

# Voting in an African democracy: does only ethnicity rule?

An empirical assessment on contemporary Ghana

Thomas Bossuoy<sup>1</sup>

DRAFT VERSION - DECEMBER 2007

## Abstract

Is ethnicity the overwhelming determinant of the results of democratic scrutines in Africa, as evoked frequently? We investigate this question empirically on the example of contemporary Ghana. This country fulfils every pre-requisite for being a field of research on this topic: it is truly democratic, it is divided into several ethnic groups and two main parties compete on the basis of both their natural ethnic support and the political preferences they embody. We make use of a large set of different variables from several data sources (electoral, census and survey data) that we match at the district level, and perform econometric analysis on the results obtained by each party as well as on their evolution between two comparable polls. Our results concur to the view that ethnicity is not the only ruling factor, by far. When adequate variables are controlled for, the impact of ethnicity is limited and real political determinants reveal such as the social position, the integration on the labor market, the level of inequality or subjective well-being.

Keywords: Vote, Ethnicity, Democracy, Africa.  
JEL classification: D72, O1

---

<sup>1</sup>EHESS, Paris School of Economics, DIAL.

I acknowledge the financial support from the Agence Française de Développement.  
Any comment or remark welcome: bossuoy@dial.prd.fr

# 1 Introduction

For about a decade, a wide scope of economic literature deals with the effect of ethnicity on development. It tends to demonstrate that the heterogeneity of a given population deters its capacity to set up the institutions suitable for economic growth and poverty reduction. The core of the argument at least implicitly centers on the specific political economy of such societies. A first kind of explanation deals with conflicts: it explains that conflicts are more likely to occur in more heterogenous societies. This basic intuition derives from qualitative works like those by Horowitz (1985). This argument is invoked by Easterly and Levine (1997) in their influential paper and is investigated by a number of papers (Hegre and Sambanis 2006) (Collier, Hoeffler, and Rohner 2006). An other channel through which ethnicity may impact development concerns the possible rivalry and non-cooperative relationships between groups. A range of papers investigates the properties of such a political economy, and show that more heterogenous communities are associated with a lower access to development (Miguel 2006), (Dayton-Johnson 2000). This would be due to the difficulties they have to work together (Alesina and La Ferrara 2000) in a context where the provision of public goods is determined by the specific balance of power between the different groups (Banerjee and Somanathan 2007). Such mechanisms entail less financed States and less efficient public policies (Alesina, Baqir, and Easterly 1999).

The rivalry between groups in a fragmented society should have consequences with respect to elections. Robinson (2001) investigates the impact of fractionalization on a materialistic rational choice model of conflict, that may well be applicable to votes. He shows that ethnic identity may substitute to social class belonging and determine individuals' choice. Roemer (1998) directly focuses on a voting model in which he introduces a non-economic issue (typically a religious affiliation). He shows that if there are two issues at stake instead of only one (e.g. the level of redistribution), the political platform of competing parties may change dramatically. Roemer even refers to Marx by saying that a non-economic issue may be purposely introduced by elites to divert the people's attention from the issue of class domination. By focusing on a non-economic debate, people would vote against their own economic interest and allow to perpetuate these unequal relationships.

In this framework, ethnicity and ethnic rivalries are typical non-economic issues that may prevail on economic ones in African countries. First, the fact that African elites manipulate ethnic cleavages to win elections is well documented in the literature (see for example Glaeser (2005) or the comprehensive work by Daniel Posner (2005)). Second, the pattern of election results in African countries seem to follow ethnic lines, at first sight. Third, it is well known that African civil society is little organized while elites tend to stay in power and secure their position. Should we then consider that ethnic rivalries are instrumented by elites to divert the people's attention from the truly political subjects? In other terms, following Roemer's paraphrase of Marx, is ethnicity the opiate of the masses?

If this was true, votes would be overwhelmingly determined by ethnic structures of the population, while non-ethnic determinants would play a secondary role. By non-ethnic

determinants, we mean both class and evaluative determinants. Class vote refers the vote cast by a citizen on the ground of his position on the social hierarchy. Typically, if class vote prevails, poor people tend to vote for liberal pro-redistribution party while rich people tend to vote for a conservative party. Evaluative vote refers to the vote cast on the ground of an assessment of the quality of the policy implemented by the incumbent government. It may have the same pattern as an ethnic vote if a government favors such or such ethnic group (i.e. implement an ethnic policy). In this case, ethnic groups are likely to vote as a group, but not exactly for the same reason as "mere" ethnic vote: it is not only the identification process that pushes people to determine themselves for a given party, but the assessment they make on a policy which itself may be ethnic-oriented. Ethnic voting therefore generally opposes class or evaluative voting.

Whether ethnic or non-ethnic determinants prevail is a key question about African countries, and much is said on this topic without any rigorous analysis. Indeed, quantitative studies are extremely scarce on developing countries in general and African countries in particular, contrary to the number of those dealing with election outcomes in industrialized countries (see among many others Alesina and Rosenthal (1996) on American presidential and congressional elections, or Goux and Maurin (2004) or Lewis-Beck (1997) on French elections). To our knowledge, aggregate election results have only been studied in very few cases like India (Kondo 2003), Algeria (Chhibber 1996), or Brazil (Ames 1994). African elections have almost never been studied. Only very recent papers begin to analyze them, but almost only through the lens of non representative individual level surveys. For example Erdmann (2007) uses descriptive statistics of a series of electoral results in Zambia as well as a survey data on about a thousand people. He concedes ethnicity plays an important role but also evokes the relative political mobilization of ethnic groups and programm evaluation as of a certain importance. Likewise, Lindberg and Morrison (2007) use survey data and qualitative data from focus groups to contest the importance of ethnicity or clientelism in Ghanaian elections. They emphasize the role played by evaluation of candidates and parties. On Ghana, a recent paper (Fridy 2007) used aggregate electoral data to disentangle the roles of ethnicity, economics and politics. This paper seems us to seek and answer the good question, but the data and methods involved do not allow the author to properly identify the effects of each of these factors, as we will try to show here.

The fact that Ghana was chosen as a field of research in two of the rare studies on African countries is not surprising. Politics in Ghana is especially interesting when it comes to analyzing the role of ethnicity in a democratic country: Ghana fulfills every pre-requisite for such a study. First, Ghana is democratic. After a long period of political turmoil in the 1970s and a "soft" dictatorship by Jerry Rawlings in the 1980s, multipartism and democracy were installed at the beginning of the 1990 and endure from then on. Free and fair elections were held and progressively recognized as "the only game in town", as we will see in section 2. In 2000, power shift peacefully from one of the two main parties to the other, which may be considered as the sign of a mature democracy. Second, politics in Ghana is made clearer by the fact that the political field is structured along a two-party system anchored in history. As we will see in

section 2, the two main parties in Ghana somehow form a left-right or conservative-liberal scheme, which makes the study of economic voting accurate. Third, there is a historical background of ethnic rivalries in Ghana. Although peace prevails for about a century, such rivalries originate in the period where Ashanti, Ewe or Fante kingdoms competed for occupying territories and selling slaves to the Europeans. Compromise, balance of powers and distrust have always been key to understand Ghanaian politics. Fourth, Ghana may be considered as broadly representative of African countries. Its size, fractionalization, density and history make it quite comparable to most African countries, and its level of development make it appear as an "upper-middle class" African country. This makes this country a fascinating field for the study of African democracy.

