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der Christian-Albrechts-Universität zu Kiel

Voter Behavior and Government Performance: Theory and Empirical Application in Sub-Saharan Africa

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Contents

| | | |
|-----------|--|-----------|
| 1 | Introduction | 1 |
| I | Theory | 7 |
| 2 | Voting Behavior and Government Performance: A Literature Overview | 9 |
| 3 | Theory of Voting Behavior | 15 |
| 4 | Methodology | 25 |
| 4.1 | Estimation of Probabilistic Voter Models | 25 |
| 4.2 | Analyzing Heterogeneity in Voting Behavior | 29 |
| 4.3 | Equilibrium Conditions in Probabilistic Voter Models | 33 |
| 5 | Theory and Derivation of Government Performance Indices | 37 |
| 5.1 | Modeling Voting Behavior | 37 |
| 5.1.1 | The Voters | 37 |
| 5.1.2 | Parties and the Government | 40 |
| 5.2 | Government Performance Indices | 42 |
| 5.2.1 | Government Accountability | 42 |
| 5.2.2 | Government Capture | 43 |
| II | Empirical Application | 47 |
| 6 | Introduction of Case Study Countries | 49 |
| 7 | Ghana | 53 |
| 7.1 | From Independence to Democracy | 53 |
| 7.2 | Literature Overview | 55 |
| 7.3 | Data Description | 57 |
| 7.3.1 | Sampling Procedure | 58 |
| 7.3.2 | Questionnaire and Variables | 58 |
| 7.4 | Estimation of Voting Behavior | 65 |
| 7.4.1 | Multinomial Logit Model | 67 |
| 7.4.2 | Heterogeneity | 72 |
| 7.5 | Voting Behavior and Government Performance | 78 |
| 7.5.1 | Government Accountability | 78 |
| 7.5.2 | Government Capture | 80 |
| 7.6 | Summary | 83 |

| | |
|--|------------|
| 8 Senegal | 85 |
| 8.1 From Independence to Democracy | 85 |
| 8.2 Literature Overview | 87 |
| 8.3 Data Description | 90 |
| 8.3.1 Sampling Procedure | 91 |
| 8.3.2 Questionnaire and Variables | 91 |
| 8.4 Estimation of Voting Behavior | 98 |
| 8.4.1 Multinomial Logit Model | 98 |
| 8.4.2 Heterogeneity | 102 |
| 8.5 Voting Behavior and Government Performance | 107 |
| 8.5.1 Government Accountability | 108 |
| 8.5.2 Government Capture | 109 |
| 8.6 Summary | 113 |
| 9 Uganda | 115 |
| 9.1 From Independence to Democracy | 115 |
| 9.2 Literature Overview | 118 |
| 9.3 Data Description | 119 |
| 9.3.1 Sampling Procedure | 120 |
| 9.3.2 Questionnaire and Variables | 120 |
| 9.4 Estimation of Voting Behavior | 127 |
| 9.4.1 Multinomial Logit Model | 129 |
| 9.4.2 Heterogeneity | 133 |
| 9.5 Voting Behavior and Government Performance | 137 |
| 9.5.1 Government Accountability | 139 |
| 9.5.2 Government Capture | 141 |
| 9.6 Summary | 144 |
| 10 A Comparative Perspective | 147 |
| 11 Conclusion | 153 |
| 12 Zusammenfassung | 159 |
| A Terminology | 181 |
| B Voter Questionnaire Uganda | 185 |

List of Figures

| | | |
|------|---|-----|
| 1.1 | Schematic representation of the outline of this thesis | 2 |
| 4.1 | Graph of logit curve | 27 |
| 4.2 | Global and local maxima | 35 |
| 6.1 | Freedom House and Polity IV indices | 51 |
| 7.1 | Administrative Regions in Ghana | 54 |
| 7.2 | Voter positions in Ghana | 62 |
| 7.3 | Party positions in Ghana | 63 |
| 7.4 | Changing policy positions: WEAKVSSTRONGSTATE | 71 |
| 7.5 | RI of non policy, policy and retrospective voting | 72 |
| 7.6 | RI of non policy and policy voting in rural and urban areas | 73 |
| 7.7 | RI of voting motives in latent classes | 77 |
| 7.8 | Lorenz curve (left: ML - M6, right: LC - M2) | 80 |
| 7.9 | Capture in Ghana | 81 |
| 7.10 | Relationship between voter weights and voting behavior | 83 |
| 8.1 | Administrative Regions in Senegal | 86 |
| 8.2 | Voter positions in Senegal | 93 |
| 8.3 | Party positions in Senegal | 95 |
| 8.4 | Changing policy positions: AGRVSIND | 102 |
| 8.5 | RI of non policy, policy and retrospective voting | 102 |
| 8.6 | RI of non policy and policy voting in rural and urban areas | 103 |
| 8.7 | RI of non policy and policy voting (latent class) | 105 |
| 8.8 | RI of voting motives in latent classes | 107 |
| 8.9 | Lorenz curve (left: ML - M7, right: LC) | 110 |
| 8.10 | Capture indices (ML and LC model) | 111 |
| 8.11 | Relationship between voter weights and voting behavior | 113 |
| 9.1 | Map of Uganda | 116 |
| 9.2 | Voter positions in Uganda | 124 |
| 9.3 | Party positions in Uganda | 125 |
| 9.4 | Changing policy positions: TAXVSPROTECT | 133 |
| 9.5 | RI of non policy and policy voting | 134 |
| 9.6 | RI of policy and non policy voting in rural and urban areas | 135 |
| 9.7 | RI of voting motives in latent classes | 139 |
| 9.8 | Lorenz curve (left: ML - M7, right: LC - M2) | 141 |
| 9.9 | Capture in Uganda | 142 |
| 9.10 | Relationship between voter weights and voting behavior | 145 |

List of Tables

| | | |
|------|--|-----|
| 4.1 | Data format for the logit model | 27 |
| 7.1 | Presidential election results from Ghana | 59 |
| 7.2 | Description of survey data | 66 |
| 7.3 | Voting motives in Ghana | 67 |
| 7.4 | Estimation results of the multinomial logit model | 69 |
| 7.5 | Comparison of different LC model specifications | 74 |
| 7.6 | Latent class estimation results | 75 |
| 7.7 | Descriptive statistics by latent classes | 76 |
| 7.8 | Government accountability indices (ML and LC Analysis) | 79 |
| 8.1 | Presidential election results from Senegal | 92 |
| 8.2 | Description of survey data | 97 |
| 8.3 | Results from different voter model specifications | 100 |
| 8.4 | Latent class estimation results | 104 |
| 8.5 | Descriptive statistics by latent classes | 106 |
| 8.6 | Government accountability indices (ML and LC Analysis) | 109 |
| 9.1 | Presidential election results from Uganda | 121 |
| 9.2 | Description of survey data | 128 |
| 9.3 | Voting motives in Uganda | 129 |
| 9.4 | Estimation results of the multinomial logit model | 131 |
| 9.5 | Comparison of different LC model specifications | 135 |
| 9.6 | Latent class estimation results | 136 |
| 9.7 | Descriptive statistics by latent classes | 138 |
| 9.8 | Government accountability indices (ML and LC Analysis) | 140 |
| 10.1 | Comparism of the results of Ghana, Senegal and Uganda | 148 |
| A.1 | Terminology of Chapter 3 | 181 |
| A.2 | Terminology of Chapter 4 | 182 |
| A.3 | Terminology of Chapter 5 | 183 |

Chapter 1

Introduction

During the Millennium Summit in 2000, all United Nations member states¹ committed to help achieve the so called Millennium Development Goals (MDGs). The participating countries agreed on achieving the eight main goals, which range from eradicating extreme poverty and hunger, to combat of HIV/AIDS, to the ensuring of environmental sustainability, until 2015. Especially the first MDG, *eradicate extreme poverty and hunger*, is intimately connected with economic development and increasing personal income, particularly in rural areas. These factors on the other hand go along with democratic development. It is a commonly accepted view that democracy when compared to other non-democratic systems is a superior political system promoting economic growth and well-being. However, controlling for demographic and economic structures a large variance regarding policies, implied growth and well-being can be observed across democratic countries. Hence, the question arises how these differences across economically similar democratic countries can be explained. We assume that inefficient and biased policy outcomes that are often associated with developing countries result because governments are facing incentive problems. A possible explanation for missing or suboptimal incentives, involves elections and voting behavior. In political theory electoral competition is understood as a fundamental democratic mechanism to guarantee that governmental policies reflect society's interests. In reality, however, electoral competition is often restricted and hence, leads to biased policy outcomes. Basically, policy biases result from two major mechanisms: government capture and a lack of governmental accountability. The latter corresponds to the fact that elected politicians have not sufficient electoral incentives to implement policies benefiting socio-economic groups they are representing, but rather serve their self-interests, while the former corresponds to the fact that electoral competition is biased in favor of specific interests.

In the present thesis, the relationship between voting behavior and government performance, especially government accountability and capture, is analyzed empirically. Therefore, three strands of literature are combined, namely political science, political economy and development economics. While political scientists analyze voting behavior to understand the election outcome, why people vote for certain candidates and which motives determine their vote choice, political economists are more interested in the implied government behavior. Government behavior is derived from the political equilibrium, which is defined as the policy platform of a political party or a candidate that maximizes its support function. And finally, development economists analyze economic conditions and processes in developing countries. Their focus is on the assessment of policy outcomes and the implications they have on society's welfare, e.g. people living below the poverty line, general education level and income differences. Analyzing these fields of research separately is very interesting on its own, and the existing literature has contributed massively

¹2000 the UN had 189 member states, currently there are 193.

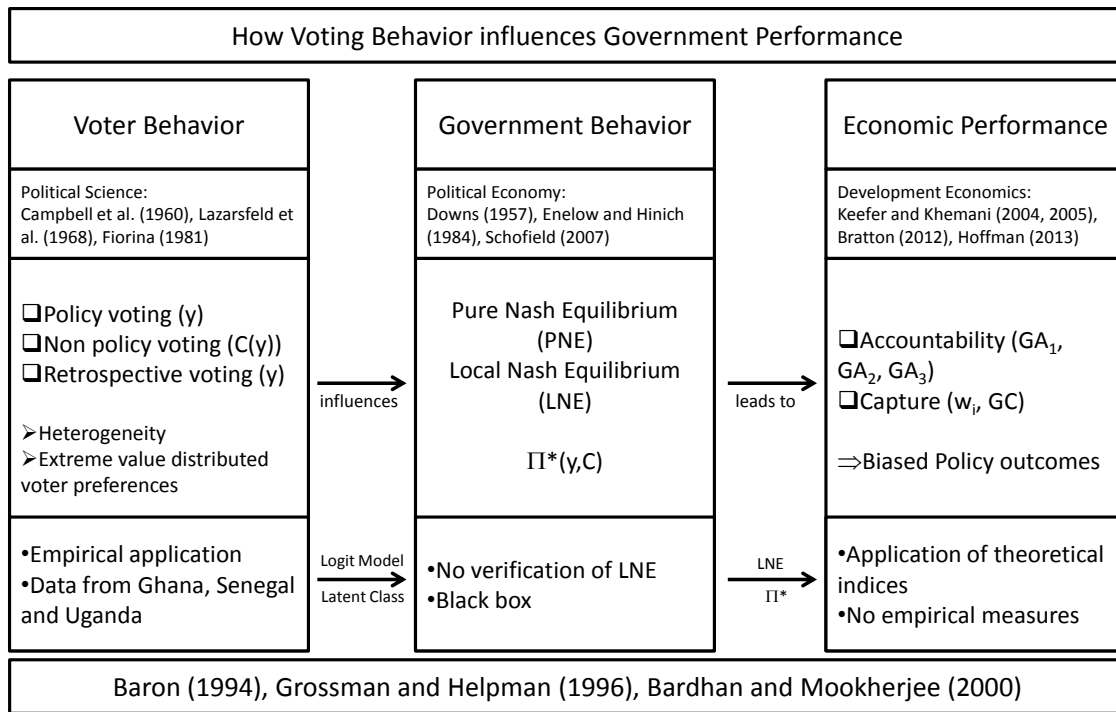


Figure 1.1: Schematic representation of the outline of this thesis
 Source: own illustration

to a better understanding of voting behavior and its implications on government performance. Though, only a few scientists have actually combined the analysis of voting behavior, equilibrium conditions and government performance. Two of them are Pranab Bardhan and Dilip Mookherjee, who extended the work of Baron (1994) and Grossman and Helpman (1996) and perfectly derived theoretical implications of voting behavior on government performance (extended BGH model). They modeled an election with two competing political parties and interest group participation, derived the optimal policy position π^* that maximizes a candidate's vote share and also drew implications on government capture and government accountability. However, Bardhan and Mookherjee did not empirically verify their theory, further they explicitly mention, "We conclude by stressing the need for empirical research. Are local governments more subject to capture? What are the determinants of absolute and relative capture? Are assumptions and implications of our model validated by data? Perceptions of capture by voters may perhaps be elicited from careful design of voter surveys.", (Bardhan and Mookherjee, 2002, p. 38). However, the empirical application of the theory of Bardhan and Mookherjee confronts the researcher with four major problems. First, they assume a uniform distribution of the voters' policy preferences, which allows them to easily determine the equilibrium conditions, as the maximization problem becomes separable. However, current studies on voting behavior utilize extreme value distributions for voter's preferences, which are far more realistic than the uniform distribution. But the extreme value distribution leads to equilibrium conditions that do not provide global maxima anymore. The support functions are usually not globally concave, which is why only local maxima

can be achieved. Second, Bardhan and Mookherjee utilize a very reduced model that only includes policy oriented voting via issue distances and non policy voting via campaign spending. Retrospective voting, personal characteristics of the candidates and other valence issues that are important factors explaining vote choice in the literature of voting behavior, are not included in their theoretic model specification. Further, the third issue is that voters are either informed or uninformed and vote policy oriented or non policy oriented respectively. Apart from this differentiation, all voters are assumed to be identical and their voting behavior is homogeneous. Differences among voters and heterogeneous voting behavior is not considered. The fourth issue is that although Bardhan and Mookherjee mention the concepts of capture and accountability, no indices are derived that actually measure government performance explicitly. Hence, it is difficult to empirically verify their theory without the corresponding tools.

To overcome these challenges and apply the theory of Bardhan and Mookherjee empirically, we undertook the following four steps, which are also presented graphically in Figure 1.1.

1. Collect micro data on voting behavior and estimate a probabilistic voter model
2. Include heterogeneous voting behavior (latent class analysis)
3. Adapt BGH model to modern voter studies (extreme value distributed voter preferences, LNE)
4. Derive indices from the theoretical framework that measure government performance

Considering the first point, which also corresponds to the left box in Figure 1.1, voter surveys were conducted in three developing countries in Sub-Saharan Africa. Here we act on the suggestion of Bardhan and Mookherjee and put special emphasis on the careful design of our voter survey. While voting behavior in industrialized countries has been studied intensively in the past, the literature on voting behavior in developing countries is quite rare, especially concerning econometric applications. Among other things, this is also due to missing data, especially surveys focusing on elections and voting behavior are scarce in Sub-Saharan Africa. Furthermore, most of the scientific papers only take non policy voting indicators like ethnicity or region into account and do not analyze the impact of other voting motives, like policy voting and retrospective voting.

Ghana, Senegal and Uganda were chosen as case study countries, because they differ in their democratic consolidation as well as in their economic development. Hence, they provide optimal requirements for later comparison of the countries and to draw further conclusions on the relationship of voting behavior, government performance, democratic consolidation and economic development. The data was collected in three surveys in 2012 and 2013. While we collected the data with the help of our local partners in Ghana and Uganda. In Senegal we collaborated with Afrobarometer, which is why the sample size in Senegal is twice as big as in the other countries. With the data at hand, voting behavior was estimated with a multinomial logit model as well as with a latent class model to further account for heterogeneity

in voting behavior. Heterogeneity in voting behavior is a necessary, although not sufficient condition for the existence of capture. Hence, it is a crucial factor, which has hardly been considered in the literature so far. With the latent class approach, we found an optimal tool that allows to further explore heterogeneity. Latent class models have been applied in many other fields of research, but are a novel method in political theory and the analysis of voting behavior.

The aim of the probabilistic voter model is not first and foremost to predict the outcome of an election, but rather to understand why people voted the way they did. Hence, we identified three voting motives, policy oriented voting, non policy oriented voting and retrospective voting to characterize voting behavior. From the estimation results we calculated the relative importance of the three voting motives for each country. Further, the estimation results provided us with the necessary parameters to calculate indices for measuring government performance. However, as the indices are derived in political equilibrium, we have to assume that the empirical policy positions correspond to a local Nash equilibrium (LNE). Therefore, we follow the theory of Schofield (2007), who derives conditions for local Nash equilibria in probabilistic voter models. Please note that in comparison to Schofield, we do not verify the existence of the LNEs at the electoral mean, but estimate the parameters such that the empirical policy positions are in fact LNEs. The equilibrium part in the middle of Figure 1.1 has to be taken as a black box for the time being.

Finally part three involves the derivation and calculation of government performance indices. In the theoretical part of the paper, the indices for government capture and government accountability are locally derived from the maximized support function of the candidate. The optimal policy platform of a governmental party satisfies the necessary condition for maximizing a weighted sum of the average welfare of voters, the aggregated welfare of all interest group members and the intrinsic policy preferences of the political party. Applying the theoretical model that is derived in this thesis, we are able to analyze empirically how voting behavior affects government incentives to perform according to societies interest. Please note that we derive our indicators internally from the theoretical model and apply them empirically. We do not externally validate government performance at this point, but will leave this important issue for future work.

The main impact of this thesis for the literature on voting behavior is threefold. First we provide an extension to the BGH model that is based on extreme value distributed voter preferences and provides theoretically derived indicators measuring government accountability and capture. Second, we apply our theory to the case of three Sub-Saharan African countries. The amount of existing studies that econometrically estimate voting behavior in these countries is small, especially the combined inclusion of policy issues, retrospective voting and non policy factors is novel. Finally, heterogeneity was explicitly included in the analysis by applying not only a multinomial logit model but also a latent class model. Considering heterogeneity is absolutely necessary to measure capture among different groups of voters. Further, the application of a latent class model also provides a methodological improvement for analyzing voting behavior. Hence, the thesis provides a theoretical, an empirical as well as a methodological contribution to the existing literature. However, the focus is on the empirical analysis of voting behavior and government performance,

which is only possible with theoretical and methodological extensions.

The thesis proceeds as follows. In the first part, the theoretical and methodological background of understanding voting behavior and government performance is given. In chapter two following the introduction, the literature on voting behavior is reviewed. Special emphasis is put on voting behavior and government performance in developing countries. Further, possible explanations for market imperfections in developing countries are described in more detail. The general theory of voting behavior, starting with the Columbia School, the Michigan School and the rational theory of voting is described in chapter three. Additionally, we introduce the extension of the well known Baron, Grossman and Helpman model (BGH), by Bardhan and Mookherjee. It establishes the basis for our own extension and generalization of the BGH model. However, before we introduce our extended model, the methodology of measuring and analyzing voting behavior is explained in chapter four. We introduce two econometric tools to estimate probabilistic voter models, the multinomial logit model and the latent class model. Chapter three ends with a short description of the concept of local Nash equilibria by Schofield (2007). Finally part one closes with the theory of our extended BGH model and the derivation of government performance indices, measuring government accountability and capture. The second part is the central part of the thesis, it applies the theoretical concepts empirically. Chapter six introduces the three case study countries, Ghana, Senegal and Uganda. The measurement of voting behavior and its implications on government performance are described for each country in chapter seven to nine. The empirical part ends with a comparative perspective on the three case studies. Finally the last chapter concludes and summarizes the content of the theoretical as well as of the empirical part of this thesis.

Part I
Theory

Chapter 2

Voting Behavior and Government Performance: A Literature Overview

A review of the burgeoning literature on participatory policy processes reveals that scholars typically focus on the involvement of stakeholder organizations and interest groups as a prerequisite of efficient development policies and particularly ignore the role of voters and elections (World Bank, 2011). This situation is at odds with political theory, which interprets electoral competition as a fundamental democratic mechanism for guaranteeing that governmental policies reflect society's interests. A theoretical justification for neglecting electoral competition and the role of the voter can be found in Becker's seminal contribution to political economy theory, which focuses on interest group competition based on the assumption that voters' electoral choices are completely controlled by interest groups e.g., via campaign spending (Becker, 1983). Another micro-political foundation for the neglect of voters can be derived from socio-structural theories of voting, i.e., following the theory of Lazarsfeld et al. (1968) or Lipset and Rokkan (1967), voters' electoral choices are completely determined by their social classes; hence, electoral competition does not imply any incentives for elected politicians to perform well and serve the needs and desires of their electorate. For example, following a socio-structural theory of voting, most scholars of African politics agree that ethnic voting dominates vote choice in multi ethnic and nascent African democracies (Horowitz, 1985; Bratton et al., 2011; Hoffman and Long, 2013). This kind of voting pattern reduces the incentives of the current government and of the opposition parties to select party platforms that reflect society's interests, because policy positions are not consulted for vote choice.

There exists a broad range of literature concerning voting behavior on the one hand and government performance on the other hand. Prominent examples for the former are Campbell et al. (1960) and Lazarsfeld et al. (1968). Important contributions to the literature of government performance are among others from (Bailey, 1999) and (Stevens, 2005). However, in this thesis we will focus on the work combining both strands of literature. Interesting work addressing the impact of voter behavior on governmental performance was just recently published in political economy theory (e.g., Keefer and Khemani (2005) and Bardhan and Mookherjee (2002)). According to this theory, electoral competition is often restricted in reality, leading to biased policy outcomes. In general, policy biases result from two major mechanisms: government capture and a lack of government accountability. The latter mechanism corresponds to a lack of sufficient electoral incentives for elected politicians to implement policies that benefit their constituencies; instead, politicians serve their self-interests. The former mechanism corresponds to the bias of electoral competition in favor of special interests. Especially Keefer and Khemani disagree with Becker and argue that the power of special interests and lobbying does not sufficiently serve as an explanation of biased policy outcomes (Keefer and Khemani,

2004). Taking the example of India, Keefer and Khemani demonstrate that although the majority of the population is poor, the provision of public goods is skewed towards special interests of the rich instead of improving the living standards of the poor. Neither does missing participation in elections provide a solution to the puzzle of biased policy outcomes, as poor people in India tend to participate in elections even more than the middle class or the rich. The voter and hence the demand side of public policies does not seem to be the critical point, rather the suppliers of policies, political parties and individual candidates have to be blamed. In their paper, "Democracy, Public Expenditures, and the Poor: Understanding Political Incentives for Providing Public Services", Keefer and Khemani (2005) get to the bottom of this issue and give an overview of the interaction between provision of public goods and political incentives. Usually politicians should be responsible for their people and use public policies to reduce poverty and increase welfare. Instead, it has been observed that especially in low income countries public policies and social service provision to the poor are insufficient and especially the income gap between rich and poor people is further increasing. When we assume that politicians are aware of their political action, it cannot be a knowledge problem that developing countries are facing. It rather seems to be an incentive problem that makes politicians act contradictory to society's interests. Generally one can distinguish between broad public goods that benefit many voters and targetable goods that serve only a chosen subset of voters (Persson et al., 2003). Due to imperfections in political markets politicians prefer to provide targetable goods like private transfers to few people rather than providing public services that reduce poverty in a more general way (broad goods). This behavior results out of a reason: Politicians are rent seeking and their main goal is to maximize their utility by being reelected. Especially in developing countries reelection does not always come along with high quality policies, it is therefore irrational for politicians and parties to provide broad public services (e.g. education and welfare benefits). Electoral competition can be won a lot easier by promising narrow targetable goods such as infrastructure, agricultural subsidies or governmental jobs. However, this does not serve as a mechanism for guaranteeing that governmental policies reflect society's interests any more. Keefer and Khemani (2005) focus on the voter's role to explain the dilemma of missing incentives and especially the redistribution gap from the wealthy to the poor that is increasing in developing countries. They mainly make out three aspects that support market imperfections in developing democracies: a) asymmetric information of voters, b) social polarization and c) missing accountability of political actors.

Information asymmetries The basic theory regarding distorted electoral competition through imperfectly and asymmetrically informed voters goes back to Baron (1994) and Grossman (1994). Baron (1994) makes a distinction between informed and uninformed voters. Informed voters vote policy oriented, whereas uninformed voters heavily rely on party loyalties and ideologies. Their vote choice is influenced by campaign expenditures unrelated to political platforms and political decision making. The uninformed voters in Baron's model basically correspond to the interpretation of elections by Becker, where vote choice is solely determined by interest groups via campaign spending. Especially in developing countries people are only

coarsely informed about policies. This is among others due to illiteracy, limited mobility and restricted media access. Without information people are not able to assess politicians adequately on their political performance but rather use proxies to do so. These proxies are mainly easy observable policies or already existing party loyalties. Khemani (2004) describes that policy actions that are easy observable increase the closer a country moves to elections. The influence of party loyalties is further described in Bardhan and Mookherjee (2002), they assume that a higher level of voter loyalty increases government capture by interest groups and reduces electoral competition. Reduced electoral competition in turn leads to lower political accountability. As a consequence Mani and Mukand (2002) show that politicians maximizing their political support have strong incentives to focus on targeted and visible policies at the cost of broad social services. Basically, this follows because of three reasons. First, only few voters have enough specific and substantial information to evaluate whether policies have contributed to better quality services or not. Second, measurable benefits may not emerge until several years after a policy has been implemented, which increases voters difficulties to reward (or punish) politicians within a particular policy cycle. Third, providing service jobs or building roads and buildings can easily be targeted to the own constituencies and hence is even for low-informed voters highly visible. Gazdar (2000); World Bank (1998, 2001), as well as Keefer (2002b) provide empirical evidence for this phenomena.

One strand of evidence on the importance of information for voter behavior and induced governmental performance comes from the literature on electoral cycles in fiscal and monetary policies. Cross-country analyses indicates that electoral cycles in monetary and fiscal policies are significantly larger in developing countries (Block, 2002; Schuknecht, 2000; Shi and Svensson, 2000). Shi and Svensson (2000) establish a direct link between electoral budget cycles and limited information available to voters, where the later is measured via access to free media. Analogously, Besley and Burgess (2003) show that state governments in India respond to declines in food production and crop flood damage through higher public food distribution and calamity relief spending where newspaper circulation is greater. Thus, external interventions such as information campaigns by civic society organizations may be useful in promoting the diffusion of information needed for political accountability, particularly in poorer countries. Overall, although there is theory and some empirical evidence for the importance of information for voter behavior and induced political incentives of elected politicians to perform on a high level, it is still fair to conclude that a comprehensive micro-political foundation has not yet been provided.

Social Polarization Social polarization exists in a country, where the society is divided, because people strongly identify with different groups, like religious, ethnic or linguistic groups etc. Especially ethnicity is believed to be a driving force in elections in African countries (Berman et al., eds, 2004; Horowitz, 1991; Olorunsola, 1972). If people are strongly divided in ethnic groups and tend to vote on this basis, elections do not represent political opinions any more but rather a census of ethnicities (Ferree, 2006; Horowitz, 1985; Lever, 1979; McLaughlin, 2008). The less voters care about policies, the less issue orientated and accountable a politician needs to be to the overall society. Easterly and Levine (1997) discovered a negative correlation

between ethnic diversity and the quantity and quality of provision of public goods. This is confirmed by studies in Kenya that show that high ethnic diversity leads to lower spending in primary school funding and school facilities (Miguel, 2001). The recent study by Eifert et al. (2010) again confirmed the importance of ethnicity during elections. They demonstrated that ethnicity becomes more salient the closer an upcoming election moves. Just like information asymmetries social polarization also leads to a situation in which politicians are missing electoral incentives to implement policies that benefit the country as a whole. Instead, they focus on maximizing their own personal interests as well as on the interests of their clientèle. This explains why in many developing countries, where the population is heterogeneous and divided into many different groups, suboptimal policies persist and politicians, who implement these policies are being reelected.

Missing Accountability¹ A third imperfection of political markets corresponds to politician's inability to make credible promises in elections. Persson and Tabellini (2000) demonstrate that when pre-election promises are not credible, elections become less effective instruments for holding politicians accountable. Keefer (2002a) shows that in countries where political parties are weak or not established, politicians tend to make credible promises only to voters with whom they have built a personal reputation. Such ties emerge most clearly as the patron-client relationship that a large body of literature identifies with policies in developing countries. The more politicians serve their clients, the less money is available for public goods. Another problem of young and unstable democracies is the fact that parties have to prove themselves within very short time horizons. People did not have the chance to build up party identities yet and it is quite possible that they will change their vote choice from one election to the next. Those short time horizons force the incumbent parties to act in the short-run rather than in the medium or long-run. Short-run policies are often less efficient and effective than longer planned policies. Paired with weakly established political party systems short time horizons impede credible political commitments from elected politicians. Empirical evidence for clientelistic policies is provided for example by Glewwe and Jacoby (1994); Sanmartin (2001) as well as Glaeser and Shleifer (2002). Further, because of the uncertainty inherent in young democracies, politicians will first serve their own purpose and exploit office to generate high rents for themselves. This behavior is attended by high levels of corruption and public investment spending. Both are evidently higher in younger than in older democracies (Keefer, 2002a). Finally the history of democratization and multi party elections is rather short in many developing countries, hence, political parties are not yet institutionalized. While party identity is an important voting motive in industrialized countries, in those young democracies people rather identify with certain personalities than with a political party. Hence, political parties are not credible on their own, but are dependent on a charismatic leader who is personally credible. Examples of strong leaders can be found frequently in Sub-Saharan Africa, i.e. Yoweri Museveni in Uganda, Robert Mugabe in Zimbabwe or Teodoro Obiang

¹Missing accountability in terms of Keefer and Khemani (2004) corresponds rather to missing credibility of the politicians, than to a lack of incentives, as we defined missing accountability. Hence, we will further speak of missing credibility in the context of Keefer and Khemani (2004).

Nguema in Equatorial Guinea.

