africa, 1997/98- 2004





Source: UNAIDS 2006, Chp. 2

By now, the severity of the crisis has been recognized around the continent. Almost ten years after Caldwell noted the general apathy in the face of HIV/AIDS, national strategies and plans have been drawn up and some form of national AIDS response councils set up by almost every country (POLICY Project 2006). The “Three Ones” framework, agreed upon at a high-level donor summit in 2004, is now largely in place in every country: **one** HIV/AIDS action framework to coordinate the national response; **one** national coordinating body with a broad mandate; and **one** country-level Monitoring and Evaluation System (UNAIDS 2005). In several countries, HIV/AIDS has been declared a “national

disaster” or a “national emergency” in recent years.² In spite of this, however, one cannot help but notice that the actual commitment to taking aggressive action varies across Africa. Different countries have emphasized different components in their AIDS strategies, some making provision of drugs a priority, some making prevention their most important pursuit.

The Research Question

Against this background, I examine how aggressively each government has responded to the HIV/AIDS crisis and why it has shown the level of commitment to action that it has. It is important to make it clear from the outset that what I propose to explain is not whether these policies were effective in reducing prevalence rates and what made them so or not. My focus is on the commitment demonstrated in the **adoption of policies** by governments. An analysis of the **effectiveness** of these policies, as measured by the fluctuation in infection rates in the population, is beyond the scope of this dissertation as it belongs to the field of public health policy. To measure government commitment, I use the AIDS Program Effort Index, developed by the POLICY

² Incidentally, declaring the epidemic a “national emergency” also allows a government to bypass pharmaceutical patents and buy generic drugs from abroad or manufacture them locally, a move which has been made by a few governments in southern Africa to be able to provide antiretroviral treatment to a greater portion of its infected population than would otherwise have been possible. In recent years, the Clinton Foundation has negotiated with pharmaceutical companies and significant drops in drug prices have now made ARV treatment much more affordable, although, as noted above, a large majority of infected people still do not have access to the necessary drugs.

Project, which specifically aims to measure government effort in various areas related to AIDS action (United States Agency for International Development et al. 2003).

My investigation will be conducted in two parts, using a mixed methods approach. The first part of the empirical analysis uses fuzzy-set Qualitative Comparative Analysis (fsQCA) on a sample of 29 sub-Saharan African countries to determine what factors make a government more likely to address HIV/AIDS aggressively. The data used for this analysis will be described in more detail in Chapter Two, which deals with the sources I use and general descriptive statistics of the data. The second part of the empirical analysis consists in a case study of Botswana, a democratic country whose efforts have been very comprehensive and aggressive, to attempt to understand the causal mechanisms that link a democratic regime with forceful government action.

The question of government commitment to fighting HIV/AIDS is significant for both practical and theoretical reasons. Empirical observation makes it clear that state responses to the pandemic need to be studied. Indeed, raw numbers obscure the variation that exists on the continent among regions and among countries. While infection rates are roughly consistent within sub-regions (i.e. low and stable in western Africa, high but stable in eastern Africa; high and increasing in southern Africa), government effort and commitment is not. Some governments have been very proactive in fighting the disease, while

others have not. This variation in prevalence rates and government responses makes sub-Saharan Africa an ideal choice for investigating the factors that influence governments' level of aggressiveness in responding to the AIDS epidemic.

There are several reasons why an examination of the role of the state is fundamental in understanding successful responses to HIV/AIDS. The state is central to any successful drive against the epidemic. When the state adopts a comprehensive national program, coordination among its different partners in the fight against HIV/AIDS ensures that efforts are not duplicated and crucial response areas are not neglected. Those countries across the continent in which the epidemic has leveled off or has decreased are, by and large, those in which the government has reacted strongly to the crisis and worked closely with domestic civil society and international agencies. Moreover, the apparatus of the state is crucial when responding to a large-scale epidemic such as HIV/AIDS because it can make use of its various institutions (health, education, communications, etc) and make an impact that international organizations and civil society cannot achieve on their own because they do not have the same reach. Any intervention, especially by foreign entities, requires the cooperation of national leaders because of the principle of sovereignty.

The international community, in the guise of the Joint United Nations Programme on HIV/AIDS (UNAIDS, a consortium of U.N. agencies that

coordinates the U.N.'s AIDS effort), programs such as the U.S. Presidential Emergency Program for AIDS Relief (PEPFAR) or the multilateral Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and large foundations such as the Bill and Melinda Gates Foundation, has become actively involved in recent years in combating the epidemic on the continent. However, there is widespread agreement among all these organizations that the best strategy is not for them to substitute for or override government efforts, but to complement them and that their role is to support national programs (Bill and Melinda Gates Foundation 2006; Webb 2004). They have been unwilling to step in and work aggressively in states where the government has not taken the leadership in combating AIDS. Swaziland, for example, has the highest infection rate in the continent, but because the government is not seen to be attacking the epidemic as energetically as it could, international agencies have not provided as much aid to the country as to other states with smaller epidemics (Patterson 2006). Clearly, the state remains central to our understanding of what makes for aggressive and comprehensive responses.

Along the same lines, an additional reason why the question of the determinants of government responses is important is that, in spite of the abundance of literature on the HIV/AIDS epidemic in Africa, its political dimension remains as yet understudied. Indeed, political science as a discipline has generally ignored the question of the AIDS crisis in the developing world.

Over fifteen years ago, Sherrill et al. noted that, in not addressing the political aspect of the global AIDS crisis, the discipline was missing many opportunities to deepen our understanding of “processes of political mobilization, policy making [and] the creation of political networks or alternative power maps” (Sherrill et al. 1992: 688). Things changed little in subsequent years, which allowed Boone and Batsell to say almost a decade later that, “Political Science as a discipline... has been slow to grapple with the AIDS crisis. It seems that the HIV-AIDS issue has been conceived of as too private, too biological, too microlevel and sociological, too behavioral and too cultural to attract the attention of many political scientists” (Boone and Batsell 2001: 4).

Several issues are raised by the HIV/ AIDS crisis which constitute appropriate and important topics for the discipline. These include: the ability of developing states to face the crisis in light of structural adjustment reforms that have imposed fiscal austerity and reductions in public expenditures; the role of civic groups in confronting AIDS in states where government efforts are inadequate or absent; the effect that such mobilization may have on the subsequent development and strengthening of civil society vis-à-vis the state, leading to more active political participation; and the impact of the epidemic on security forces, local elites, and governance capacity in general (Boone and Batsell 2001; Sherrill et al. 1992). Some of these areas are beginning to receive sustained attention, particularly the issue of the effects of HIV/ AIDS on security

(Barnett and Prins 2006; Elbe 2002; McInnes 2006; Ostergard and Barcelo 2005; Ostergard 2002; Ostergard and Tubin 2004). Other topics, however, have continued to be ignored in spite of their importance. This means that our understanding of the political dimensions of the epidemic still remains very weak.

Specifically, the role that governments play in addressing the epidemic, and the factors that lead them to respond in the manner that they do, is poorly understood. What has been published on the topic can be broadly divided into two groups: descriptive studies of specific states' AIDS policies, and cross-national studies of government responses.

Scholars in the first group have largely focused on a handful of cases. Two countries that are repeatedly studied are Uganda and South Africa³: Uganda as an example of a government that acted early and forcefully (Hyden 2005; Low-Beer and Stoneburner 2004; Putzel 2003, 2004; Rau 2006) and South Africa as the anomalous case, a country with a democratic government and enormous resources that failed to act (Butler 2005; Schneider 2002; Furlong and Ball 2005). The general consensus in these works is that the timing of the Ugandan government's response was key in the spectacular reversal of the epidemic in Uganda over the last fifteen years (prevalence rates, estimated at

³ Most case studies up to this point have focused on sub-Saharan African countries; other countries, India and Brazil in particular, are only now attracting scholars' attention.

over 20% in the late 1980s, are now stable at about 6%). Putzel (2004) argues that it was the personal leadership of President Yoweri Museveni that mattered- his personal convictions and behavior, as well as his outspokenness on the issue. Museveni “listened to and valued scientific and medical knowledge.” He “favored public delivery of health care and the regulation of private providers.” He called for the “protection of the rights of women and children and advanced a socially conservative agenda.” He “argued for an all out campaign to educate the public”. However, these factors relate to personal characteristics of the Ugandan president and do not provide any foundation for us to test hypotheses in other settings and generalize findings. There is no discussion of the **context** in which Museveni was acting- the local institutional, economic or political context, or the regional and international context for his actions and decisions. Although the commitment of the highest government officials are undoubtedly key to a successful national campaign, Putzel’s exclusive focus on the President weakens his analysis, for it reduces major policy decisions to the personal preferences of a single man.

In South Africa, President Nelson Mandela and his successor, Thabo Mbeki, were both reluctant to confront the HIV/AIDS epidemic. Despite early warnings about the extent and likely disastrous consequences of the epidemic in

the population, both presidents failed to make it a priority to address the crisis⁴. As late as August 2006, South African Minister of Health Manto Tshabalala-Msimang caused a storm at the International AIDS Conference in Toronto by insisting that traditional treatments such as garlic, lemons and beetroots are just as important in combating AIDS as anti-retroviral drugs because they help to boost the immune system (BBC News 2006).

As is evident in this discussion, political leadership, especially the role of the chief executive, is considered crucial in each state's response. The strength of those countries' responses seems to be directly correlated with each president's personal ownership of the issue. Youde (2007) argues that this focus on the level of "political will" demonstrated by political leaders does not address the question of the *root* of this will. Focusing on what he terms "ideology" (a pro-Western outlook and willingness to work with the international community in the Ugandan case, and a Western-skeptic attitude and resentment at international interference among the post-apartheid South African leadership), he explains why Uganda was pro-active and South Africa resistant to scientific evidence and international guidelines.

Senegal is another country that has also received attention because of its similarly aggressive response early on, which has allowed infection rates to

⁴ Since leaving office, Nelson Mandela has recognized that his administration did not do enough to address HIV/AIDS. He has been active in bringing the issue to the forefront since he retired from office.

remain consistently low (Piot and Coll Seck 2001; Putzel 2003). Here success is attributed to the government's efforts to involve civil society, particularly religious leaders, as well as its early provision of treatment to infected individuals.

Finally, security concerns may also play an important role in determining whether the state can focus on a long-term development challenge such as HIV/AIDS. Ostergard and Barcelo (2005) argue that the presence of a security threat means that the political leadership is focused on meeting this immediate threat rather than on the more distant one of disease, no matter how devastating the consequences may be in the future. In the absence of security concerns, however, the government can focus on longer-term goals and projects such as making policy to combat HIV/AIDS.

Three cross-national analyses of government responses to the AIDS epidemic provide further insight into the factors at play in shaping government responses to HIV/AIDS. Patterson (2006) compares four cases (Swaziland, South Africa, Zimbabwe and Uganda) to examine the influence of four characteristics of the state on each country's response to AIDS over the last two decades: security concerns, degree of centralization (referring to the tendency in African states for power to be concentrated in one person or one small group's hands), neopatrimonialism (level of corruption) and capacity (measured by GNI per

capita). These variables' effect on state effort is tested using the AIDS Program Effort Index (API).

Patterson's analysis reveals no clear-cut answers. In her own words, these factors have an "inconsistent effect" (pp. 56) in the countries she examines. For example, while internal turmoil has contributed to Zimbabwe's lethargy in the face of the HIV/AIDS epidemic, in Uganda the ongoing civil war and the need to maintain a healthy army had the opposite effect on President Museveni's calculations. Similarly, a high level of centralization has actually *helped* Uganda's program, but has adversely affected Zimbabwe and Swaziland in their efforts. A similar observation emerges for neopatrimonialism. Finally, high capacity has not translated into more effort in the case of Swaziland, but it has definitely helped South Africa.

Price-Smith et al. (2004) do not focus exclusively on Africa, but use a random sample of 50 members of the United Nations. The authors posit that state capacity impacts government "adaptability" or response to HIV/AIDS. They create a composite measure of state capacity, using GNI per capita, government expenditure on social services, secondary school enrollment ratio, military spending per capita, ratio of physicians to general population, telephones per 100,000 population and percentage of paved roads in the country. These measures are weighted, with the infrastructural variables being assigned a

greater weight than expenditure, and then standardized. The authors find that state capacity is positively related to government adaptability to the crisis.

The choice of variables included in the weighted index is debatable and warrants some caution in interpreting and accepting the results. More problematic, however, is the choice of the dependent variable. Price-Smith et al. (2004) use HIV prevalence rates as their dependent variable. Specifically, they use the percentage change from the apex of the epidemic from each country to measure how successful government has been in “adapting” to the crisis⁵. For a number of reasons, it is highly problematic to use prevalence rates to measure government effectiveness. First, the development pattern of HIV/AIDS makes it unfair to judge a government’s efforts based on prevalence. The long latency of the disease (symptoms of AIDS typically appear about eight years after infection in Africa) means that people may be infected for a long time and be unaware of it until they develop the symptoms of disease. During that time, they may infect others. Since the only way to find out if someone is seropositive is for them to take a test, and it is both impractical and costly to test everyone all the time (especially in Africa, where resources are severely limited), this effectively means that only those who actively seek out opportunities to be tested will become aware of their serostatus and be able to stop spreading the infection. Thus,

⁵ It is not clear for what year or series of years this analysis is performed, as this information is not provided.

government programs may not appear to be successful for several years. Second, efforts by a government to provide treatment for infected people mean, by definition, that prevalence rates will take a long time to decline. For, if the government provides drugs, then infected people remain alive for a longer period of time than they otherwise would, keeping prevalence numbers up. Prevalence rates stabilize when the number of newly infected people match the number of deaths, and decline only when deaths outnumber new infections- a tipping point which may take several years. As mentioned before, it is difficult to ascertain accurately the number of new infections every year, since that would require frequent testing of the population, which is both inefficient and expensive. Third, epidemics started at very different times in different regions. While the eastern African epidemic seems to have started in the late 1970s, with reports of people dying of "Slim Disease" in Rakai District in southwestern Uganda reaching Western doctors by the early 1980s, southern Africa did not see an outbreak until the late 1980s. Thus, it is no surprise that the epidemic has matured and is declining in eastern Africa while it is still raging in southern Africa. Here timing, not of government response but of the actual unleashing of the epidemic, plays a role in prevalence rates. And finally, looking at infection rates is not the best way to gauge government efforts because of the many exogenous variables that may play a role. From social context (such as women's rights and status and labor migration) to individual choices about condom use or

regularity in following a treatment regimen, several factors may influence the outcome of government policy. For all these reasons, gauging government responses using prevalence rates would not give an accurate picture of the actual level of commitment they show.

The third cross-national study of interest (Bor 2007) seeks to explain the commitment, or “political will,” of high-level government leaders specifically (as opposed to the efforts of the government more broadly). Studying a sample of 54 developing countries, Bor finds that press freedoms, income equality and HIV prevalence explain a significant portion of political leaders' commitment to addressing HIV/AIDS.

The Importance of Regime Type: Democracy and Policy Performance

Building on the works reviewed above, I argue that democracy is one overlooked causal factor that may lead to forceful government action on HIV/AIDS. Indeed, an extensive literature exists on the relative policy performance of democratic and authoritarian regimes. Sen (1993) famously observed that there has never been a famine in a democracy. In addition, scholars have found that democracy is associated with a variety of positive outcomes: higher levels of basic needs provision (Baum and Lake 2001; Moon and Dixon 1985, Bueno de Mesquita et al. 2002, 2003), lower infant mortality (Boone 1996, Przeworski et al. 2000, Zweifel and Navia 2000) and higher

economic growth (Sloan and Tedin 1987, Leblang 1997, Baum and Lake 2003). More recently, more attention has been paid to the differences between democratic and authoritarian regimes in their inputs (as opposed to outcomes). Several studies have found a positive relationship between democracy and social spending. Kaufman and Segura-Ubiergo (2001) and Brown and Hunter (1999, 2004) have shown that democratically elected governments in Latin America spend more on education and health care. A recent study (Stasavage 2005) finds that these results hold in Africa as well, where democracies spend more on primary education.

What is it about a democratic regime that encourages leaders to act in the people's interest? The mechanisms identified relate both to the dynamics of competitive electoral politics and the features of a democratic society. A nice summary is provided by Frey and Al-Roumi (1999). *Competitive elections* make political leaders accountable to citizens. Whatever citizen preferences are, politicians have to deliver or they face defeat. Elections also create incentives for politicians to include disenfranchised groups, such as the poor or those who live in rural areas, into the political process. These groups are likely to demand concrete action that benefits them in return for their support. *Political participation* provides channels for citizens to express their demands to politicians. With the information thus available, politicians are able to make educated policy decisions that address citizens' demands. *A free press* monitors

the performance of the government and documents its shortcomings. It draws attention to problems and needs in the population, putting pressure on the government to act and deliver on the demands of the population so as to avoid more negative publicity. *Opposition parties* are similarly whistle-blowers: they put pressure on policy makers to address fundamental needs.

Applying these arguments to the issue of HIV/AIDS, I argue that some or all of these mechanisms would provide incentives to democratically-elected governments to address the epidemic aggressively. Especially in those countries where prevalence rates are high, governments are likely to face pressure from citizens, civil society and opposition parties to take decisive steps to respond to this public health crisis. Freedom of the press means that signs of the extent of the epidemic (the rising number of deaths, the conditions in which seropositive people live and die, the financial and emotional effects of the disease on various segments of society) will be reported on and put pressure on the government to take action. In those countries where the epidemic is taking a heavy toll on the productive portion of the population, the private sector and professional groups are also likely to demand that government respond to the threat to national development. In short, in some contexts, we can expect the mechanisms identified above to be at work in pushing democratically-elected governments to react aggressively to the HIV/AIDS epidemic.

In measuring how democratic a country is, I use both procedural and substantive dimensions. The holding of competitive elections is recognized as the most basic necessary condition for a country to be considered democratic (Schumpeter 1976). However, a democratic society has other characteristics beyond the holding of competitive elections. In particular, its citizens enjoy civil liberties such as the right to assemble in civil society groups and to lobby (and sometimes challenge) the government; the press is free; people are free to practice whatever religion they choose, etc. The causal mechanisms outlined above include the effects of both electoral competition and the substantive aspect of democracy; however, in many states in Africa that regularly hold competitive elections, civil liberties are curtailed. These states can be characterized as procedural democracies or illiberal democracies (Zakaria 1997). To distinguish between the effects of electoral competition and those of civil liberties, I use both a measure of the degree of competition in the electoral system and an indicator of the level of civil liberties. These two measures are described and discussed in Chapter Two.

Multiple Causation

The second thrust of the argument made in this dissertation is that the reason why no conclusive picture emerges from the research done so far is that there are, in fact, several pathways to the outcome, i.e. more than one path

leading to aggressive government action. This phenomenon, termed **equifinality** or **multiple causation**, has received increasing attention from social scientists in recent years (for example, Goertz 2006; Ragin 1987, 2000; Rihoux and Ragin 2008). Equifinality recognizes that causal complexity manifests itself in social phenomena, and that “different constellations of factors may lead to the same result” (Rihoux and Ragin 2008:8).

If the question of aggressive government responses to HIV/AIDS is best explained by a theory that posits multiple causal pathways, then conventional regression-based quantitative analysis is not a suitable methodology. One approach that does acknowledge and incorporate equifinality is qualitative comparative analysis (QCA). The logic of QCA approaches is discussed more at length in Chapter Three; a brief explanation of their features will establish why it is best suited to test the proposition that there are in fact several causal pathways to aggressive government action on HIV/AIDS.

Qualitative comparative analysis differs from conventional quantitative analysis in several ways. Firstly, qualitative comparative analysis looks for *causal combinations* as opposed to single causes. The idea is that, more often than not, causes in the real world are not independent, but act in conjunction with one another and influence one another to produce outcomes. Thus QCA seeks to account for causal complexity rather than net effects (Ragin 2008: 6). Secondly, and directly related to the first item, there are no *a priori* assumptions

about how causal factors relate to one another in producing the outcome. In other words, causes can be related additively (the Boolean OR, indicating that one cause or causal combination can be substituted for the other) or multiplicatively (the Boolean AND, meaning that all the factors are necessary). While regression analysis is by nature additive, and multiplicative configurations are possible by the inclusion of interaction or squared terms, these are established in the model by the researcher. By contrast, in qualitative comparative analysis, the process of analysis itself looks for patterns and determines these combinations. Thirdly and directly relevant to my argument, qualitative comparative analysis does not assume that there is only one path to the outcome. While regression techniques average out tendencies across observations, ignoring the distinctiveness of cases and outliers, qualitative comparative analysis takes into account cases' specificities. A causal combination that applies to only one case or a small subset of cases is not considered less useful or less important than one that explains fifty cases; it is treated as one causal combination alongside others (Rihoux and Ragin 2008: 9). This makes qualitative comparative analysis a case-centric, rather than a variable-centric, method.

What does all this mean for the research question at hand? Applied to this study, multiple causation leads us to assume that there may be more than one set of causal factors that produce aggressive government action. While I argue that

democracy is an important causal factor, it may not matter in every single case; non-democratic regimes may also, under certain conditions, show aggressiveness in fighting HIV/AIDS. Another example is that, although strong states are in a better position to respond to the epidemic, those without the advantage of high capacity may also put forth forceful efforts. There is more than one path to strong government action.

The Model

The model I test incorporates eight causal factors. Along with level of democracy (measured in two ways: competitiveness of system and existence of civil liberties), which I hypothesize plays a role in whether a government will be aggressive in responding to the HIV/AIDS epidemic, I use other factors that have been shown in previous studies to matter: state capacity, internal stability (lack of security threat), level of development, and prevalence rates. In addition, I include the direction of the epidemic, with the reasoning that, even if a country has a small epidemic, if it is on the rise the government may choose to act forcefully to prevent it from becoming a large problem; and finally, the level of international funding, as a high level of it may prompt a government to set up a strong national response.

The model being tested may be represented thus⁶:

$$\begin{aligned}
 \text{API} = & \textit{Democratic Institutions} + \textit{Civil Liberties} + \textit{State Capacity} + \textit{Internal} \\
 & \textit{Stability} + \textit{Prevalence} + \textit{Direction of Epidemic} + \textit{Level of Development} + \\
 & \textit{International Funds}
 \end{aligned}$$

Layout

The rest of this dissertation proceeds as follows. The second chapter discusses in depth the data used in the qualitative comparative analysis, describing their sources, formats, and descriptive statistics. Chapter Three describes in detail the method used, explaining the logic behind it, the reasons for its use and the way to interpret results. The fourth chapter provides a test of the theory, analyzing whether a democratic regime plays a role in influencing a government to address HIV/AIDS more aggressively and whether there are indeed multiple pathways to aggressive government action. Chapter Five is a case study of Botswana, which illustrates the argument presented in this dissertation that a democratic regime can, in combination with other causal factors, be an incentive for governments to act forcefully on HIV/AIDS. The sixth chapter concludes by summarizing the work done in the dissertation and by bringing together the lessons learnt from the analysis.

⁶ The additive sign here does not signify the Boolean OR referred to above, but merely the sequence of causal factors tested in the model.

CHAPTER 2

DATA: SOURCES AND DESCRIPTIVE STATISTICS

This chapter surveys the data used in the analysis of state effort to combat AIDS. It details the sources of the data, discusses their advantages and disadvantages, potential alternatives and graphs their descriptive characteristics. The outcome I seek to explain is the level of effort by the state, measured by the score received on the AIDS Program Effort Index. The explanatory variables are type of political institutions, level of civil liberties, state capacity, political stability, level of economic development, level of international funding, HIV/AIDS prevalence and direction of epidemic.

1. OUTCOME: NATIONAL EFFORT IN COMBATING HIV/AIDS

Since the phenomenon I try to explain in this study is the level of *effort* that national governments put forth in addressing the AIDS epidemic, it would be inappropriate to use indicators that would point to the *results* of their policies, such as changes in prevalence rates. I measure government commitment using the AIDS Program Effort Index (API), a survey built by USAID, UNAIDS, WHO and the POLICY Project to measure the level of effort demonstrated by governments in addressing HIV/AIDS.

The choice of the API as a measure for the outcome of interest is motivated both by the weaknesses of alternative measures and by the advantages offered by the survey. Previous studies have used two other measures of government effort: budgetary allocations to HIV/AIDS programs and the number of socially-marketed condoms distributed.

Using budgetary allocations towards HIV/AIDS initiatives poses both theoretical and practical difficulties. On the theoretical level, focusing on money spent ignores other important dimensions of a government's commitment to the fight that may not require funding, such as political leadership, changes in the school curriculum to better inform children and teenagers, or the passing of laws to protect HIV-positive persons. On the practical side, gathering reliable and comparable data about money allocated to AIDS efforts is tricky for three reasons. Firstly, money for AIDS programs is often bundled with allocations to other programs, which are then expected to incorporate the elements of the national HIV/AIDS program. Thus, no separate figure for the HIV/AIDS portion of the program is available. For example, in Ministry of Health budgets, some items, like testing services, may be specifically marked HIV/AIDS, while others, such as care of sexually transmitted infections (STI) or pre-natal care, may contain a significant HIV/AIDS component which is not individually mentioned. The second complication posed by using budgetary allocations as a measure of government effort is that some governments have decentralized the

implementation of their HIV/AIDS programs, with the logic that local governments are best placed to decide upon the appropriate allocation of funding among different program components based on local needs. An example of this is South Africa, where provincial governments have significant discretion over how to spend funds that are allocated by the central government (Butler 2005; Schneider 2002). Typically, little or no data is gathered as to how these funds are spent, so determining the amounts spent on HIV/AIDS is difficult. The third factor making budgetary allocations an inappropriate measure of governmental commitment is that, in some countries, government has partnered with community-based organizations (CBOs) and other civil society groups to deliver HIV/AIDS programs and is funding their activities. These funds would not appear as HIV/AIDS spending, but rather as support for CBOs or the equivalent items in the national budget. The tally would not reflect the true amount being spent.

The number of socially-marketed condoms⁷ is another measure that has been used (Lieberman 2007). This too, seems a rather narrow definition of government effort, as it ignores other important areas of intervention such as education, health delivery services or treatment. It is also Western-centric in its emphasis on condoms, which tend to be favored by donor countries and agencies

⁷ Socially-marketed condoms are those made available free of charge through health delivery centers, community centers or schools.

but have significant social barriers attached to their use and are therefore less popular (at least at the beginning) among Africans.

These substantial weaknesses of its alternatives, as well as its own advantages, make the API an attractive option for measuring state effort in combating AIDS. The express purpose of the API is “to measure the amount of effort put into national HIV/AIDS programs by domestic institutions and by international organizations,” (USAID et al 2003: 1) and therefore corresponds very closely to the phenomenon I seek to explain. As will be described below, it addresses the level of financial support of AIDS programs, the provision of condoms as well as other avenues of government action that the two measures discussed previously cannot measure. As such, it provides a more complete picture of state commitment. It also enables us to distinguish among different program areas, such as political support, prevention efforts, legal protection, etc, allowing for a more nuanced understanding of each government’s program. Moreover, because the survey is administered to experts in each program area, it allows for independent evaluation of each category, making it unlikely that bias in one area would spill over or otherwise contaminate the evaluations of each category⁸.

⁸ The low correlation among scores in different categories increases confidence in the independence of the various respondents in their judgments.

The weaknesses of the API are two-fold: the nature of the measure (a survey) and the choice of respondents to the survey. I examine each in turn and argue that the API still is the best measure of government effort.

Survey research has a long but by no means undisputed pedigree in political science scholarship. While the insights gained from asking people questions directly (as opposed to observing or measuring) can be valuable, their very authenticity can be questioned due to a variety of concerns. An inherent danger of survey research concerns the design of the survey itself and especially the wording of questions, which can elicit a certain type of answer from respondents: respondents may feel pressured to give a certain type of answer, whether it be the politically correct one or the one that they feel the researcher wants to hear (Fowler 2008: 15-16). This well-known and documented weakness can be overcome by careful survey design. The API was tested in two countries before being administered in all 54 countries in the sample, and interviews were carried out not only on an individual basis but also in groups in an attempt to ensure that respondents would answer honestly and consistently (USAID et al. 2003: 5).

The second potential shortcoming of the API concerns the constitution of the respondent population. Consultants carrying out the survey in each country were instructed to contact the two or three persons most knowledgeable about each particular survey component and to administer the relevant part of the

survey to them. For example, legal experts could be contacted about the sections on the questionnaire dealing with the legal and regulatory environment.

However, the API did not have a standardized method of selecting these key informants- in different countries, experts came from government, civil society, donor organizations, the private sector, and academia (USAID et al. 2003: 6).

This makes comparisons across countries potentially problematic. Secondly, a bias may be introduced by virtue of the very position held by the respondent.

