A State-Centered, Political Capital Approach to the Explanation of Demographic Differences: With Special Reference to Regional/Ethnic Inequality in Sub-Saharan Africa[1]

Max began by accusing the outgoing Government of all kinds of swindling and corruption. As he gave instance after instance of how some of our leaders who were ash-mouthed paupers five years ago had become near millionaires under our very eyes, many in the audience laughed. But it was the laughter of resignation to misfortune. No one among them swore vengeance; no one shook with rage or showed any sign of fight. They understood what was being said, they had seen it with their own eyes. But what did anyone expect them to do?

The ex-policemen put it very well. 'We know they are eating,' he said, 'but we are eating too. They are bringing us water and they promise to bring us electricity. We did not have those things before; that is why I say we are eating too.' (Achebe 1966:123-4)

In the year I journeyed on the river, Mobutu dispatched a government-owned DC8 airliner to Venezuela thirty-two times to pick up five thousand long-haired sheep for his ranch at his ancestral village of Gbadolite. That remote village (population 1,700 in 1965) has been fabulously blessed under the Guide's guidance. It is now a small city (population 37,000) with the best water, electrical, telephone, television, and hospital service in the country. (Harden 1991:38)

Introduction

This paper discusses the relationship between political patronage and social inequality. The foundational premises derive from political economy and are summarized fictionally by Achebe and anecdotally by Harden in the introductory quotations above. First, the state is responsible for the provision of essential services, among which are services which affect current and future demographic choices. Demographic trends are, therefore, partly induced by state action. Second, political leaders determine state actions, including how state resources are to be distributed. Third, although political leaders often use their office for personal accumulation, to varying degrees they must also direct patronage to their core constituencies in order to maintain some minimal level of popular support. Fourth, political leaders' ability to distribute state resources in this way is a function of their positional power in the state hierarchy.

Applying these premises in demography gives rise to the following proposition: Areas represented by senior political figures are more likely to receive a disproportionate share of development resources since they have (a) more intensive linkages to senior decision makers and

---

[1] The author is NICHD postdoctoral fellow at the Population Research Center, NORC/University of Chicago. He can be contacted at awein@uchicago.edu.

(b) structural pressures predispose decision makers to favor constituents. Therefore, within-country variation in demographic measures, including variation in the determinants of those measures – e.g., employment opportunities, healthcare, schooling, general infrastructure – is a function of differential access to political leadership. This effect may be particularly pronounced where development levels are low, resources constrained, and the same personnel dominate government for long periods.

This paper explores this general hypothesis in relation to an explanation of household inequality in core determinants of demographic behavior in SSA, with an analytic focus on Kenya. The principal conceptual aim of the paper is to provide the methodological vocabulary to allow for the expression of linkages between a given area and the state. To this end, I introduce the notion of "political capital," a subtype of social capital which is intended to measure access to political decision-makers. And I attempt to validate that measure by merging data on political representation in Kenya with Demographic and Health Survey data and then exploring relationships between political capital and individual data on level of schooling, employment opportunities, use of modern healthcare facilities, and various measures of household wealth.

I lay the groundwork for that primary analytic section in two prior sections, however. In the first I briefly outline a theoretical framework on the nature of ethnic politics in Africa and on the relationship between ethnic politics and population that I have presented elsewhere (Weinreb 2001). In the second section I shift the focus to Kenya. I begin by reviewing some key, relevant facts in Kenyan political history, especially those related to a late 1970s transition from a Kikuyu-led to a Kalenjin-led government. I subsequently devote the bulk of that section to detailed empirical analysis of regional and ethnic inequality in the post-independence era in terms of the core determinants of demographic behavior – employment opportunities, access to health and educational facilities, and general infrastructure development – which I also assume are favored development goods.[2] Results confirm that aggregate-level (regional/ethnic) variation in the variables of interest correspond to expectations since areas associated with political leaders have greater access to a full range of development goods.

A fourth section is devoted to the generalizability of these arguments to both other states in SSA and beyond. I discuss the conditions under which both the theory and the specific methodology are likely to be generalizable.

Section 1. Reviewing the links between politics and population with reference to SSA[3]

a. The multiple roles and goals of political actors

---

[2] There is some debate about what constitutes the favorite type of development good. The basic position adopted here follows from Hyden (1990: 200). He writes: "When given a choice of how to spend money on "development" rural Kenyans overwhelmingly prefer education, health and domestic water supply over investments in agriculture and physical infrastructure such as road construction." That said, I also assume that formal-sector employment opportunities and road-building are important aspects of development. Repeated conversations with rural informants in Kenya have shown that the first is valued because it provides "a regular salary," which provides some protection from the vagaries of climate and other elements of fortune. Similarly, not only do roads facilitate business opportunities; they are also symbolically important. One informant told me that a new road from Homa Bay to a fishing town in Suba District close to where he lived (in Nyanza Province) was a sign that "the President is bringing us closer to him." This was understood as a sign of the President's benevolent future intentions with respect to the area.

[3] As noted, this review of the links between population and politics is a summary of a larger "theory of politics for demography" presented in Weinreb (2001).

That political decisions are determined by things other than the objective merits of the proposed policy is an old theme in mainstream sociological and political theory. Marx, Weber, and their more contemporary theoretical disciples, for example, portray the state as an arena of competing interests (e.g., O'Connor 1973; Skocpol 1979; Mann 1986; Collins 1988). Policy tends to be determined by the most powerful of these interests. New Political Economy (NPE) approaches support these older assertions. A key proposition and finding of much NPE empirical research is that political decisions tend to be determined by private and potentially "perverse" political interests (Birdsall and James 1993) of individual political actors (Bates 1989; Buchanan 1991; Grindle and Thomas 1991; Meier 1991; Birdsall and James 1993; Hoogvelt 1997; Kimenyi and Mbaku 1999; Mbaku 1999; Rowley 1999).

In current microsociological terms, this differentiation of political actors' motives fits with Coleman's (1990) distinction between "corporate actors" and "natural persons." The latter are individual actors in the classic sense – ie., concerned with their own narrow interests. The former have a wider set of interests since, in the political context, they may be the agents of: (i) a given constituency in the legislature; (ii) a given party; and (iii) the state in the wider polity. In addition, they may also be (iv) the agents of the government if, in a parliamentary system, they are coopted from the legislature into the cabinet.

The crucial analytic question for a state-centered approach to demographic differences is: whose interests do these political actors serve? The reason this question should be asked is, as noted above, that the answer is likely to signal the main beneficiary of a given political actor's decisions.

I argue that a good answer can be represented by a simple "accountability principle." Consistent with both the skepticism of NPE and sociological approaches to the state it asserts: since political actors tend to want to maintain their positions, their decisions tend to favor the expected preferences of those to whom they owe their position. For political appointees this patron list necessarily includes senior people in the political hierarchy. But if it is a public office, it also necessarily includes some aspect of popular sovereignty, especially if they wish to retain the support of the public, or at least a section of the public. For example, even if the principle of popular sovereignty is not enshrined in a given state's constitution, leaders must be sensitive to the whims of popular opinion.[4] Cabinet members, therefore, owe allegiance both to the President who appointed them, but also to their own specific constituents (whose support the President may have been trying to attract by making the appointment). This is particularly true where a population is divided along ethnic lines, as I shall describe below. Similarly, the President, while constitutionally more independent – in theory he is accountable to the people in a democracy and to no-one in an autocracy – must also balance other demands. These clearly vary from state to state, but at a minimum include the goodwill of his own popular constituency. Other potentially important interest groups that he must pacify could include members of the socioeconomic élite – who are also potential political rivals – and leaders of the security forces – on whom he ultimately relies to maintain his position.

The accountability principle can be applied cross-nationally. But structural differences among states or among the societies from which states have emerged (or, in certain situations,

---

[4] As a key component of skilled statecraft this is enshrined in Machiavelli's notion of *virtú*. Some good recent examples have arisen out of Arab government responses to the latest *intifada*. For example, notwithstanding some discomfort about the possible radicalization of Arab political opinion – especially in the older monarchies of the Gulf states since radical Islamist groups inevitably include some anti-monarchical elements – Arab governments have had no choice but to allow anti-Israel demonstrations. Similarly, Palestinian spokespersons repeatedly argue that Chairman Arafat is unable to put an end to the *intifada* because doing so would contravene the popular will. The implicit premise in both these cases is that ignoring the popular will would diminish the legitimacy of these leaders even if they are not subjected to direct election.

on which they have been imposed) mean that there can be significant differences in the way that this principle manifests itself (I discuss these differences in Section 4). For hermeneutic reasons, therefore – that is, in order to limit the scope of the discussion to manageable proportions – I now narrow the focus to sub-Saharan Africa. I describe both the scale and nature of political patronage, and then the role of ethnicity in the political process.

b. How the structural characteristics of African states augment political actors' roles

Corrupt leadership in Africa is a popular theme among both Africans – as judged by a survey of African fiction[5] – and long-term Africa correspondents to the Western media (e.g. Harden 1991; Buckoke 1992; Berkeley 2000). Yet hiding behind this singular image of African leadership style, with its emphases on the accumulative success of long-term kleptocrats, is a more interesting set of institutionalized relationships that spread across the whole society. Specifically, in typical sub-Saharan African states politicians appear much more likely to act as state-sponsored patrons – that is, to have a powerful distributive role – than is the norm in Euro-American liberal democracies. This is because the relative dearth of economic opportunity outside the state apparatus means that although African governments are structurally relatively ineffective (Callaghan 1987), they also tend to have what Hyden describes as "a virtual monopoly in development" (1990:193).

Not only are African states the primary providers of basic infrastructure like schools, health-care and roads but, as important in an environment in which employment opportunities are extremely limited, they also tend to be the largest formal sector employers.[6] Note that this refers not only to employment opportunities in the civil service, but also in parastatal enterprises. In Kenya, for example, often cited as operating a relatively free market in comparison to most other sub-Saharan states during the 1970s and 1980s, the 177 "organizations with some level of equity participation by government or associated institutions and enterprises ... constitute about one third of the Kenyan economy in terms of employment and wages paid" (United Nations Centre on Transnational Corporations 1989:1). This is in addition to direct government employment through the civil service and paramilitary forces.

It is also important to understand that this augmented distributive role exists at all levels of state organization. It is part of a general two-way patronage system in which clients provide support for patrons and, in return, patrons distribute patronage to clients. By patronage, I refer to general development funds that are used to finance infrastructure like schools, clinics, roads, etc. Where patrons distribute insufficient funds they are often replaced, even in one-party states (eg. Barkan 1979). Similarly, at least in the top tier of government, clients who fail to provide sufficient support for their patrons also tend to be replaced.

c. The role of ethnicity

---

[5] For example, a common contextual backdrop is the often nameless but invariably powerful, corrupt and relatively unaccountable leader. For example, Chinua Achebe's (1966) term "Big Man", since popularized in the journalistic literature (eg. Harden 1991; Berekely 2001) first appears in *A Man of the People*. Francis Imbuga's (1976) *Betrayal in the City* and John Ruganda's (1980) *The Floods* both refer to "the Boss". Kyeyune, one of Ruganda's characters, also refers to "the ogre." Leaders as "Gamblers" appear in Opinya Okoth-Ogendo's (1971) poem of the same name and in Ambayisi Namale's (1994) novel *Honourable Criminals*. A more totalitarian (or perhaps theocratic) "Father" is also used (eg. Madanhire's 1996 novel *Goatsmell*).

[6] Dietz and Houtkamp (1998) argue that this role is a function of structural characteristics of African economies. They write: "In the virtual absence of private capital stock and of indigenous private capital tradition, governments in independent Africa have long seen themselves as the engines of growth, the design and implementation machinery for development" (1998:101).

I return to the question implicit in the discussion above: who are the most important patrons of these corporate actors? In the sub-Saharan African context, the most important determinant of accumulative patterns is ethnicity, generally referred to as "tribalism" in this African political guise. For many reasons – among them continued poverty and scarcity of development resources, manipulative and hate-mongering leadership, histories of ethnic domination and brutality, the attractions of group identity – ethnicity remains the primary status group affiliation for many people in most areas of SSA (Bangura 1994; Berkeley 2001).[7]

The political consequences of this flourishing of ethnicity, and simultaneously part of the reason for ethnicity's continued salience, are twofold. First, an ethnic constituency remains a necessary springboard for participation in national politics; and second, ethnic constituencies are used to validate the informal networks and patron-client relationships through which the state's resources are distributed (eg. Holmquist 1979; Hyden 1979; Shaw 1986; Khadiagala and Schatzberg 1987; Kitching 1980; Nyangira 1987; Throup 1987; Chazan et al. 1988; Bates 1987, 1989; Bradshaw 1990; Stamp 1991; Schraeder 1993; Bangura 1994; Himbara, 1994; Holmquist and Ford 1994; Young 1994; Gordon 1995). In short, if we were to characterize political life throughout SSA, we would say that the fundamental competition in political life in many countries in SSA is between ethnic groups. They compete for the right to control the state since the state is itself both an instrument for acquiring and exercising power.

