Solving the Mystery of the AFRICA Dummy

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Summary. — Most empirical studies have reported a negative effect on growth of being an African country, even when accounting for ethnic heterogeneity. Modeling policy choices has reduced this effect in recent studies, but these have begged the question of why Africa appears adverse to developmental policies. This paper uses a cross-sectional data set to show that the governments of arbitrary postcolonial states—as are most African states—face substantial limitations to their power and are constrained in their responses, deriving greater relative power payoffs from neopatrimonial than from developmental policies. Differing levels of state legitimacy account therefore largely for the policy choices which characterize most of Africa.

1. INTRODUCTION

In his landmark empirical study of economic growth, Barro (1991, p. 436) acknowledged that “there appear to be adverse effects on growth from being in Sub-Saharan Africa” which his model could not explain despite controlling for the level of investments, government consumption, school enrollments and political instability. In fact, the dummy variable which he used to assess whether a country was African—the “AFRICA dummy”—was significantly associated with an annual decline in per capita GDP of as much as 1.14% during 1960–85.

Most subsequent cross-sectional studies of growth have been unable to reduce the magnitude and significance of the AFRICA dummy effect. Mauro (1995), for example, despite controlling for a “bureaucratic efficiency index” which included measures of corruption, red tape and quality of the judiciary, nevertheless saw his AFRICA dummy reduce average annual per capita GDP growth over 1960–85 by between 1.7% and 2.1%. Easterly and Levine (1997), who set out to explain Africa’s “growth tragedy” as a function of its ethnic heterogeneity, similarly still ended up with a significant AFRICA dummy impact, ranging from 1.2% to 1.4% decline in annual per capita GDP (1960–89) after controlling for ethno-linguistic heterogeneity. This effect was only slightly smaller than the dummy’s coefficient without controlling for ethno-linguistic heterogeneity (−1.4% to −1.8%), suggesting that they essentially failed to capture the true nature of Africa’s growth tragedy. Most recently, Temple and Johnson’s (1998) rather robust findings on the effects of prior “social arrangements” on subsequent growth, were significantly reduced upon controlling for regional dummies, of which AFRICA was the only one to be significantly and negatively associated with growth. These models all share, therefore, a failure to capture what it is about being an African country, which is inimical to growth.

Two fairly recent contributions to the growth literature have managed, however, to produce regressions with statistically insignificant AFRICA dummies. In a cross-sectional study of 79 countries, Sachs and Warner (1997) showed that a mix of structural and policy variables captured the sources of Africa’s slow growth quite exhaustively, leaving the regional dummy without further additional impact. Their structural factors included a dummy for landlocked status and a semi-continuous variable for tropical climate, ranging from 0 (no part of the territory covered by tropical climate) to 1 (all territory covered by tropical climate).
climate) to 1 (entire territory subject to tropical climate). They argued that a landlocked position reduces the benefits of international trade by adding to transportation and insurance costs, and that tropical conditions worsen agricultural productivity, morbidity and life expectancy (see also Bloom & Sachs, 1998). Their policy variables included measures of openness to trade, central government saving and an index of institutional quality. Similarly, in a panel estimation, Barro (1997) also succeeded in suppressing the effects of the AFRICA dummy after controlling for the ratio of government consumption to GDP.

These two studies provide empirical evidence that Africa’s development crisis is indeed largely a policy crisis. As such, they vindicate the argument made by many political scientists since Bates (1981) first questioned the policy choices of African governments. In their success, however, lies also their ultimate failure. By substituting policy choices for a regional dummy, they replace indeed one measure of our ignorance with another. For, if policies affect growth, it remains in turn to explain what affects policy choices. In other words, why do most African governments tend to adopt policies that are inimical to growth? Short of a model that relies on truly exogenous explanatory variables, the AFRICA dummy may well end up empirically deflated but its mystery remains.

In this paper I offer a model which purports to solve the mystery of the AFRICA dummy without resorting to endogenous explanatory variables. Relying on some of the insights of the neo-patrimonial literature in political science, I show that the lack of historical continuity of the African state from the precolonial to the postcolonial period constrains the options available to African policy makers. Specifically, the relative power payoffs of developmental policies for political elites are lower in countries where the state was arbitrarily imposed over preexisting institutions, leading them to resort instead with greater frequency to redistributive policies which retard or hinder growth. Because, of all regions, sub-Saharan Africa has the largest concentration of arbitrary postcolonial states, with little or no embeddedness into precolonial institutions and preexisting norms of political authority, its economic performance tends to be weaker, even after controlling for other variables known to differ between Africa and other regions.

After suggesting an original approach to quantify the historical nature of the state, I test this hypothesis and manage to reduce dramatically the magnitude and obliterate the significance of the AFRICA dummy in growth regressions while simultaneously endogenizing policy preferences. The paper’s contribution is twofold. First, it provides a theoretical articulation of the historically constrained calculus by which African elites decide to opt for neopatrimonial rather than developmental policies. Second, it shows that the true residual root of African stagnation lies in the nature of the African state, a political emphasis which most empirical studies of growth tend to neglect.

2. IDIOSYNCRACIES OF AFRICAN STATEHOOD

Econometric studies of growth which use countries as their unit of observation assume a relative homogeneity of states across the world. Differences in the capacity of governments to design and carry on specific policies for growth are acknowledged but, as an analytical category, the state remains generally unchallenged. Yet, most African states differ from states elsewhere in their very configuration and origins (Clapham, 1996). By and large, they are exogenous institutions superimposed over preexisting political structures and inherited by domestic but Westernized elites at independence (Hyden, 1983; Whitaker, 1991; Badie, 1992; Davidson, 1992; Young, 1994). They were born as colonies. In precolonial times, the societies they now comprise were often organized along different lines. Some were stateless, living in small-scale institutional arrangements at the village or household level, such as the Ibo of Nigeria, the Kikuyu of Kenya, the Banda of Central Africa or the Lobi of Burkina Faso. Others, like the Ovimbundu of Angola, the Baoule of Côte d’Ivoire or the Bamileke of Cameroon, were based on chiefdoms with limited territorial control. Some were organized in states, but usually different ones from those which ended up prevailing at independence: the Bakongo of Congo-Brazzaville, Congo-Kinshasa and Angola; the Baganda of Uganda; and the Yoruba of Benin and Nigeria, to name but a few. 1