In this paper we intend to investigate the respective weight of ethnic, class and evaluative determinants of votes on a range of elections in contemporary. We try to fill the gap between micro-level analysis of group interactions and macro-level study on State building and democratic processes. This is made possible by the collection of several datasets from various sources, which allow to identify more precisely than ever the non-ethnic determinants of vote.

The remainder of the paper is organized as follows: in section 2, we propose a historical survey of politics in Ghana and especially trace the origins and key features of the two-party pattern. Section 3 presents the different data sources used in the empirics and provides some descriptive statistics. We then estimate the determinants of vote following two different and complementary strategies: in section 4 we first analyze the results of the presidential election 2004 and show that ethnicity does not account for the whole heterogeneity of votes, by far. Then in section 5 we try to identify what made districts more or less vote for a given party than 4 years earlier in the previous presidential scrutiny. Thereby we control for the structural correlation between ethnicity and party affiliation and show that class and evaluative voting are key to understand the evolution of votes. Section 6 concludes.

## 2 Historical background

### 2.1 The origins of the two-party system

Ghanaian two-party system is deeply rooted and dates back from the liberation movements under the colonial power. In 1947, lawyer and journalist Joseph B. Danquah founded the first political party, the United Gold Coast Convention (UGCC). It included members of the African elite (mostly lawyers) and invited a young intellectual settled then in the United Kingdom: Kwame Nkrumah. The unity of this movement only lasted a year, the time necessary for six of the main UGCC leaders (the "Big Six") to be imprisoned in what remained as a milestone episode in the path to independence. But in 1949, Nkrumah broke away from the party and inaugurated his own party, the Convention People's Party (CPP). The CPP presented a more radical

nationalist programm, calling for "Self-government NOW", while the UGCC appeared by contrast more compromised with the colonial power. Besides, while UGCC leaders were almost all Ashanti and closely linked with Ashanti traditional chiefs, the CPP leaders appeared selfless and dedicated solely to the liberation of the people without any connection to a specific ethnic group. The CPP rapidly increased its influence among the people and obtained overwhelming majorities in the elections held in 1951 and 1956. It defeated the National Liberation Movement (NLM), created by Danquah and Kofi Busia in 1954 which succeeded to the UGCC.

The rivalry between the CPP and the NLM in the 1950s and 60s crystallized all major splits in Ghanaian politics. The NLM (also more generally referred to as "the Busia/Danquah tradition") had its strongholds in the Ashanti region. Its main supports were to be found among the cocoa growers and the traditional chiefs, whose interests were defended. It recruited among the educated elite and proposed a rather conservative project for Ghanaian society. By contrast, the CPP (and later all nkrumahist parties) defended the "masses" and presented a more radical political position. During his presidency (1957-1966), Kwame Nkrumah opposed the interests of cocoa growers by raising taxes on exports and contested the power of Ashanti traditional rulers (particularly by the Chieftancy Act in 1961). He made socialism the official ideology of the regime and drew his country closer to the Eastern bloc (although he remained above all as one of the first and most influential pan-africanist leaders).

After the fall of Nkrumah, overthrown by a coup in 1966, Kofi Busia came to power in 1969 and implemented a very different policy. He offered financial support to the revenues of cocoa growers, broke off with communist countries and leaned on the Akan majority group (of which Ashanti form a sub-group). But the economic crisis accelerated his fall and he was dismissed by a military coup in 1972. We thus see that as early as in the immediate aftermath of independence, the two main political forces were facing each other and implemented quite different political projects when they successively came to power.

The 1970's remained as the "kalabule" years, which refers to the variety of petty informal activities that the population had to devote to in times of economic anarchy and loss of morality (Chavagneux 1997). On the political level, military governments and coups attempts succeeded one another, until a last coup was successfully held by Flight Lieutenant Jerry Rawlings in 1979. He remained 112 days in power, just the time necessary to enforce a "house cleaning exercise" (restoring state authority through symbolic and sometimes violent decisions like executing the former military chiefs) and organize elections. Hilla Limann, a "Northerner" who professed to represent the inheritance of Nkrumah's CPP, became President but rapidly faced social unrest and discontent. In 1981 Rawlings came back at the head of the State as the power was almost left vacant.

Jerry Rawlings does not fall into one of the two political categories that we mentioned above. His presidency thus introduced some modifications in the two-party system but did not abolish it, quite the contrary. Rawlings tried (and eventually succeeded) to diminish the influence of the nkrumahist forces and integrate them in his own camp.

The movements of young partisans who claimed their faithfulness to Kwame Nkrumah represented a threat for Rawlings, for they surely would oppose his project to carry on an economic adjustment under the supervision of the IMF and the World Bank. And yet this adjustment was deemed absolutely necessary to get off the economic crisis and have access to international aid flows. In the early years of his presidency, Rawlings made gestures of goodwill towards these revolutionary forces by creating People' and Worker's Defence Committees seemingly designed to enforce the revolution. Thereby he kept control on these potentially threatening activists. By determinedly imposing the economic adjustment during the 1980s, Rawlings sidelined nkrumahists.

In the opposition between nkrumahism and the Busia/Danquah tradition, nkrumahism was thus progressively replaced by Rawlings and his heirs. This activated the rivalry between Ashanti and Ewe, this latter group being strongly supportive of his member Jerry Rawlings, while Ashanti and to a larger extent Akan remained resolute opponents. But since these two conflicting parties at least agreed upon the broad macroeconomic strategy (adjustment and international openness), nkrumahist movements represented a radical criticism of this system and progressively became protest parties under the Fourth Republic.

## **2.2 Political developments under the Fourth Republic**

In 1992, a new constitution was adopted by referendum. It lifted the ban on political parties and opened the way to a presidential election. Jerry Rawlings was candidate in the name of the National Democratic Congress (NDC). He was challenged by Professor Abdu Boahen from the New Patriotic Party (NPP) which represents the follow up of the Busia/Danquah tradition. The nkrumahist side was much divided between several parties and presented three candidates to this election, among whom former President Hilla Limann. To oppose Rawlings who benefited from his incumbent position, Limann paradoxically reached an agreement with Boahen, i.e. with the political party to which nkrumahists were the traditional opponents! This may have accelerated the loss of influence of nkrumahists on the Ghanaian political field (Chavagneux 1997).

Rawlings largely won the elections (see Table 1). He benefited from a large support by the political elite for his adjustment and democratic policy. The opposition was severely beaten, and some of its partisans in Ashanti region began to commit violence. Traditional Ashanti chiefs appealed to appeasement. Although the poll was said "free and fair", the opposition boycotted the parliamentary election that immediately succeeded and denounced a "stolen verdict". In this 1992 presidential election, nkrumahists were severely defeated.