Summarized there are mainly three concerns that affect accountability. First, clientelism, second short time horizons and third institutionalized parties. Each of them can influence political credibility in one or the other direction. Clientelistic governments only act accountable to their clients, which further increases the bias towards special interests and does not provide any incentives to implement broad public policies. Short time horizons lead to policies that are immediately observable and to politicians that exploit the state for their own well being. Neither of those increases government accountability and overall credibility. Finally institutionalized parties have built up a reputation towards their voters, which makes them more accountable and reduces the level of corruption and public investment spending. Though in developing countries, many parties are not institutionalized yet and are hence missing accountability.

Again, to our knowledge there hardly exist empirical studies applying econometric estimations of probabilistic voter models based on individual election survey data to estimate the relative importance of information asymmetries, social polarization and lack of credible commitments as determinants of distorted political incentives derived from electoral competition. Therefore, we consider it as an important contribution to literature to provide first a descriptive overview but also an econometric estimation of probabilistic voter models including explicitly voters motivation for non policy oriented voting, e.g. valence or personal voting, induced by asymmetric information, social polarization or lack of credible commitments.

Chapter 3

Theory of Voting Behavior

The act of voting is a central element of decision making in modern democracies. It gives each citizen who is eligible to vote the opportunity to co-decide political decisions. For researchers, it is not first and foremost the actual result of the election that is interesting to study, but how the result was achieved and why it resulted the way it did. There exist three main approaches to analyze voting behavior, (1) the socio-structural theory of voting, also known as the Columbia school (Lazarsfeld et al., 1968; Lipset and Rokkan, 1967), (2) the Michigan School, which favors a socio-psychological view (Campbell et al., 1960) and (3) the theory of rational voting (Downs, 1957). The Michigan school gained fame for their path breaking study *The American Voter*, where the role of political socialization is especially emphasized. Further, Campbell et al. (1960) differentiate between long-term and short-term forces. Party identification is the most important long-term factor, while policy issues and characteristics of the candidate are classified as short-term forces. The main work of the Columbia school is the 1944 published book *The Peoples Choice* (Lazarsfeld et al., 1968). It analyses the US presidential elections in 1940 with a panel survey of 600 individuals from Erie County in Ohio. Lazarsfeld and his colleagues especially emphasize that vote choice is mainly determined by social structures like social class, ethnicity or religion. Finally, the theory of rational voting assumes that voters gain utility from the policies that are implemented when a candidate is elected. Naturally they will vote for the candidate whose policies provide the highest expected utility for themselves. Further, political parties seek to choose the policy position that maximizes their expected vote share. Hence, voters as well as political parties act rational when they vote or choose their policy positions. Therefore, Anthony Downs was among the first to combine voting behavior and government behavior.

However, when considering that about 50-90% of the population take part in elections, the marginal effect of an additional vote on the election outcome is rather small. This is because the probability P^1 that one's vote is actually decisive is only marginal. Even if the cost of voting is also small, taking part in elections is not rational as long as voter turnout is high. The utility gained from voting is measured as the utility difference between the policies of the candidates, B , multiplied with P . Hence, the cost of voting C has to be smaller than the product of P and B to make the act of voting a rational choice. The phenomena that most people do vote, although their behavior seems irrational is known as the paradox of voting. Mueller (1989) phrases it nicely, "Several people have noted that the probability of being run over by a car going to or returning from the polls is similar to the probability of casting the decisive vote". Trying to explain the paradox, some scholars found ways to transfer the obviously irrational behavior into rational behavior. Riker and Ordeshook (1968) introduced the term D , which acts as an utility component that

¹Please find a table with all symbols and definitions in the appendix

voters gain from the pure act of voting. Taking part in elections is seen as civic duty that comes along with a well functioning democracy. Hence, citizens participate in elections, when:

$$R = PB - C + D \quad (3.1)$$

where, D is the utility gained from the act of voting itself (civic duty). Another explanation is of game theoretic nature. The utility gained from voting heavily depends on whether all other people vote or not. When everybody thinks that their vote does not count and abstain from the election, P increases and equals one if no one else votes. The lack of information on how many people actually participate in the election, can lead to a situation where the act of voting becomes rational if the expected benefit B is large enough. Further, Ferejohn and Fiorina (1974) show that it is a rational choice to vote, if voters apply a minimax-regret strategy and the utility difference B is at least double the cost of voting.

When voters decide to participate in elections and voting behavior is modeled as a rational choice, the literature differentiates two kinds of models, a deterministic voter model and a probabilistic voter model. In the deterministic voter model with two political parties, the probability that voter j votes for party A equals simply:

$$\begin{aligned} P_j^A(A, B) &= 1 \text{ when } U_j^A > U_j^B \\ P_j^A(A, B) &= 0.5 \text{ when } U_j^A = U_j^B \\ P_j^A(A, B) &= 0 \text{ when } U_j^A < U_j^B \end{aligned} \quad (3.2)$$

The utility voter j associates with party k in this case party A or party B is depicted by U_j^A and U_j^B respectively. Though the empirical application of the deterministic voter model is problematic, as not all aspects of the utility function are observable. Further, candidates are not aware of the exact preferences of all voters and cannot definitely predict their vote choice. But also voters are not perfectly informed about political parties and their policy positions. Hence, vote choice is afflicted with uncertainty, the application of a probabilistic model is more suitable than the application of a deterministic model. In a probabilistic model, whether voter j votes for party A results in the following function:

$$P_j^A(A, B) = Prob(U_j^A \geq U_j^B) \text{ with } U_j^k = V_j^k + \epsilon_j^k \quad (3.3)$$

V_j^k denotes the deterministic part that is already known from equation 3.2 and ϵ_j^k is the probabilistic component of the utility function. The deterministic part of the utility function V_j^k can be further split up into three sub components, which originate partly from the Columbia as well as from the Michigan school.

$$V_{jk} = V_{jk}^P + V_{jk}^R + V_{jk}^{NP}, \quad (3.4)$$

where P stands for policy oriented voting, R for retrospective voting and NP for non policy oriented voting.

Policy oriented voting goes back to the theory of Hotelling (1929), who analyzed spatial competition in a duopoly. Further, he already observed similarities of his model with the political market and electoral competition. Downs (1957) finally

picked up the idea of Hotelling, "Our main thesis is that parties in democratic politics are analogous to entrepreneurs in a profit-seeking economy. So as, to attain their private ends, they formulate whatever policies they believe will gain the most votes, just as entrepreneurs produce whatever products they believe will gain the most profits for the same reason. In order to examine the implications of this thesis, we have assumed that citizens behave rationally in politics." (Downs, 1957, pp.295-296). He assumed that political parties choose their policy position on an ideological left-right scale, that ranges between 0 and 100. Voters' preferences are single peaked and distributed on the same scale. The utility of each voter is formulated as a loss function. The further a candidate's policy position is from the voter's ideal position the less utility he gains from voting for that particular candidate. In a two party competition the equilibrium results at the median position, where the vote share of both parties is maximized. Though the general validation of the theory of the median voter is very limited. When more than two candidates participate in elections or the policy space is multidimensional instead of one dimensional, the equilibrium does not exist. Davis et al. (1970) extended the model of Downs, for multiple policy dimensions as they assumed that the political issues influencing electoral competition cannot be combined in one ideological dimension. Hence, a voter will choose the political party whose policy positions on all issue dimensions d will minimize the sum of the policy distances.

While policy oriented voting requires detailed information on candidate's policy positions, retrospective voting is less demanding concerning voters' political knowledge. Retrospective voting refers to the act of voting that is based on observed performance indicators, e.g. unemployment rates and GDP growth rates. Even if individual voters are uninformed or disinterested in politics the electorate as a whole is able to hold government accountable (Page and Shapiro, 1992), because retrospective voting provides incentives to politicians as they can either be sanctioned for their poor performance or selected, when they performed very well (Katz and Katz, 2009; Kramer, 1971; Fiorina, 1981; Gomez and Wilson, 2001, 2003). In general one can distinguish two kinds of retrospective voting, the first one is called the *sociotropic hypothesis* (Kinder and Kiewiet, 1979, 1981), which assumes that voters consider the well being of the economy as a whole, when they decide who to vote for. *Pocketbook* voting on the other hand, describes voters who associate their own well-being and personal living conditions with government performance and base their vote choice on these personal indicators (Campbell et al., 1960; Kramer, 1971, 1983). It is important to mention that both theories assume that it is not the absolute well being that influences vote choice, but the perceived change of well being compared to the past election period. Especially most recent events are taken into account, while efforts from former periods are rediscounted (Kramer, 1971; Fair, 1978) and become less important over the years. The issue of timing is one reason, why retrospective voting does not always provide the right incentives to politicians and candidates. It results in increased spending during the year of elections and reduced spending in all other years. Cole (2009) provides evidence that in election years more agricultural credits are provided and in another paper, Cole et al. (2012) show that also the spendings on relief in response of natural disasters are increased when elections are close. However, an adequate level of disaster preparedness is much

more efficient than relief spending, after the catastrophe happened. Nevertheless in comparison to relief spending, spending on disaster preparedness is not rewarded by voters. At this point it is obvious that voters offer wrong incentives to their politicians, as they rather spend money on disaster relief than on the much more efficient disaster preparedness. It follows that politicians actually gain votes if they act decently during natural disasters, although they did not contribute sufficiently to disaster preparedness beforehand (Healy and Malhotra, 2013). In this case wrong incentives arise from focusing on short term policies as well as from biased policy beliefs of the voters.

Finally, next to retrospective voting and policy oriented voting there also exists non policy voting. In comparison to the former two, non policy oriented voting is not related to actual political behavior and policy platforms. Especially voters with low levels of political awareness and low education levels, fall back on non policy factors when they make their vote choice (Abrajano, 2005). Typical non policy factors are for example personal characteristics of the candidate, ethnicity and charisma. The crucial point about non policy factors is that they are exogenously given in the sense that they are permanent attributes of the candidate or the political party. Sometimes they are referred to as an extension of valence-issues (Peress, 2010), which are defined as "those that merely involve the linking of the parties with some condition that is positively or negatively valued by the electorate", by Stokes (1963). However, the distinction between policy and non policy voting factors is not always discrete (de Mesquita, 2000), as non policy factors might also influence the perception of policy factors. Charisma, for example, can help political candidates to promote their policy positions. The drawback of non policy voting compared to retrospective and policy issue voting is that it does not enhance government accountability. Political candidates have no incentives to provide broad public goods for the society as a whole if their election probability depends mainly on non policy voting that is beyond any policy issues.

While Anthony Downs was the first one to actually combine voting behavior and government behavior theoretically, others extended his work and developed it further. David Baron was one of the first to distinguish informed and uninformed voters when modeling voting behavior. In his paper, he assumes that informed voters vote because of policy positions while uninformed voters are swayed by non policy factors (Baron, 1994). Two years later Grossman and Helpman (1996) continued modeling voting behavior, their main aim was to include interest groups in the process and explain why the political process does not serve the interests of the median voter. At this point, we will introduce the model of Bardhan and Mookherjee (2000), which is an extension of the models of Baron, Grossman and Helpman. Bardhan and Mookherjee put special emphasis on the concept of capture and voting weights, which are core pieces of the theoretical chapter as well as of the application chapter of this book.

In their model², Bardhan and Mookherjee (2000) classify each voter j in one of three classes $c(j)$, poor (p), middle income (m) and rich (r). Further, there are n

²This part is based on the detailed description of the extended Baron, Grossman and Helpman model by Bardhan and Mookherjee in their working paper *Relative Capture of Local and Central Governments* (Bardhan and Mookherjee, 2002).

districts, in each district i live β_p^i poor people, β_m^i people with middle income and β_r^i rich people³. Some of the voters in each class are interested in policies, while others are not. The interested voters are aware of the political process, know the political parties and their policy platforms. When they decide about their vote choice, they heavily rely on the parties' policy positions. Uninformed voters on the other hand are not interested in politics, when they vote, they decide because of non policy reasons that are not related to policy issues. Bardhan and Mookherjee, just like Baron and Grossman and Helpman assume that those uninformed voters are swayed by campaign expenditures when making their vote choice. Whether someone is interested in politics or not is closely related to socioeconomic status and education level, hence the share of informed voters α is highest in the rich class and lowest in the poor class ($\alpha_p \leq \alpha_m \leq \alpha_r$).

During elections, voters can choose between two parties k , say party A and party B, who provide policies π^A and π^B respectively. Informed voters j gain utility from the policy choice of each party, but also from a non policy based weighting factor a that measures the voter's preference for party A over party B.

$$U_{c(j)}(\pi) + a_j I(A) \quad (3.5)$$

Party preference a_j can be split up in a nationwide preference a and an individual-specific preference ϵ_j . For simplicity, Bardhan and Mookherjee assume that the voter-specific preferences ϵ_j are distributed uniformly, which leads to linearity between vote shares and policy-based utility differences. Typical reasons for one party being preferred over another are incumbent advantages, personal characteristics or exogenous shocks (e.g. natural disasters, economic or financial crisis). Baron showed theoretically that the incumbency advantage, which results from existing power in the legislature and name recognition, leads to policy positions that are closer to the median. Though in the theoretical model party preferences are not further specified. Taking party preferences and policy positions into account an informed voter j in class c will vote for party A if $U_c(\pi^A) - U_c(\pi^B) + a + \epsilon_j \geq 0$. From this and the linearity between vote shares and policy-based utility differences, it follows that the total share of informed voters voting for party A equals

$$\frac{1}{2} + f[a + W_I(\pi^A) - W_I(\pi^B)], \quad (3.6)$$

with $W_I(\pi^k) = \beta_r \alpha_r U_r(\pi^k) + \beta_m \alpha_m U_m(\pi^k) + \beta_p \alpha_p U_p(\pi^k)$.

While informed voters consider policy positions, uninformed voters are convinced by campaign expenditures, C , and vote for the party that spends relatively more money on election campaigning, e.g. election posters, election advertisements or door to door visits. Hence, the uninformed voter will vote for party A if $h[C^A - C^B] + a + \epsilon_j \geq 0$ and the share of uninformed voters voting for party A will be $\frac{1}{2} + f[a + h(C^A - C^B)]$. The marginal effectiveness of campaign spending is denoted by h and is assumed to be strictly greater than zero. Depending on the kind of election campaigning, election expenditures are more or less productive in generating

³In the following we will drop the district index i , as we will extend and apply the model only for the case of presidential elections, which take place in only one country wide district.

votes, which is expressed by h . Finally summing up the vote share of informed and uninformed voters results in

$$\begin{aligned} S^A &= \frac{1}{2} + f[a + W_I(\pi^A) - W_I(\pi^B) + h\{1 - \beta_r\alpha_r - \beta_m\alpha_m - \beta_p\alpha_p\}\{C^A - C^B\}] \\ &= \frac{1}{2} + f[a + V(\pi^A, C^A) - V(\pi^B, C^B)] \end{aligned} \quad (3.7)$$

with $V(\pi^A, C^A) \equiv W_I(\pi^A) + \chi C^A$, which denotes the net effectiveness of the electoral strategy of party k . The marginal effectiveness h of campaign spending is included in $\chi = h\{1 - \beta_r\alpha_r - \beta_m\alpha_m - \beta_p\alpha_p\}$, which additionally depends on the fraction of uninformed voters. The electoral strategies of the two parties are represented by the vector (π^k, C^k) , when they are given, the probability that party A wins the election equals:

$$G^A(V(\pi^A, C^A) - V(\pi^B, C^B)) \equiv Prob[a + V(\pi^A, C^A) - V(\pi^B, C^B) \geq 0]. \quad (3.8)$$

G^A is the distribution function of the party preference a , it is strictly increasing with $V(\pi^A, C^A) - V(\pi^B, C^B)$.

Political parties are assumed to be office seekers that act purely opportunistic in elections. Their aim is to win the election, by choosing the electoral strategy (π^k, C^k) that maximizes their expected vote share. The objective function is represented by the weighted sum of informed voter's welfare and uninformed voter's welfare, which results from campaign spending.

$$W_I(\pi^k) + \chi C^k \quad (3.9)$$

In a case where no interest groups are actively lobbying for political support, the election outcome is solely determined by informed voters. Each party chooses the policy platform that maximizes W_I , following Downs (1957) that means that all parties will converge at the median position. Baron calls this the centripetal incentives, which are dominant when the share of informed voters is high. The opposite effects are called centrifugal incentives, they are triggered by interest groups and campaign contributions. It follows that when all parties take the median policy position the outcome of the election only depends on the exogenous party preferences $a + \epsilon_i$.

Bardhan and Mookherjee assume that there exists only one organized interest group and all interest group members are from the rich class. But not all of them actually contribute financially to the common interest, only a share l of the rich citizens contributes, while the rest of them $(1 - l)$ free-rides. Depending on the organizational structure and the possibilities to exclude non-paying members from the gains achieved by the interest group, the share l varies and allows more or less free-riding. In the model of Baron, the number of interest groups is not further specified. However, he differentiates between the kind of policies that are implemented, while particularistic policies can be denied to an interest group that does not contribute to the candidate, collective policies are provided to everybody independent of whether they contribute to the party or not. He concludes, when the benefits from a policy are free to everybody, no interest group will contribute to the political parties. Thus, when only collective policies matter, campaign spending is zero and

both candidates will locate at the median position to please the informed voters. Grossman and Helpman model two cases, one with only a single lobby and another with several interest groups lobbying for political support. While in the first case the more popular party will receive greater campaign contributions from the lobby, in the second case, the equilibrium policy positions are not uniquely determined. Further, depending on the beliefs of the different lobby groups, any party can win the elections. Grossman and Helpman call this behavior a self-fulfilling prophesies that is due to coordination failure among lobbies.

The equilibrium in the extended Baron-Grossman-Helpman (BGH) model of Bardhan and Mookherjee, is achieved in a two-stage, non cooperative, political game. At the first stage the lobby decides about it's campaign contributions, based on the parties' policy platforms. The second stage involves the political parties, which select their policy positions to maximize their vote share. Accepting campaign contributions from interest groups, forces the political parties to move away from the median position towards the more extreme policy positions favored by that particular interest group. Hence, the party will only accept campaign contributions if the gained votes by uninformed voters exceed the lost votes of informed voters. When π^* is the median position, interest groups would have to contribute at least $\tilde{C}^k(\pi^k)$ to make the party indifferent between the two options.

$$W_I(\pi^k) + \chi\tilde{C}^k = W_I(\pi^*) \quad (3.10)$$

Equation 3.10 illustrates the participation constraint, rearranging the formula results in the minimum contribution of the interest group that will be sufficient for party k to accept the offer.

$$\tilde{C}^k(\pi^k) = \frac{1}{2}[W_I(\pi^*) - W_I(\pi^k)] \quad (3.11)$$

In the following Bardhan and Mookherjee consider two cases, one where the participation constraint binds for both parties and another case where the participation constraint only binds for the less favored party. In the first case, the actual probability that party A or party B wins the election does not change when π^k or C^k are modified, only the policy positions of each party may vary because of the influence of lobby groups. The probabilities do not change, because if moving away from the median position results in a loss of informed voters, it will be compensated by the gain of uninformed voters, convinced by campaign spending. The probability that party A or party B will win the election is always $G^k(0)$, because of the binding participation constraints. When interest groups pay exactly $\tilde{C}^k(\pi^k)$ to get policy π^k from party k , this policy choice maximizes the term $\bar{G}^k U_r(\pi^k) - \frac{1}{l\beta_r}\tilde{C}^k(\pi^k)$, which corresponds to the utility gained by a rich citizen minus the share of campaign contributions he actually pays himself. Hence, in equilibrium the following function is maximized,

$$l\chi\beta_r\bar{G}^k U_r(\pi^k) + W_I(\pi^k) \equiv \beta_p\alpha_p U_p(\pi^k) + \beta_m\alpha_m U_m(\pi^k) + \beta_r\{\alpha_r + l\chi\bar{G}\}U_r(\pi^k). \quad (3.12)$$

The objective function corresponds to a linear quasi-utilitarian welfare function, with the share of informed voters representing the welfare weights. In the first proposition of their paper Bardhan and Mookherjee show that if the participation

constraint only holds strictly for one party, the first order condition is:

$$U_r(\pi^A(p^A)) - U_r(\pi^B(1 - p^A)) \geq \frac{1}{\chi l \beta_r g(G^{A^{-1}}(p^A))}. \quad (3.13)$$

Equation 3.13 holds with equality when $p^A < 1$. p^A denotes the win probability and g is the density of G^A . From proposition one it follows that when one party is favored over the other, their policy platforms will diverge. This happens irrespective of whether only one participation constraint binds or both of them bind. Interest groups rather pay campaign contribution to the party that has better chances to form the government, because only the governmental party can actually implement policies. Hence, the preferred party will select policies that are further away from the median, but closer to the special interests of the lobby groups. The more pronounced the voters' preferences are for one of the two parties, the more the parties' policy positions will diverge from each other. The divergence will be even stronger, when the participation constraint only binds for one party. For the less preferred party the participation constraint will always bind, as it does not make any sense to spend more money than just necessary on a political party that is likely to lose the upcoming election. For the preferred party additional campaign contributions enhance the chance of winning the election, which makes it reasonable to exceed the participation constraint. Grossman and Helpman show explicitly that the lobby will increase its campaign contributions to the preferred party, as long as the marginal utility of campaign contributions is greater than the marginal cost of them⁴. Campaign contributions that exceed the participation constraint will pull policy positions even further away from the median and increase divergence.

In comparison to Baron and Grossman and Helpman, Bardhan and Mookherjee explicitly describe the weight of the different classes and introduce the term capture. Capture is defined as policies that are biased towards special interests. If we recall Equation 3.12, the weights of the group specific utilities are given by the population share of the respective group, by the fraction of informed voters and by lobbying activity. However, the political process does not necessarily have to suffer from capture. First consider the case where all voters are informed: $\alpha_c = 1$, for all c . The welfare weights will be reduced to the population shares, $\beta_p, \beta_m, \beta_r$, which corresponds with equal weights for every individual, quasi *one man one vote*. With only informed voters group weights only depend on demographic characteristics. Accordingly in developing countries where the share of poor people is high, the total weight of poor citizens would be greater than the weight of mid income and rich citizens. The fact that this is not the case is well known, especially in developing countries the political process is biased towards the interests of the urban and rich part of the population (Lipton, 1977; Sahn and Stifel, 2003; Avery and Peffley, 2005). The reason therefore lies in the different share of informed voters among poor people and rich people. From this it follows that literacy, poverty and inequality increase the level of capture in a country. Additionally lobbying increases the weight of the rich people, which further contributes to the already existing bias. Capture is also influenced by party loyalties, as one-sided party preferences lead to enhanced

⁴The marginal cost of an additional campaign contribution is one.

lobbying efforts for that particular party. Uncertainty in the outcome of elections on the other hand can also decrease the level of capture, as lobby groups cannot be sure about a parties electoral success. The critical point about capture and disparate voting weights is that those citizens with the higher voting weight are dominant in the political process, which leads to future policies that further privilege this elite. Hence, inequality will persist or even increase in the long run, when an elite exists and captures the common people.

Chapter 4

Methodology

4.1 Estimation of Probabilistic Voter Models

Probabilistic voter models are estimated with so called Discrete Choice models. Discrete Choice models¹ are applicable for all kind of research questions that involve a choice between alternatives e.g. consumers choosing their favorite yogurt brand in the supermarket, commuters choosing their way of transport and also voters choosing their preferred political party. All these choice situations have in common that the number of possible choices is finite, they are countable. There are two more requirements for a discrete choice model, the alternatives have to be mutually exclusive and the choice set has to be exhaustive. The latter means that all possible alternatives are included in the choice set, whereas the former demands that only a single alternative is selectable from each choice set. The example of vote choice easily satisfies all three obligations, there is only a finite number of parties that run for office, during election day all parties that are legally eligible for election will be presented on the ballot paper and each voter is only allowed to choose one party. Hence, discrete choice models are exceptionally suitable to model voting behavior.

To derive the discrete choice model, usually a random utility approach (RUM) is utilized. A decision maker j is choosing an alternative k among K alternatives. Choosing an alternative creates utility $U_{jk}, k = 1, \dots, K$ for him. The decision maker, in our case the voter, acts rational and chooses the alternative that provides the highest utility for him, that is he chooses alternative k over l if and only if $U_{jk} > U_{jl} \forall k \neq l$. Unfortunately the researcher is not aware of the decision maker's utility, he can observe the choice situation and may know some attributes of the alternatives and characteristics of the decision maker himself, but the true utility remains hidden for him. Though he can consider the representative utility which is given by the function $V_{jk} = V(x_{jk}, s_j) \forall k$, where x_{jk} are the attributes of the alternatives and s_j the characteristics of the decision maker. Of course the representative utility function is not able to describe the true utility, hence $V_{jk} \neq U_{jk}$. The true utility can be split in two parts, the representative utility and an error term ϵ_{nj} that contains everything that is not known by the researcher a priori, $U_{jk} = V_{jk} + \epsilon_{jk}$. As ϵ_{jk} is unknown by the researcher, it is treated as random and has a joint density, $f(\epsilon_j)$. Depending on the specification of the density function several discrete choice models can be distinguished. An independently, identically extreme value distribution (iid) for instance results in a logit model and a multivariate normal distribution in a

¹The explanation of discrete choice models mainly goes back to Train (2009)

probit model. In general the probability that an alternative is chosen is given by:

$$\begin{aligned} P_{jk} &= Prob(U_{jk} > U_{jl} \forall k \neq l) \\ &= Prob(V_{jk} + \epsilon_{jk} > V_{jl} + \epsilon_{jl} \forall k \neq l) \\ &= Prob(\epsilon_{jl} - \epsilon_{jk} < V_{jk} - V_{jl} \forall k \neq l). \end{aligned} \quad (4.1)$$

With the density $f(\epsilon_j)$ at hand, the cumulative probability can be written as

$$P_{jk} = \int_{\epsilon} I(\epsilon_{jl} - \epsilon_{jk} < V_{jk} - V_{jl} \forall k \neq l) f(\epsilon_j) d\epsilon_j. \quad (4.2)$$

$I(\cdot)$ is an indicator function, which equals 1 if the expression in parentheses is true and 0 otherwise.

After Luce (1959) derived the logit formula, it became one of the most widely applied discrete choice models in research. And also for the estimation of voting behavior in part two of this book we apply a logit model. The major advantage of the logit model compared to other discrete choice models is that the formula for the choice probability takes a closed form. As already explained earlier, the decision maker generates utility from choosing an alternative, this utility can be split in a part which is known to the researcher V_{jk} and a random part which is unknown, ϵ_{jk} . When we assume that the unknown error term is independently, identically extreme value distributed (iid), the logit model is obtained. The density of ϵ_{jk} is

$$f(\epsilon_{jk}) = e^{-\epsilon_{jk}} e^{-e^{-\epsilon_{jk}}} \quad (4.3)$$

Independently distributed error terms denote that ϵ_{jk} is not related to ϵ_{jl} . The logit probability can be derived as (McFadden, 1974)

$$P_{jk} = \frac{e^{V_{jk}}}{\sum_l e^{V_{jl}}}. \quad (4.4)$$

The relation between representative utility and probability is sigmoid (see Figure 4.1). The shape of the curve indicates that changes in probability are low when the representative utility is either very low or very high compared to all other alternatives. Changes in representative utility have the greatest effect on probability, when the probability of being chosen is 50%. The specific shape of the probability curve has important implications on policy makers (Train, 2009) and also on political parties choosing their election campaigning strategy. We will further emphasize this point in chapter 5.

Generally there exist different logit models depending on the kind of variables and parameters that are included. Usually a multinomial logit model only consists of individual specific variables whereas a conditional logit model includes only alternative specific variables. To describe the different kinds of variables it is necessary to further specify the structure of the data used in the analysis. The dataset will be transformed into the long format, which is displayed schematically in Table 4.1.

The data is formatted in the long format, where each observations represented by one row. In the case of Table 4.1 an observation is displayed by a voter/party

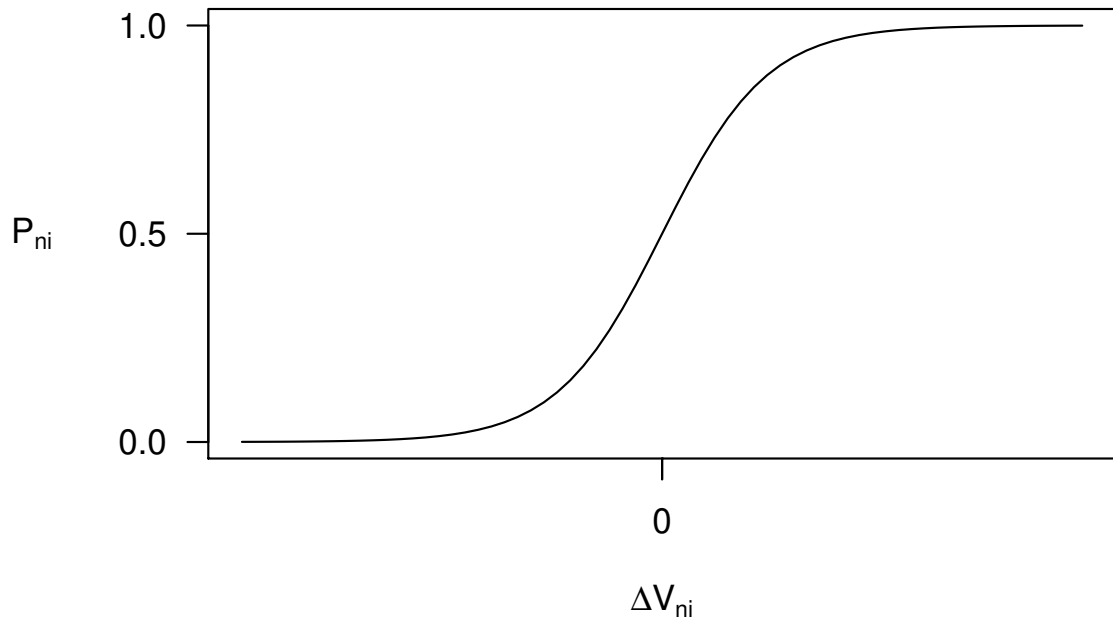


Figure 4.1: Graph of logit curve
Source: own illustration based on Train (2009)

Table 4.1: Data format for the logit model

| Case | Id | Choice | Party | Age | Gender | Issue 1 | Issue 2 | Party ID |
|------|-----|--------|-------|-----|--------|---------|---------|----------|
| 1 | 1 | 0 | P1 | 23 | male | 9 | 16 | 0 |
| 2 | 1 | 1 | P2 | 23 | male | 4 | 4 | 1 |
| 3 | 1 | 0 | P3 | 23 | male | 16 | 9 | 0 |
| 4 | 2 | 1 | P1 | 46 | male | 0 | 9 | 0 |
| 5 | 2 | 0 | P2 | 46 | male | 16 | 9 | 0 |
| 6 | 2 | 0 | P3 | 46 | male | 16 | 16 | 0 |
| 7 | 3 | 1 | P1 | 30 | female | 9 | 16 | 0 |
| 8 | 3 | 0 | P2 | 30 | female | 9 | 4 | 1 |
| 9 | 3 | 0 | P3 | 30 | female | 4 | 0 | 0 |
| 10 | 4 | 0 | P1 | 81 | male | 4 | 4 | 0 |
| 11 | 4 | 0 | P2 | 81 | male | 16 | 4 | 0 |
| 12 | 4 | 1 | P3 | 81 | male | 9 | 16 | 1 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |

Source: own illustration based on Thurner (1998)

combination, the variable *Id* indicates the identification number of the voter, while *Party* indicates the three political parties that are eligible for election. Depending on the number of alternatives (political parties), each voter faces K choice situations and hence represents K observations. The dependent variable is *Choice* which equals one if the particular party is chosen and zero otherwise. To see the difference between alternative specific variables and individual specific variables, take a look at the variables *Issue 1* and *Agein* Table 4.1, while the latter is different for every voter/party combination, the former is a characteristic of the voter and independent of the alternatives. Typical alternative specific variables are issue distances and party identification, among the individual specific variables are usually age, gender and ethnicity.