For example, officials of the Ministry of Health or a member of a country's national AIDS committee may be more likely to rate the government's efforts positively. An AIDS activist may be much more critical. Since POLICY does not provide a list of respondents from each country, it is difficult to make a judgment on the possible level of this bias. However, consultants were instructed to select respondents from different groups (government, civil society, donor organizations, etc) just so such bias might be mitigated, as the responses of all respondents were averaged to give the final score for each component in each country. A final potential problem is the difference in the expectations of these experts. Those coming from richer or more developed countries may have had higher expectations and rated their governments' efforts accordingly, which also makes cross-country comparison tricky.

While these weaknesses of the API pose legitimate concern, in light of the more severe weaknesses of its alternatives, it still appears to be the best available

measure of government effort. An additional reason for confidence in this measure is that our purpose here is not to rank countries precisely, but to group them broadly into countries that are doing well and those doing less well. For this exercise, the API provides an adequate measure for such categorization.

Construction of the survey

The API provides 54 countries' (including 29 sub-Saharan countries) scores on expert surveys about national AIDS programs. A first round of the survey was conducted in 2000, but the results from that round are not available. The survey was modified for the 2003 round to be more precise and more directly comparable across countries⁹. No more recent rounds have been conducted, the POLICY Project having only received funding for a period of five years, which ended before another round could be conducted.

The survey contained ten sections, each addressing a different area of program effort (see Appendix A). It is important to note that the API was not designed to evaluate program *outputs*, but the *inputs* in each category. Each section of the questionnaire, in turn, contained a number of questions.

The questionnaire was designed to make results comparable across countries by the inclusion of two kinds of evaluation by these experts. The first

⁹ Contrary to the 2003 round of the API, the 2000 round did not contain an objective Yes/ No component, but only asked respondents to rate their country's effort in each area on a 1-10 scale.

component is a series of 'Yes/ No' questions about the existence of a policy and its characteristics. There are 167 of these specific item questions (USAID et al. 2003: 4). If the answer was Yes, they were then asked to rate the particular area of program effort by assigning it a score between 0 and 10. This obviously introduces an element of qualitative judgement into the assessment of program effort. The final score for each area is computed by averaging the quantitative item scores (the 'Yes/ No' questions) and this qualitative summary rating. The maximum score in each area is the proportion of positive responses to the 'Yes/ No' questions.

The experts gave each country a score out of a total of 100 possible points in each program area. When possible, all respondents for a given program area were interviewed together so they could come to a consensus as to the score to be assigned and the opinion to be expressed. When this was not possible, each respondent's scores were collected separately and then averaged to express the consensus evaluation of the experts for a given program area.

This results in separate scores for each program area evaluated for each country, scores that represent the opinion of experts in that program area for that country, as well as an overall average. All scores are out of 100 possible points.

The program areas investigated are:

- Political support
- Policy and planning

- Organizational structure
- Program resources
- Evaluation, monitoring, and research
- Legal and regulatory environment
- Human rights
- Prevention programs
- Care and treatment services
- Mitigation programs

Next, I explain what factors each of these program categories examines and describe the specific questions asked.

A. Political Support

The political support category, as its name suggests, evaluates political leaders' commitment to addressing HIV/AIDS and their willingness to talk publicly about it. Specifically, the questionnaire asks respondents if the head of the government or other high officials "speak publicly and favorably about AIDS issues at least twice a year," the idea being that if they do, this signals a willingness to make AIDS an issue of open national debate. This category also asks about the existence and functioning of a National AIDS Coordinating Council or Commission. The fact that it is chaired by the head of state or a

deputy head of state, as well as the inclusion of civil society in the organization, indicates a positive attitude on the government's part concerning AIDS. The final question in this section addresses funding, specifically whether the government has applied for funding from the Global Fund for AIDS, Tuberculosis and Malaria and whether this application has been approved.

B. Policy and Planning

This program area details the concrete policy environment for AIDS. In this section, respondents are asked whether a national policy concerning AIDS exists in the country. If it does, they are then asked whether specific items such as voluntary counseling and testing, condom promotion and distribution or breastfeeding (18 items in all) are addressed in this national policy. Additionally, a question asks if this policy document was drafted with "significant involvement of civil society," the idea again being that a government that includes civil society shows more commitment than one that does not.

C. Organizational Structure

This category examines the adequacy of the administrative structure in place to address HIV/AIDS and the competence of staff, both of which are assessed at the national, provincial/ state, and district levels. The questionnaire also asks

about participation of different ministries, whether in their own program or in the national one.

D. Program Resources

Questions in this program area investigate the allocation of resources. The first question enquires whether resources are allocated according to “considerations of need, cost-effectiveness and available infrastructure.” The other substantive question in this category then asks the respondents to rate the resources that are available for each of 20 programs such as those that target youth, at-risk groups, the care of orphans or blood safety.

E. Evaluation, Monitoring and Research

This category asks if there is an officer who is specifically in charge of monitoring and evaluating activities of the national program, and what components of the national program form part of the national surveillance system.

F. Legal and Regulatory Environment

This category, the longest in the questionnaire with 11 questions, aims to uncover whether laws regulating the release of information and the protection of

at-risk populations and infected persons have been passed concerning HIV/AIDS and how strictly they are enforced.

G. Human Rights

This category, which overlaps with the previous one in some respects, examines the general social atmosphere as far as AIDS is concerned: the conducting of workshops to dispel negative attitudes and stereotypes, the ratification of international human rights treaties by the government, the existence of legal services to inform people infected with and affected by HIV/AIDS of their rights, among other things.

H. Prevention Programs

As its name implies, this category asks respondents whether specific prevention measures have been implemented (for example, school-based education for youth, programs to ensure safe injections in health care clinics, as well as efforts to promote accurate reporting on HIV/AIDS by the media).

I. Care and Treatment Services

The sole substantive question in this category asks whether specific programs are available to treat physical conditions associated with HIV/AIDS

(e.g sexually transmitted infections) and the psychological effects of the disease on infected persons and their families.

J. Mitigation Programs

This category enquires about the implementation of activities whose aim is to mitigate the impacts of the disease on individuals, families and communities. Examples of such activities include community support for orphans and other vulnerable children (OVC) and services that try to reduce the social and economic impacts of infection.

African Countries in the API

The 29 sub-Saharan countries included in the survey are grouped regionally, i.e. countries belonging to Southern and East Africa are grouped together, as are countries in West and Central Africa (see Table 2.1 below). Across the continent, the scores range from 39 (Lesotho) to 82 (Burkina Faso). The average score for each of the two sub-regional groupings is 64, as is the continental average.

Some surprising observations emerge from a cursory examination of this table. Firstly, two small countries top the list. The country with the highest score is Burkina Faso, a country which does not make international headlines very often. A small country with limited resources, it has nevertheless been

confronting the HIV/AIDS crisis very aggressively, with the help of foreign governments and international agencies (World Bank 2006a). Ranked second is Rwanda, a country that experienced genocide, with the attendant widespread destruction of physical and social infrastructure, not so very long ago.

Table 2.1 Sub-Saharan countries included in API, with score and rank

COUNTRY	AVERAGE SCORE	RANK
Eastern and Southern Africa		
Angola	43	28
Botswana	80	3
Burundi	67	14
Ethiopia	57	22
Kenya	48	26
Lesotho	39	29
Madagascar	62	18
Malawi	77	4
Mozambique	68	12
Namibia	70	10
Rwanda	81	2
South Africa	75	7
Swaziland	60	20
Tanzania	63	16
Uganda	76	6
Zambia	66	15

Zimbabwe	61	19
Eastern and Southern Africa Average	64	
Western and Central Africa		
Benin	68	12
Burkina Faso	82	1
Cameroon	73	8
Chad	52	24
Congo	47	27
Congo, D.R.	54	23
Cote d'Ivoire	63	16
Ghana	73	8
Mali	60	20
Nigeria	69	11
Senegal	77	4
Togo	52	24
Western and Central Africa Average	64	
All countries: Average	64	

Source: The AIDS Program Effort Index, 2003 Round

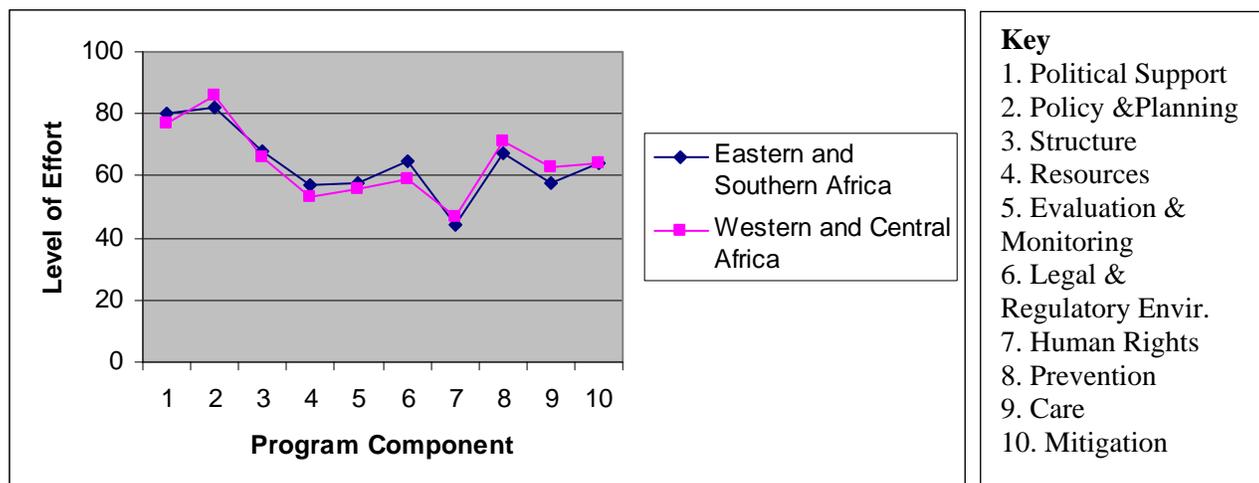
The second observation is related to the first one: none of the large countries on the African continent fares very well in this classification. Neither the largest economy, South Africa, nor the “giant of Africa,” Nigeria, is among the top five most aggressive states.

A third observation is that there is no discernible difference between the sub-regions in terms of the level of effort that they are expending to confront the HIV/AIDS epidemic. Even though there is significant variation in the severity of the epidemic, both groups seem to be motivated in an equal measure to address the epidemic. This is clearer in Figure 1 below, which breaks down the average scores in each program area by sub-region. Western and Central Africa is doing slightly better in the areas of human rights, prevention programs care and treatment services and mitigation programs- but the difference is so small as to be negligible. This suggests that infection rates by themselves do not allow us to predict the level of effort- which will be tested in the analysis. Moreover, all the countries in the study have strengths and weaknesses in the same areas, as demonstrated by the figure below.

It is interesting to note that all countries do very poorly in ensuring the human rights of those who suffer from HIV/AIDS and their families. This is consistent with the lack of regard for human rights more generally in Africa, as demonstrated by the abysmal Freedom House scores for the continent for several years running, including 2003, the year that the API was conducted. The continent's average in civil liberties was 3.9¹⁰. According to Freedom House, only eight countries, located in two clusters- one in Southern Africa and one in

¹⁰ Freedom House scores run on a scale of 1 to 7, where 1 is the best score, representing complete freedom, and 7 is the worst, representing complete repression.

West Africa- can be considered free; all the others are in the “Not Free” or “Partly Free” categories (Freedom House 2003).



Source: *The AIDS Program Effort Index, 2003 Round*

Figure 2.1. AIDS program effort by component and sub-region

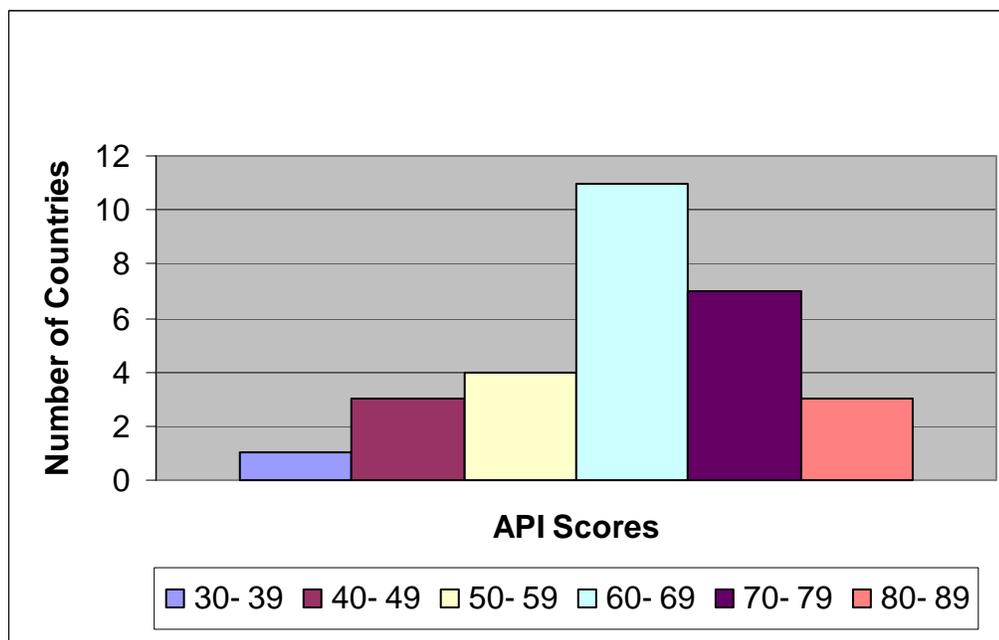
Table 2.2. Descriptive statistics of API scores for sub-Saharan countries

Descriptive Statistic	Value
Minimum	39
Maximum	82
Mean	64
Median	66

Table 2.2 above shows the descriptive statistics for overall API scores (the averages of all ten categories) for all 29 sub-Saharan countries. The mean and median are closer to the maximum than to the minimum, showing that more

countries have relatively high scores. In fact, as Figure 2.2 shows, most of the scores are in the 60s and 70s.

Figure 2.2. Distribution of API scores among 29 Sub-Saharan countries



Source: The AIDS Program Effort Index, 2003 Round

2. EXPLANATORY FACTORS

As mentioned above, the explanatory factors included in the analysis are type of political institutions, level of civil liberties, state capacity, political stability, level of economic development, HIV prevalence rates, direction of epidemic and level of international funding. I now discuss each in turn, describing the measures I use for each explanatory factor and providing descriptive characteristics.

A. Type of Political Institutions

To measure the competitiveness of the political system, I use Polity scores for the year 2003 (Marshall et al. 2006). Polity data span a 21-point scale from -10 (total autocracy) to 10 (total democracy). The scale is composed of eight different measures of democracy and autocracy, focusing on recruitment of the executive, constraints on it once in office, and conditions of participation for non-elites. Scores are assigned according to these measures to build two composite indices, AUTOC and DEMOC, which each run from 0 to 10. The final Polity score is obtained by subtracting the autocracy score from the democracy score. Thus a “total autocracy” would score a 10 on the AUTOC index and a 0 on the DEMOC index, giving it a score of -10 on the Polity scale.

Emphasizing as it does the rules of participation in the political process, Polity corresponds to a purely procedural definition of democracy. The dataset does not purport to describe the state of civil rights or the level of substantive democracy that exists in a state, but it is adequate for the question of whether electoral competition leads to government aggressiveness in addressing HIV/AIDS.

The countries in my sample span almost the entire range of POLITY scores: the minimum is -9 and the maximum 9, but surprisingly enough, most of

the countries fall on the more democratic side of the spectrum, between 0 and 10. Indeed, as the table below shows, 17 of the 29 countries are at least somewhat democratic; of these, 6 are considered fully democratic (scores equal to or higher than 7). 3 more countries are anocracies, sitting at exactly 0; these countries can be considered neither democratic nor autocratic. This leaves only 9 countries in the authoritarian category, with 2 consolidated autocratic states (scores equal to or lower than -7). The mean Polity score for the set of 29 countries is about 2.

Figure 2.3 plots Polity against level of government effort, in an attempt to discover any correlation between the two causal factors. The relationship between the two factors is not linear, i.e. a unit change in Polity cannot be said to lead to a corresponding change in government effort throughout the sample. This weak relationship is also expressed by the low correlation coefficient between API and Polity- 0.16. While in statistical approaches this would suggest that there is no relationship between type of political institutions and government performance, it may be that the relationship is more complex, as hypothesized in this work. If other factors work in conjunction with democratic institutions to produce the outcome, then no relationship will readily appear in a simple correlation.

Table 2.3 Distribution of Polity scores

Score Range	Number of Countries in Category
-10 to -7	2
-6 to -1	7
0	3
1 to 6	11
7 to 10	6

Source: Computed from Polity IV Project

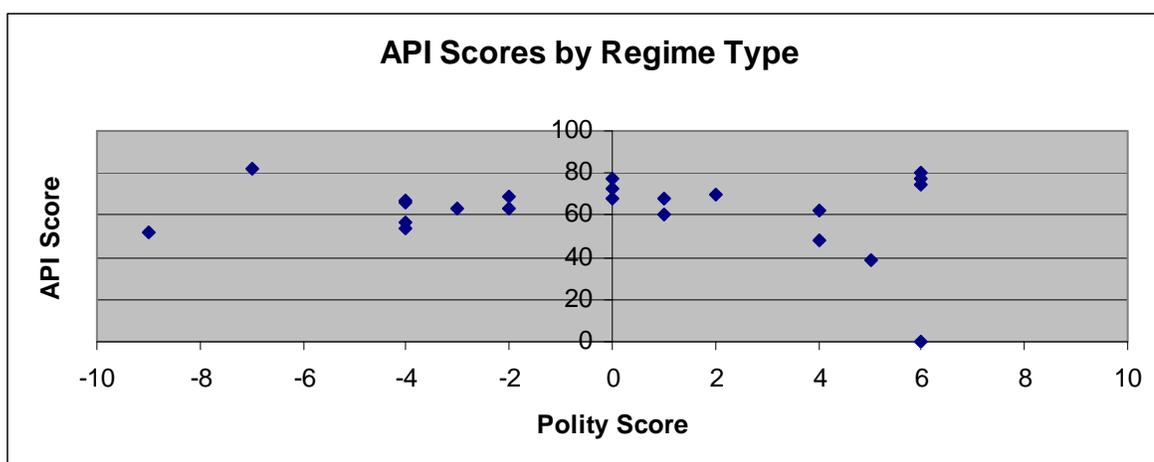


Figure 2.3. Polity scores and corresponding API scores

B. Level of Civil Liberties

This causal factor addresses those causal mechanisms that go beyond mere procedural democracy and involve features of a democratic society, specifically the existence of civil society and a free press. The existence of these

civil liberties adds a layer of incentives for democratic leaders to adopt policies that benefit the population, such as promoting aggressive action on HIV/AIDS.

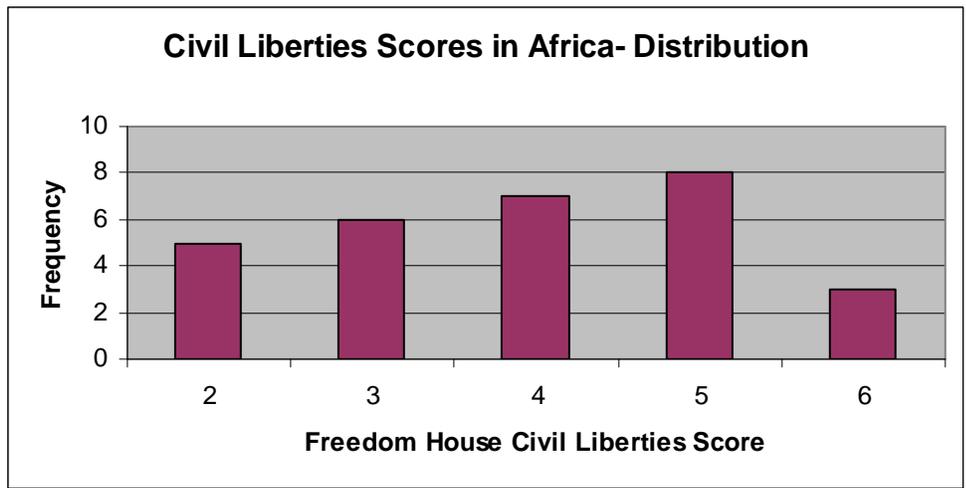
In some parts of Africa, civil society is playing a vital role in pushing governments to act and in providing services themselves. Local groups have formed in several countries to support people suffering from AIDS and their families, and these have often been drawn into the political arena to lobby government to be more proactive. An excellent example of this phenomenon is the Treatment Action Campaign (TAC) in South Africa, which started as a support group for people living with HIV/AIDS (PLWHA) and then became a fierce critic of the ANC government's lack of action (Schneider 2002). Partly as a result of the TAC's relentless domestic and international campaign to raise awareness of the extent of the crisis and the lack of response by the South African government, the latter has become much more aggressive in the last few years and has been much more willing to include civil society in the crafting of its AIDS policies. In Uganda, the government has worked closely with community groups (Putzel 2004). In Senegal, the government has similarly made extensive use of the authority and networks of religious leaders to disseminate information about HIV/AIDS (Piot and Coll Seck 2001; Putzel 2003).

Freedom House's index of civil liberties (Freedom House 2003) is used to measure the extent of civil liberties that exists in sub-Saharan countries. Part of

what the index measures is independence of the media and freedom for civic groups such as religious institutions, non-governmental organizations and trade unions¹¹. The index basically measures to what extent the government controls society or not. Figure 2.4 below shows the distribution of civil liberty scores among the sample of 29 countries. As can be seen, five of the 29 countries can be considered completely free (score of 2) while three are “Not Free” (score of 6). The result of the stalled reforms of the 1990s can be seen in the fact that a vast majority of countries in sub-Saharan Africa fall in the “Partly Free” category. Although a majority of African countries undertook liberalization during the continent’s “wave of democratization,” these efforts were incomplete at best and reversed at worse, leaving the continent with a very inconsistent picture.

Figure 2.5 plots API scores against the level of civil liberties. Again, no clear trend is discernible in this chart: those countries that score highly on civil liberties (FH scores of 2) do not appear to be doing better than countries that are less free (scores of 3, 4, 5 or 6). There is no simple linear relationship between the existence of civil liberties in a country and the level of effort that the government puts forth in combating HIV/AIDS, as indicated by the weak negative correlation coefficient of -0.22.

¹¹ Starting in 2007, Freedom House now provides the breakdown for the different components of its indices (freedom of press, religious freedom, etc). However, since no retroactive data are available for 2003, I use the composite score for both freedom of the press and existence of civil society.



Source: Freedom House, *Freedom in the World* 2003

Figure 2.4. Frequency distribution of civil liberties scores

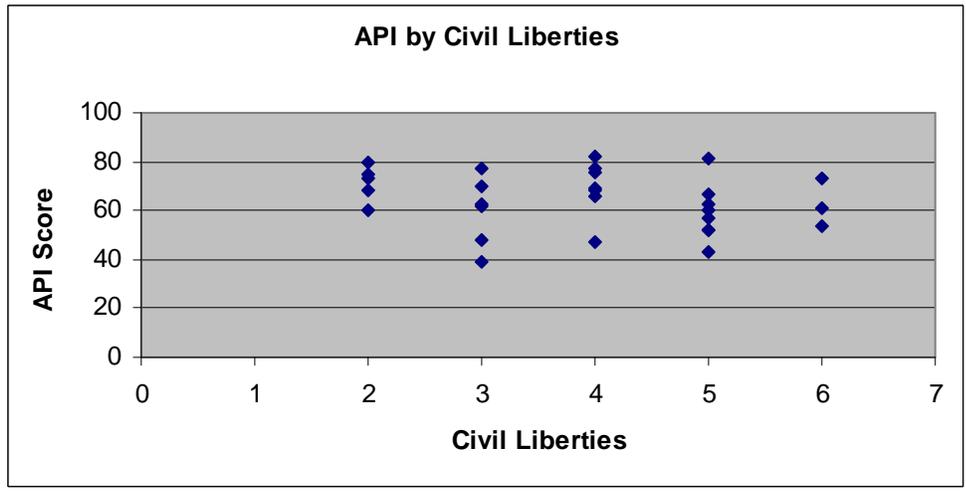


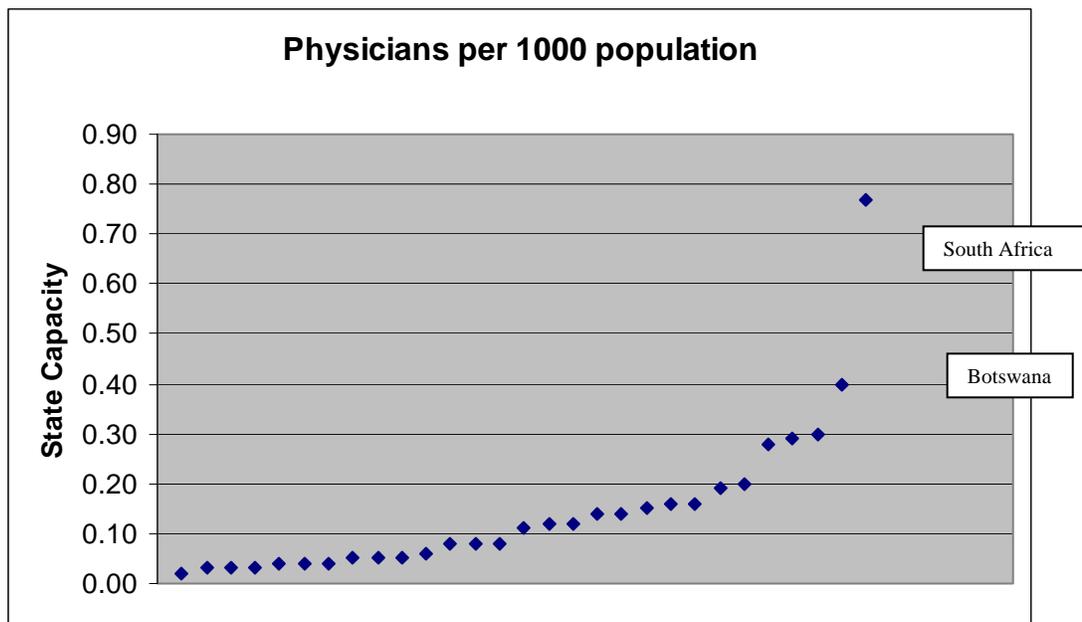
Figure 2.5. Relationship between API scores and level of civil liberties

C. State capacity

This indicator refers to the strength of the state and its penetration of society (Migdal 1988). This is sometimes measured as the percentage of

government revenue obtained through taxation, but taxation data is often missing and unreliable in the African case. Moreover, in this study it is the state's ability to provide services to its citizens that is of interest, as states with greater capacity are better equipped to respond to the challenges that HIV/AIDS poses. I measure state capacity by the number of physicians per 1000 population, a measure compiled by the World Health Organization (WHO 2008).

The distribution of scores in this measure is, predictably, rather skewed. Only six of the twenty-nine countries score above the average of 0.17. As Figure 2.6 below shows, the difference between the top five and the rest is rather large, with a sudden jump after the 0.2 threshold is reached. The relatively wealthy Southern African countries lead the pack, with South Africa, Botswana and Namibia having the most physicians per 1000 population (0.77, 0.4 and 0.3 respectively). Figure 2.7, which plots API scores by state capacity, shows again the lack of any linear relationship between this causal factor and the outcome, level of government effort. The correlation between the two sets of values is only 0.23, which also shows the lack of a consistent relationship between them.



Source: World Health Organization 2008

Figure 2.6. Distribution of number of physicians per 1000 population

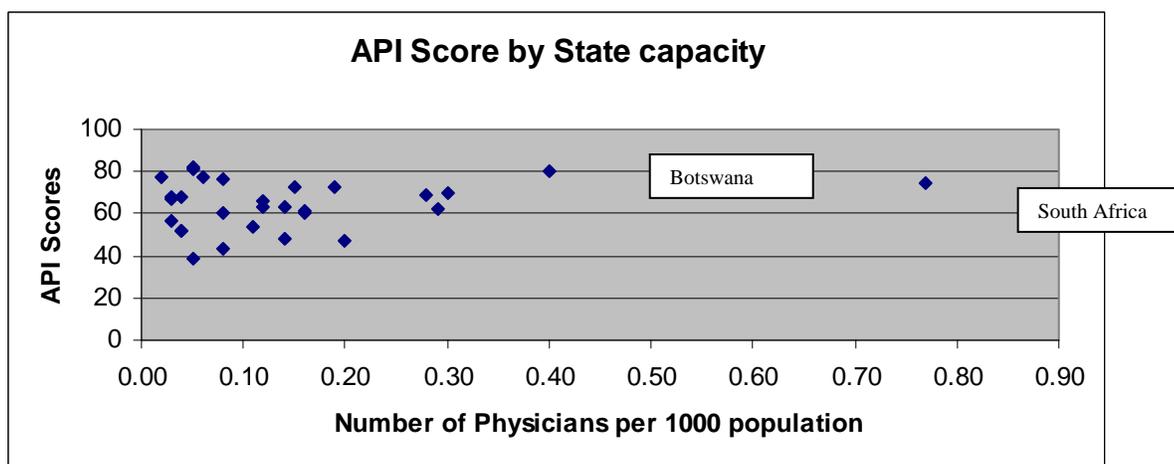


Figure 2.7. Variation of API score by state capacity

D. Political Stability

This indicator is obtained from the World Bank Institute (World Bank Institute 2006b) and is one of six variables designed to portray various dimensions of the quality of governance in countries around the world. Each variable is an aggregate of several individual indicators culled from 31 databases that are maintained by 25 organizations around the world (World Bank Institute 2006a: 13). These individual indicators are weighted to construct each aggregate indicator using the “unobserved components model,” with the weight of each indicator being determined by the reliability of the source (*ibid*). The Governance Indicators run on a scale from -2.5 to 2.5, with mean zero and standard deviation one across all countries and where zero represents the world average in 2005 (Kaufmann et al. 2006: 9). Higher scores represent better outcomes.