Colonial existence as a prelude to sovereignty is not unique to Africa, however, nor is it at all rare. Many states in Asia, the Middle East,
Oceania and the Western Hemisphere were colonies to begin with. In fact, all the states of continental North, Central and South America were once colonies. But the relationship between these states and their citizenry differs from what one observes in Africa. When the Spanish and British colonies of America gained their independence, they did so as the instruments of the colonizers or their descendants. The preexisting indigenous institutions and societies usually played no part in the new state system. With a few Latin American exceptions (namely Bolivia, Guatemala, Peru and Ecuador), they had either been assimilated or physically eliminated. In other regions, such as Asia and some parts of the Middle East, the end of the colonial episode was more often (albeit certainly not always) the closing of a historical parenthesis of occupation, as preexisting states recovered their sovereignty (Korea, Sri Lanka, Egypt, Cambodia and Vietnam, for example).

In most African countries, however, there was neither a return to precolonial institutional forms of sovereignty, nor an attempt by colonizers to remain at the levers of power in the new states (with the temporary exception of Rhodesia during 1966–80). New domestic elites, trained in the colonizers’ schools, speaking the colonizer’s language, and often wearing the colonizer’s clothes, took over the colonizer’s state and made it theirs. In a word, they appropriated the imported state. In doing so, they did not usually build upon their institutional past and often even tried to repress it, forging ahead instead with strategies of “nation-building.”

Again, this situation is not unique to Africa. In fact, a similar process took place in several states of the Middle East and South Asia, if not elsewhere. What is unique, however, is the unusual concentration of such states in Africa. Of all the regions of the world, Africa has the highest proportion of countries where the process of state creation was exogenous to their societies and where the leadership, or ruling class, inherited the state rather than shaping it as an instrument of its existing or developing hegemony. Most African states, as a result, were born lacking legitimacy in the sense that they were not endogenous to their societies, that they were not historically embedded into domestic relations of power and domination and that they therefore suffered from a dichotomization between power and statehood.

3. ROOTS OF AFRICAN NEO-PATRIMONIALISM

The peculiar historical origins of African states posed a challenge to their rulers and limited the options available to them to address it. Their challenge resided mainly in the vacuity of their alleged power. African “inheritance elites” (Gellner, 1973) were bequeathed the colonial state but not the colonial power that forced it and kept it together. Even those who benefited from chiefly status in customary systems did not enjoy nationwide foundations to their power by virtue of the heterogeneity of the precolonial systems comprised in the state. Beyond the short-term legitimacy which they may have derived from the anti-colonial nationalist moment or the charisma of their personality, African independence elites soon discovered how truly little power they had inherited. Their problem was not merely to face “strong” or diverse societies (Hyden, 1983; Sandbrook, 1986; Migdal, 1988). The true challenge to their rule came from the competing institutional claims to sovereignty which their state harbored. As Geertz wrote upon observing the lack of integration of the “new states” of the Third World, “we have not just competing loyalties, but competing loyalties of the same general order” (Geertz, 1973, p. 261).

Consequently, citizens and politicians alike came to conceive of the postcolonial African state as not so much the outcome of a social contract, an instrument of collective action or reduction of transaction costs based on common “ideological convictions” (North, 1981, p. 44), but as an “alien institution” which had “nothing to do with you or me” in the words of Nigerian novelist Achebe (1960, p. 38). As Ekeh (1975) has argued, the morality which Africans displayed in the precolonial public setting did not apply to the postcolonial “second public.” The state became therefore either a potential resource to be appropriated, or a possible instrument of the domination of other groups to be resisted. Not only were rules of the political game not agreed upon but there was not even a consensus about playing the game at all since the players had never willingly come together. Hence, opposition to government policies by groups that self-identified as “losers” tended not to focus so much on the policies themselves but rather on challenging the government as a whole, or even the existence of the state itself.
The resulting propensity of African polities to display high levels of instability—from constitutional deadlocks and military coups to secession attempts and civil wars—all but wiped out the power content of African independence. Kwame Nkrumah’s belief that all else would be granted to those who sought first the political kingdom proved wrong. Africa experienced its worst period of instability in the 1960s, when it was also the most unstable of all developing regions (Campos & Nugent, 1997). From 1963 onward, coups d’État over apparently benign matters of domestic politics became increasingly common and but the mildest manifestation of the politics of illegitimacy (Benin, the Central African Republic, Congo, Gabon, Ghana, Togo, and Upper Volta all experienced early coups in reaction to mere budgetary or personnel crises). In other cases, sustained violence for control of the state ensued. Examples include guerilla actions by Chad’s Front de Liberation Nationale (FROLI-NAT), Cameroon’s Union des Populations du Cameroun (UPC), the Tivs of Nigeria, the Mende of Sierra Leone and most of Sudan’s southern peoples. Finally, although many such attempts were thwarted by the rigidities imposed by the Cold War and neocolonial interventions, many groups or regions simply tried to break away from the arbitrary postcolonial state, including Congo’s Katanga, Nigeria’s Biafra, the Évé and Asante of Ghana, the Agni of Côte d’Ivoire, the Somalis of Ethiopia, the Barotses of Zambia and the Bakongo of Angola (the Frente Nacional da Libaracao de Angola actually originated as an irredentist Bakongo movement).

