

## ACHIEVING GOOD GOVERNMENT—AND, MAYBE, LEGITIMACY

**Margaret Levi**, University of Washington

[mlevi@u.washington.edu](mailto:mlevi@u.washington.edu)

**Audrey Sacks**, University of Washington

[sacks@u.washington.edu](mailto:sacks@u.washington.edu)

**Abstract:** Increased governance capacity and quality are crucial elements of social development and, as such, governments are more efficient when they achieve acceptance. This paper describes the means for governments to effectively establish a balance between maintaining sufficient power to tax and provide security while inhibiting it from predation on the population it is supposed to serve. Using data from Africa, Central and Southeast Asia, and Central and Eastern Europe, case studies, and survey research it analyzes reasons for state failure, ways to rebuild them when they do fail, and means to ensure that they are responsive and responsible to those they should be serving. It shows that an equitable and democratic government that elicits from its citizens quasi-voluntary compliance and, better yet, contingent consent is what it means to have government legitimacy.

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According to Max Weber, legitimacy facilitates the exercise of domination, a particular form of power (Weber 1968, 212-6). A legitimate ruler or government elicits willing deference and obedience by justifying its exercise of authority with arguments the populace believes are normatively appropriate.<sup>1</sup> Legitimacy is a concept meant to capture the beliefs that bolster that willingness. The appeal of legitimacy as a feature of government has two aspects. First, the existence of legitimacy reduces the transaction costs of governing by reducing reliance on coercion and monitoring. Second, its existence denotes popular approval of government and governors or, at least, acceptance of their right to rule.

For Weber, the three ideal types of legitimate domination are legal, traditional, and charismatic. But by his own accounting, traditional and charismatic authority rest on beliefs that may be inconsistent with democracy, protection of human rights, or other factors that promote general economic well-being and relative equity. History reveals numerous instances of rulers, deemed legitimate by their subjects, exercising their authority to eliminate enemies, internal and external. Legitimacy does not signify that power will be used to promote the good of the nation or of humanity. It implies only that the populace acquiesces in the exercise of governmental power.

There are good reasons to avoid the concept altogether. My reasons are several. Legitimacy sometimes, perhaps too many times, is a support for very problematic governments. Divine right bolstered the power of some horrendous monarchs. Questionable but legal laws have given presidents and prime ministers legitimate authority to engage in some questionable practices. Being the party that wins a civil war may legitimate its rule among the victors but not the losers.

Even if we leave these moral objections to the side, the concept itself is too imprecise for good positive research. It is more a catch phrase than a concept. Deference, trust, duty, adulation, and other attributes may interact with each other, but are any of them (all of them, some of them) necessary conditions for legitimacy? And, presuming we can achieve conceptual clarity, how does one measure such factors outside the laboratory?

The major reason for unease, however, is that legitimacy is generally discussed in terms of only one of its dimensions: the beliefs people hold about the normative

appropriateness of government structure, officials, and processes. Yet, equally important—at least for those of us concerned about improving the quality of government—are how individuals come to develop and accept current standards for normative appropriateness and how they are able to assess the extent to which a government meets those standards. Certainly, government and those seeking legitimation play a role in this process, but they do not always succeed in winning popular endorsement. What causes people to change standards and beliefs necessitates a theory of learning that social science still lacks (North 2005).

What this paper sets out to do is to begin to develop an approach for establishing where legitimacy is likely to exist and to then measure the extent to which correlates of legitimacy are present. This requires, first, a theoretical elaboration of what we might mean by legitimacy and then the development of an empirical model. In particular, we are interested in how we might achieve a legitimate government that is also a good government. It is not legitimacy per se that intrigues us but the process by which legitimacy is created as an effect of good government. And this is only important if legitimacy then helps create and stabilize good government. The endogeneity problems in this issue are, of course, great.

The first step, the one we take in this paper, is to understand how governments might demonstrate their effectiveness to their populations and how this in turn affects the willingness of citizens to comply with government demands. We cannot yet capture all the components of legitimacy in an empirical model, but we can specify a model that captures aspects of legitimacy. The legitimacy of a government depends on a widespread belief that government deserves support and loyalty. The legitimacy of a government we might consider a good government requires the belief that government deserves support because it is serving the collective good and doing so in a relatively equitable manner. Moreover, the basis of the belief must be grounded in evidence; it must be rational. Both the nature of the belief and the grounds for it distinguishes the legitimacy supportive of good government from that which supports more problematic governments. Further, the legitimacy of good governments requires citizens to update beliefs so that they are consistent with changes in government behavior.

Conceptually, the focus is on two aspects of legitimacy: effective government

and quasi-voluntary compliance. There is a long tradition of argument that effective government is a source of legitimacy (Lipset 1963). From at least Weber on some form of willing or quasi-voluntary compliance (Levi 1988) has been considered an important outcome of legitimacy. Key to quasi-voluntary compliance, particularly in contemporary states, is citizen assessment that government upholds the fiscal contract with its citizens and meets prevailing standards of procedural fairness in delivering services, regulating behavior, and making extractive demands.<sup>2</sup>

The investigation of the existence of legitimacy requires evidence that government is effective and that it is just and fair and that these features of government help legitimate it. There must also be indicators that the population actually holds the belief that the combination of effectiveness and procedural fairness makes the government legitimate. We would then have confidence legitimacy exists. We would still lack confirmation that it matters. For that, we need a dependent variable, a behavior that would result from holding legitimating beliefs and that would diminish with the decline in those beliefs. The extent to which compliance with government is quasi-voluntary rather than coerced or habitual is as good an indicator as any that legitimating beliefs have behavioral consequences for government. Indeed, there may well be a feedback loop here: Government effectiveness enhances legitimating beliefs which elicit quasi-voluntary compliance that, in turn, makes government both more effective and more legitimate.

Diagram 1 lays out the model; we have italicized those factors we are not yet able to measure. In particular, we do not yet feel that we have adequate indicators of legitimating beliefs or even some of the elements hypothesized as promoting quasi-voluntary compliance. What we can do is provide evidence that there may be a link between attributes of an effective government and compliance attitudes and behaviors that would be consistent with beliefs that government deserves support.

Before proceeding to the empirical sections of this paper, it is first necessary to further clarify the terms.

*Good governments* are those that are: (1) representative of and accountable to the population they are meant to serve; and (2) *effective*, that is capable of protecting the population from violence, ensuring security of property rights, and supplying other public

goods the populace needs and desires. The most representative and accountable governments are in democracies, but not all democracies have effective governments, and there are relatively effective and even representative governments in non-democratic states.<sup>3</sup> While democracy, or at least accountability and representativeness, may well improve legitimacy, the argument here is that effective government is a necessary condition at least in the long-run.<sup>4</sup>

*Quasi-voluntary compliance* with government extractions both results from and reinforces effective government. Quasi-voluntary compliance is compliance motivated by a willingness to cooperate but backed by coercion. It requires that subjects and citizens receive something from government in return for the extractions government takes from them. It also means that compliance is always conditional. It will vary as governments vary in their performance, honesty, attention to due process, and other determinants of government reliability.

Social scientists are still grappling with how to objectively assess the extent to which a government is effective, let alone demonstrate that citizens perceive it as such or translate that perception into legitimating beliefs. Thus, the first step is to find a way to measure the effectiveness of government. That is the subject of the next section.

## **MEASURING EFFECTIVE GOVERNMENT**

In a large sample of countries researchers find a significant correlation between the reliability and quality of states, economic growth, and social development. (Kaufmann, Kraay, and Zoido-Lobaton 1999; Kaufmann, Kraay, and Zoido-Lobaton 2002; Knack and Keefer 1995). Using surveys of experts to derive indicators of rule of law, the probability of expropriation, corruption, bureaucratic quality, and infrastructural quality, these studies produce measures of contract enforceability, governmental credibility, and government efficiency. The resulting research significantly advances the capacity to measure and assess the quality and role of government institutions. However, it cannot reveal which institutions matter for institutional and household well-being.

Studies using aggregate indicators to identify the effect of government on social welfare are limited for three reasons. First, they do not help us to identify the actual government institutions that make a difference for individuals' well-being. Second, using aggregate indicators, especially per capita income growth, may disguise income

inequality within countries. Those suffering deprivation may be excluded from any increase in per capita national income. Third, an increase in national income does not necessarily lead to improvements in relevant government institutions or in their contribution to the health and nutritional status of the populace, variables we are using as key indicators of whether what appears to be an effective government is actually effective. Even with an increase in income among those at-risk, improvements in their health and nutritional status may not take place without accompanying information about how best to use additional resources. Nor does an increase in national income necessarily correspond to an improvement in the accessibility or quality of services for the most vulnerable (Smith and Haddad 2002, 55).

In this paper, we introduce and test an alternative model for measuring government effectiveness. Our work complements existing models that rely on aggregate indicators of governance, but our model promises to do what macro-models cannot: uncover micro-level mechanisms by which GDP affects individuals' everyday access to food and medicine. Macro-level models have difficulty accounting for why differences in national wealth translate into differences in levels of social welfare; we need more micro-level data for that. We were lucky enough to find a source in the Afrobarometer surveys. Although this limits our empirical modeling to only nine countries on one continent, analysis of this data permits us to find out if, as we suspect, the level of infrastructure development, the quality of the bureaucracy and law enforcement capacity explain a significant amount of variation in the social welfare of individuals. Indeed, we find that those citizens who never or rarely go without food, medicine, and medical treatment are those who live in neighborhoods with electricity grids, roads and little crime, and those more likely to have access to identity cards and loans or payments from governments.

### ***Data and Methods***

The Afrobarometer, conducted between 2001 and 2003, surveys Africans' views towards democracy, economics, and civil society with random, stratified, nationally representative samples. Trained enumerators conducted face to face interviews in local languages with a total of 14,476 respondents in Botswana, Cape Verde, Ghana, Namibia, Nigeria, Mozambique, South Africa, Uganda, and Zambia (see table 1).<sup>5</sup> The margin of

sampling error is +/- 3 percentage points at a 95 percent level of confidence where the country sample size was approximately 1200 and +/- 2.2 percentage points where the country sample size is approximately 2400.

