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LEGITIMATING BELIEFS: SOURCES AND INDICATORS

by Margaret Levi and Audrey Sacks

A comparative series of national public attitude surveys on democracy, markets and civil society in Africa.
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Legitimating Beliefs: Sources and Indicators

Abstract
This paper examines the conditions that promote popular legitimating beliefs that provide support for
governments that are attempting to serve their entire populations competently and in a manner that is
relatively impartial and equitable. Legitimacy as a feature of government reduces the transaction costs of
governing by reducing reliance on coercion and monitoring. Here we explore the relationship between the
existence of a relatively effective government, particularly one that is considered fair, and attitudes that
indicate quasi-voluntary compliance, our indicator of the existence of legitimating beliefs. We posit that
where such a relationship exists, there is the potential for the development of a virtuous circle. The more
effective and fair the government, the greater the degree of quasi-voluntary compliance, which then
improves government’s capacity to become more effective, which in turn increases quasi-voluntary
compliance.
INTRODUCTION
An effective government is one that protects the population from violence, ensures security of property rights, and provides the infrastructure that makes possible the exchange of goods and delivery of services (Levi 2006, 5). If it is also reliable, it is both competent and credible in its commitments to provide services and benefits that enhance citizen welfare; it is motivated to act in the interests of the general public; and it implements laws and regulations fairly (Cook et al. 2005; Levi 1988, 1997; Rothstein 2005). The more a government is effective and reliable, the more legitimacy that government is likely to attain and, the more it will possess the potential to elicit compliance without excessive monitoring or punitive action. These are the propositions this paper sets out to explore.

We are particularly interested in the conditions that promote popular legitimating beliefs that provide support for governments that are attempting to serve their entire populations competently and in a manner that is relatively impartial and equitable. The basis of such legitimating beliefs is cognitive, meaning they are grounded in evidence concerning government performance and updated with changes in government behavior. The appeal of legitimacy as a feature of government reduces the transaction costs of governing by reducing reliance on coercion and monitoring. Its existence denotes popular approval of government and governors or, at least, acceptance of their right to rule and, therefore, an increased likelihood of compliance with governmental rules and regulations.

In earlier papers, we demonstrate how government’s infrastructure development, administrative capacity, and law and order facilitate citizen attainment of at least a minimal level of social welfare (Levi and Sacks 2005; Sacks and Levi 2007). Here we explore the relationship between the existence of a relatively effective government, particularly one that is considered fair, and attitudes that indicate quasi-voluntary compliance, our indicator of the existence of legitimating beliefs. We posit that where such a relationship exists, there is the potential for the development of a virtuous circle. The more effective and fair the government, the greater the degree of quasi-voluntary compliance, which then improves government’s capacity to become more effective, which in turn increases quasi-voluntary compliance.

Sorting out this cycle empirically is complicated, and we are only in the initial stages of our research program. We cannot yet capture all the components of legitimacy in an empirical model, but we can specify a model that captures aspects of legitimacy. Before turning to the operationalization of our variables and to the data, we first discuss the concepts that lay behind the empirical analysis.

CONCEPTS
Legitimacy
The concept of legitimacy that we are using derives from Max Weber’s discussion of rational-legal legitimacy. According to Weber (1968, 212-6), legitimacy facilitates the exercise of domination, a particular form of power. A legitimate ruler or government elicits willing deference and obedience by justifying its exercise of authority with arguments the populace believes are normatively appropriate (Tyler 2006b) and, as recent scholarship emphasizes, reasonable (Swaine 2006). Legitimacy is a concept meant to capture the beliefs that bolster that willing obedience. One of these is a sense of obligation which leads to voluntary deference to the directives of legitimate authorities and rules (Hurd and Hopcroft 1999; Kelman and Hamilton 1989b; Tyler 2006a, 378).

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 unless it is used carefully and with precision. Our concerns 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 often 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?

Legitimacy can be understood as the beliefs people hold about the normative appropriateness of government structure, officials, and processes. Yet, this definition begs the important question—at least for those of us concerned about improving the quality of government—of how individuals come to develop and accept current standards of normative appropriateness and how they are able to assess the extent to which a government meets those standards. There are three major factors we need to address if we are to develop an adequate empirical theory of legitimacy. The first has to do with material factors and conditions, that is, the quality of life government provides and to whom. The second is the role that government plays in forming citizen expectations of what government can deliver and then persuading citizens that government is in fact delivering. Government officials do not always succeed in winning popular endorsement even in circumstances where material conditions are improving and arguably improving as a consequence of government action. This leads us to the third factor, the process by which people develop and change standards and beliefs. This requires a theory of learning that social science still lacks (North 2005).

In this paper we are interested in exploring legitimating beliefs produced by governments that are relatively effective and reliable; our analysis includes a range of countries, some of which fit this description and some that do not. We are interested in bases for legitimating beliefs that lie in government performance, competence, credibility, and fairness rather than religion, ethnicity, or charisma.  

Quasi-voluntary Compliance
The investigation of the existence of legitimacy requires evidence, first, of government effectiveness and reliability and, second, that these attributes promote legitimating beliefs. This means there must be substantiation that the population actually perceives the government as relatively reliable and effective and that these perceptions engender legitimating beliefs. We would then have greater confidence that legitimating beliefs exist and greater understanding of how they come about. We would still lack confirmation that they matter. For that, we need to identify a behavior that results from holding legitimating beliefs and that would diminish with the decline in those beliefs. Here we focus on quasi-
voluntary compliance with government revenue extractions.

The achievement of compliance with government revenue extractions depends on the coercive capacity of the state, including its ability to monitor tax payments and to punish those who illegally evade their obligations. But an effective government extraction system seems also to require what Levi (1988) called quasi-voluntary compliance, that is, compliance motivated by a willingness to comply but backed up by coercion, particularly coercion that ensures that others will also be paying their taxes (also see Levi 1997; Moore 1998, 105).

