

## **The Political Economy of AIDS Leadership in Developing Countries: An Exploratory Analysis**

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### **ABSTRACT**

The commitment of high-level government leaders is widely recognized as a key factor in curbing national AIDS epidemics. But where does such leadership come from? This paper presents a quantitative analysis of the determinants of AIDS leadership in 54 developing countries, using the 2003 AIDS Program Effort Index “political support” score as an indicator of political commitment. Explanatory variables measure aspects of political institutions and economic development and integration. Models developed in the analysis explain over half of the variation in commitment across the countries in the sample. In particular, press freedoms, income inequality, and HIV prevalence stand out as determinants of political commitment.

The health of populations is influenced not only by social contexts, but by political institutions as well.<sup>1</sup> HIV/AIDS is no exception. From the beginnings of the global epidemic, AIDS was recognized as a political crisis with a political solution (Fredland, 2001). Evidence from a handful of developing countries—Uganda, Senegal, Thailand, and Brazil—suggests that well-informed interventions on the part of national governments can significantly reduce the spread of HIV, prolong the lives of those infected, and mitigate its impact on society at large. The factor most frequently cited as crucial to these “success stories” is the presence of strong political leadership (Parkhurst & Lush, 2004; Meda, Ndoeye, & M’Bou, 1999; Poolcharoen, 1998; Oliveira-Cruz, Kowalski, & McPake, 2004). Still, political commitment to confront AIDS in developing countries remains tragically uneven and on the whole inadequate. *Why have the leaders of some countries made AIDS a national priority while others have all but ignored the epidemic?*

Using a cross-national, quantitative approach, this paper investigates whether differences in political institutions and economic context contribute to the wide disparities in political commitment among developing countries (N = 54). The analysis reveals a number of interesting findings: while press freedoms are associated with higher levels of political

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<sup>1</sup> Political institutions influence the extent and distribution of public health and social welfare provisions, key determinants of morbidity and mortality (Sen, 1998, 1999).

commitment, elected leaders are no more committed than autocrats; leaders tend to be less responsive to HIV/AIDS where income inequality is high; AIDS is most likely to be a political priority in countries with large epidemics. Taken as a whole, the evidence presented here argues that political leaders do not operate in a vacuum. Political institutions and economic context shape the incentives and capabilities of leaders to act in the face of national AIDS epidemics.

The paper proceeds as follows. Part I discusses the role of political commitment in a governmental response to AIDS and presents the “political support” score of the AIDS Program Effort Index (API) as a suitable measure. Part II develops a series of hypotheses regarding the influence of political and economic factors on political commitment and presents the measures used in the analysis. Part III models the determinants of political commitment through a series of statistical tests.

## **PART I: WHAT IS POLITICAL COMMITMENT**

In anticipation of the Fifteenth International AIDS Conference in Bangkok, the lead editorial of the July 3, 2004 *Lancet* observed:

Perhaps the most important factor [in changing the epidemic’s course] is the willingness of political leaders to acknowledge the crisis and implement needed interventions swiftly, even in the face of political opposition. Where there has been responsive political leadership, as in Uganda, Thailand, and Cambodia, the course of epidemics has been changed and millions of lives saved. In other areas, where political leaders have been slow to act effectively, the virus continues to spread unchecked. (“HIV/AIDS: not one epidemic but many,” 2004)

One week after this editorial hit the newsstands, 17,000 government leaders, AIDS experts, celebrities, and activists from around the world descended on Bangkok to renew the global commitment on AIDS (IAC vision statement, [www.aids2004.org](http://www.aids2004.org)). The conference called for “leadership from the highest political levels” to combat the pandemic. As the events came to a close, Thai journalist Apiradee Treerutkuarkul wrote: “The message heard over and over again throughout the six-day conference—from Kofi Annan, to Nelson Mandela to Richard Gere—was the need for serious leadership...” (Treerutkuarkul, 2004).

IAC Bangkok was not the first time the trumpet had been sounded for stronger leadership. As early as 1987, the World Health Organization’s Global Program on AIDS (WHO/GPA)<sup>2</sup> called on all national governments to make AIDS an official priority, emphasizing the importance of vocal political commitment from the highest levels of government (Mann and Tarantola, 1992, p. 286). For over a decade, international AIDS conferences have been replete with appeals for stronger political commitment, leadership,

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<sup>2</sup> The Global Program on AIDS (GPA) was established in 1986 as a branch of the World Health Organization. In 1996, the AIDS efforts of the WHO/GPA, UNICEF, UNDP, World Bank, and several other UN agencies were brought under the umbrella of the Joint UN Program on HIV/AIDS (UNAIDS).

or willpower.<sup>3</sup> The 2001 UNGASS Declaration of Commitment on HIV/AIDS, adopted by 189 countries, has led to a substantial increase in leadership in recent years.

A cursory review of recent history suggests that the calls for increased leadership are well-founded. In a handful of countries, political leaders recognized an emerging crisis and pushed AIDS onto the national agenda. As early as 1988, Yoweri Museveni, President of Uganda, announced that “all ministers, Resistance Committees, [and] Senior Government officials must inform the people how to stop the spread of AIDS, at all meetings, without exception” (quoted in Putzel, 2004, p. 25). Presidents Abdou Diouf of Senegal and Kenneth Kaunda of Zambia also become personally and publicly involved in the AIDS efforts of their own countries (Green, 2003, p. 166). Prime Minister Anand Panyarachun established and assumed leadership of Thailand's multisectoral “National AIDS Prevention and Control Committee” (Barnett and Whiteside, 2002, p. 335).

In other countries, failures of leadership have impeded efforts to curtail AIDS epidemics. At various times, Zimbabwe, South Africa, Kenya, China and India have been plagued by official silence and denials of HIV/AIDS as a national threat (Boone and Batsell, 2001; AIDS in India, *Economist*, 2004). In 2003, South African President Thabo Mbeki denied knowing anyone who was infected with HIV, despite having lost an aide to the virus in 2001 (Meldrum, 2003). Mbeki's silence has not only delayed government intervention; it has also created confusion about the epidemic, undermining the work of non-governmental and community organizations (Uys, 2005). Despite all the attention that it has garnered, “political commitment” remains an under-theorized concept. How can political commitment be conceptualized as a useful and delimited variable for empirical analysis? I propose the following formal definition.

*“Political commitment” refers to the extent to which top-level government leaders (viz. heads of state and their appointees) support AIDS as a priority on the national agenda. Political commitment embodies many different leadership roles: speaking publicly about the problem; eliciting policy recommendations from experts; building coalitions of key players—legislators and bureaucrats, public health experts and health care providers, civil society leaders and persons living with HIV/AIDS (PLWHA); establishing and overseeing an administrative apparatus, such as a national AIDS program or coordinating committee; soliciting funding from international donors; and allocating resources towards policy solutions.<sup>4</sup> As understood here, political commitment refers only to the activities of high-level government leaders. This is a departure from broader conceptions of political commitment, which may include the private sector, civil society, and local government (see, e.g., Campbell, 2003).*

Political commitment is only one component of the broader government response to AIDS (see Figure 1). Political commitment is distinct from the specific types of programs and interventions implemented—whether these programs emphasize treatment,

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<sup>3</sup> For the purposes of this paper, I use the terms interchangeably.

<sup>4</sup> This understanding of political commitment is informed by Mann and Tarantola (1992).

prevention, or care.<sup>5</sup> It is also distinct from epidemiological outcomes—rates of HIV incidence, AIDS mortality, condom use, etc.—which are influenced by myriad contextual factors beyond the control of governments.<sup>6</sup> Countries have tremendous diversity in terms of institutional capacity, AIDS-related policy needs, and epidemiology. Isolating political commitment from these downstream factors enables comparison across a wide range of cases.

Political commitment alone is not enough. To wit, the leadership of Botswanan President Festus Mogae has yet to translate into prevalence reductions. Government interventions must be coupled with a broader societal mobilization against AIDS (Piot and Coll Seck, 2001). In addition, Schneider and Stein (2001) warn that political will can be misdirected towards “quick-fix” solutions that hamper a long-term response. Even so, the commitment of high-level government leaders has emerged as a critical factor for a successful national response to AIDS. Not only does political commitment generate policy responses; through frank and open discourse, political leaders can help educate the public, alleviate stigma, and generate an environment conducive to civil society initiatives and, ultimately, behavioral change.