The data used for this paper has a multilevel structure; one unit of analysis (individuals) is nested within another (countries). This type of data structure can generate a number of statistical problems including biased estimates and inefficient standard errors.<sup>6</sup> To deal with these issues, multilevel modeling techniques allow for estimating varying intercepts and slopes, produce asymptotically efficient standard errors, and provide for a direct estimate of variance components at each level of the model (Snijders and Bosker 1999; Steenbergen and Jones 2002). Specifically, in this paper, we estimated a two-level model with random-intercepts for the countries and fixed coefficients for the variables.<sup>7</sup>

### ***Concepts and Measurement***

#### *Dependent Variables*

The study's dependent variables are the likelihood an individual or household member has never gone without food and the likelihood an individual or household member has never gone without medicine or necessary medical treatment.<sup>8</sup> Effective governments are those that provide an environment where all citizens have reliable access to food and medicine. The ability of governments to provide citizens with these two fundamental goods is even more essential today in the wake of the HIV/AIDS crisis sweeping throughout Southern Africa. As a result of the epidemic, increasing numbers of households are experiencing shortages of food due to a loss of assets and skills associated with adult mortality, the burden of caring for sick household members and orphans, and general changes in dependency patterns (de Waal and Whiteside 2003).

#### *Independent Variables*

The independent variables measure demographic characteristics and the quality of institutions. Household access to food depends on whether the household has the ability to purchase food, has enough land and other resources to grow its own food, or can obtain in-kind transfers of food (Bank 1986). Governmental services and provision may also influence access to food.

### ***Demographic variables***

We do not include a direct control for household income since this question is problematic in the context of developing economies, where individuals are often embedded in exchange, rather than, market economies. About half of Afrobarometer respondents live in rural areas; not unexpectedly, about a third of these respondents did not report any income. Among the urban respondents, a quarter reported not earning any income. We do measure other demographic factors that affect household access to food and medicine: age, employment, physical health, gender, education, household size, and location (including differences between urban and rural areas). We include a variable for whether respondents are physically ill (miss work frequently due to physical health problems) and dummy variables for whether respondents are employed and whether they are employed as farmers producing food only for household consumption. Farmers producing food only for subsistence are most vulnerable to food shortages since they run the risk of sickness and drought without savings.

Female-headed households are often more vulnerable to food insecurity and illness because of a lack of access to land and technology, as well as to education and health services (Paarlberg 1999). Education, especially among women, influences household access to food and medicine by enabling individuals to acquire skills and make proper use of health care and other public services (Caldwell 1979; Smith and Haddad 2002). We also include a variable indicating the number of children under the age of 18 in a household.

Residents of urban areas tend to have better nutritional and health status than their rural counterparts (Smith, Ruel, and Ndiaye 2005; von Braun 1993). This urban-rural difference is mainly driven by the more favorable living conditions of urban areas including better sanitation systems, piped water, and electricity. Greater availability of food, housing arrangements, health services and possibility of employment also engender urban-rural discrepancies (Garrett and Ruel 1999; Smith, Ruel, and Ndiaye 2005). Moreover, urban groups, i.e. students, army, the bureaucracy, and consumers, tend to have greater organization and political power than rural residents (Bates 1981), and are therefore, in a better position to exact welfare from the government.

### ***State Infrastructure***

The more a state is able to penetrate all parts of the country, the more likely a government will be effective. Transportation and communication networks enhance a state’s consolidation of power but also its capacity to provide services. In his history of rural France, Eugene Weber noted, “Until roads spread, many rural communities remained imprisoned in semi-isolation, limited participants in the economy and politics of the nation” (1976, 195). The construction of roads may also increase the reach of state power and reduce its dependence on patronage politics (Herbst 2000). Once a state is established, adequate transportation and communication facilitate distribution of aid during droughts and epidemics.

Recent research supports the link between investment in infrastructure and poverty reduction. For example, Chinese government investments in agricultural research and development, irrigation, infrastructure (including roads, electricity, and telecommunications) , and, especially, rural education contributed not only to agricultural production growth but also to a reduction of rural poverty and regional inequality (Fan, Zhan, and Zhang 2002).

The Afrobarometer measures state scope by whether interviewers, in consultation with survey supervisors, observed the presence or absence of public services in randomly selected localities, usually census enumeration areas (Bratton, personal communication). These services can be broken down into economic, political, and social services (Bratton and Chung forthcoming). As shown in figures 1, the level of development varies significantly among the types of infrastructure, as well as between rural and urban areas. Whereas less than half of urban areas and less than 15% of rural areas have post offices, about eighty percent of all urban and rural areas have schools. 90% of urban areas have electricity grids in contrast to 37% of rural areas. Figure 2 illustrates the disparity in infrastructure across countries. Less than one-third of homes in Uganda have electricity grids in contrast to Botswana, where the overwhelming majority of homes have electricity. If we compare Uganda and South Africa, we can see that South Africa has many more post offices, roads, and electricity grids but interestingly, Uganda has more schools and health clinics.<sup>9</sup>

### ***Bureaucratic and Law Enforcement Capacity***

Individual access to public goods depends not only on household demographic characteristics and available infrastructure but also on a functioning and reliable bureaucracy. The degree to which bureaucratic agencies employ meritocratic recruitment and offer predictable and rewarding long-term careers seems to enhance prospects for economic growth (Evans and Rauch 1999). The presence of excessive red tape can delay the distribution of permits and licenses, thereby slowing down the process by which technological advance leads to new equipment or new productive processes (DeSoto 1989; Mauro 1995). When investors believe that rule of law exists and that their property rights are protected, the economy is likely to grow (Rodrik, Subramnian, and Trebbi 2004; Widner 2001).

Our model includes three measures of bureaucratic capacity relating to the ease or difficulty individuals face in getting identity documents, places in primary school for their children, and loans or payment from government. The first captures the extent to which the bureaucracy has penetrated the country and, perhaps, its honesty and universalism. One of the major grievances expressed in recent upsurges of violence in Ivory Coast is the severely unequal access to identity cards. As Adama Traore, one of thousands of rebels who control the northern half of Cote d'Ivoire expressed, "Without an identity card you are nothing in this country" ([www.allafrica.com/cotedivoire](http://www.allafrica.com/cotedivoire)). Places in primary school certainly indicate bureaucratic penetration and universalism. Loans or payments from the government is the most problematic of these measures. Respondents may interpret loans or payments to include a range of transfers including agricultural credit, welfare grants, pensions, loans, or entitlements. We use "loans and payments" to indicate the extent to which government has the capacity to deliver resources citizens demand, but it is an indicator we shall be evaluating further in future research.

Figure 3 indicates that the majority of respondents in Botswana, Cape Verde, and South Africa have an easy time getting identity documents, and places in primary school for their children. This finding is not surprising since Botswana and South Africa are rated by Transparency International as having the lowest rates of corruption among the African countries included in their index ([www.transparency.org/cpi/2004/](http://www.transparency.org/cpi/2004/)). Cape Verde, which is not included in the Corruption Perceptions Index, is rated as having the lowest possible score on both the Freedom House's political and civil liberties ratings

([www.freedomhouse.org](http://www.freedomhouse.org)). The widest discrepancy is seen in Uganda, where 94% of respondents report an easy time obtaining a place in primary school for their child while only 11% report an easy time obtaining a loan or payment from government. Except for South Africa, loans or payments from government are difficult to get.

### ***Law enforcement capacity***

A government's ability to help ensure its citizens sufficient access to food and medicine is directly linked to the level of security it provides people and property. The prevalence of violent conflict continues to undermine security, especially among those living in rural areas. There are multiple links between violent civil conflict and food insecurity. Recruitment of young men into militias reduces family income from agricultural productivity. Predatory activities of both militias and regular armies further diminish the food supplies of the unarmed population. To starve adversaries, militias and armies may even destroy food they cannot use. Anticipating theft and destruction, farmers will lose their incentive to plant crops (Paarlberg 1999).

Government's ability to protect property rights is essential for economic growth at the macro-level and individuals' livelihoods at the micro-level. Where governments do not provide sufficient security, individuals have fewer incentives to invest in enhancing their economic productivity through the acquisition of education and technology since they fear expropriation. At the same time, when state supplied law enforcement is weak, individuals are more likely to divert part of their incomes towards private security (Bates 2005).

Development of law enforcement capacity is still maturing (see figure 4). In Ghana, 40% of respondents report never calling on the police for help; at the same time, a quarter of Ghanaian respondent's report that their house was broken into once or more. Only in Botswana do the majority of respondents report that they have an easy time getting help from the police. In each country, except in Cape Verde, more than one-fifth of respondents report having their house broken into once or more. In Zambia, a staggering 40% of respondents report experiencing a burglary once or more and in South Africa, Botswana, and Namibia, about a third of respondents report that their house was broken into once or more.

## **Results**

Tables 4 and 5 shows the results of two models estimating the direct effects of the demographic variables and measures of institutional quality on access to food (Panel A) and medicine/medical treatment (Panel B) for individuals and their households. Two models are shown in each panel: model 1 includes only the demographic variables; and model 2 includes indicators of effective government. Results from these models provide substantial evidence that social welfare is related to the level of development but also to government's infrastructure, bureaucratic and law enforcement capacity. Moreover, with a few exceptions, the variables that explain individual and households' access to food also explain individual and household access to medicine/medical treatment.

When we only include the demographic variables, rho is estimated to be .23 in panel A and .20 in panel B. The definition of rho is the proportion of total variance contributed by differences across panels, which, in our analysis, are countries. In other words, 23% and 20% of the variance in the odds that an individual or household member has gone without food or medicine/medical treatment is explained by country level differences not captured by the individual-level independent variables. Except for gender and the variable indicating whether an individual is a farmer, all of the demographic variables are significant at the  $p < .05$  level. Poor physical health, rural residence, and large households each increase the odds an individual or household member will go without food and medicine/medical treatment. For example, living in rural areas decreases the odds an individual and/or household member has food by 15% and medicine or medical treatment by 43%. Age, education, and employment, each increase the odds an individual or household member has food and necessary medicine/medical treatment. Employment, for example, increases the odds an individual or household member has food by 48% and necessary medical treatment by 25%. Each unit increase in the amount of education an individual attains increases the odds that she or a member of her household has food by 18% and medicine or medical treatment by 19%.

