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**The Demand for Power Diffusion: A Case Study of the 2005
Constitutional Referendum Voting in Kenya**

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Abstract

Recent studies on the history of economic development demonstrate that concentration of power on a monarch or a ruling coalition impedes economic growth and that institutional changes that diffuse power, though beneficial to the society in general, are opposed by some social groups. In November 2005, Kenyans rejected a proposed constitution primarily because it did not reduce the powers of the executive to any significant degree. Using data of voting patterns in the constitutional referendum and following the rational choice framework, I estimate a model of the demand for power diffusion and demonstrate that groups voting decisions depend on expected gains and likelihood of monopolizing power. The results also reveal the importance of ethnic divisions in hindering the power diffusion process, and therefore the study establishes a channel through which ethnic fragmentation impacts on economic development.

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1 Introduction

One of the most significant advances in the economic literature during the last few decades has been theoretical and empirical insights on the role of institutions in the development process. Earlier work by North (1981); North and Thomas (1973); North and Weingast (1989); and Olson (1965), (1982; among others, highlight the importance of institutions such as secure property rights and the quality of governance in providing the right economic incentives for capital accumulation and economic growth. Recent work by Acemoglu and Robinson (2000a) and (2000b), Acemoglu, Johnson and Robinson (2001) and (2005), stress the importance of institutions and especially constraints on the executive-or what Powellson (1994) refers to diffusion of power-as central to the emergence of conditions that are conducive to economic growth. Acemoglu and his colleagues provide evidence showing that concentration of power on a monarch or a ruling coalition acts as a barrier to economic growth (see also Olson 1993 and 1997). The power diffusion process varies across countries and to an extent depends on the leverage that excluded groups have to influence change (Powellson 1994). The capacity of the disfranchised groups to leverage institutional change is therefore crucial to economic development.

Acemoglu, Johnson and Robinson (2005) suggest that institutional change, such as one that places constraints on the executive, even though beneficial to society in general, will be resisted by those social groups that stand to lose economic rents or political power. In a society where power is concentrated, various groups differ in their preferences for institutional change, with those already enjoying benefits from concentration of power preferring the status quo. I test this theory using voting of the 2005 constitutional referendum in Kenya. Kenya is a typical African country and although it has escaped military rule and civil war that have been pervasive in most of Africa, it has been characterized by a high concentration of power in the executive. For many years, Kenyans agitated for constitutional change that would reduce the powers of the executive but then President Moi's government frustrated the process and prevented the timely adoption of a democratic constitution.

In December 2002, Kenyans elected a coalition government with Mwai Kibaki as President bringing to an end 40 years rule by the Kenya African National Union (KANU) that hitherto dominated politics since independence. The rejection of KANU was culmination of many years of frustration with leadership that was characterized by nepotism, corruption, poor economic management and widespread violation of human rights. Misrule under the KANU regime was attributed primarily to a national constitution that endowed too much power on the executive and the almost complete absence of separation of powers between the branches of government. Presidents Moi and Kenyatta before him used the executive powers to marginalize some ethnic groups and redistribute the countries resources to reward political support thereby exacerbating regional and ethnic disparities and also undermining production incentives (see for example Odhiambo 2004). As a demonstration of commitment to advancing democracy in the country, President Kibaki in his inaugural speech promised that a new constitution would be

completed within 100 days.

The process of preparing a new constitution had been on-going for several years but a draft constitution was not completed until late in 2005. The delay in finalizing the constitution making process was primarily because of what were referred to as "contentious" issues that mainly revolved around the distribution of power between the Executive and the Legislature. The draft constitution was subjected to a national referendum in November 2005 and overwhelmingly rejected by voters. The primary reason given by opponents was that the proposed constitution still provided the Executive with excessive powers much like the constitution it was meant to replace. The majority of voters instead favored a system where substantial powers would be devolved to the legislature with an executive prime minister as head of the government. Thus, the majority of voters considered the proposed constitution deficient for failing to deal with the most important issue of constraining executive power.

Although the proposed constitution was rejected by the Majority of voters, the voting patterns varied widely across the country. Such patterns suggest differences in the perceived benefits and costs associated with adoption or rejection of the new constitution across the country's 210 parliamentary constituencies. The constitutional referendum voting data and the availability of reasonably good economic and demographic information provide a rare opportunity to evaluate the demand for power diffusion in a developing country setting. Using a rational choice framework, I present results that are consistent to the theoretical proposition that power diffusion is opposed by those who benefit from concentration of power. I demonstrate that a primary barrier to power diffusion are ethnic interests and therefore establish a channel through which ethnic fragmentation impacts on economic growth-namely by slowing the power diffusion process. Section II provides highlights of the voting patterns and then outlines a simple model of constitutional choice. Section III outlines the empirical model and results, and Section IV concludes.

2 Demand for Power Diffusion Through Constitutional Choice

2.1 *Voting Patterns*

Referendums, or what is referred to as direct democracy, are being used with increasing frequency around the world to decide on important public policy issues (Deacon and Shapiro 1975, Matsusaka 1992; Butler and Austin 1994, Fidrmuc 1998; Coate and Conlin 2004). Of particular interest is the use of referendums in deciding on national constitutions or even regional integration (Clarke and Kornberg 1994, Remmer and Gelineau 2003, and Vlachos 2005). Developing countries undergoing democratic transitions are increasing using referendums to decide on constitutions. In 2005, Kenyans voted in a constitutional referendum where they were asked to accept or reject a proposed constitution which if approved by the majority of the voters would have replaced the current constitution. Our focus

is on the determinants of the voter choice for a new constitution and we start by looking at the voting patterns for the proposed constitution across the country and by regions and population groups.