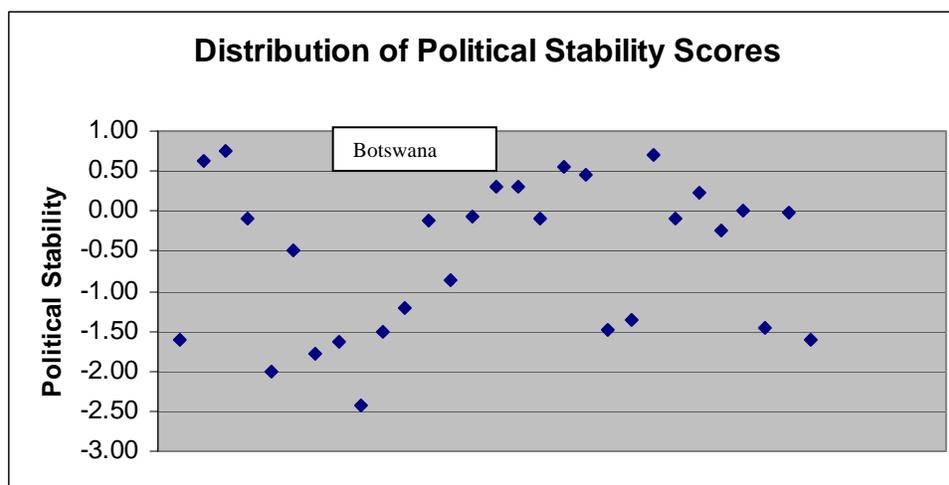
The political stability variable represents the lack of internal political turmoil. In the absence of immediate threats to its survival, a country’s government is more likely to respond quickly to the long-term threat that AIDS represents. As the table below demonstrates, African averages are below the world average: the average for sub-Saharan Africa is consistently below zero. This is also visible in Figure 2.8, which shows the clustering of scores towards the bottom of the range (the majority of points in scatter-plot are below zero).

However, the tendencies over time are encouraging, as political stability has improved over the last five years.

Table 2.4 Sub-Saharan African averages on political stability, 2001-2005

INDICATOR	SSA AVERAGE, 2001- 2005	2001	2002	2003	2004	2005	Change from 2001 to 2005
Political Stability	-0.63	-0.79	-0.69	-0.61	-0.59	-0.57	+0.22

Source: Computed from Governance Indicators, *Governance Matters V*, World Bank Institute 2006.



Source: World Governance Indicators 2006

Figure 2.8. Distribution of internal stability scores

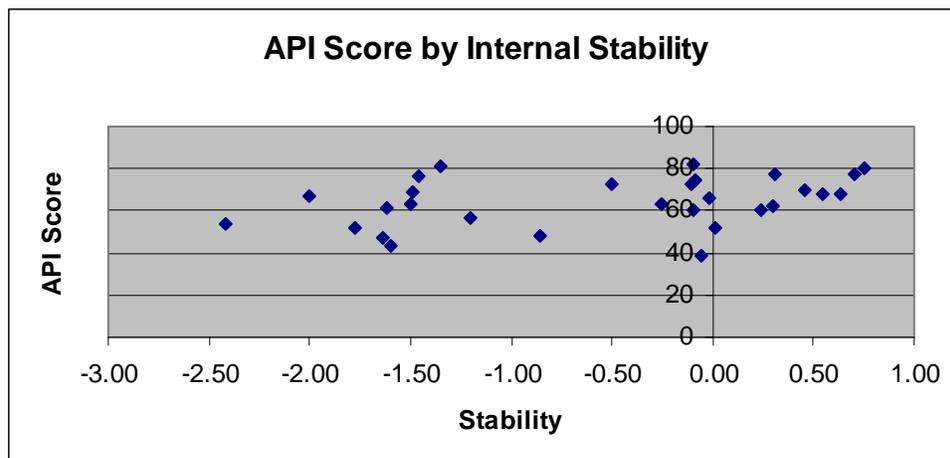


Figure 2.9 API scores by internal stability

Figure 2.9 above graphs the relationship between internal stability and government effort. Similar to the causal factors considered previously, no correlation is apparent. The coefficient is only 0.36- the highest among the correlations between the API and the causal factors considered here, but still too low to indicate any real relationship. Although government aggressiveness does seem to be increasing consistently at the right end of the range, among the most stable countries, a quick look at the middle section of the chart reveals that less stable countries attain similar scores. For example, Burkina Faso at -0.1 and Rwanda at -1.35 have similar scores to Botswana, the most stable country at 0.75. However, it seems safe to say that, apart from Lesotho (stability score of -0.06, API score of 39), the countries from the middle of the chart to the right end on average score more highly on the API than the least stable countries.

E. Level of Development

The level of economic development of a country determines to a large extent how extensive the government's resources are and for what it uses them. The more developed and wealthy the country, the more extensive the services the government is able to provide. I measure the level of development by Gross Domestic Product per capita. These data are obtained from the World Bank (World Bank 2006b), and are expressed in constant 2000 US dollars.

The sample of 29 countries includes states of very different economic statuses. At one end of the spectrum sit Botswana and South Africa, with per capita incomes of US\$ 8,725 and US\$ 10,031 respectively. At the other end of the spectrum are countries such as Burundi, DR Congo, Tanzania and Malawi, which all have per capita incomes of less than US\$ 750. The distribution is heavily skewed toward lower incomes, with 25 of the 29 countries posting per capita incomes of US\$ 2,500 or less. In fact, the average income is only US\$ 2,053. The histogram below demonstrates that 16 countries out of the 29 in the sample are in the first three categories (GDP per capita income less than US\$ 1250), and only four countries post a per capita income of more than US\$ 2,500 (categories 7,8 and 9). This is also apparent in Figure 11, which shows the distribution of API scores by GDP per capita, and reveals no clear trend. The correlation between the two sets of values is a low 0.26, which suggests no correlation

between GDP per capita and government performance against HIV/AIDS. More developed countries are not more likely, independently of other factors, to demonstrate stronger government action.

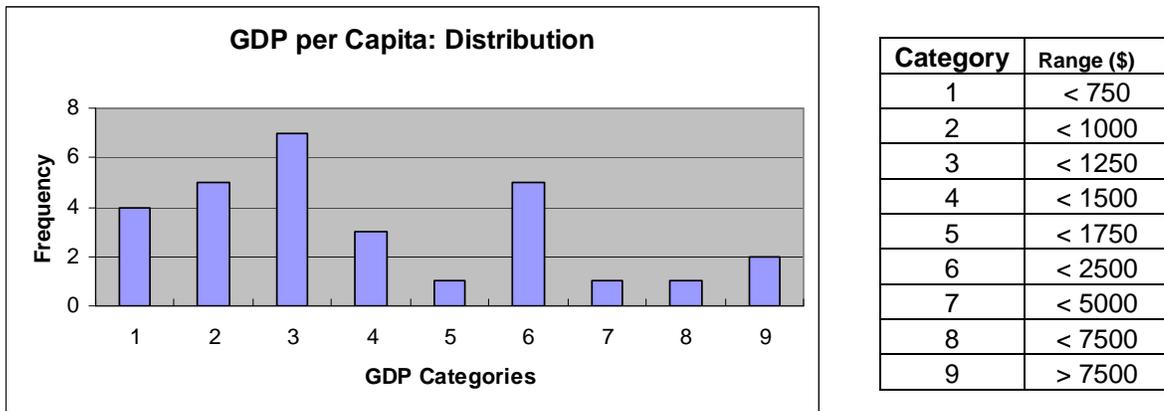


Figure 2.10. Distribution of GDP per capita in Sample

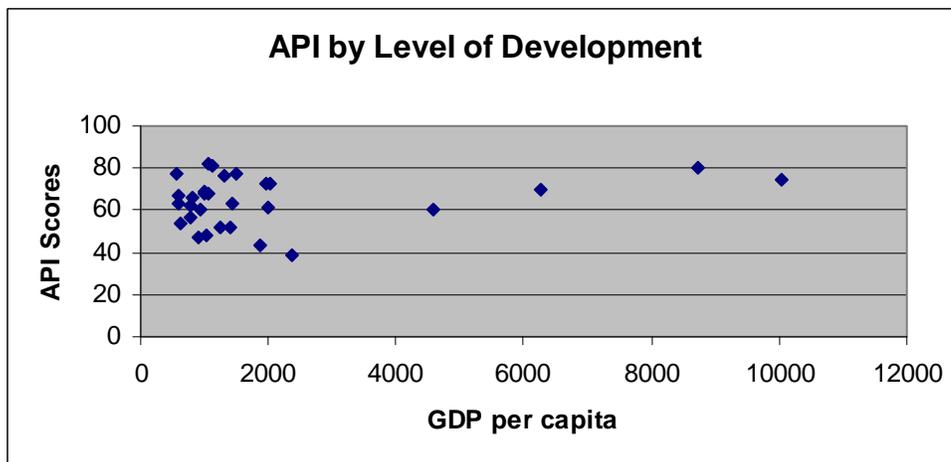


Figure 2.11. Relationship between API Scores and Level of Development

F. HIV Prevalence Rates

The final variable included in the analysis is the HIV prevalence rate within each country. Although the graphing of level of effort broken down by sub-region seemed to suggest that the severity of the epidemic did not impact states' responses, because theory suggests otherwise, it is included in the analysis. Data on HIV prevalence are obtained from the 2006 UNAIDS report on the worldwide AIDS epidemic (2006), which included a reevaluation of 2003 prevalence rates as well as more recent data. These revised numbers are used rather than those presented in the 2004 UNAIDS report.

As mentioned before, prevalence rates vary from the low single digits to the low 20s. Figure 2.12 below allows us to eyeball the distribution of prevalence rates across the continent. The interesting observation in this chart is the "clustering" of countries once again in one of two groups: relatively low prevalence rates (below 10 %) and relatively high prevalence rates (between 15 % and 25 %), with one outlier (Swaziland) that is almost 10 percentage points higher than the nearest case. Figure 2.13, which breaks down these numbers by sub-region, shows the stark difference between West and Central Africa, on the one hand, and East and Southern Africa, on the other. *All* the countries in the latter group have higher prevalence rates than any country in the former. In West and Central Africa, all the countries have rates that hover around 5 %.

Another enlightening observation comes from Figure 2.14, which plots API scores by the prevalence rate. The lack of any clear relationship between prevalence and performance is apparent from the non-monotonic, non-linear correlation between prevalence and API scores. Some countries with low prevalence rates are among the best performers (in terms of government effort) and some with high prevalence (for example Lesotho, a country where close to 25% of adults are seropositive and yet is doing poorly, with an API score of 39—the lowest score among all 29 countries). This chart, as well as the extremely low correlation coefficient—0.003—, lends support to the hypothesis put forth in this paper that the relationship between any one causal factor and the outcome is complex, with other factors intervening in the relationship.

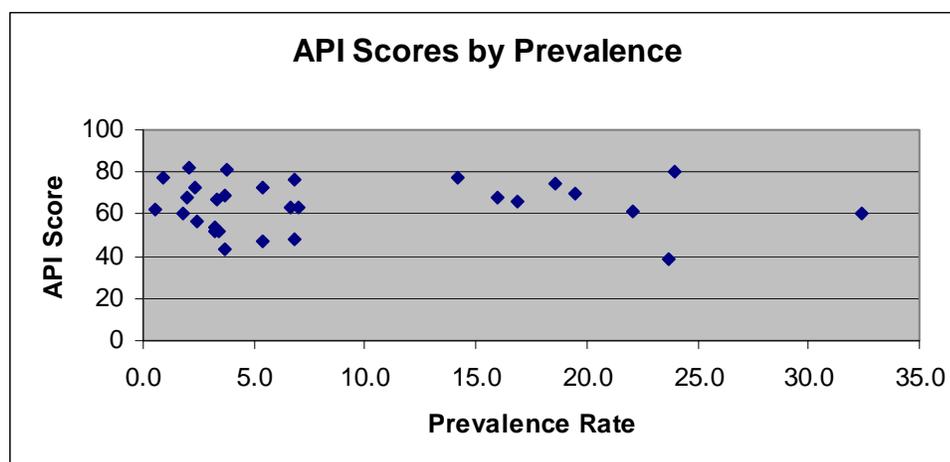


Figure 2.14 Prevalence rates and corresponding API scores

G. Direction of Epidemic

Recognizing whether prevalence is stable, on the rise or declining has become easier in recent years with UNAIDS regular reports providing estimates of prevalence rates. A government facing an epidemic on the rise (whether the baseline is low or high) is more likely to want to take action. Especially with international funding and technical expertise, governments may have the necessary incentive in an increasing epidemic to set up a comprehensive program of action.

The direction of the epidemic prior to 2003 is estimated by the direction between 2003 and 2005, an imperfect method because the data does not predate the API but made necessary by the lack of reliable data about prevalence rates before 2003¹². However, HIV/AIDS being a long-term process that does not usually experience dramatic changes, it seems reasonable to assume that epidemics that were on the rise between 2003 and 2005 had started their upward trend before 2003.

In the sample, most countries had relatively stable epidemics, with only slight upward or downward changes. This is not surprising, as prevalence rates seldom change by large amounts from one year to the next. The exceptions were

¹² As previously noted, in its 2006 report, UNAIDS revised prevalence estimates downward, but only went as far back as 2003.

Benin, Burundi, Rwanda and Swaziland, where prevalence rates were increasing by significant numbers until recently (UNAIDS 2008).

Conclusion

This examination of the data used for the fsQCA analysis in this chapter enables us to make certain observations. The regional variation in prevalence is clear: Eastern and Southern Africa has a much larger epidemic than does West and Central Africa. However, this obvious difference in prevalence does not translate into a corresponding difference in the level of government effort in responding to the epidemic. Similarly, there is no clear relationship between level of electoral competitiveness (as measured by Polity), level of civil rights, state capacity or level of development. The fact that the relationship between these causal factors and government effort is not linear and monotonic is not surprising, if one accepts that causality is indeed complex and that it is the conjunction of these factors with other conditions that leads to the outcome. This can be interpreted as preliminary support for the hypothesis set forth in this study, that no one causal factor has independent effects that are apparent in the data. The next chapter will elucidate these different pathways through a fuzzy-set qualitative comparative analysis.

CHAPTER 3

METHODOLOGY: FUZZY-SET QUALITATIVE COMPARATIVE ANALYSIS

Two reasons make QCA approaches more desirable than conventional regression techniques in the present study. First, the sample size of 29 cases makes ordinary least squares (OLS) regression inappropriate because of concerns about the number of degrees of freedom. QCA, on the other hand, is ideally suited to medium-sized samples. Second, searching as it does for the line that “best fits” the data, regression is not suitable for testing the proposition that there are several pathways to the same outcome. One technique that does allow one to determine multiple causation is qualitative comparative analysis (QCA).

Contrary to statistical techniques such as regression, which rely on correlational relationships between variables and the outcome, QCA approaches rely on set theory. Causes and outcomes are conceived of as sets to which cases belong: for example, the set of “countries with high level of development,” measured by per capita income. When looking for causal relationships, QCA looks for the degree of overlap between sets. If one were hypothesizing that a high literacy rate is a cause of high level of development, then one would compare how much overlap there is between the set of “countries with high literacy rate” and the set of “countries with high level of development.”

In conventional set (also known as “crisp” set) theory, there are only two possible states: either a case is “in” the set (value 1) or it is “out” of the set (value 0). In that sense, a crisp set is similar to a binary variable. Fuzzy sets, by contrast, allow for **partial membership** in sets. Thus, membership scores can be in the range between 0 and 1, with scores closer to 1 denoting cases that are “more in than out” and scores closer to 0 denoting cases that are “more out than in,” and 0.5 (also called the “cross-over point”) being the point at which a case is neither in nor out (Ragin 2006b). These concepts are dealt with in more detail in the section on “fuzzification.”

In addition to the ability to test for equifinality, QCA approaches are also uniquely equipped to determine causal configurations. When causal factors interact with one another and occur in combinations to produce the outcome, we face a phenomenon known as **conjunctural causation**. This may be represented thus:

$$AB \rightarrow Y$$

In the example above, causal factors A and B together lead to the outcome Y. While looking for such relationships is possible in regression techniques by the inclusion of interaction terms, they have to be specified in the model by the researcher. In addition, interaction terms with more than two terms become

difficult to interpret. In QCA, however, determining and interpreting causal configurations with two or more causal factors is straightforward.

The combination of the two concepts, equifinality and conjunctural causation, is termed multiple conjunctural causation, which may be represented as:

$$AB + CD \rightarrow Y \text{ (where "+" represents the Boolean } or \text{)}$$

The equation above is interpreted as "A and B together, **or** C and D together, lead to the outcome Y."

One implication of multiple conjunctural causation is that there may not be *necessary* conditions to the production of the outcome (since other factors can be substituted for one explanatory factor or set of conditions and the same outcome occurs), but rather sets of *sufficient* conditions. In other words, there may not be any factor, among those studied so far, that is necessary in producing a strong government response and whose absence would lead to the absence of such a response, but several configurations of factors may be jointly sufficient in leading to the outcome.

Furthermore, approaches that look for multiple conjunctural causation allow for the absence, as well as the presence, of a particular cause to produce the outcome. The representation below clarifies this proposition:

$$AB \rightarrow Y$$

$$aC \rightarrow Y$$

While in the first causal combination the presence of factor A, in conjunction with factor B, leads to the outcome Y, in the second causal combination it is the *absence* of A, in combination with factor C, that produces the outcome. Simply put, context matters in the causal effect of any given factor of interest.

Below I detail how the data described in Chapter Two were transformed to make them suitable for fuzzy set analysis.

Fuzzification

As explained above, fuzzy-set QCA requires data to be in the 0-to-1 range, which means that all the data used in this analysis had to be transformed (or, to use the language of fuzzy sets researchers, “fuzzified”) to fit into that range. An important first step in this process is to specify the set being considered, as the construction of the set will determine the fuzzy scores of cases. For example, the set is “countries with high level of development” is different from the set of “countries with *very* high level of development:” the second set is theoretically smaller than the first because the value for membership in it is higher than that for membership in the first. If the indicator being used to measure level of development is GDP per capita, then the threshold for membership in the first

set might be US\$ 8,000 and US\$ 12,000 in the second, for example. The point is that the set being built determines, conceptually and empirically, what cases fit in the set and to what degree.

For this analysis, the sets that were created are the following:

- Outcome: Set of countries which react aggressively to AIDS
- Causal factors:
 - 1) Type of political institutions: Set of democratic countries
 - 2) Civil liberties: Set of countries with high level of civil liberties
 - 3) State capacity: Set of countries with high state capacity
 - 4) Internal stability: Set of countries that are internally stable
 - 5) Prevalence: Set of countries with high HIV/ AIDS prevalence
 - 6) Direction of epidemic: Set of countries with epidemics on the rise
 - 7) Level of development: Set of countries with high level of development
 - 8) International funds: Set of countries having received funds from GFATM by 2003

Three kinds of transformation were undertaken. Data that came in the form of interval-level scales were transformed into continuous fuzzy-set scores. The API, as well as all of the causal factors except funds from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), was transformed using this method. Data on GFATM grant disbursements were coded as dichotomies.

Finally, data on direction of the epidemic were coded in four categories. I explain these processes below.

A. Interval-level Data

Unlike quantitative methods, for which variation among cases in each variable is important, in fuzzy set analysis it is membership in specific sets that matters. For example, in the context of countries' scores on the API, it is not the variation in API scores that is crucial in the analysis, but the degree to which particular countries belong to the set of countries that are acting aggressively to counter AIDS. Thus the focus is on specific cases and not on variation in the variable.

Grouping cases in sets and assessing the degree of their membership in these sets introduces some personal judgement into the analysis. Indeed, in fuzzy set analysis, one's substantive and theoretical knowledge about the cases with which one is dealing is paramount. Such knowledge is crucial when deciding on the values to assign to cases as far as membership in the various sets is concerned. However, this exercise is not wholly arbitrary: especially when there is a usable interval-level scale measuring a particular characteristic of the cases under consideration, one can use different techniques to calculate and calibrate those scores. Ragin (2008b) details two methods by which membership scores for fuzzy sets can be calibrated: the direct method and the regression

method. In this analysis, I use the direct method, which provides a sufficiently precise calculation method given my lack of thorough substantive knowledge about all the characteristics of all 29 cases under study.

The starting point is to choose fuzzy membership scores that correspond to full set membership and full set non-membership (for example, one can decide that a score of 0.9 is the threshold for full membership and 0.1 is the threshold for full non-membership). These values are chosen by the researcher, so there is no intrinsic meaning to them other than to say that membership scores above 0.9 in the final calculation will represent full membership in the target set and values below 0.1 will represent full non-membership. The corresponding odds of membership are then calculated according to the formula¹³:

Odds of membership = degree of membership / (1 - degree of membership)

The next step is to take the natural log of these odds, which enables us to proceed to the next stage of the analysis. According to Ragin (Ragin 2008: 13), “working in the metric of log odds is useful because this metric is completely symmetric around 0.0 (an odds of 50/50) and suffers neither floor nor ceiling effects.” This property, in turn, means that when these log odds are converted to

¹³ I detail the full process by which fuzzy scores are calculated to give the reader a sense of what the process is. The software program, available at www.u.arizona.edu/~cragin/fsQCA/software.shtml, actually calculates fuzzy scores with the researcher only having to specify the thresholds for full membership and non-membership and the cross-over point.

degrees of membership in sets, the result always falls between 0 and 1, which is required by fuzzy sets. Below I demonstrate how this is done using the two values suggested above, 0.9 for full membership and 0.1 for full non-membership.

Table 3.1 Calculating log odds of full membership and full non-membership

Verbal Label	Membership Score	Odds of Membership	Log Odds of Membership
Full Membership	0.9	$0.9 / (1 - 0.9) = 9$	2.197
Full Non-Membership	0.2	$0.2 / (1 - 0.2) = 0.25$	-1.386

These log odds of full membership and full non-membership are used in the calibration of all cases.

The direct method of calibration uses three precise benchmarks by which to calibrate cases: the threshold for full membership, the threshold for full non-membership and the cross-over point. One way to do this is to look for natural “breaks” in the data: groups of countries that are clustered at the lower and upper ends and in the middle. This method was utilized for all the data employed in this analysis.

The threshold for full membership is the value on an interval-level scale at which a case is considered to definitely be in the target set (Ragin Forthcoming: 15). In the API, the target set is “set of countries which react aggressively to AIDS,” and the score at which a country may be considered to be fully in this set was set at 75, a score chosen because it was a natural “break” in the data. In other words, if a country obtains a score of 75 or higher on the API, there is no doubt or ambiguity about the fact that it is addressing AIDS aggressively. Thus, a score of 75 corresponds to a set membership of 0.9, according to the values selected above. The threshold for full non-membership, conversely, is the score at which a country may be unambiguously considered to not belong to the set of “countries which react aggressively to AIDS.” I set this score at 45. In other words, countries that score 45 or lower in the API can be said to definitely not be among those countries that are aggressively fighting AIDS; countries that score exactly 45 will receive a membership score of 0.2 according to the scheme adopted above.

The adverb “aggressively” is very important in this description. Verbal labels are central in fuzzy set analysis, as they help define sets and the membership of cases in those sets. Changing or adding an adjective or adverb (for e.g., *aggressively* vs. *very aggressively* vs. *somewhat aggressively*) can mean changing the degree of membership of cases in these sets. To reflect more or less stringent criteria of set membership, one can modify the thresholds used to

calculate membership (making the threshold for full membership higher, for example changing it from 75 to 85 in the API) or use mathematical operations to transform sets according to such adjectives or adverbs.

The third and last benchmark is the cross-over point, “the value of the interval-scale variable where there is maximum ambiguity as to whether a case is more in or more out of the target set” (Ragin 2008: 14). In other words, it is the value at which it is unclear whether a case should be considered as belonging in the set or not. For the purposes of the API, the score of 60 was chosen. What this tells us is that it is unclear whether a country that receives a score of 60 is acting aggressively against AIDS or not (again, the adverb matters). It is neither in nor out of the set of countries that are acting aggressively against AIDS- it is on the cross-over point between those two categories of cases.

All scores are pegged to these three “anchors.” That is, the degree of membership of all cases in the target set depends on the values chosen for these three benchmarks. Specifically, the threshold for full membership will determine which cases are considered to fully belong in the set, with high membership scores; the threshold for full non-membership determines which cases are considered to not belong in the set at all, with low membership scores; and the cross-over point determines which cases are considered at varying levels of membership. The cross-over point is also used in the actual calculation of membership scores, as demonstrated below.

The key concept is the deviation of each interval-level variable score from the cross-over point, which is used to calculate the log odds of set membership for each case. These deviations, together with the log odds of full membership and full non-membership calculated previously, enable us to calculate the log odds of membership in the set for each case and, from this value, its fuzzy membership in the set itself. Below I explain the steps involved in transforming values on the interval-level scale to fuzzy set membership scores. All the values refer to the scores on the API used in the description above: 75 representing full membership, 45 full non-membership and 60 being the cross-over point.

Steps in Fuzzification of Interval-Level Data

Step 1. Calculate the log odds associated with full membership and full non-membership (explained above).

Step 2. Calculate associated scalars. For values *above* the cross-over, this is the ratio of log odds of full membership (2.197) to the difference between the full membership threshold and the cross-over (i.e. $75 - 60 = 15$). This ratio is $2.197 / 15 = 0.146$. For values *below* the cross-over, it is the ratio of log odds of full non-membership (-21.386) to the difference between the full non-membership threshold and the cross over (i.e. $45 - 60 = -15$). This ratio is $-1.386 / -15 = 0.092$.

Step 3. Calculate deviations between each interval-level value and the cross-over value.

Step 4. Multiply the deviation by the corresponding scalar: deviations above the cross-over are multiplied by 0.146, while deviations below the cross-over are multiplied by 0.092. The product represents each case's log odds of membership.

Step 5. Calculate the degree of membership of each case by the following formula:

$$\text{Degree of membership} = \exp(\text{log odds}) / (1 + \exp(\text{log odds}))$$

where "exp" is the exponentiation of the log odds calculated above to convert them into simple odds.

The distribution of cases' degrees of membership achieved by this procedure corresponds exactly to those values and thresholds chosen at the outset. Cases with interval-level values that are higher than the one chosen as the threshold for full membership have higher fuzzy membership scores than the threshold specified in step 1 above (i.e. higher than 0.9). Cases with interval-level values that are lower than the one chosen as the threshold for full non-membership have lower fuzzy membership scores than the threshold specified (i.e. lower than 0.2). Cases with interval-level values that are in-between the two thresholds receive fuzzy membership scores that are also in-between the scores chosen.

The tables below illustrate the steps and the final result for 8 of the 29 cases included in the analysis. Table 3.2 shows the choice of the three important anchors: the threshold for full membership, the threshold for full non-

membership and the cross-over point. The corresponding odds, log odds and scalars, calculated according to the formulae discussed above, are also shown.

Table 3.3 demonstrates the calculation of the fuzzy membership scores for each of the 8 cases by multiplying its deviation from the cross-over to the appropriate scalar and then transforming the product to obtain the membership scores.