In the literature a mixture of multinomial logit and conditional logit model is often referred to as a mixed logit model, which may cause confusion as logit models with random parameters are also specified with the same term. Following Croissant (2012) we will call either model a multinomial logit model independent of the kind of variables included. A simple form of the model that will be estimated later on, will look like this:

$$P_{jk} = \frac{e^{V_{jk}}}{\sum_l e^{V_{jl}}}, \text{ with } V_{jk} = \alpha_k + \beta x_{jk} + \delta_k r_j, \quad (4.5)$$

where x_{jk} is a vector of alternative specific variables, β the generic coefficient and α_k an alternative specific constant, additionally there is the individual specific variable r_j with its alternative specific coefficients δ_k . Alternative specific coefficients are always estimated with one of them set to zero, as the model cannot be identified otherwise. The remaining coefficients are interpreted relative to the alternative, whose coefficient was normalized. Generic coefficients are constant across all alternatives.

As the probability P_{jk} is distributed logistically the coefficients cannot be interpreted straightforward like in a linear regression analysis. Though the algebraic sign gives the direction of the effect, the absolute level is not interpretable. That is why marginal effects and elasticities are important for further interpretation. Depending on whether the variable is binary or continuous, marginal effects measure either a discrete change or an instantaneous rate of change. Further, marginal effects can be calculated at the means of all other variables held constant or at the actual value of all other variables. The former is known as the marginal effect at the mean and latter as average marginal effects. Average marginal effects have the advantage that they better represent the data at hand and provide an individual specific effect. Further, especially when binary or categoric variables are part of the estimation mean values can be misleading, i.e. when considering gender, place of living or ethnicity. That is why we will use the average marginal effects in the empirical application of this paper. For continuous variables, the extent to which the probability of choosing a certain alternative will decrease or increase when one of the independent variables

is increased by one unit results in:

$$\frac{\partial P_{jk}}{\partial x_{jk}} = \frac{\partial V_{jk}}{\partial x_{jk}} P_{jk}(1 - P_{jk}) \quad (4.6)$$

$$\frac{\partial P_{jk}}{\partial x_{jl}} = -\frac{\partial V_{jl}}{\partial x_{jl}} P_{jk} P_{jl} \quad (4.7)$$

for alternative specific variables x_{jk} or x_{jl} and

$$\frac{\partial P_{jk}}{\partial s_j} = P_{jk} \left(\frac{\partial V_{jk}}{\partial s_j} - \sum_l P_{jl} \frac{\partial V_{jl}}{\partial s_j} \right) \quad (4.8)$$

for individual specific variables s_j . The marginal effect for categorical variables is calculated simply as:

$$ME_{s_j} = P_{jk}(s_j = 1) - P_{jk}(s_j = 0) \quad (4.9)$$

Some researchers prefer elasticities to marginal effects because they are normalized to a one percentage change of the independent variable. The elasticity of P_{jk} with respect to x_{jk} , the cross-elasticity and the elasticity with respect to a individual specific variable are:

$$E_{kx_{jk}} = \frac{\partial P_{jk}}{\partial x_{jk}} \frac{x_{jk}}{P_{jk}} = -\frac{\partial V_{jk}}{\partial x_{jk}} x_{jk}(1 - P_{jk}) \quad (4.10)$$

$$E_{kx_{jl}} = \frac{\partial P_{jk}}{\partial x_{jl}} \frac{x_{jl}}{P_{jk}} = -\frac{\partial V_{jl}}{\partial x_{jl}} x_{jl} P_{jl} \quad (4.11)$$

$$E_{ks_j} = \frac{\partial P_{jk}}{\partial s_j} \frac{s_j}{P_{jk}} = s_j \left(\frac{\partial V_{jk}}{\partial s_j} - \sum_l P_{jl} \frac{\partial V_{jl}}{\partial s_j} \right) \quad (4.12)$$

4.2 Analyzing Heterogeneity in Voting Behavior

Heterogeneity is a necessary condition for the existence of capture. As we are analyzing the implications of voting behavior on government performance and especially on government accountability and capture, we were looking for an approach that is able to include heterogeneity. The multinomial logit model described in the previous chapter assumes that all individuals act homogeneous, hence it is not the optimal tool for our purpose. However, there exists an extension to the multinomial logit model, the latent class model. The idea of a latent class model is that there exist different groups of individuals within a population, who share similar personal characteristics. These groups or classes are homogeneous within themselves but heterogeneous compared to other classes. Latent class models are also known as mixed logit models with discrete mixing distribution (Train, 2008), which is a more obvious term as the latent class model is a special case of the mixed logit model, precisely that case where the mixing distribution is not continuous but discrete.

Mixed logit models are an extension of the simple logit model to overcome its limitations. These limitations are (1) random taste variation, (2) proportional sub-

stitution patterns and (3) correlations over time. As long as tastes vary systematically logit models can deal with them what they cannot deal with is random taste variations meaning variations that do not result from observed variables. But Train (2009) also emphasizes that the logit model still gives a pretty good approximation of average tastes even when they are random, which is because of the relative robustness of the logit formula to misspecification. The issue of substitution patterns (2) goes back to the IIA assumption of the logit model, the IIA assumes that the ratio of the logit probabilities of two alternatives is independent of any other alternative. That this is not always the case is obvious in the prominent red-bus-blue-bus problem (the interested reader should consider for example Ben-Akiva and Lerman, 1985). The third issue is about panel data, logit models are able to analyze these data as long as unobserved factors are not correlated over time. Overcoming these limitations can also be seen as a strength of the logit model since the model has to be very well defined and include all the relevant explanatory variables. Still, there might be some unobserved variables or choice patterns that the researcher does not know of, which will challenge the ability of the logit model to generate valid results. That is why extensions of the logit models were developed one of them being the mixed logit model.

The mixed logit model assumes that parameters are not the same for each individual, but follow a certain mixing distribution. The probabilities can be expressed in the following form

$$P_{jk} = \int L_{jk}(\beta) f(\beta) d\beta \quad (4.13)$$

$L_{jk}(\beta)$ is the standard logit probability with parameters β

$$L_{jk}(\beta) = \frac{e^{V_{jk}(\beta)}}{\sum_{l=1}^L e^{V_{jl}(\beta)}}. \quad (4.14)$$

In this case $f(\beta)$ is the density function and mixing distribution. When the mixing distribution $f(\beta) = 1$ and the parameters are fixed, the mixed logit model becomes the simple logit model. Another possibility is provided when the mixing distribution is discrete, which means that there is a finite set of values the parameters can take. The model is then called latent class model and takes the following form:

$$P_{jk} = \sum_{c=1}^C \pi_c \left(\frac{e^{V_{jk}}}{\sum_l V_{jl}} \right) \quad (4.15)$$

π_c is the share of the population which belongs to class c and has parameters β_c . Depending on the model which is estimated, it is possible to define a vector of demographics z_j that determines class membership. The vector of demographics will be called covariates further on. Next to the covariates there are two more kinds of variables, attributes and predictors. The latter have been introduced as individual specific variables in the former section already and the former are the already known alternative specific variables (Vermunt and Magidson, 2005). Nowadays latent class models are often solved using an EM algorithm (Pacífico, 2012), which

will be explained in further detail in the following paragraph.

EM-Algorithm This part heavily relies on the work of Pacifico (2012), who is the author of the program *lclogit* which estimates latent class models in *Stata*. When the EM-Algorithm was developed it was first designed for the imputation of missing data (Dempster et al., 1977). In latent class models the class shares are taken as missing values and estimated with the EM-Algorithm. EM stands for two steps, expectation and maximization. First the expectation of the missing data distribution is estimated, afterwards the missing-data log likelihood is maximized.

This is the log-likelihood function that has to be maximized:

$$LL = \sum_{j=1}^J \ln \sum_{c=1}^C \pi_c \prod_{k=1}^K \left(\frac{e^{U_{cjk}}}{\sum_{l=1}^L e^{U_{cjl}}} \right)^{d_{jk}} \quad (4.16)$$

d_{jk} is a dummy variable which equals one, if the alternative is chosen and zero otherwise. The same log likelihood can also be written in a different way, which can then be maximized by repeatedly updating the following recursion:

$$\eta^{t+1} = \underset{\eta}{\operatorname{argmax}} \sum_j \sum_c C_j(\eta^t) \ln \pi_c \prod_k \left(\frac{e^{U_{cjk}}}{\sum_{l=1}^L e^{U_{cjl}}} \right)^{d_{jk}} \quad (4.17)$$

$$\eta^{t+1} = \underset{\eta}{\operatorname{argmax}} \sum_j \sum_c C_j(\eta^t) \ln(L_j | \text{class}_j = c) \quad (4.18)$$

η contains all the parameters that need to be estimated, including the choice and class probabilities, L_j is the likelihood function for the missing data and $C_j(\eta^t)$ is the probability that household j belongs to class c , which is conditional on the density of the data and the previous value of the parameters. Using Bayes' theorem $C_j(\eta^t)$ can be computed easily.

$$C_j(\eta^t) = \frac{L_j | \text{class}_j = c}{\sum_{c=1}^C L_j | \text{class}_j = c} \quad (4.19)$$

Then the likelihood function can be rewritten as

$$\ln(L_j | \text{class}_j = c) = \ln \pi_c + \ln \prod_k \left(\frac{e^{U_{cjk}}}{\sum_{l=1}^L e^{U_{cjl}}} \right)^{d_{jk}} \quad (4.20)$$

and maximized using the following steps.

1. Calculate $(L_j | \text{class}_j = c)$ for each class²
2. Using the results from (1) calculate the conditional class membership probability $C_j(\eta^t)$

²use random starting values for the first iteration. These starting values have to be different for each class

3. Next estimate a conditional logit model which is weighted by the individual-specific class membership probabilities

$$\beta_c^{t+1} = \operatorname{argmax}_\beta \sum_j \sum_c C_j(\eta^t) \ln \prod_k \left(\frac{e^{U_{cjk}}}{\sum_{l=1}^L e^{U_{cjl}}} \right)^{d_{jk}} \quad (4.21)$$

4. Following (3) the second part of equation 4.21 is maximized to get the updated vector of class shares

$$\pi_c^{t+1} = \operatorname{argmax}_\pi \sum_{j=1}^J \sum_{c=1}^C C_j(\eta^t) \ln \pi_c \quad (4.22)$$

- Depending on the specified model, the class shares may depend on some demographics z_j , which influence the class shares the following way.

$$\alpha_c^{t+1} = \operatorname{argmax}_\alpha \sum_{j=1}^J \sum_{c=1}^C C_j(\eta^t) \ln \frac{e^{(\alpha_c z_j)}}{\sum_c e^{(\alpha_c z_j)}}, \alpha_C = 0 \quad (4.23)$$

- Afterwards the class shares π_c for each class can be updated

$$\pi_c^{t+1} = \frac{e^{\hat{\alpha}_c^{t+1} z_j}}{\sum_c e^{\hat{\alpha}_c^{t+1} z_j}} \quad (4.24)$$

- Taking β_c^{t+1} and π_c^{t+1} the updated conditional probabilities of class membership can be calculated for every individual.
- In the case of no dependencies between demographics and the class shares, the class shares can be simply calculated as

$$\pi_c^{t+1} = \frac{\sum_j C_j(\eta^{t+1})}{\sum_j \sum_c C_j(\eta^{t+1})}, c = 1, \dots, C \quad (4.25)$$

5. With the updated conditional probabilities of class membership the recursion can start again from point 3 until convergence.

Goodness of Fit To evaluate the goodness of fit of the model and also to decide about the number of classes, the Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC) are used. Further, there also exists the Akaike Information Criterion 3 (AIC3) and the Consistent Akaike Information Criterion (CAIC). The information criteria are based on the Log-Likelihood and the degrees of freedom. The lower the value of the information criteria, the better is the model fit. In the empirical application we will follow the suggestion of Andrews and Currin (2003) and Dias (2004) that when determining the number of latent classes, AIC3 is a better criterion than BIC and AIC (Vermunt and Magidson, 2005). The Information

criteria are defined as³:

$$BIC_{\log\mathcal{L}} = -2\log\mathcal{L} + (\log J)n_{par}, \quad (4.26)$$

$$AIC_{\log\mathcal{L}} = -2\log\mathcal{L} + 2n_{par}, \quad (4.27)$$

$$AIC3_{\log\mathcal{L}} = -2\log\mathcal{L} + 3n_{par}, \quad (4.28)$$

$$CAIC_{\log\mathcal{L}} = -2\log\mathcal{L} + [(\log J + 1)n_{par}], \quad (4.29)$$

Furthermore, we will consider the classification error, that determines whether the model is able to correctly predict the latent classes. The estimated proportion of classification error is defined as:

$$ClassificationError = \frac{\sum_{j=1}^J [1 - \max \hat{P}(c|z_j, y_j)]}{J} \quad (4.30)$$

$\hat{P}(c|z_j, y_j)$ is the posterior class membership probability, given the choice variable y_j and the covariates z_j . Next to the classification error we will also consider the prediction error when evaluating the outcome of the latent class estimation. The prediction error indicates whether the model is able to predict the original choice pattern. It is calculated as the share of wrong predictions of the total number of observations.

$$PredictionError = 1 - \frac{\sum_i Error_i}{N} \quad (4.31)$$

$Error_i$ equals one if the choice is predicted correctly and zero if the prediction is wrong. Finally when estimating latent class models, it is not obvious that the model converges. Especially when the number of estimated classes is high, the problem of local maxima often occurs (Vermunt and Magidson, 2005). Hence, another important indicator about the quality of the model is whether the model converges and finds a global maxima.

4.3 Equilibrium Conditions in Probabilistic Voter Models

The literature on voting behavior has always put special emphasis on identifying policy positions that result in an equilibrium, where no party has an incentive to move away from. Political equilibria are crucial, because if no equilibrium exists, theoretically established implications on government performance are not possible. One of the best known equilibria in public choice theory is the median voter model, which concludes that political parties converge to the electoral center (median position) when they are maximizing their vote share (Hotelling, 1929; Downs, 1957; Riker and Ordeshook, 1973). As long as there exist only two political parties, a one-dimensional policy space and deterministic vote choices the median position equals a pure-strategy Nash equilibria (PNE), which always represents a global optima. However, when there is more than just one policy dimension usually a two party PNE does not exist (McKelvey, 1976). Enelow and Hinich (1984) introduced next to the

³n_{par} = number of estimated parameters

deterministic utility component a stochastic utility component which enables the existence of a PNE. When the stochastic utility component is sufficiently large and a quadratic utility function is assumed, the political parties converge at the mean voter position. A PNE with diverging policy positions results, when the stochastic part of the utility function is sufficiently small compared to the deterministic utility component (Enelow and Hinich, 1984; Merrill III and Grofman, 1999). The result was further generalized by Enelow and Hinich (1989) to apply it for the multi party case as well. The restricting assumption of their model is the concavity of the vote share function. When a uniform distribution of the stochastic term is assumed, concavity is always given. Baron (1994); Grossman and Helpman (1996) and Bardhan and Mookherjee (2000) also utilize a uniformly distributed error terms in their models of voting behavior. With this assumption, they are perfectly able to model voting behavior theoretically, identify equilibrium conditions and derive indicators of government performance. Though the assumption of uniformly distributed error terms is only theoretically valuable, as it does not describe real world behavior. That is why nowadays studies on voting behavior mainly estimate probabilistic voter models using a logit model, whose error terms are Type I extreme value distributed instead of uniform. The probability share functions of extreme value distributed error terms are usually not globally concave, hence instead of PNEs only Local pure-strategy Nash equilibria (LNE) can be found (Schofield, 2007). LNEs in comparison to PNEs are only local optima. The difference between a local and a global optima is presented highly simplified in Figure 4.2. Schofield (2007) analyzed the case of extreme value distributed error terms and defined the following equilibrium concepts.

- (i) A strategy vector $z^* = (z_1^*, \dots, z_{j-1}^*, z_j^*, z_{j+1}^*, \dots, z_p^*) \in X^p$ is a local strict Nash equilibrium (LSNE) for the profile function $V : X^p \rightarrow \mathfrak{R}^p$ iff, for each agent $j \in P$, there exists a neighborhood X_j of z_j^* in X such that

$$V_j(z_1^*, \dots, z_{j-1}^*, z_j^*, z_{j+1}^*, \dots, z_p^*) > V_j(z_1^*, \dots, z_j, \dots, z_p^*) \text{ for all } z_j \in X_j - z_j^*$$

- (ii) A strategy vector $z^* = (z_1^*, \dots, z_{j-1}^*, z_j^*, z_{j+1}^*, \dots, z_p^*)$ is a local weak Nash equilibrium (LNE) if, for each agent j , there exists a neighborhood X_j of z_j^* in X such that

$$V_j(z_1^*, \dots, z_{j-1}^*, z_j^*, z_{j+1}^*, \dots, z_p^*) \geq V_j(z_1^*, \dots, z_j, \dots, z_p^*) \text{ for all } z_j \in X_j$$

- (iii) and (iv) A strategy vector $z^* = (z_1^*, \dots, z_{j-1}^*, z_j^*, z_{j+1}^*, \dots, z_p^*)$ is a strict, respectively, weak pure, strategy Nash equilibrium (PSNE, respectively, PNE) if X_j can be replaced by X in (i), (ii), respectively.

- (v) The strategy z_j^* is termed a local strict best response, a local weak best response, a global strict best response, or a global weak best response to $z_{-j}^* = (z_1^*, \dots, z_{j-1}^*, z_{j+1}^*, \dots, z_p^*)$, respectively, depending on which of the conditions (i)-(iv), hold for z_j^* .

In his paper Schofield (2007) further inserts the valence term and shows that under certain conditions the joint electoral mean of the stochastic vote model with valence

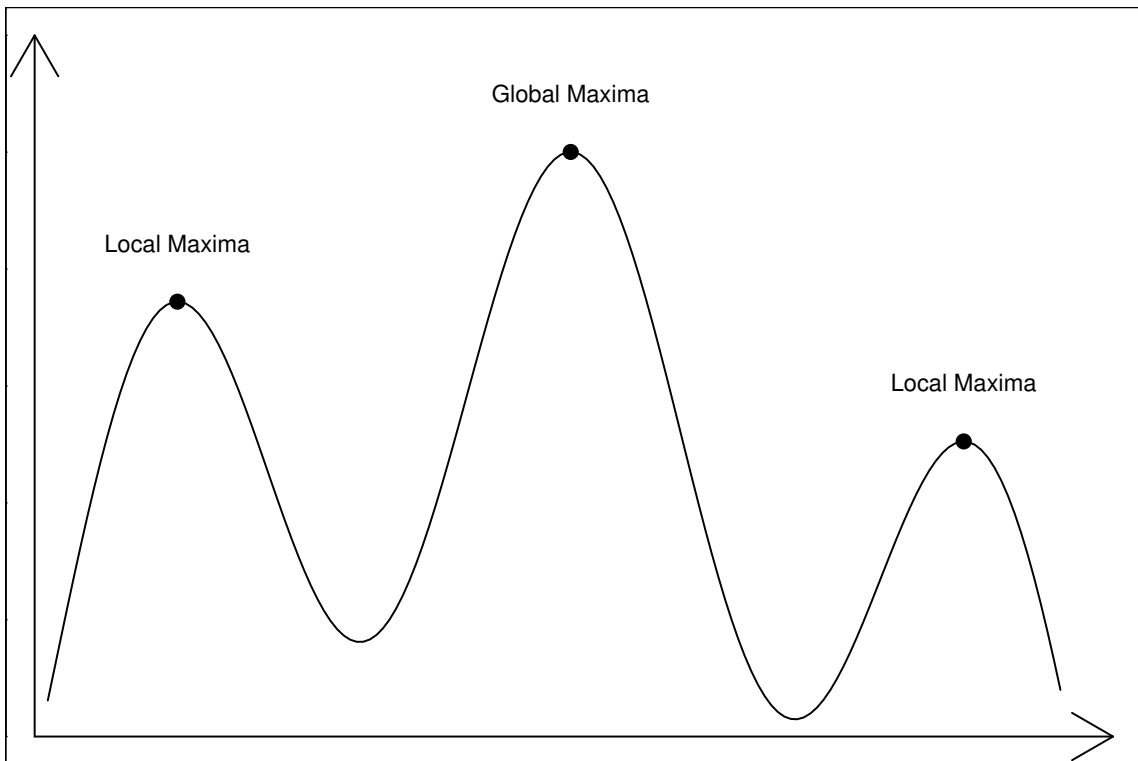


Figure 4.2: Global and local maxima

Source: own illustration

is a LNE. Valence is similar to the term of non policy voting used in this book, it is independent of policy issues and parties' positions, but rather measures the general approval with the president. In electoral competition high valence parties tend to position themselves in the center of the policy space, while low valence parties move away from the mean position. Schofield (2007) states the necessary conditions for the existence of a LSNE/LNE at the joint origin $z_0^* = (0, \dots, 0)$. The first order condition is that $dV_j/dz_j = 0$ and the second order condition demands that the Hessians (d^2V_j/dz_j^2) are negative definite at the joint origin. Please note that the first order as well as the second order condition are only necessary and not sufficient conditions for the LNE.

However, Schofield (2007) applies a very simplified utility function in his paper, $u_{ij}^*(x_i, z_j) = \lambda_j - \beta \|x_i - z_j\|^2$, where vote choice solely depends on valence and policy voting. Further, valence is displayed only by the alternative specific constant λ_j and neither party identity nor retrospective voting is included in the model. To have a more realistic model of party competition, Kurella and Pappi (2014) tie party positions to a meaningful ideological component and Erikson and Romero (1990); Adams (2001); Adams et al. (2005) include party identification in the utility function of the voter. In the paper of Henning et al. (forthcoming) the utility function additionally includes policy issues, party identification and retrospective voting, besides the model also accounts for heterogeneity of the voter, which has not been considered by other authors yet. Further, in comparison to Schofield, our goal is not to verify that a certain policy position (electoral mean) corresponds to a LNE, but we presume that the empirical policy positions are in fact LNEs. There are

different techniques to do so, one would be to utilize a Bayesian estimation subject to the constraint that the policy platforms correspond to a LNE. Another more simple approach, is to determine some of the parameters residually. In the empirical part of this book, the residual parameters are interest group preferences and the intrinsic preferences of the candidate. Consequently empirical party positions will always represent a local Nash equilibrium.

Chapter 5

Theory and Derivation of Government Performance Indices

In the previous chapters we explained the role of the voter and elections in policy processes as well as the theoretical model of voting behavior by Baron-Grossman-Helpman. Further, the idea of probabilistic voting models and methods for statistical applications were introduced. In this chapter of the book we will contribute to the literature by closing existing research gaps, i.e. combining the theoretical work on voter behavior and government performance with the existing empirical work on voter behavior. In particular, we apply an extended Baron-Grossman-Helpman model (BGH) as a theoretical framework to derive theoretically founded indices that measure government accountability and capture. The latter corresponds to the bias of electoral competition in favor of special interests and the former describes the lack of sufficient electoral incentives for elected politicians to implement policies that benefit their constituencies, but rather serve their self interest. Therefore, the original BGH-model is combined with empirical voter studies, via applying the more general Local Nash equilibrium (LNE) concept to the electoral equilibrium as suggested by Schofield (2007). Please note that in comparison to Schofield we do not take the electoral mean and verify that it is a LNE, but estimate the probabilistic voter model subject to the constraint that the empirical policy positions correspond to a LNE. Based on our theoretical framework, we are able to derive indices that characterize voting behavior, which is measured as the relative importance of different policy and non policy voting motives. The theoretical framework was developed by Henning et al. (forthcoming), who measured voting behavior and government performance for the case of Malawi. In the following we will first introduce the model outline, before we derive the indices¹.

5.1 Modeling Voting Behavior

5.1.1 The Voters

Following the literature on the theory of voting also described in the former sections of this book, we assume that people vote for different parties based on the utility a voter ascribes to them. Let $j \in NV$ denote the index of an individual voter, NV denote the set of voters and n is the total number of voters. Further, let NP denote the set of political parties that run for election, where $k \in NP$ denotes the index of an individual party and K is the total number of parties. Then each voter can be described by a vector $U_j = (U_{jk}, \dots, U_{jK})$, where it holds:

$$U_{jk} = V_{jk} + \epsilon_{jk} \tag{5.1}$$

¹The chapter can be found in a very similar version in Henning et al. (forthcoming).

Here, V_{jk} denotes the observable utility that voter j associates with party k , and the term ϵ_{jk} presents the stochastic error. Following the literature, we assume that each ϵ_{jk} is drawn from the same probability distribution. The cumulative distribution of the errors is denoted as Ψ . Because of the stochastic assumption, voter behavior is modeled by a probability vector, where the probability that a voter j votes for party k is:

$$P_{jk} = Pr[V_{jk} \geq V_{jl}, \text{ for all } l \neq k] = F_k^j(U_j) \quad (5.2)$$

The expected vote share of a party k results as:

$$S_k = \frac{1}{n} \sum_j P_{jk} \quad (5.3)$$

$Pr[\]$ stands for the probability operator associated with Ψ ; this probability is a function of the vector of observable utilities that voters associate with the different parties. The specific function F depends on the assumed distribution Ψ . In this regard, different distributions are assumed in the literature, implying different voter models. For example, many theoretical studies assume a uniform distribution in a two-party set-up, as these assumptions facilitate formal analyses (for example, see Grossman and Helpman (1996), Bardhan and Mookherjee (2006) or Persson and Tabellini (2000)). However, the work horse model that is applied in empirical voter studies corresponds to the logit model, assuming an extreme value distribution for Ψ . In particular, assuming that each ϵ_{jk} is iid extreme value-distributed allows the derivation of an analytical form for $F_k^j(U_j)$ (McFadden, 1974):

$$P_{vk} = F_k^j(U_j) = \frac{e^{V_{jk}}}{\sum_{l \in NP} e^{V_{jl}}} \quad (5.4)$$

Following the voter theory, the utility that a voter v associates with a party k incorporates different components (i.e., a policy (V^P), a retrospective (V^R), and a non policy (V^{NP}) component):

$$V_{jk} = \beta_j V_{jk}^P + \delta_j V_{jk}^R + \alpha_j V_{jk}^{NP}, \quad (5.5)$$

where β , δ and α are the relative weights of the different utility components. In a perfect political world where all voters are well informed about policies, electoral competition would be based on the policy platforms, say γ_A and γ_B , suggested by candidates A and B . Hence, in a perfect world, vote choice is only based on the policy oriented component $V_{jk}^P(\gamma_k)$. The motive of policy oriented voting goes back to the classic voting theory created by Davis et al. (1970) and Enelow and Hinich (1984). The spatial voting model formulates voter's utility as a loss function of the weighted distance between a voter's own ideal point x_{dj} on a specific policy dimension d and the position taken by a party, γ_{dk} .

$$V_{jk}^P = \sum_d \beta_d (\gamma_{dk} - x_{dj})^2 \quad (5.6)$$

However, because in the real world, the transformation of policies into welfare is rather complex, the calculation of expected utility is also rather complex from the viewpoint of individual voters. In addition not all voters are aware of policies and especially in developing countries the share of uninformed voters is high. Hence, voters apply simple heuristics to estimate their expected utility. Basically, voters apply different types of policy and non policy indicators to estimate the future utility they expect assuming a candidate is elected. Non policy oriented indicators correspond to the concept of valence (Schofield, 2007), which holds that based on specific characteristics z_G of the incumbent, such as appearance, charisma, occupation and ethnicity, voters perceive a specific competence or popularity of candidates and parties. Moreover, following Grossman and Helpman (1996), we also assume that voters are at least partially swayed by the relative campaign spending of different parties. This effect may reflect the influence of election advertisements or other efforts made to mobilize support (e.g., election rallies, door-to-door visits by campaign workers, etc.):

$$V_{jk}^{NP}(z, c) = \sum_l \alpha_{jkl} z_l + \sum_l \alpha_{jkl}^L C_l, \quad (5.7)$$

where C_l denotes the campaign spending of party l and c is the vector of campaign spending of all parties. Parties collect campaign funds from different sources. According to Magee et al. (1989) or Grossman and Helpman (1996), organized interest groups have strong incentives to provide campaign contributions to political parties. However, Magee et al. (1989) assume that campaign spending by interest groups is mainly governed by electoral motives, while Grossman and Helpman highlight the influence motive of interest groups (i.e., interest groups provide resources to parties expecting that in exchange, parties will adapt their platforms to the ideal points of the interest groups). The efficiency of campaign spending and lobbying respectively is denoted by α_{jkl}^L , the indices show that the utility gained from voting for party k does not only depend on the campaign contributions received by party k , but also on campaign spending of all other parties. The same applies for the influence of personal characteristics z_k on voters' utility, which is denoted by α_{jkl} . In addition to campaign spending by special interest groups, especially in developing countries international donor organizations also provide financial resources to politicians (e.g., via development aid). Development aid is often granted conditional on the implementation of specific policies (Dollar and Easterly, 1999). Moreover, financial aid gives national politicians some leeway to generate benefits for their electorate. Thus, from the viewpoint of national politicians, development aid is similar to campaign spending. Therefore, we formally include development aid in c , although we are aware that campaign spending by national interest groups and development aid are fundamentally different in many other respects.