The 1996 scrutiny saw the confirmation of the two-party system and the decline of nkrumahist parties. In spite of their effort to present a unique candidate, they could only gather 3% of the votes and most of their activists joined the NPP in the already mentioned paradoxical alliance to defeat Rawlings. But 1996 also saw the consolidation of democracy. Although the opposition was almost as severely beaten as four years earlier, it did not boycott the parliamentary elections that took place right after.

	1992			1996			2000			2004		
Rawlings	NDC	58%	Rawlings	NDC	57%	Kufuor	NPP	48%	Kufuor	NPP	52%	
Boahen	NPP	30%	Kufuor	NPP	40%	Atta-Mills	NDC	45%	Atta-Mills	NDC	45%	
Limann	PNC	7%	Mahama	PNC	3%	Mahama	PNC	2.5%	Mahama	PNC	2%	
Darko	NIP	3%				Hagan	CPP	2%	Aggudey	CPP	1%	
Erskine	PHP	2%				Tanoh	NRP	1%				
						Lartey	GCPP	1%				
						Brobby	UGM	0.5%				
						<b>2nd Round</b>						
						Kufuor	NPP	57%				
						Atta-Mills	NDC	43%				

Table 1: Results of the 1992, 1996, 2000 and 2004 presidential elections

Besides, the logistical aspects of the elections were much better organized than in 1992. Overall, 1996 was a time of deepening democracy and two-party system (Nugent 1999).

We will come back in much greater details to the 2000 and 2004 elections, but it is worth mentioning already that they perpetuated and intensified this bipartisan democratic pattern. In 2000, for the first time in the Fourth Republic, power shift from NDC to NPP peacefully, which may be considered as the sign of an accomplished democracy. The second round that was held to decide between the candidates of the NPP and NDC consolidated the two-party system, and the very limited number of candidates in the 2004 elections (as well as their very limited results) seemed to establish it.

### 3 The data

Our study relies on an original compilation of several datasets that we match at the district level. This provides an important amount of information on the demographical, social and economic situation of every district. The lack of accurate data may account for the rather deceiving results obtained by previous studies: some of them did not even seek to explain votes empirically (Nugent 2001); an other one only relies on a very limited number of variables (Fridy 2007).

#### 3.1 Electoral data

We first collected a set of electoral results on seven major national polls between 1992 and 2004 in Ghana: the 1992 presidential elections and the 1996, 2000 and 2004 presidential and parliamentary elections. These results are available at the constituency level.

Ghana used to be divided into 200 constituencies until the 2000 presidential and parliamentary polls. In 2004, a reform divided and rearranged the electoral map up to 230 constituencies. This change of boundaries does not impact our matching: since all socio-economic variables are available at the district level, we aggregated the constituency data by simply summing them at the district level. This is made possible

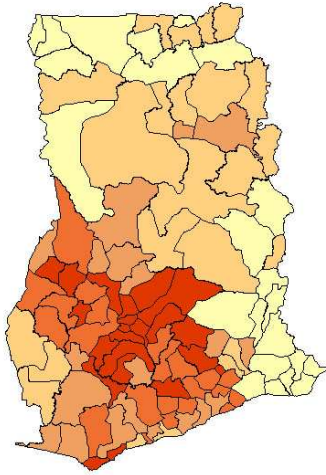


Figure 1: Vote for the NPP in 2000

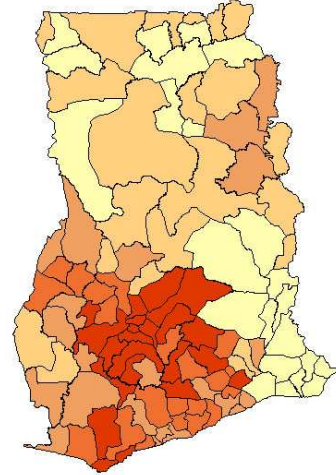


Figure 2: Vote for the NPP in 2004

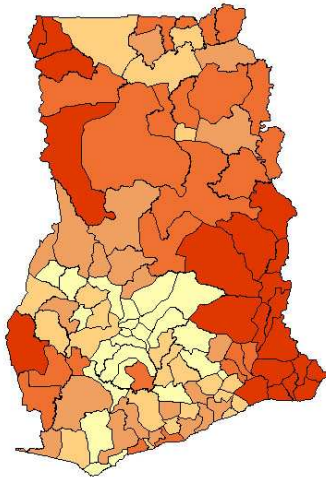


Figure 3: Vote for NDC in 2000

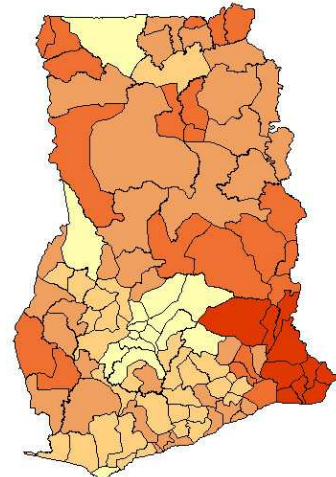


Figure 4: Vote for the NDC in 2004

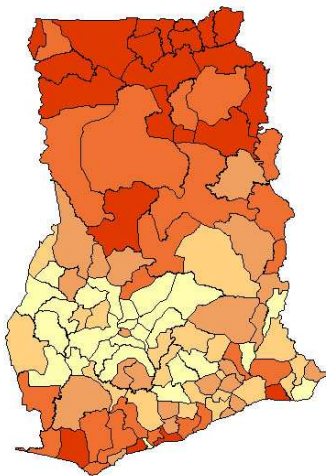


Figure 5: Vote for Nkrumahists in 2000

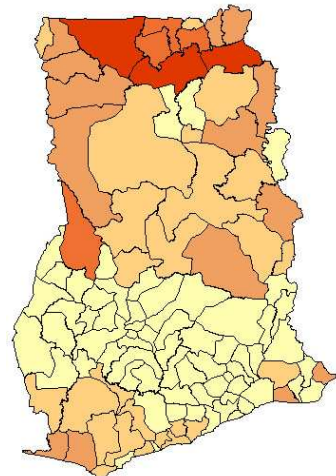


Figure 6: Vote for Nkrumahists in 2004

by the fact that every constituency (both before and after the boundary changes) is included in a district, with no overlap.

For each of these polls, we know how many voters were registered, how many actually cast a ballot, how many of these votes were deemed valid, how many votes each of the candidates obtained as well as the party they represented and of course who was eventually elected. The pattern of votes in 2000 and 2004 presidential elections are presented in Figures 1 to 6.

But in this paper we do not use all these electoral data. First, since all other variables used in our empirical strategy are drawn from the Census held in 2000 and a national survey held in 2003, the only electoral results that may be accounted for are those of 2004. But we will also use the 2000 results as a point of comparison and seek the determinants of the evolution of votes between these two scrutines. Second, in this paper we will concentrate on the determinants of vote to the presidential election, the analysis of parliamentary results being left for further research.