It is this absolute centrality of ethnicity in African political life that places "tribalistic" politics at the center of any analysis of inequality in SSA, including differential demographic trends. The two-way political relationship enshrined in the notion of ethnicity – the upward flow of political support and the downward flow of resources within the loose ethnic-specific network (Barkan 1979; Smoke 1993) – means that it is less the strength of communities' demands that affects the distribution of development goods than communities' access to empowered political decision-makers. But this is itself largely a *function of ethnicity* since to provide funds to his constituents an elected representative must satisfy two necessary conditions: first, he needs to be elected, unlikely if he belongs to a different ethnic group than his constituents; and second, he needs to find favor with the executive, also a function of ethnicity since the executive tends to be dominated by a particular ethnic bloc.

Section 2.   Regional/Ethnic Inequality in Employment Opportunities, Healthcare Accessibility, Schooling, and Infrastructure Investment in Kenya

The key aim of this section is show that regional differentials across an array of data conform to the general political hypotheses described above. By doing so I lay the groundwork for the introduction and validation of the notion of political capital in the following section.

I begin by outlining some key points about Kenyan political history from which we can draw some simple hypotheses consistent with the theoretical framework. The remainder of the section is devoted to establishing the differentials.

---

[7] Achebe's (1983) comments are worth noting at length: "Nothing in Nigeria's political history captures her problem of national integration more graphically than the chequered fortune of the word *tribe*.... Perhaps it was an unrealistic dream at the best of times [ie. to dream of a Nigeria without tribalism] but some young, educated men and women of my generation did dream it.... all this self-conscious wish to banish *tribe* has proved largely futile because a word will stay around as long as there is work for it to do. In Nigeria, in spite of our protestations, there *is* plenty of work for *tribe*.... A Nigerian child seeking admission into a federal school, a student wishing to enter a College or University, a graduate seeking employment in the public service, a businessman tendering for a contract, a citizen applying for a passport, filing a report with the police or seeking access to any of the hundred thousand avenues controlled by the state, will sooner or later fill out a form which requires him to confess his tribe (or less crudely, and more hypocritically, his state of origin)" (1983:5-7).

a. The Kenyan story

Three key elements Kenyan political history are relevant to the formulation of hypotheses with regard to inequality. First, Kenya is typical of multiethnic societies in sub-Saharan Africa insofar as "tribalism" has been a constant in its party/factional politics. Ethnicity in Kenya, therefore, has been one of the more important determinants of access to political power and to the subsequent downward flow of patronage (Barkan 1979, 1992; Kitching 1980, Nyangira 1987, Holmquist and Ford 1994).

Second, administrative regions in Kenya tend to be dominated by single ethnic groups. The Kikuyu, for example, are concentrated in Central Province, the Kalenjin in Rift Valley Province, the Luo in Nyanza Province, the Luhya in Western Province, and the Meru, Embu and Kamba in Central and Eastern Provinces.

Third, a more singular characteristic of Kenyan history is that not only have two ethnic coalitions rather than one have dominated the state apparatus. But, more important, the transition from one to another was largely peaceful. Specifically, from independence in 1963 until 1978, Jomo Kenyatta was the President and led a Kikuyu-dominated coalition (though it is worth noting that towards the end of his Presidency the inner cabinet was increasingly drawn from his home district of Kiambu). The Kikuyu are the largest ethnic group in Kenya and under Kenyatta their main client groups were the related ethnic-linguistic groups like the Meru, Embu and, to a lesser extent, the Kamba. When Kenyatta died, however, Vice-President Daniel Arap Moi, from the smaller Kalenjin-speaking group of tribes inherited his office and relatively quickly discarded Kenyatta's old Kiambu-Kikuyu elite. This process was hastened after an attempted coup in 1982. Throughout his presidency, Moi has forged his strongest alliances with older KADU and *Majimbo* allies, especially the Maasai, various groups in Coastal Province, and the Luhya-speaking groups (Bates 1989, Barkan 1992).[8] In short, Kenya is a good test case for this theory because we can compare the distributive patterns across two administrations with different distributive priorities but within a stable political system. In many other African states, a transition of the reins of power from one ethnic coalition to another has occurred only with civil war (e.g. Uganda, Sierra Leone, Liberia).

Specific hypotheses in this section follow from the application of the theoretical ideas discussed in Section 1 to this Kikuyu-to-Kalenjin transition. That is, if state leaders use government resources for "perverse" political purposes then we should expect:

1.   The Kikuyu and their allies (residents of Central Province) to have done relatively better across a variety of measures until 1978;

2.   After a sufficient time-lag, during which the new ethnic contingents gradually increased their influence over the ministries, the parastatals etc., disproportionate improvements in the status of the Kalenjin and their allies (especially residents of Rift Valley Province);

3.   No significant change in the relative position of unaffiliated groups. For example, even though Luo were among the leaders of the Kenyan independence movement (eg. Odinga Oginga and Tom Mboya) they have been relatively disempowered politically since the mid-1960s.

As preliminary tests of the validity of these hypotheses I present a range of

---

[8] In the years preceding independence there was heated debate among Kenyan independence leaders about post-independence constitutional arrangements. The two larger ethnic groups, the Kikuyu and Luo, favored a unitary constitution with a powerful, centralized government. They formed the core of the dominant political party, KANU. The smaller groups, suspicious of Kikuyu-Luo dominance, favored a federal or *Majimbo* arrangement, in which certain powers would be reserved for regions. Leaders of Kalenjin- and Luhya-speaking groups belonged to the latter group, organized in the principal opposition party, KADU.

socioeconomic, health-related, and educational data on regional and ethnic inequality. As mentioned above, these are among the principal determinants of demographic behavior since they define key aspects of the risk-environment in which these decisions are made, including constraints on decision-makers. In addition, as mentioned earlier (footnote #2) these are also the preferred type of development goods.[9]

b. Ethnic and district-level stratification in labor opportunities
Two measures are used to describe the characteristics of the labor market. First, I look at trends in upper-level employment by examining the ethnicity of parastatal heads between 1978, the last year of Kenyatta's Presidency, and the 1990s. Second, I look at more general labor market characteristics, in this case using district-level data on earnings per capita.

i. Upper-level personnel choices: Trends in the ethnicity of senior parastatal personnel
The United Nations Centre on Transnational Corporations (UNCTC) Main Report (UNCTC 1989) on Kenya defines parastatals as (p.xi) "organizations with some level of equity participation by government or associated institutions and enterprises." As noted above, it counted 177 such enterprises in Kenya, of which the Kenyan Government owned 47 corporations complete, had a controlling interest in 36 and a direct or indirect minority in 94. These 177 parastatals, many of which were set up in conjunction with foreign companies, constituted about one third of the Kenyan economy in terms of employment and wages paid (and an equivalent proportion of the total public debt).

In addition to this major role in the Kenyan economy parastatals have also been a major instrument of government efforts to 'Kenyanize' the economy (Kitching 1980). This instrumental role has been made possible by two entrenched executive powers. First, the President had the authority to establish state corporations. And second, he or his overseeing Minister had the authority to appoint the Chairman and Board of Directors for that corporation.[10]

Relatively early in the UNCTC report the authors note that any analysis of the performance and role of parastatals (p.24) "..also involves issues such as how state power is manifested, through what institutional bases it is activated, and who benefits from its activities and in what ways." The relevance of ethnicity in decisions about 'benefit' is precisely the issue that I am addressing in this section. It allows me to generate the simple hypothesis that the selection of senior parastatal personnel should have reflected changes in the ethnic composition

[9] It is also important to note that the comparative approach allows us to avoid a potential inferential weakness in the analysis. Specifically, during the colonial era, administrators typically used an "indirect rule" approach in which certain ethnic groups were favored with development goods and others were largely ignored. In Kenya, for example, schools and labor reserves were concentrated among the Kikuyu and, secondarily, among the Luo. As professions opened to Africans, Kikuyu and Luo became the most likely to fill those positions. Subsequently, leaders of the independence movement were disproportionately drawn from these ethnic groups (especially from the Kikuyu, who were at the forefront of the *Mau Mua* rebellion). In the absence of a shift to a coalition led by an ethnic group that was *not* favored by the colonial administration, colonial favoritism would raise a serious analytic problem since it would suggest that, by virtue of advantages extended to them during the colonial era, especially in the realm of educational opportunities, Kikuyu and Luo were the most likely to benefit from the Africanization of the state in the early years of independence. Thus, pro-Kikuyu or pro-Luo biases in government spending could not be inferred from current data on inequalities, since the latter could equally reflect prior colonial investments. The Kikuyu-to-Kalenjin shift undermines this criticism (though so, too, does the measure of "political capital" to which I turn in Section 3).

[10] Although these powers were only institutionalized by the Kenyan Parliament in the State Corporation Act (September 1986), the UNCTC (1989: 70) argues that prior to the passage of this Act these were *de facto* presidential powers.

of government after Moi's succession. In order to test this I found the names of the senior personnel in the parastatals (those listed in the UNCTC 1989) for all years between 1978, the year of Kenyatta's death, and the 1990's. By senior personnel I referred to the Chairmen of the Board of Directors. Then, using family names as an indicator of ethnicity, or at least perceived ethnicity, I examined trends in the apparent ethnicity of these personnel between 1978 and the 1990s. Specifically, I divided the data into four time periods: 1978-81, 1982-85, 1986-89, 1990s. Within each time period I estimated the total number of person-years of chairmanships, and then the total number of person-years associated with a particular ethnic group.

The limitations of these data should be noted. They were much more difficult to find than I expected. For example, many of the parastatals' annual reports were not in the Kenyan National Archives, although they are supposed to be. Moreover, without a formal research permit, unlikely given the sensitivity of the research aims, my research assistant was not able to use the Parliamentary library. In short, there were enough reports to create a record of Chairmen in 33 parastatals, among which are the largest public corporations. They are listed in Appendix 1.

Figure 1 about here

The results, presented in Figure 1, fit neatly with the expectations. From 1978 there is a clear trend away from the chairmanship of parastatals by Kikuyu towards Kalenjin, a good example of substitution in political-economic dominance. In addition, the representation of most of the other ethnic groups in these elite positions remains relatively stable, though there is a relatively unambiguous reduction in Luo representation at this chairmanship level.

ii. District-level data on employment and earnings
I now turn to more general labor market characteristics. Figure 2 presents a set of graphs based on official Kenyan government data on earnings per capita (1973-1987) at the district-level (CBS 1985, 1989). Separate graphs are presented for districts dominated by the four major Kenyan ethnic groups, the Kalenjin, Kikuyu, Luhya and Luo, plus a fifth graph for the Kikuyu's long-term political and economic allies, the Meru, Embu and Kamba. A district is said to "belong" to ethnic group *x* if a majority of that district's population belongs to ethnic group *x* according to the 1989 census.

The proportion of the district population reporting as a member of the dominant ethnic group in the census is noted at the top of each bar in Figure 2. The figures are estimated using the algorithm noted below.

$$\ln \left[\frac{\dfrac{\text{District change in per capita earnings, 1979-87}}{\text{National change in per capita earnings, 1979-87}}}{\dfrac{\text{District change in per capita earnings, 1973-79}}{\text{National change in per capita earnings, 1973-79}}} \right]$$

It compares the proportion of total change in national earnings that occurred in a given district during the 2nd half of the Kenyatta presidency to the proportion of total change that occurred during the first decade of Moi's presidency. It is therefore a measure of the change in a district's share of the *national* increase in earnings per capita between two periods. Where the bar equals 0, a district's share of the change in the national pie was the same in the second period as in the first. Where the bar is greater than 0 a district had a larger share in the period after 1979, during the Kalenjin-dominated regime, than before, when the Kikuyu dominated Kenyan government; and vice versa. It should also be noted that the district's female population

aged at least 6 in 1989 – the data were from the 1989 census – was used to estimate the 'per capita' measure. I assume that the female population is a better *de jure* measure of the district's population because of high male labor migration rates (according to the 1989 census data, for example, provincial sex ratios for 30-39 year olds ranges from 82 males per 100 females in Nyanza to 108 males per 100 females in Rift Valley, which is itself a measure of the relative attractiveness of these two Provinces).

Figure 2 about here

Again, the data support the hypotheses. The proportionate increase in per-capita earnings was better in five out of the six Kalenjin districts, with especially large improvements in Elgeyo Marakwet, West Pokot and Baringo, districts with the highest concentration of Kalenjin. This means that the per capita earnings in Kalenjin districts improved much faster during the 1980s, under Moi, than during the 1970s, under Kenyatta. Similarly, the Luhya, allied with the Kalenjin for much of the 1980s, have increases in per capita earnings in three out of four districts.[11]

By contrast, per capita earnings improved faster in only one out of seven Kikuyu districts in the 1979-87 period than in the 1973-79 period. Indeed, in the single district which enjoyed a proportionate increase in earnings, Nakuru, that increase was only marginal (roughly 10%), and it should be noted that Kikuyu majority is only nominal (only 60% of the district's population) since the city of Nakuru is a fast-growing urban center in Rift Valley Province, the Kalenjin heartland. Similarly, the main political allies of the Kikuyu, the Kamba, Meru and Embu, also did relatively worse in the 1980s. This is especially true of Meru District.