A third set of indicators corresponds to the concept of retrospective voting (Fiorina, 1981; Katz and Katz, 2009) which implies that voters use observable welfare indicators Z_j^r , such as income growth or other measures of well-being realized in the incumbent's last election period, to update their evaluation of the incumbent's competence and popularity. From the viewpoint of the incumbent party, the welfare indicator is determined by implemented policies, $Z_j^r = z_{jr}(\gamma)$. Hence, the retrospective component of voters' perceived utility is also a function of governmental

policy, $V_{jk}^R(z_{jr}(\gamma_G))$, where γ_G indicates the governmental policy. Assuming a linear approximation for V^R implies:

$$V_{jk}^R(Z_j^r(\gamma_G)) = \delta_{jkr} Z_j^r(\gamma_G) \quad (5.8)$$

Please note that following the empirical voting literature, we assume that perceived economic performance has an impact not only on voters' evaluations of governmental parties but also on their evaluation of all other non-governmental parties.

5.1.2 Parties and the Government

Political parties choose their policy platform, γ_k to maximize their vote share, S_k and consequently their representation in the legislature. Further, they are aware of the fact that their chosen policy platforms will affect their popularity among voters in different ways. First, voters evaluate party platforms based on their policy oriented utility component. They compare party positions on different policy dimensions to their own ideal points; the closer a party's platform to a voter's ideal point, the more utility is provided. Second, parties choose their platforms while considering organized interest groups, which vary their campaign contributions to a party according to the position a party takes. The parties know that any contributions they collect from interest groups can be used to finance campaign activities, which in turn sway voters in their electoral choice. Following Grossman and Helpman (1996) and Bardhan and Mookherjee (2006), we assume that in political equilibrium, interest groups donate locally truthful campaign contribution schedules to parties. Hence, the total contributions collected by a party k correspond to a weighted sum of interest group welfare:

$$C_k = \sum_i \varrho_{ik} W_i(\gamma_k) \quad (5.9)$$

where $W_i(\gamma_k)$ denotes the average per capita welfare of an individual member of interest group i and ϱ_{ik} denotes the weight of interest group i to party k . Please note that the sum of the interest group weights is generally lower than 1 (see Grossman and Helpman, 1996)². Moreover, we formally treat international donor organizations as interest groups (i.e., the amount of financial aid provided by these organizations corresponds to their intrinsic policy preferences, $W_i(\gamma)$, with i =donor).

After rearrangement the share equation results in:

$$S_k = \frac{1}{n} \sum_j P_{jk} = \frac{1}{n} \sum_j F_k^j(\gamma_k) \quad (5.10)$$

Finally, in previous models it was assumed that parties are purely office seeking, in our model, we understand politicians not as pure office-seeking agents who only

²Please note that compared to Grossman and Helpman 1996, our set-up is more general (i.e., we allow for more than two parties and allow the assumption of a non-uniform distribution for Ψ). Therefore, the equilibrium results of Grossman and Helpman (GH) do not directly apply to our more general set-up. However, at this stage, we do not prove that the essential results of GH also hold for our more general set-up but instead assume this point exogenously. We leave a rigorous proof of this assumption for future work.

maximize their political support S_k , but also as parties with intrinsic policy preferences. Let $u_k(\gamma_k)$ denote the intrinsic policy preferences of party k . Then the total utility of a party results as:

$$U_k = S_k(\gamma_k) + \vartheta_k u_k(\gamma_k). \quad (5.11)$$

ϑ_k is a party-specific weight that reflects the relative importance of rents received from political office versus the intrinsic utility derived from a policy. Accordingly, the policy platform chosen by a governmental party $k=G$ to maximize its total utility derived from political support and its intrinsic political utility results from the following first-order condition:

$$\begin{aligned} \frac{\partial U_G}{\partial \gamma_G} &= \frac{\partial S_G}{\partial \gamma_G} + \frac{\partial u_G}{\partial \gamma_G} \\ &= \sum_{j \in NV} \sum_k \frac{\partial F_G^j}{\partial V_{jk}} \left(\beta_j \frac{\partial V_{jk}^P}{\partial \gamma_G} + \delta_j \frac{\partial V_{jk}^R}{\partial \gamma_G} + \alpha_j \alpha_{jGk}^L \sum_J \varrho_{ki} \frac{\partial W_i}{\partial \gamma_G} \right) + \vartheta_k \frac{\partial u_G}{\partial \gamma_G} = 0 \end{aligned} \quad (5.12)$$

Rearrangement implies:

$$\frac{\partial U_G}{\partial \gamma_G} = \beta_G \frac{\partial V_G^P}{\partial \gamma_G} + \delta_G \frac{\partial Z_G^R}{\partial \gamma_G} + \alpha_G \frac{\partial W_G}{\partial \gamma_G} + \vartheta_G \frac{\partial u_G}{\partial \gamma_G} = 0 \quad (5.13)$$

where it holds:

$$\beta_G = \sum_{j \in NV} F_{GG}^j \beta_j; \quad (5.14)$$

$$\delta_G = \sum_{j \in NV} \delta_j \left| \sum_k F_{Gk}^j \delta_{jkr} \right|; \quad (5.15)$$

$$\alpha_G = \sum_i \varrho_{iG} \sum_{j \in NV} \alpha_j \left| \sum_k F_{Gk}^j \alpha_{jGk}^L \right| \quad (5.16)$$

$$\frac{\partial V_G^{PV}}{\partial \gamma_G} = \sum_j \frac{F_{GG}^j \beta_j}{\beta_G} \frac{\partial V_{jG}^{PV}}{\partial \gamma_G}; \quad (5.17)$$

$$\frac{\partial Z_G^R}{\partial \gamma_G} = \sum_j \frac{\delta_j \sum_k F_{Gk}^j \delta_{jkr}}{\delta_G} \frac{\partial Z_j^r}{\partial \gamma_G}; \quad (5.18)$$

$$\frac{\partial W_G}{\partial \gamma_G} = \sum_i \frac{\varrho_{iG}}{\sum_h \varrho_{hG}} \frac{\partial W_i}{\partial \gamma_G} \quad (5.19)$$

$$F_{Gk}^j = \frac{\partial F_G^j}{\partial V_{jk}} \quad (5.20)$$

It follows from Equation 5.13 that the optimal policy platform chosen by a governmental party G , given the platforms of all other parties, satisfies the necessary condition for maximizing a weighted sum of the average welfare of voters, the aggregated welfare of all interest group members and the intrinsic policy preferences of a party. The corresponding welfare weights are given by β_G , δ_G , α_G and ϑ_G . While in the model of Bardhan and Mookherjee the additive welfare function is globally maximized, for the time being we are only able to locally approximate the maximum of the welfare function. Nevertheless we can derive government performance indices and verify empirically how they are linked to voting behavior.

5.2 Government Performance Indices

5.2.1 Government Accountability

As described in the introduction, according to the relevant literature (e.g. Keefer and Khemani, 2005; Bardhan and Mookherjee, 2002), less electoral competition implies incentives for the government to implement policies that do not correspond to the needs and desires of the majority of society, hence government performance is c.p. lower. Given our derivations above, the more c.p. voters rely on non policy indicators when evaluating parties, the less a political support-maximizing government considers voter's preferred policy position when it formulates governmental policies. Formally, the larger the α -parameter in relation to the β - and δ -parameters, the more voters base their vote choice on non policy factors; thus, more electoral competition implies that the government orients its policy towards organized interest groups and ignores voters. Accordingly, we define an index of governmental accountability (GA) vis-a-vis the voter as the following relation:

$$GA_1 = \frac{(\beta_G + \delta_G)}{\alpha_G + \beta_G + \delta_G} \quad (5.21)$$

While GA_1 measures the relative accountability of the government vis-à-vis the voter, $(1 - GA_1)$ measures relative accountability towards organized interest groups. In a scenario with only informed voters, who base their vote solely on policy platforms the index equals 1, indicating 100% government accountability. In reality, not all voters are informed about policies, that is why the index will be below 1. Though a low value for GA_1 does not necessarily imply that the government is not accountable to society. A high α -value only implies that the electoral outcome is significantly driven by campaign spending. However, as long as campaign funds are generated primarily by national interest groups, whose members represent the general interests of society, elected politicians have strong incentives to represent organized interest groups as well as the average voter. Only if campaign spending is derived primarily from special interest organizations (e.g., farmers organizations, oil lobby or even international donors) a high α -value implies low government accountability. This effect occurs because those interest groups do not represent all members of society, but only a small fraction of it. In many cases, donor organizations for example act in the interest of a specific society, but from a country's perspective, donor-driven policies are at best derived from imposed welfare functions.

Next to voters and interest groups, government is also acting accountable towards itself. As demonstrated by Equation 5.13, the larger ϑ_G is in relation to the sum of $(\alpha_G + \beta_G + \delta_G)$, the larger is c.p. the incentive of the government to pursue its self-interest. Hence, we derive GA_2 as a second index of government accountability:

$$GA_{2_1} = \frac{\vartheta_G}{\alpha_G + \beta_G + \delta_G} \quad (5.22)$$

Because information on ϑ is limited and often not available for the researcher, we developed an alternative way to calculate GA_2 .

$$GA_{2_2} = \frac{\frac{\vartheta_G}{\alpha_G + \beta_G + \delta_G}}{\frac{\vartheta_G}{\hat{\alpha}_G + \hat{\beta}_G + \hat{\delta}_G}} \quad (5.23)$$

While the numerator is identical with GA_{2_1} , in the denominator $\hat{\alpha}_G$, $\hat{\beta}_G$ and $\hat{\delta}_G$ were calculated under the assumption that all voters are informed and do not engage in non policy voting. The ratio corresponds to the percentage of accountability that is achieved in the actual situation in comparison to the optimal accountability that would be achieved if all voters based their vote choice on policy indicators and observed economic performance only. An index greater than 1 implies that intrinsic policy preferences are less pronounced in the situation without any non policy voting.

A third intuitively conceivable measure of government accountability corresponds to the possibility of the government to diverge from it's current policy position. The index can be calculated separately for all policy dimensions, d , and is defined as:

$$GA_3^d = \frac{x_2^d - x_1^d}{x_d^{max} - x_d^{min}} \quad (5.24)$$

s.t. $S(x_1) \geq 0.5$ and $S(x_2) \geq 0.5$

While x_1 represents the point farthest to the left side of the scale which still gains the majority of votes, x_2 represents the same on the right side. Further, $(x_d^{max} - x_d^{min})$ is the range of the corresponding policy dimension. GA_3 indicates the leeway of the government to select a policy that pursues its own interests and the interests of lobby groups against society's will without losing the election. Thus, the larger GA_3 , the lower is c.p. government accountability. The index ranges from zero, which indicates that every movement away from the current position will result in electoral turnover, to one, which means that the governmental party can change its policy position arbitrarily without any consequences for the election outcome.

5.2.2 Government Capture

The government chooses it's optimal policy platform by maximizing a weighted welfare function. Hence, the individual weights of each voter can be locally approximated $((\beta_G + \delta_G))$, just like the weights of organized interest groups (α_G) and intrinsic policy preferences (ϑ_G) . We define w_v as the relative weight of an individual

voter determining governmental policy results.

$$w_v = \frac{F_{GG}^j \beta_j + \delta_j \sum_k F_{Gk}^j \delta_{jkr}}{(\beta_G + \delta_G)} \quad (5.25)$$

In the two party case w_j can be rearranged to $P_{jG}(1 - P_{jG})$. From this it follows that the weight is maximized, when electoral competition is very close and all individuals are indifferent between the two parties. As explained in detail below the relative political weight of individual voters depends on the relative importance of policy and non policy voting motives. Please note that a perfect democratic vote corresponds to an equal relative weight for all voters (i.e., the weight of each voter equals $\frac{1}{n}$ if n is the total number of voters). If voters differ in the relative importance of voting motives, they also have different voting weights; in particular, the relative importance of the valence component in comparison to the policy oriented and retrospective voting component determines the relative weights of voters.

Further, we can also derive the relative political weight of social groups. We define social groups as partitions of the total society (e.g., rich versus poor or rural versus urban voters), where T denotes the index of a social group. Thus, it holds:

$$w_T = \sum_{j \in T} w_j \quad (5.26)$$

Based on the political weights of social groups, we define governmental capture as the average weight of a member of a social group T compared to the average political weight of a member of another social group T' :

$$GC = \frac{w_T}{w_{T'}} \frac{n_{T'}}{n_T} \quad (5.27)$$

When $GC > 1$, the average weight of group T is greater than that of group T' , which indicates that group T captures group T' . When $GC < 1$, it is just the other way around and when $GC = 1$, both groups have the same average weight and no capture persists. The relative weight of an individual voter and hence of a social group is determined by relative voting behavior, i.e., the relative importance of non policy voting motives versus policy voting motives. Further, government capture results from the lobbying activities of vested interest groups and is particularly pronounced when not all members of society are equally organized into interest groups (Grossman and Helpman, 1994) or when the relative political weight of different interest groups deviates from the corresponding population shares of the society members organized in these interest groups (Bardhan and Mookherjee, 2002). However, please note that given our general theoretical framework, it follows that biased electoral competition might compensate for biased incentives of politicians induced by asymmetric lobbying activities and vice-versa. Imagine, for example a country with the majority of people working in the agricultural sector, who are demanding agricultural subsidies. The government of this country does not act accountable towards the voter, but only towards interest groups. However, the most influential interest group is the National Farmers Union, which also favors agricultural subsidies and is lobbying for it's members' interests. After all, the government will implement

agricultural subsidies because it is captured by the National Farmers Union and the result will represent the interests of the majority of society, although government accountability towards the voter is low. Thus, at least theoretically, although both channels of interest mediation, election and lobbying, are biased still an unbiased policy outcome might result. To analyze whether biased policy positions exist and whether they result from missing accountability or capture, we calculate the policy positions γ_{dG}^* that corresponds to the optimal government policy position, if the weights of interest groups and intrinsic policy preferences are zero ($GA_1=1$).

$$\gamma_{dG}^* = \sum_j^n w_j x_{dj} \quad (5.28)$$

The government party G takes position γ_{dG}^* on issue d , if they only act accountable towards the voter. However, the position might still be biased by unequal voting weights and capture. The optimal, unbiased government policy position, γ_{dG}^{**} , results as the simple mean of the voters' policy positions, assuming that weights are equal for every voter ($\frac{1}{n}$).

$$\gamma_{dG}^{**} = \frac{1}{n} \sum_j^n x_{dj} \quad (5.29)$$

Comparing the empirical policy position γ_{dG} with the optimal policy position γ_{dG}^{**} gives information whether the policy positions are biased or not.

To measure the relative importance of different voting motives, we proceed as follows. First, for voting motives based on indicator variables controlled by parties (i.e., policy oriented voting based on party platforms and retrospective voting based on observed economic development that is indirectly controlled by governmental party choices), we use relative marginal effects of the different indicator variables. In particular, we define the marginal effect of an indicator variable κ on the governmental party, as follows:

$$ME_{G\kappa} = \frac{\partial S_G}{\partial \kappa} \quad (5.30)$$

Then we can define the following directional utility differentials:

$$ME^P = \sum_{\kappa \in P} |ME_{G\kappa}| \quad (5.31)$$

$$ME^R = \sum_{\kappa \in R} |ME_{G\kappa}| \quad (5.32)$$

$$ME^{NP} = \sum_{\kappa \in NP} |ME_{G\kappa}| \quad (5.33)$$

When we calculate the marginal effect of non policy voting we only consider those variables that are manipulable by campaign expenditures. Although especially personal characteristics of the candidate and hence also the characteristics of the voter are part of non policy voting they are not considered at this point. These characteristics are not changeable by the policy maker within a short time horizon, which is why they have no implication on the partial derivative of the vote share function.

Finally, to assess the relative importance of different voting motives empirically, we relate calculated relative marginal effects (RI) to the sum of all marginal effects:

$$RI^{NP} = \frac{|ME^{NP}|}{|ME^{NP}| + |ME^P| + |ME^R|} \quad (5.34)$$

$$RI^P = \frac{|ME^P|}{|ME^{NP}| + |ME^P| + |ME^R|} \quad (5.35)$$

$$RI^R = \frac{|ME^R|}{|ME^{NP}| + |ME^P| + |ME^R|} \quad (5.36)$$

Naturally the sum of all relative marginal effects adds up to one. When comparing non policy and policy voting, the RI for retrospective voting can be added to the RI of policy voting, as they both directly depend on policy positions and can be seen as the counterpart of non policy voting.

Summarizing the above, we estimate a probabilistic voter model and describe voting behavior as the relative importance of policy, non policy and retrospective voting. Further, we measure government performance with the government accountability indices, GA_1 , GA_2 and GA_3 , and individual specific and group specific voter weights, w_j . As the government performance indicators are derived theoretically from the maximization of the incumbent's support function, they are independent of actual voting behavior. However, we assume that voting behavior and government performance are linked. In particular we hypothesize that government accountability is lower in countries where people vote mostly non policy oriented. Furthermore, we expect to find a relationship between heterogeneity/capture and biased policy outcomes. Of course the relationship can be verified theoretically from the Nash Equilibrium, but because of the extreme value distributed error terms and the general case of multiparty elections the procedure becomes very complicated. That is why, for the time being we will choose a more modest approach and analyze the relationship empirically. The theoretical verification is left for future research.

Part II

Empirical Application

Chapter 6

Introduction of Case Study Countries

There exists a large body of empirical voter studies that analyze the behavior of African voters (For example, see the literature overview of Hoffman and Long (2013), Ferree and Horowitz (2010) or Bratton et al. (2011)). However, these empirical voter studies mainly focus on the relative importance of different non policy factors, e.g. ethnicity and regional origin, when determining African vote choice and do not relate different voting motives with induced government performance (Ferree and Horowitz, 2010; Bratton et al., 2011; Hoffman and Long, 2013). At the methodological level, the majority of the empirical African voter studies apply socio-structural theories (e.g., the theory of Lazarsfeld et al. (1968) or Lipset and Rokkan (1967)) or social psychological theories of voter behavior (Campbell et al., 1960). Hoffman and Long (2013) published one of the few studies of voter behavior in Africa to mention the importance of policy issues and the spatial theory of voting (Downs (1957) as well as Enelow and Hinich (1984)). However, although these authors mention the relevance of policy distances as variables of party choices, they fail to include these factors in their empirical application (see Hoffman and Long, 2013). The neglect of policy-oriented voting in African election studies is inapprehensible since spatial theory of voting (Enelow and Hinich, 1984) has become the workhorse model of election studies in industrialized countries (Adams et al., 2005).

Moreover, the few existing African voter studies that explicitly consider different voter motives (e.g., economic versus ethnic voting or approval voting) only provide a test of statistical significance without providing a measure of the relative importance of different voting motives. One notable exception is the study by Bratton et al. (2011), who computed the marginal effects of different indicators of ethnic and economic voting. In particular, Bratton et al. (2011) provide empirical evidence from a cross-country panel analysis that includes 16 African countries. In addition to ethnic identification, he also includes voters' perception of the economic development achieved under the current government as a particularly important determinant of voters' electoral choices.

In this context, the present application contributes to the literature by closing existing research gaps. We measure voting behavior as the relative importance of different voting motives: policy voting, non policy voting and retrospective voting. By applying the theory introduced in the first part of this book, we explicitly consider these voting motives and further analyze their impact on government performance. To analyze voting behavior econometrically we estimate a multinomial logit model as well as a latent class model, which is a comparatively new approach in political voter studies. In this context it had only been applied a few times before, e.g. by Hoffman and Long (2013), who analyzed voting behavior in Ghana applying a latent class model. The latent class model explicitly includes heterogeneity of voters in the analysis, which is necessary when measuring capture. Additionally we do not only analyze a single country, but apply our theory empirically to three countries

in Sub-Saharan Africa, namely Ghana, Senegal and Uganda. This enables us to compare the results of the three countries and draw further conclusions on general applicability of our approach. In the following we will briefly introduce the countries of choice, Ghana, Senegal and Uganda.

The three case study countries are all located in Sub-Saharan Africa. Ghana and Senegal are both situated in West Africa at the Atlantic coast, while Uganda is a landlocked country in East Africa. Further, they differ in many other characteristics, especially in their degree of democracy and economic development. While Senegal witnessed its first real multiparty presidential elections in 1978, in Ghana they took place almost 15 years later in 1992 and Ugandans only vote in multiparty presidential elections since 2005. In Senegal and Ghana several peaceful turnover of power took place until now, while in Uganda Yowery Museveni has been in power without interruption since 1986. The history of multiparty elections and turnovers is also reflected in the Polity IV democracy index and Freedom House index (Marshall et al., 2012; Freedom House, 2014). Polity IV measures the level of democracy, the Polity Score ranges from -10 to +10. Countries with a score between -10 and -6 are classified as autocracies, when the score is between -5 and 5 they are considered to be anocracies and finally democracies have a score between 6 and 10. Freedom House on the other hand measures the freedom in the world, taking the mean of a Civil Liberties and a Political Rights index to calculate the so-called Freedom Rating, which ranges from 1 (best) to 7 (worst). In Figure 6.1 the indices are depicted for the period of 2005-2012 for all three case study countries. Ghana is the most stable among them, has the highest democracy index and is considered to be the most free country. Senegal is also classified as a democracy, but its score declined from 8 to 7 in 2007 because President Wade further consolidated his power, which finally led to an electoral boycott of the 2007 legislative elections by the opposition parties. Freedom House considers Senegal a free country, the political rights rating improved from 3 to 2 in 2013, after the successful turnover of power in 2012. Last is Uganda, which has a Polity IV Score of one and is hence classified as anocracy. Also the Freedom House rating is far behind the ratings of Ghana and Senegal, with a score of 4.5 Uganda is only considered as a partly free country. Next to the political differences also the economic status of the three countries diverges, Ghana and Senegal are both lower middle income countries, while Uganda is still a low income country. Though Uganda's economy is growing with a GDP growth rate of 4.6%, which is above the average growth rate of Sub-Saharan Africa (3.5%) and also above the growth rate of Senegal (3.7%). Additionally Uganda's growth rate is expected to increase further and even overtake Ghana in the upcoming five years. Currently Ghana's economy is growing by a rate of 7.9%, but the expected growth rates for the following years are decreasing. Hence, we expect Uganda to further improve its income status in the near future.

To analyze voting behavior empirically, micro data is necessary that measures sociodemographic variables, retrospective evaluation of government performance and policy positions. Hence, we conducted our own voter survey in Ghana and Uganda, whereas in Senegal we used Afrobarometer data, but were able to add several questions to the existing questionnaire. In all three countries the agricultural sector is still very important for the local economy, in Ghana and Uganda the agriculture

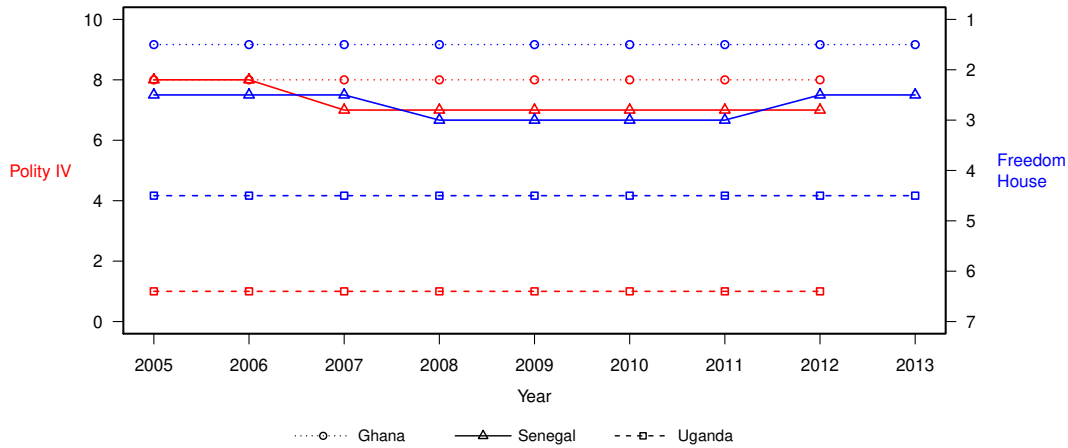


Figure 6.1: Freedom House and Polity IV indices
 Source: Marshall et al. (2012); Freedom House (2014)

share of GDP is 21.5% and 23.1% respectively. In the case of Senegal it is only 14.9%, but still 77.5% of the people are employed in the agricultural sector. In Uganda even 82% of the labor force work in agriculture and in Ghana 56%. Because of the importance of agriculture, we explicitly asked for policy positions on agricultural policy issues in the voter survey. We assume that these are the relevant issues in the elections for the voter as well as for the political parties. The biggest advantage of our own surveys in Ghana and Uganda is that we did not only ask for the voter’s own policy position, but also for his evaluation of the party’s policy positions. Hence, we were able to calculate the perceived policy distance between political parties and voters. In Senegal on the contrary, we only have the position of the voter and had to calculate the policy position as the mean policy position of those voters that voted for that particular party. Both approaches are applied in the literature on voting behavior, though the first one includes more information and is hence better suitable. An advantage of the Afrobarometer survey is its sample size, 1200 people were interviewed in Senegal. In our own surveys we interviewed 601 individuals in Ghana and 624 in Uganda. After data cleaning and deletion of missing values, we ended up with a sample size of 325 in Uganda, 333 in Ghana and 667 in Senegal. Summarizing the last two paragraph, we are applying our theoretical analysis to three Sub-Saharan African countries that still rely very much on agricultural policies. Ghana is the most developed country with more than 20 years of experience with multi party elections and a comparatively well functioning economy; Senegal has the longest history of multi party elections, but is lacking behind Ghana in economic and democratic development; Finally, Uganda is still in the process of becoming a democracy, has not witnessed an electoral turnover yet and only voted in two multiparty presidential elections since 2005. Also economically Uganda is not as developed as Ghana and Senegal, but is expected to increase economic growth significantly in the following years and catch up with other countries in Sub-Saharan Africa.

From the theoretical derivations in the former part, we expect that non policy

voting reduces government accountability. Further, we hypothesized that heterogeneity in voting behavior leads to capture and biased policy positions. In the following chapters we will estimate a probabilistic voter model for Ghana, Senegal and Uganda, to analyze voting behavior and its implications on government performance empirically. Each chapter will contain an introduction to the country, a short historical summary and a literature overview on voting behavior. Afterwards the data will be explained, before the actual voter model is estimated. We put special emphasis on the issue of heterogeneity, which will be treated in a separate section. Finally, we will combine voting behavior and government performance, with our theoretically derived government performance indices. After each chapter a summary is given. The second part of this book closes with a conclusion that compares the results from the three empirical case studies.

Chapter 7

Ghana

Ghana is a country in Western Africa, bordering the Gulf of Guinea, located between Cote d'Ivoire and Togo. It is divided into ten administrative regions (Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East and Upper West) (see Figure 7.1). The population size of Ghana is 25.76 million, which is among the ten biggest states of Sub-Saharan Africa. The country is home to many different ethnic groups, the dominant group is the Akan tribe with a population share of 47.5%, 16.6% belong to the Mole-Dagbon tribe, 13.9% to the Ewe tribe, 7.4% to the Ga-Dangme tribe and 5.7% to the Gurma tribe.

The country is considered to be one of the more stable nations in West Africa and was categorized as a lower middle income country by the The World Bank (2013) with a GNI per capita of \$1550 in 2012. The economy mainly relies on cocoa, gold and lately oil. Although agriculture is just providing 21.5% towards the GDP, more than half of the workforce is employed in the agricultural sector (56%). The oil production in Ghana just started in 2010 and led to a rapid GDP growth by 14.4% in 2011, the score dropped again to 7.9% in 2012, but still Ghana is currently experiencing one of the highest growth rates in Sub-Saharan Africa (3.5% in 2012).

The Freedom House Index (Freedom House, 2014) considers Ghana to be a free country, with a political rights rating of one and a civil rights rating of two. It is further considered to be a democracy with a Polity IV score of eight in 2012 (Marshall et al., 2012).