From conducting a likelihood ratio test between the two models, we can conclude that including the micro-level measures of institutional quality significantly increases the model fit for both panels. Including the additional parameters reduces the proportion of the country-level variance in Panel A from .23 to .13. Now, only 13% of the variation in

the food access is explained by unmeasured difference across countries. We can interpret this to mean that a significant amount of the variation in individuals' social welfare is explained by the components of government effectiveness included in the model. In panel B, the country-level variance increases from model 1 to model 2, which may indicate that there is unexplained variance at the country-level in individuals' access to medicine and medical treatment that the additional variables helps to draw out.<sup>10</sup>

From looking at the demographic variables, we can see that with the exception of the rural residence variable, the changes in the magnitude of the odds ratios between models are minimal. In panel A, the variable indicating whether a respondent lives in a rural area completely loses its significance. Presumably, the greater likelihood an individual living in a rural area goes without food is driven by differences in infrastructure and bureaucratic capacity between urban and rural areas across Africa, rather than just living in an urban or rural area per se. In contrast, in panel B, the size of the odds ratio for the rural variable increased from model 1 to model 2. Individuals living and household members in rural areas are 27% more likely to go without necessary medicine or medical treatment. This increase may be driven by the rapid spread of HIV/AIDS across rural Africa, especially in Southern Africa.

Living in districts, where the great majority of roads are tarred or concrete and where electricity grids are ubiquitous, increase the odds an individual or household member has food by 9% and 16%, respectively. Similarly, roads and electricity grids increase the odds an individual or household member has requisite medicine and medical treatment by 11% and 33%, respectively. Facing fewer bureaucratic obstacles in obtaining identity cards and loans corresponds to a greater likelihood of access to food and medicine. Most strikingly, the ability to acquire a loan or payment from government translates into a 76% increase in the odds an individual or household member has food and a 51% increase in the odds an individual or household member has access to medicine and medical treatment. Further, the ability to obtain an identity document and a place in primary school for one's child increases the odds an individual or household member has food by 21% and 20%, respectively.

Finally, evidence from our analysis supports the claim that law enforcement affects social welfare. Never having one's house broken into corresponds to a 34% and

22% increase in the odds that an individual or household member has never gone without food or medicine/medical treatment.

Survey respondents live under a variety of conditions and environments with different levels of administrative capacity, infrastructure development, and law and order. Figure 6 illustrates the predicted probability of never having gone without food for respondents living in various plausible environments. Of the seven scenarios, individuals in urban areas with high levels of infrastructure development and administrative capacity and low crime are the most likely to have food; their predicted probability for access to food is .67. This probability falls to .3 for rural respondents living in neighborhoods with low levels of administrative capacity and infrastructure development, as well as high crime. The predicted probability for respondents living in rural areas with high administrative capacity but low infrastructural development and high crime is .52. In other words, respondents living under these conditions have a 52% chance of not going hungry. The predicted probability for access to food is only slightly higher (a .02 difference) for individuals living in urban areas, with similar levels of administrative capacity, infrastructure development, and crime.

In summary, while social welfare is, in part, determined by demographic factors including education, physical health, and household size, institutions, at least those we have modeled, matter for government effectiveness across the nine countries included in this study. These results suggest that improving the quality and quantity of certain institutions can improve social welfare.

### *Comparisons*

The next step of this analysis is to examine and compare the variation in our measures of government effectiveness among the countries in our sample and with more developed countries outside of Africa. If the model is capturing something accurate about government effectiveness, then what we know about African and OECD governments should be consistent with what the scale reveals. Richer and well-developed governments should rank higher than governments with fewer resources and more problematic state-building efforts. Questions asked on a Eurobarometer survey conducted in October 2001 across eighteen southern and western European countries enables us to compare where African and European countries fall on the following four dimensions:

crime; transportation facilities; medical services; and frequency of going without food. From figure 7, we can see where European and African countries fall on a scale that combines measures of government effectiveness with consequences of government effectiveness. Within Africa, South Africa scores the highest on the four measures with an average of just over 60% and Uganda scores the lowest with an average of 40%. The lowest ranking European country, Portugal, has about the same average as the highest ranking African country, South Africa. Even among the European countries, there is wide variation in government effectiveness with almost a 30 percent difference between the highest ranking country, Spain, and its low-ranked neighbor, Portugal.

### **QUASI-VOLUNTARY COMPLIANCE AND CONTINGENT CONSENT**

The more the members of a population feel they are getting what they need from their government, the more the members are likely to be loyal and comply quasi-voluntarily with government demands. When government officials become venal, lose their monopoly over force, fail to provide services, or prove incapable of extracting needed resources to produce collective goods, then non-compliance, resistance, and even state failure are far more likely. A vicious spiral ensues. Governments unable to collect sufficient taxes to pay public officials create incentives for those officials to expropriate "salaries" from citizens and often with force (Bates 2005).

This argument suggests that there should be a direct causal link between effective government, as we have measured it here, and quasi-voluntary compliance. But we can be even more specific. There are three conditions that make quasi-voluntary compliance more likely.

***Fiscal Contract:*** In the earliest versions of this argument, the emphasis was on the quid pro quo between government actors and those being asked to comply (Levi 1988; Levi 1997). In return for their payments in money, conscripts, or other resources, citizens (or subjects, as the case may be) expect governmental services and protection. The more the fiscal contract is kept by government, the greater the compliance. When the contract is not kept, evasion and resistance are more likely.

***Reliable government:*** Trustworthy or, more precisely, reliable government is one that is competent to provide the services it has promised, credible in its commitments to

provide those services and enforce its rules, and motivated to act in the interests of the whole public it has committed to serve (Cook, Hardin, and Levi 2005; Levi 1988; 1997; Rothstein 2005). By this account, there are three indicators of government reliability:

- 1). Actual provision of promised services, that is, evidence of effective government performance;
- 2). Evidence of government use of coercion and punishments to inhibit free riding;
- 3). Procedural justice (at least by the standards of the day) that ensures relatively equitable access to services and fair application of coercive measures.

***Ethical reciprocity:*** Within each relevant community (neighborhood, ethnic or religious group, etc.), social norms to comply with government extractions and regulations will lead to more quasi-voluntary compliance while social norms to resist will reduce quasi-voluntary compliance (Levi 1997).

There are a wide range of studies that demonstrate how quasi-voluntary compliance is most likely to result from the quality of the service provided and the quality of the process by which it is provided (Ayres and Braithwaite 1992; Levi 1988; Levi 1997; Tyler 1990a; Tyler 1990b; Tyler 1998). Most of these studies draw on material from OECD countries. They include both extractive demands, in which a government agent requests a citizen to yield resources, and its regulatory demands, in which agents ask citizens to modify behavior.<sup>11</sup>

There is less on the importance of the fiscal contract. Several scholars (e.g., Bates and Lien 1985; Cheibub 1998; Moore 1998) emphasize the importance of reciprocity, but they are more concerned with how reciprocity promotes responsive, accountable, and representative government than in its influence on quasi-voluntary compliance.

There is some evidence of a causal chain between competent and credible government, or what we have labeled effective government, and quasi-voluntary compliance.<sup>12</sup> Competence here is not generalized but domain-specific. For example, in tax collection, the payers must have good reason to believe that the extractions are actually going towards the purposes for which they were intended and not into the pockets of corrupt officials (Brewer 1988; Levi 1988; Lieberman 2003). In the provision of health care, the training and quality of health professionals and the cleanliness of

hospitals are among the indicators of competence. But even in these contexts, how constituents are treated by government employees may be more important than what they pay or what they get.

What accounts for variation in quasi-voluntary compliance may rest as much on the perceived good will and fairness of the governors as on their competence. Confidence in the motivations as well as the competence of state agents make citizens more cooperative with government and enable its agents to be more effective. For example, government regulation may be most effective if it keeps punishment in the background and uses persuasion and collegiality to induce compliance (also see Braithwaite 1985; Braithwaite 1998). When government actors fail to display confidence in citizens or when they demonstrate active distrust, citizens are more likely to become wary of government interventions and less likely to willingly consent to its bureaucratic requirements (Lipsky 1980; Peel 1995; Peel 1998).

Some of the most detailed work testing various propositions about the relationship between official behavior, citizen attitudes, and citizen responses comes from investigations of tax compliance (e.g., Frey and Feld 2002; Lieberman 2003; Slemrod 2003). In the most developed research program to date, John Scholz and various collaborators investigate how "trust heuristics make compliance conditional on the action of governing elites and of other citizens"(1998, 161). When government bureaucrats and politicians are perceived as fair, benevolent, and capable of controlling free riding, citizens are more likely to comply with their demands (Pinney and Scholz 1995; Scholz and Lubell 1998). These findings on tax compliance are consistent with the findings of research on the role of due process and fairness in explaining why people obey the law (Tyler 1990b; Tyler and Huo 2002) or contingently consent with extractions of taxes and military service (Levi 1988; Levi 1997; Tilly 2005).

Studies from transitional societies and developing countries offer some evidence that there is a link between effective government, procedural justice, and quasi-voluntary compliance in these countries as well. Most of this research focuses on variation in tax or service charge payment across populations or neighborhoods within the same country or, occasionally, across countries.<sup>13</sup>

One of the most extensive analyses is Marcelo Bergman's comparison of "net

voluntary compliance" (NVC) in Chile and Argentina (Bergman 2003). He finds that "Chile was able to enhance better tax compliance because it has implemented a permanent, stable and rational policy that allowed for the development of an effective tax administration - a process never fully accomplished in Argentina." He also finds that social norms of evasion or compliance are also essential for achieving quasi-voluntary compliance (2002; Bergman 2003).

Two studies actually consider some of the countries surveyed by the Afrobarometer. They do not rely on the Afrobarometer but on other survey instruments and behavioral indicators. Their findings, however, lend considerable support to what we argue are the bases for quasi-voluntary compliance.

Odd-Helge Fjeldstad (2004) investigates the reasons for variation in compliance behavior with local authorities in South Africa. His dependent variable is the non-payment of service charges, despite a major 1995 campaign, the Msakhane campaign, to mobilize citizens to pay. He explicitly sets out to test Levi's arguments on quasi-voluntary compliance. Fjeldstad analyzes the results of two in-depth surveys and finds that there is extensive variation within and between communities with similar socio-economic characteristics. He concludes that "ability to pay," although a factor, is not determinant of compliance.

Most of his findings confirm the model of quasi-voluntary compliance. The credibility of enforcement against others did have a positive effect on payment, but simultaneously, many citizens did not find government's enforcement credible and, therefore, were unwilling to comply. Excessive use of sanctions and force was more likely to fuel resistance than compliance. He also found that procedural fairness and the existence of a social norm to comply increased quasi-voluntary compliance. His findings would be even more compelling if he provided contingency table analysis, regressions or factor analysis. Even so, they are interesting.