Finally, the data on the Luo, politically marginalized during both the 1970s and 1980s, are, as expected, indeterminate. Per capita earnings improved faster under Moi in Siaya but not in Kisumu or South Nyanza.

c. Ethnic and district-level stratification on healthcare measures
Inequalities in two types of healthcare measures are evaluated. The first looks at the district-level data on the availability of healthcare. The second looks at individual-level data on the use of health facilities.

i. District-level availability of healthcare
I use district-level data on the supply of doctors and hospital beds from Kenyan Ministry of Health files, as presented in Bloom and Segal (1992). Although these are relatively old data – from 1983-84, more recent data were not available – they appear to be reliable measures of access insofar as they are strongly correlated with health outcomes reported in recent research surveys, summarized in Weinreb (2000).

Figure 3 graphs these district-level data. It uses the same method of district aggregation as reported in the construction of the per-capita change in district-level wages, graphed in Figure 2. That is, each district was assigned to a particular ethnic group. The number of beds and

---

[11] Note that the scores are relatively low in Nandi and Uasin Gishu, districts closely associated with Moi. This supports the overall hypothesis since Moi became a government minister in 1966, so we can expect him to have diverted resources to his district throughout Kenyatta's presidency. As this is a measure of relative growth in the second period compared to the first, the effect of his elevation to the Presidency would be less marked. In contrast, once he became President, Moi needed to build a more solid support network among other Kalenjin sub-groups. Hence the much faster growth in per capita earnings in Elgeyo Marakwet, West Pokot, and Baringo Districts.

doctors in all of the districts assigned to that ethnic group were summed to yield a single score of availability of beds and doctors for that ethnic group, weighted by that group of districts' female population. In order to allow for easy comparisons with the regional tabulations of health outcomes, ethnic groups assigned only one district were grouped with the dominant provincial ethnic group. Thus, the Kisii and the Luo have a joint score, equivalent to the score for Nyanza Province, and the Kamba and Meru and Embu score is the same as a score for Eastern Province.

Figure 3 about here

The first thing to note is that the number of women per doctor, whether that doctor is a private or public physician, appears to be totally uncorrelated with the number of women per hospital bed. Thus the Kikuyu-dominated districts have the lowest women:bed and women:doctor ratios, but the Kalenjin areas have the highest women:bed and the second lowest women:doctor ratio. Similarly, the Luo and Kisii have the second lowest women:bed ratio but the highest women:doctor ratio. One interpretation of these patterns fits with the emphasis on community-induced development in Kenya (the *Harambee* "lets pull together" ethos). That is, a community or local government can build all the hospitals, clinics and beds that it wants but the provision of trained medical staff for those facilities is in no way guaranteed.[12]

It should also be noted that decisions to supply public doctors – by the early 1990s public doctors represented only 40% of Kenya's 3,300 registered doctors (Schwarz 1996) – are largely made by the Ministry of Health (Bloom and Segall 1992; Smoke 1993). Moreover, we can hypothesize that for private doctors – aside from the relatively small number of mission and NGO doctors (Bloom and Segall 1992) – the decision on where to locate is largely an autonomous one, determined by economic and 'standard of life' concerns, where the latter includes living in one's own ethnic and linguistic community and/or in a more materially comfortable setting, a function of the same development spending that I am trying to identify in this section of the dissertation.

The second feature of Figure 3 to note, then, is the relative density of private and public doctors across regions. In the case of the public doctors this should tell us something about the priorities of government decision-makers, and in the case of private doctors it should tell us something about the local economic conditions that doctors presumably take into account when they are deciding where to locate their medical practices (e.g., the availability of patients able to pay for services). Again, the data appear to support the main hypotheses of the paper. The districts with the highest public doctor:woman ratio are the Kikuyu, Kalenjin and Luhya districts, and the areas with the lowest such ratio are the Luo/Kisii, and Kamba/Meru/Embu districts. Moreover, the areas with the lowest woman:*private* doctor ratio are the Luo/Kisii districts. There are approximately 5 times as many women per private doctor in these districts as there are in Kikuyu, Kamba/Meru/Embu, and Kalenjin areas. The contrast with the Kamba/Meru/Embu is particularly strong because there is very little difference in the relative availability of *public* doctors. This says something about the relative attractiveness of Nyanza and Eastern Provinces for both government and ministerial decision-makers *and* individual doctors.

It should also be noted that there is little indication that this occurs because Luos are under-represented in senior positions in the health sector. In fact, the opposite is more likely the

---

[12] The fifth national development plan (1984-88) notes (p.89): "Because of the importance of self-help efforts in providing health and education facilities, Government expenditures in these areas... greatly underestimate the nation's development spending on both health and education." (Quoted in Seeley 1987:560)

case. The stereotype of Luos is that they are over-represented in Kenyan academic circles. Presumably this also extends to medical profession though the sensitivity of ethnicity in Kenya make this a difficult hypothesis to test.

ii. Individual-level data on health outcomes
As mentioned above, these district-level data on the availability of healthcare broadly correspond to data on the use of health facilities and current health outcomes as recorded in recent surveys. Table 1 presents the distribution of a number of these measures from the 1998 DHS: Births in last 3 years where antenatal care was provided by a doctor; children aged 12-23 months who had received all eight recommended vaccinations; children younger than 3 who had symptoms of acute respiratory infection (ARI) in the last 2 weeks and had been taken to a health facility; children younger than 3 who had suffered from diarrhoea in last 2 weeks and had been taken to a health facility, or who had received oral rehydration salts (ORS) or recommended homemade fluids (RHF).

Table 1 about here

Only Nairobi, Coastal and Rift Valley Province score higher than the Kenyan mean across all five of these measures. *A priori* this is surprising given the differences in background characteristics of residents in these three areas, shown in the last three columns of Table 1. Rift Valley, for example, has the least proportion urban of these three (14.2 per cent in comparison to 100.0 and 41.7 per cent). Moreover, both Rift Valley and Coastal Province have considerably higher fertility – multiple children presumably affect a family's ability to provide such services – and lower levels of maternal education than in either the Nairobi or Central Province sample. Indeed, in terms of educational status, women in both Rift Valley and Coastal Province are the least educated in Kenya. In short, these data indicate that returns to both urban residence and to maternal education in terms of basic health outcomes are not as pronounced as we might expect. Other types of investment appear to be more important.

d. Ethnic and district-level stratification on education
Although aggregate distributions shows that a higher proportion of Rift Valley women have no education than women in all other provinces with the exception of Coastal Province, that single variable is a relatively crude measure insofar as it does not take account of age/cohort differences in educational status brought about by the speedy post-independence expansion in educational facilities. Exploring trends in regional differences is better accomplished, I think, by comparing educational attainment across successive birth cohorts. This is also a good measure because educational status tends to be fixed at a relatively early age.

Figure 4 describes ethnic-specific trends in "no education" across 5-year cohorts using data from the 1993 Kenya DHS (data for the 1965-84 cohorts are presented in the associated table). Note that these are 'potential primary school cohorts' rather than birth cohorts, since it is easier to relate specific historical periods and political events to the year in which the respondent would have likely begun schooling, rather than to their birth year. Thus, women aged 6 in 1980-84 are in the 15-19 age group in the 1993 data. And those aged 6 in 1950-54 are in the 45-49 age group in 1993.

Figure 4 about here

Again, the overall results fit with expectations. First, there are radical improvements in the levels of schooling over the 30 years represented in the these data. 56.4% of women aged

6 in 1950-54 had no schooling. In the incoming primary school cohorts in 1960-64, 1970-74 and 1980-84, that percentage was reduced to 34.4, 11.8 and 3.7 respectively. At least on this minimal measure of education, therefore, Kenya developed an almost universal system of education relatively quickly, continuing the expansion of schooling opportunities reported by Court and Ghai (1974) in relation to the 1960s.

Within this general increase in educational coverage, however, there are some of the expected ethnic trends. For example, the Kikuyu 1950-54 school cohort has the third lowest rate of non-schooling (47.42%). Among the 1965-79 cohorts, however – those children likely to begin their schooling careers during Kenyatta's Presidency – the Kikuyu have the lowest rate of non-schooling (respectively 7.08, 0.81, and 1.76% across the three periods).

Similarly, Kalenjin improvements also fit the political-historical pattern. 72.06% of Kalenjin women in the 1950-54 schooling cohort had no formal schooling, the highest percentage of any ethnic group with the exception of the Mijikenda group.[13] The 1970-74 school cohort remain relatively ill-educated, their 16.57% well in excess of the average of 11.84%. Within 10 years, however, educational coverage in Kalenjin school cohorts was among the most universal. Specifically, only 1.89% of the Kalenjin 1980-84 school cohort (women aged 15-19 in 1993) had not gone to school, well below the 3.69% average for that cohort, and bettered only by the Kikuyu (1.56) and Kisii (1.27).

Looking at the changes between 1975-79 and 1980-84 is also instructive. The only groups that reduced the percentage of non-educated to below 2% (among those aged 6 in 1980-84) were the Kalenjin and Kisii. By contrast, educational coverage among the Embu, Meru, and Kamba, allies of the Kikuyu, deteriorated.

In short, DHS data on respondents' schooling show that educational coverage improved at a faster than average rate for the two groups, the Kikuyu and Kalenjin, whose chief patron was the state President. Moreover, the timing of these groups' improvement correlates with the timing of the Kenyatta's, then Moi's, ascendancy to that office.

e. General infrastructure development

Two measures of general infrastructure investment are presented. The first describes the distribution of road maintenance (and road-building) at the district level, and the second describes the distribution of households in which drinking water is piped directly into the house. I consider both to be indicators of government investment priorities, although the latter jointly indicates government investment – e.g., laying the municipal network of pipes that makes a household's decision to link to the network possible – and a household's ability to pay for the installation of running water.

i.The maintenance of roads
Notwithstanding Hyden's (1990) depiction of road building as a type of development for which there is little popular demand, it is useful to consider regional variation in road building if only because roads (a) require relatively large investments which provide (b) large capital inflows into road-building areas and (c) increased labor opportunities for local residents. Finally, (d), roads subsequently facilitate other types of development as the costs of transport fall.

Figure 5 about here

---

[13] Arguably, the Mijikenda are cultural outliers in terms of women's education because of their traditional Muslim conservatism, maintained in part through strong cultural ties to some of the more conservative areas in the Arabian peninsula and Persian Gulf (Middleton 1992).

Figure 5 presents data, by the same ethnic regions described above, on total kilometers of maintained roads in 1980, and on the percentage of total national changes that take place in these areas between 1980-85 and 1985-91. The data are from CBS (1985, 1989, 1992). The distribution conforms to the patterns already seen with respect to wage-labor, health facilities and educational outcomes. Specifically, beginning from a higher base, Rift Valley Province received the largest proportionate increase in maintained roads in 1980-85. Moreover, it was the only province to increase the portion of the total national investment in roads in the 1985-91 period. In fact, in the latter period, 63% of total national increase in maintained roads occurred in this Kalenjin-dominated province.

ii. Individual-level data on source of drinking water
Similar patterns emerge when we compare the distribution of households with water piped directly into their residence across 3 waves of Demographic and Health Surveys (DHS) data (in 1988, 1993, and 1998), shown in Figure 6. The only province to have had consistent increases across the two inter-survey periods is Rift Valley Province (larger in both relative and absolute terms). In all other provinces, the percentage of sampled households with piped water remains relatively stable.

Figure 6 about here

f. Conclusion
As indicated above, this section has been devoted to preliminary tests of the validity of the political hypotheses. I have presented a range of data on regional and ethnic differentials in labor opportunities, availability of healthcare, educational characteristics and general infrastructure investment. The results on all these measures conform to the political hypotheses. Specifically, the patterns of stratification on these measures, all of which are among the principal covariates of demographic outcomes, are consistent with the ethnic parameters of political competition in Kenya. Favored groups appear to have benefitted disproportionately.

Section 3. The Effects of Political Capital on Regional/Ethnic Inequality in Kenya
Thus far I have not tried to directly relate the distribution of these determinants of demographic decisions to corporate actors. The argument is, therefore, missing an important component. In this section I try to fill this gap by introducing an analytic construct that measures natural person's access to political power by estimating the seniority of their political representation over time. I treat this measure as an indicator of "political capital," a component of social capital.

a. Measuring access to political power
Consistent with the my discussion of the nature of politics in sub-Saharan Africa, it is possible to think of a measure of an area's political power as being equivalent to the seniority associated with its political representative. The higher on the national political ladder an area's representative has climbed – and note that Kenya's Parliamentary system means that members of the executive are drawn from the legislature, that is, from the elected and nominated area representatives – the greater the amount of state resources he should be able to direct to his home area.

With this principle in mind I collected a full history of political representation in Kenya.

That is, in any year from independence in 1963 until 1996 I have a measure of how senior a governmental position was filled by a particular constituency's parliamentary representative. Out of these data I constructed an area-specific political score, presented in Figure 7. Panel A presents the top tier in Barkan's (1979:73) depiction of the "patron-client linkage structure" in Kenya. The chief patron is the President, also a Parliamentary representative. Under him are the chief ethnic/regional patrons who serve as cabinet ministers. The lowest members in this top tier are the emerging ethnic/regional leaders who serve as assistant ministers. Under them, not shown, are the constituency patrons – the backbench members of Parliament – other constituency leaders, clan leaders, and finally the public.