Kenya is divided into 8 main administrative regions known as Provinces which are subdivided into 70 sub units called districts.¹ Except for Nairobi Province which is fairly ethnically heterogeneous, other provinces are dominated by particular ethnic groups and though not completely homogenous, are comprised of closely related groups in terms of language and customs. Districts are on the other hand fairly homogenous both in terms of ethnicity, population characteristics and economic activities. Representation in the national Parliament is based on sub units of the districts known as Constituencies. There are presently 210 Parliamentary constituencies that are largely homogenous in terms of ethnicity and other dimensions.

Table 1 provides summary information on the constitutional referendum voting results for the entire country and by provinces, districts and main ethnic groupings. While the proportion approving the proposed constitution nationally was 38 percent this figure was 93.28 percent in Central Province and only 15.04 percent in Nyanza Province. Likewise, there is a wide variation across the districts with support ranging from 98.39 percent in Nyeri District to only 0.68 percent in Rachuonyo District. Similar differences in support of the constitution are evident across ethnic groups for example with 93.28 percent of Kikuyu's, and only 1.43 percent of Luos supporting the proposed constitution.

Another interesting aspect of the data is the wide differences in the voter turnout. Turnout nationally was nearly 60 percent, but only 27.26 percent in North Eastern Province and as high as 71.86 percent in the Rift Valley Province. Voter turnout across the districts range from a low of 24.7 percent in Mandera District, to a high of 84 percent in Migori District. For ethnic groups, turnout was highest among the Kikuyus (72.18 percent) and lowest among the Mji Kenda group (40.48 percent).² The last column in Table 1 looks at the voter intensity-measured as the percentage of voter turnout in the referendum (2005) compared to the voter turnout in the general elections (2002).³ While the referendum and the general election were held in different years, the relative turnout is a good proximate indicator of how strongly voters felt about the referendum. Although nationally voter intensity is just about the same for both the referendum and general election (100.49 percent), the data shows a wide variation in voter intensity across provinces, districts and ethnic groups.

Overall, the data on the constitutional referendum voting patterns reveals im-

¹Nairobi province is not sub-divided into districts. That is, there is only one district also known as Nairobi.

²Turnout normally does vary because of the cost of voting (e.g. differences in distances to polling stations, weather, etc). For our current study, we do not focus on the differences in turnout but we do capture turnout through a voter intensity variable.

³Voter intensity is simply computed as (voter turnout-Referendum /voter turnout General Election)*100. Voter intensity equal to 100 means that the referendum was considered just as important as the general election in a particular constituency assuming that costs of voting did not change between the two events, or if there were changes, they were uniform across the country.

Table 1: Constitutional Referendum Voting Patterns

Unit	Constituencies	Percent YES	Turnout	Intensity
National	210	38.0	59.4	100.49
PROVINCE				
Nairobi	8	43.35	42.33	98.67
Coast	21	20.65	41.00	88.68
Northeastern	11	25.4	27.26	46.35
Eastern	36	47.33	60.20	97.31
Central Province	29	93.28	72.18	107.24
Rift Valley	49	22.92	71.86	115.98
Western	24	37.81	50.36	90.97
Nyanza Province	32	15.04	61.57	108.71
DISTRICT				
1. Nairobi	8	43.5	42.33	98.67
2 Mombasa	4	20.85	29.92	89.24
3. Kwale	3	12.41	43.42	91.48
4. Kilifi	3	14.59	37.52	87.72
5. Malindi	2	11.56	37.60	89.28
6. Tana River	3	15.43	44.25	81.79
7. Lamu	2	34.67	49.13	81.89
8. Taita	4	32.62	48.09	95.00
9. Garissa	4	12.68	27.16	50.15
10. Wajir	4	28.00	24.71	40.87
11. Mandera	3	39.00	30.81	48.58
12. Moyale	1	47.36	42.14	64.80
13. Marasbit	3	26.21	46.60	73.32
14. Isolo	2	40.95	48.32	75.94
15. Meru North	4	84.06	80.71	124.41
16. Meru Central	3	95.70	68.08	101.32
17. Meru South	1	94.93	66.41	95.27
18. Tharaka	1	86.21	69.39	94.94
19. Embu	2	94.59	64.58	100.70
20. Mbeere	2	77.18	58.99	89.64
21 Mwingi	2	14.90	65.43	103.13
22. Kitui	4	28.00	50.36	88.30
23. Machakos	6	11.71	57.93	102.06
24. Makueni	5	25.16	59.77	104.41
25. Nyandarua	4	96.14	77.35	112.96
26. Nyeri	6	98.39	76.53	107.25
27. Kirinyaga	4	96.96	80.25	110.03
28. Muranga	3	96.85	70.22	106.79
29. Maragwa	3	97.32	72.80	112.78
30. Thika	4	79.86	61.05	98.40
31. Kiambu	5	88.12	66.11	104.41
32. Turkana	3	26.04	31.96	71.69
33. West Pokot	3	4.36	68.45	124.07
34. Samburu	2	9.70	59.55	108.30