Hence, for ruling elites, power was fragile. Shoring up the foundations of their regimes became therefore their overarching challenge and the prime motive of their action. Yet, the very lack of legitimacy of the states they had inherited peculiarly limited the policy options available to them in this endeavor. In some other regions of the world, it has been argued that developmental efficiency brought about legitimacy to governments which lacked democratic credentials. The apparent acquiescence of Singaporeans to their authoritarian government, for example, is often credited upon the latter’s economic achievements (see Neher & Marlay, 1995, p. 139). But creating legitimacy out of efficiency is a Catch-22 for arbitrary African states. Indeed, legitimacy results in time \( t + 1 \) from the policy efficiency displayed in time \( t \). Successful implementation of developmental policies in time \( t \) requires, however, a certain preexisting level of societal loyalty which African states did not benefit from to begin with. When bureaucrats are insufficiently loyal to the state and private agents distrustful of its institutions, state elites find it difficult to implement developmental policies which require substantial levels of state capacity.

As a result, ruling elites find it more convenient to shore up their fledgling power by resorting to personal rule and neo-patrimonial policies, meaning a propensity for ignoring one’s own institutions and for resorting to corruption, clientelism, nepotism, regionalism and other forms of factionalism (Sandbrook, 1972; Médard, 1982; Jackson & Rosberg, 1984; Joseph, 1987; Lewis, 1996; Bratton & van de Walle, 1997). The point of these policies is to create the foundations of some instrumental legitimacy, to substitute patron-client links for the lack of moral right to rule, to replace the state with an informal web of ad hoc political alliances (Bayart, 1993), and thereby provide the regime with a semblance of social foundations. From the point of view of political elites trying to maximize their power, the appeal of neo-patrimonialism lies therefore in its capacity to deliver immediate payoffs without making demands on their weak bureaucratic apparatus.

Hence, deficits of state legitimacy trigger the African neo-patrimonial pathology. Neo-patrimonial policies in turn embody the characteristics identified by Sachs and Warner (1997) and Barro (1997) as distinguishing African economic performance from that of other regions. ² Neo-patrimonialism relies indeed on the creation and maintenance of rents such as those derived from trade restrictions, and a preference for distribution over long-term investments. More generally, neo-patrimonial policies lead to widespread distortions in market mechanisms in order to allocate resources along political rather than economic criteria. Trade, foreign exchange and price distortions are typical areas of predation. Neo-patrimonial policies also favor current government consumption at the expense of investments in physical and human capital which have few, if any, short-term returns to the ruling elite in terms of power.

Linking the historical origins of African states to the policy choices of their governments sheds light not only on Africa’s poor average economic performance, but also on variations in economic fortunes within Africa. The tradi-
tional political economy approach to African underdevelopment stresses indeed the rent-seeking nature of African governments (Lofchie, 1975; Lipton, 1977; Bates, 1981) and the use of economic policies for the acquisition and maintenance of power (Sandbrook, 1986). But it fails to account, however, for African development success stories. Why do some African states display greater developmental capacity than others? The answer lies in the different levels of historical legitimacy across Africa. Although most African states share relatively high levels of historical arbitrariness and disembeddedness from precolonial sources of political authority, some are more akin to European states than to their African counterparts. At least one African country was not colonized (Ethiopia). Some had no human settlement before colonization and therefore no possibility for conflict with precolonial institutions (Cape Verde, Mauritius, São Tome and Príncipe, Seychelles). A few actually are close approximations of precolonial political structures (Botswana, Burundi, Lesotho, Rwanda, Swaziland). By and large, Africa’s best performers are included in this group of more “legitimate” African states. Botswana, for example, was the fastest-growing country in the world during 1965–85 (World Bank, 1994) and its successive rulers have received high marks for their management of the economy which they have taken progressively from a reliance on cattle toward a diversification into diamond mining and eventually manufacturing with, most recently, the establishment of a car assembly plant in Gaborone (Picard, 1987; Harvey, 1992; Lewis, 1993; Samatar & Oldfield, 1995; Samatar, 1999). Botswana’s history provided the context which allowed its governments to pursue such policies. Indeed, the British protectorate of Botswana was overwhelmingly composed of the preexisting Tswana kingdoms which retained a high level of autonomy throughout colonization. Upon independence in 1966, Seretse Khama, the son of the paramount Tswana king, became the president of Botswana, embedding thereby both his right to rule and the institutions of his state into the preexisting Tswana system, and conferring upon the new state a high degree of historical legitimacy. The government’s subsequent active intervention in the economy has benefited from the legitimacy that its long-established hegemony conferred upon its leaders, freeing it from the need to finance new networks of political support.

To summarize the argument, the relative payoffs of developmental versus neo-patrimonial policies depend on state legitimacy. In the low-legitimacy setting of most postcolonial African states, neo-patrimonial policies yield the greatest relative short-term payoffs to elites in terms of consolidation of their power. They bolster domestic support by directing public resources to private actors through unofficial channels and networks, allowing official development policies to languish. In the worst cases, the systematic use of state resources to finance political allegiance eventually brings about state collapse (Zartman, 1995). In “legitimate” states, on the other hand, institutions and rulers do not face the challenges of preexisting loci of power and are therefore able to use the apparatus of the state to implement developmental policies which further enhance their legitimacy over time in a virtuous cycle of capacity and development.

What distinguishes this theory from the usual neo-patrimonial argument is its more general character and its flexibility to variations in the African historical setting. It brings in an explicit consideration of the match between precolonial and postcolonial institutions as the determinant of the power conundrum of elites, going beyond the uniform “transplanted institutions” hypothesis (Sandbrook, 1986; Dia, 1996). It reconciles thereby two strands of literature in African studies: the one that stresses the hegemonic quests of elites as determinant of political behavior (Lonsdale, 1981; Bayart, 1993; Boone, 1994) and the one that insists on the imported nature of the African state as the root of policy deviances (Hyden, 1983; Whitaker, 1991; Davidson, 1992). Furthermore, this model operates within the rational-choice assumption that leaders care about their power and want to maximize their time in office, by linking the likelihood of developmental policies to self-interested considerations of power by the elites. As a consequence of these features, it can account for both Africa’s specificity in the world and for the diversity of developmental records within Africa.