### **Measuring Political Commitment: The AIDS Program Effort Index (API)**

One reason for the paucity of analysis on this topic is that researchers have struggled to find workable measures of political commitment.<sup>7</sup> This study uses a new indicator, the “political support” component of the 2003 AIDS Program Effort Index (API). The API is a composite indicator developed by UNAIDS, USAID, WHO and the POLICY Project and is recommended as a tool for monitoring implementation of the 2001 Declaration of

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<sup>5</sup> One could argue that political commitment exists only if a government pursues a comprehensive approach to AIDS, to include treatment, prevention, *and* mitigation. However, it is important to recognize that policy needs and recommendations are variable over time and space. For example, in poor countries with large, generalized epidemics, prioritizing treatment may be an unreasonable expectation.

<sup>6</sup> Other scholars have related rates of HIV/AIDS with various governance measures (Gizelis & Malotte, 2004; Menon-Johansson, 2005); however, these efforts have not adequately controlled for socioeconomic and cultural determinants of HIV infection, not to mention wide variations in surveillance quality.

<sup>7</sup> Existing quantitative analyses have looked at public mentions of AIDS by heads of state, as reported in mainstream national media sources; AIDS expenditures; and number of socially marketed condoms distributed (Stover, J, The Futures Group International, co-author of API, 8/30/2004, personal correspondence; SIDALAC, 2004; Lieberman, 2004). Each of these measures has its shortcomings. The enumeration of public mentions of HIV/AIDS by high-ranking officials ignores the content, context, and consequences of leaders’ remarks (Stover, 8/30/04). Until recent and ongoing efforts by UNAIDS to collect data on “National AIDS Accounts,” AIDS expenditures data have suffered from great inconsistencies in several areas: e.g., collecting information from multiple levels of government, categorizing expenditures on opportunistic infections such as TB, and capturing non-health sector spending on HIV/AIDS (De Lay, P., Director of Monitoring and Evaluation, UNAIDS, personal correspondence, 8/17/04; Stover, 8/30/04). Finally, counting the number of condoms distributed reflects a Western bias for barrier prevention methods and may not accurately measure the political commitment of countries that have promoted other methods of prevention (Green, 2003).

Commitment on HIV/AIDS (UNAIDS, 2005). Data for this instrument were collected through surveys of a set of key informants in 54 developing countries.

The API measures “program effort” across ten components, ranging from organizational structure, to prevention programs to human rights. This paper uses only one component: the API’s “political support” score. The inventory for “political support” includes questions regarding speeches by the head of state and other high ranking officials, the existence of a national coordinating commission for AIDS programs, whether AIDS has been declared a national disaster, whether the government has applied for funds from the Global Fund to Fight AIDS, TB and Malaria, and whether the government has sought the participation of leaders in civil society. In addition to these items, respondents rated “political support” on a scale of 1 to 10 (see API, 2003, for complete inventory). On the basis of these questions, “political support” was ranked on a 100-pt scale. The 2003 round of the API also asked respondents to rate levels of political support in 2001, retrospectively, as a point of comparison.

The 2003 API was administered to a sample of 54 countries, which included the forty countries most severely affected by HIV/AIDS, according to 2001 UNAIDS estimates. As the vast majority of these countries are in sub-Saharan Africa, other countries were selected to improve geographical representation (API, 2003, p. 5). To control for potential sampling bias, the results of this paper are tested for robustness across the universe of high-HIV prevalence cases in the sample (N=25). Table 1 presents the 2003 and 2001 (retrospective) “political support” scores for the 54 country sample.

### **Measurement Concerns and Validity Assessment**

There are legitimate concerns in using the “political support” score of the AIDS Program Effort Index as a quantitative measure of political commitment. The API was created as a tool for policy advocacy and evaluation, and has yet to be used in an empirical, cross-country analysis (Stover, 8/30/2004, interview). While social scientists typically prefer objective, observable indicators, such as expenditures data, the API is based on the subjective evaluations of a small number of key informants, leaving it vulnerable to bias. Selection of respondents has not been standardized, with informants drawn from government, civil society, donor organizations, academia, and the private sector (API, 2003). Additionally, differences in respondent expectations may have influenced their evaluations of program effort, complicating the task of cross-national analysis. To mitigate bias, I include control variables deemed likely to shape the expectations of respondents.

In spite of these concerns, there is evidence to support the validity of the API’s “political support” score as a measure of political commitment. The discussion below evaluates the API in terms of both *criterion validity* and *construct validity*. Criterion validity refers to how well an instrument measures a phenomenon external to the instrument itself, in this

case, whether “political support” scores measure political commitment. Support for the criterion validity of “political support” scores can be found in the AIDS leadership “success stories.” Brazil (100), Uganda (94), Thailand (85), and Senegal (89) rank at or near the top of the countries in their respective regions. Botswana (95) also ranks highly, as expected.<sup>8</sup> But how do we know that “political support” scores measure the commitment of high-level government leaders and do not simply reflect respondents’ general attitudes towards national program effort? As shown in Table 2, the ten API components do not correlate especially strongly with each other; the highest coefficients are in the low 0.60s, and many are quite weak. There is greater consistency between 2003 and 2001 “political support” scores ( $r = 0.66$ ) than between any of the 2003 components. Respondents to the API did not simply give crude, overarching judgments of national effort, but were able to discriminate between different qualities of a national response, including “political support.”

“Political support” scores are in most cases commensurate with existing reputations of political commitment. But are these reputations meaningful? Ultimately, AIDS leadership matters only inasmuch as it helps to reduce the human costs of an epidemic. Does political commitment, as measured by API “political support” scores, lead to epidemiological results? This question addresses the API’s *construct validity*, or “the extent to which a particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts (or constructs) that are being measured” (Carmines, 1979, p. 23). Do “political support” scores support the hypothesis that political commitment generates results?

The API was based on the Family Planning Program Effort Index (FPE), an older indicator developed by the Population Council, which has been found to correlate with contraceptive use and fertility reductions (Ross and Stover, 2001; John Stover, phone interview, 8/30/04). The API has only been administered since 2000—not enough time to observe changes in HIV prevalence or AIDS mortality. However, Demographic and Health Surveys (DHS) data exist on HIV knowledge and risk-behaviors, which precede epidemiological outcomes and are more responsive to interventions in the short run. In a series of multivariate regressions (Table 3), “political support” scores predicted higher rates of “condom use at last risky sexual encounter” and “knowledge of HIV prevention methods” when controlling for HIV prevalence, GDP per capita, and literacy rates. Significance of coefficients ranged from  $p < .01$  to  $p < .10$ . Regression analysis suggests that API “political support” scores are a valid measure of political commitment, inasmuch as political commitment leads to results.<sup>9</sup>

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<sup>8</sup> Some countries, notably Ethiopia, Burkina Faso, and Indonesia, rank higher than existing qualitative accounts would suggest (Alex de Waal, Dennis Altman, personal communication). Still, these scores do not necessarily invalidate the API “political support” score as a measure, since they do not appear to reflect any systematic bias in the indicator. Regression analysis tolerates “noise” in the dependent variable, as long as the error term is indeed random.

<sup>9</sup> The behavioral data used in this analysis are taken from the most recent DHS surveys in 17 and 23 African countries (Demographic and Health Surveys [DHS], 1998-2003). Regions outside of Africa were

The high scores of the “success stories,” the specificity of the API components, the precedent of the FPE, and the association with rates of condom use and HIV knowledge all testify to the validity of the API’s indicator of “political support.” In light of the failure of other measures (e.g. AIDS expenditures, condoms distributed) to provide a consistent valuation of commitment across countries, the API’s “political support” score provides a promising new indicator of political commitment in response to AIDS.

## **PART II: THEORETICAL MODEL**

No existing model provides a complete picture of the determinants of political commitment. Most accounts explain variation in AIDS leadership with reference to personal idiosyncrasies, cultural taboos, or stigmas against AIDS. Political commitment is attributed to the personal inspiration of leaders such as former Zambian President Kenneth Kaunda, who lost a son to AIDS; conversely, the silence of leaders such as Daniel Arap Moi, Frederick Chiluba, Thabo Mbeki, and Nelson Mandela is seen to reflect their sense of propriety about public discussion of sex. The analysis here leaves behind the psychological and the cultural, and looks instead at how political and economic factors shape the incentives and capabilities of leaders to respond to AIDS.