Table 1 (cont): Constitutional Referendum Voting Patterns

Unit	Constituencies	Percent YES	Turnout	Intensity
DISTRICT				
35. Trans Nzoia	3	55.15	53.27	92.56
36. Usian Gishu	3	16.33	74.21	123.70
37. Marakwet	2	1.69	99.01	148.33
38. Keiyo	2	1.73	87.43	127.83
39. Nandi North	2	6.44	78.42	115.90
40. Nandi South	2	8.45	76.22	120.37
41. Baringo	3	18.61	77.97	101.22
42. Koibatek	2	9.05	96.16	135.16
43. Laikipia	2	83.61	64.88	106.52
44. Nakuru	6	62.35	65.98	114.97
45. Trans Mara	1	7.00	73.12	113.11
46. Narok	2	6.90	78.33	116.75
47. Kajiado	3	29.20	65.25	103.94
48. Bomet	3	2.92	84.14	130.90
49. Bureti	2	2.92	83.94	141.38
50. Kericho	3	7.76	79.54	126.71
51. Kakamega	4	38.10	49.78	83.71
52. Lugari	1	13.19	31.13	137.49
53. Butere Mumias	4	29.60	47.88	87.34
54. Vihiga	4	16.88	45.72	85.94
55. Mt. Elgon	1	22.28	75.27	113.90
56. Bungoma	5	80.93	51.57	84.91
57. Teso	1	4.89	65.11	107.40
58. Busia	4	31.04	51.44	83.00
59. Siaya	3	1.14	57.09	117.48
60. Bondo	2	2.76	70.22	122.96
61. Kisumu	3	2.48	54.92	107.31
62. Nyando	3	1.32	66.79	115.97
63. Rachuonyo	2	0.68	78.50	133.44
64. Homa Bay	2	0.76	72.34	132.00
65. Migori	4	1.01	84.03	144.83
66. Suba	2	1.32	72.79	132.53
67. Kuria	1	31.01	61.84	97.71
68. Gucha	3	41.07	44.44	71.70
69. Kisii	5	41.26	43.84	73.15
70. Nyamira	2	45.49	27.85	78.30
1. Kikuyu		93.28	72.18	107.24
2. Embu		83.38	61.83	94.50
3. Meru		90.79	72.45	109.90
4. Luhya		37.81	50.34	90.97
5. Luo		1.43	69.19	125.18
6. Kalejin		16.13	70.78	113.47
7. Kamba		19.87	57.57	99.64
8. Kisii		42.05	44.82	73.75
9. Mji Kenda		19.09	40.48	81.28

portance of regionalism and ethnicity in supporting or rejecting the proposed constitution. Likewise, turnout and voter intensity vary across regions and ethnic groups. The data therefore suggests wide variations in the demand for institutional change across regions and ethnic groups. Our interest in this paper is on the determinants of voter choice in the constitutional referendum.

2.2 *Model of Constitutional Choice*

The evaluation by the majority of voters was that the proposed constitution still concentrated powers and therefore its adoption would not have resulted in gains to disfranchised groups.⁴ Thus, those who voted against the adoption of the constitution were in fact expressing a demand for power diffusion while those who supported the constitution are those who preferred a system that concentrated powers.⁵ The data presented in Table 1 therefore reveals differences in the demand for power diffusion. Simply, the patterns reflect differences in the expected gains and losses associated with adoption or rejection of the constitution across the various groups and regions.⁶ To model citizen's decisions to vote in the constitutional referendum, we assume that the country is represented by voters who share a utility function of the following general form:

$$U_I(q_i, g_i) \tag{1}$$

Where (q_i is private consumption, g_i is consumption of publicly provided goods and services and I is an index of institutional arrangements. Citizens first make a decision to participate in the referendum ($p_i = 1$) and then make a decision to either vote "YES" ($v = 1$) or "NO" ($v = 0$). Voters face a cost π of participating in the referendum. The probability of an individual voting "yes" or "no" is assumed to depend on the expected benefits from institutional change relative to the status quo such that $v = 1$ if

$$U_{I=0}(q_i, g_i, \pi) < U_{I=1}(q_i, g_i, \pi) \tag{2}$$

and $v = 0$ if

$$U_{I=0}(q_i, g_i, \pi) > U_{I=1}(q_i, g_i, \pi) \tag{3}$$

⁴This information is also confirmed by exit polling data obtained from the media and public opinion polling firms.

⁵This view was well articulated during the referendum campaign. The Electoral Commission of Kenya assigned fruit symbols—Banana for "Yes" and Oranges for "No," and in a cleverly crafted advertisement, those opposed to the draft emphasized the point of concentration of power by comparing bananas (all bunched together) and oranges (widely distributed in the various branches of the orange tree).

⁶Although we focus on the most debated issue of concentration of power, from a constitutional economics perspective, the draft constitution had many other serious flaws for example, by including largely economic guarantees that are cannot be achieved by any country. A concern is that inclusion of economic rights that are not enforceable or even achievable weakens a constitution and make it ambiguous (See Kimenyi 2006c). Unfortunately, neither opponents nor supporters of the draft constitution debated the "economic rights" aspects of the constitution

Where $I = 0$ denotes the status quo and $I = 1$ denotes the post- referendum institutional change.⁷ For simplicity, we assume that the cost of voting (π) is uniform across opponents and supporters in a given electoral area. This allows us to ignore variations in participation rates and only focus on the voter choices.⁸

The probability of a "yes" or "no" vote is assumed to be influenced by a vector of variables (X_i) that proxy wellbeing and other factors such as region or group that the voter i belongs to and can be expressed by the cumulative logistic function as follows:

$$V_i = \frac{1}{e^{-(\alpha + \beta X_i)}} \quad (4)$$

The data available does not permit us to estimate individual voting behavior as we only observe the aggregate voting data. Group data are available for the 210 constituencies for the share of "Yes" and "No" votes and also average data on other variables that characterize the constituencies. If we assume that each individual's vote is independent, then aggregate voting behavior can be approximated by:

$$\ln\left(\frac{V_c}{1 - V_c}\right) = \alpha_g + \beta_g X + \mu_g \quad (5)$$

Where V_c is the proportion voting "Yes" in constituency C and α_g and β_g are the coefficients based on group data for each of the constituencies, and μ_g is the error term. Given the assumptions made, the estimated regression coefficients can be interpreted as parameters underlying the utility function of a representative voter i in constituency C .