4. DATA AND METHODOLOGY

This paper tests the hypothesis that the relative lack of historical legitimacy of African states magnifies their propensity to adopt neo-patrimonial policies with their attendant
negative effects on growth. One would expect, therefore, to see neo-patrimonial policies as an inverse function of levels of state legitimacy and to find no residual negative effect on growth of being an African country once levels of state legitimacy are controlled for.

I use a cross-sectional data set covering the 1960 (or independence)—92 period for up to 133 countries. Population, income, growth, macroeconomic and policy indicators are calculated from the Penn World Table, mark 5.6 (Heston & Summers, 1991), the World Development Indicators CD-Rom (World Bank, 1997), and miscellaneous data sets used in the above-mentioned recent empirical studies of growth, most of which can be downloaded from the World Bank or National Bureau of Economic Research web sites. These include Barro (1991), Keefer and Knack (1995), Barro and Lee (1996), Bruno and Easterly (1996), and Easterly and Levine (1997).

In order to capture the range of neo-patrimonial policies, I use an aggregate measure of six policy indicators which overlap those identified by Sachs and Warner (1997) and Barro (1997) as differentiating African economic performance. These six variables capture both the propensity of neo-patrimonial policies to privilege current consumption over accumulation and to introduce distortions in resource allocation. Each of these indicators has also been individually associated with economic performance in recent empirical studies of growth. The consumption–accumulation trade-off is captured by a measure of government investment in human capital proxied by a logarithmic transformation of educational attainment (Barro & Lee, 1996), a measure of public investments in infrastructure expressed as the logarithm of the number of telephones per 1,000 workers (Easterly & Levine, 1997) and by the ratio of current government consumption over GDP (Heston & Summers, 1991). Distortionary policies include the degree of openness of the economy measured as imports and exports relative to GDP (Heston & Summers, 1991), the extent of the black market premium in the foreign exchange market—a measure of overall price distortions—calculated as the logarithm of the difference between the official and parallel exchange rates (Easterly & Levine, 1997), and the logarithm of the ratio of liquid liabilities of the financial system to GDP, an indicator of distortions in the financial sector (King & Levine, 1993).

I generate the first principal component of these six indicators. The principal component technique is a factor-analysis method of aggregation which produces a linear combination of correlated variables and maximizes the joint variance of its components. It is “the most reliable and valid means of combining multiple indicators of a theoretical variable into a single index” (Putnam, 1993, p. 216). Each variable receives a specific weight in the resulting index as a function of the strength of its correlation with the other variables. Table 1 shows each indicator’s “factor loading,” or its individual correlation with the resulting policy index, and its “scoring coefficient,” or its individual weight in the index.

The measures of human and physical capital accumulation correlate most strongly with the index and receive the greatest weight. Openness to trade has the weakest association with the other policies, in large part because many other factors besides trade policies affect the ratio of exports and imports to GDP. Altogether the index puts therefore more emphasis on policies which differentiate between accumulation and consumption than on distortionary policies. This is consistent with the available evidence which links accumulation policies more robustly with growth than distortionary ones (see Levine & Renelt, 1992). As Figure 1 makes clear, however, the resulting policy index correlates strongly with overall growth ($r = 0.67$).

Although the index’s primary purpose is to measure the extent to which neo-patrimonial policies are chosen over developmental ones, it also captures several of the right-hand side variables which have become conventional in growth models since Barro (1991), including the accumulation of human and physical capital and the extent of government consumption. Together with a measure of conditional convergence, the growth regressions in the next section approximate therefore conventional specifications. Aggregating these variables makes it possible to identify the consequences of the compound of policy behaviors apprehended under the concept of neo-patrimonialism and brings the model a desirable measure of parsimony. It should be stressed, however, that the findings with respect to the effects of state legitimacy on growth are not sensitive to this choice of specification. In other words, the legitimacy effects which are identified in the next section are robust to the separate and cumulative introduction in the model of each component variable of the index.
“State legitimacy” is quantified with a variable that differentiates endogenous from imported statehood with the idea that political institutions which evolve endogenously to a society, as a result of domestic social relations or in opposition to neighboring societies, are presumed historically legitimate from a societal point of view. This dummy variable takes the value 1 when a state is historically legitimate, 0 otherwise. It tries to capture either the historical continuity of state institutions (for noncolonized areas), the embeddedness of the postcolonial state into precolonial relations of authority, or, more generally, the lack of “clash” between precolonial and postcolonial political institutions.

Each country is measured against a series of five dichotomous outcomes at each stage of which it can fail the test of legitimacy and receive a score of 0. Table 2 shows the five stages and the corresponding legitimacy ranking. If, at any stage, a country scores 1, the process ends. If not, it moves on to the next stage. If a country does not score 1 by stage 5, it is finally deemed historically illegitimate and is assigned a score of 0.

Although the resulting variable is categorical and will likely miss the nuances of the historical origins of some states, the five-stage process allows for a wider range of historical experiences than could a more conventional dichotomous variable. The group of legitimate countries includes 10 sub-Saharan African states (out of 38 in the data set). Four Botswana, Burundi, Cape Verde, Ethiopia, Lesotho, Mauritius, Rwanda, Sao Tome and Principe,
Seychelles and Swaziland. The decision to include Ethiopia, Rwanda and Burundi was somewhat arbitrary. Ethiopia was included because it was never formally colonized, setting aside a brief occupation by Mussolini’s Italy in the late 1930s and early 1940s. Yet, to a large extent, it was itself a colonial power in East Africa, swallowing areas of Somali settlement as well as Eritrea following the Italian defeat in WW II. As a result, it has had to contend with numerous years of civil war in the period under consideration which negatively affected its economic performance despite a reputation for bureaucratic efficiency. Rwanda and Burundi existed as state structures before colonization and, consequently, were also considered legitimate. In reality, however, German and Belgian colonialism affected their territorial structures and so thoroughly manipulated their political system that the foundations of political authority no longer were the object of a consensus by the time independence came in 1962 (Lemarchand, 1970; Pabanel, 1991). In cases like these, the categorization of countries followed a principle of adverse selection on the dependent variable. According to this principle, when in doubt, a country was put in the category that would least support the hypothesis (these three countries average 0.5% growth over the period under consideration).