7.1 From Independence to Democracy

Ghana was a British colony until 1957, when it became the first African country that gained independence from the European colonization. In these years Kwame Nkrumah ruled the country with his Convention People's Party (CPP) first as prime minister (1954-1960) and later as president when Ghana's first republic was declared in 1960 (1960-1966). Within only eight years Nkrumah led Ghana from being a promising, ambitious country to a state where people were deeply unsatisfied with the government and especially with their president. While Nkrumah visited Hanoi in 1966, the army exploited his absence and forcefully took over power. After this first military coup in Ghana a history of instability and changes of government began (Osei-Kwame and Taylor, 1984). In 1966 the new regime stayed in office for three years, until in 1969 elections took place and Dr. Kofi Busia was elected as president of the second Ghanaian Republic. However, the economic situation did not improve during Busias government. On the contrary, ethnic conflicts as well as regionalism increased and corruption was once more on the rise. After a dramatic devaluation of the Ghanaian Cedi, a second military coup took place in 1972 and terminated the second republic of Ghana. After the coup a military government ruled until 1979, when once more elections were scheduled. Against expectations shortly before the



Figure 7.1: Administrative Regions in Ghana

Source: Map No. 4186 Rev. 3, February 2005, UNITED NATIONS

election, Jerry Rawlings and a few other young officers forcefully took over power. They claimed to free Ghana from their corrupt political and economical elite. Despite the repeated military coup the election took place in December 1979 and the army moved back to the barracks. The new president Hilla Limann and his Peoples National Party won the election with 62 percent of the vote, this marked the beginning of the third Republic of Ghana. Limann's way of government was close to Nkrumas traditional way of governing. However, in two years of government he did not succeed in fighting corruption nor the emerging shadow economy. Hence, in 1981 it was again Jerry Rawlings who took over power. This time he banned all political parties and overthrew the constitution. He led the country in a socialistic way and successfully fought corruption. But still economic success did not materialize and Ghana suffered tough times in the mid to late eighties. Only in the beginning of the nineties the tide turned. Inflation decreased and especially the situation of the rural population finally improved. In the meantime the third wave of democratization arrived in Sub-Saharan Africa. During this time many countries changed their political system towards multi-party democracies (Bratton and van de Walle, 1997; Lindberg, 2006). One of them was Ghana, where the first real multi-party election took place in 1992, when incumbent Jerry Rawlings and the National Democratic Party (NDC) were contested by the National Patriotic Party (NPP) with its candidate Albert Adu Boahen. Rawlings won the election and led Ghana into the Fourth Republic.

7.2 Literature Overview

In Ghana until now six presidential and parliamentary elections under the democratic multi-party regime took place, whereof all apart from the first one were considered fair and free by international observers (Freedom House, 2011). There were two peaceful transfers of power, 2000 when the NPP won the presidential election with their candidate John Kufuor and 2008, when John Atta-Mills gained back power for the NDC. Hence, Ghana passed Huntington's *Two Turnover Test* and moved from an *emergent democracy* to a *stable democracy* (Huntington, 1991). There exists a broad range of literature on voting behavior during the past six elections, authors mainly focused on regional and ethical voting patterns especially in 1992, 1996 and 2000. Though, beginning with the new century they changed path towards a more policy oriented examination of voting behavior. The literature suggests that Ghana's democracy has matured over the past two decades. While the first election was neither fair nor free and later elections were mainly determined by ethical and regional factors, the most recent elections were characterized by voters, who considered policy factors, party attributes and past political performance of the incumbent.

The first multiparty election in 1992 was determined by a rural/urban split of the population. Whereas rural regions supported the incumbent candidate Rawlings, the urban constituencies favored the opposition parties. In his paper, Bawumia (1998) drew a link between the distributional impacts of the Structural Adjustment Program (SAP) and the voting patterns of rural/urban voters. Especially rural areas were benefiting from the SAP policies implemented by Rawlings and they rewarded him with their votes at the ballot box. Although a rural/urban distribution of

the election result is clearly observable and seems to confirm non policy voting, the pattern also points in the direction of rational voting behavior. Voters are rewarding the policies benefiting themselves (rural voters) and punishing those ones that discriminate them (urban voters). Following the theory described in the former section these people would base their vote mainly on policy issues, in this specific case agricultural and SAP policy issues. For the election in 1996 a similar pattern of voting behavior was observed, only voter segments changed from the rural/urban divide to a more regional segmentation, mainly those people living in the center and those living in the periphery. Again the central regions, which are basically urban supported the NPP and the periphery which contains the Volta Region in the east, the Western and Brong-Ahafo Regions in the west, and the Upper East and Upper West regions in the north voted for the NDC (Nugent, 1999; Jeffries, 1998). These rural/urban but also center/periphery divide is found in the literature throughout all elections in Ghana. On the one hand there is the typical NPP voter, who lives in the urban areas and cities, is well educated and belongs to the Asante tribe and on the other hand is the NDC voter, who lives in rural regions, tends to be poor, is less educated and identifies with the Ewe tribe (Whitfield, 2009; Lindberg, 2012). After the first two election defeats the NPP realized it's disadvantages in the rural areas and increased campaign efforts especially in those regions for the 2000 election (Lindberg, 2005). The change of strategy was successful and proved to be one of the main reasons for the NPP victory in 2000. Lindberg (2005) addresses another topic in his paper, he quantifies the amount of swing voters in Ghana. In his sample he identifies only 18 percent swing voters compared to 82 percent core voters. The reasons that lie behind being a swing voter are not yet discovered, no significant differences in socioeconomic characteristics like age, education, gender etc. could be found between core and swing voters in the studies so far.

The election result in 2004 was once more very close and in favor of the NPP. Which suggests an incumbent advantage. The NDC used this advantage in the elections 1992 and 1996, but still they lost their incumbency in 2000. From now on the NPP had the advantage on their side and used it successfully in the following election in 2004 (Kelly, 2005). But once again the head start did not last for long, the election in 2008 brought back power to the NDC, the result was as close as it has never been before with the NDC winning in the run-off by less than one-half of a percentage point. Ghana earned a lot of praise for their fifth election which took place in a very professional manner. But although Ghana is growing in it's democracy still ethnicity and regional identification are playing an important role during elections, especially the Ashanti (NPP) and Volta (NDC) region strongly support their traditional candidates (Jockers et al., 2009). Hoffman and Long (2013) conducted an exit poll on Election Day 2008, they questioned 4022 voters in 227 parliamentary constituencies. Their research focused mainly on answering some of the questions that were swirling around in literature for the past years using econometric evidence. In their paper they investigate the role of ethnicity, other voter characteristics like education, income etc., party identification and retrospective evaluations on voting behavior. Their results show that the well known core voters that were described earlier do exist, but the ability of only this factor to explain election results is poor. Candidates performance and the general economic

conditions do also shape vote choice and most importantly party identification. The finding that party identification is responsible for vote choice is not surprising, as it is part of the definition of core voters (Lindberg, 2005). In general Hoffman and Long (2013) describe Ghanaians as voters who actually consider policy platforms and political performance rather than use simple ethnic bloc voting. Unfortunately they do not measure policy issues explicitly which leaves a gap in the literature on voting behavior in Ghana.

The most current election in 2012 were overshadowed by the death of President John Atta-Mills in July 2012. Following the constitution the vice president John Dramani Mahama became the interim president for the time until the upcoming election in December 2012 (Pryce and Oidtmann, 2014). He was also chosen to represent the NDC as their presidential candidate. The NPP nominated Nana Akufo-Addo as their candidate. Although a total of 16 political parties were registered for the election, only the NDC and NPP had a serious chance to gain the majority of votes. All other parties won only very limited votes and struggled with a result of five percent. Finally, the result of the 2012 election was not as close as expected and as the previous election in 2008. Mahama gained 50.7% in the first round and hence rendered a second round unnecessary. His opponent Akufo-Addo was defeated, he only won 47.7% of the vote.

Taking the very close electoral outcomes of the recent elections in Ghana into account, the role every single voter plays for the outcome of the election result is enormous. Consequently electoral competition should serve as a fundamental democratic mechanism and guarantee that governmental policies reflect society's interests. Whether this is the case in Ghana has not been analyzed in the literature so far. Which is why we will estimate a probabilistic voter model and analyze voting behavior in Ghana empirically with data gathered just before the 2012 presidential election. In comparison to previous studies, we measure voting behavior holistically, by including policy oriented voting, non policy oriented voting and retrospective voting. Further, the impact of voting behavior on government performance especially on government accountability and capture is analyzed, which will give valuable information on the state of democracy in Ghana.

7.3 Data Description

Data on voting behavior is still scarce especially in developing countries and although Afrobarometer provides an excellent set of data, some questions necessary for the analysis of elections and its implications on government performance are missing (Lindberg, 2012). For example, voter's as well as party's positions on policy issues are rarely available. Additionally the timing of most surveys is not planned according to upcoming elections, which is crucial for voter surveys. Because of this drawbacks we conducted our own voter survey in Ghana during September 2012. With regard to the presidential election that took place in Ghana at the 7th of December, we assumed most Ghanaians have made up their mind about the upcoming election, providing reliable data on the actual voting decision. Further, all political parties have identified their issues for the upcoming election and chosen their candidates respectively. The fieldwork, which we conducted when election campaigning was in

full progress, confirmed our assumptions.

7.3.1 Sampling Procedure

The voter survey in Ghana was drawn on a national probability sample. The sample design provides a representative cross-section of all citizens of voting age. This objective was achieved by strictly applying random selection methods at every stage of sampling and by applying sampling with probability proportionate to population size. The sample design is a clustered, stratified, multi-stage, area probability sample. At a first stage the Primary Sampling Units (PSUs) were randomly selected, further the sample was stratified by agri ecological zones, residential locality (urban/rural) and sub-national area (North/South). PSUs are the smallest, well-defined geographic units for which reliable population data is available. In Ghana, this is the census Enumeration Areas (EAs). In a next step the EAs were identified on maps and a list of all households was prepared. In total 20 EAs were randomly selected from over 4500 EAs in Ghana based on the 2000 population census. In each EA 30 households were again randomly selected for interviews. To ensure that women were not under represented, there is a gender stratum of an equal number of men and women in the overall sample. To accomplish this stratum, the gender of the respondent was alternated after each interview.

The interviews were conducted face-to-face in the respective first language of the interviewee. All interviewers were intensively prepared and trained before the actual survey, to guarantee a smooth interview procedure.

7.3.2 Questionnaire and Variables

The sample contains 601 individuals from twenty different districts across Ghana. The questionnaire includes questions on socioeconomic characteristics, voting behavior, policy positions and network characteristics. It is very similar to the Afrobarometer surveys in many ways but also includes additional questions and abandons some of the questions that are not necessary for analyzing voting behavior (e.g. issues regarding taxation or gender). Especially missing questions asking for policy positions have strongly restricted the applicability of probabilistic voter models in former surveys. Thus in this survey policy positions were explicitly asked. The seven different policy issues, include general economic/social issues but also issues focusing particularly on agricultural policies (taxation or support of agricultural sector).

For further analysis some observations were deleted from the sample. This was especially due to missing values concerning the vote choice question, but also missing values concerning voters' own policy position. After data cleaning 333 complete observations remained for the analysis of voting behavior. In the following part variables used in the analysis are introduced and explained in more detail. For comprehensibility the variables are split up into dependent and independent variables and into their category of voting: policy, retrospective and non policy.

Dependent Variable A probabilistic voter model is estimating vote choice. Depending on the kind of data available actual or intended vote choice is used as the

dependent variable. Just like in the Afrobarometer survey, in our questionnaire respondents were asked:

B2. If a presidential election were held tomorrow, which party's candidate would you vote for?

additionally we asked respondents about their general intention to vote in the next election:

B5. Do you already know whether you will vote in the elections in December?

92% responded yes, I will definitely take part in the election, 3% said they will not vote, 4% did not know yet and only four people did not reply. Our results overestimate the actual turnout of the presidential election (official turnout was 79.43%) by 12%. The result is a well known problem in voter studies, as turnout is often over reported in voter surveys. People misreport whether they vote or not, because they are aware of the fact that the act of voting is socially desirable. The phenomenon is known as the social desirability response bias (Holbrook and Krosnick, 2010). Still, we expected that the vote choice question gives a good approximation of the actual vote choice, as the timing of the survey is close to the next presidential election (Bratton et al., 2012). In total 394 (66%) respondents answered the question correctly and named a valid political party, while 207 did not reply accordingly. Table 7.1 shows the results of the survey (n=394) as well as the official election results of the presidential elections in 2008 and 2012 (Nonvoters were not considered). The

Table 7.1: Presidential election results from Ghana

| | NDC | NPP | CPP | PPP | PNC | other |
|----------------------------|-------|-------|------|------|------|-------|
| Presidential election 2008 | 47.76 | 49.32 | 1.34 | - | 0.87 | 0.70 |
| Presidential election 2012 | 50.70 | 47.74 | 0.18 | 0.59 | 0.22 | 0.57 |
| Own survey 2012 | 48.73 | 45.69 | 0.76 | 1.78 | 0.25 | 2.79 |

Source: African Elections Database (2014a), own survey

survey results are quite close to the actual election results, which confirms the reliability of the data. Furthermore, the numbers show that election campaigning is rather a two-party than a multi-party contest. NDC and NPP are the only political parties that are able to decide the electoral competition in favor of themselves. For further analysis the remaining small parties (CPP, PPP, PNC and other parties) were dropped, hence Ghana will be treated as a two party case.

Independent Variables

Policy Voting Voting decisions are affected by policy issues. In political theory it is assumed that on the one hand political parties take different positions on policy issues, depending on their kind of electoral strategy. On the other hand citizens also vary in their positions on different policy issues. E.g. a farmer might be more interested in agricultural policies and take a protective position on this issue,

while someone working in the non-agricultural, industrial sector will rather demand taxation of the agricultural sector. The agricultural sector is very important in Ghana and provides work for more than 50% of the population, hence we expect that especially agricultural issues have to be considered when analyzing voting behavior. In the questionnaire respondents were confronted with seven different policy issues, for each issue they were requested to place themselves and the four main parties (NDC, NPP, PNC and CPP)¹ on a five point scale. Each issue was presented with two endpoint statements (The exact phrasing of the questions can be found in the questionnaire printed in the Annex of this book).

- 1-Agree with liberal policies, 5-Disagree with liberal policies (LIBERAL)
- 1-Tax revenues should be used to provide public goods, 5-Tax revenues should be used to improve economic growth (ECONOMIC)
- 1-Economic growth shall be achieved through the agricultural sector, 5-Economic growth shall be achieved through the industrial (non-agricultural) sector (AGRVSIND)
- 1-Economic growth through technological progress, 5-Economic growth through better market access (TPVSMA)
- 1-Promotion of cash crops, 5-Promotion of food crops (CASHVSFOODCROPS)
- 1-Agricultural sector should be taxed, 5-Agricultural sector should be supported (TAXVSPROTECT)
- 1-Governmental decision making process without the population, 5-Governmental decision making process including the population (WEAKVSSTRONGSTATE)

While the first two statements measure general policy issues, the latter are specific for the study of agricultural policy positions in developing countries. In Figure 7.2 the distribution of voters' policy positions is plotted for rural and urban residents. Ghanaians have a very strong aversion against liberal policies (LIBERAL), which were described as legalizing abortion, homosexual marriage etc. Almost ninety percent strongly disagree with these liberal policies and only 5.1% are neutral or agree with liberal policies. The result is almost identical for rural and for urban regions. For the second issue, ECONOMIC, the general opinion is not as clear. While 61% of the rural population favor the provision of public goods, only 57% of the urban population think the same. Twenty two percent of them would rather use tax money to improve economic growth and economic development compared to 14% of the rural population. The majority of Ghanaians (58%) wants to achieve economic growth via the agricultural sector. The rural population is mainly dependent on agriculture and hence advances the view to support the agricultural sector stronger than the urban population (AGRVSIND). One third of the urban people does not favor one alternative over the other, they choose to position themselves in between both statements. This kind of behavior is not specific for the issue AGRVSIND, but also occurs for the issues ECONOMIC, TPVSMA and CASHVSFOODCROPS. It seems that urban people do not have a strong opinion concerning the agricultural issues. Agricultural growth should be achieved mainly through technological progress, 63% (46%) of the

¹For later analysis only responses for the NDC and NPP were taken into account as the election campaign is almost solely a duel between the two.

rural (urban) people agree with this statement. Only 17% (23%) want to achieve growth through market access. The question whether economic growth should be achieved through the promotion of cash crops or food crops shows a clear separation between rural and urban respondents. In the rural areas, people are dependent on the production of food crops for their own consumption. Hence, they rather claim that the promotion of food crops (45%) is supported, while only one third of the urban people think so. In urban areas people mainly buy their food on local markets and do not grow it themselves, that is why for them the promotion of the more profitable cash crops is rather desirable. The issue of taxation or protection of the agricultural sector is again very clear (TAXVSPROTECT). 85% want the agricultural sector to be supported. For this issue the difference between rural and urban areas is not as pronounced, though more people from the urban areas would like to tax the agricultural sector. The last policy issue is especially important for developing countries that moved from an autocratic government to a democratic government (WEAKVSSTRONGSTATE). In Ghana the population is demanding democracy and involvement of the citizens. 71% agree or strongly agree with the statement that *it is more important for citizens to be able to hold government accountable, even if that means it makes decisions more slowly*. Interestingly the usually better informed and better educated urban people have on average a slightly more autocratic opinion on this issue than the rural population.

Besides their own policy positions, respondents were also asked to evaluate the policy positions of the main political parties. In the case of Ghana we assume that the true party position corresponds to the mean of the perceived party positions of all voters. But as people are not fully rational they make mistakes when estimating policy positions, with the survey data we are able to calculate the cognition error for each voter. Figure 7.3 shows the positions of NDC and NPP as well as the distribution of the voters perceived positions of both parties. Figure 7.3 also shows that the policy positions of NDC and NPP are very similar on all seven policy issues. The NDC is a little bit closer to the rural interests, as they are positioned further towards the support of the agricultural sector, want the sector to be supported instead of taxed and also favor the promotion of food crops. But as already mentioned before, the differences are only marginal and do not allow to draw any further conclusions on differences in policy programs between the NDC and NPP. Both parties strongly disagree with liberal policies. Their position on the issue economic is not as clear, tax money shall be spend almost equally for public goods and economic growth. Further, on the issues cash crops vs. food crops, technological progress vs. market access and agricultural vs. industrial sector, both parties also take a position in between the endpoint statements. The support of the agricultural sector is equally important for both parties, they take an identical position of 4.3. Finally, NDC as well as NPP demand a rather weak state apparatus with lots of involvement of the population in the political process and government accountability towards society.

In industrialized countries political parties take positions to distinguish themselves from other political parties, in Germany for example the CDU is always classified on the right side of the SPD (Shikano and Pappi, 2004). The same is true for Republicans and Democrats in the US. However, in developing countries and especially in young democracies most political parties do not differ very much from each other in

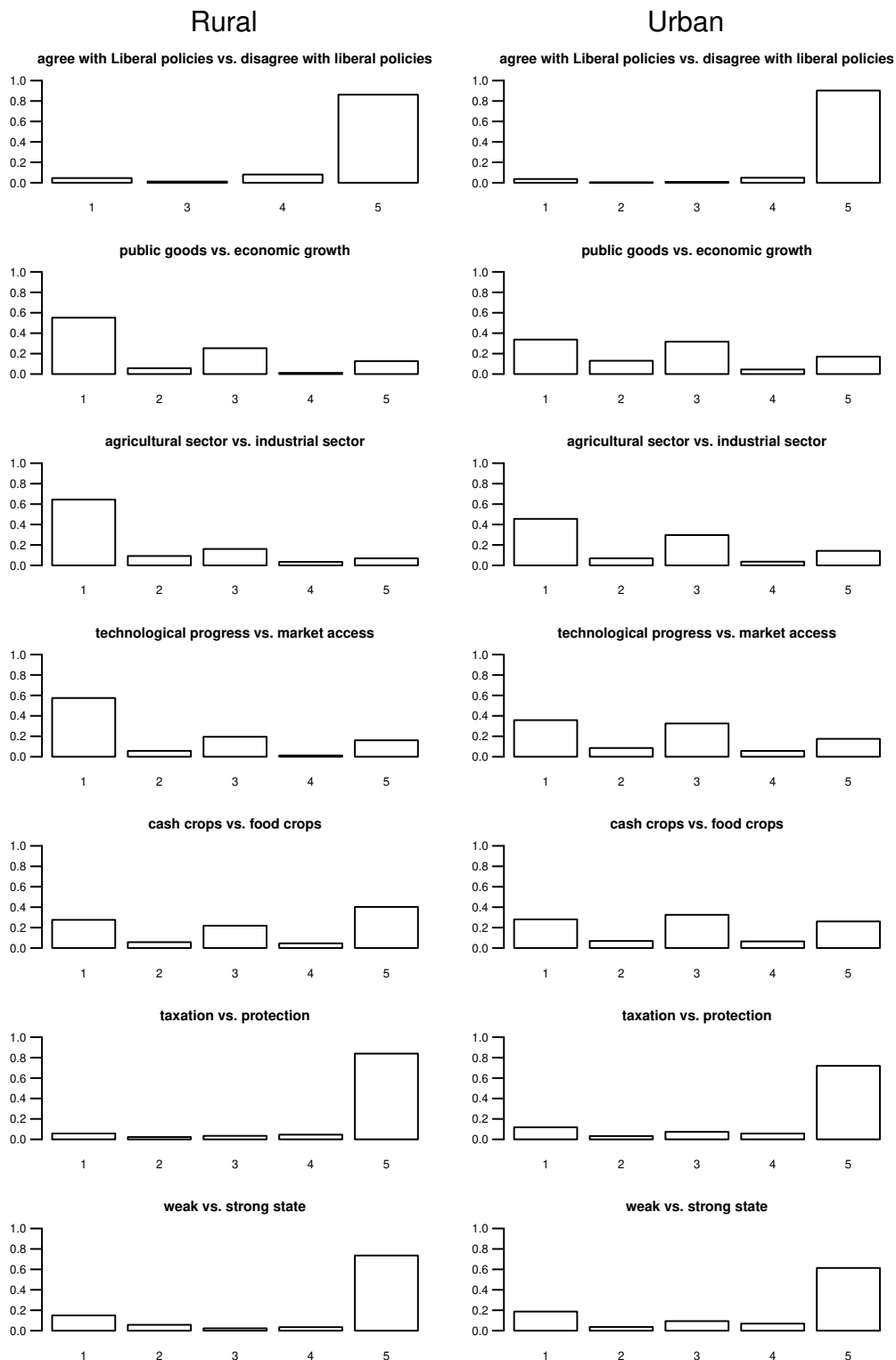


Figure 7.2: Voter positions in Ghana
Source: own data

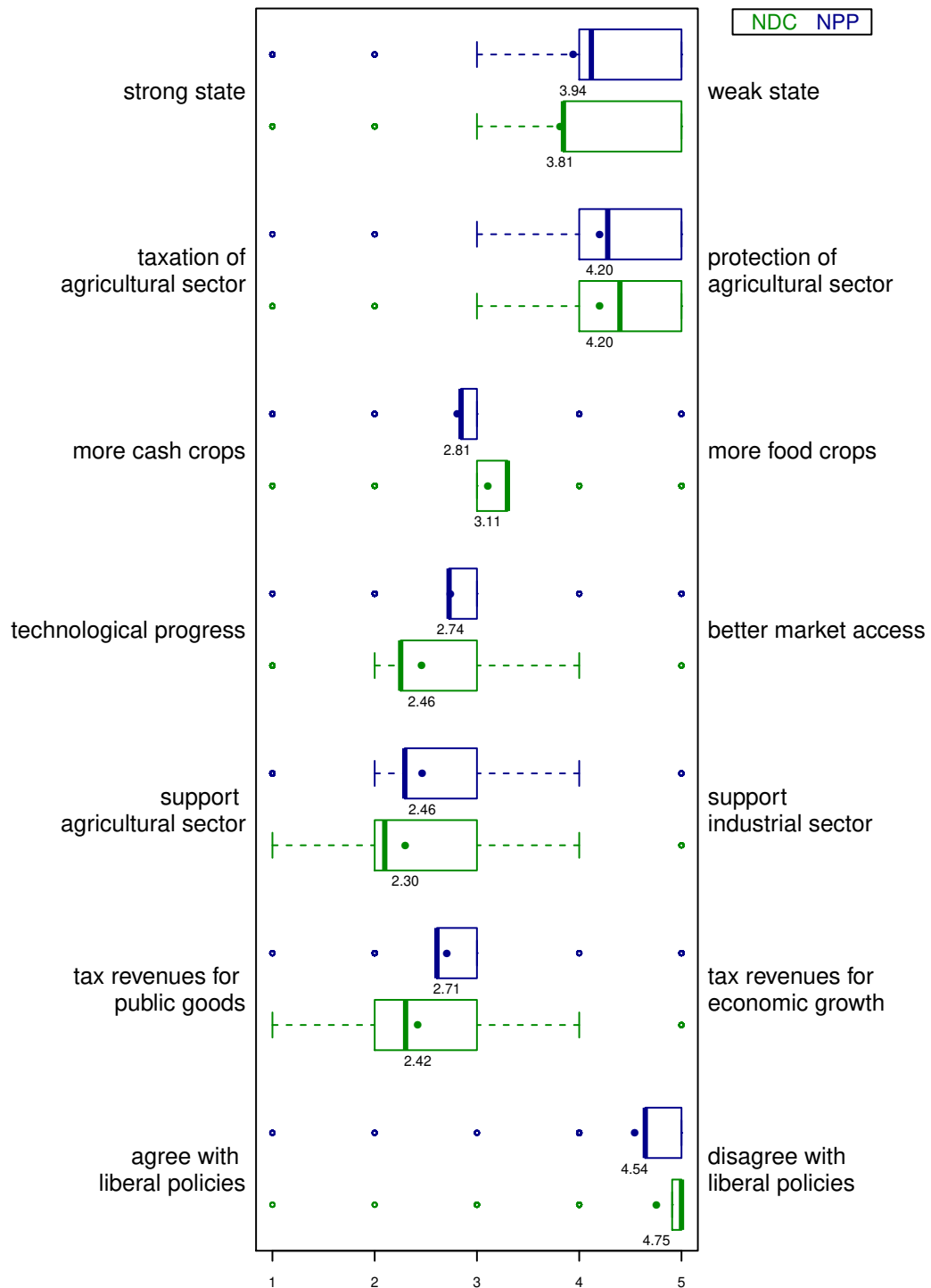


Figure 7.3: Party positions in Ghana
Source: own data

their policy positions or party manifestos (Ottaway, 1999; van de Walle, 2003; Erdmann, 2004). Taking the results from Figure 7.3 we can confirm this assumption. For further analysis, policy distances were calculated from voters' policy positions and their perceived party positions. To additionally emphasize greater policy distances and get rid of the algebraic sign, the squared distance is used for the estimation of the probabilistic voter model.

Retrospective voting In the survey questions considering sociotropic voting as well as pocketbook voting were asked. Further, time was added as an additional dimension - past, present and future. In total there are six questions in the survey dealing with the issue of the economic situation of the country and one's own personal living conditions. Expecting the variables to be correlated, we conducted a factor analysis to reduce the number of variables in the model². Interestingly the factors did not merge on sociotropic or pocketbook voting but on the time dimension. Ending up with three factors: RETRO-FUTURE, RETRO-PRESENT, RETRO-PAST. Both variables concerning the present situation give a rather negative impression, almost 60% of the Ghanaians consider the current economic/living conditions as very bad or fairly bad. When evaluating the situation compared to twelve month ago, 40% say that the situation has not changed, but 30% think that the situation has improved. The assessment of their own living conditions is slightly more positive than that of the country's economic conditions. Finally, the evaluation of the future is very positive, almost 90% expect that the situation will be better or much better in twelve month time. Although we have to point out that the question for future governmental performance and personal well being included a large amount of missing values. While more than 90% answered the questions considering past and present conditions, only 68% had an opinion concerning the future economic condition of the country and 73% concerning their own living conditions in twelve month time. The finding suggests that for many Ghanaians the near future (the next twelve month) is associated with a relative high degree of uncertainty.

Non policy voting To account for non policy voting a whole set of sociodemographic variables as well as some variables that measure approval with the president were included. Whether someone approves or disapproves with the president's performance depends on many different factors. Following the theory described in chapter 5 we assume that approval with the president is mainly a valence issue, strongly manipulable by election campaigning. To measure approval with the president we factor analyzed seventeen questions asking *how well or badly the current government is handling the following matters?* (e.g. managing the economy, creating jobs or empowering women). The result is again a three factor solution featuring PERF-ECONOMY, PERF-SOCIAL, PERF-INFRASTRUCTURE. Most variables are balanced out with negative and positive evaluations. Matters that are perceived to be handled rather bad by the government are: keeping prices down, narrowing the gap between the rich and the poor and fighting corruption in government. Issues that are

²The models were also estimated with all variables included, which did not change the results significantly.

handled pretty well are: reducing crime, improving basic health services, addressing educational needs, providing water and sanitation services, resolving violent conflicts between communities, combating HIV/AIDS and empowering women.

Further, sociodemographic variables were included in the model. The main regions (VOLTA, CENTRAL, ASHANTI, NORTHERN) and ethnicities (AKAN, GA, EWE, MOLE) are coded as dummy variables, as well as GENDER, RURAL and FARMING. Furthermore, information on household EXPENDITURES, AGE and EDUCATION are also part of the model framework. To measure peoples' awareness of politics, they were also asked: *To what extent would you say you are interested in politics* (POLINT). Some descriptive statistics can be found in Table 7.2. In the sample 52% of the respondents belong to the Akan tribe, which is about 4% more than their population share in the last national census (Central Intelligence Agency, 2013). The other tribes are represented according to their population share, though the Ga-Dangme and Gruma are slightly underrepresented, while the Guan and Grusi are slightly overrepresented. The gender stratification in the sampling strategy led to a balanced proportion of men and women. The rural population is heavily underrepresented with only 26%, in the last census 48% of the population were considered to live in rural areas. The mean household expenditures in Ghana are 300 Ghana Cedi (GHS) per month, which equals about \$102³. However, household expenditures range from 0GHS to 4500GHS, which reflects the unequal income distribution in the country. The income Gini coefficient of Ghana is 42.8 and the richest 10% of the population have 14.1 times as much income as the poorest 10%. For comparison the Gini coefficient of Germany is 28.3 and the richest 10% have only 6.9 times as much income as the poorest 10%. Another method to measure income is the Lived Poverty Index (LPI) that calculates the mean of the following questions: *Over the past year, how often, if ever, have you or anyone in your family gone without -enough food to eat?; - enough clean water for home use?; - medicines or medical treatment?; - enough fuel to cook for food?; - a cash income?* Possible answers were, *never – just once or twice – several times – many times – always* (Mattes, 2008). It follows that the poverty level is low, when the index is close to zero and high, when it is close to four. For our sample the LPI equals 0.66. The score is close to the LPI score for the Afrobarometer data (0.61), which classifies Ghana as the country with the third lowest LPI. The mean age of the sample is 38 years, the youngest participant is 18 years old and the oldest 82 years. In the sample 22% have never been to school, most of them are older than 30 years. The majority of the younger generation visited at least primary school, but many of them also went to secondary school. Only 3% of the sample enjoyed tertiary education. The general interest in politics also differs very much from person to person, 26% are not at all interested in politics, 22% are not very interested, 27% are somewhat interested and 25% are very interested.