Fjeldstad finds little evidence that government performance and effectiveness increase compliance. While he does not altogether reject the possibility of a fiscal contract, he is skeptical about the importance of government performance relative to other bases for legitimating beliefs that promote compliance (Fjeldstad 2002; 2004).

The most persuasive piece of research to date is by Hoffman and Gibson (2005).

They analyze the relationship between the policies and expenditures of local governments and their source of revenue in Tanzania and Zambia. While this is hardly a direct test of the link between effective government and quasi-voluntary compliance, it does suggest exactly the kind of fiscal contract that Fjeldstad fails to find. After a sophisticated statistical analysis, they conclude: “...independent of the level of external assistance, local governments in Tanzania and Zambia devote a larger share of locally-generated revenue to public services as the amount of taxes constituents pay increases.” (21)

They also find that reliance on funds from donors increases the use of locally generated revenues for recurrent expenses. Their findings are, thus, consistent with at least part of the argument put forward by Moore (1995) and others that development aid might undermine the development of government responsive and accountable to its own population.

### *Measuring Compliance*

Using Afrobarometer data, we now estimate the estimate the direct effects of social welfare, which we have already shown is a consequence of effective government and which should stimulate the belief that government is effective,<sup>14</sup> and perceptions of government competence and fairness on the willingness to comply with taxes. If individuals are dissatisfied with the goods they receive from government and/or perceive the government as acting unfairly or incompetently, will they be less willing to comply with taxes more than satisfied citizens? In this model, the dependent variable is whether individuals agree that the tax department always has the right to make people pay taxes. We include the same set of demographic control variables that were included in the previous two panels: age; education; gender; rural; physical health; number of children under the age 18 in the household; employment; and employment as a farmer.

If there is an effective government, it should be providing valued goods that citizens expect in return for their taxes. As predictors of the willingness to pay taxes, we include one of our indicators of social welfare, access to food – a product of effective government. In addition, we include perceptions of government performance in three domains that are especially salient across Africa: fighting corruption, HIV/AIDS, and resolving conflicts between communities. To examine whether a link exists between citizens’ perception of government fairness and tax compliance, we include a variable

indicating whether respondents believe that the government treats people fairly. Finally, we include one additional measure of government competency: the ease of obtaining help from the police. Results from these models provide evidence that perception of governmental fairness, effectiveness, and competency matters for tax compliance.

### **Results**

Table 6 shows the results for two models estimating the direct effects of perceptions of government performance, competency and fairness on tax compliance for survey respondents.<sup>15</sup> Model 1 includes only the socio-demographic variables and model 2 includes indicators of perceptions of government performance and fairness. In model 1, the only socio-demographic variables significant at the  $p < .05$  are age, education and never having gone without food. Although the odds ratio for age and education is significant at the  $p < .01$  level, the size of the coefficients are very small. Never having gone without food increases the odds an individual believes that the tax department always has the right to make people pay taxes by 35% net of the other variables. Of course, refusal to pay taxes on the part of the hungry may reflect poverty and an inability to pay. But, this refusal may also reflect a belief that their relationship with government is one-sided and the government is not fulfilling their end of the 'fiscal contract'.

A likelihood-ratio test between the two models indicates that the additional parameters in model 2 improve the model fit. Variables for age and education are no longer significant. The odds ratio for never having gone without food falls to 1.27 but is still significant at the  $p < .001$  level. Easily obtaining help from the police increases the odds that an individual advocates tax compliance by 27% net of the other variables. Our indicator for a perception of government fairness is significant at the  $p < .001$ . Believing the government treats everyone fairly either all or most of the time increases the odds an individual complies with tax laws by 38% in comparison to those who believe the government treats people *unfairly* most of the time or always.

Variables measuring governments' performance in combating HIV/AIDS and resolving conflicts between communities are each significant at the  $p < .001$  level. Approval of the government's combating of HIV/AIDS corresponds to a 34% increase in the odds that an individual agrees that the tax department has the right to make people pay taxes in contrast to those who are dissatisfied with the government's response to

HIV/AIDS. Approval of the government's attempts to resolve conflicts between communities corresponds to a 27% increase in the odds that an individual agrees that the tax department has the right to make people pay taxes in contrast to those dissatisfied with government efforts in this sphere.<sup>16</sup> In summary, we find evidence that government effectiveness and perceptions of government fairness and competency are linked to tax compliance. With the available data, however, we cannot know whether those who go without food are less likely to comply with tax laws because of an inability to pay or because of a belief that they are not getting enough goods back from government.

### **EMPIRICAL CONCLUSION**

This exercise demonstrates that it is possible to measure effective government and, in principle, causally link it to quasi-voluntary compliance. We have even made some suggestive progress in understanding how quasi-voluntary compliance might enhance effective government. If those in the society know that others are complying and doing so without significant coercion, they, too, might recognize compliance as a norm or even, more strongly, come to believe that the government deserves their deference, the sine qua non of legitimating beliefs. We have accomplished only a small part of what is necessary to establish that there really are legitimating beliefs and that they support government. The next steps, the much more difficult steps, are, first, to find a way to assess the nature of the population's beliefs about government and their obligations to it; and, second, to establish that those beliefs actually lead to behaviors in support of government.

### **WHITHER FROM HERE?**

Let us now go beyond the limited empirical findings to address larger theoretical and practical questions. Legitimacy beliefs come from a variety of sources, some of which may support accountable, responsive, and even democratic government, but many of which most definitely do not. Our aim is to elaborate the bases of legitimating beliefs that promote good government. Weber's notion of legal rational institutions provides part of the story, but we must further elaborate the role of actual government behaviors and of actual popular beliefs about the deference government is owed.

Effective government is an indicator of competent government, an important

component of a reliable government. But as important as the competence of government are bases for having confidence that it is motivated (or constrained) to act in the interests of the whole population and not just special interests or elites. While there is some reason to believe that democracy promotes quasi-voluntary compliance (Cheibub 1998; Levi 1997), the case is far from made.

We are ever more conscious that well-ordered institutions and the bases for cooperation require small steps that allow people to learn what institutions and which people are reliable and in what settings. Individuals can then take increasing risks and broaden the range of those with whom they can productively interact (Cook, Hardin, and Levi 2005, ch. 9 and *passim*). This applies to their perceptions of government as well as of other individuals and groups.

We now have some confidence about necessary preconditions for state formation and democracy. We know that formal institutions are essential but not enough. Thus, it is no surprise—and was, in fact, foreseeable to political scientists, if not macro-economists—that the formulaic approach of the IMF could not produce desired results. Most importantly, we have a large body of experiences that give us some indication of the mechanisms, processes, and arrangements that might lead to or inhibit effective and legitimate government.

To achieve legitimacy requires the rule of law and the provision of infrastructure, justice, education and other services that make populations better off than they would be without government. But law and services are insufficient without government commitments to procedural fairness and relative transparency. This, in turn, involves public servants with pay and other incentives to withstand corruption and to serve constituents, all constituents. And that in turn rests on a symbiotic relationship with an alert citizenry willing to make demands and hold their public servants accountable. They will do so only if they believe—and for good reason—that they are getting something in return for their compliance and active citizenship. There is a chicken and egg problem here to be sure: Without services, citizens will not find government legitimate, BUT funds for services can be a source of corruption rather than legitimate government.

The way to break this cycle often involves local action and knowledge, perhaps facilitated by international agency expertise. There are four main factors:<sup>17</sup>

- appropriate alignment of incentives to public servants
- management capacity or good leadership
- transparency and fairness in implementation
- learning processes that produce legitimating beliefs supportive of good government

The alignment of incentives requires both positive inducements and punitive action. Good pay actually paid out and incentives (through promotions, opportunities, and monetary compensation) are essential to inhibit corruption and discriminatory service delivery. But the positive inducements must be backed up punitive action against those who are corrupt or who negatively discriminate. This can only be accomplished if there is good management coupled with a sufficient coterie of well-motivated public servants, including among the police. So, transformation of selection procedures of personnel may also be necessary.

Leadership is often assumed by international lending institutions, who believe they only have to locate leaders and not expend significant resources to develop them. But often there is a dearth of management expertise, even among those who otherwise exhibit attributes of leadership ability. Quality management, especially in societies where there are relatively few management opportunities, requires both training and socialization. Moreover, where there is evidence of good management, it is important to reward the individuals with public recognition, on the one hand, and collective benefits going to their agency or municipality, on the other. The Ford Foundation Innovations program does some of this.

Equally important is transparency and procedural fairness. A recent *Economist* article describes the discovery by the World Bank that funds going to Ugandan primary schools were disproportionately going to “ghost workers”. By publicizing their survey findings and thus making the parents and more general public aware of this problem, the Bank helped create significant public pressure, which in turn led to a significant increase in the proportion of funds actually reaching the schools. Such expenditures on monitoring and transparency helped create a more alert and effective citizenry as well as inhibiting corruption. It also suggested that they were attempting to abide by fair and non-discriminatory implementation of policies as well as treatment of clients and citizens.

The importance of procedural fairness in eliciting quasi-voluntary compliance and, more to the point, legitimating beliefs is a strong finding of a large body of research, including historical and contemporary case studies, formal models, and experiments on due process and trust. How we are to promote procedural fairness in the context of strong ethnic, religious, and tribal distrust is a subject of other papers for this conference. But at least part of the answer is generic: good management, good public servants, and transparency combined with institutional arrangements that provide effective voice and grievance procedures to those who experience discrimination.

The final element is the most problematic and least understood. We must recognize and address the numbingly slow process by which individuals often acquire new norms and realistic understandings of a post-transition society. Citizens must learn what governments are really like, determine the quality and credibility of their performance, and then change beliefs about the extent to which such governments are owed deference. Our tasks, as social scientists, are two-fold: first, to provide the guidelines for building good governments; and, second, to develop a theory about how people come to form legitimating beliefs. Only when legitimating beliefs and good government are combined will we have any confidence in the stability of societies and their constitutions. Only then will we have the basis for real hope for the improved well-being of their populations.