Quasi-voluntary compliance is most likely among those citizens who perceive that government is: engaging in serious efforts to meet its fiscal contract with constituents; competent (or quickly developing the competence) to provide infrastructure and services; and meeting prevailing standards of procedural fairness in its provision of goods and implementation of policies. Quasi-voluntary compliance further depends on the existence of a norm of reciprocity in which constituents feel they have a duty to repay government for their services with taxes, at least as long as they believe others hold the same norm or will be coerced to comply. Norms of reciprocity are by their nature shared and enforced by communities or subgroups within a national state. There will be considerable variation among populations, with some having no norms of reciprocity, some having a strong norm, and others having a norm of disobedience, resistance or non-compliance as a consequence of perceiving poor treatment by government.3

FISCAL CONTRACT

The perception of being minimally well-served by government is generally a product of the actual provision of those public goods which the population requires to ensure at least a minimal level of social welfare, e.g., drinkable water, roads, post offices, electricity, piped water, and sanitation. Security of life and property are conditions of well-being and prerequisites for realizing a minimal level of social welfare. Some public goods, such as education or publicly-provided health care, may matter more for certain groups or classes than for others. Some public goods also have a class dimension which may have consequences for what citizens understand as the fiscal contract. For example, everyone requires sanitation, but some may be satisfied with sewage management while others expect garbage collection, street-cleaning, and flush toilets.

Individuals seem to be more willing to pay rates and taxes where they can observe a direct relationship between their contributions and the services they receive (Fjeldstad and Semboja 2000, 7, 22; Westergaard and Alam 1995, 686). Taxpayers seem to have an easier time drawing a clearer link between local taxes and locally-supplied goods than between national taxes and nationally-supplied local goods. If this is true, then we would expect to observe higher rates of compliance for local taxes than for national taxes.

Research on developing countries indicates a possible link between deteriorating or inadequate public goods provision and a corresponding decline in tax compliance or even a rise in tax resistance movements. A study of local government taxation in the Nigerian Ipabaraba district reveals a decline in citizens’ willingness to pay taxes under the Native Authority when “it became obvious that a high and increasing proportion of tax expenditure was doing nothing but maintaining the salaries of civil servants” (Guyer 1992, 55). An article in Tanzania’s Daily News on June 9, 1985 offers a revealing comment by a Dar es Salaam resident: “When it comes to the Development Levy we have…seen nothing as a result of the levy we pay. Take Dar es Salaam as a [case in] point: the city is very dirty and the situation is deteriorating day in and day out. Our hospitals in the city are low in standards, [they have] poor hygienic conditions, no soaps, no insecticides and no mosquito nets in the hospitals. What we want to see is how
such taxes are being spent” (Tripp 1997, 233 n.39). Tax resistance sometimes takes more violent forms. Another article from the Daily News on November 28, 1997 reported that “[o]ver twenty Moshi Municipal Council workers who were on a special operation to net development levy defaulters were attacked by a mob at Mbuyni Market on Wednesday afternoon and eight of them were injured, some seriously…” (cited in Fjeldstad and Semboja 2000, 22).

PERCEPTION OF COMPETENT BUREAUCRACY
Taxpayers are more likely to quasi-voluntarily comply when they are confident that the government will produce the services they have been promised. High levels of corruption can undermine this perception, particularly when corruption takes the form of government agents pocketing revenues meant for the public coffers or when it reduces their incentive to collect taxes from certain segments of the population. Patronage or other factors that undermine the meritocratic selection of government agents can also weaken citizens’ confidence in government’s competence.

Bureaucratic incompetence can be both a cause and effect of a vicious cycle. Low-quality service provision or significant corruption reduces the motivation to pay taxes and can lead to budget shortfalls, which in turn lead to a diminution in the salaries and working conditions of tax administration officials. Low salaries can create incentives to accept bribes and prey upon citizens rather than serve them (Bates 2001; Bates forthcoming; Kaldor 1962-1963). Large potential rewards for taxpayers willing to bribe officials to reduce their own tax burden is particularly likely to exist where there is a low probability of the detection and punishment of corruption among tax officials (Chand and Moene 1999; Fjeldstad 2005, 8-13; Kiser and Baker 1994, 491-492; Prud'homme 1992; Taliercio 2004, 6).

Many tax officers and managers remain embedded in networks of traditional social relations and are expected to fulfill reciprocal obligations to members of their extended kin. The importance of such ties may be growing rather than withering away as countries try to democratize in a context of economic instability and uncertainty (Rose-Ackerman 1998, 317-323). The loss of reputation from failing to adhere to such obligations can be severe (de Saradan 1999, 40-41). In Uganda, for example, there is a widespread perception that the Ugandan Revenue Administration (URA) officers receive high salaries. Consequently, extended family members of tax administrators expect to receive a share of their kin’s wages. Thus, increased salaries for tax administrators and officers may correspond to increased social obligations, which may compel tax officers to take even more bribes as compensation for the higher expenses (Fjeldstad 2005, 13).

Crucial in improving the confidence of taxpayers in government competence is a demonstrated capacity to monitor and enforce taxation regulations in a consistent and equitable manner. For instance, one explanation for why Chile yields higher levels of tax compliance than its neighbor, Argentina, points to Chile’s relatively strong and autonomous tax administration capable of deterring tax evaders (Bergman 2003, 594-595). Perceptions of tax enforcement change as a consequence of an individual’s personal experiences with enforcement (Bergman 2003, 618). The expectation that tax regulations will be enforced also increases compliance.

There is another dimension of government competence that is also likely to influence taxpayers’ perceptions. To the extent taxpayers can easily navigate the bureaucracy to obtain the services promised to them, the more confident they are likely to be in government itself. Hernando DeSoto (1989) documents the immense amount of red tape and time required to get a simple permit for building or trade in Lima. In our earlier analysis of the Afrobarometer data, we found that the ease of getting an identity
card, a place in primary school, or a loan or payment from government had effects on food security (Levi and Sacks 2005). We also suspect that these same factors will influence the willingness to comply quasi-voluntarily.

PERCEPTIONS OF GOVERNMENT FAIRNESS
The extraction of the development levy in Tanzania and the graduated tax in Uganda led to wide-spread tax evasion and resistance. In both of these cases, the masses perceive the taxes to be grossly unjust (Fjeldstad and Rakner 2003, 8). This is consistent with evidence from a wide range of time periods and places.