## **3.2 Social, economic and demographic data**

Descriptive statistics on the variables used in the remainder of the paper are provided in Table 2. They all include 110 observations corresponding to the 110 districts, and come from three different sources.

We first collected a nationally representative large sample household survey: the CWIQ survey elaborated by the World Bank and carried out by the Ghana Statistical Service in 2003. This survey has a national representative sample of more than 49,000 households representing more than 210,000 individuals throughout the country. It makes it possible to split the sample into sub-samples of about 400 households and 1,000 individuals representative of each district. We compute a series of variables for each district : occupational and educational structure, household compositions and assets, average levels of expenditures in a variety of goods etc. This survey also includes subjective questions on the degree of "happiness", poverty and vulnerability. The fair number of households in each district allows us to compute information on inequality and poverty such as Gini indicators, percentile ratios, or population under a certain poverty line.

These district-level results are completed by the regional paper reports of the 2000 Census Survey that we brought back from Accra. They provide cross-tabulations of some major socioeconomic dimensions for the whole population of every district. The ethnic structure of each district, among other variables, is drawn from there. Most of this information at the district level is here used for the first time for the purpose of political analysis.

We also use information from the 2000 Facility Census that we obtained from the Ghana Statistical Service in Accra: this part of the 2000 Census gathers information on local amenities, public goods and equipment for the more than 70 000 localities of the country. The total population of each locality is provided, as well as information on the access to some basic amenities: the presence of (or distance to) such equipments

Variable	Source	Mean	St. Dev	Min	Max
Akan (%)	Census 2000	49.6	31.8	0.9	96.6
Northern ethnic groups (%)	Census 2000	23.6	29.6	0.6	97.7
Ewe (%)	Census 2000	12.5	20.7	0.0	92.7
No education (%)	Census 2000	41.8	18.9	16.0	84.3
Primary education (%)	Census 2000	21.7	5.3	8.0	34.3
Middle education (%)	Census 2000	23.0	9.6	2.6	35.8
Secondary education or more (%)	Census 2000	13.5	7.6	3.9	29.9
Public sector (%)	Census 2000	7.7	4.0	1.7	18.2
Formal private sector (%)	Census 2000	15.3	6.1	3.9	27.5
Informal private sector (%)	Census 2000	76.2	10.0	57.6	93.8
Pipe water (%)	Census 2000	37.3	31.1	0.9	96.8
Tank water (%)	Census 2000	2.1	4.3	0.0	21.2
Well water (%)	Census 2000	16.8	13.0	1.0	70.6
Borehole water (%)	Census 2000	17.6	16.2	0.3	62.3
Rain water (%)	Census 2000	21.3	16.1	0.7	64.2
Lake water (%)	Census 2000	4.6	7.9	0.1	54.6
Employed active workers (%)	CWIQ Survey 2003	47.6	7.1	17.2	72.2
Unemployed active workers (%)	CWIQ Survey 2003	7.3	6.4	0.3	39.0
Inactive workers (%)	CWIQ Survey 2003	45.0	4.7	27.1	56.4
Gini index of bread expenditures	CWIQ Survey 2003	58.6	12.2	37.8	95.8
Feeling poor (%)	CWIQ Survey 2003	48.1	16.8	14.6	93.1
Feeling happy (%)	CWIQ Survey 2003	60.2	13.3	24.4	94.8
Feeling more vulnerable than 5 years ago (%)	CWIQ Survey 2003	38.0	14.3	7.9	79.5
Feeling unsafe (%)	CWIQ Survey 2003	10.2	8.6	0.0	41.0
Considering morality as a problem (%)	CWIQ Survey 2003	5.9	4.7	0.0	16.9
At least occasionally listen to the radio (%)	CWIQ Survey 2003	85.3	11.4	47.2	98.3
Share of the 5 main cities in the population of the district (%)	Facility Census 2000	31.7	13.6	10.8	86.5
Average distance to the most proximate post office (km)	Facility Census 2000	15.2	11.4	0.0	54.4

*Note: Results are individual level data aggregated up to the district level. Means and standard deviations are weighted by the population of each of the 110 district to be nationally representative.*

Table 2: Descriptive statistics for the main socio-economic variables

as a post office, hospital or primary school is mentioned. We thus have indicators both on the level of urbanization of every district (the share of the population which lives in cities for example), on population concentration and on access to public goods. In dualist countries like Ghana, the level of urbanity may play a key role in structuring the political field. Likewise, as it derives from the policies implemented by central or local authorities, the availability of public goods or lack thereof might determine the opinion of citizens about the incumbent party.

Table 2 shows how heterogeneous the 110 districts are. Differences between the minimum and the maximum of each variable are extremely large, which corresponds to the gap between urban populous areas and rural ones, the coast on the South and arid landscapes in the North, the heart of Akan territories and the Ewe regions, etc. This variance is necessary to identify properly the impact of these social and economic variables on the pattern of votes.

## 4 Estimating the results of the 2004 presidential election

We begin this analysis by simply seeking which are the determinants of the voting pattern in the 2004 presidential election. Our econometric model is the simplest possible:

$$y_{ij} = \alpha\theta_j + \beta U_j + \gamma V_j + \epsilon_{ij} \quad (1)$$

where  $y_{ij}$  is the share of votes obtained by party  $i$  in district  $j$ ,  $\theta_j$  is the ethnic composition of the district,  $U_j$  is a vector of non-ethnic characteristics of the district population (level of education, occupational structure, wealth, subjective well-being) and  $V_j$  a vector of characteristics of the district (access to public goods, urbanity). If ethnic voting is an overwhelming determinant, we should have  $\alpha$  highly significant while  $\beta$  and  $\gamma$  would be non significant. Adding non-ethnic variables would hardly improve the share of variance explained.

As we explained in sub-section 2.2, the 2004 election brought together outgoing President John Kufuor, who represented the NPP and NDC candidate John Atta-Mills. Two other candidates also competed in this election: Edward Mahama for the PNC and George Aggudey for the CPP. These two candidates proclaim their relation to nkrumahism. In our analysis, we add the results obtained by these two challengers, for they broadly represent the same political family and play the similar role of "anti-system outsider". In such a setting, both ethnic and non-ethnic determinants could play a role.

Let us start with the votes for the ultimately winning candidate, John Kufuor. As we saw in section 2, his party the NPP represents the Busia/Danquah tradition which is closely related to the Akan people. The geographical patterns of votes clearly reveal it: Figures 1 and 2 show that the highest scores were obtained by the NPP (more precisely by its candidate John Kufuor, himself an Ashanti) in Ashanti region. The share of Akan could thus play a role in explaining the votes. But as we also explained, the NPP represents the rather conservative wing of Ghanaian politics. Its traditional supports are to be found among the educated well-off citizens who are economically and socially integrated. These two dimensions are confronted in the regression presented in Table 3.