Figure 7 about here

Panel B notes the constituency-specific political score into which each of these positions is translated in each year of observation, yielding a simple measure of *political points per person-year in office*. This score should be interpreted as the level of seniority in government, an indicator of the political actor's access to state resources. Although the range of scores which I assign, from 1 to 5 per person-year, is arbitrary, the specific values – positively associated with the seniority of the member – fits with the overall theoretical framework.

b. Political capital
At the individual level – that is, when assigned as a "global characteristic" to all residents in a particular constituency[14] – this measure of political power is an indicator of a type of social capital that can be called political capital. It has the three key characteristics that Portes (1998) identifies as the essence of social capital as understood by Bourdieu and Coleman. First, it "inheres in the structure of ... relationships. To possess social capital, a person must be related to others" (Portes 1998:7). Second, it facilitates "certain action of actors whether persons or corporate actors within the structure" (Coleman, 1990:302), but specifies "those others, not himself" as the "actual source of his or her advantage" (Portes 1998:7). Third, it is a public good – that is, a resource that can benefit all members of the relatively closed social network.

On the other hand, on specific characteristics the notion of political capital also comes closer to Bourdieu's original formulation of social capital than to Coleman's. First, it treats the political patron-client structure as an instrumentally constructed network tie that (a) institutionalizes social relations between two parties with the aim of (b) benefitting both parties in the relationship. And second, it emphasizes the fungibility of the political capital. That is, because I am using this construct to try to explain differential access to opportunities, political capital, as per Bourdieu's suggestion, can be reduced to more traditional measures of economic capital.

c. Ethnic variation in political capital in Kenya
The estimation procedure for the political scores described above are constituency-specific. Because DHS data are not linked to constituencies, however, I transformed these into district-level scores by simply aggregating all constituency scores in a given district into a single measure. In turn, these were aggregated to ethnic blocs based on the proportion of the district's female population – assumed to be a more reliable indicator of the *de jure* ethnic composition than the male population – identified as belonging to a particular ethnicity in the 1989 census.

---

[14] Kreft and de Leeuw (1998:9) define 'global characteristics' as "variables that measure characteristics of the context directly, instead of using aggregates of variables that are measured over individuals."

Most districts in Kenya are dominated by a single ethnic group. For example, excluding Nairobi and Mombasa, the median proportion in the districts sampled in 1993 was 0.87 (see Appendix 3.3 for a more detailed breakdown). In short, the political scores can be interpreted as the level of political capital associated with particular ethnic groups or, in certain situations, ethnic blocs.

Figure 8 shows the emergence of a few patterns in these levels of political capital among the 4 largest ethnic groups (and a residual category) after constructing these ethnic blocs.

Figure 8 about here

Four main trends should be noted. First, most notably, and as expected, there is a strong surge in levels of Kalenjin political capital between the early 60's and early 80's. Thereafter it flattens out. This surge reflects the increasing power of Vice-President – from 1966 – then President – from 1978 – Moi and his ethnic allies.

Second, there is a relative reduction in the levels of political capital associated with the two leading ethnic blocs at the time of independence, the Kikuyu and Luo. In the 1963-67 period these two groups – which included the main leaders in the Kenyan independence movement – accounted for more than 50% of all the political points. In the first five years of Moi's presidency (1978-82), however, they accounted for just over 35% of the available political points.

Third, smaller ethnic groups' share of political capital has also changed. In particular the Kamba, Kisii and Mijikenda have done relatively better under Moi than under Kenyatta. This fits with the general impression that Moi, hampered by the Kalenjins' relative numerical weakness, has included more members of smaller groups in his political bloc.

Finally, the data also imply that, even with these noted ethnic-specific trends in representation, members of all major groups are represented in government at all times. This is to be expected given the relative political stability of Kenya in comparison to many other states in sub-Saharan Africa. In contrast, more monopolistic approaches to ethnic oligarchy have contributed to considerable unrest and civil war in several other SSA countries (e.g, Uganda, Rwanda and Burundi, Cameroon, Liberia and others).

d. The relationship between political capital and demographic covariates
These political scores were merged with 1989 DHS rural women's data. I used 1989 data rather than more recent data since the greater number of rural districts covered (N=34) allows for more statistical power than in the 1993 or 1998 DHS (N=15). Urban areas were eliminated because at the district level urban constituencies are not homogenous in terms of ethnicity, which makes it impossible to infer political capital effects among ethnic-specific networks (at the constituency level it would be possible as there are ethnic concentrations in many urban areas but, as mentioned above, DHS data are not available at that level).[15]

A set of OLS and logit models were then estimated in order to assess the relationship between the *population weighted level of political capital* associated with all the constituencies in a given district and variation in selected demographic covariates in three categories:

---

[15] This is a shame since I imagine that a slight variant of the political capital argument could effectively explain the urban advantage across a number of development goods. For example, political decision-makers themselves tend to be urban residents and want their own families to have improved access to, at a minimum, good schools and health care. In addition, however, because they move in the same social circles as the non-political urban elite, the latter's demands for a larger range of services, including demands about program placement, may be privileged by the simple fact that they have more immediate social access to political decision-makers. They can therefore use informal lobbying techniques and, if those fail, hold the political actor socially accountable.

- indicators of individual's socioeconomic status – years of schooling, whether currently employed);
- indicators of access to healthcare and household health – assisted by a doctor or nurse at last birth, average cluster time to a source of family planning, whether the last child had any vaccinations;
- indicators of household's socioeconomic status – household has access to piped water, has a flush toilet, and electricity.

Table 2 presents results from these models. Individual's socioeconomic status Estimates for the relationship between political capital and years of schooling and current work status are in columns 1 and 2, for the health variables in columns 3 - 5, and for the household socioeconomic variables in columns 6 - 9.

Table 2 about here

Individual's socioeconomic status

The average age of respondents in the 1989 DHS was 28.2. On average, therefore, they were born in 1961. Because of this, the model in column 1 only uses the measures of political power from 1963-1972.

As expected, the models show that the lower the level of political capital, the fewer years of schooling associated with the respondents. I noted the inherent ambiguity in retrospectively interpreting educational status data in the previous chapter. Nonetheless, at least one way to interpret this result is that those in power in the early years of independence – during which time there was an enormous expansion in educational opportunities throughout Kenya (Court and Ghai 1974) – were more likely to direct facilities to their own ethnic areas.

A similar result is seen with respect to current work status. Women who are currently working are more likely to be living in an area that enjoyed higher levels of political capital in the first 10 years of independence.

Access to healthcare and household health

Columns 3 and 4 present two indicators of local healthcare availability. Column 3, predicting whether a woman was assisted at her last birth by a doctor or nurse – an indicator of the availability of trained medical personnel – shows the expected pattern. It differs from the models presented in columns 1 and 2 insofar as the distribution of political capital in the first 10 years after independence is unimportant. Rather, the distribution of political capital from the mid-1970s – with the exception of the 1978-82 period – affects the likelihood of medical assistance. Specifically, the lower the levels of political capital, the less likely are women to have been assisted by trained medical personnel.

The story appears to be completely different with respect to the availability of contraception, however. Column 4 shows that with the exception of the 1963-67 period, areas with the lowest levels of political capital have the most easily available family planning. One interpretive approach to this result is to assert that the greater availability of family planning in areas with low political capital is attributable to NGOs that concentrate their resources in areas ignored by government programs. An alternative explanation – though this is flimsy evidence for so cynical a claim – derives from a classical 'conflict theory' stance: those in power have attempted to make contraception more easily available in opposition areas because, like traditional mercantilists, they believe that political and numeric strength are related.[16]

---

[16] I know of no data that would allow me to test which of these competing interpretations appears to be the 'right' one. However, insofar as the availability of contraception is related to the provision of general health care, the reduced

Finally, Column 5 presents a model predicting whether the respondent's last child had any vaccinations. The relationship between political capital and the child's vaccination only exists in relation to one of the time periods. But it is in the expected direction. That is, if the last child was born in an area with a relatively high level of political capital between 7 and 11 years prior to the survey, s/he was more likely to have been vaccinated.

Household's socioeconomic status
Stronger results can be seen in relation to access to piped water, which can be jointly considered to be an indicator of the household's or community's wealth and an indicator of health (note that this refers to water piped directly into the house or to a public tap). The lower the level of political capital in all periods except for 1968-72, the less likely are that area's residents to have access to piped water.

Similarly, political capital accumulated in the Kenyatta era – that is, the pre-1979 period – is positively associated with the likelihood of having a flush toilet and electricity.

In summary, political capital is associated with all of these indicators of health and wealth and, with the exception of the provision of sources of family planning, it is associated with these indicators in the expected direction. Thus, residents in areas with lower levels of political capital now or in the past tend to have lower educational status, fewer economic opportunities, and reduced access to birth assistance by trained medical personnel. In addition, they are less likely to vaccinate their children and have access to relatively clean piped water or electricity.

4. Some comments about generalizability
In combination with both the theoretical framework presented in Section 1 and other data on regional inequalities presented in Section 2, the observed associations between the measures of political capital and the indicators of household's health and wealth presented in Section 3 underscore the overall validity of the notion of political capital itself, as well as its more specific operationalization in this analysis.

In order to accurately assess the implications of this for the analysis of demographic patterns in general it is important to specify claims about the generalizability of this analysis in the Kenyan context to other sub-Saharan African states, and to states outside Africa. To facilitate this discussion I think it is useful to differentiate between the generalizability of the theory and its operationalization.

a. Generalizing the theory
At its simplest, the theory is generalizable to all contexts, I think, because it is entrenched in long-standing assumptions about the preferences of both political actors and constituents, and the nature of political action. With respect to the first of these, the theory asserts that at some level, whether justified by broader political ideology or not, political actors have the natural bias of Coleman's "natural persons:" they seek to protect their own interests. This psychological pessimism has been a fundamental assumption in social and political thought since at least the sixteenth century. It underlies both Hobbes' and Locke's social contract theory, for example. It remained beloved through the Enlightenment – Hume, for example, warned that "...in contriving any system of government ... every man ought to be supposed a knave, and to have no other end ... than private interests" (cited in Seldon, 1991). Ultimately, it provided part of

_____

likelihood of medical assistance at birth in areas with low political capital is surely an indicator that NGOs do not play a larger role in under-represented areas.

the rationale behind the intricate sets of checks and balances that became standard elements in post-Enlightenment republican constitutions. There is no reason to assume that contemporary political actors have changed. On the contrary, to the extent that politics continues to provide opportunities for personal enrichment, in both less and more developed countries, the assumption remains all the more relevant.

Second, the theory also assumes that, like their political patrons, constituents judge the efficacy of leadership through the lens of personal gain. Thus, the downward flow of resources leads to the upward flow of political support. In the main body of the text I chose to limit the discussion of this to SSA. But the relationship between these flows is similar in developed countries. An old aphorism in political campaigns is that "people vote with their pocket-books." More important, it has been shown in the U.S. that the longevity of congressional representatives' careers is partly a function of the extent to which they can direct funds to their home districts – Besley and Case (1995) neatly refer to this as "opportunistic behavior." For example, each additional \$100 per capita non-transfer federal spending that incumbent congressional representatives are able to allocate to their states is worth two per cent of the popular vote in a subsequent congressional election (Levitt and Snyder 1997).

Third, and more generally, the embeddedness of the notion of political capital in contemporary social theory also authenticates claims about its generalizability, in particular parallels between it and theories of more general social action. For example, as depicted here, the notion embeds political action in a social networks framework since the underlying sociological assumption is that political decisions are, in part, a product of the decision-makers' social ties. Indeed, because political capital is an indicator of the intensity of linkages between an average resident in a given parliamentary constituency and their representative (of given seniority), it is precisely a subset of these ties that the measure of political capital attempts to capture. Again, this general social definition of political action is as old as the systematic analysis of politics itself. In Plato's *Republic*, for example, children selected to become members of the ruling Guardian class were separated from their natal families in order to minimize the maladministrative effects of legislative favoritism. Implicit in this Platonic ideal is the idea that the objective assessment of a given policy's merits is undermined by personal linkages. Indeed, this has become a core tenet in the practice of both law and social science: judges are expected to recuse themselves from cases in which they have a personal interest; stranger-researchers are believed to collect more accurate data than insiders (e.g. Simmel 1950); in contrast – and this was precisely what Plato was attempting to avoid – political actors determine policy in which they have potentially extensive personal interests.

b. Generalizing measurement and analysis

Even if the broad theory is generalizable, there may be some limitations on its operationalization, that is, on the observability of political capital effects. Some *a priori* suggestions with regard to this follow.

First, there is a single ideological constraint on the utility of political capital. The extent to which political capital effects can be observed is likely a function of the general political tradition of the state, in particular the extent to which social equality among groups is promoted. Where social equality is an explicit aim of government policy – as it is, say, in much of continental Europe – differences in access to social goods like healthcare and education are minimized. In contrast, I imagine it would be relatively easy to find some such political capital effects on, say, racial and ethnic differences in access to health and schooling in the U.S.. I return to this below.