There are two major factors that influence whether government is perceived as fair and, therefore, deserving of quasi-voluntary compliance. The first is biased implementation and enforcement of the rules and regulations. When governments apply laws unevenly or target certain groups, disobedience is likely to increase (Tyler 1990). So is skepticism about the motivations behind government policy. When the economist, A.R.J. Turgot submitted to Louis XVI a plan for reforming the administration of the rural districts in 1775, he worried that the prevailing inequality in the burdens of taxation had made taxpayers so distrustful of each other and the government that they would reject his reform agenda (Tocqueville 1983, 198).

The second factor is relative equality of influence in making policy. “No taxation without representation” has played a role throughout history, not just American history. Those whose voices are not heard or opinions not cultivated in the establishment of the tax system may feel that they are paying tribute rather than taxes. The result may be the perception of what Hechter labels “alien rule” (2006). The underrepresentation of a group in the legislature or the assignment of permanent minority status may reduce the group members’ sense of ownership, increase their sense of injustice and partiality in the determination of policy, and dampen their quasi-voluntary compliance.

Highly unequal distributions of income may also increase perceptions of bias and reduce quasi-voluntary compliance. When elites privately provide their own collective goods, such as education, security, and even roads, they may object to being taxed to provide such services to others (Bird et al. 2004, 23). If non-elites believe that the rich are able to purchase tax exemptions—through demands, bribes or tax avoidance schemes—they are less likely to support the tax system (Levi 1988).

Corruption affects fairness as well as competence. Personalistic bases for distributing government bounty is a form of corruption that, when coded as inappropriate or unfair (Granovetter 2006) should reduce quasi-voluntary compliance among those who feel they are not getting their just desserts. Favoritism, even when there is no bribery involved, can have the same effect.

A country’s civil liberties and political freedom also may have consequences for citizen perceptions of government fairness. Civil liberties and press freedom contribute to government transparency and accountability. Improvements in political and civil liberties should, in theory, correspond with legitimating beliefs.

Norms of Reciprocity
Within each relevant community (neighborhood, ethnic or religious group, etc.), social norms to reciprocate with government will lead to more quasi-voluntary compliance if government indeed upholds its side of the fiscal contract and is relatively competent and fair. Where these conditions are not met, the
norm of reciprocity will produce non-compliance. If those in a relevant group know that others are complying and doing so without significant coercion, they, too, might recognize compliance as a norm of reciprocity or even, more strongly, come to believe that the government deserves their deference, the sine qua non of legitimating beliefs. Quasi-voluntary compliance is, in part, strategic but it also has an ethical element; an individual will want to cooperate but only if others are also cooperating. Individuals, who perceive a high incidence of evasion within their community, are likely to also evade so as not to become the sucker (Levi 1997).

**Government Education and Socialization**

There is an additional factor that may affect citizens’ beliefs about the legitimacy of taxes that we cannot capture with quantitative data: the role governments play in educating and socializing the public about the legitimacy of taxes. Research in the United States (Scholz and Lubell 1998, 905) and Latin America (Bergman 2003; Bergman and Nevarez 2006) suggests that those citizens with a sense of duty are more likely to pay taxes. Case studies from Latin America highlight how governments try to instill into citizens that sense of duty. Countries across Latin America have developed a wide array of educational programs targeted towards creating a culture of taxpaying. In a country where tax evasion is estimated at fifty percent, Argentina developed educational programs to teach youth and their parents alike the importance of paying taxes and the punishments citizens face when they offer bribes. Theater, puppets, educational games, entertainment centers, and competitions are all part of Argentina’s efforts to alter citizens’ beliefs about taxes. “The aim is to create a new culture in which children will understand why taxes are paid and what the money is spent on, so that they understand that public things aren’t free things that don’t belong to anybody, but that they belong to everybody, and maintaining them must be part of a collective effort”, one expert said (Valente 2005).

Plays revolve around issues involving taxes, public goods, and the importance of abiding by certain rules. A tax education center in a Children’s Museum located in Buenos Aires, children can dress up as customs inspectors, or play games where they decide how to spend money they collect in taxes. A park in Buenos Aires has child-scale replicas of the buildings housing the country’s main institutions, including the Federal Administration of Public Revenue (AFIP). Similar educational programs exist in Brazil, Ecuador, Mexico, and Colombia (Valente 2005).

Unless Argentina and other countries overcome corruption within the tax administration, their most formidable obstacle to increasing tax compliance, efforts to socialize citizens into paying taxes will be limited. Argentinians continue to ask themselves why they should pay taxes if the tax collectors steal their funds. The program’s coordinator, Andrea Vilardebo comments that “The children tell us what they hear at home, for instance that tax collectors ‘are all a bunch of thieves’” (Valente 2005). An additional obstacle also remains, that is, simplification of its tax laws and regulations. As it is now, the tax framework is extremely complex, where credits for one kind of tax can offset other taxes. “In my personal opinion, this is the most complicated tax system I’d ever seen,” said Mr. Castilla of the Inter-American Development Bank (Altman 2002).

**The Model**

Diagram 1 lays out our 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 and fair government and compliance attitudes and behaviors that would be consistent with beliefs that government deserves support. With our data, which only captures attitudes at one point of time, we cannot determine whether improvements in
government effectiveness and fairness correspond to a wider acceptance of government’s right to make people pay taxes. We would need longitudinal data for that.

DATA AND METHODS
This project relies on the third round of Afrobarometer data that surveys Africans’ views towards democracy, economics, and civil society with random, stratified, nationally representative samples. In 2005, trained enumerators conducted face to face interviews in local languages with 23,151 respondents across 16 countries (see table 1). The margin of sampling error is +/- 3 percentage points at a 95 percent confidence level where the country sample size was approximately 1200 and +/- 2.2 percentage points where the country sample size was approximately 2400. The sample is designed as a representative cross-section of all citizens of voting age in a given country.