We obtain quite contrasted results. First, the share of Akan is significant in all possible specifications, i.e. even when controlling for other non-ethnic dimensions. It accounts

<b>Dependent variable: share of vote for the NPP</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	<b>(7)</b>
Akan	<b>48.95***</b> (3.18)	<b>48.75***</b> (3.11)	<b>49.12***</b> (3.17)	<b>51.98***</b> (3.51)	<b>48.89***</b> (3.11)	<b>44.43***</b> (3.76)	<b>40.2***</b> (4.02)
Formal private sector		<b>53.4**</b> (21.51)					<b>37.66*</b> (19.67)
No education			46.17 (32.64)				<b>-27.1***</b> (8.78)
Gini index of bread expenditures				<b>19.01*</b> (9.85)			<b>39.04***</b> (10.15)
Feeling happy					<b>18.87**</b> (7.83)		<b>23.8***</b> (7.35)
Listen to the radio at least occasionally						<b>22.91**</b> (10.55)	<b>25.07**</b> (10.42)
Constant	<b>25.86***</b> (1.85)	<b>18.99***</b> (3.3)	<b>20.97***</b> (3.91)	<b>12.7*</b> (7.05)	<b>14.66***</b> (4.99)	8.94 (8)	-21.31 (12.87)
R-square	0.69	0.70	0.69	0.70	0.70	0.70	0.77
Observations	110	110	110	110	110	110	110

*Note: OLS regressions. Standard deviations in parentheses. \*, \*\*, \*\*\*: significant at the 90, 95 and 99%*

Table 3: Voting for the NPP in the presidential 2004 elections

alone for a large share of the variance. The ethnic dimension of vote is established here. But the effect of ethnic composition does not rule out the effect of other non-ethnic variables. When introduced one by one, the other variables are significant, contrary to what Fridy (2007) found on a much more limited set of variables. The socio-economic determinants play a significant role in line with the expectations derived from political and economic analysis. The share of active people who work in the formal private sector enters positively in the regression, while the share of non educated people negatively impacts the electoral results for the NPP. Being connected to the "modernity", as proxied by listening regularly to the radio, also favors support for NPP. The fact that people who proclaim they are "happy" tend to vote for the NPP confirms the conservative position of this party. It is striking to notice that the most unequal districts are the most prone to vote for the NPP. It may be driven by the share of wealthy people who pull up the Gini index while providing support to the conservative party.

An other interpretation of these results is related to the fact that John Kufuor is the outgoing President, he thus presented himself to this election as the incumbent. Independently from the positions he or his party could have defended during the campaign, good economic results and general satisfaction are likely to be put to his credit and increase the share of citizens who wish he carries on the job. Being integrated in the economic modernity, being educated and feeling happy may thus increase the vote for any incumbent candidate whatever be his political profile.

Let us turn now to the main challenger to John Kufuor in this elections: John Atta-Mills, representing the NDC. The traditional strongholds of the NDC are located in the Ewe territories in the South-Eastern part of Ghana. This is due both to the personality of former President and founder of the NDC Jerry Rawlings whose mother was an Ewe, and to the age-old rivalry between Ashanti and Ewe which could incite these latter to vote against the Ashanti candidate. But with the decline of nkrumahist parties, a number of minority ethnic groups are also part of the natural electoral basis of the

NDC, especially Northerners. To take into account this diversity, we did not only examined the impact of the share of Ewe, but more largely the impact of the share of all non-Akan group. This allows to check a possible identification effect of the Fante people to their ethnic-mate Atta-Mills. But here again, non-ethnic determinants are likely to play a role: NDC always presented itself as more proximate to the suffering people and defender of their interests. Its natural support should then come from the little educated poor people. It is also possible that the NDC takes benefit from the dissatisfaction towards the policy of the incumbent party. Empirical results on the votes for John Atta-Mills are presented in Table 4.

Dependent variable: share of votes for the NDC	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Akan	<b>-41.77***</b> (3.71)	<b>-40.04***</b> (3.65)	<b>-42.06***</b> (3.66)	<b>-40.93***</b> (3.52)	<b>-49.38***</b> (3.83)	<b>-41.73***</b> (3.7)	<b>-38.14***</b> (4.75)
Informal private sector		<b>46.23***</b> (16.47)					<b>42.08***</b> (15.01)
No education			<b>-76.3**</b> (37.72)				<b>24.37**</b> (10.01)
Borehole water				<b>-27.74***</b> (7.47)			<b>-18.93**</b> (8.06)
Gini index of bread expenditures					<b>-47.81***</b> (10.74)		<b>-46.43***</b> (12.28)
Feeling happy						-12.56 (9.3)	<b>-15.65*</b> (8.26)
Constant	<b>66.57***</b> (2.16)	<b>28.72**</b> (13.64)	<b>74.65***</b> (4.52)	<b>72.37***</b> (2.57)	<b>99.63***</b> (7.69)	<b>74.02***</b> (5.92)	<b>61.87***</b> (14.91)
R-square	0.54	0.57	0.56	0.59	0.61	0.55	0.68
Observations	110	110	110	110	110	110	110

Note: OLS regressions. Standard deviations in parentheses. \*, \*\*, \*\*\*: significant at the 90, 95 and 99%

Table 4: The determinants of voting for the NDC in the presidential 2004 elections

The pattern obtained here is similar to the regression on the share of NPP votes. The share of Akan plays a very significant role, this time negative as expected. But a number of additional non-ethnic variables also have a significant effect when introduced in the regression. The determinants of votes for the NDC are quite symmetric to those of votes for the NPP. Districts with a large share of uneducated people who work in the informal sector tend to vote more for the NDC. Having a borehole as a main source of drinking water is characteristic of wealthy rural households, who tend to support the NPP. The feeling of happiness is negatively correlated with the vote for the main opposition candidate. Last, the NDC candidate obtained its better results in districts where the level of inequality is low. This might be due to the fact that very rich people tend to vote for the conservative NPP while very poor are more likely to cast a protest vote for the nkrumahist parties. Middle class may feel represented by the political position defended by the NDC.

But the NDC candidate is not the only challenger. We turn now to the determinants of votes for candidates of the two smaller parties, the PNC and the CPP which both belong to the nkrumahist tendency. Figure 6 confirms the fact that Northern parts of the country are more likely to vote for these radical parties. Edward Mahama, who represents the PNC, is himself a native of the Northern region. What about an ethnic voting for the nkrumahists?