Table 3.2 Thresholds and associated odds of membership

Anchor	Value	Odds	Log Odds	API Score	Deviation	Scalars
Full membership	0.9	9.0	2.197	75	15	0.146
Full non-membership	0.2	0.25	-1.386	45	-15	0.092
Cross-over	0.5			60		

Table 3.3 Sample of eight countries and calculation of fuzzy membership scores

Country	API	Deviations	Scalars	Product	Degree of membership
Lesotho	39	-21	0.092	-1.941	0.126
Congo	47	-13	0.092	-1.201	0.231
Ethiopia	57	-3	0.092	-0.277	0.431
Swaziland	60	0	0.146	0	0.5
Madagascar	62	2	0.146	0.293	0.573
South Africa	75	15	0.146	2.197	0.9
Uganda	76	16	0.146	2.344	0.912
Burkina Faso	82	22	0.146	3.223	0.962

As can be seen, Lesotho, which has an API score lower than the threshold for full non-membership (45), receives a fuzzy membership score than the lower threshold which was set at 0.2. Congo, whose API score is only slightly higher

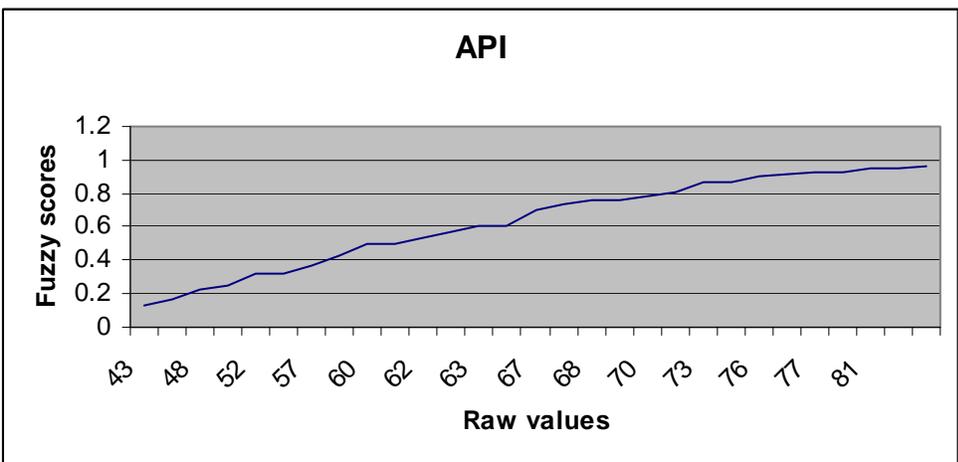
than the threshold value of 45, correspondingly receives a slightly higher fuzzy membership score than the lower threshold. Swaziland's API score is 60, which corresponds to the cross-over value; consequently, its fuzzy membership score is exactly 0.5. A few rows down, South Africa has an API score of 75, which corresponds to the threshold for full membership, for which the fuzzy membership score was set at 0.9. The calculation yields a membership score of 0.9 for it, while Uganda, with an API score only one point higher, receives a fuzzy membership score that is slightly higher. This table demonstrates that fine distinctions in interval-level variables are translated into fine distinctions in fuzzy membership scores as well, and that analytic richness is not lost when translating raw interval-level scores into fuzzy set membership scores.

The thresholds for full membership and full non-membership and the cross-over point were all chosen according to the natural trends in the data. Starting from the plotting of the cases according to each causal factor (see Chapter 2), I selected natural cutoff points as thresholds. The results of this fuzzification of the interval-level variables, including the values chosen for each threshold and the resulting membership scores for each case in each set, can be seen in Appendix B.

Table 3.4 Anchors chosen for causal factors

Cause	Full membership	Full non-membership	Cross-over point
Type of political institutions	7	-7	0.2
Level of civil liberties	2	5	3.5
State capacity	0.25	0.1	0.15
Internal stability	0.5	-2	-0.5
Prevalence	20	5	10
Level of development	4000	600	2000

The charts below, which graph the raw value of the 29 cases on the API and all causal factors and the corresponding fuzzy scores, show the close correspondence of fuzzy scores with raw scores.



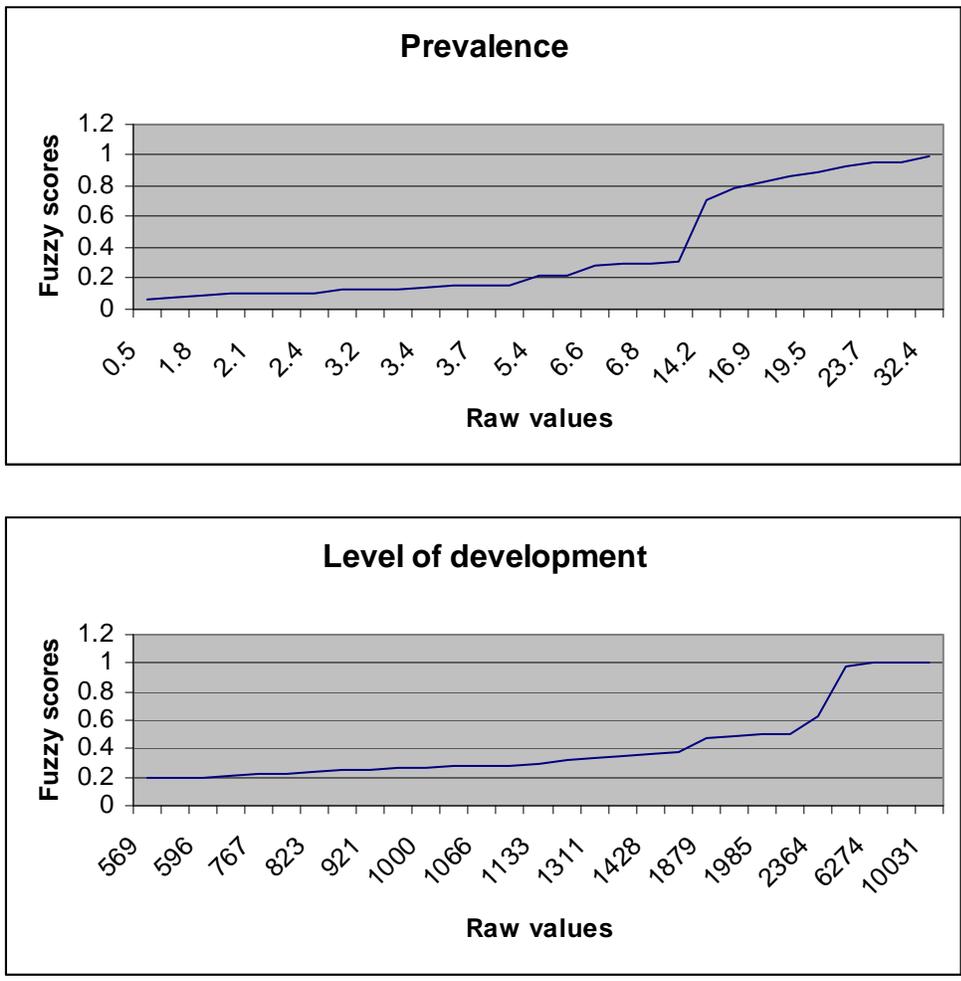


Figure 3.1 Fuzzy scores plotted against raw values

B. Direction of Epidemic

The set for this cause was “set of countries with increasing epidemics.” Consequently, it was coded as 0 if the epidemic was clearly declining (decrease of 2 percentage points or more over two years), 0.45 if there was a slight decrease from one year to the next, 0.55 if there was a modest increase from one year to the next, and 1 if there was an increase of 2 percentage points or more over the

two-year period between 2003 and 2005. No country had zero change in its epidemic.

C. GFATM Funds

Although funds received from the GFATM are interval-level, I chose to code these data as a dichotomous variable, with countries that had received funds in 2003¹⁴ being coded 1 and countries that had not received funds being coded 0. The reason for coding this variable as a dichotomous variable is that, among the 16 countries that did receive funds from the GFATM by 2003, there is tremendous variation (US\$ 287,029 to US\$ 45,739,466). Several countries had not received the full amount of their grants. This makes it difficult to specify thresholds for membership in a set, for example “the set of countries that have received high amounts.” It seems reasonable to assume that governments would design programs and policies based on the amount for which they were *approved* and not amounts *disbursed* to date; therefore, basing membership scores on amounts received, when the disbursement of part or most of the grant might have not happened, is not justified methodologically. The most straightforward way to deal with this situation is to make a simple distinction between countries that had already started receiving money from the GFATM (and which would likely have started to use it in their national efforts) and those that had not yet

¹⁴ The GFATM was founded in 2002, and the first grants were allocated in 2003.

received any money from the international organization (whether the reason be that they had not submitted grant requests, their requests had not yet been approved, or their funds had not yet been disbursed). The table below details the scores obtained by the 29 countries in the sample.

Table 3.5 Dichotomous coding of countries having been approved for international funding by 2003

Country	GFATM
Angola	0
Benin	0
Botswana	0
Burkina Faso	0
Burundi	1
Cameroon	0
Chad	0
Congo	0
Congo, D.R.	0
Cote d'Ivoire	0
Ethiopia	1
Ghana	1
Kenya	1
Lesotho	1
Madagascar	0
Malawi	1
Mali	1
Mozambique	0
Namibia	0
Nigeria	1
Rwanda	1
Senegal	1
South Africa	1
Swaziland	1
Tanzania	1
Togo	0
Uganda	1
Zambia	1
Zimbabwe	1

Between Complexity and Parsimony: The Role of Counterfactuals

Ideally, to test causal arguments, one would have at one's disposal a variety of cases exhibiting all the combinations of causal conditions hypothesized to affect the outcome. This would make it possible to determine, by examining which combinations produce the outcome, which causes were actually necessary or sufficient. Finding cases that differ in only one causal condition (as in experiments) would make comparison easier and establishing causality more straightforward. However, a central feature of social science research is the limited diversity that exists in the universe of cases available to scholars. If all the combinations of causes were to be arranged in a table, not all combinations would have empirical instances. In fact, often most cases fit only a few of the causal combinations. Table 6 illustrates this using a hypothetical outcome Y having three causes, A, B and C.

Table 3.6 Limited diversity: truth table with three causal conditions and one outcome

Causal Conditions			Outcome
A	B	C	Number of instances of Y
no	no	no	0
yes	no	no	1
no	yes	no	0
no	no	yes	0
yes	yes	no	6
yes	no	yes	2
no	yes	yes	0
yes	yes	yes	5

The truth table above shows the eight possible causal combinations (2^3) of the three hypothesized causes of Y. However, as can be seen, only four of the eight combinations have empirical instances; moreover, most of the cases (11 out of 14) cluster in two of the four causal combinations with empirical instances.

This lack of cases that are similar in all relevant causal conditions except for one (“matched cases”) means that researchers need to make use of counterfactuals, which involves “assessing the plausible outcome of a combination of conditions that does not exist and instead must be imagined” (Ragin 2008: 150). Because it assumes causal complexity (conjunctural causation instead of independent effects), qualitative comparative analysis is well-suited to the incorporation of counterfactuals. In fact, the solution that a QCA analysis provides depends on how counterfactuals are treated.

Combinations without empirical instances (“remainders” in the language of QCA) can be treated in two ways. They can be excluded altogether from the analysis, which is the most conservative strategy and yields more complex solutions (solutions with several elements). Alternately, they can be used as a simplifying assumption by being treated as *don't care* combinations: they can be used as a positive instance of the outcome if considering them as such leads to a logically simpler (more parsimonious) solution with fewer terms. Thus the parsimonious solution to a QCA analysis is one that incorporates remainders as simplifying assumptions, while the complex solution excludes all such

assumptions (Ragin 2008: 155-157). It is important to note that the complex solution is always a subset of the parsimonious solution, which is necessarily the case because both solutions are based on the instances where the outcome is observed; the only difference is that the parsimonious solution also includes counterfactuals as additional likely instances of the outcome (Ragin 2008: 165).

In deciding which remainders to allow as simplifying assumptions, the analyst must evaluate how plausible each combination is, since it will be used as a potential positive instance of the outcome. Existing theoretical and substantive knowledge is crucial to counterfactual analysis, as it guides and supports the decisions analysts have to make about the plausibility of each remainder (Ragin 2008: 156-157). Some of these decisions are fairly straightforward (easy counterfactuals), while others can be considered difficult. The addition of a causal condition to a configuration that is already known to produce the outcome is an example of an easy counterfactual. The removal of a causal condition from a configuration that has been shown to lead to the outcome, on the assumption that the remaining causal conditions would still produce the outcome, is considered a difficult counterfactual. Whether a particular counterfactual is considered easy or difficult depends on the theoretical knowledge and empirical evidence available to scholars to support the characterization of a cause as redundant or irrelevant (see Ragin 2008, Chapter 9).

As mentioned above, QCA allows the complete exclusion of remainders or the inclusion of all remainders. However, neither option seems optimal. Excluding remainders typically produces very complex solutions that could be simplified by the inclusion of easy counterfactuals. The inclusion of all remainders, on the other hand, although it might yield the most parsimonious solution, carries the price of ignoring the plausibility of individual remainders and may be unrealistically simple as a result. Complex and parsimonious solutions can be conceived of as two end points of a continuum, with various *intermediate solutions* along that continuum¹⁵. In effect, optimal solutions can be arrived at by specifying which counterfactuals to allow and which ones to reject. Each analysis can yield several such solutions, depending on the number and kind of counterfactuals allowed. QCA offers the analyst the power to choose which counterfactuals are used in the analysis, which means that he/she can select to incorporate easy counterfactuals and bar difficult or implausible ones. The results reported in Chapter Four are intermediate solutions, which were chosen because they were likely to represent the patterns in the data more simply than the complex solution and more realistically than the parsimonious solution.

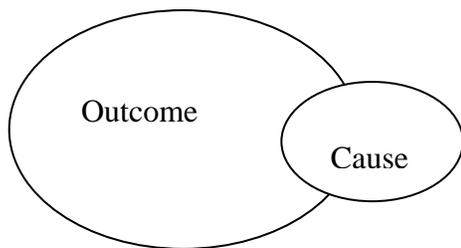
¹⁵ As noted above, the complex solution is always a subset of the parsimonious solution. Intermediate solutions are also subsets of the parsimonious solution and supersets of the complex solution.

Interpreting Results

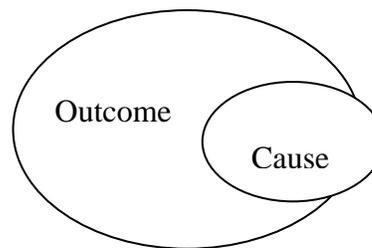
The analysis was carried out using the software program fs/QCA 2.0 (Ragin et al. 2006). The main quantities of interest in a fuzzy-set QCA are **consistency** and **coverage** (Ragin 2006). The consistency of a solution measures how often a cause or set of causes leads to the outcome of interest, and refers to the degree of overlap between the set representing the cause and the subset representing the cause (or causal combination). A cause is considered sufficient if the cause always (or nearly always) produces the outcome. In Venn diagram terms, consistency refers to the degree to which the set representing the cause is a subset of that representing the outcome.

The coverage of a solution, on the other hand, measures what proportion of the outcome is explained by the solution. It measures to what extent a given cause or causal combination produces the outcome.¹⁶ If coverage is 100 % or very close to it, the cause is necessary. When there are multiple paths to an outcome, the coverage of a particular causal combination may be small (Ragin 2006: 2), which means that it explains only a few cases of the outcome. However, as explained before, this does not mean that it is less important than another cause or causal combination with greater coverage; it is simply another pathway to the outcome, albeit one with fewer empirical instances. The diagrams below illustrate low and high consistency and coverage:

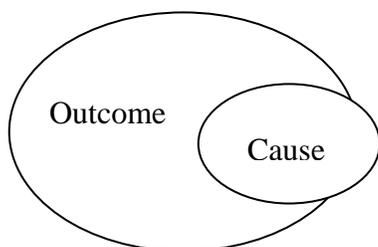
¹⁶ In that sense, solution coverage is akin to the R^2 statistic in OLS regression.



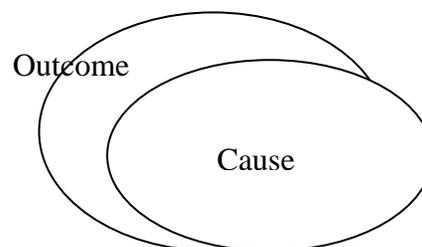
Low consistency:
Presence of cause often does
not lead to outcome



High consistency:
Presence of cause almost
always leads to outcome



Low coverage:
Cause explains low proportion
of outcome



High coverage: Cause explains
high proportion of outcome

Figure 3.2 Consistency and coverage

An important way to understand the results of the analysis is to determine which cases belong in each causal combination. One way to do this is to go through each case's scores in each causal factor and determining which ones have high membership scores in the factors identified in each causal combination. An easier method is to plot cases' membership in each combination against membership in the outcome. Such scatter plots are useful in

visualizing to which cases a given causal combination applies and to which ones it does not apply at all. A case's placement on the scatter plot indicates the importance of that particular pathway in determining the outcome in that case. Cases that fall above the diagonal and to the right of the vertical line indicating 0.5 membership in the causal combination (or very close to either one) are considered "explained" by that causal combination. Thus, in the figure below, cases 1, 2 and 3 are explained by the causal combination, while the other cases are not.

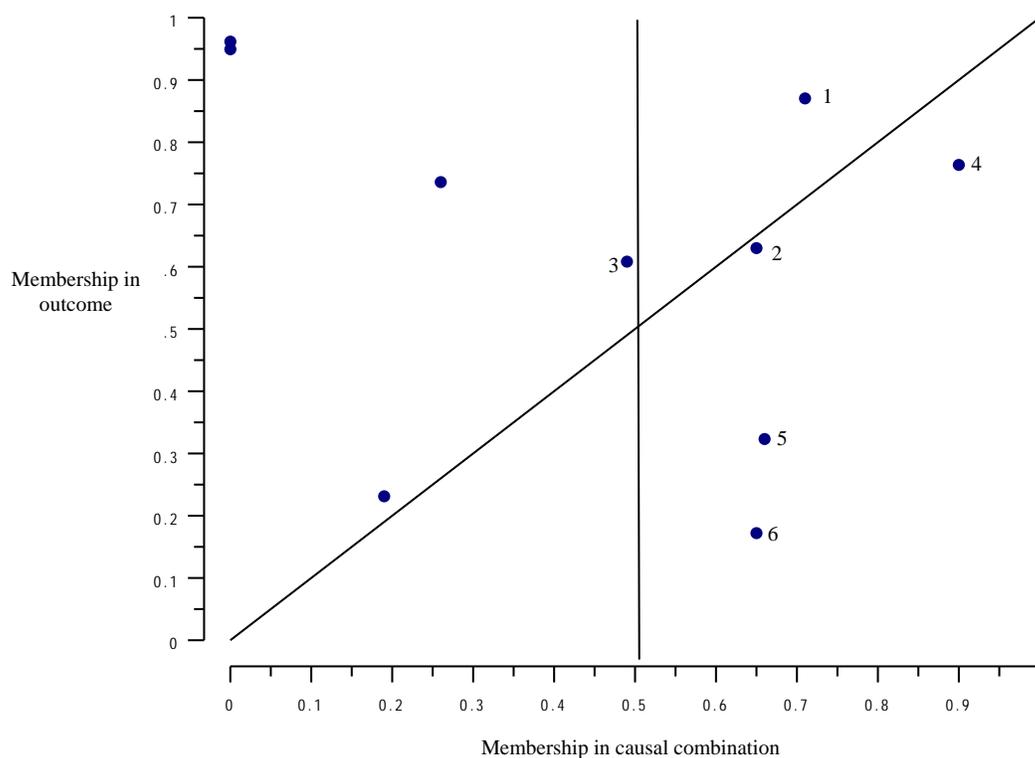


Figure 3.3 Scatter plot of fictitious cases' membership in a causal combination against membership in outcome

Even though cases 2 and 3 are technically outside the area considered “explained” (the area to the right of the vertical line at 0.5 membership in X and above the diagonal), they are close enough to the diagonal and to the 0.5 line respectively to be included in cases explained by the causal combination. Case 4, on the other hand, is too far below the diagonal to be considered explained by this causal combination.

Cases 4, 5 and 6 can be considered “under-performers,” inasmuch as their high membership in the causal combination would cause one to expect higher membership in the outcome.

Conclusion

This chapter has given an overview of the methodology chosen to carry out the main analysis in this dissertation, fuzzy-set qualitative comparative analysis. FsQCA offers many advantages that make it appropriate for the task that this research seeks to accomplish. It offers the possibility to investigate multiple causation or equifinality, which is the proposition that several pathways may lead to the same outcome. It also allows one to explore how causes work together to produce an outcome, a phenomenon known as conjunctural causation. Finally, this approach is also most suitable for the sample size (29 cases), allowing the use of all the information that is available rather than restricting the analysis to one or two case studies. This chapter has also

explained in depth the logic of fsQCA and how to interpret the results of the analysis. The next chapter presents the results of the analysis of government effort in addressing HIV/AIDS in 29 sub-Saharan African countries and discusses what they tell us about the factors that influence government aggressiveness in the face of the epidemic.

CHAPTER 4
AN ANALYSIS OF GOVERNMENT EFFORT AGAINST HIV/AIDS
IN SUB-SAHARAN AFRICA

This chapter investigates whether the data support the two main arguments made in this dissertation: first, that a democratic regime is one factor that enables governments to act forcefully against HIV/AIDS; and second, that there are multiple pathways to action on HIV/AIDS. To test these arguments, I analyze data on national effort to combat HIV/AIDS using the causal factors identified in Chapter One: type of political institutions, state capacity, the strength of civil society, internal stability, the level of development, the extent and direction of the epidemic and the flow of international funds.

The chapter is organized as follows. I first briefly review the main hypothesis being tested and the expected results. Then I report the results from the analysis and discuss what they mean substantively. Next, I use the same factors to analyze the reasons for lack of government effort in responding to HIV/AIDS. I conclude by discussing the implications of the results obtained from the analyses in light of the hypotheses outlined in Chapter One.

Hypothesis and Model

The goal of this dissertation is to show that there are multiple pathways to aggressive government action against the HIV/AIDS crisis, and to discover these causal pathways. I argue that countries with various constellations of causal factors- democratic or non-democratic regimes, high or low levels of development, strong or weak states- are able to be forceful in their efforts to fight HIV/AIDS. This analysis aims to find out which factors are jointly necessary or sufficient to produce the outcome of interest.

Previous research leads me to expect that having a democratic regime does make a positive difference in countries' level of national effort. Democracy, along with a combination of other domestic factors, should make it more likely that a country will score highly on the program effort index. However, this need not be the only pathway to good performance on the API. There can also be other paths to this outcome, perhaps involving combinations of causal factors not including democracy, as explained below. The method I have chosen allows me to discover the range of causal combinations, in addition to the one I am testing, that may lead to the outcome of interest.

As a reminder, the model being tested may be represented in the following manner, where the addition sign does not signify the Boolean OR but merely the sequence of terms included in the analysis:

*API = Democratic Institutions + Civil Liberties + State Capacity + Internal
Stability + Prevalence + Direction of Epidemic + Level of Development +
International Funds*

Results

The analysis returns five pathways to high government effort in fighting HIV/AIDS. These five solution terms are listed in Table 4 below. The features of fsQCA discussed above and that led to its being chosen for this analysis are demonstrated in these results: the solution terms are in the form of causal combinations, with different causal factors included in the analysis appearing in different solution terms; the interaction of causal factors is expressed in an additive as well as a multiplicative form; and finally, multiple possible paths to the outcome of interest are specified.

The consistency of the resulting set of solutions is very high, at 0.92. Taken as a whole, the cases displaying the combination of causes in this set of solution terms lead to the outcome 92% of the time. The coverage is 0.78, which is also very satisfactory. In other words, these five solution terms together explain 78% of the outcome. The consistency of each of the solution terms is also high (all above 0.9), which indicates that they are almost always sufficient to produce the outcome.

Table 4.1: Solution set for aggressive government action

	Causal Combination	Raw Coverage	Unique Coverage	Consistency
1	Democratic Institutions * State Capacity * Increasing Epidemic	0.38	0.04	0.97
2	Democratic Institutions * Civil Liberties * Internal Stability * Low Prevalence	0.43	0.13	0.92
3	Internal Stability * State Capacity	0.40	0.03	0.92
4	Internal Stability * International Funds	0.46	0.02	0.95
5	High Prevalence * Low Level of Development	0.33	0.1	0.95

N= 29

Solution Coverage: 0.78

Solution Consistency: 0.92

The first two solution terms relate directly to the first research question in this dissertation: under what conditions are democratic regimes more likely to address HIV/AIDS than authoritarian regimes? They specify two sets of conditions under which democracy matters: when there is strong state capacity and an increasing epidemic, and when there is internal stability, a strong civil society and low HIV prevalence.

I now examine each of the five solution terms in turn and in each case plot the position of the cases in the sample against the outcome to determine where each case falls and what cases “fit” each causal pathway.

Term 1: Democratic Institutions * State Capacity * Increasing Epidemic

The first set of conditions under which democracies perform better than autocracies is in the presence of strong state capacity and an epidemic that is on the rise. This relationship does not depend on the baseline infection level (i.e. whether levels in 2003 were considered high or low) but focuses rather on whether prevalence rates were going up or down in 2003. In other words, countries with competitive politics and strong capacity, when faced with a worsening epidemic, react strongly whether their infection rates are low or high. If the means are available to mobilize, they make use of them. It is important to note that this causal combination involves the level of competitiveness in the electoral arena, and not the liberal aspect of democracy- the existence of civil liberties. Hence even electoral democracies, which hold competitive elections regularly but may not have liberal societies, are able to put forth strong effort when state capacity is present and the epidemic is increasing. This suggests that competition in the political arena is a powerful motivator for politicians to adopt certain policies, even in illiberal societies. This is not to say that *only* countries where competitive elections are held without a liberal society existing can do well; the solution term only points out that civil liberties are not a necessary condition in this case.

The consistency of this configuration of causes is very high at 0.97, meaning that it is almost always sufficient to produce strong government action.

As the scatter plot below shows, countries that belong to this group of good performers include Botswana, Ghana, Madagascar, Nigeria, Namibia and South Africa. The Polity scores of these countries range from 4 (Nigeria) to 9 (Botswana and South Africa), while state capacity varies between 0.15 (Ghana) and 0.77 (South Africa). All the cases had a slightly increasing epidemic (increase of less than 2 percentage points over a two-year period), except Namibia which had a slightly *decreasing* epidemic (decrease of less than 2 percentage points over a two-year period).

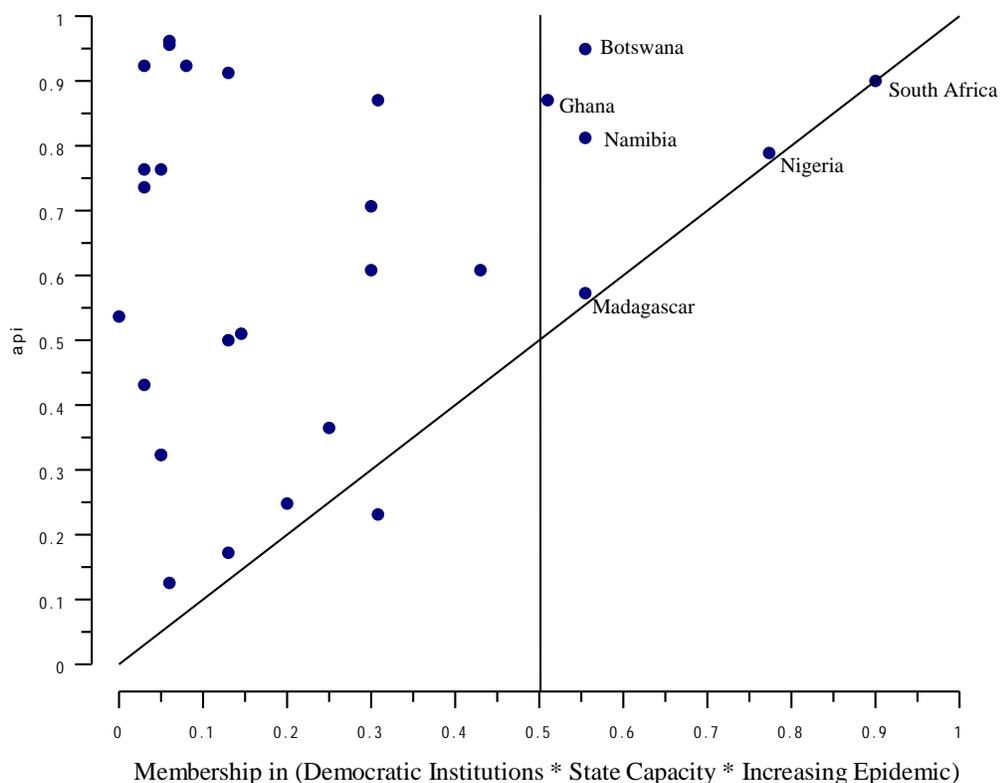


Figure 4.1. Scatter plot of causal combination 1 and API

Term 2: Democratic Regime * Stability * Strong Civil Society * Low Prevalence

The second solution term points to a second set of conditions under which democracies score highly on the API. This set of conditions paints the classic picture of democratic regimes, with the concurrent presence of internal stability and a strong civil society. The solution makes it clear that the presence of these characteristics matters when the HIV prevalence rate is still low. This fits with our prior knowledge about democratic regimes- that internal stability and a strong civil society that acts as watchdog (and as whistleblower when necessary) are enabling factors that prompt government to act in the interest of the public.