Second, the observability of political capital effects is affected by the level of social heterogeneity. In a socially homogenous state few essentialist differences can emerge among groups. This limits the extent to which policies can favor one group at the expense of the other

(in terms of causality, this is related to the previous point since it is likely that the more homogenous a state, the more likely it is to favor the development of a national ideology in which social equality is stressed).

Third, net of the ideology of social equality, a state's general level of development is negatively correlated with the observability of political capital effects on social dimensions. This is because wealthier countries tend to have relatively well-educated and healthy populations (though obviously there are important differences among wealthy countries). Thus, political capital effects will likely be observed less in social goods than in more economic ones. Both French and U.S. farmers, for example, wield a disproportionate influence on agricultural policies through legislators associated with farming areas. Similarly, Senator Jesse Helms has repeatedly used his committee chairmanship to block confirmation of both Clinton's and Bush's Treasury nominees. His latest demands are intended to assure his state's textile industry protection from cheaper foreign competitors. In both of these cases, politically mobilized and geographically specific interest groups wield political capital through positionally powerful representatives. If those representatives refused to accede to those groups' requests, there would doubtless be attempts to replace them as local representative at the next opportunity.

Finally, the observability of political capital effects is also affected by idiosyncratic political factors. Two of these are particularly important. The first is the electoral rules which determine the extent to which a given political actor can be identified with a geographic area. It is likely easier to measure the intensity of a linkage between a given constituency and associated political figures where, for example, that constituency is isomorphic with a geographical area rather than where a constituency is associated with a given class of people. Hence, the theory is easier to apply empirically in pluralistic democracies than in political systems in which leaders are elected through pure proportional representation or in which they represent, say, an unelected oligarchy. The reason for this difference is simply that, unless that class of people is concentrated in a specific geographical area, the benefits which accrue to them as a result of political capital will also be extended to members of other groups with whom the area is shared.

The second of these idiosyncratic political characteristics is the extent to which a single person can influence the distribution of government resources. Typically there are more constraints on political actors' whims in the older democracies than in developing countries. That said, even in a system as oriented around checks and balances as exists in the U.S., certain positions in both the executive and legislature allow those filling them to wield disproportionate power, as noted above in relation to Jesse Helms.

Conclusion

The systematic exploration of differences is one of the older substantive goals of demography. Thus far, explanations have been centered around some type of modernization or cultural hypothesis. I have argued here that both are inadequate since, as recognized by Hammel (1990), both indicators of modernization and normative cultural values are themselves outcomes of political processes.[17] We therefore need to incorporate measures of political competition, since this gives rise to general social inequality, and district-specific measures of the intensity of linkages between given areas and accomplished political competitors. I refer to this as a state-centered political capital approach.

---

[17]An even more unsavory type of explanation for differences can be sought in microeconomic approaches. One unattractive example: demographic outcomes reflect differential consumption of health goods, and these latter reflect different tastes; therefore, differential child mortality reflects differential "tastes" for child death.

I have argued that this approach is important for those seeking to understand all group-level differences in demography, as well as differences in more general measures of social well-being. The bulk of the paper has focused on explanation of differences in the developing world, especially in SSA. This is because of the reasons listed in the last section. First, states in the developing world are typically heterogenous. Second, often this heterogeneity is based on ethnic, religious or clan divisions which are geographically specific – allowing for the easy association of a given area with a senior political figure – and which also correspond to associations between groups and political factions/parties and, subsequently, associations with different patronage systems. Third, other than in socialist states, developing countries tend to place little value on ideologies of social equality. Fourth, because development levels are low, relatively small political capital effects on investment in development goods are easily observable. And finally, most developing countries have unitary constitutions with minimal checks on executive power.

That said, I do not want to imply that this approach should be automatically restricted to the developing world. It may also be used profitably in developed countries with high levels of social inequality. The prime candidate here is clearly the U.S.. Although wealthy, it is heterogenous with respect to race and ethnicity, and those differences neatly correspond to residential segregation (Massey and Denton 1994), to substantial differences in access to health and educational institutions, in health and behavioral outcomes (National Academy Press 1997), and access to political power. The political system also allows for considerable extraction of government resources by well-placed political leaders, especially in the legislature. In short, the U.S. has many of the primary ingredients for a political capital approach to the explanation of demographic differences.

References

Achebe, Chinua. 1966. *A Man of the People*. Nairobi: East African Educational Publishers.
———. 1983. *The Trouble With Nigeria*. Nairobi: Heinemann Kenya.
Bangura, Yusuf. 1994. "Economic Restructuring, Coping Strategies and Social Change: Implications for Institutional Development in Africa." *Development and Change* 25:785-827.
Barkan, J. D. 1979. "Legislators, Elections, and Political Linkage." Pp. 64-92 in *Politics and Public Policy in Kenya and Tanzania*, eds. Joel D. Barkan and John O. Okumu. New York: Praeger.
———. 1992. "The Rise and Fall of Governance in Kenya." Pp. 167-92 in *Governance and Politics in Africa*, eds. G. Hyden and M. Bratton. Boulder, CO: Lynne Rienner.
———. 1994. "Resurrecting Modernization Theory and the Emergence of Civil Society in Kenya and Nigeria." Pp. 87-116 in *Political Development and the New Realism in Sub-Saharan Africa*, eds. David E. Apter and Carl G. Rosberg. Charlottesville: University Press of Virginia.
Bates, Robert H. 1989. *Beyond the Miracle of the Market: The Political Economy of Agrarian Development in Kenya*. Cambridge: Cambridge University Press.
———. 1987. "The Politics of Food Crises in Kenya." *The Political Economy of Kenya* ed. Michael G. Schatzberg(New York: Praeger Publishers):75-92.
Besley, Timothy and Anne Case. 1995. "Does Electoral Accountability Affect Economic Policy Choices? Evidence From Gubernatorial Term Limits." *Quarterly Journal of Economics* 110(3):769-98.
Berkeley, Bill. 2001. *The Graves are Not Yet Full: Race, Tribe and Power in the Heart of Africa*. New York: Basic Books.
Birdsall, Nancy and Estelle James. 1993. "Efficiency and Equity in Social Spending: How and Why Governments Misbehave." Pp. 335-58 in *Including the Poor: Proceedings of a Symposium Organized by the World Bank and and the International Food Policy Research Institute*, eds. Michael Lipton and Jacques van der Gaag. Washington, DC: The World Bank.
Bloom, Gerald, and Malcolm Segall. 1993. *Expenditure and Financing of the Health Sector in Kenya: IDS Commissioned Study #9*. Brighton, UK: Institute of Development Studies at the University of Sussex.
Bradshaw, York W. 1990. "Perpetuating Underdevelopment in Kenya: The Link Between Agriculture, Class, and State." *African Studies Review* 33(1):1-28.
Brass, William and Carol L Jolly, eds. 1993. *Population Dynamics of Kenya*. Washington, D.C.: National Academy Press.
Buchanan, James M. 1991. *Constitutional Economics*. Oxford: Basil Blackwell.
Buckoke, Andrew. 1991. *Fishing in Africa: A Guide to War and Corruption*. London: Picador.
Bulatao, Rodolpho A. and Ronald D. Lee. 1983a. "A Framework for the Study of Fertility Determinants," Pp. 1-26 in *Determinants of Fertility in Developing Countries: Volume 1: Supply and Demand for Children*, eds. Rodolfo A Bulatao and Ronald D. Lee. New York: Academic Press.
Bulatao, Rodolpho A. and Ronald D. Lee. 1983b. "The Demand for Children: A Critical Essay," Pp. 233-287 in *Determinants of Fertility in Developing Countries: Volume 1: Supply and Demand for Children*, eds. Rodolfo A Bulatao and Ronald D. Lee. New York: Academic Press.
Callaghan, Thomas M. 1987. "The State As Lame Leviathan: The Patrimonial Administrative State in Africa." Pp. 87-116 in *The African State in Transition*, ed. Zaki Ergas. New York: St. Martin's Press.

Central Bureau of Statistics (CBS). 1985. *Annual Statistical Abstract*. Nairobi, Kenya: Central Bureau of Statistics.

Central Bureau of Statistics (CBS). 1989. *Annual Statistical Abstract*. Nairobi, Kenya: Central Bureau of Statistics.

Chazan, Naomi, Robert Mortimer, John Ravenhill, and Donald Rothschild. 1988. "Ethnicity, Class, and the State." Pp. 101-25 in *Politics and Society in Contemporary Africa*, eds. Robert Mortimer, John Ravenhill, Donald Rothschild, and Naomi Chazan. Boulder, CO: Lynne Rienner Publishers.

Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge, Mass: Harvard University Press.

Collins, Randall. 1988. *Theoretical Sociology*. San Diego, CA: Harcourt Brace Jovanovich.

Dahlgren, Goran. 1994. "The Political Economy of Health Financing Strategies in Kenya." Pp. 453-70 in *Health and Social Change in International Perspective*, eds. Arthur K. N. C. W. Lincoln C. Chen. Boston: Harvard School of Public Health.

Dietz, Tom and John Houtkamp. 1998. "Foreign Aid to Africa: The Rise and Fall of Structural Development Aid." Pp. 89-102 in *The Global Crisis in Foreign Aid*, eds. Richard Grant and Jan Nijman. Syracuse, NY: Syracuse University Press.

Frank, Odile and Geoffrey McNicoll. 1987. "An Interpretation of Fertility and Population Policy in Kenya." *Population and Development Review* 13: 2: 209-43.

Freedman, Ronald. 1987. "The Social and Political Environment, Fertility, and Family Planning Effectiveness." Pp. 37-57 in *Organizing for Effective Family Planning Programs*, eds. Robert J. Lapham and George B. Simmons. Washington, D.C.: National Academy Press.

Gordon, April. 1995. "Gender, Ethnicity, and Class in Kenya: "Burying Otieno" Revisited." *Signs: Journal of Women in Culture and Society* 20(4):883-912.

Gourevitch, Philip. 1998. *We Wish to Inform You That Tomorrow We Will Be Killed With Our Families: Stories From Rwanda*. New York: Farrar, Strauss and Giroux.

Greenhalgh, Susan. 1995. "Anthropology Theorizes Reproduction: Integrating Practice, Political Economic, and Feminist Perspective." Pp. 3-28 in *Situating Fertility: Anthropology and Demographic Inquiry*, ed. Susan Greenhalgh. Cambridge: Cambridge University Press.

Grindle, Merilee S. and John W. Thomas. 1991. *Public Choices and Policy Change: The Political Economy of Reform in Developing Countries*. Baltimore: The Johns Hopkins University Press.

Hammel, E. A. 1990. "A Theory of Culture for Demography." *Population and Development Review* 16:455-85.

Harden, Blaine. 1991. *Africa: Dispatches From a Fragile Continent*. London: HarperCollins.

Himbara, David. 1994. "The Failed Africanization of Commerce and Industry in Kenya." *World Development* 22(3):469-82.

Holmquist, Frank. 1979. "Class Structure, Peasant Participation, and Rural Self-Help." Pp. 129-53 in *Politics and Public Policy in Kenya and Tanzania*, eds. Joel D. Barkan and Joel J. Okumu. New York: Praeger.

Holmquist, Frank and Michael Ford. 1994. "Kenya: State and Civil Society the First Year After the Election." *Africa Today* 41(4):5-25.

Hoogvelt, Ankie. 1997. *Globalization and the Postcolonial World: The New Political Economy of Development*. Baltimore, Maryland: The Johns Hopkins Press.

Hyden, Goran. 1979. "Administration and Public Policy." Pp. 93-113 in *Politics and Public Policy in Kenya and Tanzania*, eds. Joel D. Barkan and John O. Okumu. New York: Praeger.

———. 1990. "Local Governance and Economic-Demographic Transition in Rural Africa." Pp.

193-211 in *Rural Development and Population: Institutions and Policy*, eds. Geoffrey McNicoll and Mead Cain. New York: Population and Development Review: A Supplement to Volume 15, 1989.

Imbuga, Francis. 1976. *Betrayal in the City*. Nairobi: Heinemann Kenya.

Kertzer, David I. 1995. "Political-Economic and Cultural Explanations of Demographic Behavior." Pp. 29-52 in *Situating Fertility: Anthropology and Demographic Inquiry*, ed. Susan Greenhalgh. Cambridge: Cambridge University Press.

Khadiagala, Gilbert M. and Michael G. Schatzberg. 1987. "The Kenya Bourgeoisie, External Capital, and the State: An Introduction." Pp. 1-13 in *The Political Economy of Kenya*, ed. Michael G. Schatzberg . New York: Praeger.

Kimenyi, Mwangi S. 1999. "Spatial Competition, Ethnicity, and the Optimal Size and Composition of Units of Collective Choice." Pp. 355-80 in *Insititutions and Collective Choice in Developing Countries: Applications of the Theory of Public Choice*, eds. Mwangi D. Kimenyi and John Mukum Mbaku. Aldershot, Hants: Ashgate.

Kimenyi, Mwangi S. and John Mukum Mbaku, eds. 1999. *Institutions and Collective Choice in Developing Countries*. Aldershot: Ashgate.