7.4 Estimation of Voting Behavior

The literature on African politics has mainly postulated that Africans tend to vote non policy oriented and clientelistic instead of rational and policy oriented (Horowitz,

³1GHS = \$0.34

Table 7.2: Description of survey data

| | N | mean | sd | CI-left | CI-right | min | max |
|---|-----|---------|---------|---------|----------|--------|-------|
| Retrospective Variables | | | | | | | |
| Ghana (present) ¹ | 333 | 2.429 | 0.073 | 2.287 | 2.572 | 1 | 5 |
| Personal (present) | 333 | 2.563 | 0.074 | 2.417 | 2.709 | 1 | 5 |
| Ghana (past) | 333 | 3.049 | 0.054 | 2.942 | 3.155 | 1 | 5 |
| Personal (past) | 333 | 3.179 | 0.052 | 3.077 | 3.282 | 1 | 5 |
| Ghana (future) | 333 | 3.900 | 0.042 | 3.818 | 3.981 | 1 | 5 |
| Personal (future) | 333 | 4.015 | 0.041 | 3.936 | 4.095 | 1 | 5 |
| Government Performance | | | | | | | |
| PERF-ECONOMY | 333 | -0.050 | 0.947 | -0.152 | 0.052 | -2.418 | 2.376 |
| PERF-SOCIAL | 333 | -0.020 | 0.895 | -0.116 | 0.076 | -2.430 | 2.110 |
| PERF-INFRA | 333 | 0.031 | 0.803 | -0.055 | 0.117 | -2.173 | 2.249 |
| Sociodemographic Characteristics | | | | | | | |
| RURAL ² | 333 | 0.261 | 0.440 | 0.214 | 0.309 | 0 | 1 |
| GENDER ³ | 333 | 0.495 | 0.501 | 0.442 | 0.549 | 0 | 1 |
| AGE | 333 | 38.249 | 15.270 | 36.609 | 39.889 | 18 | 82 |
| EDUCATION ⁴ | 333 | 2.790 | 1.396 | 2.640 | 2.940 | 1 | 7 |
| FARMER ⁵ | 333 | 0.474 | 0.500 | 0.421 | 0.528 | 0 | 1 |
| EXPENDITURES ⁶ | 333 | 300.066 | 412.775 | 255.732 | 344.400 | 0 | 4500 |
| POLINT ⁷ | 332 | 2.518 | 1.136 | 2.396 | 2.640 | 1 | 4 |
| Regions | | | | | | | |
| WESTERN | 333 | 0.099 | 0.299 | 0.067 | 0.131 | 0 | 1 |
| CENTRAL | 333 | 0.081 | 0.273 | 0.052 | 0.110 | 0 | 1 |
| GREATER ACCRA | 333 | 0.078 | 0.269 | 0.049 | 0.107 | 0 | 1 |
| VOLTA | 333 | 0.105 | 0.307 | 0.072 | 0.138 | 0 | 1 |
| EASTERN | 333 | 0.150 | 0.358 | 0.112 | 0.189 | 0 | 1 |
| ASHANTI | 333 | 0.165 | 0.372 | 0.125 | 0.205 | 0 | 1 |
| BRONG AHAFO | 333 | 0.105 | 0.307 | 0.072 | 0.138 | 0 | 1 |
| NOTHERN | 333 | 0.120 | 0.326 | 0.085 | 0.155 | 0 | 1 |
| UPPER EAST | 333 | 0.057 | 0.232 | 0.032 | 0.082 | 0 | 1 |
| UPPER WEST | 333 | 0.039 | 0.194 | 0.018 | 0.060 | 0 | 1 |
| Tribes | | | | | | | |
| AKAN | 333 | 0.520 | 0.500 | 0.466 | 0.573 | 0 | 1 |
| GA/DANGME | 333 | 0.030 | 0.171 | 0.012 | 0.048 | 0 | 1 |
| EWE | 333 | 0.138 | 0.346 | 0.101 | 0.175 | 0 | 1 |
| GUAN | 333 | 0.051 | 0.220 | 0.027 | 0.075 | 0 | 1 |
| GRUMA | 333 | 0.027 | 0.162 | 0.010 | 0.044 | 0 | 1 |
| MOLE DAGBON | 333 | 0.156 | 0.364 | 0.117 | 0.195 | 0 | 1 |
| GRUSI | 333 | 0.054 | 0.226 | 0.030 | 0.078 | 0 | 1 |
| MANDE | 333 | 0.012 | 0.109 | 0.000 | 0.024 | 0 | 1 |
| OTHER | 333 | 0.012 | 0.109 | 0.000 | 0.024 | 0 | 1 |

¹ 1=very bad, 5=very good; ² 1=rural, 0=urban; ³ 1=women, 0=men; ⁴ 1=no schooling, 7=tertiary education; ⁵ 1=farmer, 0=no farmer; ⁶ in GHS; ⁷ 1=not at all interested, 4=very interested

Source: own data

Table 7.3: Voting motives in Ghana

| | very unimportant | unimportant | important | very important |
|----------------------------|---------------------|-------------|-----------|-------------------|
| character | 1.83 | 4.66 | 25.12 | 64.89 |
| outer appearance | 20.80 | 32.11 | 24.79 | 19.30 |
| ethnic origin | 30.12 | 44.43 | 13.48 | 9.65 |
| regional origin | 29.28 | 44.09 | 14.64 | 9.32 |
| political knowledge | 3.33 | 6.32 | 34.28 | 51.25 |
| party affiliation | 10.82 | 19.13 | 32.95 | 33.94 |
| past political performance | 1.66 | 4.83 | 31.45 | 58.07 |
| election campaign | 14.98 | 18.47 | 29.78 | 33.11 |

Source: own data

1985; Bratton and Kimenyi, 2008; Bratton et al., 2011; Eifert et al., 2010; Hoffman and Long, 2013). To get a first impression how voters make their voting decision in Ghana, Table 7.3 shows what Ghanaians replied when they were asked directly about their voting motives.

C17. When you consider voting for a certain candidate, which of the following things are important for your choice?

From their responses it seems that only one out of ten Ghanaians thinks that ethnic or regional origin is very important for their vote choice, on the other hand almost 60% find that past political performance is very important. The most important determinant in electoral competition in Ghana however seems to be the character of the candidate, more than 90% think that the candidates' character is important or very important for their vote choice. Unfortunately character is a concept that involves many latent variables and is therefore hard to interpret. Someone may appeal to have a good character, because he rules the country when the economy is booming (retrospective), because he is postulating policy positions that are close to ones own (issue voting) or because he is charismatic and belongs to a well known family (non policy voting). This way of getting behind the question why voters vote for a certain party gives a first direction, but does not create any deeper knowledge. The first description of voting behavior in Table 7.3 leads to the hypothesis that in Ghana retrospective voting is the most important voting motive, closely followed by policy voting and non policy voting. In a next step we estimate a probabilistic voter model with our own survey data to examine to which extend the hypothesis is true and which other factors influence African voting behavior.

7.4.1 Multinomial Logit Model

With the data described in the former section we estimated different specifications of a multinomial logit model (ML). The ML was chosen because alternative specific as well as individual specific variables are important to explain voting behavior and hence have to be included in the model specification. From model one to model

five explanatory variables were added stepwise to improve model fit. All model specifications take the NDC as reference party which means that the individual specific variables have to be interpreted in comparison to the incumbent party NDC. Model one is a purely policy oriented model, it contains all policy distances and an alternative specific constant. The constant absorbs all information that is not explicitly included in the model. From model one to model five the constant is gradually split up into retrospective voting motives, performance indicators, ethnic and regional dummies and sociodemographic characteristics. Table 7.4 shows the estimation results. The goodness of fit significantly increases from model one to model five. McFadden's R^2 is 0.24 in the first model and increases to 0.67 in the fifth model. The first model shows the importance of policy oriented voting, five of seven policy issues are significant and all of them show the theoretically expected negative sign indicating that greater distances between a voter and a political party reduce the probability to vote for the parties' candidate. Retrospective voting increases the explanatory power of the model further, apart from the factor future both other factors are negative and significant. This was expected as the probability to vote for the opposition party usually decreases when a voter's evaluation of the economic situation of the country and of his own personal situation is positive. Analogously, we expected the performance indicators, which were added in model specification three, to have negative coefficients. The three additional variables further increase the R^2 by twenty percentage points and therefore have major impact on voting behavior in Ghana. Models four and five basically include variables that account for sociodemographic characteristics of the respondents. In Ghana only the two big ethnic groups Akan and Ewe have significant influence on voting behavior and also regional voting is only significant in one region, the Central region. From the other sociodemographic variables solely education influences voting behavior, while interest in politics, residential locality, age, farming background and expenditures are not significant. From the literature introduced in the former section we were expecting to find significant influence of residential locality on vote choice, which is not the case. Hence, it seems that rural and urban voting patterns were not as important for the last presidential election as they were in the foregoing elections.

Table 7.4: Estimation results of the multinomial logit model

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | |
|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value |
| NPP:INTERCEPT | 0.002 | 0.989 | 0.058 | 0.675 | 0.124 | 0.485 | -1.233 | 0.022 | -1.492 | 0.214 | -1.894 | 0.000 |
| LIBERAL | -0.143 | 0.323 | -0.062 | 0.639 | 0.024 | 0.900 | 0.102 | 0.619 | 0.148 | 0.512 | | |
| ECONOMIC | -0.063 | 0.381 | -0.006 | 0.938 | -0.021 | 0.841 | -0.066 | 0.635 | -0.0584 | 0.694 | | |
| AGRVSIND | -0.159 | 0.031 | -0.174 | 0.030 | -0.202 | 0.028 | -0.057 | 0.624 | -0.079 | 0.525 | | |
| TPVSMA | -0.122 | 0.050 | -0.113 | 0.083 | -0.122 | 0.155 | -0.076 | 0.481 | -0.090 | 0.438 | | |
| CASHVSFOODCROPS | -0.185 | 0.006 | -0.189 | 0.008 | -0.297 | 0.002 | -0.293 | 0.013 | -0.2714 | 0.033 | -0.315 | 0.004 |
| TAXVSPROTECT | -0.141 | 0.062 | -0.180 | 0.056 | -0.200 | 0.060 | -0.275 | 0.068 | -0.240 | 0.138 | -0.241 | 0.083 |
| WEAKVSSTRONGSTATE | -0.451 | 0.001 | -0.443 | 0.001 | -0.492 | 0.003 | -0.666 | 0.002 | -0.720 | 0.002 | -0.584 | 0.000 |
| NPP:RETRO-FUTURE | | | -0.065 | 0.684 | 0.156 | 0.474 | 0.247 | 0.333 | 0.282 | 0.304 | | |
| NPP:RETRO-PRESENT | | | -0.254 | 0.062 | 0.487 | 0.012 | 0.483 | 0.039 | 0.494 | 0.054 | 0.500 | 0.028 |
| NPP:RETRO-PAST | | | -0.820 | 0.000 | -0.782 | 0.000 | -0.889 | 0.000 | -0.967 | 0.000 | -0.999 | 0.000 |
| NPP:PERF-ECONOMY | | | | | -1.891 | 0.000 | -1.752 | 0.000 | -1.799 | 0.000 | -1.678 | 0.000 |
| NPP:PERF-SOCIAL | | | | | -0.973 | 0.000 | -0.887 | 0.003 | -1.030 | 0.002 | -1.042 | 0.001 |
| NPP:PERF-INFRA | | | | | -0.124 | 0.587 | -0.841 | 0.008 | -0.918 | 0.006 | -0.903 | 0.002 |
| NPP:AKAN | | | | | | | 3.173 | 0.000 | 2.690 | 0.000 | 2.935 | 0.000 |
| NPP:GA | | | | | | | 1.125 | 0.345 | 0.460 | 0.710 | | |
| NPP:EWE | | | | | | | -1.279 | 0.407 | -2.111 | 0.225 | -1.693 | 0.084 |
| NPP:MOLE | | | | | | | -0.206 | 0.801 | 0.010 | 0.991 | | |
| NPP:VOITA | | | | | | | -0.501 | 0.781 | 0.168 | 0.932 | | |
| NPP:CENTRAL | | | | | | | -1.583 | 0.018 | -1.811 | 0.012 | -1.853 | 0.006 |
| NPP:ASHANTI | | | | | | | 0.580 | 0.437 | 0.526 | 0.504 | | |
| NPP:NOTHERN | | | | | | | 0.194 | 0.823 | 0.289 | 0.742 | | |
| NPP:RURAL | | | | | | | | | -0.249 | 0.743 | | |
| NPP:GENDER | | | | | | | | | -0.158 | 0.753 | | |
| NPP:AGE | | | | | | | | | 0.010 | 0.569 | | |
| NPP:EDUCATION | | | | | | | | | 0.333 | 0.124 | 0.335 | 0.070 |
| NPP:FARMING | | | | | | | | | -0.579 | 0.299 | | |
| NPP:EXPENDITURES | | | | | | | | | 0.000 | 0.848 | | |
| NPP:POLINT | | | | | | | | | -0.140 | 0.514 | | |
| Log-Likelihood | -176.58 | | -158.93 | | -112.46 | | -78.52 | | -75.93 | | -79.13 | |
| McFadden R^2 | 0.235 | | 0.312 | | 0.513 | | 0.660 | | 0.671 | | 0.657 | |

Source: own estimation

Finally, Model 6 in the last column is a reduced model specification that is considered to be the optimal model. It was derived by stepwise omitting independent variables and testing via likelihood ratio test whether the removal of the variables actually deteriorated the model fit. The model presented here proved to be the best one considering this test. Model 6, is a mixture of the previous models with all variables being significant and a McFadden's R^2 of 0.66. Interestingly the coefficient for RETRO-PRESENT changed its algebraic sign from negative to positive, which is in contrary to the theory of retrospective voting. A positive evaluation of the current political situation has positive influence on the opposition party and not on the incumbent. This can be a sign that the opposition is a powerful player in the current government and voters reward them for their political actions. The evaluation of government performance has negative coefficients, just as expected beforehand. Better performance increases the probability to vote for the governmental party. The hypothesis that the Asante (AKAN) mainly support the NPP while the EWE support the NDC is also confirmed. From the regional dummies only CENTRAL is left in the optimal model, the coefficient is negative and hence in favor of the NDC. The result is surprising as the NDC is usually close to the rural population and the Central Region is rather considered to be urban, traditionally a stronghold for the NPP. EDUCATION has positive impact on voting for the NPP, which goes in line with the assumption that the traditional NPP voter lives in urban areas, has a better income and a higher education level.

Because the probabilistic voter model is a logistic regression model the coefficients cannot be interpreted as straightforward as in a linear regression analysis. Furthermore, the direction of the effect is meaningful, but for broader interpretation marginal effects or elasticities have to be consulted. Considering policy voting, the marginal effects of each issue are very small. On average, when the NDC changes its position on the policy issue CASHVSFOODCROPS by one unit, it results in a probability change of 0.3%. The marginal effect can be positive or negative depending on the policy position of the individual, hence we also calculated the absolute marginal effect for each policy issue. In the case of CASHVSFOODCROPS the absolute effect equals 5.5%. The effect of changing the policy position on the issue TAXVSPROTECT has an even lower and negative effect on the probability to vote for the NDC (-0.2%). The absolute change in probability is 3%. The biggest influence and hence potential stems from the issue WEAKVSSTRONGSTATE, changing the position on this issue yields an average probability change of 0.3% and an absolute probability change of 9%. Figure 7.4 shows the effects of changing policy positions for both parties for the issue of WEAKVSSTRONGSTATE graphically. The bar charts in the background display the distribution of the voters' policy positions on this issue. It is striking out that there is hardly any difference between the two political parties. Actually the NPP is the dominant party for most of the scenarios, the NDC only gets more votes than its political opponent when taking a position close to four (weak government). The maximum of the curve is situated at 3.78 with a probability to vote for the incumbent of 50.17%. The status quo position of the NDC, 3.85, is already very close to the optimal position. Although the marginal effects of the policy issues are small, policy voting is important in Ghana. When considering Figure 7.4 it becomes obvious that moving away from their current position will lead to a reduction of vote

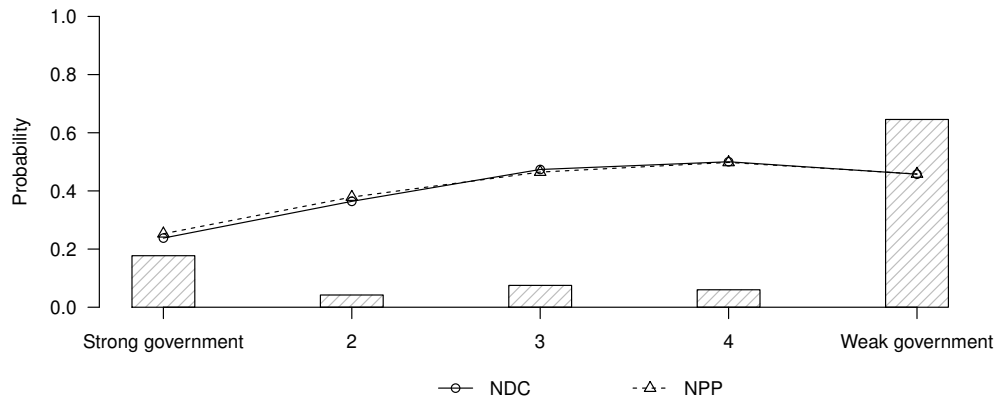


Figure 7.4: Changing policy positions: WEAKVSSTRONGSTATE
Source: own data

share for both political parties. Hence, they stick to their almost identical policy positions to maximize their vote share. The finding goes in line with the rational theory of voting in a two party case, where both political parties locate at the median position.

Non policy voting is cognitive less challenging for the electorate and offers a wider range for political parties to differ from each other, hence it is expected that marginal effects are more pronounced for retrospective voting and performance voting. Indeed, retrospective voting, has a negative effect of four percentage points on the election probability of the NDC for NPP-RETRO-PRESENT, while the effect of NPP-RETRO-PAST is positive (7%). When considering performance voting, especially improving NPP-PERF-ECONOMY gains additional votes (12%), but also NPP-PERF-SOCIAL and NPP-PERF-INFRA yield eight and seven percentage points respectively. The marginal effect of EDUCATION is -2%, increasing the education level would reduce the chances of the NDC and improve the chances of the opposition party, NPP. Greater marginal effects are visible for the dummy variables of region and ethnicity. When all voters belong to the Akan tribe, the NPP gains 30% and would doubtlessly win the election. The opposite effect holds true if the whole country would belong to the Ewe tribe, then the NDC gains 26%. In contrast to ethnicity the effect of living in the Central region is only small. The NDC gains additional 13 percentage points. Although the effects of region and ethnicity are significantly bigger than the effects of retrospective voting and policy oriented voting, there is little scope for the political parties to benefit from them, as both region and ethnicity cannot simply be changed through political action. These characteristics are a matter of a country's census and therefore constant in the medium to long run. Quite the contrary to the perception of government performance, which is considered to be very influenceable by election campaigning and interest group spending. Hence, trying to influence the perception of government performance (positively for the incumbent party and negatively for the opposition party) is the most efficient instrument to gain additional

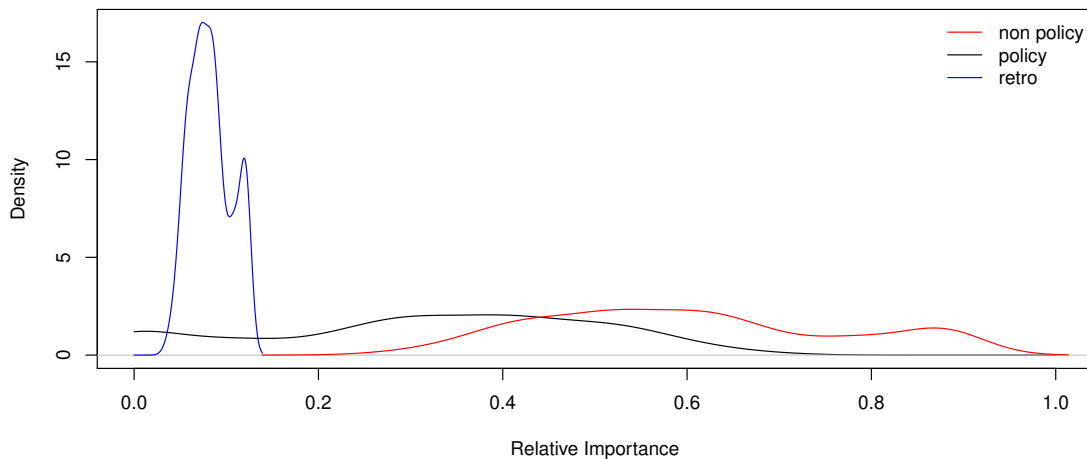


Figure 7.5: RI of non policy, policy and retrospective voting
Source: own data

votes. However, it is also the most expensive and favors the incumbent.

For further interpretation of the importance of the different voting motives, we do not only compare the marginal effects but rather concentrate on the relative importance of each of the voting motives RI^{NP} , RI^R and RI^P . When calculating the RIs, valence voting only contains the performance factors and not the individual characteristics, because they are not adjustable by actions of the governmental party. The relative importance is biggest for non policy voting with an average of 60% followed by policy voting with 32% and last is retrospective voting with only 8%. Figure 7.5 shows the distribution of the RI indicators as a density plot.

7.4.2 Heterogeneity

In the ML model non policy voting was identified to be the driving force in elections in Ghana. But the relative importance of policy voting as well as non policy voting ranges widely, while retrospective voting is mainly distributed around 10% with little variance. Although the mean RI for policy voting is 32%, there are also some individuals who have a relative importance of 69% and hence lower RI's for non policy and retrospective voting. The same is true for non policy voting, the maximum RI is 88% and the minimum RI is 27%. Voting motives are not equally important for every voter, they differ from person to person. For further insight into the heterogeneity of voting behavior, Figure 7.6 shows the distribution for policy and non policy voting depending on whether someone lives in a rural or urban area. From the literature overview in section 7.2 we are already aware of the importance of the place of residence on voting behavior. In general people from rural areas have a lower education level and less access to information, that is why we hypothesize that these citizens will especially rely on non policy voting instead of policy voting to determine their vote choice. The opposite is expected from the urban population,

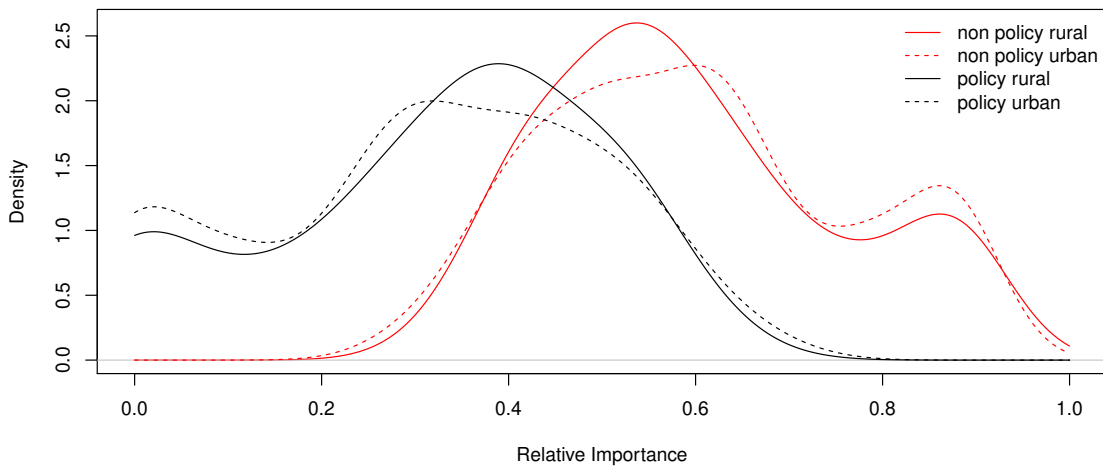


Figure 7.6: RI of non policy and policy voting in rural and urban areas
Source: own data

who would vote more policy oriented and less non policy oriented. In comparison to the different electoral outcomes in rural and urban areas, the differences in voting behavior are small and actually the other way around than expected. Rural voters vote slightly more policy oriented, while urban voters focus more on non policy voting. In Figure 7.6 it was attempted to explain the differences in voting behavior by splitting the sample in rural and urban voters. Although small differences between rural and urban voters are visible they cannot sufficiently explain the heterogeneity in voting behavior found in Figure 7.5. In the past years econometric methods were further developed and some of the new approaches also found their way into political studies analyzing voting behavior. One of them is the latent class approach, which we will apply to further explain the heterogeneity that was already discovered in the ML model.

In the former section we found out that voting behavior is heterogeneous in Ghana. Depending on the personal characteristics of a voter, his voting behavior and also his vote choice varies. The estimated latent class model consists of two sub models, the choice model that determines which alternative is chosen and the class model that estimates class membership. In the class membership model the personal characteristics are explicitly included as covariates. In the case of Ghana the choice model was held constant with only the variables on issue voting, retrospective voting and performance voting included. For the class model different model specifications were tested. All models were estimated with one, two, three and four classes respectively. Independent of the model specification the three and four class models did not converge and hence cannot be considered any further⁴. Table 7.5 shows the overview statistics of each estimation. Model 1 does not include any covariates that further

⁴Because of the occurrence of local maxima, often latent class models do not converge, especially when the number of estimated classes is high (Vermunt and Magidson, 2005).

Table 7.5: Comparison of different LC model specifications

| | LL | BIC | AIC | AIC3 | CAIC | Npar | df | Class.Err. | Pred.Err. | Conv. |
|--|---------|--------|--------|--------|--------|------|-----|------------|-----------|-------|
| MCL Model | | | | | | | | | | |
| 1-Class | -79.16 | 233.83 | 184.33 | 197.33 | 246.83 | 13 | 320 | 0.00 | 0.10 | yes |
| Model 1: no covariates | | | | | | | | | | |
| 1-Class | -116.67 | 285.61 | 251.34 | 260.34 | 294.61 | 9 | 324 | 0.00 | 0.18 | yes |
| 2-Class | -97.94 | 306.24 | 233.88 | 252.88 | 325.24 | 19 | 314 | 0.35 | 0.02 | yes |
| 3-Class | -86.81 | 342.07 | 231.63 | 260.63 | 371.07 | 29 | 304 | 0.53 | 0.01 | no |
| 4-Class | -85.14 | 396.79 | 248.27 | 287.27 | 435.79 | 39 | 294 | 0.57 | 0.00 | no |
| Model 2: Akan, Ewe, Central, Education | | | | | | | | | | |
| 1-Class | -116.67 | 285.61 | 251.34 | 260.34 | 294.61 | 9 | 324 | 0.00 | 0.18 | yes |
| 2-Class | -67.93 | 269.44 | 181.86 | 204.86 | 292.44 | 23 | 310 | 0.06 | 0.06 | yes |
| 3-Class | -47.62 | 310.14 | 169.24 | 206.24 | 347.14 | 37 | 296 | 0.15 | 0.02 | no |
| 4-Class | -44.26 | 384.73 | 190.51 | 241.51 | 435.73 | 51 | 282 | 0.24 | 0.00 | no |
| Model 3: Akan, Central, Education | | | | | | | | | | |
| 1-Class | -116.67 | 285.61 | 251.34 | 260.34 | 294.61 | 9 | 324 | 0.00 | 0.18 | yes |
| 2-Class | -68.11 | 264.01 | 180.23 | 202.23 | 286.01 | 22 | 311 | 0.06 | 0.05 | yes |
| 3-Class | -52.02 | 307.32 | 174.03 | 209.03 | 342.32 | 35 | 298 | 0.16 | 0.03 | no |
| 4-Class | -45.91 | 370.61 | 187.82 | 235.82 | 418.61 | 48 | 285 | 0.29 | 0.00 | no |
| Model 4: Akan, Central, Education, Expenditures | | | | | | | | | | |
| 1-Class | -116.67 | 285.61 | 251.34 | 260.34 | 294.61 | 9 | 324 | 0.00 | 0.18 | yes |
| 2-Class | -64.97 | 263.53 | 175.95 | 198.95 | 286.53 | 23 | 310 | 0.03 | 0.08 | yes |
| 3-Class | -46.33 | 307.56 | 166.66 | 203.66 | 344.56 | 37 | 296 | 0.14 | 0.02 | no |
| 4-Class | -39.55 | 375.31 | 181.09 | 232.09 | 426.31 | 51 | 282 | 0.25 | 0.01 | no |

Source: own estimation

determine class membership, hence the class assignment is only due to the data structure in the choice model. While models without covariates provide very good prediction abilities, the classification of the different classes is not their key strength, which is confirmed by the large classification error. Model number two includes all the individual specific variables that were also included in the ML model as covariates. As the variable Ewe is not significant in Model 2, it was left out in Model 3 to further improve model fit. Both model specifications show very similar classification and prediction errors. In the last model, Model 4, the variable household expenditures was included as an additional covariate. Although household expenditures were not significant in the ML model, they have an impact on class membership and further improve model fit. When deciding about the optimal number of latent classes, we follow Andrews and Currim (2003) and Dias (2004) who "suggest that the AIC3 is a better criterion than BIC and AIC in determining the number of latent classes in choice models", Vermunt and Magidson (2005). Hence, for all four models the two class solution proves to be the best one. In model specifications two to four the BIC criterion reaches the same decision. The normal AIC criterion prefers the three class solution, which is not feasible as it does not converge.