<table>
<thead>
<tr>
<th>Country Name</th>
<th>N</th>
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<tbody>
<tr>
<td>Benin</td>
<td>1198</td>
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<tr>
<td>Botswana</td>
<td>1200</td>
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<tr>
<td>Cape Verde</td>
<td>1256</td>
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<tr>
<td>Ghana</td>
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<tr>
<td>Kenya</td>
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<td>Madagascar</td>
<td>1161</td>
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<tr>
<td>Lesotho</td>
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<tr>
<td>Malawi</td>
<td>1200</td>
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<tr>
<td>Mali</td>
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<tr>
<td>Namibia</td>
<td>1200</td>
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<tr>
<td>Nigeria</td>
<td>2363</td>
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<tr>
<td>Senegal</td>
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<td>South Africa</td>
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<tr>
<td>Tanzania</td>
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<tr>
<td>Uganda</td>
<td>2400</td>
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<tr>
<td>Zambia</td>
<td>1200</td>
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<tr>
<td><strong>N</strong></td>
<td>23151</td>
</tr>
<tr>
<td>Variables</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Local Gov’t Competence</td>
<td>Variable indicating whether respondent approves of gov’t maintenance of local roads</td>
</tr>
<tr>
<td>Gov’t Maintenance of Local Roads</td>
<td>Variable indicating whether respondent approves of gov’t maintenance of local roads</td>
</tr>
<tr>
<td>Gov’t Handling of Local Spending Decisions</td>
<td>Variable indicating whether respondent approves of gov’t spending decisions</td>
</tr>
<tr>
<td>Gov’t Collection of Local Taxes</td>
<td>Variable indicating whether respondent approves of gov’t collection of taxes</td>
</tr>
<tr>
<td>Perceptions of Gov’t Fairness</td>
<td></td>
</tr>
<tr>
<td>Treatment of Ethnic Group</td>
<td>Variable indicating how often the gov’t treats the respondent’s ethnic group fairly</td>
</tr>
<tr>
<td>Treatment of Citizens</td>
<td>Variable indicating how often the gov’t treats citizens unfairly</td>
</tr>
<tr>
<td>Perceptions about Government Performance</td>
<td></td>
</tr>
<tr>
<td>Handling fighting corruption in government</td>
<td>Indicate how well or badly respondent thinks the current government is handling fighting corruption in government</td>
</tr>
<tr>
<td>Handling combating HIV/AIDS</td>
<td>Indicates how well or badly respondent thinks the current government is combating HIV/AIDS</td>
</tr>
<tr>
<td>Corruption among Tax Officials</td>
<td>Indicates the amount of tax officials citizens believe to be corruption</td>
</tr>
</tbody>
</table>

The dataset used for this paper has a multilevel structure; individuals are nested within primary sampling units (PSU), which are in turn nested within countries. The PSUs are the smallest, well-defined geographic units for which reliable population data are available and they tend to be socially homogenous, thereby producing highly clustered data. In most countries, these will be Census Enumeration Areas (Afrobarometer 2005, 37-38). Although respondents were not sampled based on their ethnic affiliation, there is likely to be a high level of clustering in the dataset around ethnicity. Across
Africa, ethnicity plays a highly salient role in the allocation of public goods (Bates 1983, 152; Kasfir 1979; Posner 2004). Case studies from a number of countries underscore instances in which African leaders have distributed goods to members of their own ethnic group or to their home area. Ignoring the multilevel structure of our data can generate a number of statistical problems. When observations are clustered into higher-level units, such as PSUs, ethnic groups, and countries, the observations are no longer independent. Respondents sampled from the same PSU, country, or ethnic group are likely to have similar values and in some cases, the same values on key covariates, such that we may be able to predict the outcome of an observation if we know the outcome of another observation in the same cluster. Failure to control for this clustering can result in biased parameter estimates and inefficient standard errors. Further, intercepts may be variable across countries and failure to control for this may result in biased estimates. The individual level variables may also have unequal slopes across countries. In this case, a pooled estimator may be biased for each particular country.

To deal with these issues, multilevel modeling techniques allow for estimating varying intercepts and slopes to produce asymptotically efficient standard errors. In addition to correcting for biases in parameter estimates and standard errors, multilevel models offer two additional advantages. First, they also allow us to examine how covariates measured at the PSU and country levels affect our outcome variable. Second, this type of model allows us to test whether slopes are random, e.g., the effect of individual level measures on our dependent variable differs across PSUs or the effect of PSU-level measures on our dependent variable differs across countries (Guo and Zhao 2000, 444).

Since the dependent variable in this study is binary, the probability an individual believes that the tax department has the right to make people pay taxes, we use a multilevel logistic model. Taking into account the multilevel nature of our data, we estimate random intercepts for PSUs, countries, and ethnic groups. The following equation describes a four-level model with a single explanatory variable that has both a fixed effect and a random effect,

\[
\begin{align*}
\text{Level 1: } & \log\left(\frac{P_{ijkt}}{1 - P_{ijkt}}\right) = \beta_{0ijkt} + \beta_{1ijkt} X_{ijkt} + \beta_{0ljk} \\
\text{Level 2: } & \beta_{0ijkt} = \delta_{00k} + u_{0jkt} \\
\text{Level 2: } & \beta_{1ijkt} = \delta_{10k} + u_{1jkt} \\
\text{Level 3: } & \delta_{01k} = \gamma_{00} + v_{00k} \\
\text{Level 4: } & \beta_{0ljk} = \tau_{00} + \rho_{0l}
\end{align*}
\]

where, i, j, k, and l index levels 1, 2, 3, and 4; \(u_{0jkt}\), \(v_{00k}\), and \(\rho_{0l}\), are the random effects of intercepts at the PSU, country, and ethnic group levels, respectively; and \(u_{1jkt}\) is the random effect of a variable at the district level. The logistic multilevel model expresses the log-odds (i.e. the logit \(P_{ijkt}\)) as a sum of a linear function of the explanatory variables and random-group and random effect deviations. One important difference between multilevel logistic models and multilevel linear models is that in the former, the parameter \(\sigma^2\) is interpreted as the average residual variance (i.e. the average in the population of all groups) (Snijders and Bosker 1999, 209). In a random coefficient logistic model, the groups are viewed as being taken from a population of groups and the success probabilities in the groups are regarded as random variables defined in this population. These random effects are also standardized to have a mean of zero (Snijders and Bosker 1999, 208, 213).
Dependent Variable

Our dependent variable is whether respondents agree with the question, “The tax department always has the right to make people pay taxes.” Figure 1 shows the percentage of respondents across the sixteen countries who accept government’s right to make people pay taxes. We dichotomized this variable from a five point scale because we are interested in the comparison of people who accept government’s right to make people pay taxes versus those who express some ambiguity about this right and those who reject this right. Although we have concerns about the validity of our indicator of quasi-voluntary tax compliance, it is the only survey indicator available. Whether individuals accept the right of government to make people pay taxes reflects a normative stance rather than a behavior. How well this norm translates into actual behavior is a subject of future research.