3 Empirical Model and Results

3.1 Estimation Strategy

Equation (5) forms the basis of the empirical model that describes voting behavior in the referendum. In addition to the measures of the state of the economy and social provision, we expect voting behavior to be influenced by representative characteristics that may associate with benefits or costs of concentration of power. Recent literature shows that ethnic diversity is an important feature that impacts on development outcomes (Alesina et al. (1999); Easterly and Levine 1997; Collier 2000). Within the context of diffusion of power, ethnic groups could impact on development outcomes because tension between groups lowers their capacity to leverage institutional change. In other words, ethnic diversity could increase the

⁷The assumption is that voters compare the present value of benefits when $I = 0$ versus when $I = 1$. Actually, the voters could reject the constitution even when $U_{I=0} < U_{I=1}$ if they consider that there is a feasible constitutional arrangements that would associate with much larger stream of benefits.

⁸There are reports that politicians and well endowed businessmen invested heavily to influence the voters. Such expenditures could lower the cost of voting for example if voters are provided with free transport or funds to pay for fare. Both opponents and supporters are said to have spent large amount of resources but we are not able to capture such expenditures and any effect that they might have had.

costs of cooperation against a ruling coalition.⁹ We would expect members of different ethnic groups to oppose or support institutional change depending on the perceived benefits and costs to their group.

I specify a regression model of the determinants of voting in the constitutional referendum as follows;

$$\text{Ln(PYV)} = \text{ECONOMY} + \text{SOCIAL PROVISION} + \text{REPRESENTATIVE} + \text{INTENSITY} + \text{REGION ETHNICITY} + U$$

Where:

PYV = Percentage of "YES" votes (Constituency, 2005);

ECONOMY

Poverty = Poverty rate (District- 1997);

Unemployment = Rate of unemployment (District-2000)

SOCIAL PROVISION

Piped Water = Percentage of households with piped water (District-2000);

Secondary School = Gross enrollment rate in secondary schools (District-2003);

REPRESENTATIVE

Cabinet = Representative is Minister or Assistant Minister (Constituency-2005);

Opposition = Representative is a member of the opposition (Constituency-2005);

VOTER INTENSITY = Ratio of voter turnout for the referendum (2005) to the turnout during the general election (2002-Constituency);

REGION = Main administrative divisions (Provinces-2005);

ETHNICITY = Ethnic groups (Constituency-2005);

μ = error term.

As noted previously, the draft constitution was rejected by majority of voters primarily because it did not reflect real change in as far as concentration of power was concerned. Voting "no" in the referendum can therefore be interpreted as a vote for change while "yes" means resistant to change in favor of the status quo.

Economic well-being is proxied by poverty and unemployment rates. If we take it that economic status in a constituency reflect cumulative outcomes of past policies, then higher poverty and unemployment rates would associate with lower probability of approving the proposed constitution if voters do not believe that it offers substantial change. Likewise, the quality of social provision as captured by the proportion of households with piped water and gross secondary school enrollment rates should associate with higher probability of approving the constitution

⁹Kimenyi (2006b) argues that the failure of states to adopt pro-poor growth policies is due to the concentration of power and argues that ethnic fragmentation weakens cooperation across groups and thus reduces the leverage that excluded have to force diffusion of power.

if voters believe that the proposed constitution would not erode their advantageous position. On the other hand, where provision is poor, voters would oppose the adoption of a constitution that does not radically depart from the status quo. Constituencies represented by members of the cabinet can be expected to support the proposed constitution while those in the opposition are more likely to oppose the constitution. Simply, being in the cabinet increases the probability of constituents benefiting from the concentration of power while those constituencies represented by members of the opposition parties are likely to benefit less from concentration of power. Voter intensity is included to capture the value placed by opponents and supporters on the referendum outcomes while REGION and ETHNICITY capture regional and ethnic fixed effects.

3.2 *Data*

The preferred unit of analysis is the constituency for which we have good data on voter choice (Yes or No), turnout, dominant ethnic groups and also representative member characteristics (whether in cabinet or opposition). However, the most reliable other data for measures of state of the economy (unemployment and poverty) and level of social provision (piped water, gross secondary school enrollment rates) are only available at the district level. I therefore use district average data for these variables. Although this introduces some noise, constituencies within the same district are fairly similar and we do not expect serious biases. Likewise, data for these measures are not available for year 2005 when voting in the referendum took place and are only available for various years between 1997 and 2003.

The choice of measures is largely influenced by data availability and also their perceived importance to voters. During the preparation of planning documents such as the Poverty Reduction Strategy Paper (2000) and the Economic Recovery Strategy for Wealth and Employment Creation (2003), consultations were held across the countries to identify what citizens considered as developmental priorities. As can be expected, these priorities varied across the regions. Nevertheless, education (primary and secondary), infrastructure (roads and water) were prioritized in all the regions. A good measure of the level of education across the constituencies is primary school enrollment. However, a policy of free (and largely compulsory) primary education was introduced in 2003 and therefore this would not be a good variable to measure differences in provision. Data on road infrastructure is rather poor and although data on road density are available, it is not possible to infer as to the quality of the roads. The proportion of households with piped water is easier to measure and also reflects what may be referred to as "patronage" goods whose benefits only accrue to limited number of groups as opposed to broader public goods. As will be shown later, piped water is also a good indicator of the level of infrastructure provision generally.