Kitching, Gavin. 1980. *Class and Economic Change in Kenya: The Making of an African Petit-Bourgeoisie*. New Haven: Yale University Press.

Kraft, Ita and Jan de Leeuw. 1998. *Introducing Multilevel Modeling*. London: Sage Publications.

Kugler, Jacek, A.F.K.Organski, J.Timothy Johnson, and Youssef Cohen. 1983. "Political Determinants of Population Dynamics." *Comparative Political Studies* 16:3-36.

Lapham, Robert and W. Parker Mauldin. 1984. "Family Planning Program Effort and Birth Rate Decline in Developing Countries." *International Family Planning Perspectives* 10:109-18.

Levitt, Steven D. and James M. Poterba. 1997. "Congressional Distributive Politics and State Economic Performance." *Public Choice*.

Levitt, Steven D. and Jr. James M. Snyder. 1997. "The Impact of Federal Spending on House Election Outcomes." *Journal of Political Economy* 105:30-53.

Madanhire, Nevanji. 1996. *Goatsmell*. Nairobi: East African Educational Publishers.

Mann, Michael. 1986. *The Sources of Social Power*. Cambridge: Cambridge University Press.

Mbaku, John M. 1999. "Democratization and the Crisis of Policy Reform in Developing Countries." Pp. 327-54 in *Insititutions and Collective Choice in Developing Countries: Applications of the Theory of Public Choice*, eds. Mwangi D. Kimenyi and John Mukum Mbaku. Aldershot, Hants: Ashgate.

McChesney, F. S. 1997. *Money for Nothing*. Cambridge: Harvard University Press.

McNicoll, Geoffrey. 1980. "Institutional Determinants of Fertility Change." *Population and Development Review* 6(3):441-62.

———. 1998. *Government and Fertility in Transitional and Post-Transitional Societies*. Population Council Working Paper No. 113, Policy Research Division .

McNicoll, Geoffrey and Mead Cain. 1990. "Institutional Effects on Rural Economic and Demographic Change." Pp. 3-42 in *Rural Development and Population: Institutions and Policy*, vol. Vol. 15, eds. Geoffrey McNicoll and Mead Cain . A Supplement to the Population and Development Review.

Meier, Gerald M., ed. 1991. *Politics and Policy Making in Developing Countries: Perspectives on the New Political Economy*. San Francisco: ICS Press.

Middleton, John. 1992. *The World of the Swahili: An African Mercantile Cvilization*. New Haven, CT: Yale University Press.

Namale, Ambayisi. 1994. *Honourable Criminals*. Nairobi: East African Educational Publishers.

Nash, Manning. 1989. *The Cauldron of Ethnicity in the Modern World*. Chicago: University of Chicago.

National Council for Population and Development (NCPD), Central Bureau of Statistics, and Macro International. 1994. *Kenya Demographic and Health Survey 1993*. Calverton, Maryland: NCPD, CBS, and MI.

National Research Council (NRC). 1993. *Factors Affecting Contraceptive Use in Sub-Saharan Africa*. Washington, DC: National Academy Press.

Nyangira, Nicholas. 1987. "Ethnicity, Class, and Politics in Kenya." *The Political Economy of Kenya* ed. Michael G. Schatzberg(New York: Praeger):15-31.

O'Connor, James. 1973. *The Fiscal Crisis of the State*. New York: St. Martin's Press.

Okoth-Ogendo, Opinya H. W. 1971. "The Gambler." Pp. 132-33 in *Poems From East Africa*, eds. David &. D. R. Cook. Nairobi: East African Educational Publishers.

Organski, A. F. K., Jacek Kugler, J.Timothy Johnson, and and Youssef Cohen. 1984. *Births, Deaths, and Taxes*. Chicago: University of Chicago Press.

Population Reference Bureau (PRB). 2000. *World Population Data Sheet.* www.prb.org

Portes, Alejandro. 1998. "Social Capital: Its Origin and Applications in Modern Sociology." *Annual Review of Sociology* 24:1-24.

Rouyer, Alwyn R. 1987. "Political Capacity and the Decline of Fertility in India." *The American Political Science Review* 81(2):453-70.

Rowley, Charles K. 1999. "Rent Seeking and Rent Extraction From the Perspective of Africa." Pp. 223-54 in *Insititutions and Collective Choice in Developing Countries: Applications of the Theory of Public Choice*, eds. Mwangi D. Kimenyi and John Mukum Mbaku. Aldershot, Hants: Ashgate.

Ruganda, John. 1980. *The Floods*. Nairobi: East Africa Educational Publishers.

Schraeder, Peter J. 1993. "Ethnic Politics in Djibouti: From 'Eye of the Hurricane' to 'Boiling Cauldron'." *African Affairs* 92:203-21.

Schwarz, Ronald A. 1996. *The Health Sector in Kenya: Health Personnel, Facilities, Education and Training* (2nd Edition). Nairobi: Development Solutions for Africa.

Seeley, Janet. 1987. "Social Welfare in a Kenyan Town: Policy and Practice, 1902-1985." *African Affairs* 86:541-66.

Shaw, Timothy M. 1986. "Ethnicity As the Resilient Paradigm for Africa: From the 1960s to the 1980s." *Development and Change* 17:587-605.

Simmel, Georg. 1950. "The Stranger," in *The Sociology of Georg Simmel* (translated and edited) by Kurt H. Wolf. New York: Free Press.

Skocpol, Theda. 1979. *States and Social Revolutions*. New York: Cambridge University Press.

Smoke, Paul. 1993. "Local Government Fiscal Reform in Developing Countries: Lessons From Kenya." *World Development* 21(6):901-23.

Stamp, Patricia. 1991. "Burying Otieno: The Politics of Gender and Ethnicity in Kenya." *Signs: Journal of Women in Culture and Society* 16(4):808-45.

Throup, David W. 1987. "The Construction and Destruction of the Kenyatta State." *The Political Economy of Kenya* ed. Michael G. Schatzberg(New York: Praeger):33-74.

UNCTC (United Nations Centre on Transnational Corporations). 1989. "Volume Eleven: Appendix IX: Evolution of Parastatal Joint Ventures in Kenya." *Development Through Partnerships: Business Relations Between State and Foreign Enterprises in Kenya*. New York.

wa Thiong'o, Ngũgĩ. 1981. *Detained: A Writer's Prison Diary.* Nairobi: Heinemann Kenya

Weinreb, Alexander A. 2000. *Integrating Respondents, Community, and the State in the Analysis of Contraceptive Use in Kenya.* PhD dissertation. University of Pennsylvania.

_____. 2001. "First Politics, then Culture: Accounting for Ethnic Differences in Demographic Behavior in Kenya." Forthcoming in *Population and Development Review* Vol. 3.

Young, Crawford. 1994. "Evolving Modes of Consciousness and Ideology: Nationalism and Ethnicity." Pp. 61-86 in *Political Development and the New Realism in Sub-Saharan Africa*, eds. David E. Rapter and Carl G. Rosberg. Charlottesville: University Press of Virginia.

Table 1.   **Accessibility and use of health related infrastructure, by region, Kenya DHS 1998**

	Accessibility of medical care					Women's characteristics		
	Births in last 3 years where antenatal care provided by doctor	*Children 12-23 months who received all eight vaccinations[1]*	*Children <3 yrs ill with short, rapid breathing in last 2 weeks, and taken to health facility[2]*	*Children <3 yrs. with diarrhoea in last 2 weeks, taken to health facility[2]*	*Children <3 yrs. with diarrhoea in last 2 weeks, received ORS or RHF[3]*	*Urban*	*No education*	*Total fertility rate*
	%	%	%	%	%	%	%	
Nairobi	32.8*	72.7*	(76.2)*	(60.0)*	(86.7)*	100.0	1.2*	2.6
Central	25.8	84.8*	(55.0)	(44.9)*	(70.2)*	9.6	4.7*	3.7
Coast	42.7*	71.9*	(67.3)*	(63.3)*	(78.5)*	41.7	30.6	5.1
Eastern	25.8	74.9*	52.6	37.2	65.3	10.7	10.0*	4.7
Nyanza	23.4	46.5	49.6	37.1	62.6	14.6	10.7*	5.0
Rift Valley	35.8*	69.3*	68.7*	52.9*	70.4*	14.2	14.5	5.3
Western	12.4	56.2	40.0	33.0	67.5	10.1	12.2	5.6
Total	**27.8**	**65.4**	**57.3**	**44.3**	**68.7**	**23.2**	**11.5**	**4.7**

Notes: [1] All vaccinations = BCG, DPT 1-3, Polio 1-3, and measles; [2] Includes health center, hospital, clinic, and private doctor; [3] ORS=Oral rehydration salts, RHF=Recommended homemade fluids.
* Represents higher than average (total) score, where "higher" means more desirable.
Parenthesized figures used where the sample of children is less than 50.

Table 2: Effects of district-level political power on demographic covariates; rural women sample of Kenya DHS, 1989

Independent variables	Dependent variables β (t-score) or e^β (z-score)			
	Indicators of individual's socioeconomic status		Indicators of local healthcare availability	
	Column #1	Column #2	Column #3	Column #4
	Years of schooling	Currently working	Assisted by doctor or nurse at last birth	Average cluster time to source of family planning
District Population per Unit of Political Power/1000:				
1963-1967	-0.0016 (1.78)*	-0.0031 (7.18)***	-0.0001 (0.471)	-0.0778 (6.43)***
1968-1972	-0.0026 (2.82)***			0.0551 (4.56)***
1973-1977	n/a	-0.0003 (1.58)	-0.0007 (4.03)***	0.0604 (18.33)***
1978-1982	n/a	-0.0005 (1.96)*	0.0001 (0.665)	0.0176 (4.51)***
1983-1987	n/a	0.0019 (1.60)	-0.0034 (2.96)***	0.1394 (7.05)***
constant	5.82 (90.57)***	1.70 (31.01)***	0.45 (8.71)***	76.74 (75.68)***
F/chi²	38.68	66.89	41.39	190.84
p>F/chi²	0.0000	0.0000	0.0000	0.0000

Significant at the: *** 1% level; ** 5% level; *10% level

Table 2 (continued):

	Dependent variables e^β (z-score)			
	Indicators of household's health			
		Indicators of household's health/economic status		
	Column #5	Column #6	Column #7	Column #8
Independent variables	Last child had any vaccinations	Household has access to piped water	Household has a flush toilet	Household has electricity
District Population per Unit of Political Power/1000:				
1963-1967	-0.0003 (0.197)	-0.0024 (3.77)***	-0.0009 (1.219)	-0.0032 (7.68)***
1968-1972	0.0011 (0.615)	0.0024 (3.77)	-0.0017 (2.12)**	
1973-1977	0.0003 (0.590)	-0.0014 (7.27)***	-0.0021 (7.04)***	-0.0022 (8.13)***
1978-1982	-0.0012 (2.67)***	-0.0010 (4.28)***	0.0001 (0.31)	-0.0001 (0.24)
1983-1987	0.0001 (0.04)	-0.0032 (2.84)***	0.0013 (1.06)	-0.0007 (0.57)
constant	2.31 (16.55)***	-0.763 (-15.08)***	-1.533 (-24.80)***	1.40 (26.58)***
chi^2	7.93	144.48	131.04	179.39
p>chi^2	0.1600	0.0000	0.0000	0.0000