Figure 1: % Accept Gov’t Right to Make People Pay Taxes

It is also difficult to assess just how ubiquitous taxes are in ordinary Africans’ lives. We have considerable concerns about the quality of existing African fiscal data. There has not been any effort to take stock of the types and amount of taxes citizens pay across Africa. Similar to premodern European states, African states’ revenue raising capacity is generally low. On average, the tax-to-GDP ratio in sub-
Saharan Africa is around 21 percent, compared with the OECD average of about 32 percent (Fjeldstad and Rakner 2003, 12). In Tanzania and Uganda, the total tax share drops to about 10 percent. Historical data suggests that the tax share of many European countries did not reach 15 percent of GDP until World War II - when incomes were substantially higher than they are in many African countries (Fjeldstad and Rakner 2003, 12).

The types and amount of taxes citizens pay varies both within and between countries. It is hard to ascertain whether citizens pay more national or local level taxes. User fees from electricity, water, sanitation, and other services comprise the majority of local revenue in South Africa (Hoffman 2007). In Tanzania, Fjeldstad and Semboja (2000) count ten major categories of taxes, eighteen major categories of licenses, forty groups of charges and fees, and sixteen items listed as other “revenue sources. In some countries including Kenya, Malawi, Tanzania, Uganda and Zambia, national-level semi-autonomous revenue authorities are in charge of collecting a limited number of taxes. Even with the presence of national revenue authorities, there is often little or no coordination in setting and collecting taxes between the various levels of government in Africa (Fjeldstad and Rakner 2003, vi). Thus, when answering a question about their approval of government’s right to make people pay taxes, some citizens may be thinking of government at the national level while others may be thinking of their local level government and others may have both in mind.

INDEPENDENT VARIABLES
Socio-Demographic Variables
We control for standard socio-demographic variables that can affect citizens’ acceptance of government’s right to make people pay taxes. A question probing respondents their household income was not included in the third round of Afrobarometer surveys. Asking respondents to quantify their income can be problematic in the context of developing economies, where individuals are often embedded in barter or commodity exchange, rather than, market economies. There are reasonably good proxies, however, including whether respondents own a television and other demographic factors that affect household resources: health, age, employment, and urban or rural residence.

Perceptions of Government Performance (Fiscal Contract)
In areas with poor transportation infrastructure, inadequate media, and sparse settlement patterns, citizens interact more with local than national government authorities. We therefore include variables measuring perceptions of government performance in three domains at the local level that are especially likely to affect quasi-voluntary compliance: the handling of tax collection, spending decisions and the maintenance of roads.

Including an indicator of respondents’ perception of local government tax collection is key, especially because tax administration within some sub-Saharan countries is decentralized. We allow the slope for perceptions of local government’s handling of tax collection to vary randomly across countries. This allows us to test whether the effect of perceptions toward local government tax collection on respondents’ acceptance of government’s right to make people pay taxes varies depending on the local context. For example, approval of local government tax collection may vary depending on the extent to which citizens perceive the national governments as an “alien ruler” (cf. Hechter 2006). If this is the case, then we may find that a citizen is unwilling to accept government’s right to make people pay taxes even if she approves of her local government’s handling of tax collection.
Citizen approval of how local governments spend their taxes and how well local governments maintain roads are possible indicators of whether citizens perceive that government is meeting its fiscal contract. Where citizens disapprove of their local government’s spending decisions, we also expect to observe disapproval of the way local tax collection is handled and lower approval of government’s right to make people taxes.

We also include respondents’ perceptions of government performance in combating HIV/AIDS as an indicator of whether citizens believe that the government is meeting its end of the fiscal contract. As a result of the epidemic, increasing numbers of households are experiencing deprivations as well as increased burden of caring for sick household members and orphans (de Waal 2003, 10). Where citizens’ disapprove of their government’s HIV/AIDS policies, we expect citizens to be less willing to accept government’s right to make people pay taxes.

**PERCEPTIONS OF BUREAUCRATIC COMPETENCE AND HONESTY**
Citizens’ perception of the honesty of tax officials and the pervasiveness of corruption within government, in general, is likely to affect an individual’s willingness to grant government the right to make people pay taxes. We include a measure of whether citizens believe that a large portion of tax administrators are corrupt. As several studies suggest, corruption is a social construct and what is considered to be corrupt behavior varies by culture (de Saradan 1999; Granovetter 2006). We control for this variation by allowing our indicator of citizen perception of corruption within the tax administration to vary across districts.

Tax compliance is also related to government’s ability to effectively detect and punish tax avoiders, tax evaders, and tax arrears. Although an imperfect measure of states’ deterrent capacity, Afrobarometer includes a survey question probing respondents on the likelihood the state will enforce the law if a citizen does not pay taxes.

**Perceptions of Government Fairness**
If individuals perceive the government as acting partially towards certain ethnic groups or individuals, will they be less willing to quasi-voluntarily comply than citizens who perceive their governments as acting fairly? To examine whether a link exists between citizens’ perception of government fairness and their acceptance of government’s right to make people pay taxes, we include variables indicating whether respondents believe the government treats citizens fairly and whether they believe the government treats members of their own ethnic group fairly. We also include Freedom House’s political liberties and civil rights ratings for the sixteen countries in our sample as an indicator of government fairness. These two variables may also indirectly capture the level of coercion government relies on to enforce compliance with its rules and regulations.