No constituency is inhabited exclusively by a single ethnic group but most constituencies are dominated by a particular group. For this paper, ethnicity denotes the dominant ethnic group in a particular constituency. Although there are over 30 ethnic groups in Kenya, many are fairly small and in this study we focus only

on the larger groups which include the Gikuyu, Embu, Meru, Luhya, Luo, Kamba, Kalejin, Kisii, and Mji Kenda. The Gikuyu-Embu-Meru ethnic groups—commonly referred to as "GEMA" have strong ties and exhibit similar voting patterns and for all practical purposes they are considered as one group.¹⁰ In this paper, we therefore classify GEMA as one group. Mji Kenda is actually a general term for several closely related and small ethnic groups in the Coast Province. Although not completely homogenous, their voting patterns are fairly uniform. The urban towns of Nairobi and Mombasa are however fairly ethnically heterogeneous and we are not able to assign particular ethnic groups to constituencies in those towns. This is also true for North Eastern Province which is inhabited by many small groups (many with a nomadic lifestyle) and data are not available to accurately identify dominant groups in these areas by constituency and therefore ethnicity is defined as "others".¹¹

Voting data (General Election 2002 and Referendum 2005) are as officially reported by the Electoral Commission of Kenya (ECK). All other data are from reports by the Government of Kenya, Central Bureau of Statistics including the Welfare Monitoring Survey, Multiple Indicator Cluster Survey and The Economic Survey. Table 2 reports the descriptive statistics for the variables used in the estimation.¹²

3.3 Results and Analysis

Tables 3 and 4 report results of various specifications of the general model. Both tables include measures of the state of the economy (poverty rate and unemployment rate), indicators of levels of social provision (share of households with piped water and secondary school enrollment rates) and other controls such as, representative characteristics (whether member of cabinet or if member of an opposition party), voter intensity which captures how strongly voters feel about the proposed constitution and also regional fixed effects. Table 4 also controls for ethnic groups. For the estimations presented, Central province is the excluded region and GEMA is the excluded ethnic group. Central Province and the GEMA group voted overwhelmingly in support of the constitution.

The results are largely consistent in most of the specifications shown in Table 3.¹³ Both measures of the state of the economy-unemployment and poverty associate with lower proportion of those supporting the proposed constitution but

¹⁰GEMA is an acronym for the now defunct Gikuyu-Embu-Meru Association—a voluntary tribal association that also had extensive business interests and substantial political influence especially during President Kenyatta's era.

¹¹In actual fact, many ethnic groups are not 100 percent homogenous and are instead a conglomeration of many clans that consider themselves different. For example, the group we refer to as Luhya is fairly fragmented and often different clans exhibit divergent voting patterns.

¹²Note that the summary statistics shown are based on the constituencies. Regional and ethnic statistics therefore reflect share of constituencies per province and share of constituencies where ethnic groups are dominant, respectively. Thus the ethnic data shown does not represent population shares.

¹³In the Tables that follow, t-statistics are in parentheses below the coefficients. Asterisks denote significance at 1 percent (***), 5 percent (**) and 10 percent (*). Central Province is the omitted region in Table 3 and 4; and GEMA is the omitted ethnic group in Table 4

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation
Percent Voting "Yes"	38.00	34.29
Poverty Rate	54.98	13.22
Unemployment Rate	9.60	4.73
Percent with Piped Water	24.59	23.17
Secondary School Enrollment	22.02	14.78
Member of Cabinet	0.33	0.69
Member of Opposition	0.40	0.49
Voter Intensity	100.49	24.65
Eastern province	0.17	0.38
Coast Province	0.10	0.30
Nyanza Province	0.15	0.36
Western Province	0.11	0.31
North Eastern Province	0.05	0.22
Nairobi Province	0.04	0.19
Central Province	0.14	0.34
Rift Valley Province	0.23	0.42
GEMA	0.21	0.41
Luhya	0.11	0.32
Luo	0.12	0.33
Kalejin	0.19	0.39
Kamba	0.08	0.27
Kisii	0.05	0.21
Mji Kenda	0.10	0.30
Other	0.10	0.31

unemployment rate is not statistically significant in some of the specifications (Table 3). The results suggest that voters are concerned about their current economic status when voting on constitutional change. The fact that voters in areas that are more economically depressed as evidenced by high poverty and unemployment rates are more opposed to the proposed constitution suggest that they did not see much change in the proposed constitution. Simply, if voters attribute their economic well-being to weaknesses in a constitution, they will reject proposed changes if they do not reflect a significant departure from the old constitution. The variables are not statistically significant when ethnicity is controlled for (Table 4). This could be due to the fact that poverty and unemployment rates vary systematically by ethnic groups as a result of the spatial concentration of ethnic groups in particular areas.

We use the proportion of households with piped water and gross secondary school enrollment as measures of social provision. As observed, both provision of education and water are highly valued across the country and voters are likely to make decisions about approving or opposing the proposed constitution depending on how well they have been served under existing constitution. Although secondary school enrollments do capture differences across districts, education provision is such that a sizeable number of students study outside their home districts and thus enrollments are not a good indicator of provision to specific groups and regions. Nevertheless, the variation in enrollments could be influenced by ability to pay in a particular region. We consider piped water to be the most important proxy for level of social provision. First, its benefits are concentrated to particular communities-hence a good indicator patronage that comes with concentration of power. Second, simple data analysis reveal that the percentage of households with piped water is highly correlated to other infrastructure such as electricity and telephone density. In other words, areas that have piped water are also likely to benefit from other infrastructure.¹⁴ The different levels of social provision across the country is primarily attributed to discriminative allocation of resources by the government which is possible because of the excessive powers of the executive. Voters in regions that have been marginalized by past governments in terms of social provision would only support a new constitution if it promises to curtail the powers of the executive substantially.

The signs on the coefficients for these variables are as hypothesized. The proportion of households with piped water is highly significant in all specifications. Given the high correlation between this variable and other forms of infrastructure suggest that level of provision is an important determinant of constitutional choice. Secondary school enrollment is only significant in some of the specifications.

Representative characteristics (cabinet member or being in the opposition) are not important determinants of constitutional choice. The interpretation is that voters are not myopic but instead are concerned about the longer-term implications of a constitution.¹⁵

¹⁴It is of course possible that high potential, high income regions are well served with infrastructure because of effective demand (people have still to pay for services). This is true-however, the services are provided by the government and such depends on political decisions.