<b>Dependent variable:</b>						
<b>share of vote for the nkrumahist parties</b>	(1)	(2)	(3)	(4)	(5)	(6)
						Akan is replaced by "Northern ethnic group"
Akan	<b>-7.2***</b> (1.79)	-2.76 (1.72)	-2.62 (1.75)	<b>-6.55***</b> (1.92)	0.5 (1.79)	3.64 (2.36)
Unemployed active workers		<b>51.87***</b> (8.56)			<b>38.71***</b> (8.85)	<b>32.71***</b> (9.13)
Gini index of bread expenditures			<b>28.78***</b> (4.91)		<b>20.02***</b> (5.02)	<b>14.19**</b> (5.93)
Feeling more vulnerable				4.13 (4.5)	<b>7.76**</b> (3.64)	<b>8.27**</b> (3.39)
Constant	<b>7.56***</b> (1.04)	1.99 (1.29)	<b>-12.35***</b> (3.52)	<b>5.61**</b> (2.36)	<b>-14.11***</b> (3.81)	<b>-11.05***</b> (3.31)
R-square	0.13	0.35	0.34	0.14	0.45	0.47
Observations	110	110	110	110	110	110

Note: OLS regressions. Standard deviations in parentheses. \*, \*\*, \*\*\*: significant at the 90, 95 and 99%

Table 5: The determinants of voting for the nkrumahist parties in the presidential 2004 elections

Table 5 provides answers to that question. The major determinants for the nkrumahist vote are not ethnic, as shown by the non significance of the ethnic coefficient as soon as it is introduced simultaneously with other non-ethnic variables (except the feeling of increased vulnerability). The share of Akan plays negatively, as expected, but is not significant in the complete regression. If we replace it by the share of Northern ethnic groups (Model 6), which may more precisely account for the pattern of votes for the nkrumahist parties, the coefficient is positive but no more significant.

The economic variables have the decisive effect on this protest vote. The rate of unemployment is the variable that explains the largest share of variance when it is the only regressor, the level of inequality ranks second. Last, the feeling of increased vulnerability (as compared to five years ago) also plays a important role. These results converge on the idea that votes for the nkrumahist parties are frequent in the most fragile part of the population in Ghana. People who are excluded from the labor market and witness a high level of inequalities are prone to vote for these candidates. This makes the determinants of voting for the nkrumahist parties typically non ethnic. The economic and political explaining factors clearly and coherently dominate.

In Tables 3, 4 and 5, we presented the models that best fit the pattern of votes observed during the 2004 presidential election, with consideration for parsimony so that the R-square statistics are not artificially high. In order to compare these factors as rigorously as possible, we now present a unique model for the three regressions (see Table 6)

The results obtained separately hold when the same model is used for the different parties. The ethnic determinant exists and discriminates between the NPP (for which districts with a larger share of Akan tend to vote more) and the NDC (which tends to gathers the votes of non-Akan). But besides, a clear and coherent set of non-ethnic variables have an important and significant effect. Districts with an important middle class of little educated citizens who work in the informal sector and do not regularly listen to the radio tend to support the NDC. Symmetrically, the more well-off districts with fewer non-educated people, a larger formal sector and a feeling of satisfaction tend

Dependent variable: share of vote for...	NPP	NDC	CPP + PNC	NPP	NDC	CPP + PNC
Akan	<b>36.67***</b> (4.51)	<b>-37.98***</b> (4.96)	1.3 (2.31)	<b>37***</b> (4.22)	<b>-37.35***</b> (4.73)	0.33 (2.25)
No education	<b>-24.89***</b> (9.39)	<b>19.2*</b> (10.32)	5.68 (4.82)	<b>-29.9***</b> (9.21)	<b>23.81**</b> (10.34)	6.07 (4.91)
Unemployed active workers	0.75 (19.48)	<b>-36.35*</b> (21.41)	<b>35.59***</b> (10)	3.8 (18.81)	<b>-37.61*</b> (21.1)	<b>33.79***</b> (10.03)
Informal private sector	<b>-26.13*</b> (15.03)	<b>31.73*</b> (16.51)	-5.62 (7.71)	-23.44 (14.54)	<b>29.22*</b> (16.31)	-5.79 (7.75)
Gini index of bread expenditures	<b>24.5*</b> (12.43)	<b>-42.64***</b> (13.66)	<b>18.13***</b> (6.38)	<b>27.47**</b> (12.02)	<b>-44.18***</b> (13.49)	<b>16.69**</b> (6.41)
Borehole water	<b>16.81**</b> (7.39)	<b>-18.87**</b> (8.12)	2.04 (3.79)	<b>17.44**</b> (7.09)	<b>-18.67**</b> (7.96)	1.22 (3.78)
Feeling more vulnerable than 5 years ago	-11.91 (8.02)	1.94 (8.81)	<b>9.96**</b> (4.11)			
Feeling happy				<b>22.44***</b> (7.27)	<b>-13.77*</b> (8.15)	<b>-8.68**</b> (3.87)
Listen to the radio at least occasionally	<b>19.85*</b> (11.52)	<b>-23.74*</b> (12.66)	3.87 (5.91)	<b>22.08**</b> (10.32)	<b>-22.05*</b> (11.58)	-0.05 (5.5)
Constant	<b>33.56*</b> (18.95)	<b>82.25***</b> (20.82)	-15.83 (9.72)	11.48 (16.84)	<b>90.35***</b> (18.89)	-1.84 (8.98)
R-square	0.77	0.70	0.47	0.78	0.71	0.46
Observations	110	110	110	110	110	110

Note: OLS regressions. Standard deviations in parentheses. \*, \*\*, \*\*\*: significant at the 90, 95 and 99%

Table 6: Disentangling the patterns of vote in the presidential 2004 election

to vote for the conservative candidate who is also the incumbent. Last, districts which present a high level of inequality, have a high unemployment rate and where people feel increasingly vulnerable bring voices to the radical anti-system nkrumahist candidates. This latter vote seems quite independent from ethnic determinants.

Our results thus lead to a much more contrasted conclusion than what is usually heard about the determinants of votes in African democracies. They also contradict the rare other studies that tried to identify other determinants than ethnicity, with no success. The fact that ethnicity plays a role may not be denied, especially in such a country as Ghana where ethnic cleavages, albeit peaceful and discreet, remain very present. But it is also naive to pretend that no other determinant plays a role. When taking into account a sufficient amount of information on social, demographical or economic characteristics of the population, it becomes impossible to pretend that only ethnicity rules. The different parties and their candidates tend to gather the votes of those who are the most interested in their propositions and may identify to their political project.

## 5 Estimating the evolution of votes between 2000 and 2004 presidential elections

In order to clarify the picture of the determinants of votes, we now try to estimate the impacts of our variables on the evolution of votes between the two recent presidential scrutinies. Thereby, we let aside the structural patterns of votes and consider votes in a more dynamic way. If vote for a given party was perfectly predicted by ethnicity,

and if we let aside migration and differential population growth rates between ethnic groups, there should not be any evolution in the outcomes between different elections. Yet there are evolutions, even major evolutions since they entailed a power shift in 2000.

For this reason, by considering the evolutions of votes we should more easily bring non-ethnic determinants to the surface. However, these evolutions are not necessarily only driven by non-ethnic factors: it may well be that a party loses the votes of an ethnic group or makes gestures towards another one so that the ethnic composition will be the major determinant of these evolutions. This describes a political economy in which ethnic identity is the key motivation of citizens and politicians are incited to enforce strategies based on ethnic identities.