The consistency for this causal combination is also high, at 0.92. Figure 4.2 above shows where the cases examined in this analysis fall when their membership in this set is plotted against membership in the set of countries with high scores on the API. Countries that followed this path to strong government action include Ghana and Senegal. Both countries have convincing scores in each causal factor as well as strong performances in the API. Their position in the scatter plot reflects this- they are both positioned squarely in the top right triangle of the plot, far above the diagonal and well to the right of the 0.5 line.

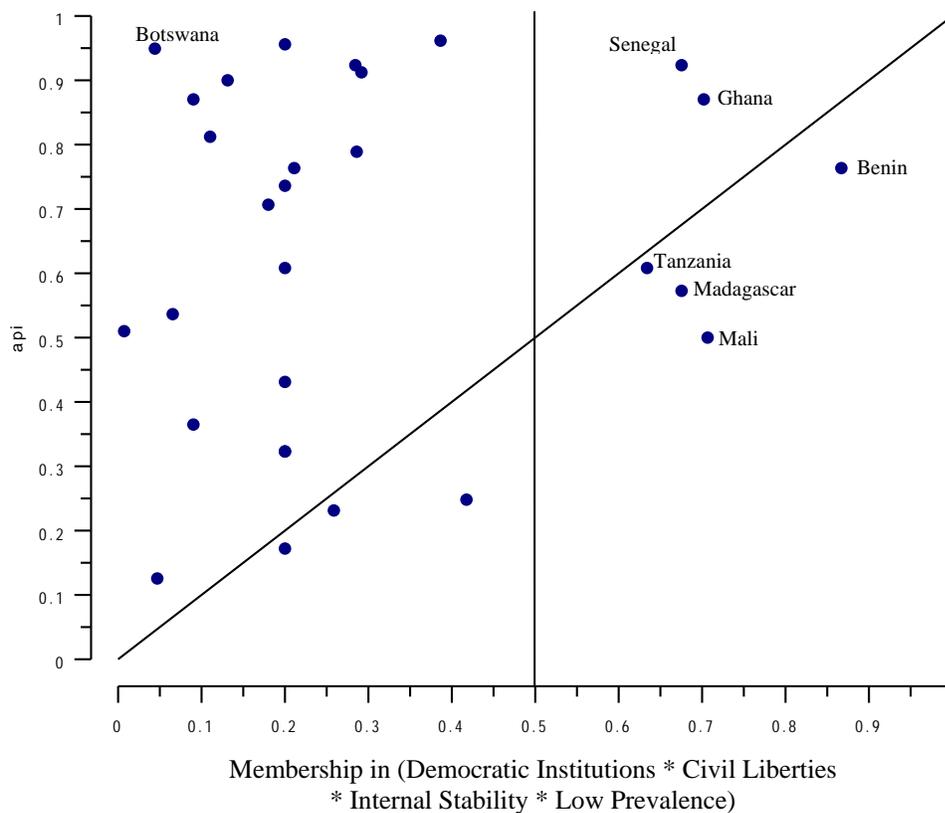


Figure 4.2. Scatter plot of causal combination 2 and API

Tanzania can be placed in this category as well, being very close to the diagonal. Its moderate scores in three of the sets of causal factors (2 in Polity, -0.25 in internal stability and 6.6 in HIV prevalence) explain why it is not more comfortably in the set of good performers: these values are only slightly higher than the cross-over point.

The other three countries below the diagonal and to the right of the vertical line (Madagascar, Mali and Benin) can be considered “under-performers.” Given their high membership in the set representing this causal

combination, one would have expected them to have higher scores on the API. Benin, especially, is surprising. With a Polity score of 6, civil liberties rating of 2 (free), a stability score of 0.63 (third highest in the sample) and a very low prevalence of 2%, Benin should have been a full member of this causal combination. In-depth research would establish the reasons for its “under-performance.”

Notice the very low membership of Botswana in this causal combination (extreme left on X-axis, indicating low membership in the set represented by this causal combination). Since it is a liberal democracy, one might expect Botswana to appear on this list of good performers. While the first three terms in the combination certainly apply to Botswana, it has high prevalence, which makes this particular pathway inapplicable to it.

Term 3: Internal Stability * State Capacity

Term 4: Internal Stability * International Funds

The third and fourth solution terms can be combined into one single term by factoring out the common term in the two expressions, internal stability. This gives us

$$\text{API} = \text{Internal Stability} (\text{State Capacity} + \text{International Funds})$$

Doing so is useful because it allows us to specify substitutable conditions under which internal stability can make a difference.

According to this solution, the absence of internal political strife leads to high government effort in addressing HIV/AIDS when a country either has strong capacity in the health services delivery sector or receives funds from international sources. The first scenario is not surprising, considering that the absence of pressing security issues allows governments the “luxury” (and funds) to address longer-term development and security problems such as HIV/AIDS (Ostergard and Barcelo 2005). The interesting aspect of this solution is the substitutability it suggests between state capacity and international intervention. In states that are stable but where capacity is low, financial assistance from foreign donors can make the difference between the government acting aggressively or not being able to. Funds from international organizations such as the GFATM can be used to build up formal health capacity or to use existing non-traditional methods of distributing treatment and care (such as village support groups, local NGOs, etc). The consistency of both solution terms are above 0.9, which indicates that they nearly always lead to the outcome.

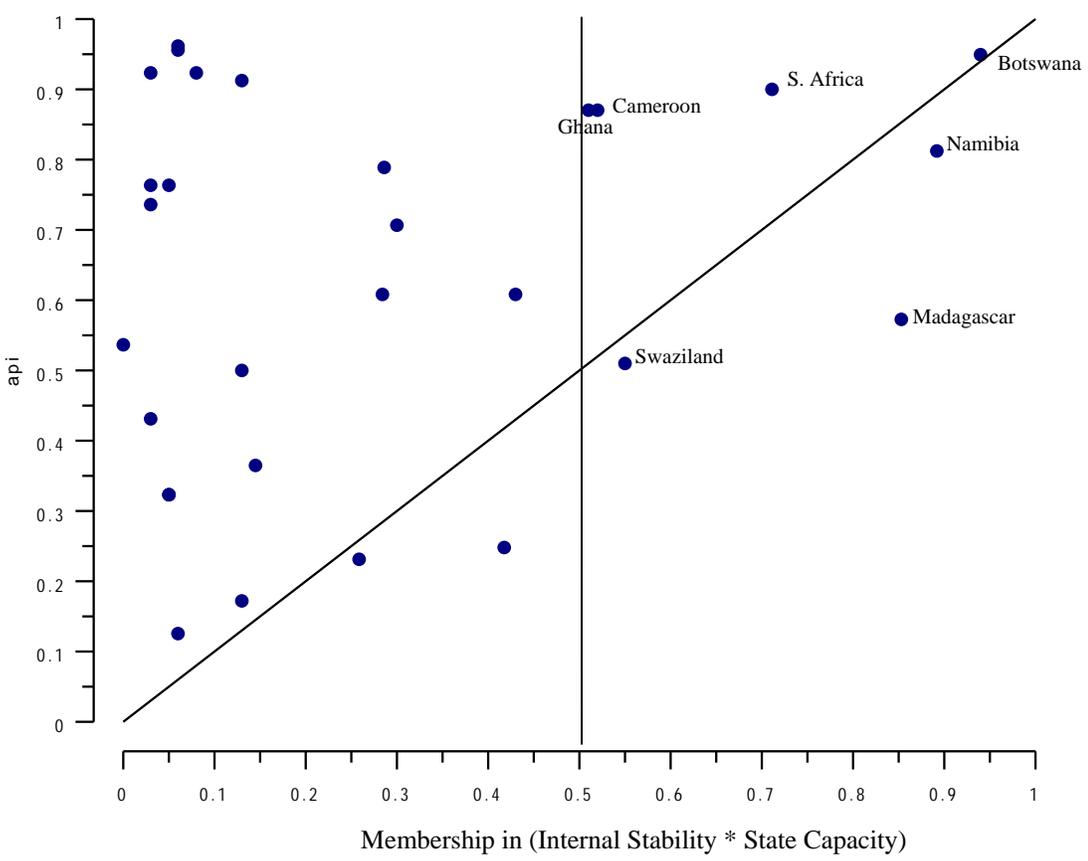


Figure 4.3 Scatter plot of causal combination 3 and API

According to the scatter plot above, the countries that followed this pathway to strong government action against HIV/AIDS are Botswana, Cameroon, Ghana and South Africa. Botswana's scores in the causal factors put its performance on the API right where it would be expected to be. It has the highest stability score in the entire sample (0.75) and the second highest state capacity (0.4 physicians per 1000 population). Cameroon and Ghana's appearance on this plot is rather surprising, given their moderate scores on both stability (-0.5 and -0.11 respectively) and state capacity (0.19 and 0.15 physicians

per 1000 population respectively). Their proximity to the vertical line indicates that their membership in this set is almost exactly at the cross-over point. South Africa's very high state capacity (0.77, almost twice Botswana's second highest score of 0.4) makes its inclusion here unsurprising, despite its moderate stability score (-0.09).

The next scatter plot, Figure 4.4 below, depicts the fourth solution term. It shows that three countries are unequivocally members of this causal pathway: Ghana, Malawi and South Africa, with three additional countries close enough to the diagonal to be included as well (Senegal, Tanzania and Zambia). This plot illustrates the importance of international funds as a substitute for endemic state capacity. While the other cases enjoy fairly strong state capacity, at least by African standards, Malawi and Senegal both have extremely low capacity (0.02 and 0.06 physicians per 1000 population respectively). In this case, the disbursement of GFATM funds by 2003 apparently made a significant difference in the Malawian and Senegalese governments' ability to fight HIV/AIDS effectively.

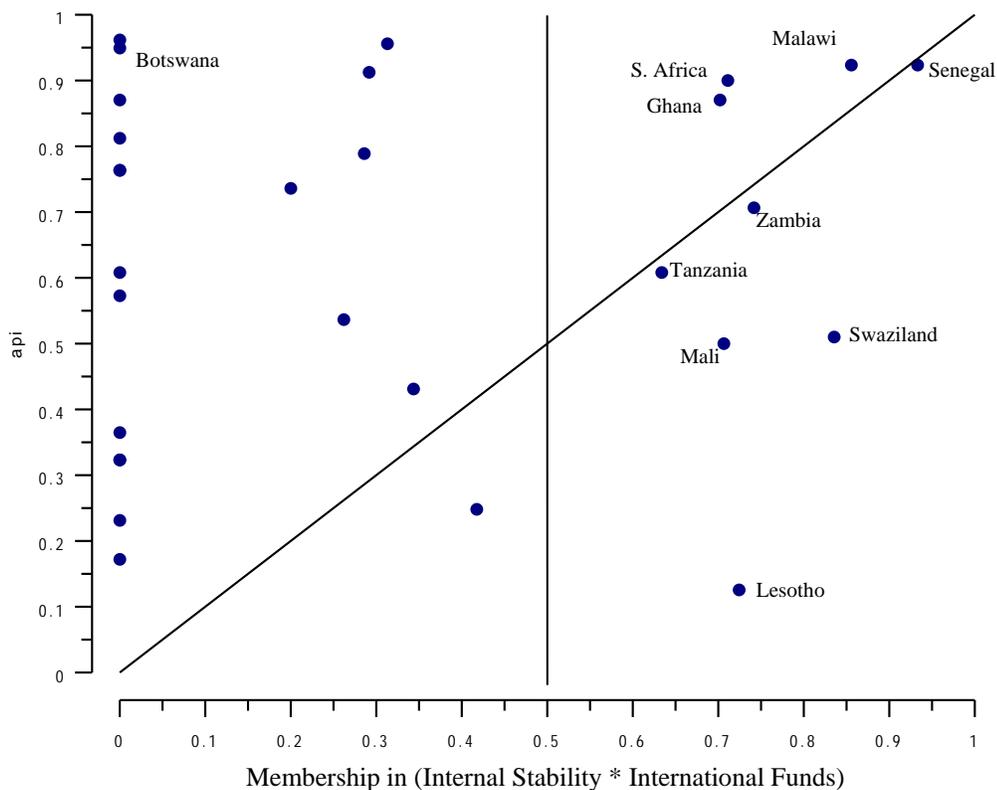


Figure 4.4 Scatter plot of causal combination 4 and API

The significant under-performer in this pathway is Lesotho, far at the bottom of the bottom triangle. Lesotho's dismal performance on the API despite favorable characteristics (internal stability, democratic regime, moderate civil liberties, above-average GDP per capita and high HIV prevalence) is an enigma that deserves to be studied in more depth.

Botswana and the countries directly below it had zero membership in this solution set because they had not yet received any funds from the GFATM by 2003¹⁷.

The plot below shows the combination of the two terms. Since adding two terms involves taking the maximum of the membership scores, all the good performers on each of the previous two plots appear in this plot. Thus Botswana reappears on the diagonal because of its membership in the first solution term.

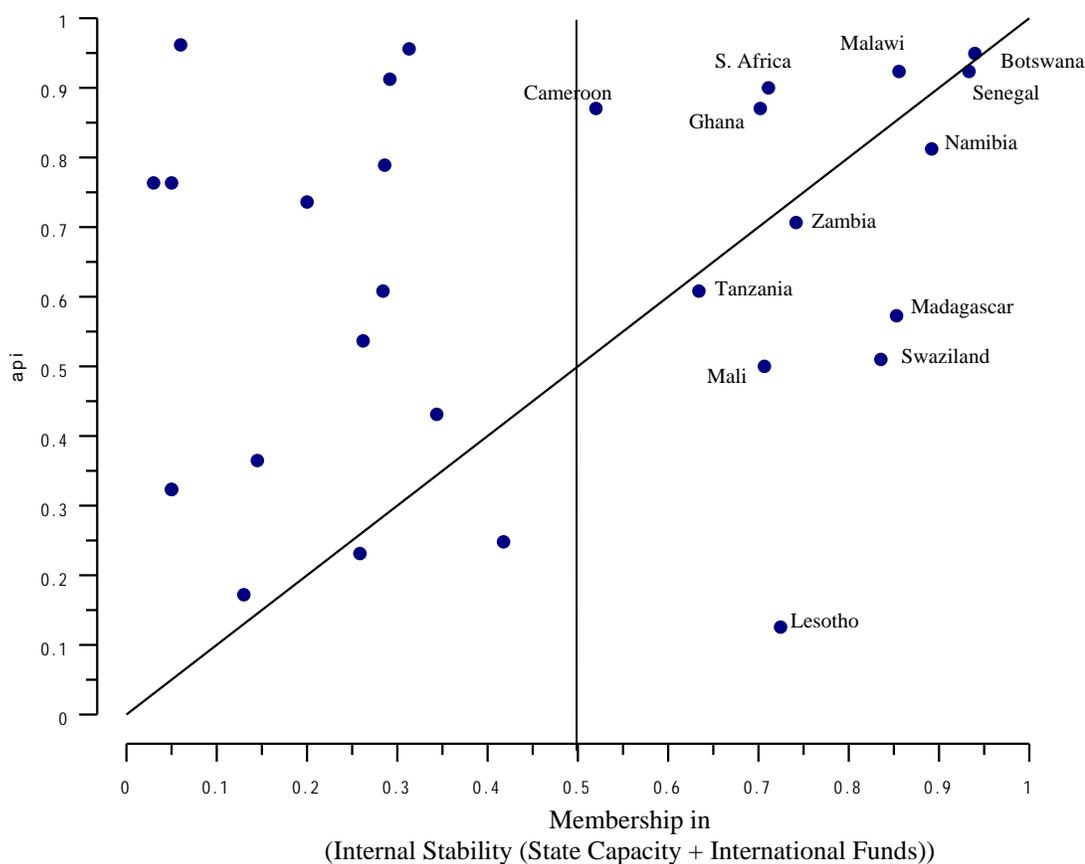


Figure 4.5 Scatter plot of combined solutions 3 and 4 and API

¹⁷ The membership score in any given solution set involving the logical AND is the *minimum* of membership scores in the sets of the different factors present in the solution.

Term 5: High Prevalence * Low Level of Development

This solution term is rather intriguing because of the combination of factors it involves. High prevalence by itself would not be surprising as a solution term, since one would expect that governments would act very forcefully if the epidemic was severe in their country. But coupled with low level of development (meaning that high prevalence influences aggressive government action *when level of development is low*), it points to some other dynamic. The most likely scenario is that, in these very poor countries, international organizations, mainly the United Nations Development Program (UNDP) are very active in the fight against HIV/AIDS because of the lack of resources locally. This fact is borne out by a quick look at the grants awarded by the GFATM to very poor countries: the awards are almost exclusively to the UNDP. The government, in these cases, would in effect be acting as facilitator for the efforts of these agencies by creating the necessary legal, regulatory and policy infrastructure for their programs. Nevertheless, creating this framework earns it high points in the relevant categories of the API, thus raising its total in the API.

As surprising as this causal combination is, its consistency is very high (0.95), meaning that when these two conditions are present together they almost always lead to strong government action.

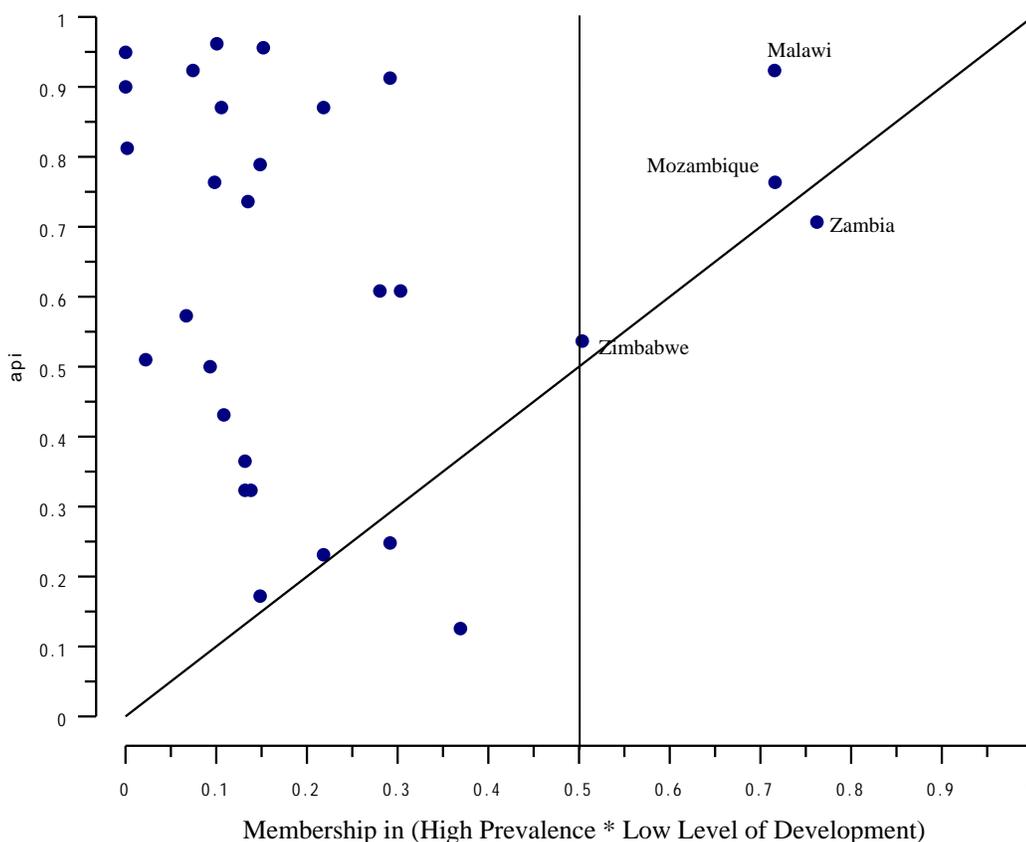


Figure 4.6 Scatter plot of causal combination 5 and API

The scatter plot indicates that four countries are explained by this combination: Malawi, Mozambique, Zambia and Zimbabwe. Of these, the last two have weak membership in this group, since Zambia is slightly below the diagonal and Zimbabwe is almost exactly on the 0.5 line. Zimbabwe's position is explained by the fact that its GDP per capita in 2003 was US \$1985, just below the US \$2000 threshold established in the set of countries with high level of development. If the threshold had been set higher (for example, US \$2,500), Zimbabwe would have been a full member of this set. Of the other two cases,

only Mozambique is a unique case, as Malawi also appeared in the previous combination of internal stability and international funds.

To summarize the results presented above, Table 4.2 lists the five causal combinations and the countries that belong to each combination.

Table 4.2. List of countries belonging to each causal combination

Democratic Institutions * State Capacity * Increasing Epidemic	Democratic Institutions * Civil Liberties * Internal Stability * Low Prevalence	Internal Stability * State Capacity	Internal Stability * International Funds	High Prevalence * Low Level of Development
Botswana Ghana Madagascar Namibia Nigeria South Africa	Ghana Senegal Tanzania	Botswana Cameroon Ghana South Africa	Ghana Malawi Senegal South Africa Tanzania Zambia	Malawi Mozambique Zambia Zimbabwe

This table shows that significant overlap exists among the combinations, in that several countries belong to more than one combination. Botswana, Malawi, Senegal, Tanzania and Zambia appear in two lists each, while South Africa figures in three combinations and Ghana belongs to no less than four categories. This is inevitable when the same causal factor appears in more than one combination (for example, stability) or when several factors that typically go

hand-in-hand appear in different combinations (for example, democratic institutions and stability). Cases that possess such characteristics are then likely to appear to be explained by more than one causal combination. This overlap in the membership of cases means that the model is overdetermined. In this situation, it is impossible to identify, from the results of the analysis, which of the various combinations that a particular country belongs to may have led the government of that country to act aggressively. In-depth research is needed to distinguish which factors were critical in leading to the outcome in each of the cases that belong to more than one causal combination.

Not all cases of aggressive government action on HIV/AIDS are accounted for by these five causal pathways. The coverage of 0.78 indicated that some cases fall outside the explanatory power of these five solution terms. Six cases do not fall in any of these categories: Benin, Burkina Faso, Burundi, Côte d'Ivoire, Rwanda and Uganda¹⁸. Intriguingly, two of these countries- Burkina Faso and Rwanda- happen to be the countries with the highest scores on the API (82 and 81 respectively). While idiosyncratic features may help explain the performance of some of these cases- for example, the genocide that occurred in Rwanda in 1994 has allegedly led the West to feel guilty for not doing more to stop it and is responsible for the very extensive programs that various

¹⁸ Two other cases- Mali and Swaziland- could arguably be included in this list. Both have an API score of 60, which was selected as the cross-over point between aggressiveness and lack of aggressiveness. Being right at the cross-over, these countries are considered neither in nor out of the set of countries having responded aggressively to HIV/AIDS, therefore I did not include them here.

organizations are carrying out in that country-, more research is needed to determine the reasons for strong action in these countries separate from the factors identified in this analysis.

Understanding Lack of Government Action

Another interesting (and related) phenomenon that can be explained using these data is the *lack* of government effort in addressing HIV/AIDS. Unlike standard statistical techniques, QCA does not assume symmetry in causal effects. In regression analysis, if the presence of a causal factor leads to the presence of the outcome, the absence of that cause is assumed to be associated with the absence of the outcome. For example, if high level of stability is correlated with good performance on the API, low stability is expected to lead to the absence of government effort. In QCA, however, no such symmetry is assumed: the set of factors that leads to the absence of an outcome may be completely different from the set of factors that leads to the presence of the outcome. This section explores the causes of lack of government action against HIV/AIDS. The same data as for the analysis above are used; however the outcome here is the negation of the one used previously, and is obtained by subtracting API fuzzy scores from 1. Expressed in mathematical form, this is:

$$\sim\text{API} = 1 - \text{API}$$

Table 4.3 details the results of this analysis along with the coverage and consistency scores.

Table 4.3 Solution set for lack of government action

Causal Combination	Raw Coverage	Unique Coverage	Consistency
Lack of Democratic Institutions * High Prevalence * Lack of Civil Liberties	0.40	0.08	0.75
No International Funds * Low Level of Development * Low Stability * Lack of Democratic Institutions * Lack of Civil Liberties	0.30	0.04	0.84
No International Funds * Low Level of Development * Increasing Epidemic * Low Prevalence * Civil Liberties	0.21	0	0.83
No International Funds * Low Level of Development * Democratic Institutions * Low Prevalence * State Capacity	0.17	0	0.76
No International Funds * Low Level of Development * Low Stability * Decreasing Epidemic * Low Prevalence * Lack of Civil Liberties	0.28	0	0.80
No International Funds * Low Level of Development * Increasing Epidemic * Low Prevalence * State Capacity	0.18	0	0.80
Decreasing Epidemic * High Level of Development * Low State Capacity	0.54	0.12	0.76

N= 29

Solution Coverage: 0.75

Solution Consistency: 0.71

The first observation that must be made is the relatively low consistency score of the overall solution set (0.71) as well as individual solution terms. This means that these causal conditions, when they occur together, do not always lead to the production of the outcome (low level of government effort against HIV/AIDS). However, the coverage (0.75) is satisfactory: taken together, this set of solution terms explains about 75% of instances of lack of government aggressiveness in the face of the HIV/AIDS epidemic. While the low consistency

scores suggest that these results need to be accepted cautiously, a few comments can be made on the overall picture that emerges as to the conditions that lead to weak government effort.

The most striking trend that is visible in these results is the role of financial resources: lack of international funds and low level of development appear together in five of the seven pathways to weak government effort¹⁹. Even though these two conditions are far from being sufficient, as can be seen by the number of other conditions that appear in the solution terms, they could almost be considered necessary. While the *presence* of financial resources is no guarantee that a government will address HIV/AIDS (as borne out by the previous analysis), it seems that their *absence* is almost certain to lead to *lack* of government response. Nevertheless, four of these causal combinations are not responsible for any unique instances of the outcome but completely overlap with other combinations (zero unique coverage), reducing their usefulness in understanding the outcome of interest.

No clear conclusion can be made as to the role of democratic institutions (or the lack thereof) in producing weak government effort. According to the first two solution terms, the absence of democratic institutions and civil liberties (in other words, total autocracy) coupled with either high prevalence or low stability

¹⁹ It is worth noting that these five pathways also have the highest consistencies of the seven combinations, meaning that these combinations lead to the outcome more reliably than the other two combinations.

and lack of financial resources leads to weak government effort. However, according to the fourth solution term, the presence of democratic institutions is also associated to weak government action when there is a lack of financial resources, even when prevalence is low and state capacity is high.

Conclusion

This chapter has investigated the factors that explain sub-Saharan African governments' responses to the HIV/AIDS crisis. It has done so by examining the causal configurations that lead to aggressive action as well as the pathways that explain weak government responses. Five pathways to strong action were identified, all with high consistencies, while the analysis of lack of strong action returned seven pathways with moderate consistencies. Both analyses demonstrate that state responses to HIV/AIDS are best explained by multiple causal combinations instead of single causes with independent effects. No necessary condition was identified in the analysis of aggressive action, but the lack of financial resources (whether local or from international sources) seems to be an almost necessary condition in creating weak responses.

With regards to the hypothesis about the role of democracy, the results of the analysis of aggressive government action provide strong support for the thesis that, under certain conditions (when the state is strong and the epidemic is rising, or alternately when there is internal stability, a strong civil society and the

level of prevalence is still low) democratic regimes perform better than their authoritarian counterparts. Democracy is not a necessary condition nor is it a sufficient condition. Other scenarios for good performance include internal stability coupled with strong capacity or the reception of international funds, and high prevalence in countries with a low level of development.

Some interesting features were noted in the plotting of cases in the causal combinations which suggest avenues for further exploration. The significant overlap that exists among the causal combinations shows that the model is overdetermined, which makes it impossible without more in-depth study to determine which pathway any particular case actually followed in arriving to the outcome. The positive instances of strong government action against HIV/AIDS which did not fit into any of the pathways are also intriguing and warrant further research to find the factors that explain strong government action in those countries.

What do these findings mean for theory and for practice? Theoretically, this confirms what political scientists have often found in other policy areas, namely that democracies outperform autocracies in quality of life issue areas. However, according to the results of this analysis, this superior performance only occurs under certain circumstances, detailed above. It bears noting that the literature on democracy in sub-Saharan Africa generally characterizes opposition parties, free press, interest groups and independent judiciaries as weak at best.

That they nevertheless work well enough to encourage democratically-elected governments to adopt positive policies is a testimony to the strength of mechanisms of democratic accountability.

As far as practice goes, the findings presented in this chapter highlight avenues that are of interest to the donor community. Foreign governments and international organizations are always trying to determine what makes some programs work better than others and why, as well as how these lessons can be applied to cases that do not perform as well- the principle of "best practice." This research points to two fundamental requirements for governments to act aggressively against HIV/AIDS: internal stability and a democratic regime. Donors' efforts can complement those of democratic regimes and make the fight against HIV/AIDS even more comprehensive and effective.