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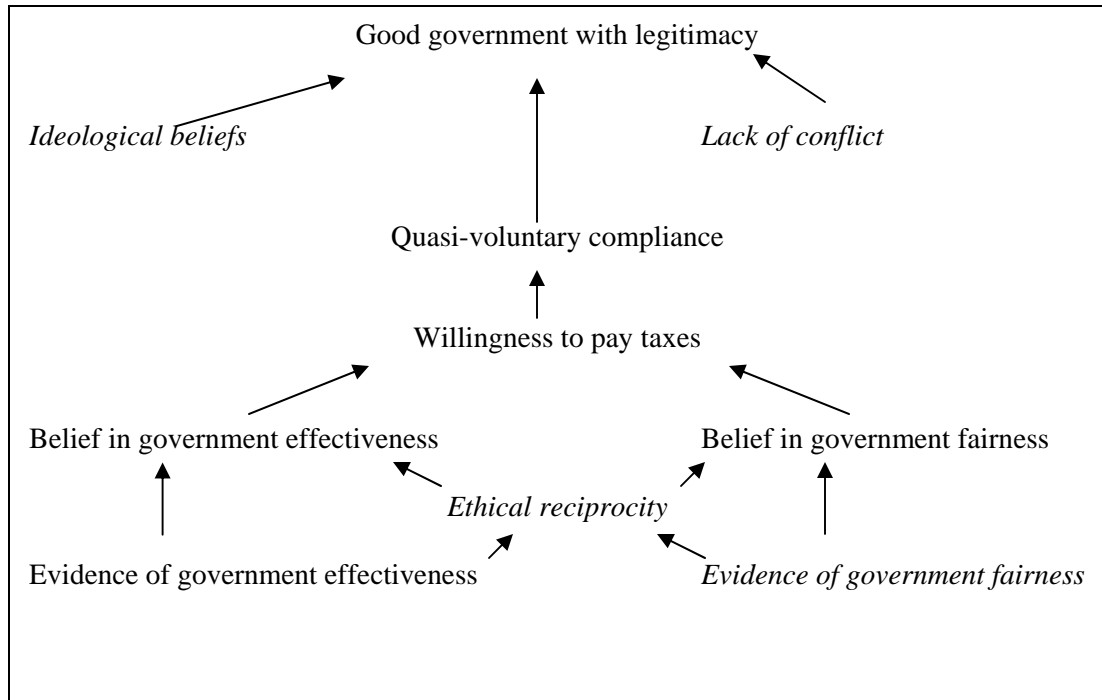
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### DIAGRAM 1: PARTIAL MODEL OF LEGITIMACY



## Appendix A: Tables and Figures

**Table 1: Sample Sizes**

<b>Country name</b>	<b>Sample Size</b>
Botswana	1,200
Cape Verde	1,268
Ghana	1,200
Mozambique	1,400
Namibia	1,200
Nigeria	2,210
South Africa	2,400
Uganda	2,400
Zambia	1,198
<b>Total</b>	<b>14,476</b>

<b>Table 2: Variable Descriptive Statistics For Panels A and B (N=14476)</b>				
	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>
<b>Dependent Variables</b>				
Never Gone Without Food	0.51	0.50	0.00	1.00
Never Gone Without Medicine	0.43	0.50	0.00	1.00
<b>Demographic Variables</b>				
Age	35.50	14.53	17.00	105.00
Education	3.39	2.06	0.00	9.00
Female	0.50	0.50	0.00	1.00
Rural	0.56	0.50	0.00	1.00
Number of children<18 in Household	3.53	3.91	0.00	25.00
Employed	0.75	0.43	0.00	1.00
Farmer (Producing Food only for Home)	0.11	0.31	0.00	1.00
Physical Health	0.81	0.86	0.00	3.00
<b>Infrastructure of PSU/EA</b>				
Post Office	0.24	0.43	0.00	1.00
Tarred or Concrete Roads	1.55	1.21	0.00	3.00
Electricity Grid	0.61	0.49	0.00	1.00
<b>Administrative Capacity</b>				
Obtaining an id document? Difficult	0.37	0.48	0.00	1.00
Obtaining an id document? Easy	0.45	0.50	0.00	1.00
Obtaining an id document? Never Tried	0.16	0.37	0.00	1.00
Obtaining an id document - Don't Know	0.02	0.14	0.00	1.00
Obtaining a place in primary school for child? Difficult	0.19	0.39	0.00	1.00
Obtaining a place in primary school for child? Easy	0.71	0.46	0.00	1.00
Obtain a place in primary school for child? Never Tried	0.09	0.28	0.00	1.00
Obtaining a place in primary school for one child? Don't Know	0.01	0.12	0.00	1.00
Obtaining a loan or payment from Government? Difficult	0.42	0.49	0.00	1.00
Obtaining a loan or payment from Government? Easy	0.10	0.30	0.00	1.00
Obtaining a loan or payment from Government? Never Tried	0.41	0.49	0.00	1.00
Obtaining a loan or payment from Government? Don't Know	0.07	0.25	0.00	1.00
<b>Law Enforcement capacity</b>				
House Never Broken Into	0.73	0.45	0.00	1.00

**Table 3, Panel A: Logistic Regression on Never Gone without Food (1=Never) (Random Intercepts for Countries) (N=13060)**

Variables	Model 1			Model 2		
	95% CI	Odds Ratio	95% CI	95% CI	Odds Ratio	95% CI
	Lower Bound		Upper Bound	Lower Bound		Upper Bound
Age	1.00	1.01 ***	1.01	1.00	1.01 ***	1.01
Education	1.15	1.18 ***	1.20	1.15	1.17 ***	1.20
Female	0.98	1.05	1.13	0.97	1.04	1.12
Rural	0.79	0.85 ***	0.92	0.83	0.91	1.00
Number of children<18 in Household	0.98	0.99 *	1.00	0.98	0.99 *	1.00
Employed	1.33	1.48 ***	1.65	1.25	1.39 ***	1.55
Farmer	0.73	0.85	1.00	0.71	0.84 *	0.99
Physical Health	0.74	0.77 ***	0.81	0.74	0.77 ***	0.81
<b>Infrastructure</b>						
Post Office				0.93	1.02	1.12
Roads				1.05	1.09 ***	1.13
Electricity Grid				1.06	1.16 **	1.28
<b>Admin. Capacity</b>						
ID Document? Easy				1.11	1.21 ***	1.32
ID Document? Never Tried				0.91	1.03	1.17
ID Document? - Don't Know				0.93	1.26	1.69
Place in primary school? Easy				1.08	1.20 **	1.33
Place in primary school? Never Tried				1.12	1.32 **	1.56
Place in primary school? Don't Know				1.21	1.76 **	2.54
Loan or payment from Gov.? Easy				1.47	1.69 ***	1.93
Loan or payment from Gov.? Never Tried				1.09	1.19 ***	1.29
Loan or payment from Gov.? Don't Know				1.04	1.24 *	1.47
<b>Law Enforcement capacity</b>						
House Never Broken Into				1.23	1.34 ***	1.46
<b>Level 2</b>						
rho**		0.23 ***			0.13 ***	
standard error		0.02			0.01	
Log Likelihood		-8261.92			-8148.61	

\* Coefficients for the rho is in unstandardized form

\*\*Significant levels are for the likelihood ratio test of rho=0

**Table 4, Panel B: Logistic Regression on Never Gone without Medicine (1=Never) (Random Intercepts for Countries) (N=13060)**

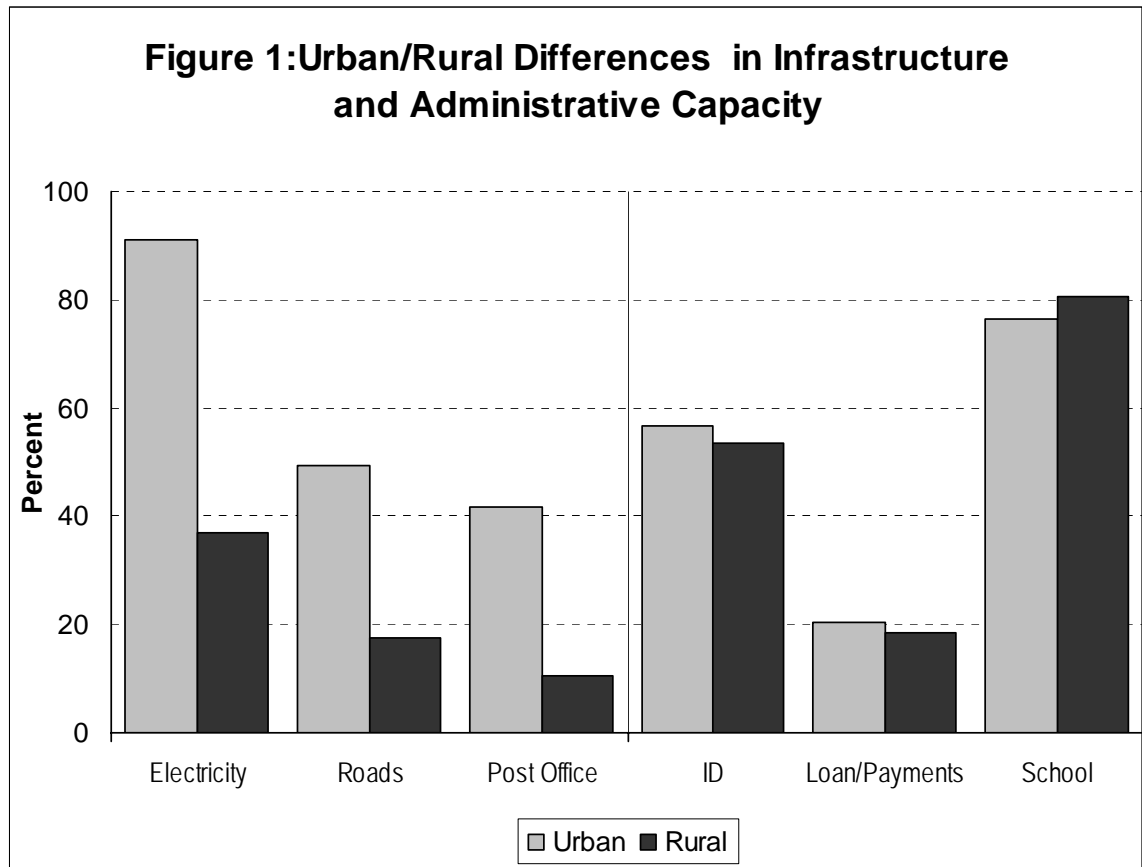
	Model 1			Model 2		
	95% CI Lower Bound	Odds Ratio	95% CI Upper Bound	95% CI Lower Bound	Odds Ratio	95% CI Upper Bound
<b>Background Variables</b>						
Age	1.00	1.00 **	1.01	1.00	1.00 **	1.01
Education	1.16	1.19 ***	1.21	1.18	1.20 ***	1.23
Female	0.91	0.98	1.06	0.90	0.98	1.06
Rural	0.53	0.57 ***	0.62	0.66	0.73 ***	0.80
Number of children<18 in Household	0.96	0.97 ***	0.98	0.96	0.97 ***	0.98
Employed	1.11	1.25 ***	1.40	1.07	1.20 **	1.35
Farmer	0.75	0.89	1.06	0.75	0.90	1.07
Physical Health	0.68	0.71 ***	0.75	0.69	0.73 ***	0.76
<b>Infrastructure</b>						
Post Office				0.95	1.05	1.16
Roads				1.07	1.11 ***	1.16
Electricity Grid				1.20	1.33 ***	1.47
<b>Admin. Capacity</b>						
ID Document? Easy				1.14	1.25 ***	1.38
ID Document? Never Tried				0.91	1.03	1.17
ID Document? - Don't Know				0.62	0.86	1.20
Place in primary school? Easy				0.98	1.09	1.22
Place in primary school? Never Tried				1.19	1.41 ***	1.68
Place in primary school? Don't Know				1.09	1.60 *	2.35
Loan or payment from Gov.? Easy				1.31	1.51 ***	1.73
Loan or payment from Gov.? Never Tried				1.08	1.18 ***	1.29
Loan or payment from Gov.? Don't Know				1.13	1.35 **	1.62
<b>Law Enforcement capacity</b>						
House Never Broken Into				1.11	1.22 ***	1.33
<b>Level 2</b>						
rho**		0.20 ***			0.26 ***	
standard error		0.02			0.02	
Log Likelihood		-7668.36			-7562.83	