Practical constraints inform this approach: personal idiosyncrasies and factors such as AIDS stigma cannot be captured by available data. There is a theoretical motivation as well. This paper asks: to what extent is AIDS leadership the product of a rational calculus by political leaders who seek to maximize the legitimacy, longevity and profitability of their rule? Putzel (2004) argues that political commitment is most likely where addressing HIV/AIDS is a positive-sum game, i.e. where action is less costly than inaction. In line with this interpretation, this analysis tests the simple proposition that “incentives matter,” a point largely missing from the exhortations of policy advocates for “stronger political commitment.”

The quantitative analysis below includes measures of: political institutions (electoral accountability, press freedom, regime stability, government effectiveness), economic development (GDP/capita, income inequality, government expenditures, literacy, health system infrastructure) and integration (foreign investment, development assistance), and

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poorly represented in the DHS data and were excluded to minimize sampling bias. The vast majority of surveys were from 2000-2003; only South Africa (1998), Tanzania (1999) and Zimbabwe (1999) predated 2000. The analysis makes use of both 2003 and 2001 (retrospective) API scores. While the 2003 data are more reliable, the 2001 scores are a better fit for the temporal ordering of the model. Respondents to the API likely answered questions with some degree of historical memory; how much is unknown. John Stover, co-author of the API, suggests that informant responses are likely to be heavily influenced by the short term (personal communication, 3/10/05). The 2001 API data provides leverage for the analysis, since it expands the time frame for respondent evaluation of political support and ignores the noise generated by recent events. The high significance of the 2001 scores confirms the model tested.

control variables for HIV prevalence and region. Table 4 lists variables, sources, and summary statistics, as well as bivariate regression coefficients.

### **Political Institutions: Democracy and Governance**

A growing literature speculates that democratic accountability stimulates positive policy responses to AIDS epidemics (Hsu, 2004; Patterson, 2001). The relationship between democratic institutions and health policy outcomes has an even longer pedigree. Amartya Sen has famously observed that “no substantial famine has ever occurred in a democratic country” (Sen, 1999, p. 51). Sen argues that *freedom of the press* and *electoral accountability*—essential characteristics of democratic regimes—generate transparency of crisis conditions and inescapable incentives for leaders to intervene. Through elections, citizens can hold leaders accountable for their failure to respond in times of crisis. Sen’s thesis is not an unconditional endorsement of democratic regimes. While effective against famines, democracies are not specially equipped to address endemic health needs, such as chronic hunger, or other problems of social welfare. How does Sen’s observation translate to epidemics of HIV/AIDS? Are political leaders more responsive to AIDS where there are competitive elections and a free press?

This analysis uses 2000 Freedom House “political rights” scores as an indicator of electoral accountability. The “political rights” score is based on an inventory of questions that evaluate aspects of electoral accountability. Items include whether a country has a) free and fair elections at both legislative and executive levels, b) open and competitive political participation with the right to organize parties, and c) government transparency and minimal corruption (Freedom House, 2003a). In addition to its rankings for political rights, Freedom House publishes an indicator of “Freedom of the Press.” The Press Freedom score measures the “legal environment for the media, political pressures that influence reporting, and economic factors that affect access to information” (Freedom House, 2003b). For the purposes of this analysis, the Freedom House scores used to measure *electoral accountability* and *press freedom* were inverted such that liberal democracies rank high on both indicators. Although Freedom House scores have been criticized for Western bias, they remain the most widely used indicators of regime type (Freedom House, 2003a).

Other elements of governance—less closely linked to democratic accountability—may shape the incentives and capabilities of leaders to respond to AIDS. The World Bank has developed a series of governance indicators which positively correlate with development outcomes (Kaufmann, Kraay, & Zoido-Lobaton, 1999). As defined by the World Bank, governance refers to

...the traditions and institutions by which authority in a country is exercised. This includes (1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of citizens and the state for institutions that govern economic and social interactions among them. (Kaufmann, et al., 1999)



Anecdotal evidence links the success of national AIDS programs to the presence of competent state infrastructure (see, e.g., Jones 2004, on the success of Senegal). To measure the efficiency and competence of the public bureaucracy, I include the World Bank indicator for “government effectiveness” in the analysis. Effective government enables leaders to pursue public programs with a realistic expectation of success.

The analysis also includes the World Bank’s indicator for “political stability,” which measures the threat of extra-legal challenges to the state. Due to their nature as “long-wave disasters,” AIDS epidemics demand long-term commitment and action from political leaders; moreover, the benefits of prevention programs are only seen in the distant future. Leaders facing the risk of regime collapse would tend to heavily discount the future benefits of committing to a robust response to AIDS. For both “government effectiveness” and “regime stability,” higher scores indicate better governance (Kaufman, et al., 2003).

### **Economic Development and Inequality**

Income levels (per capita GDP) predict a wide spectrum of development gains. Wealthier countries generally have higher life expectancies, lower infant mortality, and higher literacy (Bloom, 2000). Political scientists have long observed a correlation between economic development and democracy (Lipset, 1959). Most relevant to this analysis, increases in per capita GDP are linked to human, financial, and infrastructural resources, which in turn may increase government capacity to institute AIDS programs. One would expect countries with greater resource capacity to have higher political commitment. The analysis includes “log 2002 GDP per capita US\$ (PPP)” (World Bank, 2004) as an indicator of economic development.

In addition to GDP per capita, this analysis includes “adult literacy rates” and “percent of births attended by skilled health personnel” as measures of human resource capacity. Where the public is literate, it may be easier to disseminate prevention information. Additionally, literacy may grease the wheels of democracy by producing a knowledgeable citizenry that can make demands on politicians (Lipsett, 1959). Health system capacity is also likely to affect the national government’s ability to implement a variety of HIV/AIDS programs. Evaluation, monitoring, and epidemiological research are carried out in clinical settings and depend on widespread and regular access to health services. Political leaders may hesitate to divert health personnel and resources towards AIDS programs when they are already stretched thin. Data on “literacy” and “attended births” are taken from the 2004 UNDP Human Development Report.

HIV/AIDS interventions also require financial resources. While closely related to per capita GDP, “government expenditures per capita (\$US)” provide a more direct account of the financial resources available to the government. Expenditure data were taken from

IMF country reports, from 2001 or the most recent year available. A square root-transformation of the variable normalized its distribution.

While resource capacity should enable governments to be more responsive to AIDS epidemics, it is also conceivable that economic development would *negatively* correlate with API “political support” scores. Leaders of poor countries may voice commitment as a way to attract resources from donors. Most importantly, respondents to the API questionnaire may have higher expectations of governments with greater resource capacity, expectations which may have influenced subjective evaluations of “political support.”

While average income is an important indicator of economic development, distribution—as measured by “income inequality”—plays a key role in maximizing social benefits for the greatest number of people. Distribution of economic resources is linked to the distribution of political resources and thus to policy outcomes. There is somewhat conflicting evidence as to the socioeconomic profile of generalized AIDS epidemics. In some African countries, AIDS has been observed to affect all ranks of society, including bureaucrats and political elites (Putzel, 2004). Elsewhere, AIDS is a disease that disproportionately affects the poor and disenfranchised (Farmer, 2003). In countries that adhere to the second pattern, one would expect political commitment to be negatively associated with inequality. Where there is greater distance between political elites and those affected by the epidemic, leaders may be slower to make AIDS a priority. Even where elites are affected by AIDS, they may pursue private sector care and depend less on government solutions. This analysis includes “gini coefficients” as a measure of income inequality.

### **Integration in Global Economy**

A country’s place in the global economy shapes the nature of national governance. As shown by Brazil’s maverick decision to produce generic antiretrovirals, in defiance of the World Trade Organization and US government, a country’s relative power in the international economy may enable a greater response to AIDS. “Total GDP, 2002 (US\$)” provides a measure of a country’s international bargaining power.

Most developing countries lack the economic clout of Brazil. Governments of developing countries are situated in complex webs of power and dependency, accountable to bilateral donors and international financial institutions. Donors are often criticized for dictating AIDS policies at the expense of domestic constituencies, and rightly so. PEPFAR’s stipulation that one third of HIV prevention funds be channeled to abstinence-only education is a clear sop to Christian constituencies in the US (<http://hrw.org/campaigns/aids/2005/uganda/facts.htm>). Nevertheless, in countries such as Brazil and Uganda, the availability of donor funding for AIDS programs has been critical for motivating political commitment (Putzel, 2004). “Official development

assistance (ODA), as a percent of GDP” provides a measure of the power that donors wield, relative to domestic constituencies. ODA is a blunt measure as it does not disaggregate AIDS-specific funding, an area for further research.