Significant at the: *** 1% level; ** 5% level; *10% level
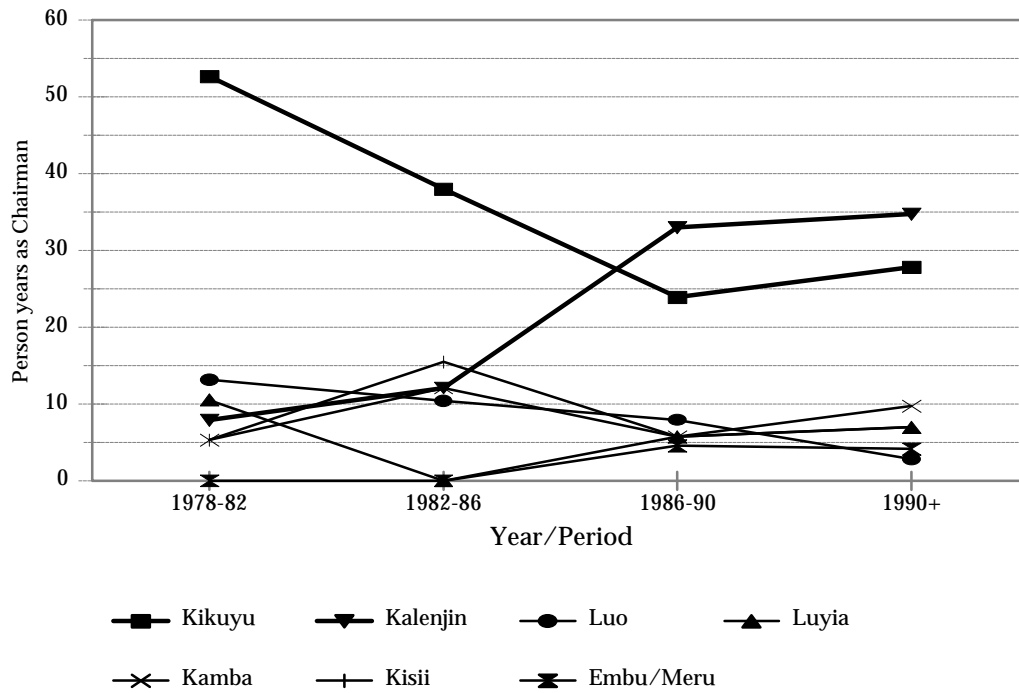
Figure 1. Person-years as chairmen of parastatals, by year and ethnicity
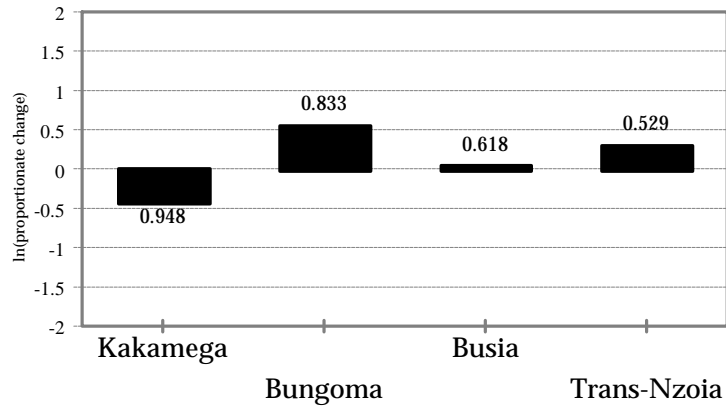
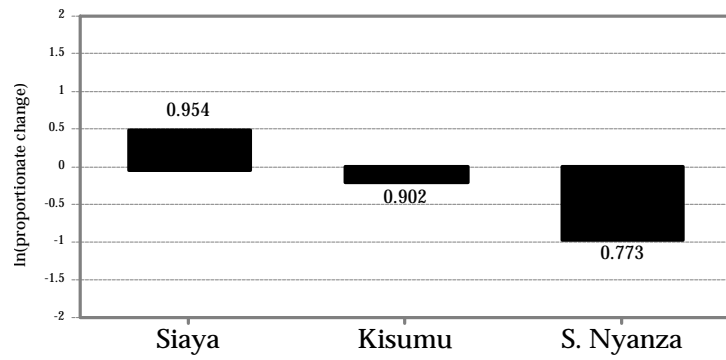## (a) Kalenjin Districts
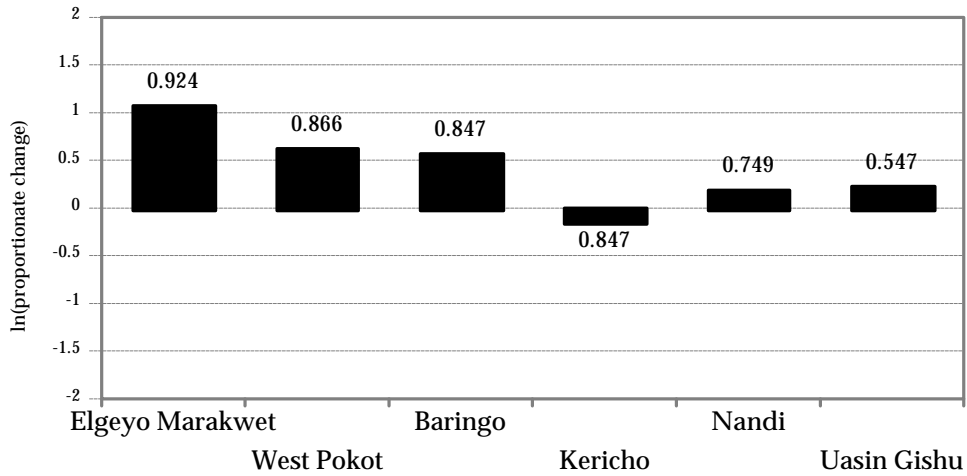
(b) Kikuyu Districts
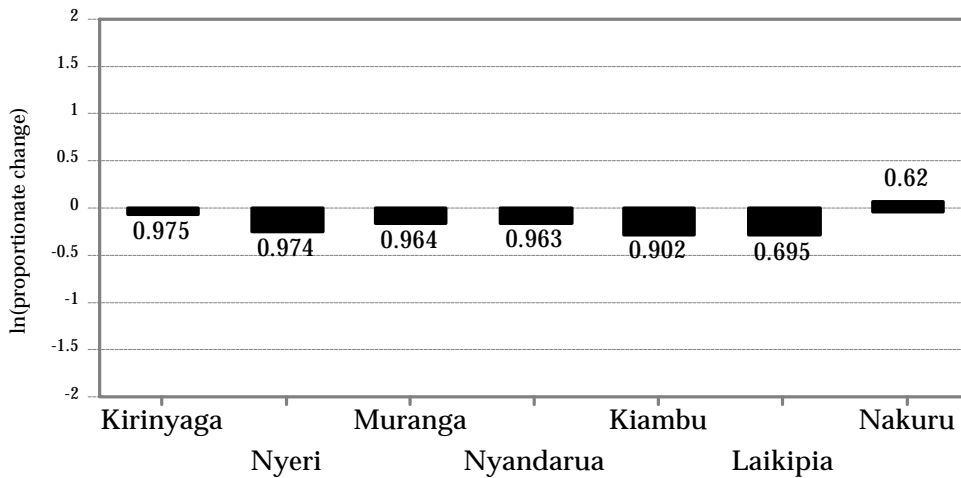
Figure 2: **The proportion of total change in national earnings that occurred in a given district during the 2ⁿᵈ half of the Kenyatta presidency in comparison to the proportion of change that occurred in the first decade of the Moi presidency, by dominant ethnic group.**
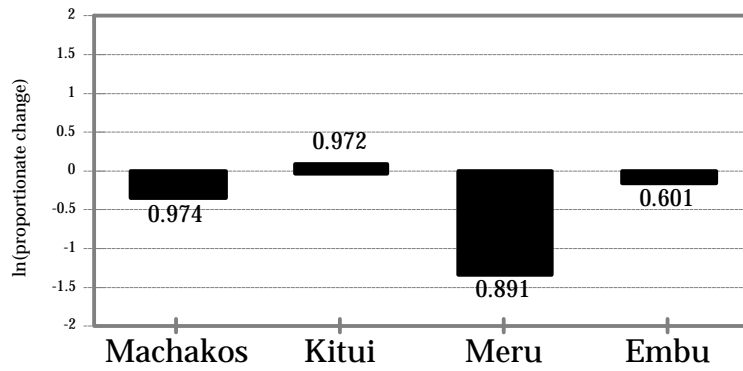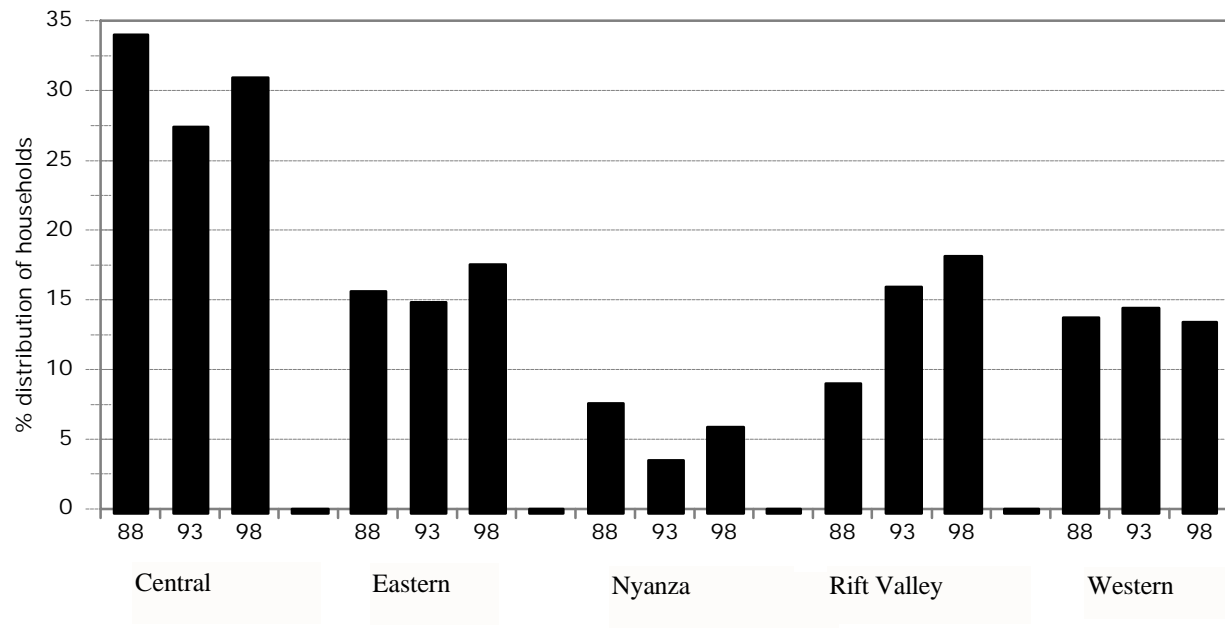
(c) Luhya Districts

(d) Luo Districts

(e) Kamba, Meru and Embu Districts

Figure 2 (cont.)