In non-democratic but stable countries, governments also act forcefully, a fact which is important because many countries in sub-Saharan Africa are not democratic but do have a stable authoritarian regime. Since it is rather difficult to install a democratic regime, this result is significant for donors who want to know under what circumstances other than the existence of a democratic regime they can work effectively. This finding suggests that it is possible for them to work with stable authoritarian regimes and see positive consequences in the form of committed government action. Since international funds contribute to aggressive action on the part of stable governments, even non-democratic

countries can do well in the fight against HIV/AIDS (and, by extension, in other development problems) if they receive funds from foreign governments and international organizations such as the GFATM. This should be an encouragement for donors to work with African governments that may not yet be democratic or have other desirable attributes. This is important for policy areas such as the fight against HIV/AIDS, where humanitarian concerns should be most important in determining funding decisions and aid should be given to help the people regardless of regime type or other political characteristics.

More importantly, the finding that lack of financial resources cripples governments enough that they cannot mount an effective national response should give pause to those who advocate directing funds to those who are already good performers. While such a policy prescription is understandable given the scarcity of resources (especially in relation to the magnitude of the problem), it suggests that, in the absence of national resources and without international funds to compensate, it will be almost impossible for poor countries to address the crisis. Although the granting of funds does not guarantee that they will be well used, withholding those funds is almost certain to lead to the absence of any response.

CHAPTER 5

AN ANALYSIS OF BOTSWANA'S NATIONAL HIV/AIDS RESPONSE

The previous chapter has shown through a qualitative comparative analysis of twenty-nine African countries the various combinations of causes that lead to a high level of government effort in combating HIV/AIDS. This chapter discusses and explores the mechanisms by which democracy has an impact on domestic HIV/AIDS policy in Sub-Saharan Africa by delving into the case of Botswana. I will discuss the various components of Botswana's program, exploring how different domestic democratic mechanisms may have influenced it to be so aggressive.

The chapter is laid out in the following manner: first, I discuss why Botswana is a good case to study the dynamics of a democratic country's HIV/AIDS response. Next, I lay out the different elements of Botswana's response, summarizing as well some of the international actors supporting that response. The following section examines how the domestic factors associated with the existence of a democracy have influenced the Botswana government's response.

Botswana: An Ideal Case

In studying the mechanisms at work in democracies with good performance in combating HIV/AIDS, Botswana stands out as an ideal case study, for reasons that are explained below. Examining if and how democratic institutions and the social environment that they foster may have influenced and shaped this country's HIV/AIDS response will make it possible to identify those mechanisms that are most powerful in the African context. These mechanisms can then be tested in other cases, most notably least likely cases, to test their robustness.

Botswana has been a democratic country since its independence from Great Britain in 1966. Seretse Khama, the legitimate heir to the chieftainship of the Ngwato people, who were the most powerful and important among Botswana's traditional ruling structure, was elected as the first president and was reelected twice²⁰, serving until 1980, when he died in office (Tlou and Campbell 1997). His Botswana Democratic Party (BDP) has been in power since independence, although several opposition parties exist and are active. Presidential and parliamentary elections have been held regularly every five years since 1969, and they are consistently recognized as free and fair by local

²⁰ Until 1998, there was no constitutional limit on the number of terms a president could serve. Under Sir Ketumile Masire, the country's second president, the constitution was amended so that presidential rule would henceforth be limited to ten years, or two terms. His successor, Festus Mogae, has abided by this term limit. He stepped down on March 31st, 2008 after ten years in office, allowing the Vice-President, Lt. General Seretse Khama Ian Khama, the son of the country's first president, to assume office ahead of the 2009 presidential election.

politicians and observers. Power has been transferred smoothly from each president to the next. Moreover, civil liberties have been consistently respected since the country's independence as well. Since 1974, the country has been rated as "Free" every year by Freedom House. It is also worthy of note that Botswana remained peaceful while much of the rest of the continent, including its immediate neighbors, Rhodesia (now Zimbabwe) and Namibia, were embroiled in civil war. Although its borders and internal security were compromised in the 1980s when the South African Defence Force conducted raids on the capital, Gaborone, the country remained democratic and stable.

Economically, Botswana has also done well in the four decades since independence. Diamond mining, which was started around the time of independence, has allowed the economy to grow at an average of 9% a year, although it has slowed down in recent years (World Bank 2007). The GDP per capita, which was US\$ 70 at independence, is now over US\$ 12,000 (World Bank 2008). This puts Botswana firmly in the category of upper-middle-income countries. Although the relatively high unemployment rate (20% by some estimates) is cause for worry, the diversification of the economy away from diamond mining in recent years, carries with it the hope that more jobs will be created. Beef exports to the European Union are now an important source of revenue, as is the tourism industry. The government has also sought in recent years to attract foreign investment, especially in the manufacturing and allied

industries (Government of Botswana 2008). Crucially, the country has avoided the debt trap that so many African countries have become embroiled over the last few decades: its public debt represents a mere 10% of GDP (Government of Botswana 2008; World Bank 2007).

Another factor which makes Botswana an ideal case is the small size and homogeneity of its population. According to the 2001 census, the population of Botswana was only 1,640,115, divided into two main ethnic groups: the Tswana (or Setswana), who comprise 79% of the population, and the Kalanga, who make up 11% of the population. Smaller ethnic groups representing the remaining 10% of the population include the Kgalagadi, Herero, Bayeyi, Hambukush, Basarwa ("San"), Khoi and whites (Botswana Central Statistics Office 2001; IDASA 2008). Such lack of ethnic fragmentation is highly unusual in sub-Saharan Africa. This homogeneity means that no group is engaged in a zero-sum game for power and resources in the country; indeed, the numerical and economic dominance of the Tswana precludes the kind of fierce competition for political power and economic resources along ethnic lines that characterizes much of sub-Saharan Africa. This, in turn, has allowed for political stability in Botswana. The government has been able to focus on governing rather than fending off challengers from other ethnic groups, implementing policies that have ensured Botswana's development from a very poor country into a middle-income country as described above.

As can be seen from the discussion above, Botswana is a stable, peaceful, prosperous and consolidated democracy. Because of this, it provides the best environment for the mechanisms by which democratic politics influence policy-making, thus constituting an ideal case for exploring the validity of explanations of democracies' policy performance: if these mechanisms do not hold in the case of Botswana, it is unlikely that they will hold in the case of more recent and/or less consolidated democracies.

In addition to providing an ideal institutional setting for responding to HIV/AIDS, Botswana also has a large epidemic. UNAIDS estimates that its adult prevalence (15-49 years) is 24% (UNAIDS 2007). Prevalence rates are especially high among pregnant women: 32% of those attending antenatal clinics in 2006 were HIV-positive (*ibid*). Recent numbers seem to suggest that new infections among the youth are falling, with prevalence among 15 to 19-year-old women attending antenatal clinics decreasing from 25% to 18% between 2001 and 2006, and from 39% to 29% among the 20 to 24-year-olds (UNAIDS 2007b).

Lastly, the results of the fsQCA analysis of aggressive government action presented in the previous chapter indicate that Botswana is an interesting case because it is explained by more than one pathway. Indeed, Botswana appeared in the list of cases with democratic institutions, high state capacity and an increasing epidemic as well as on the category of countries with internal stability

and high state capacity. An in-depth study of Botswana may enable us to shed light on which pathway the country followed to strong government action.

HIV/AIDS Policy in Botswana

Botswana's response to HIV/AIDS started in 1987, two years after the first case was diagnosed (UNAIDS 2008). A National AIDS Control Programme (NACP) was launched, and an emergency plan to deal with the epidemic was instituted (Heald 2002). The first five-year Medium-Term Plan (MTP I) was launched in 1992, followed by the more comprehensive MTP II in 1997, which redefined HIV/AIDS as a developmental issue rather than a public health problem only. The government identified response areas such as prevention, treatment and support services and outlined its goals for each of these areas. Important programs such as condom distribution and prevention of mother-to-child transmission (PMTCT) by providing antiretroviral (ARV) prophylaxis for seropositive pregnant women were launched, and the government also manifested its interest in providing antiretroviral therapy to people living with HIV/AIDS (PLWHA). Care and support for PLWHA were addressed as well. The next important action that was taken was the formation in 1999 of the National AIDS Coordinating Agency (NACA), in keeping with the "Three Ones" framework advocated by UNAIDS. Acting as the Secretariat of the National AIDS Council, which is itself chaired by the President of Botswana and includes

representatives from all stakeholders, NACA is responsible for the oversight and harmonization of different sectors' AIDS efforts, the implementation of HIV/AIDS programs, monitoring and evaluation (M&E) activities as well as resource mobilization (Republic of Botswana 2005).

In 2000, the African Comprehensive HIV/AIDS Partnership (ACHAP), a cooperative effort among the Government of Botswana, the Bill and Melinda Gates Foundation and Merck Company Foundation, was launched. MTP II was revised in 2002; the lessons learned from its implementation (the strengths that could be built on as well as the weaknesses that needed to be addressed for a more successful response) were incorporated into the new document, the National Strategic Framework for HIV/AIDS (NSF), which will guide policy until 2009. The document is guided by Vision 2016, the government's long-term development plan for Botswana, which has as one of its goals to have "an AIDS-free generation by 2016" (Government of Botswana 1997).

In each successive phase and through each new program, the national response in Botswana has been strengthened and become more comprehensive, so that it is held up today as an example not only in Africa but also in other developing region as a successful approach to tackling the HIV/AIDS epidemic in settings where resources are limited. Before getting into the details of the various programs that have been implemented, it is important to highlight the strong personal leadership that has been shown by some of the highest members

of the government, from former President Festus Mogae himself to his health ministers (formerly Joy Phumaphi²¹, and now Dr. Sheila Tlou) and other members of the cabinet and parliament. Past work has demonstrated the importance of political leaders' personally speaking out on HIV/AIDS (Bor 2007; Putzel 2003, 2004). At a time when other African leaders were silently ignoring the epidemic in their populations, Mogae and his government took personal responsibility for addressing the crisis. In the 2001 United Nations General Assembly Special Session on HIV/AIDS (UNGASS), President Mogae took the floor and made an impassioned speech about the imminent "extinction" of his people should HIV/AIDS continue unabated, pledging his government's full commitment to fighting the disease. This political commitment at the highest levels made the development and implementation of an aggressive government response possible.

The next section lays out specific policies belonging to each response area: prevention activities; treatment, care and support; and research and monitoring.

Prevention

This response area is arguably the most important of all, as it is through prevention efforts that new infections are stemmed and the epidemic is

²¹ Ms. Phumaphi's competence and strong leadership as Health Minister and high-profile role in the fight against HIV/AIDS in particular were noticed and she later became Assistant Director General for Family and Community Health at the World Health Organization; she is now Vice President of Human Development at the World Bank.

contained, to eventually disappear. The main measure in 1987, when the first steps for a national response were articulated, was to ensure that the blood supply was screened systematically to prevent the transmission of HIV through blood transfusions. Condom use was promoted as early as 1992, in the context of MTP I (Heald 2002). Male and female condoms are distributed free at public health centers and are also available through Population Services International (PSI), a social marketing organization²². In April 2006, the Minister of Finance announced that condoms would henceforth be exempt from the Value Added Tax, making them cheaper to buy.

The prevention of mother-to-child transmission (PMTCT) is another crucial area of prevention. In the absence of any intervention, between 20 and 45% of newborns born to HIV-positive pregnant women contract HIV during pregnancy, childbirth or through breastfeeding (WHO 2007). The administration of ARV drugs dramatically reduces the chances of these babies contracting the virus, to less than 2% (*ibid*). It is therefore one of the most effective methods of prevention available. Botswana has been very aggressive in the implementation of PMTCT. Its program, the first national PMTCT program in Africa, was established in 1999 and rapidly expanded: originally offered only at two pilot sites in Gaborone and Francistown (the two major cities in the country), PMTCT

²² Almost 2 million condoms were distributed through government health facilities between July and September 2007, and 6.8 million were purchased from or distributed by PSI (Republic of Botswana 2008).

was available at all public health facilities two years later (Republic of Botswana 2008). As of March 2007, ARV prophylaxis²³ was administered to 89.9% of pregnant women who were HIV-positive. Botswana uses the prophylaxis method that experts agree is the most effective and efficient in resource-constrained settings, the combination of short-course AZT and SD-NVP (Ekpini and Gilks 2005)²⁴. The Government of Botswana estimates that ARV prophylaxis has helped slash mother-to-child transmission rates from about 40% to about 4% (Republic of Botswana 2008).

In spite of reservations on the part of international experts, who were concerned about privacy and human rights issues, routine HIV testing (RHT) was introduced in January 2004, becoming part of the clinical services provided at public health facilities. Patients are now tested for HIV in addition to other services that are offered at these health centers, and have the opportunity to opt out of it if they do not wish to be tested for HIV. This has led to a much higher percentage of patients being tested- from 64% in 2004 to 93% by September 2007 (Republic of Botswana 2005, 2008). In addition, Voluntary Counseling and Testing (VCT) is available to communities in a variety of settings, including

²³ Prophylaxis refers to treatment whose aim is to prevent disease or stop it from spreading (Merriam-Webster Dictionary 2008)

²⁴ There are several forms of ARV prophylaxis. One method is to administer a single 200 mg dose of Nevirapine (SD-NVP) to the mother at the onset of labor and one dose of NVP syrup to the newborn within 72 hours of birth. Another method, short-course combination prophylaxis, calls for a three-drug regimen (with Zidovudine, or AZT, as the main drug) to be taken starting at 28 weeks of pregnancy. Lastly, highly active antiretroviral therapy (HAART) is used in pregnant women who are in advanced stages of the disease (www.pedaids.org).

through mobile clinics. The Ipoletse Call Centre, a national HIV/AIDS/STI helpline, provides the services of a professional nurse and an agent with medical training.

Campaigns of information, education and communication were launched from the inception of MTP I (www.avert.org). Education and sensitization of the general public occurs through various programs delivered in different media. The Ministry of Education has incorporated AIDS education into the curriculum for schools, developing materials for all levels, in both Setswana and English, that are tailored to the local context. A teacher capacity-building program is in place, training teachers in life skills including awareness of AIDS issues, adolescent sexual reproductive health and family planning. As far as education of the broader public is concerned, presentations and workshops are organized regularly in the community to dissipate misconceptions and disseminate correct information about the disease. The Total Community Mobilization program is a door-to-door education effort funded and led by BOTUSA, a partnership between the Government of Botswana and the U.S. Centers for Disease Control (www.botusa.org). Safe-sex billboards are ubiquitous, and television and radio advertisements are broadcast regularly. A radio drama, *Makgabaneng*, has proved very popular and has raised awareness of HIV/AIDS (www.naca.bw). Programs such as workplace educating and peer counseling (with a specially-produced facilitator's manual), workplace-specific brochures, videos and other

materials, condom distribution and the training of sector-specific AIDS coordinators take HIV/ AIDS education to the workplace (Republic of Botswana 2002, www.avert.org). The “Know Your Status” campaign is a push to get members of the public to get tested for HIV; mobile testing centers called “Tebelopele” were set up by BOTUSA and were recently turned over to the Ministry of Local Government (www.cdc.gov). Lastly, special events such as festivals and concerts are another vehicle for raising AIDS awareness (www.avert.org).

The targeting of most-at-risk groups (sex workers, men who have sex with men (MSM), migrant workers and prisoners) is an area of relative weakness in prevention efforts. The Corridors of Hope program, initiated by the United States Agency for International Development (USAID) and supported by various other international and local organizations, targets highly mobile populations in the Southern African region, including truckers, commercial sex workers and informal traders. However, such efforts are insufficient; the Government of Botswana’s 2008 report on UNGASS commitments recognizes that there are “gaps... in service delivery for most-at-risk populations” and that “laws exist that present obstacles to effective HIV prevention, treatment, care and support for most-at-risk groups” (Republic of Botswana 2008, p. 15). Indeed, under Botswana law, commercial sex services and homosexual sexual relations are considered criminal activities, preventing outreach efforts to individuals who

participate in these practices. However, these shortcomings were brought out in the recent midterm review of the NSF, which may encourage the government to review the legislation and remove the obstacles that exist to outreach to these groups.

Treatment, Care and Support

The core of the treatment program is the provision of life-saving ARV drugs to AIDS sufferers. Botswana is the first country in Africa (and the only one, so far) to guarantee treatment to anyone who needs it. This program started in 2001, when ACHAP commissioned a rapid assessment by consultancy firm McKinsey and Co. of the feasibility of distribution of ARV drugs through the public sector. The next year, the new program was rolled out, with ARV being distributed at four sites initially: the capital, Gaborone, and three major towns, Francistown, Serowe and Maun. Only four categories of people are targeted, while the government built up capacity (see table 1). Under the phased approach, seven more sites of ARV distribution were opened in 2003 and twenty-one additional ones in 2004/5. As of 2007, 89.9% of those who need treatment (over 90,000 people) were receiving it, the highest percentage in sub-Saharan Africa.

Sexually transmitted infections (STI) and opportunistic infections (OI) are also treated free of charge. This service has been in place since 1971, when the

government started providing free health care. Capacity for treatment of STIs and OIs has been increased in recent years by the opening of additional health centers, especially in remote rural areas, and the training of additional health staff through KITSO, a joint program between the government and the Harvard AIDS Institute. The BOTUSA project has been active in efforts to prevent tuberculosis, the primary cause of death in AIDS patients in Africa, through the Isoniazid Preventive Therapy (IPT).

In the field of support, programs exist to address the needs of different groups of people who are affected by the disease. Terminally ill patients are cared for through the Community Home-Based Care (CHBC) program, which provides care and assistance in the home for these patients as well as food baskets and psychological counseling. Over 300 community-based organizations (CBOs) are involved in the delivery of CHBC. Orphans are cared for under the National Orphan Care program, started in 1999. The main provisions of this program are the waiving of school fees for orphans, the delivery of a monthly food basket and psychological counseling. This program currently caters to the needs of over 53,000 children across Botswana (Republic of Botswana 2008). Finally, the Care for Caregivers program addresses the needs of health care workers and their families, providing counseling for individuals and groups, stress management and training.

Research, Monitoring and Evaluation

Botswana has had HIV/AIDS sentinel surveillance since 1992, when the epidemic was in its beginning stages (Republic of Botswana 2005). While the initial strategy was to gather data that would help raise awareness, facilitate resource mobilization and guide policy development, in 2001 it was revised to collect additional data on explanatory factors. Two Botswana AIDS Impact Surveys have been carried out so far to assess the socioeconomic impact of AIDS, in 2001 and 2004; a third one is ongoing in 2008. In addition, research is carried out in the context of the collaboration between the Government of Botswana and the Harvard AIDS Initiative, called the Botswana-Harvard Partnership (BHP). This research focuses on clinical aspects of the epidemic, such as the genomic analysis of HIV-1C, the sub-type most commonly found in Southern Africa, as well as the design of a vaccine against this subtype.

Monitoring and evaluation (M&E) of response programs is done through the Botswana HIV/AIDS Response Information Management System (BHRIMS). The different implementing agencies and sectors (government ministries, civil society organizations and the private sector) collect data on specific programs and turn them over to BHRIMS, which analyzes them to determine the performance of the national response (Republic of Botswana 2005). NACA then prepares a quarterly report on the national response which it presents to the NAC to inform policy-making.

The above overview of Botswana's national HIV/ AIDS response clearly shows, by its sheer comprehensiveness, how committed the government is to fighting the epidemic. No other country in sub-Saharan Africa, and very few countries around the world, shows a comparable level of determination to attack the epidemic on all fronts. Table 5.1 below summarizes the main components of its national program, while Table 5.2 gives an overview of spending on HIV/ AIDS for fiscal year 2006-2007, the most recent year for which such data is available.

International Partners

No picture of an African country's HIV/ AIDS response would be complete without discussing the role of international organizations, whether intergovernmental or non-governmental: the United Nations' umbrella organization, UNAIDS; the Global Fund to Fight AIDS, Tuberculosis and Malaria, or GFATM; the World Health Organization, WHO; and the World Bank, all of which have provided significant funds and expertise in various fields; a variety of non-governmental organizations; private philanthropies such as the Bill and Melinda Gates Foundation, which makes grants to improve states' ability to respond to the crisis, or former US President Bill Clinton's William J. Clinton Foundation, which has been instrumental in procuring ARV drugs at

Table 5.1 Timeline of Botswana's response: policies adopted, target population and source of funding

YEAR	POLICY/ EVENT	TARGET POPULATION	SOURCE OF FUNDING
1987	Screen blood supply	All	Government of Botswana
1989	Sexually Transmitted Infections Control Programme	People suffering from STI	
1991	HIV/ AIDS in the Workplace Programme	All workers	Government of Botswana
1992	MTP I: Information, Education and Communication	General Population	Government of Botswana
	Neonatal sentinel surveillance	Pregnant women aged 15 to 49 years	Government of Botswana
1995	Community Home-Based Care (CHBC) Programme	Terminally ill patients	Government of Botswana
1997	MTP II: G. Education H. Prevention (condom distribution) I. Provision of ARV J. PMTCT K. VCT L. HBC M. CHBC N. Support services for PLWHA and their families O. STI prevention and treatment	General Population	Government of Botswana
1999	National AIDS Coordinating Agency (NACA) formed	n/a	n/a
	PMTCT program	Pregnant women	Government of Botswana
	National Orphan Care Programme	Orphans and Vulnerable Children (OVC)	Government of Botswana

2000	ACHAP launched	n/a	n/a
	Creation of Men Sector	Organizations whose members are predominantly male	Member organizations
2001	Public Service Code of Conduct on HIV/AIDS	Public servants with HIV/AIDS	
2001	Feasibility study on possibility of providing ARV through public sector	n/a	ACHAP
2002	MASA (national ARV programme) launched: ARV available at four sites (Gaborone, Francistown, Serowe and Maun)	<p>Four categories of PLWHA:</p> <ul style="list-style-type: none"> D. Pregnant women with CD4 count lower than 200 and/or AIDS defining illnesses; qualifying partners who fulfilled the same criteria E. All HIV infected children older than 6 months of age who are inpatients F. All HIV infected TB patients with CD4 <200 G. All adult inpatients with CD4<200 and or 	Government of Botswana

		AIDS defining illnesses	
2003	Youth HIV prevention and blood safety project	Youth	ACHAP
January 2004	Routine HIV testing (opt-out system)	Anyone who goes to a hospital, clinic or health center	Government of Botswana
2003/04	7 additional sites offer ART	Anyone who goes to a hospital, clinic or health center	Government of Botswana
2004/05	22 additional sites offer ART	Anyone who goes to a hospital, clinic or health center	Government of Botswana
2005	Dried Blood Spot (DBS) HIV testing for infants	6-week-old infants	Government of Botswana
2006	Condoms no longer subjected to Value Added Tax	Sexually active men and women	Government of Botswana
	Care for Care-givers Programme	Healthcare workers and their families	Government of Botswana

Table 5.2 Botswana's spending on HIV/AIDS programs, Fiscal Year 1 April 2006- 31 March 2007

AREA OF ACTION	PUBLIC SOURCES	INTERNATIONAL SOURCES			TOTAL
	National	Bilateral	Multilateral	Total International	All Sources
	USD	USD	USD	USD	USD
Prevention	6,944,041.06	2,139,876.67	508,656.20	2,648,532.87	9,592,573.93
Care & Treatment	82,438,836.52	6,128,904.53	10,135.85	6,139,040.38	88,577,876.90
Orphans & Vulnerable Children (OVC)	28,427,985.84	164,024.08	-	164,024.08	28,592,009.93
Program Management & Administration Strengthening	9,501,464.79	2,730,030.30	432,789.18	3,162,819.47	12,664,284.26
Incentives for Human Resources	10,344.21	-	-	-	10,344.21
Enabling Environment & Community Development	-	34,168.94	-	34,168.94	34,168.94
Epidemiological Research	98,803.88	52,928.20	-	52,928.20	151,732.08
TOTAL	127,421,476.30	11,249,932.72	951,581.23	12,201,513.95	139,622,990.25

SOURCE: Government of Botswana, 2008 Progress Report on the National Response to the UNGASS Declaration of Commitment on HIV/AIDS

Figures converted from Botswana Pula (BWP) to United States Dollars (USD) using exchange rate in force on June 5, 2008 (1 BWP = 0.156568 USD).

lower prices for dozens of countries in sub-Saharan countries, as well as training health-care staff; and pharmaceutical companies, such as Bristol-Myers Squibb, which have provided drugs at lower cost or free to several countries.

Such international actors have played an important role in Botswana's national response. Although they have been mentioned in the above discussion of the components of that response, in this section I will describe in more detail the partnerships that the Government of Botswana has forged with foreign entities.

Table 3 summarizes these players and the field of cooperation with the Government of Botswana.

Bilateral and Multilateral Organizations

Worldwide, the main source of HIV/AIDS programmatic funding for developing countries is the Global Fund to Fight AIDS, Tuberculosis and Malaria, or GFATM. Set up in 2002, it is an independent public-private partnership (PPP) whose goal is to supplement (rather than replace) existing efforts at fighting the three most devastating diseases in the developing world.

According to its own estimates (www.theglobalfund.org), it provides a quarter of the funds available globally to fight AIDS. The GFATM has approved two grants to Botswana since 2004, totaling US\$ 24 million, of which just under US\$ 12 million had been disbursed as of September 2007 (GFATM 2007).

Since its inception by President George Bush in 2003, the US President's Emergency Plan for AIDS Relief, better known by its acronym, PEPFAR, has become another major source of funding for HIV/AIDS programs in its fifteen target countries. The plan consolidates the U.S. government's various aid programs that addressed the epidemic under one roof, coordinating the efforts of several entities such the US Agency for International Development, the Centers for Disease Control and Prevention, the State Department, etc (www.pepfar.gov). As one of PEPFAR fifteen beneficiaries, Botswana obtained financial support in the amount of US\$ 55 million in FY 2006, the latest year for which data is available (www.pepfar.gov, Botswana Country Profile).

Botswana's status as a middle-income country that has enjoyed strong economic growth in recent decades means that help from other bilateral or multilateral donors is minimal.²⁵ Other donors include the European Union, China, Cuba, Germany, Japan, Norway, Sweden, and the United Kingdom (PEPFAR 2007). The principal international source of funding, since 2000, has been ACHAP, which is discussed next.

ACHAP

The African Comprehensive HIV/AIDS Partnership (ACHAP) is a public-private partnership (PPP)- a joint initiative of the government of Botswana, the

²⁵ Of course, this does not mean that funds from international sources did not play a role in influencing governments' level of effort in other countries.

Bill and Melinda Gates Foundation and the pharmaceutical company Merck and Co, Inc. The initiative was reportedly instigated by Merck, whose company representatives approached the Gates Foundation in 1999 and laid out a plan to work together in partnership with the government of an African country to combat the AIDS epidemic. The two partners, which pledged US\$ 50 million each, chose Botswana because its government had already shown strong commitment to fighting HIV/AIDS, the country was a stable democracy and its relative wealth meant that the state itself had significant resources to commit to the effort (Bill and Melinda Gates Foundation 2007). Started for an initial period of five years, ACHAP was renewed in 2005 with an additional commitment of US\$ 6.5 million from the Gates Foundation and Merck, to supplement the US\$ 45 million that had not been spent from the initial US\$ 100 million.

How has its partnership with the Gates Foundation and Merck impacted the government of Botswana's response to HIV/AIDS? All three partners point out that the national program is country-led, and that the Gates Foundation and Merck merely *assist* in the implementation of this program (www.achap.org). In other words, it is the government that decides on the direction of the national

Table 5.3 Botswana's international donors and partners

Partnership/ Donor	Partners	Year Launched	Activities	Funding Level (US\$) (year)
BOTUSA	U.S. Centers for Disease Control and Prevention- Global AIDS Program (GAP), Botswana Ministry of Health	1995	<ul style="list-style-type: none"> - TB epidemic control - Mobile health clinics - 	7,547,000 (as of June 2007)
Botswana-Harvard School of Public Health AIDS Initiative Partnership for HIV Research and Education (BHP)	Harvard School of Public Health AIDS Initiative, Botswana Ministry of Health	1996	<ul style="list-style-type: none"> - Epidemiological and laboratory-based research on PMTCT - Genomic analysis of HIV-1C, the viral subtype predominant in southern Africa. - Design and development of an HIV-1C vaccine - Susceptibility and resistance to antiretroviral drugs. - Training of future researchers and laboratory technicians 	
African Comprehensive HIV/ AIDS Partnership (ACHAP)	Bill and Melinda Gates Foundation, Merck Foundation, Government of Botswana	2000		65,000,000 (as of Dec. 2006) (Total US\$ 113m pledged until 2009)
Merck Company Foundation/ Merck	Merck Company Foundation/ Merck	2000	Free ARV drugs (Stocrin and Crixivan)	26,400,000

& Co., Inc.	& Co., Inc., Government of Botswana			(as of Dec. 2006)
The Global Fund to Fight against AIDS, Tuberculosis and Malaria (GFATM)	GFATM, Botswana Ministry of Finance and Development Planning	2001 (First grant to Botswana 2004)		11,816,292 (2004-2007)
The U.S. President's Emergency Plan for AIDS Relief (PEPFAR)	United States government- Global HIV/ AIDS Initiative (GHAI), Government of Botswana	2003		68,667,127 (excluding GAP funding,; as of June 2007)
UN Agencies (WHO, UNDP, UNICEF, UNAIDS)	United Nations, Government of Botswana			

Sources: NACA (www.naca.gov.bw); PEPFAR (www.pepfar.gov); ACHAP (www.achap.org); Harvard School of Public Health (www.bsph.harvard.edu/bhp); Centers for Disease Control and Prevention (www.cdc.gov); Botswana 2008 Progress Report of the National Response to the UNGASS Declaration of Commitment on HIV/ AIDS.

response, designs programs according to the priorities established in its strategic plan, and ACHAP partners shoulder part of the cost of putting them into place. Moreover, according to estimates, the Government of Botswana shoulders 70-80% of the cost of providing treatment (Guthrie and Hickey 2004; Osei-Hwedie 2001).