Outside of Africa, most OECD countries scored 1, whereas in Latin America, countries with more than one-third of “Indian” indigenous population scored 0. They were Bolivia (70%), Guatemala (47%), Peru (40%) and Ecuador (38%) (Kurian, 1997, p. 46). Although Africa had the largest concentration of illegitimate state formations, all regions of the world counted some of them, and Asia also had a rather large proportion of them, including India, Indonesia, Malaysia and the Philippines.

Since most developed countries were not colonized and many developing countries were, one may wonder whether this dummy variable actually differentiates rich from poor countries and whether the results will therefore reveal a spurious correlation between state legitimacy and development. This should not be a problem since growth theory predicts (and previous empirical results confirm) that poor countries tend to grow faster on average than rich countries (Solow, 1956; Barro, 1991), ceteris paribus. If anything, therefore, the fact that growth rates converge towards a steady state as income increases should prevent the legitimacy variable from any pro-growth selection bias. Nevertheless, in order to avoid any misunderstanding on this matter, the following growth regressions control for initial income levels. In addition, the tests for the differences between the means of the policy indicators among legitimate and nonlegitimate states compare developing countries only, eliminating OECD observations from the sample.

As it is hypothesized that the effects of state legitimacy on growth are mediated through policy choice, an indirect estimation method is used. After first performing a bivariate regression of the policy index on state legitimacy, the residual of this regression is then recovered. This residual can be conceived of as representing the variation in the policy index which is not a function of state legitimacy. The next step estimates a growth regression with the residual of the policy variable together with the legitimacy dummy. In this regression, the coefficient of the legitimacy dummy represents the total, direct and indirect, effect of state

<table>
<thead>
<tr>
<th>Question</th>
<th>Legitimate (1)</th>
<th>Non-legitimate (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Was the country colonized in modern times?</td>
<td>No</td>
<td>Yes (go to question 2)</td>
</tr>
<tr>
<td>(2) When reaching independence, did the country recover its previous sovereignty, identity or effective existence?</td>
<td>Yes</td>
<td>No (go to question 3)</td>
</tr>
<tr>
<td>(3) If the country was created by colonialism, was there a human settlement pre-dating colonization?</td>
<td>No</td>
<td>Yes (go to question 4)</td>
</tr>
<tr>
<td>(4) Did the colonizers (and/or their imported slaves) reduce the pre-existing societies to numerical insignificance (or assimilate them) and become the citizens of the new country?</td>
<td>Yes</td>
<td>No (go to question 5)</td>
</tr>
<tr>
<td>(5) Does the post-colonial state do severe violence to pre-existing political institutions?</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
legitimacy on growth, and the coefficient of the residual policy variable represents its effect on growth which is distinct from state legitimacy. This technique also has the advantage of avoiding problems of multicollinearity among independent variables since, in this case, the policy residual is perfectly orthogonal to the legitimacy dummy.

5. SOLVING THE MYSTERY

Table 3 compares the mean performance of legitimate and nonlegitimate developing countries on individual policy indicators, the policy index and GDP growth. In all but one instances, the performance of legitimate states is statistically significantly better than that of their nonlegitimate counterparts. Only with respect to distortions in the foreign exchange market is the difference not in the expected direction and, at any rate, not significant. The reason for this counter-intuitive finding is that 13 countries in the sample of nonlegitimate states belong to the CFA Franc zone which offers pegged convertibility with the French franc and, by extension, flexible convertibility with other currencies, reducing the need for parallel currency markets. Apart from this variable, the findings lend credence to the hypothesis that deficits of state legitimacy favor neo-patrimonial policy choices.

As Table 3 suggests, nonlegitimate states tend to invest less in education because it has few direct returns to their weak leadership. If they invest in education, it is more likely to be on salaries of teachers who may form a constituency of the modern state than on educational quality, and this translates in low achievement figures. This bias, together with the requirements for pork and large bureaucracies that neo-patrimonialism implies, leads to a greater government propensity for current spending at the expense of long-term investments in infrastructure. When they do invest in infrastructure, it is more likely to finance nonproductive projects whose purpose is the assertion of their sovereignty (e.g., the relocation of a capital away from the colonial site, as in Côte d’Ivoire’s Yamoussoukro or Nigeria’s Abuja, or the construction of multiple presidential palaces and monuments as in Saddam Hussein’s Iraq) or a means to extend their hegemony (e.g., Mobutu’s Inga dam aimed at controlling the supply of power to secession-prone Shaba), than improvements in their country’s productive capacity.

Governments of low-legitimacy states are also more likely to set up barriers to trade as they provide the rents they need to finance their networks of patron-client relationships and to introduce distortions into their financial sectors, directing credit along criteria that are more likely to favor political motives than considerations of present value. In consideration of these specific policy findings, it comes as no surprise in the end that high-legitimacy developing countries grow almost five times faster than their nonlegitimate counterparts.