Level of foreign investment is another measure of a country’s integration in the global economy. High rates of foreign investment may provide disincentives for leaders to publicly acknowledge their country’s AIDS epidemic. Large-scale AIDS epidemics increase labor costs due to high worker turnover and lower productivity. This so-called “AIDS tax” may dissuade foreign capitalists from investing in labor-intensive sectors (Barnett and Whiteside, 2002). In the 1980s and early 90s, Kenya and Zimbabwe sought to keep their emerging AIDS epidemics under wraps, for fear of jeopardizing the tourist industry. Similarly, leaders may deny the severity of an AIDS epidemic so as not to scare away investors. I include net FDI as a % of GDP, log-transformed to approximate a normal distribution.

### **Control Variables**

In addition to the political and economic factors listed above, the analysis below includes control variables for region and for the size of the epidemic. Log HIV prevalence is included as a measure of the severity of the epidemic in a given country. It is a reasonable supposition that the more extreme a country’s AIDS epidemic, the more prominent it will be on the policy agenda. Prevalence rates are a good indicator not only of the size of the epidemic, but also its distribution. In countries with low prevalence rates, epidemics tend to be “concentrated” among specific populations—injecting drug users, commercial sex workers, men who have sex with men. At higher prevalence levels, epidemics tend to be “generalized” among the total population, with women bearing a disproportionate burden of HIV. On account of recent scale-backs and improvements in the accuracy of HIV prevalence projections, I have elected to use 2003 prevalence data as reported by UNAIDS.<sup>10</sup>

As a final control, I include regional dummy variables. Not only does the distribution of HIV and AIDS differ by region; the amount of energy and funding invested by international organizations in AIDS work and in stimulating political commitment varies widely as well. Appropriately, sub-Saharan Africa has been at the center of attention for international policy makers, researchers, and donors concerned with AIDS in the developing world. In addition, region may have influenced the expectations of respondents to the API. The AIDS Program Effort Index divides the countries into five regional groupings: Eastern and Southern Africa, Western and Central Africa, Asia, Latin

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<sup>10</sup> It should be noted that using 2003 HIV prevalence rates generates problems of endogeneity and simultaneous causality bias. One would hope—and indeed it is a premise of this paper—that strong political commitment leads to decreases in HIV prevalence rates over time. However, in so far as this may be true, this should lead to a downward bias in the estimated correlation for HIV prevalence, and hence, a bias against my results.

America and Caribbean, and Eastern Europe. Dummy variables for each region are included in the analysis, with East and Southern Africa as the reference group.

### **PART III: DATA ANALYSIS**

The previous section outlined a series of hypotheses regarding the determinants of political commitment to AIDS. I now turn to a statistical analysis of these hypotheses and their relationships with 2003 API “political support” scores. In evaluating the determinants of political commitment, three questions guide the analysis: what are the strength and significance of the bivariate relationships? How do these relationships hold up in the context of multivariate regression? How much of the variation in political commitment can be explained with the hypotheses above? The section concludes by testing the robustness of the regression model across several specifications of the sample: 2001 API scores; 2003 scores, excluding countries that changed drastically since 2001; using only non-imputed data; restricting the sample to the universe of high-prevalence cases (N=25); and excluding high-leverage and outlying cases. All regression analyses employ ordinary-least-squares (OLS) regression with heteroskedasticity-robust (Huber/White) standard errors; STATA 9 is used for all statistical tests.

#### **Bivariate Analysis**

Table 4 presents bivariate relationships between 2003 “political support” scores and each explanatory factor. As expected, political commitment was highest in countries with the greatest HIV burdens ( $p < .01$ ). Deeper analysis revealed a threshold effect. Among low prevalence countries, political commitment increased with HIV prevalence. Among high-prevalence countries, however, the size of the epidemic had little effect on the level of political commitment (see Figure 2).<sup>11</sup> Figure 3 displays the regional distribution of political support in a box plot. Bivariate regressions found Eastern Europe to differ significantly from the other regions in terms of political commitment ( $p < .01$ ).

Among political institutions, only “freedom of the press” exhibited a significant relationship with political commitment ( $p < .01$ ). Perhaps as noteworthy, the coefficient for “electoral accountability” failed to reach significance, suggesting that democracies are not intrinsically well-equipped to confront AIDS epidemics. As hypothesized, countries with high foreign investment tended to be less responsive to AIDS. Surprisingly, variables that described facets of economic development—literacy, attended births, and log GDP per capita—correlated significantly, but *negatively*, with “political support” scores. I see no explanation for a direct link between literacy, health infrastructure, and

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<sup>11</sup> I am indebted to the 2003 API Report for pointing out this threshold effect (p. 17). The effect was salient even when using log-transformed prevalence rates.

lower political commitment. The observed relationships are likely due to correlations with other variables or to respondent expectations.

Table 5 reveals substantial multicollinearity among the explanatory variables. The variables describing political institutions were all highly correlated, with Pearson's coefficients ranging from .47 to .85. Log GDP per capita had a moderate to strong association with nearly all other explanatory factors, including government expenditures (.81), literacy (.65), and % of births attended by skilled personnel (.79). Interestingly, HIV prevalence rates were associated with inequality (.34) and poverty (-.32 with log GDP/cap), despite the correlation between inequality and wealth (.35).<sup>12</sup> Net foreign investment as a percent of GDP was the only factor that varied completely independently. In the context of such multicollinearity, bivariate relationships are inconclusive. Multivariate analysis helps to clarify the role of explanatory factors by controlling for rival hypotheses.

### **Multivariate Analysis**

In developing a multivariate model, I followed Hendry (2000) in taking a general-to-specific approach. Using the statistical tool of reverse stepwise regression, I estimated the model given a set of variables and dropped the variable with the lowest *t*-value; this task was repeated until all variables in the model were significant at  $p \leq .10$ .<sup>13</sup> This method can be problematic in the presence of multicollinearity, which influences *t*-statistics and can cause variables to be inappropriately omitted. With this limitation in mind, I ran a series of alternate specifications, based on the theoretical constructs and bivariate analysis presented above. In Table 6, models I through V present snapshots of the process of reverse stepwise selection,<sup>14</sup> models VI – IX present alternate specifications (additional specifications not shown). In comparing models, I looked to maximize the explained variance, as measured by the coefficient of determination ( $R^2$ ), using statistically significant predictors.

The multivariate models consistently revealed highly significant, positive coefficients for “freedom of the press” and “HIV prevalence” ( $p < .01$ ). The impact of a free and independent media was particularly striking: a 10 point increase in a country’s “press freedom” score corresponded with a 5 to 6 point increase in “political support.” The salience of “press freedom” underscores the importance of transparency in alerting

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<sup>12</sup> This observation supports the Jaipur Paradigm, which posits that a society’s susceptibility to HIV is influenced by its wealth and by its level of social cohesion (Barnett & Whiteside, 2002).

<sup>13</sup> With a low bar of significance (.10), there is the potential for false inclusion of variables (type I error); yet it has the advantage of minimizing false exclusion (type II error) and consequent missing variable bias.

<sup>14</sup> Model II drops log GDP per capita and the regional dummies that failed to attain significance in the bivariate analysis. These variables had low *t*-statistics, but not necessarily the lowest. On account of its near-universal correlation with other variables, retaining log GDP per capita would have distorted the selection process. Models III – V resume the formal process of stepwise selection.

leaders and constituents to unfolding crises. As expected, the scale of an epidemic also influenced political commitment. The model generated through stepwise selection (V) suggested influences of regime stability (+,  $p < .05$ ) and foreign investment (-,  $p < .10$ ) that were in line with my original hypotheses. Electoral accountability, however, exhibited a significant *negative* effect ( $p < .10$ ) when controlling for “press freedom” and other correlates. Might competitive elections hinder political commitment?

Emerging from obscurity in the bivariate models, “inequality” and “per capita government expenditures” proved to correlate negatively with “political support” in most specifications. At the same time, “literacy,” “attended births,” and “GDP per capita” lost significance when controlling for these two factors. The negative coefficient for “government expenditures” is surprising and should give us pause. It is likely that API respondents had higher standards for governments that command greater resources and were more inclined to rank them poorly.