The coherence of the national response does owe something to ACHAP, however. Although the political will to fight the epidemic was clearly present prior to the formation of the partnership, the partnership had “to turn a serious but fragmented response into a comprehensive and coordinated national campaign” (www.gatesfoundation.org). In the years following the launching of the program, Botswana has been able to significantly strengthen its health sector and improve the level of services to its citizens. The very reach of treatment is a function of the partnership, as 24 treatment centers and 11 labs have been built throughout the country using ACHAP funds. Under the program, capacity-building has also taken center stage with the training of managers and 3,900 medical personnel (*ibid*). As far as policy is concerned, ACHAP partners were instrumental in the adoption of policies to expand testing in the population and to lower the age of consent for voluntary testing from 21 to 16. Prevention, which was for a long time put on the back burner because of the pressing issue of

providing treatment to those who were already sick, now receives more (even if not quite equal) attention from policymakers.²⁶

This discussion highlights how important Botswana's partnership with two international actors- the Bill and Melinda Gates Foundation and Merck Foundation- was in shaping the government's response to HIV/AIDS. However, as mentioned before, it was the government's seriousness in its response that made it a good candidate for the establishment of this partnership. In the next section, I explore the reasons that can account for the Government of Botswana's high level of commitment to the fight. In keeping with the main hypothesis of this dissertation, and building upon the previous chapter's finding that a democratic regime does play a role in a country's level of effort, I focus here on understanding the mechanisms by which democracy impacts policy-making and how other factors interact with democratic institutions to produce a high level of effort in combating HIV/AIDS.

Democratic Forces and HIV/AIDS Policy in Botswana

Past scholarly work posits that the most important mechanism in determining policy in a democracy is *competitive elections*, which make political

²⁶ All these numbers and facts are as of March 2008. It is not known how much of this had already been accomplished at the time when the API survey was carried out. However, since these results were the product of the plan that was established in 2000, it is likely that, by 2003, the government's level of effort in the areas that it controlled had taken into consideration the ACHAP plan.

leaders accountable to citizens (Stasavage 2005). Political leaders acting as rational actors seek reelection and therefore will act to adopt policies that make the achievement of that goal likely. Of course this supposes that politicians are aware of their constituents' preferences. Here democracy provides another important mechanism by which democracy encourages responsiveness to citizens: widespread *political participation*, which provides channels for citizens to express their demands to politicians. *Opposition parties* play an important role in the process of aggregating and expressing citizen concerns, but also in putting pressure on policy makers to address needs in the population and in holding it accountable. A *free press* is an essential ingredient in this mix, playing as it does the role of watchdog: at its best, the press can draw attention to pressing problems in the country, monitor the performance of the government and report openly and critically about its shortcomings. Finally, the existence of *civil society*, which advocates for specific causes and puts pressure on the government to act on the problems faced by the population, is another component of democratic societies that has a positive impact on policy-making. How do these mechanisms hold up in the case of Botswana's fight against HIV/AIDS?

Competitive Elections

The threat of losing power (for incumbents) or not obtaining power (for challengers) ensures that politicians will pay attention to the people's demands. Politicians have to respond to voters' expectations and demands or they can get thrown out of office at the next round of elections. Democratic elections, with the attendant competition for votes, also encourage politicians to court groups that would not otherwise be active participants in the political process, such as the poor or those who live in rural areas. Even when they do not actively demand specific policies, politicians may promise specific economic and social policies to gain their votes. In the case of HIV/AIDS, this argument would suggest that, because the population wants the government to act on the issue, competitiveness within the electoral system encourages parties vying for power to address it and to propose concrete measures to combat the disease.

Obviously, this mechanism only works if there is a credible chance that the ruling party will be voted out of office. In the case of Botswana, this threat to the ruling party is currently remote. The Botswana Democratic Party (BDP) has held power without interruption since independence in 1966 despite the holding of regular elections that are recognized as free and fair by local and international observers alike. Multiple political parties present candidates in presidential and legislative elections. So far, the dominance of the BDP has been so strong that no other party has been able to credibly jeopardize its position. In the last elections,

which were held in October 2004, the BDP obtained 52% of the vote, well ahead of its closest rival, the Botswana National Front (BNF), which obtained 25% of the vote (www.ipu.org). Indeed, the BDP's dominance is so overwhelming that the party can say with confidence, "There is still no alternative" (Mogae 2007).

This total dominance of national politics by one party is not unique among African democratic countries. In South Africa, since the end of apartheid, the supremacy of the African National Congress (ANC) is indisputable despite a string of scandals that have tainted even the highest officials. In other countries, particularly in the new democracies, the party system is still underdeveloped. According to Nicolas van de Walle (2003: 298), "the emerging modal party system in the region consists of a dominant presidential party surrounded by a large number of small, highly volatile parties." In other words, there is often no credible threat to the power of the ruling party: competitive elections are competitive only in the sense that there are multiple contenders for available positions (post of president or seats in the legislature), not in the degree of actual competitiveness for those positions.

However, the dominance of the BDP has been weakening in recent years. Its share of the popular vote has steadily if slowly decreased in the last 20 years. The table below shows the distribution of the vote in legislative elections since the founding elections in 1969.

Table 5.4 Distribution of votes in Botswana's legislative elections, 1969-2004

YEAR	Botswana Democratic Party (BDP)	Botswana National Front (BNF)	Botswana People's Party (BPP) ^a	Botswana Congress Party (BCP) ^b
1969	68.5	13.5	12	-
1974	N/A ^c	N/A	N/A	-
1979	75.4	13.1	7.5	-
1984	68	20	6.6	-
1989	64.8	26.95	4.3	-
1994	54.4	37.07	4.2	-
1999	57	26	-	12
2004 ^d	52	25	-	17

Source: www.ipu.org

^a The party ceased to exist between the 1994 and 1999 elections.

^b Party formed after a split from the Botswana national Front in 1998.

^c The percentage of votes is unavailable for that election cycle.

^d The next legislative elections are scheduled to take place in October 2009.

While the BDP's position is not under imminent threat, it is clear that it needs to keep an eye on its challengers. In the 1994 election, its percentage of the vote registered a sharp drop from the previous election as the opposition BNF launched a campaign with the motto "Time for Change" (www.ipu.org). Although it recovered slightly in the next election, it still is nowhere near the high of 75% it obtained in 1979.

Political Participation and Public Opinion

Related to the question of competitive elections are the issues of political participation and public opinion. When citizens participate in the political process and make their preferences known to political leaders, politicians are able to make educated policy decisions that address citizens' demands. This

argument assumes that citizens are able to aggregate their preferences and relay them effectively to leaders. In an open democratic society, this may happen, for example, through political parties, public opinion polls or voters communicating to their representative in the legislature.

How important was this mechanism in the case of Botswana? A look at public opinion tells us that the citizens of Botswana do indeed place HIV/AIDS high on their list of priorities. In the 2002-2003 round of the Afrobarometer (www.afrobarometer.org), a public opinion survey of Africans carried out in sixteen countries, 9% of respondents in Botswana ranked HIV/AIDS first among the “important problems facing this country that government should address”; 29% placed it among the three top priorities for government action (this was up from 24% in the 1999 round of Afrobarometer surveys). Obviously the Botswana indeed place great importance on the fight against HIV/AIDS and this has filtered through to the government.

It is entirely possible, of course, that it was in fact the messages disseminated in the context of the national response that helped create public consciousness of the extent of the epidemic and shaped public opinion on the matter, and that once the population became informed, it started exerting pressure on the government to address the epidemic. Heald's work (2002) suggests that this is the case. According to her, before the information, communication and education (ICE) campaigns started in the 1990s, HIV/AIDS

was taught by traditional leaders (who still have a significant amount of power in Botswana, especially in rural areas) to be a mix of ancient diseases and considered punishment on those who contracted it²⁷. As the risks associated with the disease started to become painfully real to more and more people with the death of close ones, public expectations of the government to address this crisis rose. The government responded by scaling up prevention efforts and treatment programs. Thus the expectations of the population did play a role in shaping the government's response to the epidemic as the epidemic unfolded.

Opposition Parties

Opposition parties in democratic systems are an important way of ensuring government does what it is supposed to. First and foremost, as mentioned above, in competitive electoral systems, opposition parties present an alternative to the governing party or coalition, offering the possibility that alternative policies more aligned with the preferences of the population will be pursued. Moreover, they can publicize government's shortcomings or failures, draw attention to campaign promises gone unfulfilled, and bring specific problems into the public discussion. In all these ways, they act as watchdogs to

²⁷ This belief explains the early resistance to the government's campaign of condom promotion. Since HIV was only caught by those who deserved it, there was no need for special protection during sexual intercourse. This and other misconceptions are still prevalent- the 2004 AIDS impact survey (BAIS II) found that almost a third of respondents (30%) believed that "HIV can be acquired by supernatural means" and half believed that mosquitoes can carry HIV (National AIDS Coordinating Agency and Central Statistical Office Botswana 2007).

make sure that government rules responsibly and in the best interest of the nation.

Have opposition parties played this role in Botswana, specifically with regards to the issue of HIV/AIDS? The evidence is mixed. Examination of campaign platforms and public rallies show that, prior to the 2004 election, HIV/AIDS was not a central issue in political campaigns (LOOK UP SOURCES). Part of the reason might have been the fact that HIV/AIDS was still (as it is to this day) a taboo subject, which was not part of the social discourse (Lieberman 2007). In 2004, however, the opposition Botswana Congress Party (BCO), the third largest party in Botswana, made it a central issue in its own manifesto (Doyle 2006). Although the ruling Botswana Democratic Party (BDP) had implemented several programs in the late 1990s and early 2000s (including a much-publicized joint partnership with the Bill and Melinda Gates Foundation and Merck Pharmaceuticals launched in 2000), its sluggishness in passing laws to protect the rights of people living with HIV/AIDS (PLWHA) came under attack from the BCP. The BCP proposed that laws be passed banning discrimination against PLWHA, especially in the workplace. Although the government of Botswana still has not passed any legislation protecting PLWHA against discrimination, which suggests that the BCP's campaign was not successful, the 2008 UNGASS Progress Report does mention this lacuna,

Free Press

Freedom of the press is one of the core features of a liberal democracy (although, arguably, even authoritarian countries can have free flow of information). Countries may hold elections, but the true measure of the “depth” of democracy is how freely the government allows itself to be monitored and criticized by the press and citizens. Some ways in which an independent press can contribute to government performance include reporting on government policy failures, providing a venue for citizens’ grievances, investigating and drawing attention to societal problems, and uncovering corruption. Previous research has shown the effect that citizen information and voice can have on improving government performance (Brunetti and Weder 2003; Isham et al. 1997).

Is there evidence of the Botswana press playing this role? Based on an examination of the newspaper archives that are available online, it appears that it does indeed. Botswana has several weekly and a few daily newspapers, some government-owned and others owned by private entities or individuals. The major newspapers include The Botswana Gazette, Botswana Guardian, Mmegi, Sunday Standard and The Voice. Mmegi and The Voice have been fairly outspoken on the issue of HIV/AIDS since the late 1990s, when the epidemic was recognized in southern Africa. Not only reporters, but members of the public as well, deal with the issue regularly in columns and letters (for example,

Keagakwa 2008; Kgwakaripane 2007; Segwai 2006). Even though the tone is usually very respectful, almost subdued, every aspect of the epidemic and the government's response is addressed in the articles, from the discussion of specific prevention and treatment programs to laws addressing the protection of those suffering from or affected by HIV/AIDS.

This analysis rests on those newspapers which have online archives, which limits its scope. Field research is necessary to determine just how influential the press was in acting as an agent of pressure on the government to adopt an aggressive stance. Specifically, a knowledge of which newspapers are most influential in the country and an examination of these newspapers' archives to determine how many articles were devoted to the epidemic and what aspects were covered would be instructive. When compared with the timing of landmark speeches and initiatives by the government, this would help strengthen conclusions about the influence of the press on government action.

Civil Society

The role of civil society is critical in democracy. Almond and Verba (1989) argued that a vibrant civil society makes the citizenry more informed and more likely to participate in the political process. Similarly, in Robert Putnam's view, the very health of democracy depends on the amount of social capital that exists in a country, which is in turn a function of citizens' forming and participating in

civil associations (Putnam 1993, 1995). Further, civil society encourages government to be responsive to citizens' needs because it can not only effectively "mobilize citizens on behalf of public causes" (Foley and Edwards, 1996), thus bringing issues to the government's attention and putting pressure on it to address them, but also act as watchdog by participating in the "ongoing process of monitoring, questioning, and demanding justification" of government performance (Diamond and Morlino 2004).

What role, if any, has civil society played in Botswana in shaping or otherwise assisting in Botswana's response to HIV/AIDS? Until the early 1990s, Botswana civil society was weak (Holm et al. 1996; Molutsi and Holm 1990). Despite being independent since 1966 and an open, democratic society since that time, Botswana had not given rise to civic associations, for reasons ranging from the domination of public life by the state (Good 2003) to the curse of natural resources, which created wealth without the need for citizen-based pressure groups (Good 2005). Nevertheless, in the 1990s, civil society developed rapidly (Carroll and Carroll 2004). The HIV/AIDS crisis has further redrawn the landscape, as civic organizations have mushroomed, participating in various aspects of the national response (Stegling and Mesima 2002). Community-based organizations (CBOs) have become a crucial component of the delivery of services such as home-based care, the care of orphans, and the follow-up of those in ART (*ibid*).

On the other hand, how much they are actually able to do is unclear. A recent survey of civil society leaders revealed that, in their view, the national response is really government-centered and civil society seems to only have a minor role to play in it (Kiley and Kovorka 2006). The latest PEPFAR Country Operational Plan for 2007 also notes this weakness (PEPFAR 2007).

Botswana in Comparative Perspective

How does Botswana compare to other cases in its configuration of causal factors and the way it has tackled the HIV/AIDS epidemic? As discussed at the beginning of this chapter, Botswana constitutes an ideal case for studying the question. Having had a democratic regime for over four decades, this country has had time to consolidate democratic institutions in a way that more recent democracies may not have. In addition, Botswana is atypical in that, contrary to many countries around the continent and even in its own immediate vicinity, it is ethnically homogeneous, stable and fairly prosperous. It enjoys high state capacity in comparison to most other countries on the continent, which it has been able to mobilize to fight the epidemic. Most other countries in sub-Saharan Africa lack one or more of these characteristics. Some brief comparisons with other cases highlight the uniqueness of Botswana and the role that specific factors seem to have played in this particular country's trajectory.

When one looks at other cases that share some of the characteristics that Botswana possesses, the role that democratic institutions played in influencing Botswana's strong national response is indisputable. Swaziland, a southern Africa country, has not done as well in responding to the crisis and has the unenviable honor of having the highest HIV prevalence rate in the world, with an estimated 32.4% of the adult population infected as of 2007 (UNAIDS 2008). Yet Swaziland is very similar to Botswana in many respects. It has a very stable government (stability score of 0.24), reasonably high state capacity (0.16, slightly higher than the continental average of 0.14) and fairly high GDP per capita (US \$4,573, more than double the continental average of US \$2,053). Yet Swaziland's performance has been very weak, as witnessed by its API score of 60. What accounts for the difference in performance between Botswana and Swaziland? One answer is the political institutions that exist in each country. While Botswana is democratic and has been for more than four decades, Swaziland is a hereditary monarchy. King Mswati III, who has ruled as absolute monarch since 1986, has the power to appoint the prime minister and members of the cabinet. Although the government has launched several attempts to address the HIV/AIDS crisis since the first case was discovered in 1987 (www.avert.org), they have not been as forceful as Botswana's. While condoms are widely available, they are not provided free of charge except in select locations to target at-risk groups such as migrant workers and truck drivers (*ibid*). In 2001, the

King, reviving an old Swazi custom, declared a ban on all young women under the age of 18 from having sex; however, he broke the ban himself by marrying a 17-year-old within a few months (www.allAfrica.com 2001; Reuters 2008)²⁸. In recent years, Swaziland has stepped up its efforts in almost every aspect, launching a PMTCT program, several behavior change campaigns, and providing ARV at public hospitals (USAID 2008). However, these efforts came only recently (after the API was administered in 2003), and the Swazi government ignored the epidemic for a long time. The crucial difference between Botswana and Swaziland, the type of government institutions, seems to have played a large role, since the king and his government do not accept criticism, have muzzled the opposition and strictly control civil society (Amnesty International 2009). In Botswana, by contrast, the government, spurred in part by the need to answer to the expectations of its constituencies, reacted quickly and aggressively from the time a threat was recognized.

Another fruitful comparison is with South Africa, Botswana's much larger (both geographically and economically) next-door neighbor. Here, lack of homogeneity and stability seems to have played a role in delaying the government response. South Africa's tortured racial history has meant that the apartheid government and the post-apartheid governments both ignored the

²⁸ In accordance with traditional Swazi custom, the king practices polygamy, which has been criticized in the context of the HIV/ AIDS crisis in his country for the poor example that he is said to set for his countrymen.

crisis for a long time. While the White-dominated National Party cast AIDS as a disease associated with gays and Blacks, the ANC-dominated government of Nelson Mandela and, later, Thabo Mbeki, framed the disease as a Western conspiracy against Africans and questioned whether HIV causes AIDS. In the post-apartheid era, Black mistrust of the West, which had for so long supported the apartheid government, stood in the way of partnerships of the kind that governments like Botswana and Senegal quickly formed with Western governments and organizations to combat the epidemic. The government has attracted widespread criticism for its policies (BBC 2006) and the High Court, the highest judicial body in the country, had to order it to provide ARV to AIDS sufferers. Although the government's efforts have been more diligent in recent years, they are well below what one could expect from a country with such economic resources. In this case, lack of homogeneity, coupled with a unique history, explains the difference in the timing of the response.

These comparisons highlight the uniqueness of Botswana but also, more broadly, the role of factors such as democratic institutions and a peaceful history in shaping its strong response. Neighboring countries which differ in only one aspect have done much more poorly in fighting HIV/AIDS.

Conclusion

This chapter has examined the case of Botswana, which is regularly held up as a country that is addressing its HIV/AIDS epidemic in a very forceful manner, to help elucidate the reasons that may lead democracies to be aggressive in their approach. As one of the oldest democracies on the African continent, and arguably the country where the mechanisms by which democracy impacts decision-making are most likely to be evident, Botswana provides an ideal case study. Looking at domestic processes such as competitive elections, participation of citizens, the action of opposition parties and the existence of a free press and civil society, it appears that these domestic factors, although not as well-established as in Western countries, are at work and have influenced the level of effort of the Botswana government. The conclusions presented here rest on extensive mining of secondary sources, and would greatly benefit from fieldwork to ascertain the causal mechanisms at work. In particular, interviews with key informants in government, the national AIDS commission and civil society leaders about the development of Botswana's national response (process-tracing) would have been enlightening. Data triangulation involving the comparison of evidence from previous scholarly studies with observation, archival research and interviews will complement what, at present, constitutes a preliminary assessment of the role of democracy in shaping Botswana's national response to HIV/AIDS. Especially when one considers Botswana in relation to other cases, the uniqueness of the country stands out, but it bears noting that this

does not diminish the value of studying it for the insight it gives us into the mechanics of democratic policy-making.

CHAPTER 6

CONCLUSION

The HIV/AIDS epidemic is threatening not only public health in sub-Saharan Africa, but the very development trajectory of the continent. About two-thirds of those with HIV or AIDS worldwide live in Africa although it is home to only a tenth of the world's population. More than 25 million individuals now live with the disease, and their ranks swell by almost 3 million annually. Epidemics in several countries have become so severe that one in four adults is seropositive, and it is estimated that about two million children under the age of fifteen are infected as well across the continent. The disease claims two million lives every year, many of them among the productive segment of the population and the well-educated. In this context, it is important to study whether governments are addressing the crisis, how and what factors lead to aggressive action. A quick survey of governments' efforts shows that reactions vary widely across the continent: on the one hand, governments with similar levels of prevalence have taken very different routes, and on the other hand governments with different kinds of characteristics have been similarly forceful. A few leaders have been very outspoken on the issue, but the majority of African heads of state and high government officials do not address the topic. While some governments have launched aggressive education campaigns, others

silently ignore the crisis. Some have started providing ARV treatment to sufferers, while others still do not.

This research project has attempted to parse out the reasons why some African countries have been aggressive in reacting to the HIV/AIDS crisis in sub-Saharan Africa and others not. The social sciences, and political science specifically, have largely ignored the subject, for reasons ranging from the “private” aspect of its sources and means of transmission to the medical aspect of the epidemic. As a result, the political dimensions of the epidemic remain inadequately explored. In particular, the factors that explain the level of government effort in fighting the epidemic are not well established.

The work that has been done on the topic has yielded some insights into some of the mechanisms that explain government effort. The role of specific political leaders, either in leading strong programs (such as in Uganda) or in ignoring the epidemic (such as in South Africa) is well documented (Putzel 2003, 2004; Schneider 2002). The importance of state capacity has been discussed quite extensively, especially as it is very low in most African countries (Patterson 2006; Price-Smith et al. 2004). Scholars have also explored the implications of stability (Ostergard and Barcelo 2005), income inequality (Bor 2007) and ideology (Youde 2007) in spurring governments to aggressiveness. This body of research has been rather inconclusive in its findings; for example, some have found that state

capacity matters (Price-Smith et al. 2004) while others conclude that it does not play a role (Patterson 2006).

In this literature, the role of institutions, specifically the type of political institutions has been explored by only one piece (Bor 2007), in which it was found to not be significant. However, previous work on other policy areas has shown that the design of institutions matters for both policy inputs and outcomes (for example, Boone 1996; Lake and Baum 2001; Stasavage 2005). Democracies are more likely to adopt policies that benefit the people because elections make leaders accountable to the population and enable them to obtain information about voters' demands through various channel, while opposition parties and civil society can apply pressure on those who govern to address pressing problems and draw voters' attention to the failure to do so. This study applied these insights to the study of HIV/AIDS responses, arguing that democratic institutions make it likely that a government will address the AIDS crisis in a forceful manner.

However, democracy is not the only characteristic that encourages aggressive government action. In fact, it is not even a necessary condition, nor is it sufficient by itself. Thus the other side of the argument made in this dissertation was that an analysis aiming to fully understand why governments sometimes act aggressively in the face of the crisis, and sometimes not, had to look for the *conditions under which* democracy matters for the outcome. It argued

that context matters: other causal factors may not only play an important role alongside democracy in leading to a forceful government response, they may actually be necessary for democratic institutions to make a difference. In other words, democracy influences the outcome in conjunction with other factors. This means that democratic institutions are not a sufficient condition, but are jointly sufficient in combination with other causal factors. Therefore we should be looking for *causal combinations*, and not single causes with independent effects.

In addition, this project posited that multiple pathways could lead to the outcome, a phenomenon which is termed **multiple causation** or **equifinality**. This makes the assumption that various causes (and therefore causal mechanisms) can lead to the same outcome. Applied to the role of democratic institutions in producing aggressive government action on HIV/AIDS, this assumption leads to the hypothesis that democracy, even in conjunction with other causes, is not necessary. Other combinations (even some featuring the *absence* of democracy as a factor) may also lead to the outcome.

This view of causation, as well as the small size of the sample on which data is available (29 cases), led me to choose a different analytical tool to explore the factors that lead to strong government action. For, if it were indeed true that several pathways to the outcome existed and that causal factors were combined rather than independent, then standard statistical techniques such as ordinary least-squares regression would be inappropriate. Instead, a relatively new

technique called fuzzy-set qualitative comparative analysis (fsQCA) was used. Based on set theory, this approach is ideally suited to looking for multiple conjunctural causation, and the sample size would not constitute a problem in the analysis.

After calibrating the raw values and converting them to fuzzy scores to reflect the degree of memberships of cases in the various sets, the analysis was carried out using fsQCA software (Ragin et al. 2006). The results of this analysis verified the two main hypotheses put forth in this project: that democracy, in conjunction with other factors, matters for government action on HIV/AIDS, and that multiple pathways (including some that do not involve a democratic regime) produce the outcome. Five causal combinations were identified, which were consolidated into four by the combining of two of the combinations into a single pathway:

1. A democratic regime combined with high state capacity and an epidemic on the rise.
2. A democratic regime combined with civil liberties, internal stability, and low HIV prevalence.
3. Internal stability coupled with either high state capacity or international funds.
4. High prevalence and a low level of development.

These causal combinations cover a good portion of the cases (consistency = 0.92, coverage = 0.78).

The Role of Democracy

According to the causal pathways identified by the fuzzy-set qualitative comparative analysis, democracy matters under two sets of conditions: in combination with high state capacity and a rising epidemic, and when civil liberties and internal stability prevail, and the rate of HIV prevalence is still low. Thus democracy is not a necessary condition in producing strong government action, but is jointly sufficient with the aforementioned factors. In other words, a democratic regime alone, in the absence of these factors, will not lead to the government being very proactive in addressing the crisis- a finding that should give pause to those who argue that a democratic regime always leads to positive outcomes without taking into account the contextual factors that influence whether this may or may not be the case.

The next step in the analysis was to study a case of a democratic regime that has been aggressive in its action on HIV/AIDS to explore the mechanisms by which democratic institutions are said to influence policy-making. Botswana was chosen because it constitutes an ideal case, having had a democratic regime uninterruptedly since independence in 1966. Its institutions may therefore be said to be consolidated in a way that few others are around the continent. In

addition, it is relatively well-developed, is ethnically homogeneous, and stable. It has a very high HIV prevalence rate, estimated at over 20% (UNAIDS 2006). Since the early 1990s, Botswana has launched a very aggressive and comprehensive campaign to address the HIV/AIDS crisis. Its national program covers all the areas of HIV/AIDS intervention (prevention, care and treatment, and research and monitoring) with various components in each category to target different population groups. The analysis suggests that the mechanisms usually associated with a democratic regime (electoral accountability, public opinion, opposition groups and civil society, a free press) were indeed at work in the case of Botswana. While the Botswana Democratic Party, which has held power since independence, still dominates the political landscape, its share of the vote has decreased in the past two decades. The fact that Botswana are more willing to support opposition parties suggests that that BDP needs to pay more attention to the expectations of its population. These expectations are also raised by opposition parties such as the Botswana Congress Party, which, since the beginning of the decade, has campaigned on the protection of the rights of PLWHA, forcing the BDP to defend its record on the issue (Doyle 2006). In addition, public opinion in Botswana is clearly in support of strong government action on the HIV/AIDS crisis, as evidenced by the 2002-2003 round of the Afrobarometer survey, which showed that fully a third of Botswana place the epidemic among their highest priorities for government action

(www.afrobarometer.org). Evidence about civil society's role in the case of Botswana is mixed. While civil society has been growing stronger since the early 1990s and has been especially active in the fight against HIV/AIDS, there is some evidence that its role is still somewhat limited. Lastly, the press has been very involved in covering the issue of HIV/AIDS, with prominent newspapers regularly addressing the drivers and effects of the epidemic.

Implications

Results from the two types of study carried out in this dissertation lend support to the contention that democracy plays a role in encouraging governments to address HIV/AIDS forcefully. This replicates findings from other studies that have focused on basic needs provision, school enrolment, infant mortality, and other measures of quality of life. However, the analysis suggests that, to have these positive consequences, democracy needs to be combined with other factors: strong capacity, stability, civil liberties, the level of prevalence and whether the epidemic is getting better or worse are all related to the effect of democratic institutions. In that sense, then, our understanding of the role of democratic institutions needs to include the mediating influence of other contextual factors instead of focusing on independent effects. The absence of one factor, for example, state capacity, can change the context enough that the

outcome does not occur. Causality is best understood in terms of causal configurations, rather than single causes.