Table 3. Comparing policies and growth among legitimate and non-legitimate states in the developing world

<table>
<thead>
<tr>
<th>Variable</th>
<th>Non-legitimate states (n)</th>
<th>Legitimate states (n)</th>
<th>P valueb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average years of schooling</td>
<td>2.99 (37)</td>
<td>4.61 (46)</td>
<td>0.0001</td>
</tr>
<tr>
<td>Telephones per ‘000 workers (infrastructure)</td>
<td>16.96 (45)</td>
<td>54.50 (40)</td>
<td>0.0001</td>
</tr>
<tr>
<td>Current government spending (% GDP)</td>
<td>22.66 (50)</td>
<td>18.06 (59)</td>
<td>0.0012</td>
</tr>
<tr>
<td>Openness to international trade (% GDP)</td>
<td>59.04 (50)</td>
<td>71.86 (59)</td>
<td>0.0500</td>
</tr>
<tr>
<td>Foreign exchange distortionsc (log scale)</td>
<td>0.31 (46)</td>
<td>0.34 (53)</td>
<td>0.2854</td>
</tr>
<tr>
<td>Depth of financial sector (log scale)</td>
<td>1.28 (42)</td>
<td>1.43 (43)</td>
<td>0.0354</td>
</tr>
<tr>
<td>Policy index</td>
<td>−1.09 (43)</td>
<td>0.14 (48)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Per capita GDP growth</td>
<td>0.49% (50)</td>
<td>2.44% (59)</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

a Note: For data sources and definitions, see Appendix A where these variables are respectively labeled SCHOOL, PHONE, G, OPEN, BLCK, LIQUID, POLICY and GROWTH. Unless otherwise indicated, logarithmic variables have been converted back to their original units for this table. Numbers in parentheses are the number of observations in the samples.
b P values refer to the probability that the observed difference is due to chance, based on one-tailed t tests with equal or unequal variances according to inspection of sample variances.
c Difference not in the hypothesized direction.
faster on average than their low-legitimacy counterparts.

But what is legitimacy’s actual contribution to growth and does it truly account for what differentiates Africa’s economic performance from the rest of the world? Table 4 presents a set of seven regressions which provides the answers to these questions, compares the explanatory power of the legitimacy dummy with alternative models, and solves the mystery of the AFRICA dummy. In the first model, real per capita GDP growth is regressed against initial income levels (to account for convergence) and two regional dummies: AFRICA and HPAE which stands for High-Performing Asian Economies, a group of seven countries identified by the World Bank (1993) as fast growers (Korea, Japan, Singapore, Taiwan, Indonesia, Malaysia and Thailand). In this barren model, the AFRICA dummy’s annual impact on growth is estimated at about 2%. The second regression adds the Bloom and Sachs (1998) measure of tropical climate and the Sachs and Warner (1997) dummy for landlocked countries. Contrary to Sachs and Warner’s (1997) findings, being landlocked fails to have a negative impact on growth. This difference may be due to the substantially larger sample size used here (126 versus 78). Their study may have suffered from a selection bias in this respect. Among African countries, for example, they count eight landlocked countries out of 23 observations in their sample. Since Africa comprises 13 landlocked countries out of 48, the selected countries may overrepresent the landlocked segment of the relevant population. More interesting, however, is the behavior of the tropical climate variable and the change in the AFRICA dummy impact following its inclusion in the model. For every 10% territorial exposure to tropical climate, economic growth is reduced by 0.19% in this estimation. In other words, even after controlling for initial income level, tropical countries grow almost 2% slower, year in year out, than their counterparts in temperate climates. This is consistent with the Bloom and Sachs (1998) hypothesis that tropical exposure reduces economic productivity. Part of Africa’s stagnation can therefore be blamed on its geographical setting. The AFRICA dummy’s

<table>
<thead>
<tr>
<th>Equation</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
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<tr>
<td>Constant</td>
<td>0.1471</td>
<td>0.1832</td>
<td>0.2126</td>
<td>0.2387</td>
<td>0.1749</td>
<td>0.2653</td>
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<td>(1.463)</td>
<td>(1.859)</td>
<td>(2.827)</td>
<td>(2.876)</td>
<td>(2.254)</td>
<td>(3.291)</td>
<td>(1.527)</td>
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<td>Convergence (log)</td>
<td>-0.0322</td>
<td>-0.0364</td>
<td>-0.0391</td>
<td>-0.0485</td>
<td>-0.0327</td>
<td>-0.0531</td>
<td>-0.0195</td>
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<tr>
<td></td>
<td>(-1.213)</td>
<td>(-1.439)</td>
<td>(-1.939)</td>
<td>(-2.238)</td>
<td>(-1.576)</td>
<td>(-2.634)</td>
<td>(-0.909)</td>
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<tr>
<td>Convergence (log)²</td>
<td>0.0021</td>
<td>0.0021</td>
<td>0.0018</td>
<td>0.0027</td>
<td>0.0014</td>
<td>0.0029</td>
<td>0.0004</td>
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<td></td>
<td>(1.180)</td>
<td>(1.303)</td>
<td>(1.356)</td>
<td>(1.914)</td>
<td>(1.010)</td>
<td>(2.302)</td>
<td>(0.310)</td>
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<td>AFRICA</td>
<td>-0.0201</td>
<td>-0.0128</td>
<td>-0.0059</td>
<td>-0.0143</td>
<td>-0.0032</td>
<td>-0.0114</td>
<td>-0.0024</td>
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<td>(-4.380)</td>
<td>(-2.531)</td>
<td>(-1.544)</td>
<td>(-3.294)</td>
<td>(-0.815)</td>
<td>(-2.284)</td>
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<td>Asian “Dragons”</td>
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<td>0.0355</td>
<td>0.0212</td>
<td>0.0286</td>
<td>0.0217</td>
<td>0.0276</td>
<td>0.0202</td>
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<td>Tropical climate</td>
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<td>-0.0177</td>
<td>-0.0120</td>
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<td>(-5.518)</td>
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<td>Landlocked status</td>
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<td>(-0.838)</td>
<td>(-1.638)</td>
<td>(-0.459)</td>
<td>(-2.175)</td>
<td>(-0.937)</td>
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<td>Policy index</td>
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<td></td>
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</tr>
<tr>
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<td>(6.897)</td>
<td></td>
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<td>Policy index (residual)</td>
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<td>0.0088</td>
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<td>0.0097</td>
<td>(4.089)</td>
<td>(6.971)</td>
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<td>ELFL</td>
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<td></td>
<td>(-2.067)</td>
<td></td>
<td></td>
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<td></td>
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<td>(0.559)</td>
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<td>State legitimacy</td>
<td>0.0207</td>
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<tr>
<td></td>
<td>(5.583)</td>
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<td></td>
<td></td>
<td></td>
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<td>(4.806)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.34</td>
<td>0.47</td>
<td>0.73</td>
<td>0.63</td>
<td>0.74</td>
<td>0.67</td>
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<tr>
<td>n</td>
<td>133</td>
<td>126</td>
<td>109</td>
<td>109</td>
<td>109</td>
<td>105</td>
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</table>

*Note: OLS estimation with White (1980) robust $t$ statistics in parentheses. For data source and definitions, see Appendix A, where these variables are respectively labeled LCON, LCONSQ, AFRICA, HPAE, TROPICS, LANDLOCK, POLICY, ELFL and LEGIT. The dependent variable is per capita PPP-adjusted GDP growth, independence-1992 (GROWTH).*
impact “falls” indeed to −1.3% after the inclusion of the tropical variable.