Another interesting observation (models VIII-IX) was the negative influence of “official development assistance (ODA) as a % of GDP.” Contrary to my initial hypothesis, political commitment appeared to be lower in aid-dependent countries. Anecdotal evidence suggests that this is unlikely; moreover, further analysis found development assistance to be correlated with improvement in “political support” from 2001 to 2003 ( $r = .31$ ). A more probable explanation for ODA’s negative coefficient is that respondent expectations are raised in countries that receive substantial donor assistance. Note that expectations of leadership seem to be conditioned by at least two realms of perceived accountability—donors and taxpayers—that are inversely related ( $r = -.63$ ). As expected, ODA achieved significance only when controlling for “government expenditures.”

The multivariate models were unable to explain adequately the failure of AIDS leadership in Eastern Europe. Still, no other regional dummy attained significance, indicating that the models developed in this paper present an adequate theory of the determinants of political commitment across most regions. Regression V emerges as the “best model” of the determinants of political commitment, explaining over half of the variation in “political support” scores with significant predictors ( $p \leq .10$ ). Although it includes a non-significant coefficient, regression IX presents an important rival explanation, since it raises questions about the salience of electoral accountability, stability, and foreign investment as predictors of political commitment. The following section assesses the robustness of these two models.

### **Robustness Assessment**

In carrying out this analysis, assumptions were made regarding the proper time-ordering of the model, the accuracy of imputed data points, and the absence of sampling bias in the case-selection process. I chose to use the most recent API scores, to impute missing values rather than lose observations, and to maximize the sample size ( $N = 54$ )—all with

the goal of minimizing bias. However, these choices may have introduced new biases into the analysis. Additionally, high-leverage and outlying cases may have influenced the results. This section evaluates the robustness of models V and IX across alternate specifications of the dataset, in an attempt to control for these sources of potential bias. First, the models were tested using 2001 (retrospective) “political support” scores, as an alternate time-ordering. The models were then tested against 2003 “political support” scores, using a smaller dataset that excludes those countries whose scores changed drastically from 2001 to 2003.<sup>15</sup> Excluding these outliers minimizes the impact of recent events and keeps only those scores that represent a general evaluation of political commitment over several years. Third, the models were tested excluding observations with imputed values. Fourth, to eliminate any unknown selection bias, I restricted the sample to the universe of developing countries with HIV prevalence rates over 3.5%. This sample included 24 African countries plus Haiti, which has experienced a generalized epidemic similar to those of sub-Saharan Africa. The only countries with prevalence rates over 3.5% for which the 2003 API did not collect data were Gabon and Central African Republic, the latter of which did not return the API questionnaire. Finally, I tested the models excluding three countries—Russia, Peru, and Brazil—with large residuals and/or high leverage in the multivariate analysis. Table 7 presents the results of the robustness tests described above.

The robustness assessment confirms the findings of the multivariate analysis. Three factors stood out in nearly every specification: “freedom of the press,” “inequality,” and “HIV prevalence.” Foreign investment also maintained significance across all tests of model V. “Electoral accountability” retained its significant negative coefficient when using non-imputed values and when 2001 outliers were omitted; however, its influence was sensitive to the exclusion of a few high-leverage cases. “Government expenditures” and “development assistance” lost significance in most tests of model IX; however, when excluding observations with imputed values, all coefficients in this model were significant.<sup>16</sup> Beyond “press freedom,” “inequality,” and “HIV prevalence,” respondent expectations present a viable alternate explanation to the effects of electoral accountability, regime stability, and foreign investment.

## **Limitations**

There are several limitations to this analysis: first, it is not entirely clear how far back in time the API scores measure. According to John Stover, co-author of the API, the subjective ratings “are supposed to be assessments of the current situation” (personal correspondence, 2/6/05). Yet, respondents cannot answer questions such as “Does the

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<sup>15</sup> Countries were omitted if the change in their political support score from 2001 to 2003 was greater than one standard deviation from the mean change.

<sup>16</sup> It is possible that multicollinearity resulting from imputation led these factors to be obscured in the other specifications. However, their significance in model IX:3 could also be the result of omitting a biased set of cases.

head of the government, and/or other high officials, speak publicly and favorably about AIDS issues at least twice a year?” without a mind to the past. The extent of respondents’ historical memory has major implications, as it dictates the proper time-ordering of variables. I have tried to minimize this source of bias by testing the robustness of my results using the API’s 2001 retrospective data and by omitting those cases that saw dramatic changes in political commitment between 2001 and 2003.

Second, quantitative data collection is a blunt instrument and cannot capture heterogeneity among cases as can qualitative methods. HIV prevalence rates only begin to describe the diverse patterns of AIDS epidemics. Similarly, a Freedom House “political rights” score of “4” may reflect different institutional arrangements for different countries. Other factors, such as stigma, escape measurement altogether and were omitted. Due to the lack of precision of composite indicators and the exclusion of variables, it is difficult to draw more than general inferences from this analysis.

Third, the small number of informants and the lack of uniformity in their selection are bound to generate subjectivity in the API questionnaire. Evidence from this study suggests that respondents tend to expect more from governments with greater resource capacity (government expenditures, development assistance). As long as subjectivity is limited to idiosyncratic personal biases or to variables that we can control, the results retain validity. Yet, it is possible that there are additional biases in the way that the API is implemented, or in the questionnaire itself, that have yet to come to the fore. Standardized selection of a greater pool of informants will increase the reliability of the API. Increased transparency of data collection methods in future rounds of the API will provide insight into biases in the survey.

## CONCLUSIONS

Poku and Whiteside write in the conclusion to their book, *The Political Economy of AIDS in Africa* (2004): “Leadership is crucial if we are to make a difference with regard to this epidemic. But where should this leadership come from and how should it be motivated?” (p. 220). The results of this analysis suggest that a free and independent media is one important factor. Free media provide a multiplicity of perspectives and greater information on an AIDS epidemic and its widespread secondary effects. With improved knowledge of local conditions, political leaders have a better grasp of the consequences of AIDS on the stability of their rule and the welfare of their citizens. Free media also provide leaders with a better understanding of the scientific and epidemiological aspects of the disease and of appropriate policy responses. Finally, transparency of epidemic conditions may increase domestic and international pressure on governments to respond. Further research is needed to determine how these pressures are brought to bear.

Contrary to expectations, domestic pressures for AIDS policies do not appear to be channeled through competitive elections. Several models generated significant negative



correlations between political commitment and electoral accountability. Indeed, in countries with competitive elections, AIDS has yet to make a salient campaign issue.<sup>17</sup> Stigma and denial no doubt play a role. Furthermore, due to the “long-wave nature of the epidemic” (Poku and Whiteside, 2004, p. 216), elected leaders may be hesitant to devote resources that will not have a return during their term. Evidence from the 2003 Afrobarometer surveys indicates that Africans consistently rank AIDS low among their political priorities, preferring government action on unemployment, the economy, poverty, water, and crime (Afrobarometer, 2004). In other words, the failure of elected leaders to respond to AIDS may reflect a rational political response to the demands of their constituents. Thus, while policy advocates have pointed to “democratic governance” as a key to stimulating political commitment to AIDS, free and fair elections are no panacea. This analysis suggests that a broader notion of democracy, to include liberal rights and socioeconomic equality, is an important factor in motivating leadership on AIDS.

These observations have implications for how political scientists understand the agenda-setting process in developing countries with regards to AIDS policy. Leaders of developing countries do not operate in a vacuum. Calls for political commitment must be accompanied by efforts to shape the context in which leaders make decisions. A free media that generates transparency of conditions is vital. In addition, international policy experts should be mindful of the various incentives that leaders face—either to confront or to ignore an AIDS epidemic. Preliminary analysis suggests that a free press matters most in countries with high foreign investment, where leaders have incentives to hide a growing epidemic.<sup>18</sup> Much has changed since Tip O’Neil’s famous adage, “all politics is local.” Leaders of developing countries respond to incentives at local, national, and international levels from a myriad of political, economic, and social actors. How this new global politics of accountability shapes policy responses to AIDS is an important area for further research.

This paper is a first step towards developing a political economy of national responses to AIDS in the developing world. The models developed through multivariate analysis were able to explain over half of the variation in political commitment across the countries in the sample. These are extraordinarily powerful models, given the likelihood of a large error term. Structural factors are critical to understanding what are often taken to be the voluntary actions of government leaders to confront AIDS. Perhaps most importantly, this paper illustrates the validity, utility, and limitations of the “political support” subscore of the 2003 AIDS Program Effort Index as an indicator of political commitment.

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<sup>17</sup> In South Africa’s 2004 election, opposition parties campaigned on platforms promising “free ARVs,” yet the ANC still garnered 70% of the vote (Prof. Nicoli Nattrass, University of Cape Town, personal communication, 7/10/05).