¹⁵The results could also reflect the fact that the ruling party "NARC" is a fairly loose coalition

Table 3: Regression results for the Determinants of Constitutional Choice (N=210. Dependent Variable = log(Percentage Voting Yes))

Explanatory Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	5.080*** (11.50)	2.656*** (4.53)	2.539*** (4.22)	18.258*** (11.04)	20.543** (12.06)
Poverty	-0.033*** (-4.60)	-0.014* (-1.93)	-0.013* (-1.84)	-0.025*** (-4.02)	-0.020 (-2.57)
Unemployment	-0.37* (-1.83)	-0.004 (-0.20)	-0.001 (-0.08)	-0.088*** (-4.49)	-0.072*** (-3.87)
Piped water		0.020*** (4.93)	0.020*** (4.70)	0.021*** (6.09)	0.0019*** (4.75)
Secondary School		.026*** (3.87)	0.026*** (3.86)	.020*** (3.62)	-0.000 (-0.09)
Cabinet			0.224 (0.94)	0.132 (0.68)	0.000 (0.00)
Opposition			-0.071 (-0.37)	-0.058 (-0.37)	-0.064 (-0.44)
Voter Intensity				-3.083*** (-9.96)	-3.352*** (-9.74)
North Eastern Province					-2.144*** (-3.82)
Eastern Province					-0.182 (-0.54)
Coast Province					-1.254*** (-3.54)
Nyanza Province					-2.13*** (-6.40)
Western province					-0.825** (-2.48)
Rift Valley Province					-1.006*** (-3.40)
Nairobi Province					-1.573*** (-3.08)
Adjusted R-Square	0.098	0.224	0.219	0.474	0.629

Table 4: Regression results for the Determinants of Constitutional Choice (N=210. Dependent Variable = log(Percentage Voting Yes))

Explanatory Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	4.354*** (13.61)	3.295*** (6.99)	3.299*** (6.77)	14.718*** (8.65)	12.508** (7.64)
Poverty	-0.000 (-0.15)	-0.051 (-0.85)	0.005 (-0.87)	-0.006 (-1.05)	-0.006 (-1.09)
Unemployment	0.017 (1.01)	0.018 (1.02)	0.017 (1.01)	-0.034* (-1.95)	-0.013 (-0.82)
Piped water		0.011*** (3.56)	0.011*** (3.55)	0.011*** (3.80)	0.007** (2.24)
Secondary School		.011* (1.76)	0.011* (1.78)	.003 (0.05)	0.006 (1.04)
Cabinet			-0.031 (-0.19)	-0.046 (-0.31)	0.018 (0.14)
Opposition			-0.073 (-0.41)	-0.10 (-0.06)	-0.065 (-0.44)
Voter Intensity				-2.208*** (-6.94)	-1.778*** (-5.60)
North Eastern Province					
Eastern Province					0.497* (1.96)
Coast Province					-1.457*** (-5.72)
Nyanza Province					-2.724*** (-5.66)
Western province					-0.460 (-0.56)
Rift Valley Province					-0.229 (-0.87)
Nairobi Province					-0.648 (-1.48)
Luhya	-1.081*** (-4.49)	-0.877*** (-3.66)	-0.891*** (-3.66)	-1.140*** (-5.15)	-0.529 (-0.56)
Luo	-3.512*** (-14.61)	-3.212*** (-12.95)	-3.229*** (-12.79)	-2.844*** (-12.20)	-0.565 (-1.41)
Kalenjin	-2.673*** (-12.07)	-2.344*** (-10.07)	-2.300*** (-8.69)	-1.975*** (-8.16)	-2.164*** (-6.89)
Kamba	-1.813*** (-6.00)	-1.747*** (-5.20)	-1.756*** (-5.18)	-1.361*** (-4.40)	-1.917*** (-5.90)
Kisii	-0.726** (-2.26)	-0.498 (-1.55)	-0.448 (-1.28)	1.188*** (-3.59)	1.766*** (3.11)
Mji Kenda	-1.662*** (-6.06)	-1.462*** (-5.34)	-1.447*** (-5.20)	-1.544*** (-6.17)	
Other Ethnic	-1.654*** (-5.64)	-1.157*** (-3.67)	-1.117*** (-3.35)	-1.853*** (-5.84)	-1.887*** (-6.39)
Adjusted R-Square	0.611	0.633	0.629	0.702	0.763

Table 5: Regression results for the Determinants of Constitutional Choice (N=210. Dependent Variable = log(Percentage Voting Yes))

Explanatory Variable	Model 1	Model 2	Model 3	Model 4
Intercept	21.269*** (12.69)	21.335*** (12.90)	19.540*** (11.94)	19.692 (12.11)
Poverty	-0.022** (-2.89)	-0.022*** (-2.91)	-0.0123*** (-3.86)	-0.024*** (-3.99)
Unemployment	-0.066*** (-3.60)	-0.066*** (-3.70)	-0.066*** (-3.37)	-0.069*** (-3.55)
Piped water	0.162*** (3.97)	0.163** (4.06)	0.017*** (4.85)	0.017*** (5.05)
Secondary School	-0.003 (-0.66)	-0.003 (-0.64)	0.012** (2.17)	0.013* (2.25)
Cabinet	0.200 (0.12)		0.158 (0.084)	
Opposition	0.045 (0.31)		0.125 (0.78)	
Voter Intensity	-3.698*** (-10.50)	-3.704*** (-10.58)	-3.612*** (-10.92)	-3.607*** (-10.96)
Ethnic Share	0.351*** (3.27)	0.343*** (3.31)	0.445*** (3.79)	0.421*** (3.77)
North Eastern Province	-1.669* (-2.95)	-1.662*** (-2.96)		
Eastern Province	0.046 (0.14)	0.048 (0.14)		
Coast Province	-0.845** (-2.30)	-0.847** (-2.32)		
Nyanza Province	-1.791** (-5.70)	-1.793*** (-5.76)		
Western province	-0.702* (-2.14)	-0.715** (-2.22)		
Rift Valley Province	-0.795** (-2.69)	-0.782** (-2.72)		
Nairobi Province	-1.400** (-2.79)	-1.414*** (-2.85)		
Adjusted R-Square	0.647	0.650	0.507	0.509

An interesting variable is the measure of voter intensity which has a negative coefficient and statistically significant in all the specification even when regional and ethnic controls are included. We make the assumption that the costs of participating in the general election and in the referendum is the same to a voter (i) in constituency (c). Thus, the only reason for differences in participation between the general election and referendum is purely due to the importance placed on the referendum relative to the general election. The results suggest that the perceived welfare loss to opponents from the adoption of the constitution is much greater than the expected welfare gain by the proponents.