It is, however, only upon the insertion of the policy index in the model, in eqn. (3), that the impact of the AFRICA dummy becomes statistically insignificant. Eqn. (3) confirms not only that policy choices are crucial determinants of economic growth but also that Africa’s propensity for neo-patrimonial policies lies at the core of its economic failure. The policy index by itself is very robustly associated with GDP growth. A one standard deviation increase in the index results in about 0.9% additional growth. The tropical effect is also reduced upon the addition of the policy index, suggesting that part of its impact is actually due to the concentration of neo-patrimonial governments in tropical countries rather than to negative productivity consequences of climatic conditions per se. By and large, these results confirm the findings of Barro (1997) and Sachs and Warner (1997).

But what is it about Africa which is conducive to “bad” policy choices? As suggested in Table 3, levels of state legitimacy have much to do with it. In a bivariate regression of the policy index on the legitimacy dummy, the latter contributed 1.8 standard deviations to the former (\(n = 114\), Adj. \(R^2 = 0.30\), White (1980) \(t = 7.479\)). Eqn. (4) in Table 4 models the impact of the residual of this regression on growth. As mentioned earlier, the residual of the policy index can be thought of as that part of policies which is not a function of state legitimacy. The bivariate regression suggested that close to a third of the variance in policy choices was related to variations in levels of state legitimacy. According to eqn. (4) in Table 4, this is a crucial third. Indeed, using the residual instead of the total index not only reduces the impact of policy choices on growth but also brings the AFRICA dummy back to life with a significant −1.43% annual effect on growth. In other words, variations in policies which are not a function of state legitimacy fail to differentiate Africa’s economic performance from that of the rest of the world.

Model (5) brings these findings together by introducing the legitimacy dummy in the regression. The impact of the AFRICA dummy falls to −0.3% and its statistical significance disappears. State legitimacy, on the other hand, contributes more than 2% to annual GDP growth. These findings highlight the considerable explanatory power of state legitimacy in terms of economic performance. Its growth impact represents about 40% of the average growth differential between Africa and the “High-Performing Asian Economies.”

The last two regressions control for the effects of ethnic heterogeneity. In regression (6), the negative impact on economic growth of ethnic polarization, identified by Easterly and Levine (1997), appears supported as the ethno-linguistic fractionalization (ELF) index displays a significantly negative coefficient. Similarly, as with Easterly and Levine’s original study, the AFRICA dummy effect remains significantly negative too. Ethnicity appears therefore to matter, but not to capture the roots of Africa’s “growth tragedy.” But does controlling for ethnic heterogeneity alter the findings with respect to state legitimacy? In other words, is legitimacy robust to a specification that includes ethnic heterogeneity? To answer this question, eqn. (7) adds both variables to the complete model. If anything, the magnitude of the legitimacy effect is further amplified, with legitimate states growing 2.22% faster than their nonlegitimate counterparts. Once again, the impact and significance of the AFRICA dummy disappear. Furthermore, the ethnicity index itself loses all explanatory power upon controlling for state legitimacy.

Hence, eqn. (7) indicates that state legitimacy is a robust determinant of economic growth. Africa’s growth tragedy is largely a function of its climate, geography, and propensity for neo-patrimonial policies. The latter propensity is, in turn, a function of the level of historical legitimacy of the states which comprise Africa. When these different dimensions are taken into account, there is no residual effect on growth of simply “being African.” Not only do these variables together deflate the impact of the AFRICA dummy, but the growth effect of state legitimacy proves robust to controls for conditional convergence, regional dummies, climate, landlocked status, policy choices (including measures of accumulation of human and physical capital, and of government spending) and ethno-linguistic polarization.

Legitimacy solves the mystery of the AFRICA dummy. African governments choose neo-patrimonial policies because they offer the highest relative power payoffs in the context of arbitrary state structures. The World Bank may well have been on the right track then when it suggested in 1989 that “underlying the litany of Africa’s development problems is a crisis of
governance” (World Bank, 1989, p. 60). But, underlying this crisis of governance, there truly is a crisis of legitimacy.

6. CONCLUSIONS

The nature of the state, the extent to which it conflicts with preexisting political institutions and norms of authority, is of crucial importance in explaining policy choices and the spread of economic growth around the world. This very nature of statehood is a variable along which Africa is most different from other regions. As a result, controlling for the effects of state legitimacy in growth regressions reduces the residual negative growth impact from being an African country to statistical insignificance. This indicates that a model which embeds policy choices into the nature of relations of power and authority is capable of explaining cross-sectional growth patterns without the need to resort to any additional alleged African particularism. 6

From a methodological point of view, these findings call for a greater integration of political science into the study of economic growth. Although growth theory has converged in recent years toward acknowledging the importance of policy choices and institutional quality (Barro, 1990; Alesina & Rodrik, 1994; Keefer & Knack, 1995; Mauro, 1995), little has been done so far to identify the determinants of policy choices and institutional quality. Most economists have been satisfied, in Schumpeter's tradition, to stop their enquiry once they found a "causal relation between two phenomena" where "the one which plays the 'causal' role is non-economic" (Schumpeter, 1983, p. 5). 7

Yet, policies may be exogenous to economic models, but they are endogenous to social, political and historical factors. African elites do not chose "bad" policies because they do not know any better. This type of explanation, which Robinson (1996) has called the "stupidity hypothesis," has led to the possibly simplistic idea that African growth "can be done" if only governments changed their policies (Sachs, 1996). The late President Sese Seko Mobutu of former Zaire may have been short on ethics but certainly not on intelligence. If he chose policies that all but obliterated his country's chances for development, it is not that he did not know better. Rather, the historical context in which he waged his pursuit of power increased the relative returns of such policies for his own hegemonic quest. Because power is a crucial determinant of economic policies, and because the conditions in which power is attained and maintained are historically constrained, we have to resort to the insights of political science, within a historical context (and not only as a matter of abstract rational choice), to move our understanding of growth forward.