**RESULTS**
Table 3 reports on results from our models estimating the direct effects of the demographic variables and perceptions of government performance, competence, fairness, and enforcement of taxes, on respondents’ acceptance of their government’s right to make people pay taxes. Four models are shown in Table 3. Model 1 only includes socio-demographic variables; Model 2 includes indicators of institutional competence at the local and national levels and fairness, Model 3 allows perceptions of local government handling of tax collection to vary across districts, and Model 4 adds country-level measures of civil liberties and political rights.
Table 3 (continued): Multilevel Logistic Regression on Accept Gov’t Right to Make People Pay Taxes (1=Accept) (N=22798)

<table>
<thead>
<tr>
<th>Model 4</th>
<th>Est.</th>
<th>S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socio-Demographic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Intercept)</td>
<td>-0.51</td>
<td>0.35</td>
</tr>
<tr>
<td>Age</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Rural</td>
<td>0.05</td>
<td>0.04</td>
</tr>
<tr>
<td>Female</td>
<td>-0.07 *</td>
<td>0.03</td>
</tr>
<tr>
<td>Never gone without Food</td>
<td>0.09 **</td>
<td>0.04</td>
</tr>
<tr>
<td>Physical Health: Missed work 1 or 2</td>
<td>-0.07</td>
<td>0.04</td>
</tr>
<tr>
<td>Physical Health: Missed Work Many Times</td>
<td>-0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>Physical Health: Missed Work Always</td>
<td>0.01</td>
<td>0.09</td>
</tr>
<tr>
<td>Physical Health: Don't Know</td>
<td>-0.09</td>
<td>0.22</td>
</tr>
<tr>
<td>Own a Television</td>
<td>0.17 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>Employed</td>
<td>-0.02</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Local Gov’t Competence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gov’t Maintenance of Local Roads - Approve</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>Gov’t Maintenance of Local Roads - Don’t Know</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>Gov’t Collection of Taxes - Approve</td>
<td>0.50 ***</td>
<td>0.07</td>
</tr>
<tr>
<td>Gov’t Collection of Taxes - Don’t Know</td>
<td>-0.17 *</td>
<td>0.09</td>
</tr>
<tr>
<td>Gov’t Spending Decisions - Approve</td>
<td>0.14 **</td>
<td>0.05</td>
</tr>
<tr>
<td>Gov’t Spending Decisions - Don’t Know</td>
<td>0.13 *</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>Perception of Gov’t Fairness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of Own Ethnic Group - Fair</td>
<td>0.21 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>Treatment of Own Ethnic Group - N/A</td>
<td>-0.01</td>
<td>0.22</td>
</tr>
<tr>
<td>Treatment of Own Ethnic Group - Don’t Know</td>
<td>-0.03</td>
<td>0.07</td>
</tr>
<tr>
<td>Treatment of Citizens - Fair</td>
<td>0.28 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>Treatment of Citizens - Don’t Know</td>
<td>-0.41 ***</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Perception of Gov’t Competence</strong></td>
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<td></td>
</tr>
<tr>
<td>Gov’t Efforts to Combat Corruption - Approve</td>
<td>0.18 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>Gov’t Efforts to Combat Corruption - Don’t Know</td>
<td>-0.09</td>
<td>0.07</td>
</tr>
<tr>
<td>Gov’t Efforts to Combat HIV/AIDS - Approve</td>
<td>0.25 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>Gov’t Efforts to Combat HIV/AIDS - Don’t Know</td>
<td>0.00</td>
<td>0.08</td>
</tr>
<tr>
<td>Corruption among Tax Officials - No</td>
<td>0.17 **</td>
<td>0.06</td>
</tr>
<tr>
<td>Corruption among Tax Officials - Don’t Know</td>
<td>-0.23 ***</td>
<td>0.05</td>
</tr>
<tr>
<td>Enforce the Law: Tax Avoiders - Yes</td>
<td>0.35 ***</td>
<td>0.05</td>
</tr>
<tr>
<td>Enforce the Law: Tax Avoiders - Don’t Know</td>
<td>-0.58 ***</td>
<td>0.10</td>
</tr>
<tr>
<td><strong>Country-Level Measures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Liberties (Freedom House Rating)</td>
<td>0.21</td>
<td>0.20</td>
</tr>
<tr>
<td>Political Rights (Freedom House Rating)</td>
<td>-0.17</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Random Slope</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$T_1^2$ (Gov’t Collection of Taxes - Approve)</td>
<td>0.04</td>
<td>0.21</td>
</tr>
<tr>
<td>$T_1^2$ (Gov’t Collection of Taxes - Don’t Know)</td>
<td>0.04</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Random Intercept</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$T_2^2$ (Ethnicity) (N=331)</td>
<td>0.09</td>
<td>0.29</td>
</tr>
<tr>
<td>$T_2^2$ (Districts) (N=2498)</td>
<td>0.22</td>
<td>0.47</td>
</tr>
<tr>
<td>$T_2^2$ (Countries) (N=16)</td>
<td>0.14</td>
<td>0.37</td>
</tr>
<tr>
<td>$X^2$ (D.F.=2)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
The “Laplace” approximation method allows us to determine whether adding additional variables improves model fit. We find that adding indicators for perceptions of government performance, fairness, and deterrence improves our model’s fit over our most basic model that just includes socio-demographic variables. Because of the difficulties of directly interpreting multilevel logistic parameters, we focus our discussion on a graphical display, figure 2, of predicted probabilities of our outcome variable. We calculate the predicted probabilities of accepting government’s right to make people pay taxes for respondents living under various hypothetical contexts and holding various hypothetical beliefs about government. By varying the levels of perceptions of government competency, fairness, and enforcement capacity, we gain a more realistic picture of the beliefs citizens are likely to hold across sub-Saharan Africa. We also calculate first differences in accepting government’s right to make people pay taxes for the various counterfactual scenarios and graphically illustrate these values in figure 3.

Figure 2: Effective Governance & Legitimacy

![Graph of Effective Governance & Legitimacy](image-url)
For the average respondent, the predicted probability of granting government the right to make people pay taxes is .65. Although respondents enjoying food security have a higher predicted probability of granting government that right than those who have experienced recent hunger, the difference between the two is quite small (3 percentage points). Of course, a disinclination to pay taxes on the part of the hungry may reflect poverty and an inability to pay. It may also reflect a belief that government is not fulfilling its end of the fiscal contract.