The regional variables show that all provinces were generally less supportive of the constitution as compared to Central Province. This holds true even when ethnicity is controlled for except for Eastern province. Likewise, when regional controls are not included, the results show that all ethnic groups were more opposed to the constitution as compared to the GEMA group which overwhelmingly supported the proposed constitution. However, when regional controls are included, only the Kalejin, Kamba and those in the "other category" were more opposed to the constitution than the GEMA (Table 4).¹⁶ The results show the importance of regionalism and ethnicity in constitutional choice decisions.¹⁷

The results presented above concerning the importance of ethnicity in constitutional choice requires some further analysis in order to unearth why particular ethnic groups vote the way they do. Monopolizing power in weak states can be expected to benefit some ethnic groups at the expense of others. It is therefore reasonable to assume that all ethnic groups would like to monopolize power which would give rulers discretion to broker transfers from some groups to others.¹⁸ We can hypothesize that the higher the potential for an ethnic group to monopolize power, the more likely that members of that group would support a constitution that endows the executive with more powers.

We make the assumption that the probability of monopolizing power is a function of population size such that the larger the group, the higher its potential to monopolize power. Although no single ethnic groups can be able to win a clear majority, the size of a group gives it an advantage in forging a coalition with others. Simply, larger sizes increase the probability of monopolizing power and we would therefore expect size to influence constitutional choice. Information is available on the relative sizes of the various ethnic groups nationally as follows: Gema-0.28; Luhya-0.14; Luo-0.13; Kalejin-0.12; Kamba-0.11; Kisii-0.06; Mji Kenda- 0.05; and

and there is much internal opposition and in fact the Cabinet was split over the draft constitution. At the time of writing this paper, a large segment of the coalition had for all practical purposes ceased to be in the ruling party.

¹⁶The reason that some of the other ethnic groups are no longer significant is primarily because there is close overlap between ethnic groups and regions that they occupy.

¹⁷Post-independence politics in Kenya has been characterized by ethnic voting patterns. Ethnic divisions became more pronounced since the introduction of competitive party politics in 1992 many political parties organized along ethnic lines emerged. In fact, it is because of such ethnic divisions within the opposition that made it possible for President Moi to hold on to power in the 1992 and 1997 general elections.

¹⁸This is consistent to the ethnic rent-seeking literature as advanced by Kimenyi and Mbaku, among others. See for example, Kimenyi 1989; Kimenyi 1998b; Kimenyi and Mbaku 1993, and Mbaku and Kimenyi 1995).

other 0.01.

For each of the constituencies, we establish the dominant ethnic group and assign ethnic shares accordingly. Thus, if GEMA is the dominant ethnic group in constituency C-1, we assign this constituency an ethnic share of 0.28. If on the other hand Luo dominate in constituency C-2, then we assign an ethnic share of 0.13. Note that ethnic shares are based on national population and not share of population of an ethnic groups in a constituency. The ethnic share variable is generated by interacting Ethnicity with the share. The assumption is that voters in each of the constituencies have an idea about the relative size of their group in the country and thus they know the probability of monopolizing power. The larger the ethnic share, the higher the probability of supporting the proposed constitution since it was characterized by concentration of power. Table 5 reports the results of various specifications of the general model. The results support our hypothesis that demand for concentration of power increases with the group size. Simply, smaller groups that have low probabilities of monopolizing power have a higher demand for diffusion of power.

4 Conclusion

This paper analyzes voting patterns in the recent constitutional referendum in Kenya and provides some empirical evidence of the demand for power diffusion. The study is unique in that it is probably the first to empirically estimate the determinants of constitutional choice in a developing country setting using the rational choice framework. Shortcomings of the data notwithstanding, the results are fairly robust and provide strong support to recent theoretical advances in the development literature spearheaded by Acemoglu and others concerning resistance to institutional change and implications for growth. Finally, this study establishes a channel through which ethnicity can hinder growth. Our results would suggest that ethnic groups impact on development outcomes by slowing the power diffusion process.

The results of the voting patterns in the Kenya constitutional referendum point to the importance of designing institutions that harmonize ethnic claims in divided societies. Concentration of power in such societies is often used to marginalize some groups and to provide patronage goods to others. An appropriate institutional change then must lower benefits of concentration of political power such as through constitutional decentralization (see for example proposals by Kimenyi 1987 and 1998a).

References

- [1] Acemoglu, Daron, Johnson, Simon and Robinson, James A. (2001), "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review*, 91(5): 1369-1401.