To study this point, we estimate the following binary model:

$$\mathbb{1}_{y_{ij2004} > y_{ij2000}} = f(y_{ij2000}, \theta_j, U_j, V_j) \quad (2)$$

with the same notations as in equation 1. To be rigorous, we use the outcomes of the first round of 2000 elections and compare it with the outcomes of the first and only round of 2004 elections. We include the results obtained in 2000 as a regressor so as to interpret the evolution conditionally to the vote in 2000. Of course the result in 2000 has a negative effect on the likelihood that the 2004 outcome is higher.

Our method is the following: we estimate the impacts of the same set of variables on the evolution of votes for the two parties separately. We perform several regressions and drop the least significant variable at each stage, until all variables are significant. By doing this, we highlight the differences in what accurately determines the evolutions of votes for these two main parties. We only keep the ethnic variable whatever its significance, since our aim is precisely to compare its impact with the impact of other non-ethnic dimensions. Since the "other parties" (i.e. neither NPP nor NDC) increased their share of votes in only three districts, we do not perform the same kind of regression for them. As Table 1 has shown, the results of all "other" parties summed to 7% in 2000 whereas it only summed to 3% in 2004. The evolutions of the results obtained by the NDC and NPP may thus be interpreted also as the consequence of the consolidation of the two-party system.

Coefficients are estimated by a Probit regression. Results are displayed in Tables 7 and 8.

The first striking result of this regression is that the share of Akan does not help to understand the evolution of votes for the NPP between 2000 and 2004. The variable is significant in none of the specifications. The significant variables have to do with education, labor market and well-being. First, the NPP seems to have somehow lost the votes by the most educated citizens between 2000 and 2004. On the contrary, the share of public sector increases the support to the NPP, which might reflect the identification civil servants are likely to feel for the incumbent power. In 2000, the outgoing President was Jerry Rawlings, who represented the NDC. This change in the political affiliation of the outgoing President might influence the evolution of the votes among civil servants.

<b>Dependent variable:</b>						
<b>Voted more for the NPP in 2004 than in 2000</b>	(1)	(2)	(3)	(4)	(5)	(6)
Voted for NPP in 2000	<b>-0.01***</b> (0)	<b>-0.01***</b> (0)	<b>-0.01***</b> (0)	<b>-0.01***</b> (0)	<b>-0.01***</b> (0)	<b>-0.01***</b> (0)
Akan	0 (0.01)	0 (0.01)	0 (0.02)	0 (0.03)	0.02 (0.04)	0.01 (0.03)
No education	<b>-0.11*</b> (0.14)	<b>-0.11*</b> (0.14)	<b>-0.15*</b> (0.16)	-0.15 (0.15)		
Secondary education	<b>-0.52***</b> (0.69)	<b>-0.54***</b> (0.71)	<b>-0.81***</b> (0.79)	<b>-1.01***</b> (0.84)	<b>-0.78**</b> (0.65)	<b>-0.83***</b> (0.7)
Public sector	<b>0.65**</b> (0.86)	<b>0.69**</b> (0.89)	<b>0.99**</b> (0.95)	<b>1.23**</b> (1.02)	<b>1.12**</b> (0.94)	<b>1.11**</b> (0.93)
Feeling poor	<b>-0.06**</b> (0.07)	<b>-0.06**</b> (0.08)	<b>-0.09*</b> (0.08)	<b>-0.11*</b> (0.08)	<b>-0.1*</b> (0.09)	<b>-0.09*</b> (0.07)
Share of the five biggest cities in the population	-0.03 (0.03)	-0.03 (0.03)				
Distance to the most proximate post office	<b>0*</b> (0)	<b>0*</b> (0)	<b>0*</b> (0)	<b>0*</b> (0)	0 (0)	
Gini index of bread expenditures	0.05 (0.07)	0.05 (0.07)	0.06 (0.08)			
Feeling unsafe	<b>-0.09**</b> (0.12)	<b>-0.1**</b> (0.12)	<b>-0.16**</b> (0.15)	<b>-0.2**</b> (0.16)	<b>-0.23**</b> (0.19)	<b>-0.25***</b> (0.2)
Morality is a problem	0.02 (0.08)					
Pseudo-R2	0.51	0.50	0.49	0.48	0.45	0.42
Observations	110	110	110	110	110	110

*Note: Probit estimation, with marginal coefficient estimates (at mean values for the explanatory variables). Standard errors in parentheses. Significantly different than zero at 90% (\*), 95% (\*\*), 99% (\*\*\*) confidence levels.*

Table 7: The determinants of an increase of votes for the NPP between 2000 and 2004

The two subjective variables show that evaluative vote contributes to the evolution in the outcomes of elections. The fact that people feel poor or (even more) unsafe has a significant impact on their choice to vote again for the incumbent party or not. It is not surprising that these indices of dissatisfaction engender a decrease in the vote for the NPP. While the feeling of "happiness", which may be considered a more "structural" long-term feeling, significantly impacted the level of votes for the NPP in 2004 (see Table 3), the feeling of poverty and lack of safety, which are more directly a result of the policy enforced, influence its evolution.

The evolution of votes for the NDC is also significantly impacted by social and economic variables, although the share of Akan keeps playing a significant role in any specification (see Table 8). The larger the share of non-educated people, the more likely the district is to post a higher result for the NDC in 2004 than in 2000. Since we just saw that districts with the highest proportion of highly educated people also reduced their vote for the NPP, we may conclude that this latter party increased its audience among the "educational middle class". It also appears clearly that urban districts tended to vote more for the NDC in 2004 than four years ago. The concentration of the population in the five biggest cities of the district favors the aggregate vote for Atta-Mills, while the average distance to a post office decreases it. NDC thus increased its support among urban citizens. The feeling of poverty increases the likelihood to vote more for the NDC in 2000 than in 2004. This corresponds both to the political platform of the NDC and to its role of challenger in position to gather the votes of citizens who feel

<b>Dependent variable:</b>				
<b>Voted more for the NDC</b>				
<b>in 2004 than in 2000</b>				
	(1)	(2)	(3)	(4)
Voted for NDC in 2000	<b>-0.02***</b> (0)	<b>-0.02***</b> (0)	<b>-0.02***</b> (0)	<b>-0.02***</b> (0)
Akan	<b>-0.64**</b> (0.28)	<b>-0.64**</b> (0.27)	<b>-0.6**</b> (0.27)	<b>-0.76***</b> (0.25)
No education	<b>2.13***</b> (0.73)	<b>2.13***</b> (0.73)	<b>2.1***</b> (0.71)	<b>1.44**</b> (0.57)
Secondary education	3.33 (2.36)	<b>3.37*</b> (2.07)	3.11 (1.96)	
Public sector	0.09 (2.28)			
Feeling poor	<b>0.79**</b> (0.37)	<b>0.78**</b> (0.36)	<b>0.77**</b> (0.36)	<b>0.67*</b> (0.35)
Share of the five biggest cities in the population	<b>1.21**</b> (0.45)	<b>1.21**</b> (0.45)	<b>1.14**</b> (0.44)	<b>1.28***</b> (0.42)
Distance to the most proximate post office	<b>-0.02**</b> (0)	<b>-0.02**</b> (0)	<b>-0.02**</b> (0)	<b>-0.02**</b> (0)
Gini index of bread expenditures	<b>-1.37**</b> (0.58)	<b>-1.37**</b> (0.58)	<b>-1.29**</b> (0.57)	<b>-1.25**</b> (0.56)
Feeling unsafe	-0.5 (0.68)	-0.5 (0.67)		
Morality is a problem	<b>3.79**</b> (1.90)	<b>3.8**</b> (1.89)	<b>3.68**</b> (1.89)	<b>4**</b> (1.81)
Pseudo-R2	0.38	0.38	0.38	0.35
Observations	110	110	110	110