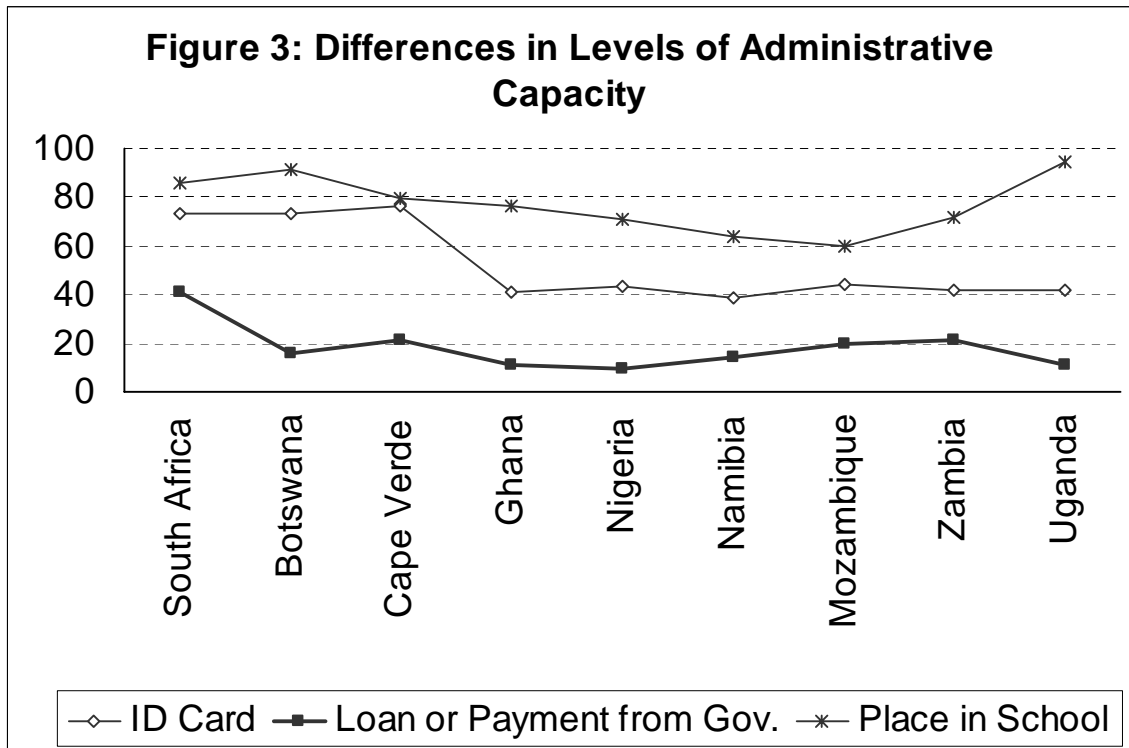
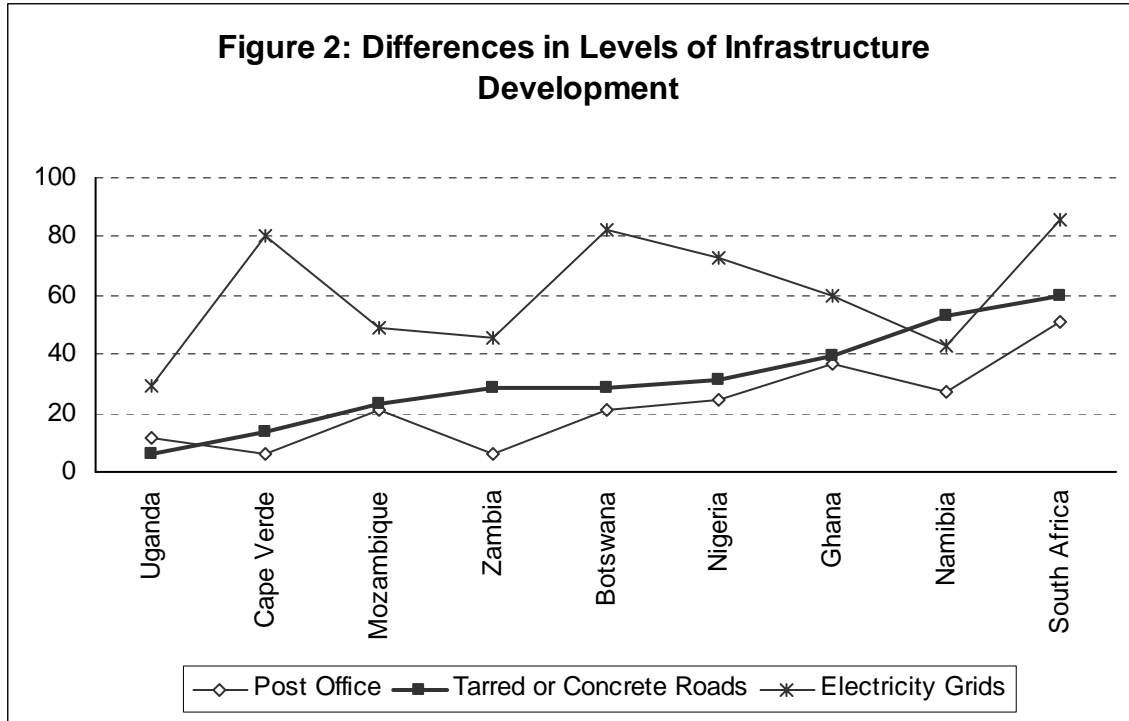
\* Coefficients for the rho is in unstandardized form

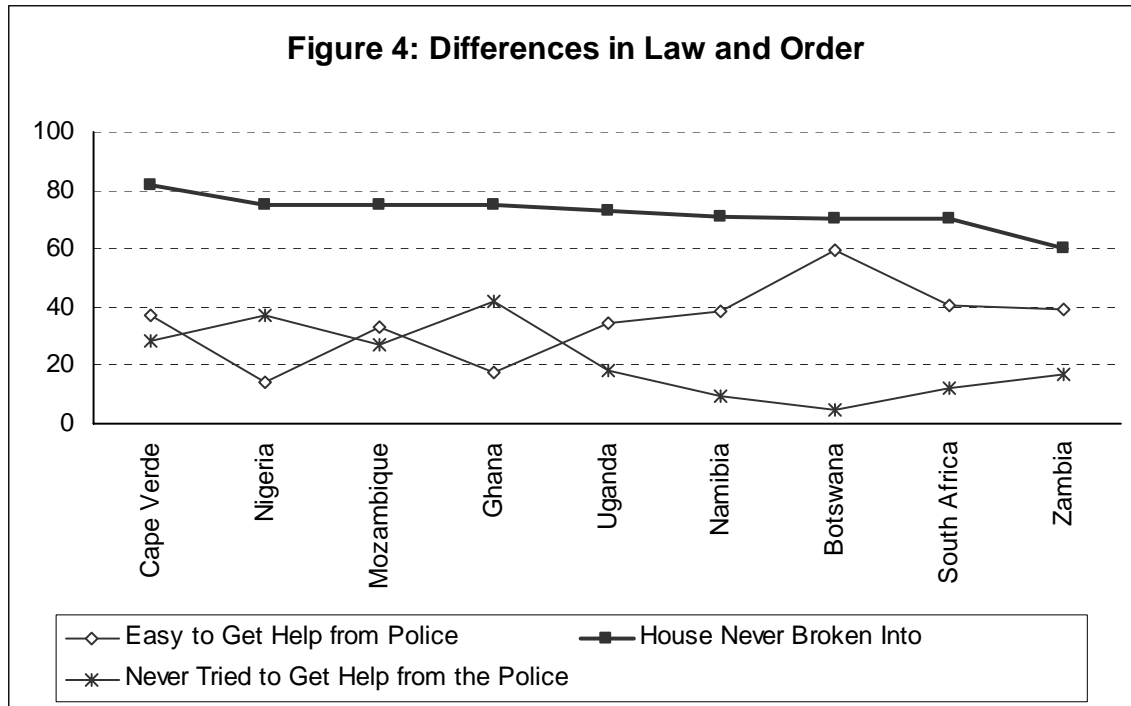
\*\*Significant levels are for the likelihood ratio test of rho=0