<sup>18</sup> When dividing the sample by level of foreign investment (FDI), “press freedom” is highly significant among countries with high FDI ( $b = .99$   $p = .007$ ) and insignificant among countries with low FDI ( $b = .38$ ,  $p = .220$ ).

Informant-based composite indices are a promising tool for program evaluation as well as comparative political science.

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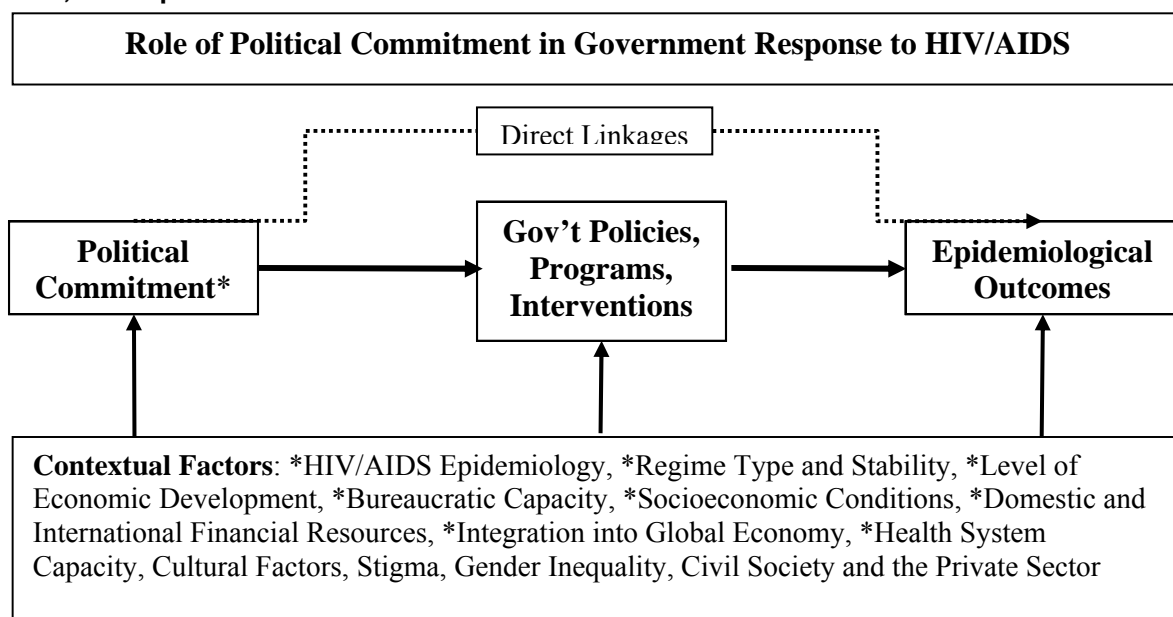
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**TABLES AND FIGURES**  
(in order of appearance)

**Table 1, API “Political Support” Scores: 2003 & 2001 (retrospective)**

<b>EAST AND SOUTHERN AFRICA</b>			<b>LATIN AMERICA AND THE CARIBBEAN</b>		
	2003	2001		2003	2001
Ethiopia	95	80	Brazil	100	100
Botswana	95	95	El Salvador	92	37
Uganda	94	92	Honduras	84	65
Malawi	90	80	Dominican Republic	84	55
Madagascar	90	75	Guatemala	78	63
Rwanda	89	77	Haiti	71	38
Zimbabwe	80	80	Guyana	66	50
South Africa	79	77	Mexico	64	64
Mozambique	79	63	Panama	61	67
Tanzania, U. Rep. of	79	67	Nicaragua	51	40
Burundi	79	25	Argentina	49	50
Swaziland	78	38	Peru	27	50
Namibia	78	68	<b>Regional Average</b>	69	57
Kenya	73	72			
Zambia	73	50			
Lesotho	68	53			
Angola	49	35			
<b>Regional Average</b>	80	66			
<b>WEST AND CENTRAL AFRICA</b>			<b>ASIA</b>		
	2003	2001		2003	2001
Burkina Faso	100	100	Thailand	85	80
Ghana	90	85	Indonesia	84	55
Benin	89	38	Cambodia	79	67
Senegal	89	68	Nepal	78	35
Nigeria	88	80	Viet Nam	75	68
Chad	75	65	India	71	60
Côte d'Ivoire	73	68	Myanmar	66	63
Cameroon	71	63	Philippines	55	63
Mali	64	50	China	50	45
Togo	61	60	<b>Regional Average</b>	71	60
Congo	61	32			
Congo (Zaire), Dem. Rep.	59	45			
<b>Regional Average</b>	77	63			
			<b>EASTERN EUROPE</b>		
				2003	2001
			Kazakhstan	63	40
			Ukraine	61	77
			Belarus	55	55
			Russian Federation	21	20
			<b>Regional Average</b>	50	48

**Figure 1, Conceptual Framework**



Note: Asterisks (\*) denote variables included in the quantitative analysis.

**Table 2, Correlation Matrix for API (2003) Components**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(10)									
-----									
Political Support (1)	1.0000								
Policy & Planning (2)	0.5985	1.0000							
Organ. Structure (3)	0.6133	0.4974	1.0000						
Program Resources (4)	0.6267	0.3799	0.6051	1.0000					
Eval & Monitoring (5)	0.4604	0.4199	0.5349	0.5515	1.0000				
Legal & Regulatory(6)	0.2118	0.3570	0.3285	0.4285	0.4696	1.0000			
Human Rights (7)	0.3688	0.4065	0.5976	0.3979	0.5521	0.4610	1.0000		
Prevention (8)	0.5035	0.3595	0.6228	0.6141	0.5474	0.3865	0.4504	1.0000	
Care & Treatment (9)	0.2508	0.3316	0.2210	0.4012	0.4604	0.4049	0.4928	0.3569	1.0000
Mitigation (10)	0.4490	0.3089	0.5157	0.3992	0.4578	0.1822	0.4709	0.3700	0.4886
1.0000									
-----									

Note: Pearson's *r*. **Boldface** denotes *r* > 0.60.

**Table 3, Do Political Support Scores Predict Rates of Condom Use and Prevention**

	Condom Use				HIV Prevention Knowledge			
<b>API "Political Support" (2003)</b>	0.43				0.30	0.30		
	2.10**				1.97*	2.06**		
<b>API "Political Support" (2001)</b>		0.56	0.46	0.57			0.33	0.32
		2.64**	2.20**	3.06***			2.22**	2.46**
Log HIV Prevalence Rate (2003)			0.39		0.66	0.57		
			1.75*		4.73***	3.71***		
Births Attended by Health Personnel (%)	0.52			0.47				
	2.00*			1.95*				
Adult Literacy Rate					0.70	0.61		
					5.98***	6.43***		
<i>Prob &gt; F</i>	0.05**	0.02**	0.04**	0.02**	0.00***	0.00***	0.00***	0.00***
<i>R</i> <sup>2</sup>	0.40	0.31	0.45	0.53	0.48	0.53	0.50	0.54
<i>N</i>	17	17	17	17	24	24	24	24

Standardized coefficients; robust *t*-statistics (abs. val.) below: \* *p* ≤ 0.1; \*\* *p* ≤ 0.05; \*\*\* *p* ≤ 0.01