The coefficients of the different model specifications are actually very similar to each other, in model two and three the model for choices as well as the model for classes almost coincide. Model 4 appears very different on first sight, but actually is also very close to the other two models when one switches Class 1 and Class

Table 7.6: Latent class estimation results

| Model for Choices | | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Class 1 | z-value | p-value | Class 2 | z-value | p-value | Wald(=) | p-value |
| Attributes | | | | | | | | |
| Constants | -2.693 | -3.213 | 0.002 | 1.867 | 3.398 | 0.001 | 20.256 | 0.000 |
| CASHVSFOODCROPS | -0.566 | -1.902 | 0.058 | -0.430 | -2.163 | 0.031 | 0.145 | 0.700 |
| TAXVSPROTECT | -0.786 | -2.419 | 0.016 | -0.132 | -1.027 | 0.306 | 3.504 | 0.061 |
| WEAKVSSTRONGSTATE | -2.321 | -2.032 | 0.043 | -0.466 | -2.416 | 0.016 | 2.619 | 0.110 |
| Predictors | | | | | | | | |
| RETRO-PRESENT | 1.955 | 2.343 | 0.020 | -0.218 | -0.564 | 0.573 | 5.541 | 0.019 |
| RETRO-PAST | -2.019 | -2.897 | 0.004 | -0.767 | -1.846 | 0.066 | 2.343 | 0.130 |
| PERF-ECONOMY | -2.992 | -2.758 | 0.006 | -2.432 | -3.748 | 0.000 | 0.198 | 0.660 |
| PERF-SOCIAL | -3.104 | -2.991 | 0.003 | -0.514 | -1.170 | 0.243 | 5.158 | 0.023 |
| PERF-INFRA | -1.955 | -2.810 | 0.005 | -0.269 | -0.438 | 0.662 | 3.341 | 0.068 |
| Model for Classes | | | | | | | | |
| | Class 1 | z-value | | Class 2 | z-value | p-value | | |
| Class Membership | 0.50 | | | 0.50 | | | | |
| Covariates | | | | | | | | |
| INTERCEPT | 0.000 | | | -5.762 | -2.318 | 0.021 | | |
| EDUCATION | 0.000 | | | 1.097 | 1.760 | 0.079 | | |
| CENTRAL | 0.000 | | | -3.153 | -1.847 | 0.066 | | |
| AKAN | 0.000 | | | 5.825 | 2.822 | 0.005 | | |
| EWE | 0.000 | | | -0.740 | -0.472 | 0.637 | | |

Source: own estimation

2. Model 1 is different from the others, which can be traced back to the missing covariates and hence missing depth of data.

In the following we will concentrate on the interpretation of model two because it is best comparable with the ML model from the former section, as it includes the same variables. The model output can be found in Table 7.6, the output of the other model specifications is available from the author on request. The high and negative intercept in the class model reflects a bias towards being in Class 1. Education on the other hand positively influences membership in Class 2. The same is true for those individuals belonging to the Akan tribe. The coefficient for the Ewe tribe is not significant, but has a negative sign and is thus driving individuals towards Class 1. Being from the Central region is another characteristic that is more pronounced in Class 1 than in Class 2. In Table 7.7 all voter characteristics are displayed for both classes⁵, a t-test indicates whether the differences between the two classes are significant or not. Although not all characteristics are included as covariates, still most of them differ significantly between the two classes. Of all the sociodemographic characteristics only Gender, Age and Political interest show no significant differences. Class 1 can be considered as the rural class, with more people living in rural areas, more people being employed in the farming sector and a lower education level. Also household expenditures are lower compared to Class 2.

⁵Someone was considered to belong to a class, when the class membership is greater than 0.5. Another possibility is to multiply class membership probability with the variable value. The second method was calculated as well, but the results did not change

Table 7.7: Descriptive statistics by latent classes

| | Class 1 | Class 2 | p-value |
|---|---------|---------|---------|
| Sociodemographic characteristics | | | |
| RURAL | 0.476 | 0.053 | 0.000 |
| EGNDER | 0.494 | 0.497 | 0.954 |
| AGE | 37.872 | 38.615 | 0.658 |
| EDUCATION | 2.134 | 3.426 | 0.000 |
| FARMER | 0.616 | 0.337 | 0.000 |
| EXPENDITURES | 227.268 | 370.710 | 0.001 |
| POLINT | 2.433 | 2.598 | 0.186 |
| Regions | | | |
| WESTERN | 0.037 | 0.160 | 0.000 |
| CENTRAL | 0.055 | 0.107 | 0.084 |
| GREATER ACCRA | 0.085 | 0.071 | 0.627 |
| VOLTA | 0.201 | 0.012 | 0.000 |
| EASTERN | 0.006 | 0.290 | 0.000 |
| ASHANTI | 0.061 | 0.266 | 0.000 |
| BRONG AHAFO | 0.122 | 0.089 | 0.326 |
| NOTHERN | 0.238 | 0.006 | 0.000 |
| UPPER EAST | 0.116 | 0.000 | 0.000 |
| UPPER WEST | 0.079 | 0.000 | 0.000 |
| Tribes | | | |
| AKAN | 0.061 | 0.964 | 0.000 |
| GA/DANGME | 0.055 | 0.006 | 0.010 |
| EWE | 0.256 | 0.024 | 0.000 |
| GUAN | 0.104 | 0.000 | 0.000 |
| GRUMA | 0.049 | 0.006 | 0.017 |
| MOLE DAGBON | 0.317 | 0.000 | 0.000 |
| GRUSI | 0.110 | 0.000 | 0.000 |
| MANDE | 0.024 | 0.000 | 0.045 |

Source: own data

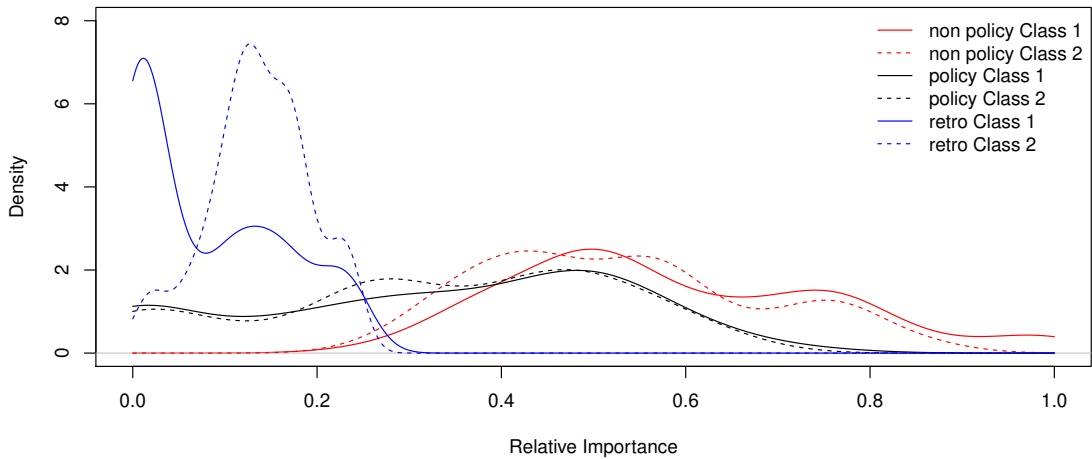


Figure 7.7: RI of voting motives in latent classes
Source: own data

Taking a look at the regional differences shows that Class 1 is dominated by people from the north and east of Ghana (Volta, Northern, Upper East and Upper West), while Class 2 is mainly represented in the south, west and in the center of Ghana (Western, Central, Eastern and Ashanti).

Before interpreting the choice model, we take a look at the distribution of the dependent variable between the classes. The differences are very distinct. On the one hand, Class 1 clearly supports the NDC with 82% (NDC=18%) and on the other hand, Class 2 supports the NPP with 80% (NDC=20%). This party identification is also visible in the estimated constant in the latent class model. While the alternative specific constant is strongly negative and significant for Class 1, which indicates an affinity towards the NDC. It is the other way around for Class 2, the constant is positively significant. The sign of the policy issue coefficients is negative regardless of which class is considered, but the level of the coefficients is smaller for every issue in Class 2 compared to Class 1. This is a first indicator for a lower importance of policy oriented voting in Class 2. The predictor variables are also consistently lower for Class 2. Further, they are all significant in Class 1, while in Class 2 only RETRO_PAST and PERF_ECONOMY influence the model significantly. The only positive predictor in Class 1 is the coefficient RETRO_PRESENT. By implication the calculation of marginal effects is only possible for the variables included in the choice model and not for those included in the class model. Interestingly the effects of the latent class model are almost identical to the effects from the ML model⁶. The maximum variation from the marginal effect of the ML model is 3% for the policy issue WEAKVSSTRONGSTATE.

The relative importance of the voting motives is plotted class specific in Figure

⁶This is also true when the other model specifications of the latent class are considered, the only exception is Model 1, where no covariates were included.

7.7. The difference in policy and valence voting are quite small between Class 1 and Class 2, but the difference in retrospective voting is considerably larger. The mean RI of Class 1 for retrospective voting is only 8% and for Class 2, 14%. Besides it is also visible that Class 1 votes less policy oriented than Class 2, which is not obvious from the model output. The coefficients of Class 1 are actually bigger than those of Class 2, but relative to the total sum of the marginal effects, policy voting is less important in Class 1 than in Class 2. Analogously the relative effect of non policy voting is also smaller in Class 2. Hence, we can conclude that the differences in voting behavior are more evident in the results of the latent class analysis compared to the results of the ML analysis.

7.5 Voting Behavior and Government Performance

In the previous sections two distinct groups of voters were identified. On the one hand there is Class 1, which consists of the rural people with lower education levels and lower income. They strongly support the incumbent party, the NDC. Class 2 on the other hand, is an urban class, with better education and higher household income, they vote for the NPP with almost 80%. While both classes differ in their personal characteristics and their vote choice, the modality of how they choose their favorite party and their voting behavior respectively do not differ very much from each other. In this section we further investigate government performance in Ghana, whether the government acts accountable towards the voter and if the political process is biased towards special interests, which is formally known as capture. As we could not identify any groups that actually differ in their voting behavior, we assume that capture is not very pronounced in Ghana. At least not between rural and urban areas.

7.5.1 Government Accountability

Governments act accountable when their implemented policies correspond to the needs and desires of voters as a whole and not to lobbying activities or intrinsic policy preferences of politicians. Based on the ML model as well as the different latent class models, accountability indices were calculated for the case of Ghana (see Table 7.8). Depending on the model on which basis the index was calculated, GA_1 varies between 0.42 for the ML model and 0.54 for model one of the latent class analyses. While the latent class models two to four are very similar to the ML index, model one is significantly different. Just like in the description of voting behavior, the absence of personal characteristics in the model reduces its abilities to express the heterogeneity that is included in the sample. Hence, we will exclude the results of model one during further explanations. A government accountability index of $GA_1=0.42-0.45$ indicates that elections and hence voters account for 42-45% of the total weight that voters and interest groups have collectively in the political process. The results imply that voting plays a crucial role in the political process in Ghana, but it is not the dominant player. Interest groups and lobbying have a weight of 55-58% and hold the majority of power. Though, the index is very close to 50%, which indicates almost equal power of voters and interest groups respectively.

Table 7.8: Government accountability indices (ML and LC Analysis)

| | | ML | Latent Class Model | | | |
|-----------------|-------------------|-------|--------------------|-------|-------|-------|
| | | M6 | M1 | M2 | M3 | M4 |
| GA ₁ | | 0.421 | 0.542 | 0.450 | 0.449 | 0.434 |
| GA ₂ | | 0.601 | 0.456 | 0.563 | 0.559 | 0.690 |
| GA ₃ | CASHVSFOODCROPS | 0.138 | 0.101 | 0.164 | 0.163 | 0.164 |
| | TAXVSPROTECT | 0.153 | 0.069 | 0.114 | 0.111 | 0.120 |
| | WEAKVSSTRONGSTATE | 0.113 | 0.084 | 0.115 | 0.115 | 0.125 |

Source: own calculations

The second index, GA₂, is corresponding to the degree of intrinsic policy preferences ϑ of the governmental party. Unfortunately no data is available on these intrinsic policy preferences, however, we can estimate the extent to which the relative weight of intrinsic policy preferences would decrease if we assume that voters do not engage in non policy voting. To this end, we recalculate the parameters α_G , β_G and δ_G , assuming non policy factors are zero for all voters and divide the sum of these recalculated parameters by the sum of the originally estimated parameters. This ratio corresponds to the percentage of intrinsic policy preferences that are achieved in the current situation compared to the percentage of intrinsic policy preferences that are achieved if all voters based their vote choice solely on policy indicators and observed economic performance. The variation of the second indicator GA₂ is considerably larger between the different model specifications than for GA₁. GA₂ varies between 0.56 for model two and 0.69 for model four. The results indicate that based on actual voting behavior the relative political weight of intrinsic policy preferences of the government is 0.44-0.31 times lower than in a hypothetical case when only policy and retrospective voting exist. From the theoretical framework in chapter 5 we already know that government accountability is high, when people vote mainly policy oriented and retrospective, hence intrinsic policy preferences must be low. GA₂ being below one is a sign of very low intrinsic policy preferences in the real world scenario for Ghana. Although the actual degree of intrinsic policy preferences can only be measured with appropriate data, which is not available so far.

The third and last indicator measuring government accountability, calculates how much the incumbent party can change its own policy position, to please their intrinsic preferences or the preferences of lobbying groups, without losing the election. The basis for the calculations is the policy scale from one to five considering the different policy issues. Without losing the majority of the votes the NDC can move its policy position within a range of 14-16% on the issue CASHVSFOODCROPS, 11-15% on the issue TAXVSPROTECT and 11-12% on the issue WEAKVSSTRONGSTATE. All three issues do not allow big shifts of the policy positions for the governmental party. The NDC has to stick to its current policy positions, as otherwise they will lose the majority in the next election (see also Figure 7.4). The result indicates high government accountability towards the voter, as the political party can only move its policy position to a minor degree to please either their own intrinsic policy preferences or the policy preferences of interest groups.

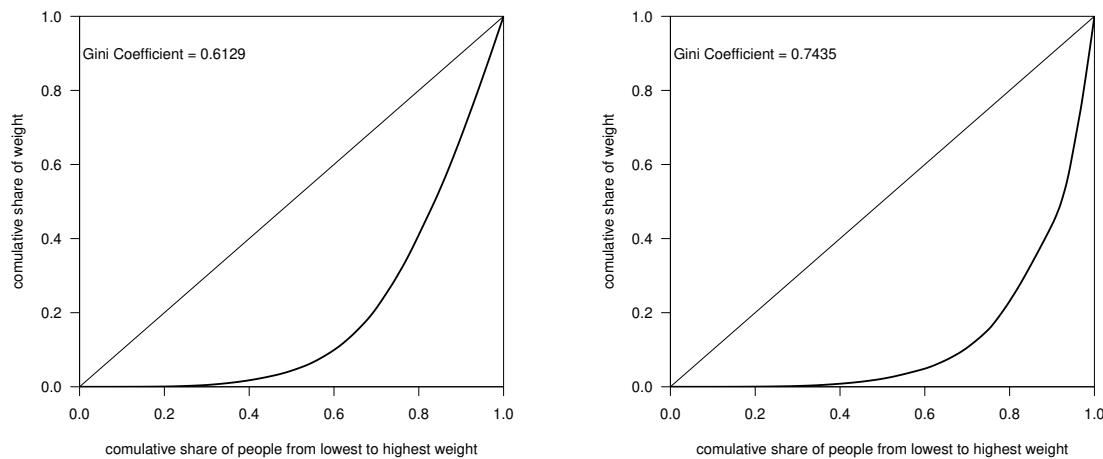


Figure 7.8: Lorenz curve (left: ML - M6, right: LC - M2)

Source: own data

7.5.2 Government Capture

Although a government acts accountable, electoral competition can still be biased in favor of special interests. To measure the discrimination of certain voters or groups of voters, we defined the individual voter weight, w_i , as well as the index $GC_{T,T'}$ that measures government capture. In the special case of a two party democracy, following equation 5.25 the individual weight corresponds exactly to $P_{ij}(1 - P_{ij})$ for the ML model. In a perfect democracy, the general rule: *one man one vote* should apply. Translated into our theory of voting, in an optimal unbiased scenario everybody has equal weights corresponding to his or her population share. In the sample ($n=333$) the unbiased individual weight equals $\frac{1}{333}$. However, this case does not exist in a real world scenario and also in Ghana voting weights are biased. In Figure 7.8 the Lorenz curve is depicted for the voter weights calculated from the ML model results and from the latent class results. The corresponding Gini coefficient⁷ is 0.61 for the former and 0.74 for the latter. The unequal distribution of weights is more pronounced in the Latent Class model, where 20% of the population own 80% of the weight, while the results from the ML model conclude that 40% own approximately 60% of the total weight. However, both results confirm major inequalities and an enormous bias between individual voters.

After exploring the bias in voter weights, the next step is to identify whether the weights are randomly distributed among the population or if some groups have significantly higher weights than others. From the literature on developing countries we expect a heavy bias towards the well educated⁸, rich⁹ and urban population

⁷The Gini-coefficient measures the relative share of the area between the Lorenz curve and the angle bisecting plane and the total area under the angle bisecting plane. The latter corresponds to a perfect equal distribution. Accordingly a Gini-coefficient of one indicates a maximally unequal distribution, while a Gini coefficient of zero indicates a perfect equal distribution.

⁸Someone was considered to be better educated, when he finished at least primary school.

⁹Someone was considered rich or poor by using the variable household expenditures, when someone spends on average more than 300 Cedi a month they were considered to be rich. The index was

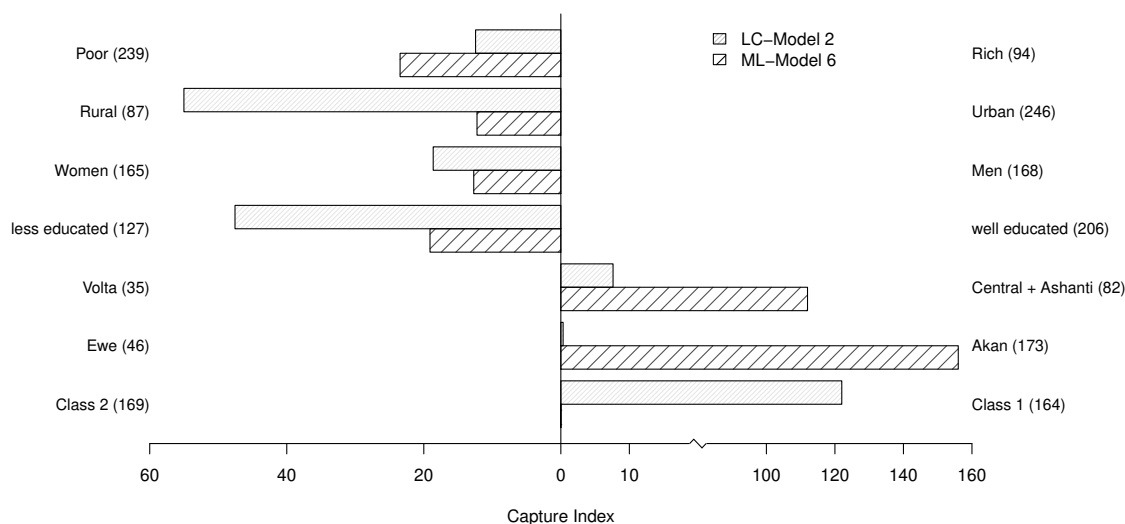


Figure 7.9: Capture in Ghana
Source: own data

(Lipton, 1977; Sahn and Stifel, 2003; Avery and Peffley, 2005). The results however point in the opposite direction. Taking a look at Figure 7.9 reveals that especially those groups that were expected to be captured are actually the ones capturing their counterparts. This means the poor people capture the rich, the rural capture the urban, women capture men and well educated capture the less educated. The results are robust independent of whether the ML or the latent class model estimation is taken for the calculation. For regional and ethnic groups capture indices were calculated for the typical voter groups of the NDC and NPP. Usually the NDC is supported by the Ewe and the Volta region, while the NPP has its strongholds in the Ashanti/Central region and among the Akan tribe. In contrary to the results above, the measurement of capture between regional and ethnic groups shows significant differences for ML and LC model. The ML model concludes that the Central and Ashanti region are heavily capturing the Volta region and the Akan tribe is capturing the Ewe tribe. The Latent class analysis qualitatively agrees but the effects are much smaller, especially the capture index between Akan and Ewe is almost zero. Finally the two classes, determined in the latent class analysis, are also contrasted with each other, the result is very clear, Class 1 has a significantly larger average weight and is hence capturing Class 2. The result was to be expected, as Class 1 is the rural class and we have noted before that the rural and poor part of the population are capturing the rich and urban people.

The results have to be looked at separate from each other, first there is capture among different socioeconomic groups and second there is capture between regional or ethnic groups. The results for the former are clear, the theoretically weaker

also calculated taking the LPI (Mattes, 2008) for measuring wealth, the results are comparable to the ones presented here.

groups like the poor, rural and female population are not captured, but actually have a greater average weight. The result is robust and independent of whether a ML or latent class analysis is applied. Further, for the latter case, the results differ significantly in their magnitude, but still point in the same direction. As the concept of capture assumes that voting behavior and personal weights differ between people, heterogeneity is a necessary condition. Hence, the latent class analysis is considered superior to the ML analysis and we believe that the degree of capture between Akan and Ewe and Central/Ashanti and Volta is rather small. Further, it became apparent that the NDC exerts its incumbent advantage towards the NPP, as NDC supporters capture NPP voters.

The distribution of power differs heavily across groups, hence the parties policy positions should usually be biased towards those groups that have higher average weights. The issue taxation vs. protection of the agricultural sector is an important political issue in Ghana. Both parties actually take an identical position of 4.20. Incumbent and opposition are equally interested in protecting the agricultural sector. The position of the rural population is to protect the agricultural sector even further (4.59), while the urban population demands slightly less protection (4.23). That means that although the rural population has a higher average voter weight, the NDC is closer to the urban than to the rural position. It further implies that the incumbent party could actually increase their vote share by moving further towards protecting the agricultural sector. This raises two questions, first why does the NDC position itself closer to the urban than to the rural policy position and second, why do they not move closer to both voter groups if they could thereby gain additional votes. The answer can be found in the definition of the support function of the incumbent party, which includes voters, interest groups and intrinsic policy preferences. When the policy position does not agree with the voters policy position, it must either please special interests by lobbying groups or serve the parties own intrinsic policy preferences. Recalling the accountability index GA_1 , interest groups and voters both have about 50% of the total weight within the political process, hence the probability is high that the movement towards the taxation of the agricultural sector and away from the voter is due to pressure from organized interest groups. We can further calculate the empirically optimal policy position of the government party that follows from the support function, by taking the weighted mean of all voters policy positions (see equation 5.28). The result is 4.30 with the ML voter weights and 4.38 for the LC voter weights. If the government would only be accountable towards the voter, they would take exactly that policy position, which is in fact closer to the rural policy position than to the urban policy position. In a situation without capture, where everybody has the same political weight, the optimal position equals 4.32 (see equation 5.29). The difference between the *one man one vote* position and the weighted policy position is small, which indicates that the bias induced through different voter weights does not influence actual policy positions significantly and that the fact that the NDC does not take this position is due to lobbying and intrinsic policy preferences instead.

Finally we are linking government performance and voting behavior. In Figure 7.10 personal voter weights are plotted on the y-axis and the utility share of non policy voting on the x-axis. Non policy voting is measured as personal characteris-

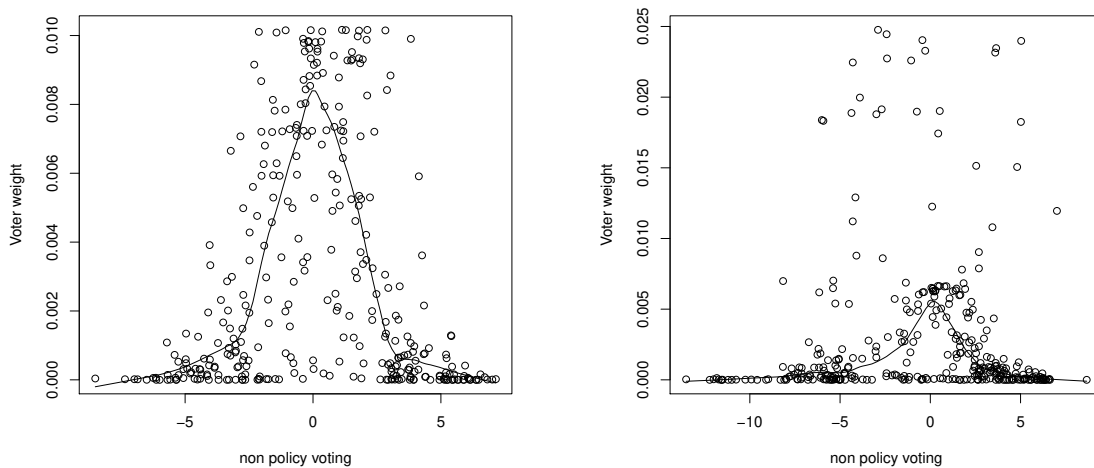


Figure 7.10: Relationship between voter weights and voting behavior (left: ML - M6, right: LC - M2)

Source: own data

tics multiplied with the corresponding alternative specific coefficient and the three variables measuring government performance also multiplied with their alternative specific coefficient¹⁰. The locally-weighted polynomial regression shows the relationship between voter weights and non policy voting. It resembles a reverted U-shape, with its maximum around zero for the ML model as well as for the latent class analysis. Though the scale of the y-axes as well as of x-axes is wider in the latent class case. For both models it applies that the greater the absolute value of non policy voting, the smaller is the voter weight respectively. The result approves with the theory that non policy voting actually leads to lower voting weights and hence also to lower accountability. The points at the edge of the plot are those voters that strongly identify with the NDC because of non policy factors, hence they don't need to be convinced with actual policy decisions or economic well being. Governmental accountability towards those voters is generally low and they will be captured by other voters with greater personal weights. Still, voters with low weights can enjoy political privileges, though they are often of clientelistic nature and hence do not promote general government accountability.

7.6 Summary

Ghana is a stable democracy in Sub-Saharan Africa, with a history of multiparty elections since 1992. During the past twenty years several turnovers took place, currently the NDC is in power and the NPP is the most important party in the opposition. In the literature Ghana is often described as a country, where especially ethnicity and region drive election results. With our analysis we cannot confirm these results. Although we also identified non policy voting to be the most impor-

¹⁰The latent class analysis does not include any personal characteristics in the choice model, hence non policy voting only consists of the alternative specific constant.

tant voting motive, with a relative importance of 60%, we further found out that policy voting accounts for 32% and retrospective voting for another 8%. Hence, policy voting is important in Ghana and significantly determines policy outcomes. Especially agricultural policy issues are of special interest. We also showed that voting behavior is not homogeneous among voters, but differs from person to person. And not only voting behavior differs, also the personal weights we calculated for every voter are distributed extremely unequal. The Gini coefficient of the distribution of the voter weights is between 0.62 and 0.75, which suggests dramatic disparity. Though, while you would expect that the elite of the country, the urban and rich people are holding the lion's share of the weight in the political process. We found out that those groups which are usually considered to be disadvantaged in the political process actually have higher average personal weights in Ghana. The result is that rural people are capturing urban people, poor capture rich and uneducated people capture educated people. Furthermore, the result is robust, also if we estimate a latent class model instead of a multinomial logit model. With the latent class model we identified two distinct classes, for the rural, poor and uneducated people the probability to be in Class 1 is much higher than the probability to be in class two. While the opposite is true for the urban, rich and educated part of the population. Hence, Class 1 possesses higher average voting weights and is capturing Class 2.

When weights are unequally distributed in the political process it normally also leads to biased policy positions. In the case of Ghana the NDC should take policy positions that are close to the rural, poor population, as they hold higher average weights than their urban counterparts. Empirically we do not find this bias, the NDC does not take the position of the rural population, they actually position themselves closer to the position of the urban people. A diverging position from the empirical position is either due to pressure of interest groups or intrinsic policy preferences. From the accountability indicators GA_1 and GA_2 we know that voters and interest groups have about the same power in the political process, further intrinsic policy preferences do not seem to be very pronounced in Ghana. Additionally GA_3 showed that the leeway the NDC has to move its policy positions is quite small, which further argues for accountability towards the voter. Hence, we conclude that the fact that the policy position of the NDC is closer to the urban than to the rural population, is due to interest groups. These groups demand policy positions that are closer to the urban interests, but the possibilities of the government to please their demands are restricted by government accountability towards the voter (GA_3). Hence, although voting weights are distributed unequally in Ghana, the political process is not heavily biased. The government is accountable towards the voter and elections provide an effective mechanism to promote democracy.

Chapter 8

Senegal

Senegal is the westernmost country on the African continent. The Atlantic Ocean marks the western border, to the north you find Mauritania, to the east is Mali, and Guinea and Guinea-Bissau are located in the south of the country. Furthermore, within Senegal lies the small country of Gambia (Central Intelligence Agency, 2013). Senegal is divided into 14 administrative regions, which can be seen in Figure 8.1. The largest city and also the country's capital is Dakar, which is located on the Cap-Vert peninsula at the westernmost tip of the country. 13.6 million people live in Senegal, it is hence the least populated country compared to Ghana and Uganda. Just like in many other countries in Africa, in Senegal live many different ethnic groups, most of them speaking their own tribal language. The biggest ethnic group are the Wolof with 43%. While French is the official language in Senegal, Wolof is the language that is mainly spoken among the people, especially in Dakar. The Pular are the second largest group with 23.8% followed by the Serer with 14.7%. The remaining ethnic groups are smaller, with population shares of less than 5%.

The GNI per capita (Atlas method) was \$1030 in 2012, just like Ghana, Senegal is considered a lower middle income country (The World Bank, 2013). The economy strongly relies on agriculture, 14.9% of the GDP are due to the primary sector and 77.5% of the labor force are occupied in the sector. The dominant agricultural products are peanuts, millet, corn and rice. Other industries are phosphate mining and fertilizer construction. Additionally due to its location, another important sector is commercial fishing. The GDP growth rate was 3.7% in 2012 and is close to the average GDP growth rate in Sub-Saharan Africa. Although GDP growth is expected to increase in the future in Senegal, it will not be sufficient to reach the same growth rates as Sub-Saharan Africa as a whole.

Senegal is among the oldest democracies in Africa (Olympio, 2012) and also often classified as one of the showpieces of African democracies (Galvan, 2001). Marshall et al. (2012) agrees and classifies Senegal on the Polity IV scale as a democracy with a polity score of 7. Additionally Senegal is considered to be a free country with a political rights and civil rights rating of 2. The civil rights ranking just improved from 3 to 2 since the last survey in 2013 (Freedom House, 2014), which is mainly due to the peaceful change of government in 2012.