<b>Table 5: Variable Descriptive Statistics for Panel C (M=14476)</b>				
	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>
<b>Dependent Variables</b>				
People must pay taxes (0=Disagree; 1=Agree; 2=Don't Know)	1.02	0.55	0.00	2.00
<b>Demographic Variables</b>				
Age	35.50	14.53	17.00	105.00
Education	3.39	2.06	0.00	9.00
Female	0.50	0.50	0.00	1.00
Rural	0.56	0.50	0.00	1.00
Number of children<18 in Household	3.53	3.91	0.00	25.00
Employed	0.75	0.43	0.00	1.00
Farmer (Producing Food only for Home)	0.11	0.31	0.00	1.00
Physical Health	0.81	0.86	0.00	3.00
Never Gone Without Food	0.51	0.50	0.00	1.00
<b>Perceptions of Government</b>				
How often are people treated unequally? Often/Always	0.41	0.49	0.00	1.00
How often are people treated unequally? Seldom/Never	0.48	0.50	0.00	1.00
How often are people treated unequally? Don't Know	0.11	0.31	0.00	1.00
Handling fighting corruption in government? Badly	0.49	0.50	0.00	1.00
Handling fighting corruption in government? Well	0.40	0.49	0.00	1.00
Handling fighting corruption in government? Don't Know	0.11	0.31	0.00	1.00
Handling combating HIV/AIDS? Badly	0.28	0.45	0.00	1.00
Handling combating HIV/AIDS? Well	0.64	0.48	0.00	1.00
Handling combating HIV/AIDS? Don't Know	0.07	0.26	0.00	1.00
Handling resolving conflicts between communities? Badly	0.32	0.47	-1.00	1.00
Handling resolving conflicts between communities? Well	0.55	0.50	0.00	1.00
Handling resolving conflicts between communities? Don't Know	0.13	0.33	0.00	1.00
<b>Law Enforcement Capacity</b>				
Obtaining help from the police? Difficult	0.42	0.49	0.00	1.00
Obtaining help from the police? Easy	0.34	0.47	0.00	1.00
Obtaining help from the police? Never tried	0.22	0.41	0.00	1.00
Obtaining help from the police? Don't Know	0.03	0.16	0.00	1.00

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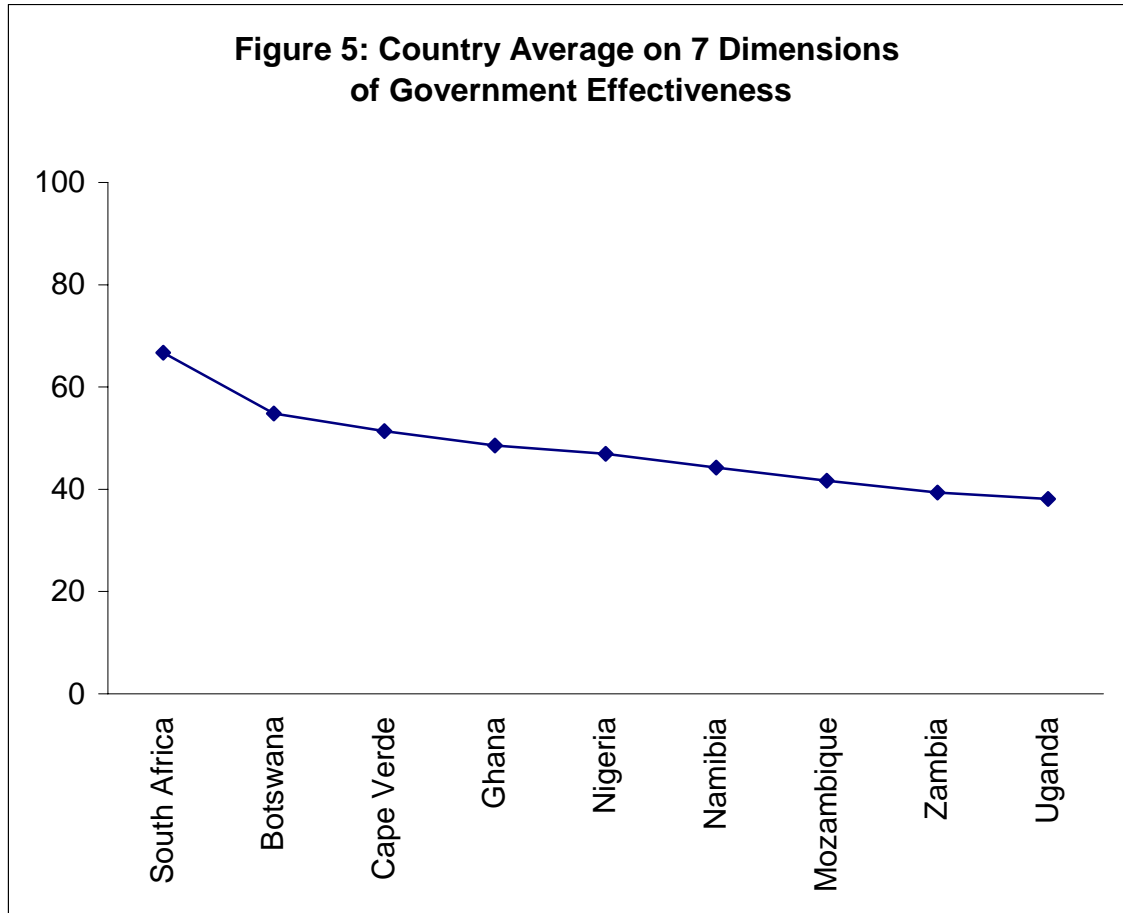


Figure #5: Seven dimensions include: the presence of a post office, paved roads, and electricity; homes that have never broken into; and the ability to obtain an identity document, a loan or payment from government, and a place in primary school for one’s child with ease.

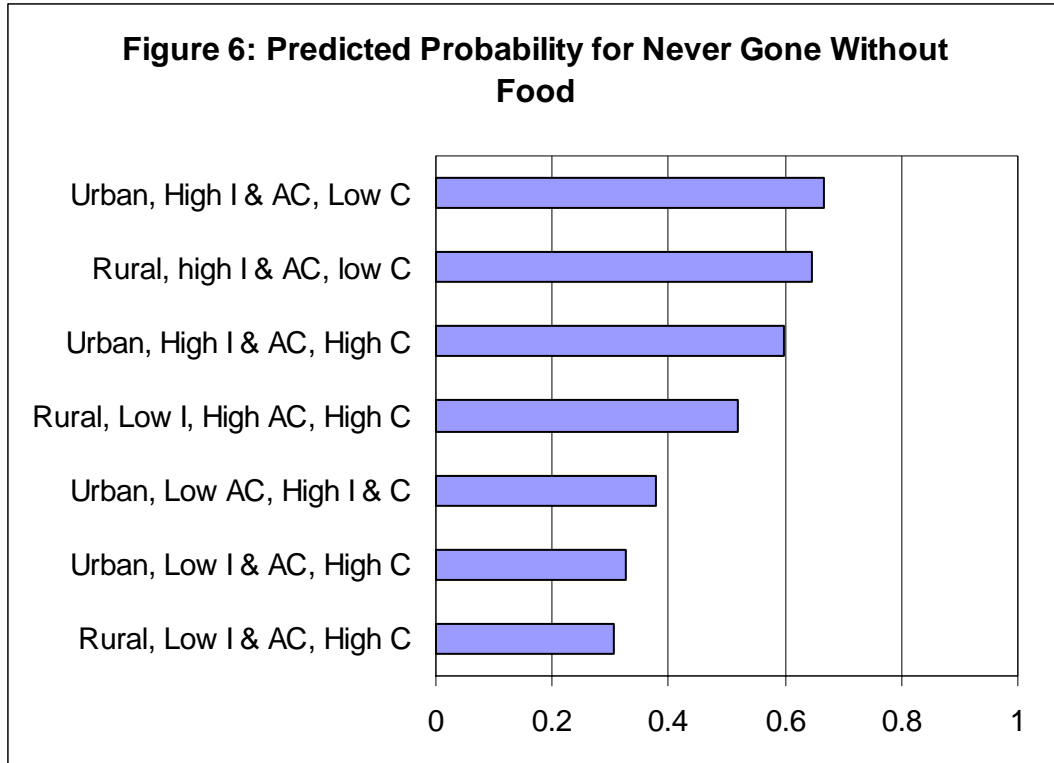


Figure #6: This figure includes the predicted probabilities for the logistic regression on never gone without food for respondents living in seven plausible environments. "I" stand for infrastructure, "AC" stands for administrative capacity, and C stands for crime. For example, the predicted probability of never going without food for a respondent living in a rural area with low infrastructure, low administrative capacity and high crime is .3.

**Figure 7: African vs. European Countries on 4 Dimensions**

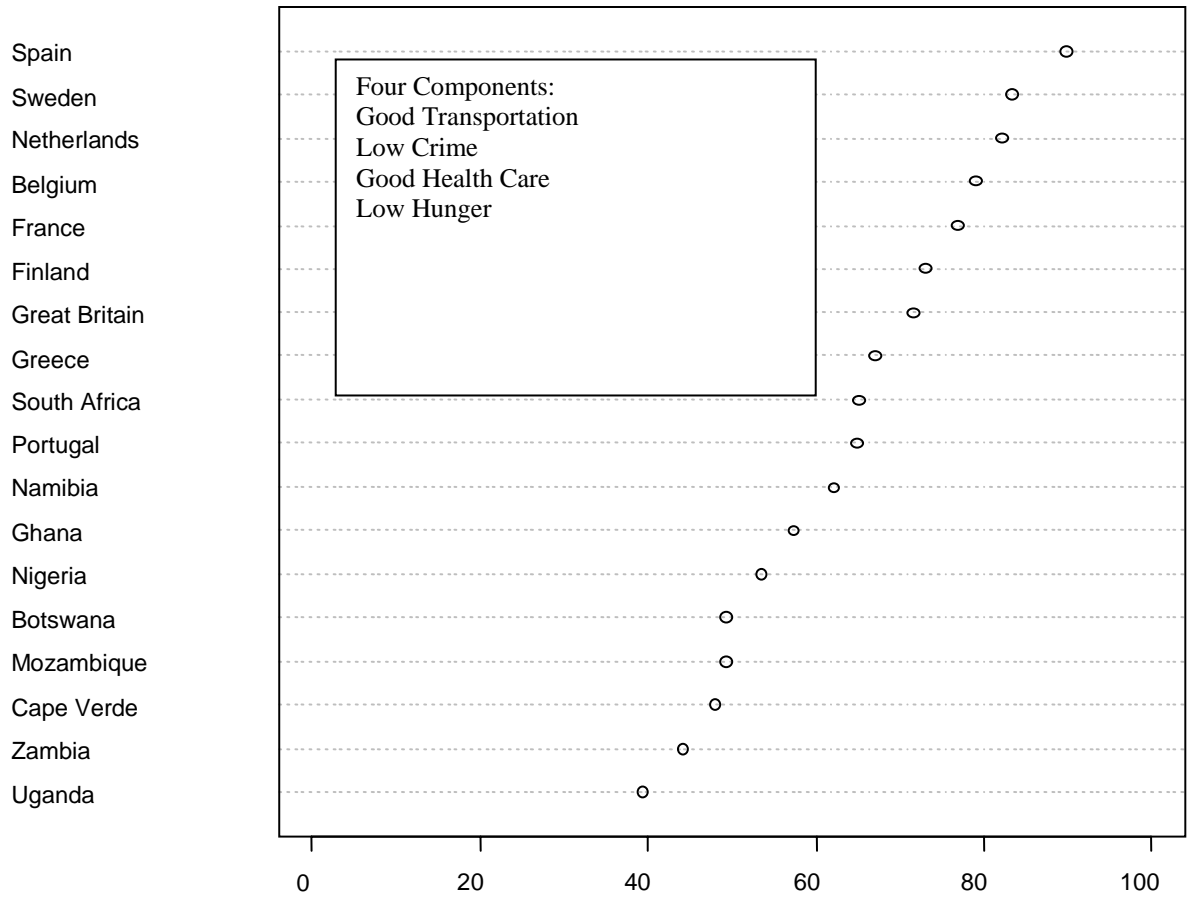


Figure 7: The scale used to create this index includes indicators of effective government and consequences of effective government.