**Knowledge?**



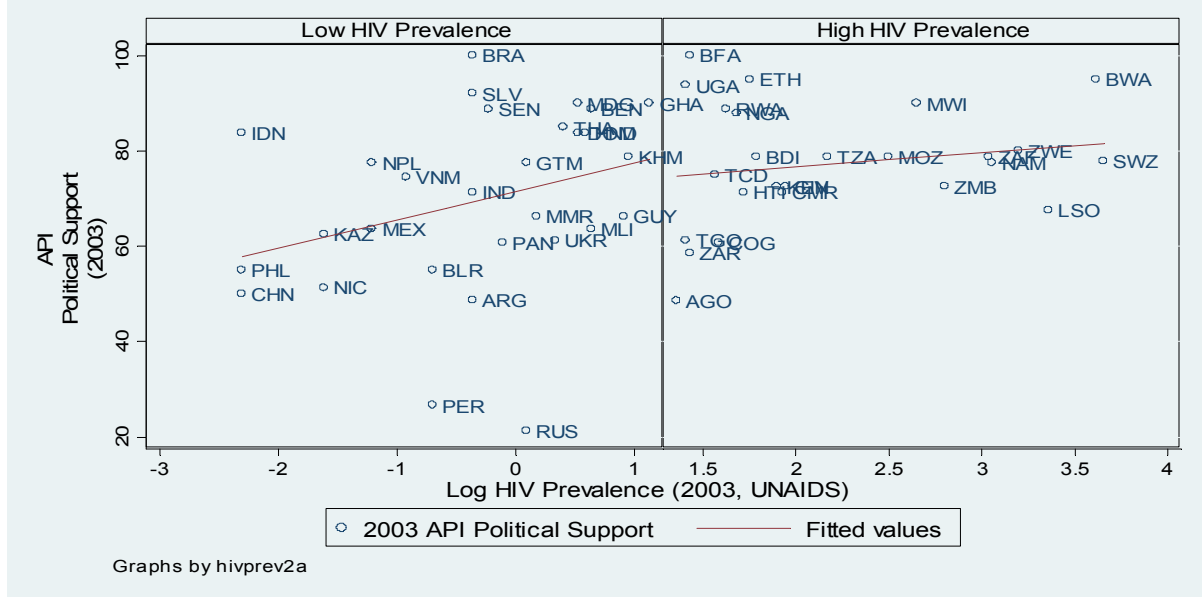
**Table 4, Data Sources, Summary Statistics and Bivariate Coefficients**

Variable	Code	Source	N	Range	Mean	Std. Dev.	Bivariate $\beta$ -Coefficients (api_polisup)
<b>Dependent Variable</b>							
Political Commitment	api_polisup	AIDS Program Effort Index (API) "Political Support" Score, 2003	54	21.25, 100	73.14	16.66	Dep. Var.
	api_polisup01	ibid., 2001 retrospective	54	20, 100	60.87	18.69	N/A
<b>Political Institutions</b>							
Electoral Accountability	pr00i	Freedom House "Political Rights" Score, 2000	54	1, 7	3.94	1.94	0.15
Press Freedom	freepress00i	Freedom House "Press Freedom" Score, 2000	54	1, 79	46.19	19.32	0.32***
Political Stability	stability	World Bank Governance Indicators, 2002	54	-2.42, 0.75	-0.45	0.83	0.09
Government Effectiveness	effectiveness	World Bank Governance Indicators, 2002	54	-1.60, 0.87	-0.56	0.50	0.16
<b>Economic Development and Integration</b>							
Log GDP per capita (US\$ PPP)	loggdpicap02	World Bank, 2002	54	6.36, 9.29	7.75	0.86	-0.29*
Log Total GDP (US\$)	loggdp02	World Bank, 2002	53	-0.36, 7.14	2.46	1.84	-0.28*
Log Foreign Direct Investment as % GDP	logfdigdp	World Bank, 2002	50	-1.61, 3.81	0.51	1.26	-0.26**
	logfd'p_hixc	missing values imputed, ex. Chad	52	-1.61, 2.46	0.48	1.16	-0.27***
Log Development Assistance as % GDP	logoda02	UNDP, 2002	51	-2.30, 4.05	1.19	1.59	0.24
Govt Expenditures per capita (sqrt)	sqrtgovexpicap	World Bank, IMF Country Reports; most recent available data used, 1990-2001.	51	0.33, 35.95	13.54	7.66	-0.27
	sqrtgove'p_i3	missing values imputed	54	0.33, 35.95	13.30	7.56	-0.25
Inequality (gini coefficient)	gini	World Bank; most recent available data used, 1983-2002	47	28.9, 70.7	45.92	10.29	-0.01
	gini_i4	missing values imputed	54	28.9, 70.7	45.73	9.82	0.00
Births Attended by Health Professional (%)	attdbirths	WHO, data from 1995-2002	53	6, 100	60.28	25.43	-0.28**
Adult Literacy Rate	literacy	UNDP, 2002	54	12.8, 99.7	72.45	20.91	-0.35**
<b>Controls</b>							
Log HIV Prevalence Rate	loghivprev	UNAIDS, 2003	54	-2.30, 3.66	0.84	1.55	0.34***
W/C Africa dummy	WCAfr	AIDS Program Effort Index (API)	54	0, 1	N/A	N/A	0.11
LAC dummy	LAC	AIDS Program Effort Index (API)	54	0, 1	N/A	N/A	-0.14
Asia dummy	Asia	AIDS Program Effort Index (API)	54	0, 1	N/A	N/A	-0.05
E. Europe dummy	EEur	AIDS Program Effort Index (API)	54	0, 1	N/A	N/A	-0.40***

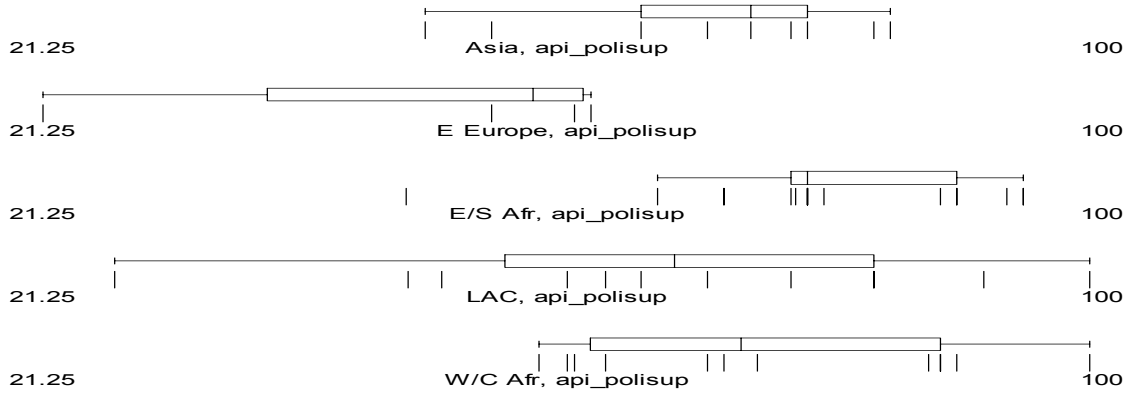
Note: To control for sampling bias, missing data were imputed for three variables. For sqrtgovexpicap\_i3 and gini\_i4, missing observations were imputed on the basis of predictive regression models: sqrtgovexpicap\_i3 was imputed as a function of "log GDP/cap 2002," "public expenditures on health as % of GDP 2001" (UNDP), "log ODA as % of GDP 2002," and "log population 2002" (UNDP), ( $R^2 = .74$ , all  $\beta$ 's significant at  $p < .05$ ); gini\_i4 was imputed as a function of "log GDP/cap 2002," "life expectancy at birth, 2002" (UNDP), "LAC," and "E. Europe" ( $R^2 = .55$ , all  $\beta$ 's significant at  $p < .01$ ). The variable logfdigdp\_hixc includes data for Namibia, Indonesia and Burundi that were found in alternate data sources and imputed by hand. FDI data could not be found for Myanmar; Chad, an outlier six standard deviations from the mean, was excluded. It is important to note that imputing missing values introduces new biases in the data; for this reason, the robustness of multivariate models will be tested using the original variables (and relaxing the demand for an unbiased sample).



**Figure 2, HIV Prevalence and API “Political Support” (2003)**



**Figure 3, Box Plot: API “Political Support” Scores (2003) by Region**



**Table 5, Multicollinearity among Explanatory Variables**

	pr00i	free00i	sta-y	eff~s	gdpcap	gdp	fdi	oda	govexp	gini	attdbs	lit
loghiv												
-----												
pr00i	1.00											
freepress00i	<b>0.85</b>	1.00										
stability	<b>0.47</b>	<b>0.48</b>	1.00									
effectiveness	<b>0.58</b>	<b>0.59</b>	<b>0.59</b>	1.00								
loggdp02	<b>0.40</b>	<b>0.32</b>	<b>0.44</b>	<b>0.61</b>	1.00							
loggdp02	0.20	0.12	0.16	<b>0.40</b>	<b>0.57</b>	1.00						
logfdigdp_hixc	-0.09	-0.11	0.18	-0.03	0.12	-0.01	1.00					
logoda02	-0.22	-0.17	<b>-0.28</b>	<b>-0.43</b>	<b>-0.78</b>	<b>-0.81</b>	0.01	1.00				
sqrtgovexp~_i3	<b>0.43</b>	<b>0.36</b>	<b>0.39</b>	<b>0.57</b>	<b>0.81</b>	<b>0.40</b>	0.15	<b>-0.63</b>	1.00			
gini_i4	<b>0.33</b>	<b>0.36</b>	<b>0.27</b>	<b>0.32</b>	<b>0.34</b>	-0.04	0.08	-0.15	<b>0.51</b>	1.00		
attdbirths	<b>0.30</b>	<u>0.25</u>	<b>0.52</b>	<b>0.42</b>	<b>0.79</b>	<b>0.44</b>	<u>0.23</u>	<b>-0.64</b>	<b>0.71</b>	<b>0.27</b>	1.00	