Variables capturing citizens’ perceptions of government performance and fairness are each significant at the p<.001 level with one exception: whether citizens approve or disapprove of their local government’s maintenance of roads is not significant. Results suggest that a citizen’s overall assessment of their local government plays a large role in their decision of whether to grant government the right to make people pay taxes. Where citizens disapprove of their local government’s spending decisions, maintenance of roads, and handling of tax collection, there is a sixty percent predicted probability of granting government that right. Where local governments appear to be eliciting their constituents’ approval, the predicted probability of accepting government’s right to make people pay taxes is 73 percent. A positive evaluation of local government performance corresponds to an extra 13 percentage points in the predicted probability of granting government the right to make people pay taxes.

Government fairness appears to correlate with our dependent variable. A belief that the government treats the populace and their own ethnic group fairly either all or most of the time corresponds to a probability of .72 of accepting government’s right to make people pay taxes. By contrast, a perception of government’s treatment of citizens and one’s own ethnic group as unjust translates into a probability of .62 – a difference of 10 percentage points.
In support of our hypothesis, citizens’ assessment of government’s handling of tax collection, the extent of corruption within the tax administration, and the likelihood government will enforce taxes, influences the probability respondents will accept government’s right to make people pay taxes. Among those who disapprove of local government’s handling of tax collection, perceive corruption within the tax administration, and do not believe the government will punish evaders, the probability of accepting government’s right to make people pay taxes is about 50 percent. By contrast, a perception of the tax administration as honest, tax collection efforts as reasonable, and tax enforcement as likely, translates into a predicted probability of .75, a difference of 23 percentage points.

Overall, we find a large positive effect of holding an all-around positive assessment of government on the predicted probability individuals will grant their government the right to make people pay taxes; this predicted probability is .84. By contrast, a poor perception of the government on all of our measures of fairness and competency corresponds to a predicted probability of .42. Thus, there is a 42 percentage point difference in the predicted probability of accepting government’s right to make people pay taxes for those citizens holding favorable views of their government and those holding unfavorable views!

The final step in our quantitative analysis is to test whether including Freedom House’s measure of civil liberties and political rights for our sixteen countries improves our model fit but find that neither of these variables are significant at the p<.05 level. Freedom House’s civil liberties and political rights ratings are highly correlated with our measures of government provision of services and fairness and thus, it is not surprising that these variables are not significant. For example, the Pearson’s correlation between a country’s civil liberties rating and the percentage of respondents reporting that the government treats their own ethnic group fairly is .27. The correlation between a country’s political rights rating and the percentage of respondents reporting approval of local government tax collection efforts is .18.

In summary, we find evidence of a link between the presence of an effective and reliable government and constituent willingness to accept government’s right to make people pay taxes. Our analysis suggests that the more effective and reliable the government, the more likely its population will accept government’s right to make people pay taxes, our surrogate indicator for quasi-voluntary compliance. With the available data, we cannot identify how respondents’ attitudes translate into actual behavior. This will be the subject of our future research.

**QUALITATIVE CASE STUDIES**

Although we lack systematic behavioral data, considerable case material adds plausibility to our findings. We have selected several illustrations from Africa and Asia to reveal the relationship between effective government, popular beliefs about the government, and quasi-voluntary compliance. These examples illuminate how neighborhoods or other kinds of communities collectively decide to evade paying taxes as a form of protest against what they perceive as poor public goods provision and unfair tax burdens.

An interesting example of collective resistance against government extractive demands comes from Nairobi, where an association representing a wealthy suburb, Karen-Langata, sued the Nairobi City Council. Residents of Karen complained to the City Council that garbage is not collected, roads have deteriorated, water supplies are unreliable and sewage pipes frequently burst and remain unattended despite having paid their taxes. Initially, the Karen-Langata Association demanded that the City Council supply them with budgetary records detailing how their tax revenue was being spent. It was only after the City Council failed to fulfill their request that the Association took the City Council to the courts. The Association demanded accountability for the Ksh803 million ($13.3 million) in annual service charges the
Nairobi City Council collects from ratepayers. In a landmark decision, the High Court forced Nairobi City Council to set up a joint fund with the suburb of Karen-Langata and levy rates against its residents only through that fund (Anonymous 1998; Mburu 1998).

In China, a wave of tax resistance in the form of riots, demonstrations, the destruction of government buildings, and the place of road blocks, occurred between 1980 and 1990 as a reaction to taxes and to brutal tax collection methods. The state records 14,176 instances of tax resistance between 1987 and 1991, including 1,916 attacks on tax collection agencies and 12,671 assaults on tax collectors. A combination of inadequate fiscal transfers from the center, low taxation revenue, and performance pressure on local officials, has led sub-national government officials to resort to collecting illegal fees and levies to compensate for shortfalls in administrative services and project costs. One of the most widely publicized incidents of collective action took place in Renshou county, Sichuan province, in 1993. Despite repeated warnings from central officials, Renshou officials persisted in collecting road construction levies and other illegal fees (Bernstein and Lu 2003, 131-132). Between January and June 2003, up to 15,000 villages from two townships in Renshou participated in an anti-tax rebellion (Paler, 57). Nearby villages sent in inspection teams to Renshou to learn from the rioters’ experiences (O’Brien and Li 1995, 763). The incident ended when central authorities deployed the People’s Armed Police (PAP) to arrest the leaders. In another instance of resistance, burden reduction heroes in Daolin (Hunan province) formed a group called Volunteers for Publicity about Policies and Regulations and used a loudspeaker mounted on a truck to inform fellow farmers about their tax burden rights (O’Brien 2002, 147).

By advancing their anti-tax demands through legal channels and framing their demands in the language espoused by the regime, peasants make their demands hard for authorities to ignore (O’Brien and Li 1995; O’Brien 1996). In response to this wave of collective resistance, the State Administration of Taxation (SAT) has begun to crack down on tax evasion by high-income earners and reform its tax system in accord with prevailing and popular norms of equity. Rural residents can turn to the Administrative Litigation Law (ALL), which enables villagers to sue officials who violate their legal rights (O’Brien 1996, 39). Since this law was implemented in 1989, hundreds of thousands of rural residents have used the ALL to challenge acts by local and county government officials and various bureaus (O’Brien and Li 2004, 76). In 2000 central authorities also approved the replacement of illegal off budget fees with formal taxes (Paler 2005, 61-65).