- [2] Acemoglu, Daron, Johnson, Simon and Robinson, James A.(2005), "The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth," *American Economic Review*, 95(3): 546-579.
- [3] Acemoglu, Daron and Robinson, James A. (2000a) , "Political Losers as a Barriers to Economic Development," *American Economic Review*, 90(2) (Papers and Proceedings): 126-130.
- [4] Acemoglu, Daron and Robinson, James A. (2000b), "Why Did the West extend the Franchise? Democracy, Inequality and Growth in Historical Perspective," *Quarterly Journal of Economics*, 115(4): 1167-1200.
- [5] Alesina, Alberto, Baqir, Reza and Easterly, William (1999), "Public Goods and Ethnic Divisions," *Quarterly Journal of Economics*, 114(4): 1243-1284.
- [6] Butler, David and Ranney, Austin, (eds.) (1994), *Referendums Around the World: The Growing Use of Direct Democracy*, Washington, D.C: AEI Press.
- [7] Collier, Paul (2000), "Ethnicity, Politics and Economic Performance," *Economics and Politics*, 12: 1225-245.
- [8] Clarke, Harold D. and Kornberg, Allan (1994), "The Politics and Economics of Constitutional Choice: Voting in Canada's 1992 National Referendum," *The Journal of Politics*, 56(4): 940-962.
- [9] Coate, Stephen and Conlin, Michael (2004), "A Group Rule-Utilitarian Approach to voter Turnout: Theory and Evidence," *American Economic Review*, 94(5): 1476-1504.
- [10] Deacon, Robert T. and Shapiro, Perry (1975), "Private Preference for Collective Goods Revealed Through Voting on Referenda," *American Economic Review*, 65 (5): 943-55.
- [11] Easterly, W. and Levine, Ross (1997), "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics*, 112:1203-50.
- [12] Electrol Commission of Kenya (2002), *2002 General Election Results*, Nairobi Kenya.
- [13] Electrol Commission of Kenya (2005), *2005 Constitutional Referendum Results*, Nairobi Kenya.
- [14] Fidrmuc, Jan (2000), "Political Support for Reforms: Economics of Voting in Transition Countries," *European Economic Review*, 44:1491-1513.
- [15] Government of Kenya, Central Bureau of Statistics, (2002), *Kenya Multiple Indicator Cluster Survey 2000*, Nairobi, Kenya.
- [16] Government of Kenya, Central Bureau of Statistics, (2002), *Welfare Monitoring Survey 1997*, Nairobi, Kenya.

- [17] Government of Kenya, Central Bureau of Statistics, (2004), *Economic Survey 2004*, Nairobi, Kenya.
- [18] Kimenyi, Mwangi S. (2006a), "Ethnicity, Governance and the Provision of Public Goods," *Journal of African Economies*, Oxford University, Forthcoming.
- [19] Kimenyi, Mwangi S. (2006b), "Institutions of Governance, Power Diffusion, and Pro-Poor Growth," *Senior Seminar Policy Papers*, African Economic Research Consortium, Forthcoming.
- [20] Kimenyi, Mwangi S. (2006c), "Political Constipation: Bananas and Oranges are Bad for Kenya's Institutional Health," Draft Working Paper (January).
- [21] Kimenyi, Mwangi S. (1998a), "Harmonizing Ethnic Claims in Africa: A Proposal for Ethnic-Based Federalism," *The Cato Journal*, 18(1): 43-63.
- [22] Kimenyi, Mwangi S. (1998b), "Ethnic Rent-Seeking, Stability and Institutional Reforms in Sub-Saharan Africa," in Borner, Silvio and Paldam, Martin (Eds), *The Political Dimension of Economic Growth*, New York: St. Martin Press.
- [23] Kimenyi, Mwangi S. (1989), "Interest Groups, Transfer Seeking and Democratization: Competition for benefits of Government Power May Explain African Political Instability," *The American Journal of Economics and Sociology*, 48(3):339-349.
- [24] Kimenyi, Mwangi S. (1987), "Toward a Self-Enforcing Constitution for South Africa," in Briand, Michael (ed), *A Way Out: Federalist Options for South Africa*, San Francisco, Ca: Institute of Contemporary Studies.
- [25] Kimenyi, Mwangi S. and Mbaku, John M. (1993), "Rent-Seeking and Institutional Stability in Developing Countries," *Public Choice*, 77:385-405.
- [26] Matsusaka, John (1992), "Economics of Direct Legislation," *Quarterly Journal of Economics*, :541-571.
- [27] Mbaku, John M. and Kimenyi, Mwangi S. (1995), "Democratization in Africa: The Continuing Struggle," *Coexistence* 32: 119-136.
- [28] North, D. C. (1981), *Structure and Change in Economic History*, New York: W.W. Norton and Co.
- [29] North, D. C. and Thomas, R. P. (1973), *The Rise of the Western World: A New Economic History*, Cambridge University Press.
- [30] North, D. C. and Weingast, Barry R. (1989), "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *Journal of Economic History*, 49(4): 803-32.

- [31] Olson, Mancur (1965), *The Logic of Collective Action*, Cambridge: Harvard University Press.
- [32] Olson, Mancur (1982), *The Rise and Decline of Nations: Economic Growth, Stagflation, and Economic Rigidities*, New haven: Yale University Press.
- [33] Olson, Mancur (1993), "Dictatorship, Democracy and Development, *American political Science Review*, 87: 567-76.
- [34] Olson, Mancur (1997), "The New Institutional Economics: The Collective Choice Approach to Economic Development," in Clague, Christopher, *Institutions and Economic Development: Growth and Government in Less-Developed and Post-Socialist Countries*, Baltimore: The John Hopkins University Press, pp. 37-64.
- [35] Odhiambo, Walter (2004), *Pulling Apart: Facts and Figures on Inequality in Kenya*, Nairobi, Kenya: Society for International Development.
- [36] Powelson, John P. (1994), *Centuries of Economic Endeavor*, Ann Arbor: The University of Michigan Press,
- [37] Remmer, Karen L. and Gelineau, Francois (2003), "Subnational Electoral Choice: Economic and Referendum Voting in Argentina, 1983-1999," *Comparative Political Studies*, 36(7): 801-821.
- [38] Vlachos, Jonas (2005), "Who Wants Political Integration? Evidence from the Swedish EU-Membership Referendum," *Journal of Public Economics*, 88: 1589-1604.