	literacy	0.06	-0.02	<b>0.28</b>	<b>0.32</b>	<b>0.65</b>	<b>0.45</b>	0.17	<b>-0.58</b>	<b>0.53</b>	0.10	<b>0.71</b>
1.00	loghivprev	-0.16	-0.09	-0.10	-0.07	<b>-0.32</b>	<b>-0.59</b>	-0.07	<b>0.45</b>	-0.06	<b>0.34</b>	<u>-0.23</u>
<u>0.25</u>	WCAfrica	-0.12	-0.11	<u>-0.24</u>	<b>-0.27</b>	<b>-0.41</b>	<u>-0.26</u>	0.03	<b>0.31</b>	<b>-0.33</b>	-0.13	<u>-0.24</u>
<b>0.54</b>	LAC	<b>0.41</b>	<b>0.34</b>	0.16	0.05	<b>0.45</b>	0.18	0.02	-0.23	<b>0.36</b>	<b>0.36</b>	<b>0.29</b>
<u>0.26</u>	Asia	-0.06	-0.08	-0.04	0.21	0.08	<b>0.42</b>	-0.07	<b>-0.33</b>	-0.15	<b>-0.31</b>	-0.07
0.15	EEurope	-0.18	-0.18	0.19	-0.10	<b>0.31</b>	0.22	0.09	<b>-0.32</b>	0.21	<b>-0.34</b>	<b>0.44</b>
<b>0.37</b>												

Note: Pearson's  $r$ . Underline denotes  $p < .10$ ; **bold** denotes  $p < .05$ ; **bold ital.** denotes  $p < .01$ .

**Table 6, Modeling the Determinants of Political Commitment (2003 API "Political Support" Scores)**

	I	II	III	IV	V	VI	VII	VIII	IX
<b>Political Institutions</b>									
Electoral Accountability (2000) (pr00i)	-0.28 1.21	-0.28 1.33	-0.28 1.35	-0.34 1.66*	-0.38 1.89*				
Press Freedom (2000) (freepress00i)	0.62 2.18**	0.61 2.41**	0.65 2.64***	0.60 2.70***	0.61 2.76***	0.45 3.95***	0.50 4.21***	0.54 4.04***	0.55 4.14***
Political Stability (WB) (stability)	0.16 0.88	0.14 0.92	0.18 1.54	0.24 2.06**	0.25 2.08**				
Government effectiveness (effectiveness)	0.02 0.05	0.07 0.37							
<b>Economic Development and Integration</b>									
Log GDP per capita (2002) (loggdp02)	0.18 0.47								
Total GDP (2002) (loggdp02)	-0.22 0.81	-0.24 0.89	-0.21 0.84						-0.26 1.07
Net FDI as % of GDP (log) (logfdigdp_hixc)	-0.14 1.12	-0.12 1.05	-0.13 1.12	-0.18 1.85*	-0.18 1.93*				
ODA as % GDP (log) (logoda02)	-0.46 1.23	-0.44 1.42	-0.42 1.43					-0.30 1.56	-0.53 2.05**
Sqrt Govt Expenditures per capita (sqrtgovexpcap_i3)	-0.45 1.64	-0.34 1.42	-0.30 1.45	-0.09 0.66			-0.41 2.86***	-0.36 1.79*	-0.42 2.00**
Inequality (gini_i4)	-0.44 2.41**	-0.40 2.19**	-0.40 2.40**	-0.37 2.36**	-0.43 3.21***	-0.44 3.39***		-0.35 2.21**	-0.38 2.29**
% Attended Births (attdbirths)	0.11 0.47	0.08 0.45							
Literacy (literacy)	-0.15 0.65	-0.10 0.61							
<b>Controls</b>									
Log HIV Prevalence Rate (2003) (loghivprev)	0.36 1.61	0.47 3.12***	0.48 3.36***	0.39 3.05***	0.40 3.23***	0.45 3.64***	0.36 3.19***	0.57 3.71***	0.54 3.68***
W/C Africa dummy (WCAfrica)	-0.15 0.85								
LAC dummy (LAC)	-0.16 0.46								
Asia dummy (Asia)	-0.23 1.07								
E. Europe dummy (EEurope)	-0.54 1.60	-0.37 1.76*	-0.39 2.31**	-0.39 2.25**	-0.43 2.65***	-0.36 2.46**		-0.29 1.62	-0.30 1.89*
<b>Summary Statistics</b>									
<i>SER (Root MSE)</i>	13.83	13.26	12.64	12.65	12.57	12.95	13.42	12.64	12.57
<i>R<sup>2</sup></i>	0.57	0.55	0.55	0.53	0.53	0.44	0.39	0.50	0.51
<i>N</i>	49	49	50	52	52	54	54	51	51

Standardized coefficients; robustt-statistics (abs. val) reported below, labeled for significance: \* p ≤ 0.10; \*\* p ≤ 0.05; \*\*\* p ≤ 0.01

**Table 7, Robustness Assessment**

	Model V					Model IX				
	1	2	3	4	5	1	2	3	4	5
<p>1 = 2001 "Political Support" Scores            2 = 2003 Scores, Excluding 2001 Outliers            Sample: 3 = 2003 Scores, Without Imputed Values            4 = 2003 Scores, High Prevalence Countries Only            5 = 2003 Scores, Excluding High Leverage and Outlying Cases</p>										
<b>Political Institutions</b>										
Electoral Accountability (2000)	-0.31 1.15	-0.42 1.99*	-0.43 1.99*	-0.32 1.05	-0.26 1.22					
Press Freedom (2000)	0.51 1.81*	0.60 2.70***	0.55 2.44**	0.91 5.06***	0.54 2.40**	0.42 2.71***	0.47 2.84***	0.43 2.82***	0.90 5.03***	0.57 3.78***
Political Stability (WB)	0.25 1.57	0.27 2.10**	0.24 1.96*	0.04 0.19	0.22 1.60					
<b>Economic Development and Integration</b>										
Total GDP(log)						0.29 1.03	-0.26 0.76	-0.42 1.80*	-0.31 1.24	-0.09 0.41
Net FDI as % of GDP (log)	-0.26 2.22**	-0.22 2.10**	-0.21 1.93*	-0.29 2.36**	-0.27 2.56***					
ODA as % GDP (log)						-0.14 0.45	-0.47 1.32	-0.76 2.76***	-0.43 1.32	-0.27 0.96
Sqrt Govt Expenditures per capita						-0.03 0.15	-0.22 0.82	-0.54 2.00**	-0.32 1.54	-0.31 1.25
Inequality (gini_i4)	-0.20 1.14	-0.33 2.15**	-0.30 2.56**	-0.53 2.49**	-0.48 3.87***	-0.33 1.74*	-0.38 1.88*	-0.38 2.07**	-0.71 3.06***	-0.42 2.20**
<b>Controls</b>										
Log HIV Prevalence Rate (2003)	0.28 2.25**	0.36 2.73***	0.41 3.60***	0.36 1.61	0.51 3.95***	0.59 4.68***	0.39 2.39**	0.59 3.75***	0.34 1.40	0.60 3.55***
E. Europe dummy	-0.18 0.96	-0.44 1.96*	-0.44 2.43**	N/A N/A	-0.28 3.05***	-0.19 0.90	-0.42 1.79*	-0.34 2.02**	N/A N/A	-0.21 1.56
<b>Summary Statistics</b>										
SER (Root MSE)	16.87	12.22	12.94	8.24	10.27	16.97	12.70	12.69	8.76	10.51
R <sup>2</sup>	0.32	0.57	0.55	0.69	0.52	0.33	0.52	0.55	0.64	0.46
N	52	39	44	24	49	51	38	43	25	48

Standardized coefficients; robust *t*-statistics (abs. val) reported below, labeled for significance: \*  $p \leq 0.10$ ; \*\*  $p \leq 0.05$ ; \*\*\*  $p \leq 0.01$