There are noticeably fewer examples of communities responding to improvements in public goods provision with a greater willingness to pay taxes. Finland’s new Happy Taxpayers Association urges Finns to be happy about paying some of highest income taxes in Europe. The Association wants Finns to focus on the public services they receive rather than dwelling on the cost of tax payment. "I don't think there is another official association like ours in the world," noted group vice-president Anna Tommola (Reuters 2006).

It is hardly surprising that most individuals are more likely to resist taxes than to welcome them. However, there are instances where taxpayers have gone from an equilibrium of resistance, protest, and noncompliance to one of quasi-voluntary compliance. For example, the Australian working class and unions protested the tax regime in the early 1980s until it underwent a significant reform; they were upset by the exemptions the rich were publicly receiving and for which they were ineligible (Levi 1988).
CONCLUSION
In this paper, we attempt to contribute to the literature assessing the links among government service provision, popular assessments of that provision, and willingness to accept government’s right to make people pay taxes, as an indicator of legitimating beliefs. To the extent individuals’ beliefs about legitimacy are tied to their perceptions of government effectiveness and fairness in service provision, government behavior influences citizens’ legitimating beliefs. We have presented data and empirical tests suggesting that individuals’ quasi-voluntary compliance, observable in their attitudes toward government’s right to enforce taxes, are affected by actual provision of promised services, bureaucratic competence, government capacity to identify tax evaders and inhibit free riding, and government fairness.

As we progress in our research 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. If services deteriorate or improve, taxpayers are likely to attempt to adjust their terms of trade with government. Determining how long it takes for citizens to draw a cognitive link between improvements or a decline in their welfare and their payments to government is fraught with difficulties. Citizens receive cues from neighbors, religious and traditional authorities, the media, or the government. Whether some signals are more effective than others may depend on the confidence citizens have in the messenger.

Without legitimacy, governments have difficulty maintaining social order, implementing their policies, and obtaining external funds, loans, or other kinds of support. Yet, despite considerable theoretical attention, we still are a far way from developing a satisfying empirical approach to studying legitimacy. Legitimating 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. Indeed, there are numerous and significant theoretical and practical questions about legitimacy and good governments that we cannot address with this limited empirical study. The Afrobarometer data has increased our analytic leverage, but a more complete analysis requires an improved theoretical model and better behavioral data.
## Appendix

### Table 1: Afrobarometer Variable Definitions and Values

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Original Values</th>
<th>Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accept Gov't Right to Make People Pay Taxes</td>
<td>Indicates whether people agree that the tax department always has the right to make people pay taxes</td>
<td>Strongly Disagree=1, Disagree=2, Neither Agree Nor Disagree=3, Agree=4, Strongly Agree=5, Don't Know=9</td>
<td>Strongly Disagree, Disagree, Neither Agree nor Disagree, Don't Know=0; Agree &amp; Strongly Agree=1</td>
</tr>
<tr>
<td><strong>Socio-Demographic Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Respondent's age at time of survey</td>
<td>Continuous Variable</td>
<td>Ages&gt;100 recoded as 100; &quot;Don't Know&quot; treated as &quot;missing&quot;</td>
</tr>
<tr>
<td>Female</td>
<td>Dummy variable indicating respondent is female</td>
<td>Male =0; Female=1</td>
<td></td>
</tr>
<tr>
<td>Food Security</td>
<td>Frequency respondent or household member has gone without food within the past year</td>
<td>Never=0; Just once or twice=1; Several times=2; Many times=3,</td>
<td>Ever/Don't Know=0; Never=1</td>
</tr>
<tr>
<td>Rural</td>
<td>Dummy variable indicating whether respondent lives in a rural or urban sampling unit</td>
<td>Urban=0, Rural=1</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>Dummy variable indicating respondent's employment status</td>
<td>Not Employed=0; Employed, full-time=1</td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td>Owns a tv</td>
<td>No=0; Yes=1; Don't Know=9</td>
<td>No/Don't Know=0; Yes=1</td>
</tr>
<tr>
<td>Physical Health</td>
<td>Indicates physical health reduced the amount of work the respondent would normally do inside or outside the home</td>
<td>Never=0; Just once or twice=1; Many times=2; Always=3</td>
<td>Categories: Never; Once or Twice; Many Times; Always; Don't Know</td>
</tr>
</tbody>
</table>

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REFERENCES


Paler, Laura. "Taxation, Power and Representation in Developing Countries: The Case of China." University of Oxford.


ENDNOTES

1 We are grateful to Robert Fishman for his suggestions about these points.
2 We remain open, however, to the possibility that ideologically-induced norms, particularly democratic norms, are important for creating legitimating beliefs. Steve Hanson has been attempting to show us how, both in his personal communications to us and with his book-in-progress.
3 Levi (1997, passim) elaborates the norm of reciprocity in her discussion of what she earlier called “ethical reciprocity”.
4 We excluded two countries from our sample: Zimbabwe and Mozambique. We excluded the former because of concerns with data quality and we excluded the latter because the survey did not include numerical codes for the P.S.U. 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. (Whiteside et al. August 2002).
5 The Afrobarometer is a joint enterprise of Michigan State University (MSU), the Institute for Democracy in South Africa (IDASA), and the Centre for Democracy and Development (CDD, Ghana).
6 In this paper, we do not attempt to calculate the intraclass correlation coefficient. Because the variance and the mean are linked in multilevel logistic models, and the area-level variance is measured on the logistic scale, defining the intraclass correlation coefficient is problematic. Further, we are more interested in examining the within group effects than the between group effects as we are interested in uncovering the institutions that are linked with food security.
7 Although ethnic affiliation is a cross-nested factor, meaning that individuals from two different PSUs or countries may belong to the same ethnic group, the computer function we use (lmer) handles nested and non-tested group factors equally easily.
8 For convenience, we refer to the ethnic group as the fourth level. However, this is a non-nested grouping factor and is more akin to a second level. Just as individuals are nested into PSUs, individuals are nested into ethnic groups.
9 We simulated the confidence intervals from the posterior distribution of the second model, which is a better fitting model than our first and most basic model.
10 One plausible explanation for this finding is that it is not clear to citizens to whom to debit or credit for the maintenance of local roads: the local government or the national government.
11 Letting perceptions of corruption vary across districts did not improve the model fit. We left these results out of our regression tables.