NOTES

1. See Fortes and Evans-Pritchard (1940), Vansina (1966), Murdock (1959, 1967), among other general studies of pre-colonial African political systems.

2. These variables are also at the core of Collier and Gunning's (1999) recent review of prevailing explanations of Africa's economic performance.

3. See Appendix A for further description of the data.

4. For 180 countries which have data on both the legitimacy and the AFRICA dummies, the two variables correlate at $r = -0.53$. By comparison, the AFRICA dummy correlates at $r = 0.56$ with Easterly and Levine's (1997) index of ELF ($n = 135$), at $r = 0.56$ with Sachs and Warner's (1998) tropics variable ($n = 147$), and at $r = -0.71$ with Temple and Johnson's (1998) index of social development ($n = 69$).

5. Hong Kong, which is also included by the World Bank (1993), was a British colony during the period under consideration and is therefore not part of the sample.

6. The continued significance of the High-Performing Asian Economies (HPAE) dummy, despite its loss of about 1% impact on growth, suggests, however, that there is more (or at least something else) to East Asia's success than to Africa's failure.

7. Easterly and Levine (1997) are a notable exception. They attempted to endogenize policy choices as a function of ethnic heterogeneity. As mentioned earlier, however, they failed to reduce the impact of the AFRICA dummy. More recent work has also questioned their equation of ethnic heterogeneity with ethnic polarization (Collier, 1998).
REFERENCES


APPENDIX A. DATA SOURCES AND DEFINITIONS*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFRICA</td>
<td>Dummy for sub-Saharan Africa</td>
</tr>
<tr>
<td>BLCK</td>
<td>Log of 1 + black market premium. Average of decade averages (1960s, 1970s, 1980s). <em>(Source: Easterly &amp; Levine, 1997.)</em></td>
</tr>
<tr>
<td>ELF</td>
<td>Index of ELF. Measures the probability that two randomly-selected individuals in a given country belong to two different ethno-linguistic groups. <em>(Source: Taylor &amp; Hudson, 1972.)</em></td>
</tr>
<tr>
<td>G</td>
<td>Average real government share of GDP (%), 1985 international prices, year of independence to 1989 <em>(Source: Heston &amp; Summers, 1991.)</em></td>
</tr>
<tr>
<td>GROWTH</td>
<td>Growth rate of the real GDP per capita in constant dollars (Chain Index) expressed in international prices, base 1985, measured form the year of independence onwards with the log method <em>(Source: Heston &amp; Summers, 1991.)</em></td>
</tr>
<tr>
<td>HPAE</td>
<td>“High-Performing Asian Economies” <em>(Source: World Bank, 1993.)</em></td>
</tr>
<tr>
<td>LANDLOCK</td>
<td>Dummy variable taking on the value 1 for a landlocked country, 0 otherwise <em>(Source: Kurian, 1997.)</em> Ethiopia, which Kurian (1997) lists as landlocked is considered instead as having access to the sea because it still comprised Eritrea in the time-frame of this study.</td>
</tr>
<tr>
<td>LCON</td>
<td>Log of value of real GDP per capita in constant dollars (Chain Index) expressed in international prices, base 1985, in 1960 or the first year of independence, whichever comes latest <em>(Source: Heston &amp; Summers, 1991.)</em></td>
</tr>
<tr>
<td>LCONSQ</td>
<td>Square of LCON.</td>
</tr>
<tr>
<td>LEGIT</td>
<td>Dummy variable capturing the idea of vertical legitimacy (see Table 2) <em>(Sources: Emerson, 1960; Bayart, 1993; Bayart, 1996; Holsti, 1996; Young, 1988; Young, 1994; Kurian, 1997; Webster, 1996; Encyclopedia Britannica; Geertz, 1973.)</em></td>
</tr>
<tr>
<td>LIQUID</td>
<td>Financial depth. Ratio of liquid liabilities of the financial system to GDP. Liquid liabilities consist of currency held outside the banking system, demand and interest bearing liabilities of banks and non-bank financial intermediaries. Average of decade averages. <em>(Source: King &amp; Levine, 1993.)</em></td>
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<tr>
<td>OPEN</td>
<td>Degree of economic openness (Exports + Imports)/Nominal GDP starting with the year of independence to 1989. The value is an average of the 1960s, 1970s and 1980s. <em>(Source: Heston &amp; Summers, 1991.)</em></td>
</tr>
<tr>
<td>PHONE</td>
<td>Log of telephones per 1,000 workers. Average of decade averages. <em>(Source: Easterly &amp; Levine 1997.)</em> In order to expand the sample size, I regressed Easterly and Levine’s LTELPW variable on the average investment share of GDP (from Heston &amp; Summers, 1991) and used the corresponding predicted values to create the PHONE variable.</td>
</tr>
<tr>
<td>POLICY</td>
<td>First principal component of SCHOOL, PHONE, G, BLCK, OPEN, and LIQUID</td>
</tr>
<tr>
<td>TROPICS</td>
<td>Approximate fraction of a country’s land area that is subject to tropical climate. <em>(Source: Sachs &amp; Warner, 1997.)</em> Coverage deductively expanded.</td>
</tr>
</tbody>
</table>

* (The data set is available at www.politics.pomona.edu/englebert.html)