*Note: Probit estimation, with marginal coefficient estimates (at mean values for the explanatory variables). Standard errors in parentheses. Significantly different than zero at 90% (\*), 95% (\*\*), 99% (\*\*\*) confidence levels.*

Table 8: The determinants of an increase of votes for the NDC between 2000 and 2004

left behind. This effect is symmetrical to the one observed in Table 7 on NPP. District with a larger share of people who feel unsafe, oppositely, do not significantly vote more for the NDC in 2004 than in 2000. It may be because of the vote for the nkrumahist parties which do well in such areas as we saw in section 4.

Last, the "morality" variable is the share of people for whom issues like violence, corruption, negative cultural practices or drug abuse belong to the three main problems that need to be fixed. Such issues may be considered as directly linked to the policy carried out and to the politicians themselves. The fact that the coefficient associated to this variable has the expected sign and is significant confirms that evaluative vote determined the evolution of votes between these two elections. This concurs with the results displayed in Table 7.

## 6 Conclusion

In this paper we tried to investigate empirically the common view that in African democracies, political cleavages would follow ethnic cleavages and votes would be overwhelmingly determined by ethnicity. Ghana is an excellent example for such a story, since results of the two main parties are quite precisely located on the map, and their natural support is to be found among the two main rival groups of the country, Akan

and Ewe. But these two parties also present quite different political platforms, one being more conservative and the other one being more poor-oriented.

Our empirical results indicate that while ethnicity certainly has an influence in the outcome of elections, it is not the only ruling factor, by far. Class cleavages remain important, as is shown by the role played by the average level of education and urbanity in a district, the rate of unemployment, the share of informal worker or the local level of inequality. Evaluative voting also exerts a significant effect: feeling poor, increasingly vulnerable or being shocked by moral issues pushes up the votes for the opposition party. On several issues, ethnicity ends up having no specific effect when a set of adequate political or economic variables is controlled for.

This work leads to reject a too naive grid of analysis on elections in Africa. In any democracy, non-economic issues may be emphasized such as regionalism, traditional identity or religion. But a well established democracy allows to circumscribe these effects and opens the way to evaluative political voting. This is what the example of voting in contemporary Ghana confirms.

## References

- Alesina, A., R. Baqir, and W. Easterly. 1999. "Public goods and ethnic divisions." *The Quarterly Journal of Economics* 114:1243–84.
- Alesina, Alberto, and Eliana La Ferrara. 2000. "Participation In Heterogeneous Communities." *The Quarterly Journal of Economics* 115 (3): 847–904 (August).
- Alesina, Alberto, and Howard Rosenthal. 1996. "A Theory of Divided Government." *Econometrica* 64 (6): 1311–41.
- Ames, B. 1994. "The Reverse Coattails Effect: Local Party Organization in the 1989 Brazilian Presidential Election." *The American Political Science Review* 88:1:95–111.
- Banerjee, A, and R Somanathan. 2007. "The political economy of public goods: Some evidence from India." *Journal of Development Economics* 82 (2): 287–314 (March).
- Chavagneux, C. 1997. *Ghana, une révolution du bon sens*. Karthala.
- Chhibber, P.K. 1996. "State Policy, Rent Seeking, and the Electoral Success of a Religious Party in Algeria." *The Journal of Politics* 58:1:126–148.
- Collier, P., A. Hoeffler, and D. Rohner. 2006. "Beyond Greed and Grievance: Feasibility and Civil War." Working paper, Centre for the Study of African Economies.
- Dayton-Johnson, Jeff. 2000. "Determinants of collective action on the local commons: a model with evidence from Mexico." *Journal of Development Economics* 62 (1): 181–208 (June).
- Easterly, W., and R. Levine. 1997. "Africa's Growth Tragedy: Policies and Ethnic Divisions." *The Quarterly Journal of Economics* 112 (4): 1203–50 (November).
- Erdmann, G. 2007. "Ethnicity, Voter Alignment and Political Party Affiliation - an African Case: Zambia." Giga working paper series, GIGA German Institute of Global and Area Studies.
- Fridy, K. 2007. "The Elephant, Umbrella and Quarrelling Cocks: Disaggregating Partisanship in Ghana's Fourth Republic." *African Affairs*, vol. 106:423.
- Glaeser, E.L. 2005. "The Political Economy of Hatred." *Quarterly Journal of Economics* 12:1:45–86.
- Goux, D., and É. Maurin. 2004. *Anatomie sociale d'un vote : le premier tour des élections régionales (21 mars 2004)*. La République des idées.
- Hegre, H., and N. Sambanis. 2006. "Sensitivity Analysis of Empirical Results on Civil War Onset." *Journal of Conflict Resolution* 50 (4): 508–535.
- Horowitz, D.L. 1985. *Ethnic Groups in Conflict*. University of California Press.
- Kondo, N. 2003. *Indian Parliamentary Elections after Independence: Social Changes and Electoral Participation*. Institute of Developing Economies, Japan External Trade Organization.

- Lewis-Beck, M.S. 1997. "Who's the chef? Economic voting under a dual executive." *European Journal of Political Research* 31:3:315–325.
- Lindberg, S.I., and M.K.C. Morrison. Forthcoming 2007. "Are African Voters Really Ethnic or Clientelistic? Survey evidence from Ghana." *Political Science Quarterly*.
- Miguel, E. 2006, June. "Ethnic Diversity and School Funding in Kenya." Center for international and development economics research, working paper series 1002, Center for International and Development Economics Research, Institute for Business and Economic Research, UC Berkeley.
- Nugent, P. 1999. "Living in the past: Urban, Rural and Ethnic Themes in the 1992 and 1996 Elections in Ghana." *The Journal of Modern African Studies* 37:2:287–319.
- . 2001. "Ethnicity as an Explanatory Factor in the Ghana 2000 Elections." *African Issues* 29:1:2–7.
- Posner, D. N. 2005. *Institutions and Ethnic Politics in Africa*. Cambridge University Press.
- Robinson, J. 2001. "Social Identity, Inequality and Conflict." *Economics of Governance* 2(1):85–99.
- Roemer, John E. 1998. "Why the poor do not expropriate the rich: an old argument in new garb." *Journal of Public Economics* 70 (3): 399–424.