The fuzzy-set qualitative comparative analysis has also illustrated causal complexity in another way: the existence of multiple pathways to the same outcome. Standard statistical models assume that there is one causal pathway, and strives to measure, through correlational relationships, the relative strength of causal factors in producing the outcome. However, this analysis confirms that there exist multiple paths to the same outcome. Looking for the “best fit” may obscure the cases that reach the same position by different routes, ignore important outliers and generally present a more simple view of the causal process than is the case in reality.

The examination of the causal mechanisms by which democratic institutions shape such policy-making, however, is less conclusive. While this preliminary analysis supports the hypotheses that have been proposed to explain the effect of democratic institutions, field research is necessary to ascertain the validity of the conclusions that have emerged. In particular, interviews with key players can shed light on the processes in the development of the national response since the 1980s. Without more information on the key actors involved, the timing of initiatives, the competing and conflicting interests involved and the role of the international community, the picture is incomplete. Furthermore, compared to other countries around the continent, Botswana is fairly atypical.

The robustness of these findings can be gauged by focusing on newer and less well-consolidated democracies to examine how these causal mechanisms are supported in cases that present less favorable historical and socio-economic conditions.

This research also has practical implications. By highlighting the different causal combinations that lead to effective government responses, this study provides a helpful tool to those engaged in the response to HIV/AIDS worldwide, making for better evaluation. It identifies those environments in which international aid can make a difference: where there is stability, regardless of regime type or level of development, international funds can make a difference. This is valuable information, as donors often privilege certain countries (those with democratic regimes, for example) in the mistaken belief that other policy environments are unfavorable and would not provide the best use for scarce resources. More generally, it demonstrates that there are different routes to strong government action and that other countries than those that are recognized as good performers are also successful. This recognition is important not only in that it determines future levels of aid that countries can receive, but also because, by ignoring these success cases, we may be missing lessons about “best practice” that could fruitfully be applied to countries around the world. Although it may suit the agenda of some donor governments or international

organizations to focus on a few specific cases, there are lessons to be drawn from several others.

APPENDIX A
AIDS Program Effort Index (API) Questionnaire

COUNTRY:

CONSULTANT NAME:

ADDRESS:

TEL:

FAX:

E-MAIL:

DATE:

GENERAL COMMENTS:

INSTRUCTIONS

This instrument is designed to measure the amount of effective effort put into national HIV/AIDS programs by domestic organizations and individuals and by international organizations. It measures the strength of effort for program inputs, as opposed to program outputs or results such as HIV prevalence or number of condoms distributed.

Your contribution will be part of a global effort to measure AIDS program effort across a number of countries. The results will be used to describe levels and patterns of program effort and as a guide to understanding the components of effective programs and the major needs to strengthen program effort worldwide.

The API is meant to assess the current environment as well as changes over a period of two years. Many of the items will change little over a two-year period; nevertheless, this allows the same features of program effort to be systematically assessed at regular intervals. Please provide responses for both the 2003 and 2001. Each section should be completed by interviewing the two or three people most knowledgeable about that topic. In many cases this will be the Director or Deputy Director of the National AIDS Program or National AIDS Council. But in some cases you will need to consult other experts, such as in the sections on human rights and the legal and regulatory environment. Some items can be completed by the consultant before the interview and checked during the interview. The best approach is to interview all respondents for a particular section together so that a consensus opinion can be recorded. If that is not possible, please complete a separate form for each person interviewed and then combine the results into a single questionnaire. All responses are strictly confidential. No answers or comments will be attributed to any specific individuals. Each section contains a number of specific questions about detailed items. Each section also contains a summary question that asks for an opinion about the overall level of effort in that area. These responses should be provided on a scale of 0 to 10. Zero means the effort in that area is extremely weak while ten means that it is optimal. Please add any comments you may have on particular items in the margin of the questionnaire or on a separate page.

RESPONDENTS

Please list the names and positions of the people who responded to each section of the questionnaire.

Name	Position	Date interviewed
-------------	-----------------	-------------------------

I. Political support

- 1.
- 2.
- 3.
- 4.
- 5.

II. Policy and planning

- 1.
- 2.
- 3.
- 4.
- 5.

III. Organizational structure

- 1.
- 2.
- 3.
- 4.
- 5.

IV. Program resources

- 1.
- 2.
- 3.
- 4.
- 5.

V. Evaluation, monitoring, and research

- 1.
- 2.
- 3.
- 4.
- 5.

VI. Legal and regulatory environment

- 1.
- 2.
- 3.
- 4.
- 5.

VII. Human rights

- 1.
- 2.
- 3.
- 4.
- 5.

VIII. Prevention programs

- 1.
- 2.
- 3.
- 4.
- 5.

IX. Care and treatment services

- 1.
- 2.
- 3.
- 4.
- 5.

X. Mitigation programs

- 1.

- 2.
- 3.
- 4.
- 5.

I. POLITICAL SUPPORT

The best respondents for this section will generally be the Director or Deputy Director of the National AIDS Council or Commission and representatives of donor agencies, such as the UNAIDS Country Program Advisor, WHO Country Representative, Chairperson of the UN Theme Group on AIDS or local representatives of USAID, DFID or other bi-lateral donors.

1. Does the head of the government, and/or other high officials, speak publicly and favorably about AIDS issues at least twice a year?

Head of government Yes No

Other high officials Yes No

2. Is there a National AIDS Council or Commission outside the Ministry of Health that coordinates the multi-sectoral AIDS program? Yes No

If so, is the Head of the Council or Commission chaired by the President, Vice President, Prime Minister or Deputy Prime Minister? Yes No

Does the Council or Commission include active participation of representatives of civil society? Yes No

3. Has AIDS been declared a national disaster? Yes No

4. Has the country submitted an application for funding to the Global Fund for AIDS, Tuberculosis and Malaria? Yes No

If so, has the application been approved by the Global Fund? Yes No

5. Overall, how would you rate the political support for the HIV/AIDS program?

Scale: 0- 10 (0: No support ; 10: Strong support)

II. POLICY AND PLANNING

If there is a national AIDS policy and a national strategic plan, you should collect copies of these documents and use them to answer the questions below. Then check the specific answers with people involved in the development of the policy and plan and have them rate the overall effort (question 3). Please list the reference for the policy and plan in the space provided below.

1. Does a favorable national AIDS policy exist? __Yes __No
2. If a national policy does not exist, are policy statements included in the national strategic plan? __Yes __No
3. Which of the following areas are addressed in the policy or strategic plan?
 - a. Human rights?
 - b. PLHA involvement?
 - c. HIV testing?
 - d. Voluntary counseling and testing?
 - e. Information and communications?
 - f. Condom promotion and distribution?
 - g. STI prevention and treatment?
 - h. Safe blood?

i. Prevention of mother-to-child transmission?

j. Breastfeeding?

k. Care and treatment?

l. Gender?

m. Youth?

n. Research/surveillance?

o. HIV/AIDS and poverty?

p. Orphans?

q. Migration?

r. Vulnerable populations?

Was the national policy developed in a participatory manner with significant involvement of civil society? __Yes __No

Reference for policy document: (title, date)

4. Is there a national strategic plan for AIDS? __Yes __No

Does it include:

a. formal program goals?

b. detailed budget of costs?

c. indications of funding sources?

d. multi-sectoral strategies?

e. a monitoring and evaluation plan?

Reference for strategic plan (title, date):

5. Overall, how would you rate policy formulation and planning in the HIV/AIDS program?

Scale: 0-10 (0: Weak; 10: Strong)

III. ORGANIZATIONAL STRUCTURE

The best respondents for this section will be the Director or Deputy Director of the National AIDS Council or Commission and representatives of donor agencies, such as the UNAIDS Country Program Advisor, WHO Country Representative, Chairperson of the UN Theme Group on AIDS or local representatives of USAID, DFID or other bi-lateral donors. It is important to include both national respondents and international respondents since it requires a judgment about the adequacy of the administrative structure and staff.

1. Adequacy of administrative structure and staff. A good administrative structure with competent staff can ensure that plans are implemented, is capable of recognizing and solving problems that cause low performance, and is capable and willing to use existing resources and/or call upon higher administrative levels to obtain resources necessary to carry out plans.

Is there an adequate administrative structure and staff for HIV/AIDS activities either through the national AIDS program or through the Ministry of Health?

a. at the national level? __Yes __No

b. at the provincial or state level? __Yes __No

c. at the district level? __Yes __No

2. Are the following government ministries actively involved in the HIV/AIDS program? Please check all that are actively involved either with their own AIDS program or as active participants in the national program.

- a. Agriculture
- b. Culture, information
- c. Education
- d. Finance
- e. Health
- f. Human resources
- g. Labor and employment
- h. Military
- i. Minerals and energy
- j. Planning
- k. Public works
- l. Tourism
- m. Trade and Industry
- n. Transportation
- o. Youth

3. Overall, how would you rate the organizational structure of the HIV/AIDS program?

Scale: 0- 10 (0: Weak; 10: Strong)

IV. PROGRAM RESOURCES

The best respondents for this section will generally be the Director or Deputy Director of the National AIDS Council or Commission and representatives of donor agencies, such as the UNAIDS Country Program Advisor, WHO Country Representative, Chairperson of the UN Theme Group on AIDS or local representatives of USAID, DFID or other bilateral donors.

1. Are resources allocated according to priority guidelines including considerations of need, cost-effectiveness and available infrastructure?

Yes No

2. How would you rate the resources available for the following programs? Use a scale of 0-3 where:

-0 no resources

-1 limited resources

-2 substantial but insufficient resources

-3 adequate resources to meet needs

a. Policy development

b. Human rights

c. Mass media

d. Community mobilization

- e. Voluntary counseling and testing
 - f. Behavior change communications
 - g. Programs for vulnerable populations (CSW, MSM, IDU)
 - h. Programs for youth
 - i. Blood safety
 - j. Condoms
 - k. STI treatment
 - l. Prevention of mother-to-child transmission
 - m. Palliative care
 - n. Treatment of opportunistic infections
 - o. Prophylaxis for opportunistic infections
 - p. Anti-retroviral therapy
 - q. Care for orphans
 - r. Research
 - s. Program management and coordination
 - t. Evaluation
3. Overall, how would you rate the adequacy of financial resources for the HIV/AIDS program?

Scale: 0- 10 (0: Poor; 10: Good)

V. EVALUATION, MONITORING AND RESEARCH

The best respondents for this section will generally be the official in charge of monitoring and evaluation in the national AIDS program.

1. Is there an evaluation officer responsible for monitoring and evaluation activities of the national program? __Yes __No

a. If so, what is the title of this officer?

b. If so, is the monitoring and evaluation officer full-time on monitoring and evaluation? __Yes __No

2. Which of the following components are including in the HIV/AIDS surveillance system. Please check all that apply.

a. AIDS case reporting

b. Annual HIV surveillance estimating prevalence among

1. pregnant women

2. STI patients

3. tuberculosis patients

4. commercial sex workers

5. men who have sex with men

6. injecting drug users

7. uniformed services

c. Regular behavioral surveillance among key populations

d. Periodic national population surveys on HIV/AIDS

knowledge, attitudes, beliefs and behaviors

3. Are evaluation and research results actively employed in policy formulation and program planning? __Yes __No

4. Overall, how would you rate the evaluation and monitoring efforts of the HIV/AIDS program?

Scale: 0- 10 (0: Poor; 10: Good)

VI. LEGAL AND REGULATORY ENVIRONMENT

The best people to answer the items in this section will be those with detailed knowledge of the HIV/AIDS legal and regulatory environment. These may include law reform commissioners, Ministry of Justice officials, ombudspersons, national human rights commissioners, and representatives of national human rights NGOs or legal aid centers/institutions.

1. Public health and other legislation and policies authorize and empower public health authorities to provide comprehensive prevention and treatment services, including:

a. HIV/AIDS information and education, for the general population and for targeted populations. __Yes __No

b. voluntary HIV testing and counseling. __Yes __No

c. sexually transmitted disease services, and , sexual and reproductive health services. __Yes __No

d. condoms, as a means of HIV/AIDS prevention. __Yes __No

e. drug treatment, care and support for AIDS-related illnesses. __Yes __No

2.

a. Legislation and policies do not authorize coercive measures such as isolation, detention or restriction of liberty or detention of persons living with HIV/AIDS, merely on the basis of their HIV status. __Yes __No

b. Where legislation authorizes the restriction of the liberty of persons living with HIV/AIDS to reduce real risk of transmission then such circumstances are prescribed within the law and due process such as the right to be heard, right to representation and the right to appeal are guaranteed. __Yes __No

3. Public health legislation and policies require that blood/tissue/organ supply is free of HIV and other blood-borne disease. __Yes __No

4. Legislation and policies require that information relative to HIV and AIDS cases, known or reported through the course of employment, is subject to strict rules of data protection and confidentiality. __Yes __No

5. Criminal law or other legislation does not include specific offences against intentional transmission of HIV/AIDS. (Where appropriate, this is covered under the general criminal, public health or mental health law.) __Yes __No

6. Legislation, policies, and programs support reducing the risk of HIV transmission among injecting drug users by providing HIV-related care and treatment for injecting drug users, such as, authorization or legalization and

promotion of needle and syringe exchange programs, including prosecution protection for intermediaries dispensing such needles and syringes. (If injection drug use is not a significant mode of HIV transmission in your country, please skip this question.) Yes No

7.

a. Legislation, policies, and programs prohibit discrimination, in the private and public sectors, on the basis of HIV status. Yes No

b. Legislation, policies and programs contain provisions that protect from discrimination members of vulnerable groups such as women, men who have sex with men, sex workers, and prisoners. Yes No

8. Legislation and policies protect and promote workplace rights, including:

a. prohibiting HIV screening for general employment purposes (appointment, promotion, training, benefits). Yes No

b. confidentiality of employees' medical and personal information, including HIV/AIDS status. Yes No

c. employment security (e.g., no unfair dismissal rules) for HIV-positive workers able to work, including reasonable alternative working arrangements, and social security and other benefits where workers are no longer able to work.

Yes No

d. access to information and education programs on HIV/AIDS, as well as to relevant counseling and appropriate referral. Yes No

9. Legislation and policies may regulate the quality, accuracy and availability of HIV-related goods, services and information to ensure availability of prevention measures and services, adequate HIV prevention and care information, and safe and effective medication at affordable price. Do legislation and policies include:

a. consumer protection against fraudulent claims; and regulatory approval for sale, distribution and marketing of pharmaceuticals, vaccines and medical devices only when they are safe and efficacious. __Yes __No

b. regulation for condom quality. __Yes __No

c. access to HIV prevention and care information, as well as to measures, such as condoms, bleach, home tests and/or rapid HIV test kits, sterile needles and syringes. __Yes __No

d. adequate, safe and effective medication at an affordable price. __Yes __No

10. Overall, how would you rate the policies, laws, regulations and structures in place relating to HIV/AIDS?

Scale: 0- 10 (0: Weak; 10: Strong)

11. Overall, how would you rate the effort to enforce the existing policies and laws?

Scale: 0- 10 (0: Weak; 10: Strong)

VII. HUMAN RIGHTS

The best people to answer the items in this section will be those with detailed knowledge of the human rights environment. These may include law reform commissioners, Ministry of Justice officials, ombudspersons, national human rights commissioners, and representatives of national human rights NGOs or legal aid centers/institutions.

1. a. The Government, through political and financial support, involve and engage communities infected, affected and vulnerable by the epidemic in all phases of HIV/ AIDS policy design, program implementation and evaluation.

Yes No

b. The Government ensures that community organizations are enabled to effectively carry out their HIV/ AIDS activities, including as they concern human rights and law. Yes No

2. The Government, in collaboration with the community, promotes a supportive and enabling environment for women, children and other vulnerable groups by addressing underlying social, cultural, political and legal prejudices and inequalities through, amongst other things, community dialogue, specially designed social and health services and support to community groups.

Yes No

3. a. A broad range of channels (such as creative education, training, film, theater, television, radio, print, personal testimonies and posters) are used to

promote respect for the rights and dignity of People Living With HIV/AIDS (PLWHAs) and members of vulnerable groups. __Yes __No

b. There are programs that are explicitly designed to change attitudes of discrimination and stigmatization associated with HIV/AIDS to understanding and acceptance. __Yes __No

2 Items included in the human rights category track two UNAIDS human rights documents to which reference should be made:

(1) *HIV/AIDS and Human Rights, International Guidelines*, United Nations, 1998; and (2) *Handbook for Legislators on HIV/AIDS, Law and Human Rights*, 1999.

4. Codes of conduct or ethical standards for professional groups that address human rights issues in the context of HIV/AIDS (such as confidentiality, informed consent to testing, the duty to treat, the duty to ensure safe workplaces, reducing vulnerability and discrimination) and include practical remedies for breaches and misconduct exist for

a. health care workers __Yes __No

b. lawyers and other legal professionals __Yes __No

c. insurance professionals __Yes __No

5. Effective monitoring and enforcement mechanisms are necessary at the national and community level to monitor and guarantee protection and

realization of HIV-related human rights, including those of PLWHAs, their families and communities. The following mechanisms are in place:

a. Collection of information on human rights and HIV/ AIDS and use of this information as a basis for policy and program development and reform.

Yes No

b. Creation of independent national institutions for the promotion and protection of human rights, including human rights commissions, law reform commissions and ombudspersons. Yes No

c. Establishment of focal points within governmental departments to monitor HIV- related human rights abuses. Yes No

d. Development of performance indicators or benchmarks for compliance with human rights standards. Yes No

6. The Government has ratified the following major international human rights instruments: (check all that have been ratified)

a. The Universal Declaration of Human Rights

b. International Covenant on Economic, Social and Cultural Rights

c. International Covenant on Civil and Political Rights

d. Convention on the Elimination of All Forms of Discrimination Against Women

e. Convention on the Rights of the Child f. International Convention on the Elimination of All Forms of Racial Discrimination

g. Convention Against Torture and Other Cruel, Inhuman or Degrading

Treatment or Punishment

h. Convention on the Prevention and Punishment of the Crime of Genocide.

The Government has submitted reports to the United Nations treaty monitoring bodies, including on relevant HIV/ AIDS-related human rights concerns arising under the various treaties. Yes No

Government institutions and non-governmental organizations cooperate with all relevant United Nations programs and agencies (e.g., UNAIDS) to share knowledge and experience concerning HIV/ AIDS-related human rights issues to ensure appropriate human rights- based responses at the international level.

Yes No

7. Legal support services can educate people affected by HIV/ AIDS about their rights, provide free legal services to enforce those rights, develop expertise on HIV-related legal issues. Yes No

Are the following legal support services available:

a. legal aid systems specializing in HIV/ AIDS casework Yes No

b. state support to private sector laws firms to provide free *pro bono* legal services to PLWHAs in areas such as anti-discrimination Yes No

c. programs to educate, raise awareness among PLHAs concerning their rights and or empower them to draft and disseminate their own charters/ declarations of legal and human rights. Yes No

8. Overall, how would you rate the legal and organizational structure in place to protect human rights?

Scale: 0- 10 (0: Weak; 10: Strong)

9. Overall, how would you rate the effort to enforce the human rights laws and regulations?

Scale: 0- 10 (0: Weak; 10: Strong)

VIII. PREVENTION PROGRAMS

The best respondents for this section will generally be the Director or Deputy Director of the National AIDS Council or Commission or those in charge or prevention, care and mitigation activities.

1. Which of the following prevention activities have been implemented? Check all programs that are implemented beyond the pilot stage to a significant portion of both the urban and rural populations.

- a. An active program to promote accurate HIV/AIDS reporting by the media.
- b. A functioning logistics system for condoms and essential HIV/AIDS drugs.
- c. A social marketing program for condoms.
- d. School-based AIDS education for youth.
- e. Behavior change communications.
- f. Voluntary counseling and testing.
- g. Special programs for commercial sex workers.

- h. Special programs for men who have sex with men.
 - i. Special programs for injecting drug users.
 - j. Special programs for other vulnerable populations.
 - k. Blood safety.
 - l. Nationwide program to prevent mother-to-child transmission of HIV.
 - m. Programs to ensure safe injections in health care settings.
2. Overall, how would you rate the prevention efforts of the HIV/ AIDS program?

Scale: 0- 10 (0: Poor; 10: Good)

IX. CARE AND TREATMENT SERVICES

The best respondents for this section will generally be those in charge of care and treatment services within the National AIDS Control Program, the Ministry of Health and the WHO and UNAIDS representatives.

2. Which of the following are part of care and treatment of HIV/ AIDS? Check all that apply.
- a. HIV screening of blood for transfusion.
 - b. Psychosocial support for PLHA and their families.
 - c. Palliative care.
 - d. Treatment of common HIV-related infections : pneumonia, diarrhoea, oral thrush, vaginal candidiasis and pulmonary TB.

- e. Nutritional care.
 - f. STI prevention (including condom use) and care.
 - g. Cotrimoxazole prophylaxis among HIV-infected people.
 - h. Universal precautions.
 - i. Intensified case finding and treatment for TB, including for smear negative and disseminated TB among HI-infected people.
 - j. Preventive therapy for TB among HIV-infected people.
 - k. Systemic antifungals for systemic mycosis (such as cryptococcosis).
 - l. Treatment of HIV-associated malignancies : Kaposi's sarcoma, lymphoma and cervical cancer.
 - m. Treatment of extensive herpes.
 - n. Post-exposure prophylaxis of occupational exposure to HIV and for rape.
 - o. Highly active antiretroviral therapy (HAART).
 - p. Diagnosis and treatment of HIV-related infections that are difficult to diagnose and/or expensive to treat, such as atypical mycobacterial infections, cytomegalovirus infection, multiresistant TB, toxoplasmosis, etc.
 - q. Advanced treatment of HIV related malignancies.
2. Overall, how would you rate the coverage (number of people served) of care and treatment efforts of the HIV/ AIDS program?

Scale: 0- 10 (0: Poor; 10: Good)

3. Overall, how would you rate the quality of care and treatment provided to those receiving it?

Scale: 0- 10 (0: Poor; 10: Good)

X. MITIGATION PROGRAMS

The best respondents will generally be those involved with mitigation programs.

This may include people from the National AIDS Commission, the Ministries of Health, Planning, Social Services, Economic Development or Children, international organizations such as UNICEF, and religious organizations and NGOs working in community support and orphan support programs.

1. Which of the following mitigation activities have been implemented?

- a. Community support for orphans and other vulnerable children
- b. Programs to pay school fees for orphans and vulnerable children.
- c. Funding of community efforts that reduce the impact of HIV infection.
- d. Specific public services that reduce the economic and social impacts of HIV infection.

2. Overall, how would you rate the efforts to mitigate the effects of the HIV/AIDS epidemic?

Scale: 0- 10 (0: Poor; 10: Good)

APPENDIX B

Raw Values and Fuzzy Scores

Raw Values

Table I below lists all the raw values for all cases on the outcome and all causal factors used in the fsQCA analysis.

Table I. Raw values

Country	API	State Capacity	Civil liberties	GDP/capita	Prevalence	Polity	Stability	GFATM
Angola	43	0.08	5	1879	3.7	-3	-1.60	0
Benin	68	0.04	2	1000	2.0	6	0.63	0
Botswana	80	0.4	2	8725	24.0	9	0.75	0
Burkina Faso	82	0.05	4	1067	2.1	0	-0.10	0
Burundi	67	0.03	5	596	3.3	0	-2.00	1
Cameroon	73	0.19	6	1949	5.4	-4	-0.50	0
Chad	52	0.04	5	1237	3.4	-2	-1.78	0
Congo	47	0.2	4	898	5.4	-4	-1.64	0
Congo, D.R.	54	0.11	6	620	3.2	0	-2.42	0
Cote d'Ivoire	63	0.12	5	1428	7.0	4	-1.50	0
Ethiopia	57	0.03	5	767	2.4	1	-1.20	1
Ghana	73	0.15	2	2014	2.3	6	-0.11	1
Kenya	48	0.14	3	1029	6.8	8	-0.86	1
Lesotho	39	0.05	3	2364	23.7	8	-0.06	1
Madagascar	62	0.29	3	768	0.5	7	0.30	0
Malawi	77	0.02	4	569	14.2	5	0.31	1
Mali	60	0.08	2	921	1.8	6	-0.10	1
Mozambique	68	0.03	4	1066	16.0	6	0.55	0
Namibia	70	0.3	3	6274	19.5	6	0.46	0
Nigeria	69	0.28	4	1000	3.7	4	-1.49	1
Rwanda	81	0.05	5	1133	3.8	-4	-1.35	1
Senegal	77	0.06	3	1504	0.9	8	0.70	1
South Africa	75	0.77	2	10031	18.6	9	-0.09	1
Swaziland	60	0.16	5	4573	32.4	-9	0.24	1
Tanzania	63	0.14	3	593	6.6	2	-0.25	1
Togo	52	0.04	5	1400	3.2	-2	0.01	0
Uganda	76	0.08	4	1311	6.8	-4	-1.46	1
Zambia	66	0.12	4	823	16.9	1	-0.02	1
Zimbabwe	61	0.16	6	1985	22.1	-7	-1.62	1

Fuzzification

The threshold fuzzy set score for full membership was set at 0.9 and 0.2 on all the variables for consistency, although the actual values that correspond to this threshold vary according to the variable. The first three rows of the table show the threshold values on the variable that correspond to full fuzzy membership, full fuzzy non-membership and the cross-over point. The next two rows show the two scalars corresponding to scores above and below the cross-over point respectively. The rest of the table shows the actual fuzzy scores for each case on each variable.

Table II. Fuzzy scores

	API	State Capacity	Stability	Polity	GDP/ capita	Civil Liberties	Prevalence
Full Membership Threshold	75	0.5	0.5	7	3500	-2	15
Full Non- Membership Threshold	45	-0.8	-1.5	-7	650	-5	5
Cross-over Point	60	0	0	0	1200	-3	8
Full Membership Scalar	0.146482	4.394449	4.394449	0.313889	0.00128	2.197225	0.313889
Full Non- Membership Scalar	0.09242	1.732868	0.924196	0.198042	0.002521	0.693147	0.462098

NAME	State						Prev
	API	Capacity	Stability	Polity	GDP/capita	Civlib	
Angola	0.172055	0.118144	0.1856217	0.355689	0.704539	0.2	0.120572
Benin	0.76348	0.254571	0.9409499	0.867994	0.376869	0.9	0.058824
Botswana	0.949292	0.978609	0.9642857	0.944012	0.999935	0.9	0.993453
Burkina Faso	0.961676	0.232245	0.4769115	0.5	0.417067	0.333333	0.061435
Burundi	0.736018	0.073783	0.1360617	0.5	0.179165	0.2	0.102306
Cameroon	0.870373	0.254571	0.3864882	0.311703	0.722767	0.111111	0.231217
Chad	0.323145	0.214224	0.1617765	0.402254	0.511911	0.2	0.106629
Congo	0.231217	0.102838	0.1800983	0.311703	0.318302	0.333333	0.231217
Congo, D.R.	0.364817	0.058824	0.0965155	0.5	0.18833	0.111111	0.098139
Cote d'Ivoire	0.608127	0.5	0.2	0.77826	0.572332	0.2	0.386488
Ethiopia	0.431126	0.176208	0.2480507	0.577834	0.251191	0.2	0.069931
Ghana	0.870373	0.510984	0.4746065	0.867994	0.739254	0.9	0.066985
Kenya	0.248051	0.186497	0.3111371	0.924917	0.393976	0.5	0.364817
Lesotho	0.125559	0.389231	0.4861406	0.924917	0.816076	0.5	0.992812
Madagascar	0.572721	0.341079	0.7889045	0.9	0.251683	0.5	0.030303
Malawi	0.923451	0.235349	0.7961299	0.827705	0.169317	0.333333	0.875022
Mali	0.5	0.18914	0.4769115	0.867994	0.3309	0.9	0.053911
Mozambique	0.76348	0.329494	0.9181105	0.867994	0.416091	0.333333	0.924917
Namibia	0.812268	0.688046	0.8830305	0.867994	0.998493	0.5	0.973654
Nigeria	0.788905	0.125559	0.2014828	0.77826	0.376819	0.333333	0.120572
Rwanda	0.955897	0.194512	0.2231046	0.311703	0.457648	0.2	0.125559
Senegal	0.923451	0.5	0.9998476	0.924917	0.595982	0.5	0.036232
South Africa	0.9	0.907637	0.4792176	0.944012	0.999988	0.9	0.965351
Swaziland	0.5	0.318112	0.7416702	0.14401	0.98685	0.2	0.999528
Tanzania	0.608127	0.292399	0.4424933	0.651986	0.178112	0.5	0.34368
Togo	0.323145	0.11635	0.5109844	0.402254	0.563535	0.2	0.098139
Uganda	0.912433	0.329494	0.2059805	0.311703	0.535605	0.333333	0.364817
Zambia	0.706592	0.166371	0.4953792	0.577834	0.279007	0.333333	0.94233
Zimbabwe	0.536555	0.2	0.1828438	0.2	0.732134	0.111111	0.988177

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