**APPENDIX B: VARIABLE DEFINITIONS AND VALUES**

<b>Variables</b>	<b>Definition</b>	<b>Original Values</b>	<b>Calculations</b>
<i>Dependent Variables</i>			
Never Gone Without Food	Indicates how often a respondent or a household member has gone without food	Scale: Never=0; Just once or twice=1; Several times=2; Many times=3, Always=4	Ever=0; Never=1
Never Gone Without Medicine or Medical Treatment	Indicates how often a respondent or household member has gone without medicine or medical treatment	Scale: Never=0; Just once or twice=1; Several times=2; Many times=3, Always=4	Ever=0; Never=1
People Must Pay Taxes	Indicates whether people agree that the tax department always has the right to make people pay taxes	Strongly Disagree=1, Disagree=2, Neither Agree Nor Disagree=3, Agree=4, Strongly Agree=5	Disagree=0; Agree=1; Neither agree Nor Disagree=2
<i>Demographic Variables</i>			
Age	Respondent's age at time of survey	Continuous Variable	
Female	Dummy variable indicating respondent is female	Male =1; Female=2	
Education	Respondent's education level at the time of survey	Scale: No formal schooling=0; post-graduate=9	
Rural	Dummy variable indicating respondent is in a rural sampling unit	0=urban, 1=rural	
Number of children <18 in household	Number of children in household under the age of 18	Continuous Variable	>25 recoded to = 25
Employed	Created a dummy variable indicating whether respondent is employed	Categorical Variable	Not Employed=0; Employed=1
Farmer	Created a dummy variable indicating whether respondent is a farmer (who produces only for home consumption)		Other=0; Farmer=1
Physical Health	The frequency physical health reduced the amount of work the respondent would normally do inside or outside the home	Scale: Never=0; Just once or twice=1; Many times=2; Always=3	

**Appendix B: Afrobarometer Variable Definitions and Values\***

<b>Variables</b>	<b>Definition</b>	<b>Original Values</b>	<b>Calculations</b>
<i>Infrastructure</i>			
Tarred or Concrete Roads	Indicates how much of the last 10 km the interviewer's journey was on tarred or concrete roads	Scale: None=0; <5 kms=1; 5-10kms=2; all=3	
Post Office	Dummy variable indicating whether there is a post-office in respondent's sampling unit	No=0; Yes=1	
Electricity Grid	Dummy variable indicating whether there is an electricity grid in respondent's sampling unit that most houses can access	No=0; Yes=1	
<i>Administrative Capacity</i>			
Easy to obtain an identity document	Variable indicating how easy or difficult it is to obtain an identity document.	Scale: Very difficult=1, Difficulty=2, 3=Easy, 4=Very easy	Very difficult/difficult=0; Very easy/easy=1
Easy to obtain a place in primary school for your child	Variable indicating how easy or difficult it is to obtain a place in primary school for one's child.	Scale: Very difficult=1, Difficulty=2, 3=Easy, 4=Very easy	Very difficult/difficult=0; Very easy/easy=1
Easy to get a loan or payment from government	Variable indicating how easy or difficult it is to obtain a loan or payment from government.	Scale: Very difficult=1, Difficulty=2, 3=Easy, 4=Very easy	Very difficult/difficult=0; Very easy/easy=1
Easy to obtain help from police	Variable indicating how easy or difficult it is to obtain help from the police when you need it	Scale: Very difficult=1, Difficulty=2, 3=Easy, 4=Very easy	Very difficult/difficult=0; Very easy/easy=1
<i>Law Enforcement Capacity</i>			
House Never Broken Into	Variable indicating the frequency one's home was broken into and had something stolen	Scale: Never=0; Just once or twice=1; Many times=2; Always=3	Never=0; Ever=1

<b>Variables</b>	<b>Definition</b>	<b>Original Values</b>	<b>Calculations</b>
<i>Perceptions about Government Performance</i>			
People treated equally	Indicates how often people are treated unequally under the law?	Never=0, Rarely=1, Often=2, Always=3	Often/Always=0, Never/Rarely=1
Handling fighting corruption in government	Indicates how well or badly respondent thinks the current government is handling fighting corruption in government	Very Badly=1, Fairly Badly=2, Fairly Well=3, Very Well=4	Very/Family Badly=0; Fairly/Ver Well=1
Handling combating HIV/AIDS	Indicates how well or badly respondent thinks the current government is combating HIV/AIDS	Very Badly=1, Fairly Badly=2, Fairly Well=3, Very Well=4	Very/Family Badly=0; Fairly/Ver Well=1
Handling resolving conflicts between communities	Indicates how well or badly respondent thinks the current government is resolving conflicts between communities	Very Badly=1, Fairly Badly=2, Fairly Well=3, Very Well=4	Very/Family Badly=0; Fairly/Ver Well=1

**\*Dummy variables were created to account for respondents answering questions with "don't know" and "never tried".**

## Endnotes

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- \* Margaret Levi is Jere L. Bacharach Professor of International Studies in the Department of Political Science at the University of Washington. Audrey Sacks is a graduate student in Sociology, University of Washington. The authors are grateful for comments from Chris Adolph, John Ahlquist, Dan Posner, Ashutosh Varshney, Mike Ward, and the participants in PEDS (Political Economy Discussion Society). We are especially grateful to Michael Bratton and Robert Mattes for their comments but, most importantly, for providing us with access to the Afrobarometer data.
- <sup>1</sup> Tyler (2006) offers an extensive literature review of recent work on legitimacy and legitimating beliefs.
- <sup>2</sup> Levi 1997; Rothstein 1998; Rothstein 2005; Tyler 1990b.
- <sup>3</sup> See Levi (2006).
- <sup>4</sup> Hlophé and Friedman (2002) argue that what legitimates South African government is its success in overcoming apartheid and not its effectiveness. This is most probably the case in many countries at least in the years immediately following a transition and at the level of the national government. It is a more problematic claim for the long run and at the local level, as Fjeldstad (2004, 556-7) also argues.
- <sup>5</sup> Fieldwork was conducted by national research institutions affiliated with the Afrobarometer project. Samples were designed using a common multi-stage, stratified, area-cluster approach. Random selection methods were used at each stage, with probability proportional to population size where appropriate. Sampling frames were constructed in the first stages from the most up-to-date census figures or projections available, and thereafter from census maps, systematic walk patterns, and project-generated lists of household members. For more on the Afrobarometer, see [www.afrobarometer.org](http://www.afrobarometer.org). (Whiteside, Mattes, Wilan, and Manning August 2002).
- <sup>6</sup> Intercepts may be variable across countries and failure to control for this may result in biased estimates. If intercepts are variable, we may be overestimating the effect of our macro-level variables on households and individuals' access to food and medicine or medical treatment. The individual level variables may have unequal slopes across countries. In this case, a pooled estimator may be biased for each particular country.

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Third, potentially inefficient standard errors resulting from potential clustering may affect the results. See Anderson and Tredova (2003) for a discussion of these problems.

<sup>7</sup> We estimated the models in this paper using STATA's GLLAMM (Generalized Linear and Latent Mixed Models) package, which estimates nested data structures with maximum likelihood (Rabe-Hesketh, Skrondal, and Pickles 2005). We also estimated fixed-effect models. The results from these models were not alarmingly different from the results produced by the random-intercept models. Results from the models are available upon request. Future plans include estimating three-level model with random coefficients at the individual, district, and country-level.

<sup>8</sup> Access to food is measured by respondents' answers to the question "Over the past year, how often, if ever, have you or your family gone without enough food to eat?" Access to medicine and medical treatment is measured by respondents' answers to the question "Over the past year, how often, if ever, have you or your family gone without medicine or medical treatment?" Answers to these questions were re-coded as "ever" or "never".

<sup>9</sup> Undoubtedly, the infrastructure in place across Africa was funded by the colonial governments, the World Bank or other aid groups, or multinational corporations. It is an empirical question, however, whether it matters to citizens if development funds and aid, in general, comes from their own government or external sources.

<sup>10</sup> A plausible explanation for the increase in the country-level variance in model two is that the HIV/AIDS epidemic may be interacting with the infrastructure and administrative capacity variables. Countries with high-levels of development and administrative capacity like South Africa and Botswana are also the countries with the high prevalence rates. In contrast, Uganda, which has generally low levels of development and administrative capacity, has a comparatively low HIV/AIDS prevalence rate.

<sup>11</sup> This distinction was provided to us by John Ahlquist.

<sup>12</sup> This and the next two paragraphs draw on Cook, Hardin and Levi (2005).

<sup>13</sup> For a review of some of this work and some of the measures, see Lieberman (2002).

<sup>14</sup> In future work, we shall try to get more direct measures of this belief and its sources.

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<sup>15</sup> We estimated a multinomial logit with three categories: 0=Disagree; 1=Agree; and 2=Don't Know/Neither agree nor disagree. Results for the category, don't know/neither agree nor disagree, are available upon request.

<sup>16</sup> Not knowing how easy or difficult it is to obtain help from the police increases the likelihood that an individual believes in tax compliance by 200% in contrast to those who experience difficulty trying to get help from the police. The interpretation of this finding, however, is ambiguous.

<sup>17</sup> For an elaboration of these factors and others, see Levi (2006)