Figure 3. **The distribution of households with water piped into the residence, by region and year of survey.**
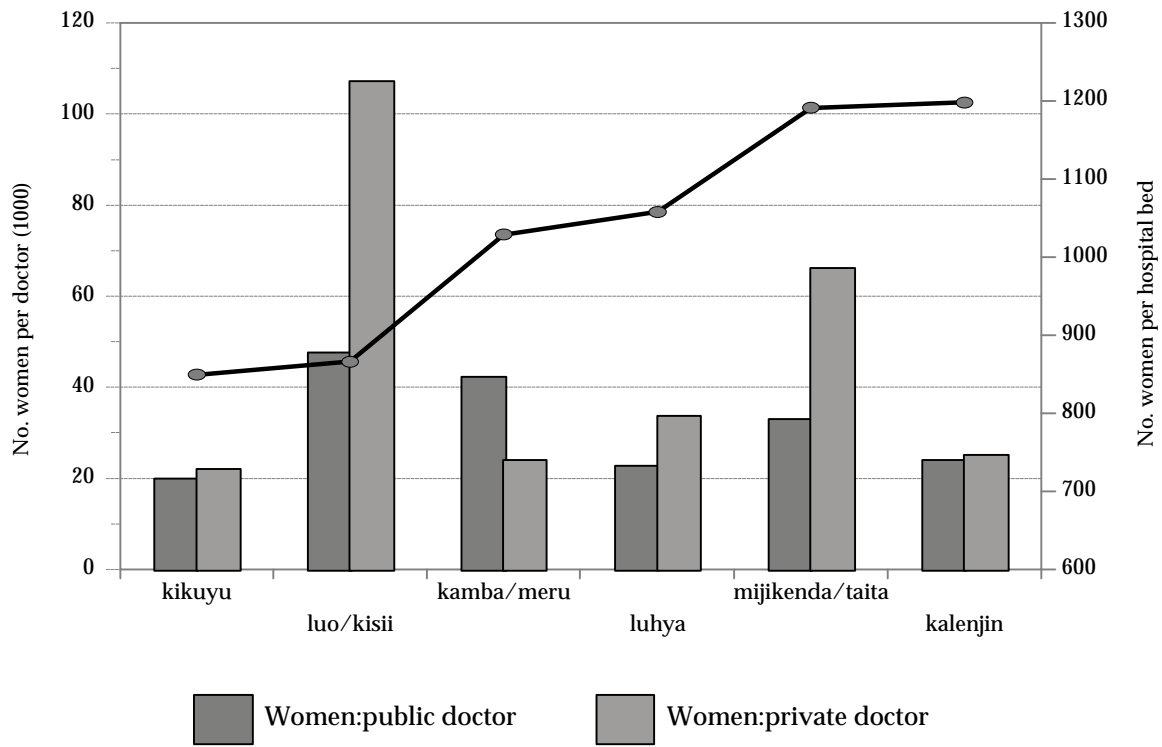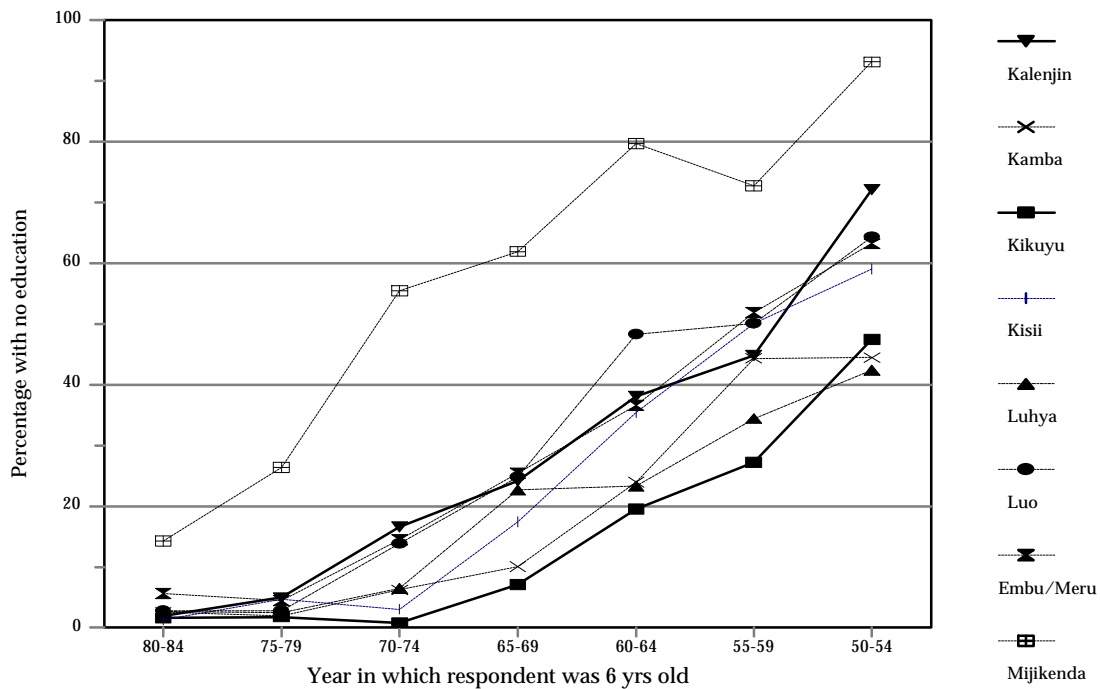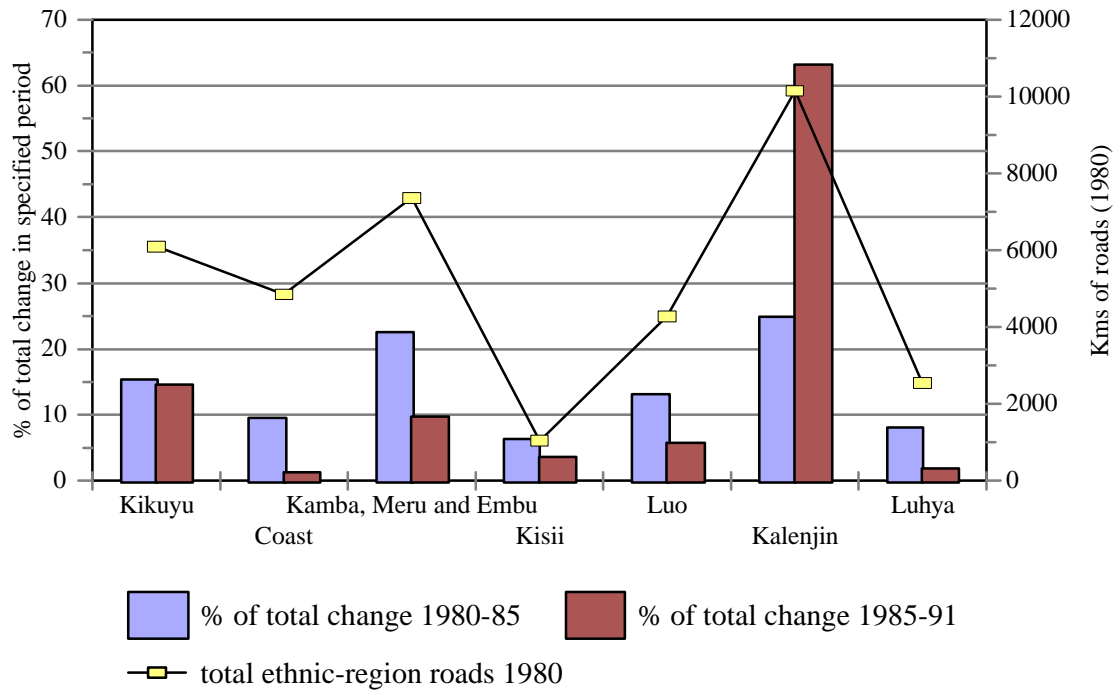
Figure 4: Women:doctor and women:hospital bed ratios, 1983/4, by ethnic majority in region

	Year in which respondent was 6 years old			
Ethnicity	**1980-84**	**1975-79**	**1970-74**	**1965-69**
Kalenjin	1.89	4.96	16.57	24.16
Kamba	2.55	1.88	6.20	10.00
Kikuyu	1.56	1.76	0.81	7.08
Kisii	1.27	4.63	3.03	17.39
Luhya	2.70	2.48	6.47	22.64
Luo	2.78	2.82	13.82	24.82
Embu/Meru	5.68	4.44	14.47	25.42
Mijikenda	14.29	26.36	55.41	61.90

Figure 5.   Percentage of 1993 KDHS women's sample with no formal schooling, by approximate year at which respondent was 6 years old.

Figure 6. Change in kilometers of maintained roads, by ethnic region.

	Position	Points per year in office
Chief Patron (president)	President	5
Ethnic/Regional leaders (cabinet leaders)	Vice President	4
	Cabinet Ministers	3
Future regional leaders (assistant ministers)	Assistant Ministers	2
	Parliamentary Secretary	1

↓   Downward flow of state resources

△   Upward flow of political support
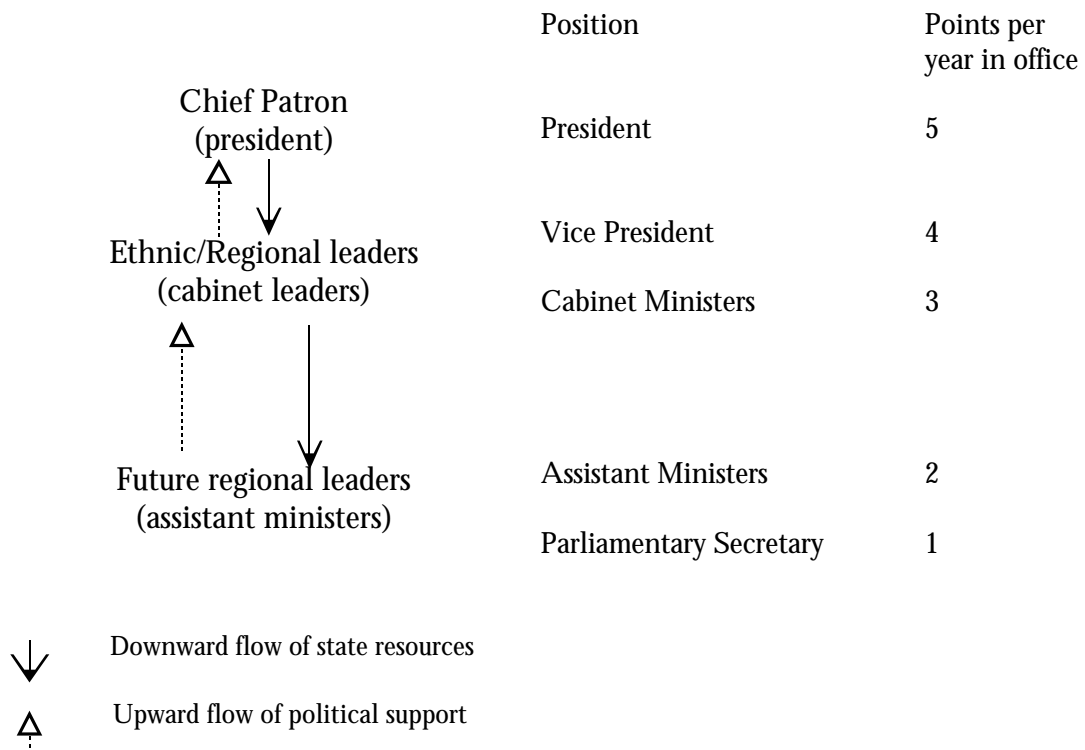
A. The top tier in Barkan's "Patron-Client Linkage

B. Political Score

Figure 7.   **Relating Barkan's (1979:73) patron-client linkage structure in Kenya to the measure of ethnic-specific political score.**
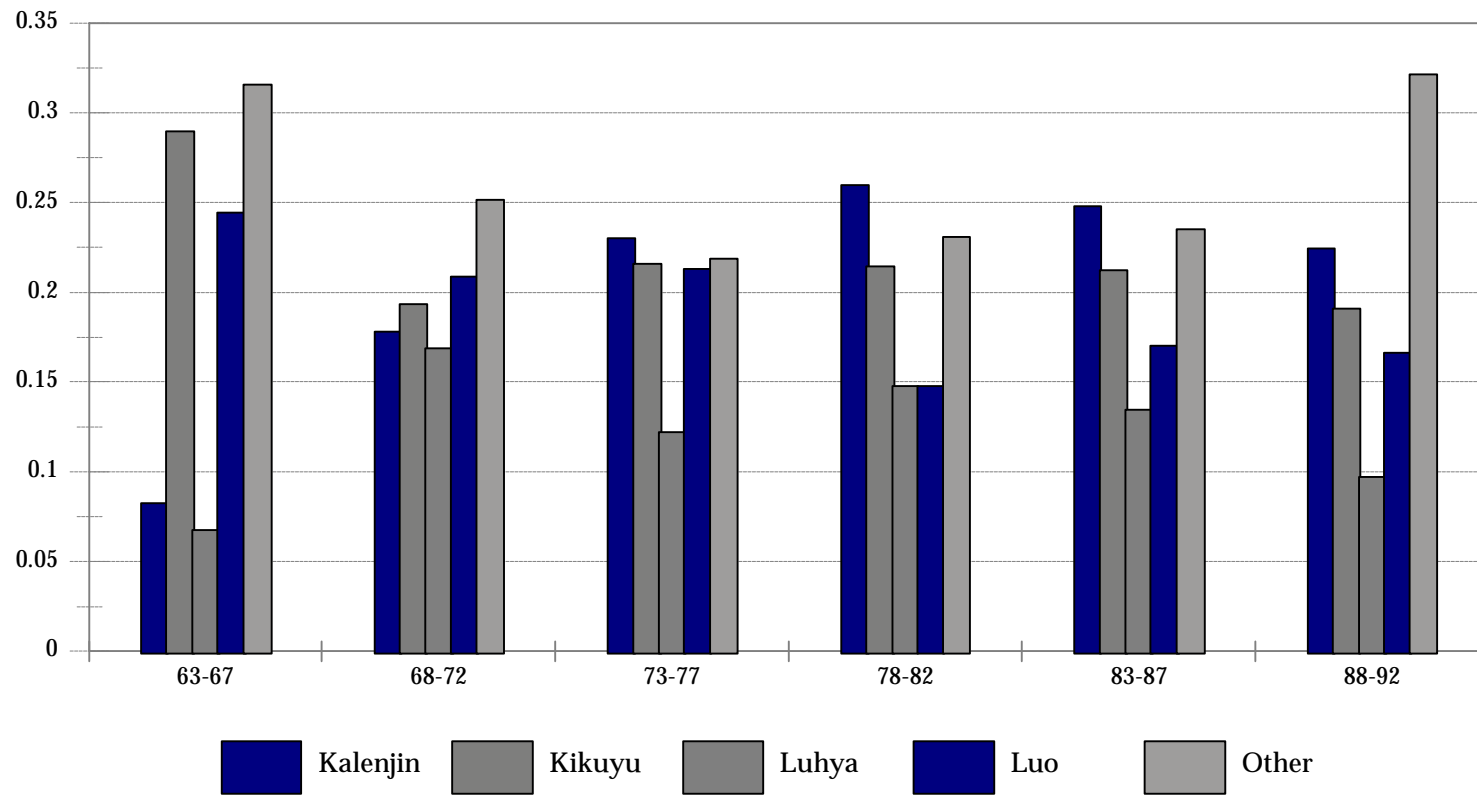
Figure 8.   Share of political power, 1963-92, by 5-year categories and main ethnic groups

Appendix 1: Kenyan parastatals (with chairmanship data) used in the construction of Figure 1

African Tours and Hotels
Agricultural Finance Corporation (AFC)
Central Bank of Kenya (Governors)
Coffee Board of Kenya
Coffee Research Foundation
Ewaso Ngiro South Development Authority
Horticultural Crops Development Authority
Housing Finance Company of Kenya
Industrial and Commercial Development Corporation (ICDC)
Kenya Airways
Kenya Broadcasting Corporation
Kenya Commercial Bank
Kenya Industrial Research and Development Institute
Kenya Literature Bureau
Kenya Marine Fisheries Research Institute
Kenya Meat Commission
Kenya National Trading Corporation
Kenya National Transport Corporation (Kenatco Taxis Ltd)
Kenya Pipeline
Kenya Ports Authority
Kenya Posts and Telecommunications Corporation
Kenya Power and Lighting (KPL Co. Ltd.)
Kenya Railways
Kenya Reinsurance
Kenya Sisal Board
Kenya Tea Development Authority
Kenya Tourist Development Corp. (Utalii Investment Ltd.)
Kenya Tourist Development Corporation
Milling Corporation of Kenya
Mumias Sugar Co. Ltd.
National Social Security Fund (NSSF)
Rift Valley Textiles Ltd. (Rivatex Ltd.)
Tana River Development Co. Ltd.