8.1 From Independence to Democracy

Senegal gained independence from France in 1960. First in collaboration with Mali under the name of the Mali Federation. But the union did not hold for long, a few month later the two countries split up again and became two independent states. After independence in 1960, Léopold Senghor became the first president of Senegal. With the Senegalese Progressive Union (UPS) a Socialist party, he ruled the country for 20 years. From 1966-1976 Senegal was basically a one-party state until finally



Figure 8.1: Administrative Regions in Senegal
 Source: Map No. 4174 Rev. 3, January 2005, UNITED NATIONS

in 1976 Senghor allowed opposition parties to participate in the political process. However, political parties could not be found at will, but had to fit in Senghor's predetermined ideological range. The former one party system was transformed to a three party system, with one party representing liberal and democratic tendencies, another party representing the socialist and democratic ideology and a third one following the Marxist-Leninist ideology (Busky, 2002). The ruling UPS was renamed to simply Socialist Party (PS), which consequently represented the socialist choice. The liberal, right-of-center alternative was the Senegalese Democratic Party (PDS) and the radical left was represented by the African Independence Party (PAI) (Galvan, 2001). In the first multiparty presidential elections in 1978, the PDS with their ambitious leader and presidential candidate Abdoulaye Wade were the only serious opponent of the PS. While the PDS gained 17.5% of the votes, Senghor got 82.5% and stayed in power for two more years, until he retired voluntarily in 1980 (Galvan, 2001). His successor Abdou Diouf took over his position, Diouf had been prime minister since 1970 and was a well known politician. Diouf decided the following three elections in 1983, 1988 and 1993 in favor of himself and the PS. Eventually in 2000 after 40 years of PS government, Abdoulaye Wade put an end to the regime. He and the Senegalese Democratic Party (PDS) decided the election in favor of themselves. The peaceful transition of power was a big step towards democratization for Senegal, although throughout his function as president Abdoulaye Wade employed some rather undemocratic strategies to stay in power (Kelly, 2012). His undemocratic strategies culminated in the presidential elections in 2012, when Wade announced that he would run for a third term as president, although he had promised differently in 2007 and had to change the countries constitution for his purpose. In the constitution of 2001 it was written that the president is limited to rule for a maximum of two terms, Wade succeeded by arguing that his first term did not count as it had been during the previous constitution (Adebayo, 2012). The President's behavior led to many protests, violence and riots in the pre-election phase in 2012. Finally it was agreed by the Constitutional Court of Senegal that Wade was legitimized to run for a third term. The opposition candidate Macky Sall from the Alliance for the Republic (APR) was his main challenger, he gained 26.58% in the first round in 2012 compared to 34.8% for the incumbent. In the second round the opposition united and aligned with Sall which led to an overwhelming victory with 65.8% of the votes. Abdoulaye Wade and his party were defeated after 12 years in office. However, Wade and his fellow party members accepted the defeat straight away and were one of the first to congratulate Macky Sall on his victory (Kelly, 2012). After the troublesome pre-election phase the outgoing of the election and the peaceful handover of power was a surprise to many national and international observers. It raised hopes that Senegal is further moving towards a well functioning democracy.

8.2 Literature Overview

Senegal is a prime example for studying voting behavior. Since 1978 seven multiparty elections took place that were considered more or less free and fair (Vengroff and Magala, 2001; Resnick, 2013; Galvan, 2007). Without military interference three peaceful turnover of power occurred, while the first turnover did not put a new

political party in power but just a new president (1980 when Diouf took over from Senghor), in 2000 and 2012 the governmental party changed as well. With Abdoulaye Wade accepting his defeat in 2012, Senegal also achieved democratic consolidation following the definition of Huntington (1991), who emphasizes that, "at least two turnovers whereby the opposition party that ousts an incumbent also accepts defeat in a subsequent election", have to take place (Resnick, 2013).

Poteete (2013) and many other scholars of African politics confirm that the link between elections and policy is not very distinct in Africa. The same applies for Senegal in particular, where political parties generally have ideologically meaningful names but hardly provide any ideology or policy platforms that differ from each other (van de Walle, 2003; Koter, 2013). Compared to other African countries like Ghana or Malawi where ethnicity and regionalism plays a dominant role for vote choice (Ferree and Horowitz, 2010; Bratton et al., 2012; Lindberg, 2012), in Senegal ethnic and regional identity is less related to voting behavior (Osei, 2012). Of course some regional patterns exist, e.g. Sall's strongholds are Fatick and Matam, and Wade gained strong support from his home department Kebemer and the Mouride capital of Touba (Resnick, 2013). But they do not significantly influence voting behavior. Instead, in Senegal, especially in the early times of democracy Islam and the Sufi Muslim brotherhoods played an important role for voting behavior. The religious leaders, the marabouts, would issue a *ndigel* a recommendation to vote for a certain candidate, which was widely accepted and followed by their *talibes*¹. The PS was always very close to the religious leaders and kept on good terms with Touba, the holy city of Mouridism. These relations partly explain the PS dominance which lasted for almost 40 years. In 2000 the brotherhood decided to not further support Diouf and they did not issue a *ndigel* to vote for him. The later president Abdoulaye Wade was also aware of the power of the brotherhoods and established excellent relations with them (Osei, 2012). He tried hard to get further support from religious and traditional leaders for the 2012 elections, mainly by distributing gifts like money, vehicles and diplomatic passports (Koter, 2013). However, this attempt of clientelism was not successful, as especially the most important religious figures decided not to interfere in the political battlefield anymore.

Although ethnicity, regionalism and religion are less important in Senegal compared to other African countries, the rural/urban divide has been very pronounced at elections. While rural regions support the incumbent, the opposition mainly gains their votes from the urban areas and cities. Koter (2013) analyzed the relationship between incumbency advantage and place of residence and could show that urbanization and incumbent score were negatively correlated for all elections in Senegal so far. Like many other African countries Senegal is dominated by rural areas, 60% of the voters live in rural regions and accordingly have a crucial part in elections. Whoever manages to rally the rural population behind himself wins the majority. Interestingly their support is not bound to personalities, while Wade was still in opposition he gained the majority of support from the urban areas and especially from Dakar. Once he was in office the results changed and he got more and more support from the rural regions compared to the urban ones. Koter (2013) also shows in her

¹The general meaning of talibe in Arabic is student, though especially in West Africa it is used for Islam students or followers of a religious teacher.

paper that her results are robust even if she controls for other social characteristics like education, age and gender. Further, also religion and ethnicity do not decrease the significance of the place of residence. Government policies are also not able to describe the bias rural inhabitants have towards the incumbent. It seems that although rural regions provide the votes for the incumbent, the urban areas gain the reward. The urban bias described by Lipton (1977) reports that urban areas gain a lot more public services and investments than rural areas. Hence, income distribution is harmed and the gap between urban/rural and rich/poor is further increasing in the future (Sahn and Stifel, 2003; Lipton, 1993). In addition a systematic discrimination of the rural population is present in African countries (Bates, 1981; Bezemer and Headey, 2008). In Senegal there is the case of the groundnut sector, where farmers have to sell their products to the marketing boards, while the government controls the prices. In the 1960s the prices for groundnuts were cut dramatically, which heavily reduced the income of all farmers, as they had no other distribution channels to sell their products. Until today farmers are dependent on price policies for agricultural products by the government that systematically discriminates them. Poteete (2013) describes another example from the fishing in her paper. In 2011 Abdoulaye Wade and his minister responsible for fisheries granted more than 40 authorization protocols for the 2012 fishing season, which allowed foreign trawlers to fish in Senegalese waters. The decision caused considerable harm for the local fishing industry, because the foreign trawlers would fish in their territories and hence reduce the local catch. These are only two examples for governmental policies that directly harm the well-being in rural areas, by reducing the income of the rural population, especially the income of farmers and fishermen. However, rural voters are still supporting the incumbent who is implementing these policies. Explanations for this behavior can only be found in clientelism and patronage. During election campaigning the incumbent candidate has financial advantages compared to his opponents. They have not only access to state money, but are also able to allocate public goods, public resources and governmental jobs to their clientèle (Vicente and Wantchekon, 2009). Clientelism is only possible with enough money and resources and therefore strongly favors the incumbent. Comparing rural and urban settings shows that clientelism works especially well in rural areas because of several reasons. First, polling stations tend to be smaller in rural areas, which makes it easier to monitor and also put pressure on a whole village. Thus, politicians can easily promise rewards or threaten with punishment for a village, depending on the outcome of the election (Koter, 2013). Second, religious and traditional leaders have a better standing and are more important in rural regions compared to urban settlements. Hence, they are used by politicians as bottle necks to influence the people of a village or a community in their vote choice.

Though the elections in 2012 were different in many aspects, one critical difference was the decreasing support of Wade in the rural regions which finally led to his loss against the opposition leader Macky Sall. But why did the rural population withdraw their votes from the incumbent? People in rural as well as in urban areas were deeply dissatisfied with Wade's governmental performance and behavior. Especially his running for a third term turned people off. Additionally many Senegalese feared that Karim Wade, the president's son would become his father's successor (Sy, 2012).

Karim Wade had gained more and more power since 2007, but is rather unpopular among the people, particularly because of financial mismanagement and corruption. Traditional and religious leaders also refrained from the president and especially the important religious figures stayed out of election campaigning. All these factors led to the situation that after 12 years of PDS government the rural population eventually noticed their own discrimination and voted for a change in 2012.

Further, the next presidential elections will be strongly influenced by the changing demographic structure of Senegal. Currently already 63% of the population are under 24 years old, and the trend will continue in the next few years. Additionally more people are migrating from the rural areas to the urban centers and urbanization will take place. Hence, future election campaigning needs to focus on the young people and urban areas in particular (Resnick, 2013). In the next chapter we will empirically analyze voting behavior in Senegal and later derive voting weights for different groups of voters. Following the literature we expect policy voting to only be of minor importance, while non policy factors will be dominant especially in rural regions. Further, the political weights of the rural populations will be low, as politicians have not been accountable towards them so far. In contrast to the literature cited above we will actually estimate voting behavior econometrically using a multinomial logit model (ML) and a latent class model (LC). As we include issue voting as well as retrospective and non policy voting in our analysis we are able to evaluate the importance of each of the voting motives. An econometric analysis of voting behavior that includes policy voting, non policy voting and retrospective voting has not been undertaken for the case of Senegal so far, hence we will close this gap in literature.

8.3 Data Description

In Senegal we cooperated with Afrobarometer to collect the data necessary for analyzing voting behavior. Afrobarometer is an independent, nonpartisan research project that measures the social, political, and economic atmosphere in Africa. Since 1999 Afrobarometer is conducting public opinion surveys in Africa. Starting with twelve countries in the first round, by now Round 5 covers 35 African countries. The data on Senegal used in this paper was collected during the fifth round in 2013 over a period of two weeks in late February. The timing of the survey is one year after the last presidential election, hence vote choice is a rather theoretical construct for the respondents as the next presidential election will not take place until 2017-2019, depending on whether Macky Sall will restore the five year term of office for the presidency or not (Poteete, 2013). Hence, the survey does not provide a forecast of the next elections, but rather an evaluation of the election and voting behavior in 2013. Therefore, the timing is quite beneficial, by now the president has been in office for one year and first evaluations of his performance are feasible. In Round 5 next to general sociodemographic data, special emphasis was put on taxation, gender issues, crime, conflict and insecurity, globalization and social service delivery. Additionally Afrobarometer offers some space to add country specific questions to the questionnaire. In this context we added several questions focusing on policy issues and the analysis of voting behavior. That is why Round 5 also covers questions on

agricultural policy issues and a question identifying whether someone is employed in the farming sector or not.

8.3.1 Sampling Procedure

Afrobarometer surveys are based on a national probability sample that is a representative cross-section of all citizens of voting age. To guarantee that every adult citizen has an equal chance of being interviewed, random selection methods are applied at every stage of sampling. Furthermore, the sampling design is corresponding to probability proportionate to population size and the sample is stratified by region and residential locality (urban/rural). The interview process includes four stages in urban areas, and five stages in rural areas. In rural areas, first a secondary sampling unit (SSU) is randomly chosen, before from each SSU two primary sampling units (PSUs) are selected. In a next stage the sampling starting point is selected, from where eight households are randomly picked. The last stage is the random selection of an interview respondent. The gender of the respondent will be altered after each interview to have an equal number of men and women in the sample. In urban locations the first stage is dropped and the PSUs are selected straight away.

The interviews were conducted face-to-face in the respective first language of the interviewee. All interviewers were intensively prepared and trained before the actual survey, to guarantee a smooth interview procedure. For further information on the sampling procedure of Afrobarometer surveys please consider the survey manual (Afrobarometer, 2011).

8.3.2 Questionnaire and Variables

The total sample size of the Afrobarometer survey is 1200 individuals, the interviews were conducted in 150 PSUs all across Senegal. The questionnaire contains 100 questions measuring socioeconomic characteristics and individual attitudes and behavior concerning: Democracy, Governance, Livelihoods, Macro-economics and Markets, Social Capital, Conflict and Crime, Participation, National Identity, Taxation, Gender issues, Crime, Conflict and Insecurity, Globalization and Social Service Delivery. So far Afrobarometer did not ask explicitly for policy issues in their surveys, that is why we added three questions focusing on agricultural policy positions. Further, another question was added to the questionnaire to determine the number of people employed in the farming sector.

For additional analysis some observations were deleted from the sample. This was especially due to missing values concerning the vote choice question, but also missing values concerning the policy position of the voter. After data cleaning 667 complete observations were available for analyzing voting behavior. In the following part variables used in the section are introduced and explained in more detail. For comprehensibility the variables are split up into dependent and independent variables and into their category of voting: policy, retrospective and non policy.

Dependent Variable In a probabilistic voter model the dependent variable is usually vote choice. Depending on the kind of data available actual or intended vote

Table 8.1: Presidential election results from Senegal

| | PDS | APR | AFP | PS | REWMI | FSDBJ | others |
|----------------|-------|-------|------|------|-------|-------|--------|
| 2012-1st Round | 34.81 | 26.58 | 13.2 | 11.3 | 7.86 | 1.93 | 4.31 |
| 2012-2nd Round | 34.2 | 65.8 | - | - | - | - | - |
| Afrobarometer | 14.08 | 62.18 | 8.08 | 3.3 | 3.3 | 0.73 | 8.32 |

Source: African Elections Database (2014b); Afrobarometer (2013)

choice is used as the dependent variable. The typical Afrobarometer vote choice question is:

Q99. If a presidential election were held tomorrow, which party's candidate would you vote for?

The vote choice question is a very sensitive one, which often creates a lot of missing values. In Senegal there are only three actual missing values, however 95 respondents refused to answer the question. Furthermore, 225 people did not know who they would vote for and 46 declared that they would not vote. In total only 817 respondents mentioned a valid party name. Thirteen political parties were named, however only three parties gained more than five percent and actually mattered for the electoral outcome. We assume that the other parties gaining less than five percent do not play a crucial role in Senegal and do not determine voting behavior significantly, hence we excluded them from further analysis and remain with these three relevant parties: *Senegalese Democratic Party* (PDS), *Alliance for the Republic* (APR) and *Alliance of the Forces of Progress* (AFP). Table 8.1 shows the distribution of votes in the complete sample (n=1200) compared to the official election results from the first and second round in 2012. The survey outcome resembles far more the second round results, it almost perfectly hits the percentage of votes for Macky Sall's APR. It also reveals the decreasing support for Abdoulaye Wade's PDS after he lost the last election in March 2012.

Independent Variables

Policy Voting Voters rely on different voting motives when making their vote choice. Policy voting is applied, when actual policy positions are considered. In a country like Senegal, where 60% of the electorate are from rural regions, the policies of interest are especially agricultural policies. Furthermore, a country that moved from a autocracy to a democracy is generally interested in the issue of political regime. When asking for policy positions in the questionnaire, each voter was confronted with two opposite statements and had to answer whether he agrees very strongly with statement one or two; agrees with statement one or two or agrees with neither statement one or two. From the responses individual policy positions were coded for each voter and issue, ranging from one (agree very strongly with statement 1) to five (agree very strongly with statement 2). The following issues were asked in the Afrobarometer survey, while the first three were added by ourselves and hence asked for the first time in Round 5, the last one has been part of the Afrobarometer survey for several years already.

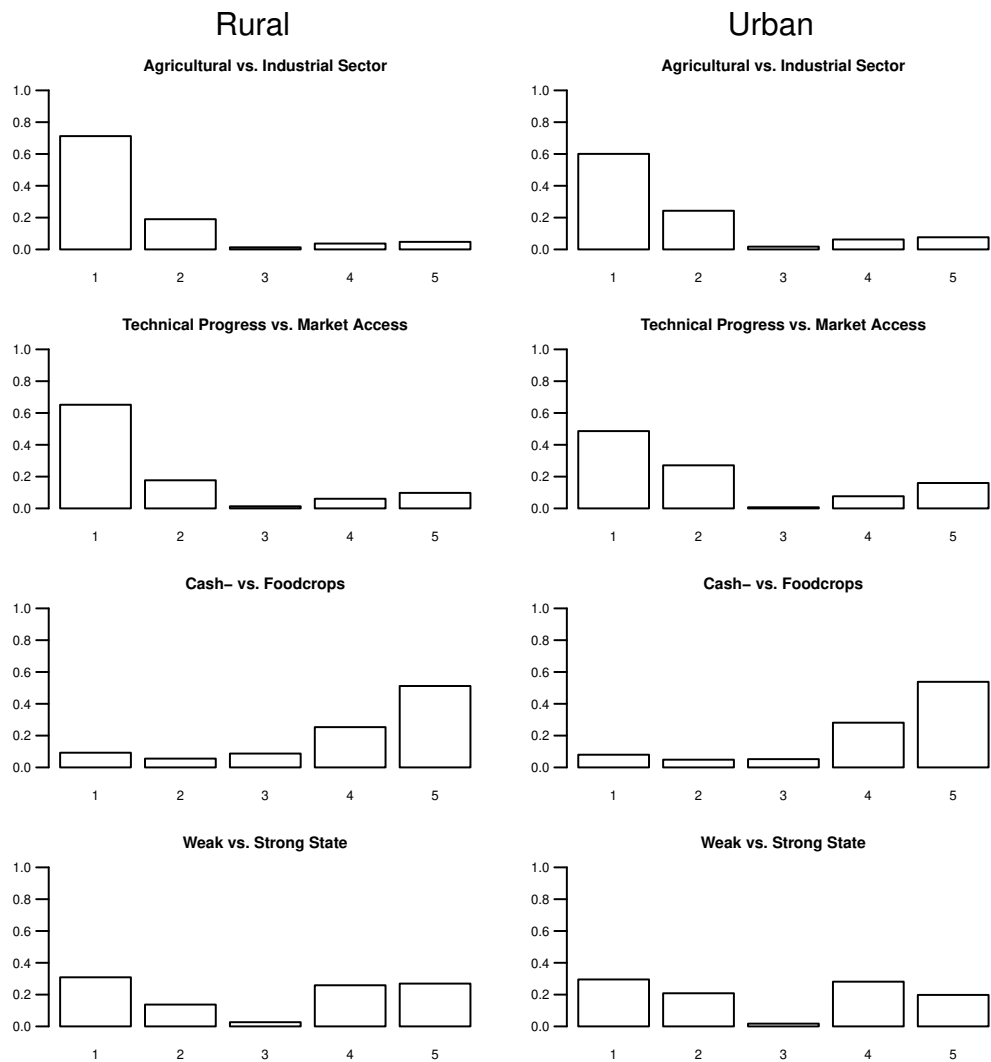


Figure 8.2: Voter positions in Senegal
Source: own data

- Agricultural Sector vs. Industrial Sector (AGRVSIND)
 - S1: To promote economic growth it is best to focus on agriculture by developing rural regions and increasing support to farmers.
 - S2: To promote economic growth it will be more effective to focus on developing urban areas and building up the industrial sector.
- Technological Progress vs. Market Access (TPVSMA)
 - S1: To promote economic growth it is best to focus on new technologies and better inputs, like machinery, fertilizer, and better seeds.
 - S2: To promote economic growth it will be more effective to focus on improving access to markets with better infrastructure and communications.
- Promotion of Cash Crops vs. Promotion of Food Crops (CASHVSFOODCROPS)
 - S1: To promote economic growth it is best to focus on producing more cash crops like peanuts, sugarcane and cotton.
 - S2: It is better to focus on producing more food crops like millet, rice, corn and sorghum to increase economic growth and decrease hunger.
- Strong Government vs. Weak Government (STRONGVSWEAKSTATE)
 - S1: It is more important to have a government that can get things done, even if we have no influence over what it does.
 - S2: It is more important for citizens to be able to hold government accountable, even if that means it makes decisions more slowly.

In Figure 8.2 the distribution of voter's policy positions is depicted for people from urban and rural regions. Differences in their policy preferences are hardly visible, all graphs are very similar independent of the area of residence. The result is especially surprising for the issue of AGRVSIND, as promoting the agricultural sector would clearly be more beneficial for rural regions than for urban regions. Generally one can conclude that in Senegal people want to support the agricultural sector rather than the industrial sector, 88% of the sample agree very strongly or agree with statement one on the issue AGRVSIND. When promoting the agricultural sector, rural as well as urban respondents think that economic growth can be achieved best through technological progress rather than market access. Further, Senegalese think that it is better to concentrate on the production of food crops to increase economic growth and decrease hunger. Again there are no significant differences between rural and urban respondents. The issue STRONGVSWEAKSTATE shows slight differences between rural and urban people, urban respondents agree more with statement two while rural respondents tend to agree with statement one. A possible explanation is education, which is generally higher in urban regions, hence citizens want to have a say in politics and hold government accountable.

As there is no explicit information on parties' policy positions available from the Afrobarometer survey, we estimated them from the individual voter positions, by taking the mean policy position of each respondent that voted for that particular party. The approach is known as partisan constituencies and is commonly used by political scientists and in the literature on voting behavior (Schofield et al., 2011).

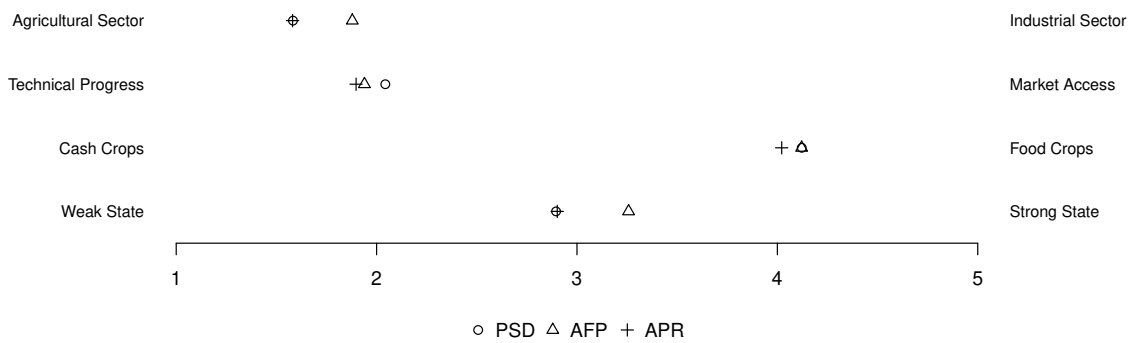


Figure 8.3: Party positions in Senegal
Source: own data

Figure 8.3 shows that the party positions do not vary significantly from party to party, which confirms the literature cited above. On the issue STRONGVSWEAK-STATE all three parties are located in the center of the scale, though the AFP is further to the right than APR and PDS, indicating that they favor a more accountable government. Concerning the issue whether the agricultural or the industrial sector should be supported, PDS and APR both hold the position 1.58, compared to the AFP with 1.88. Hence, APR and PDS rather want to develop the rural regions and the agricultural sector, while the AFP tends a bit more towards the industrial sector. The political parties agree on economic growth being mainly achieved through technological progress, with the APR being most convinced (1.90) followed by the AFP (1.94) and the PDS (2.04). On the last issue CASHVSFOODCROPS, both PDS and AFP take the same position (4.12). They want to achieve economic growth by promoting food crops rather than cash crops. The APR is oriented a little bit more towards the promotion of cash crops (4.02). The similarity of the policy positions suggests that policy oriented voting is not very important, as voters are not able to differentiate the political parties on the basis of their policy programs. Additionally there is no political party that is closer towards the rural or urban population concerning their policy positions.

For the estimation of voting behavior, policy distances between voters and political parties were calculated. We took the squared distance to further emphasize greater distances and to get rid of the algebraic sign. In the estimation results we expect the policy coefficients to be negative, as greater distances will reduce the probability to vote for a certain party.

Retrospective voting The Afrobarometer questionnaire contains three questions that ask the respondents to evaluate the economic conditions in Senegal and their own personal living conditions. The question is asked for the present situation, the situation compared to twelve month ago (past) and how the situation will change in twelve month time (future). To decrease the amount of variables in the estimation and because of collinearity, we conducted a factor analysis to reduce the number of variables in the model². We ended up with a three factor solution, with factors

²The models were also estimated with all variables included, which did not change the results.

loading high on the time dimension. The factors can be titled: RETRO-FUTURE, RETRO-PRESENT, RETRO-PAST.

Taking a closer look at the evaluations of the present situation, reveals that a majority of voters thinks that the economic conditions of Senegal are very good or fairly good. Only 19% consider them to be fairly bad and 1% thinks they are very bad. Their own living conditions are evaluated more negative by the respondents. While 45% consider their own living conditions as very good or fairly good, 26% are neutral about their current situation and the remaining 29% describe it to be fairly bad/very bad. When asked to compare the economic situation of the country today with the situation twelve month ago, 60% respond that the situation is the same or better. But there is also one third of the population that considers the situation to be worse, and 4% that even say it is much worse. The results for their own living conditions are slightly more positive, but generally very similar. The question concerning the future economic situation of the country and the future living conditions did only result in 9-10% missing values which is still a lot more than for the other retrospective variables (1%), but low compared to other African countries. The Senegalese look very positively towards the future, 78% expect the economic situation of the country to be better/much better in twelve month time. Even 80% anticipate the same for their own living conditions. The general atmosphere in Senegal has changed, before the election in 2012, people were very unsatisfied with their own living conditions and also with the economic situation of the country. They blamed the former president Abdoulaye Wade for their misery and hooked up with the opposition instead. With the new president Macky Sall being in office for one year, people evaluate their own situation as well as the situation of the country much better.

Non policy voting To account for non policy voting a whole set of sociodemographic variables as well as a variable that measures approval with the president were included (APPROVAL). Whether someone approves or disapproves with the president's performance depends on many different factors. Following the theory described in chapter 5 we assume that approval with the president is mainly a valence issue, strongly manipulable by election campaigning. To measure the president's performance, Afrobarometer asks the following question in their survey:

Q71. Do you approve or disapprove of the way that president Macky Sall has performed his job over the past twelve month, or haven't you heard enough about him to say?

Although many Senegalese are rather unsatisfied with the performance of their government, 79% of the people actually approve with president Macky Sall. The result further confirms the hypothesis that a charismatic leader is a crucial factor in African elections and far more important than the party he runs for.

Taking a look at the sociodemographic characteristics, which are displayed in Table 8.2, shows that the ethnic composition of the sample is comparable to the actual census data of the country. Although the Wolof tribe is underrepresented, while Pulaar and Serer are overrepresented. However, the differences are not big and will not restrict representativity of the data. Taking a look at the regional

Table 8.2: Description of survey data

| | N | mean | sd | se | CI-left | CI-right | min | max |
|---|-----|--------|--------|-------|---------|----------|-----|-----|
| Policy issues | | | | | | | | |
| AUTVSDDEM | 667 | 2.972 | 1.614 | 0.062 | 2.849 | 3.094 | 1 | 5 |
| AGRVSIND | 667 | 1.627 | 1.128 | 0.044 | 1.541 | 1.712 | 1 | 5 |
| TPVSMA | 667 | 1.939 | 1.407 | 0.054 | 1.832 | 2.045 | 1 | 5 |
| FOODVSCASHCROPS | 667 | 4.085 | 1.258 | 0.049 | 3.990 | 4.181 | 1 | 5 |
| Retrospective variables | | | | | | | | |
| Senegal (present) ¹ | 667 | 2.504 | 1.015 | 0.039 | 2.427 | 2.581 | 1 | 5 |
| Personal (present) | 667 | 2.705 | 1.040 | 0.040 | 2.626 | 2.784 | 1 | 5 |
| Senegal (past) | 667 | 2.987 | 0.973 | 0.038 | 2.913 | 3.060 | 1 | 5 |
| Personal (past) | 667 | 3.051 | 0.938 | 0.036 | 2.980 | 3.122 | 1 | 5 |
| Senegal (future) | 667 | 3.907 | 0.748 | 0.029 | 3.850 | 3.964 | 1 | 5 |
| Personal (future) | 667 | 3.973 | 0.703 | 0.027 | 3.920 | 4.026 | 1 | 5 |
| Government Performance | | | | | | | | |
| APPROVAL ² | 667 | 3.015 | 0.835 | 0.032 | 2.952 | 3.078 | 1 | 4 |
| Sociodemographic Characteristics | | | | | | | | |
| RURAL ³ | 667 | 0.568 | 0.496 | 0.019 | 0.531 | 0.606 | 0 | 1 |
| FARMER ⁴ | 667 | 0.543 | 0.499 | 0.019 | 0.505 | 0.581 | 0 | 1 |
| GENDER ⁵ | 667 | 0.529 | 0.500 | 0.019 | 0.491 | 0.567 | 0 | 1 |
| AGE | 667 | 37.516 | 15.067 | 0.583 | 36.372 | 38.659 | 18 | 86 |
| MUSLIM ⁶ | 667 | 0.948 | 0.223 | 0.009 | 0.931 | 0.964 | 0 | 1 |
| LPI ⁷ | 667 | 1.843 | 0.913 | 0.035 | 1.773 | 1.912 | 0 | 4 |
| POLINT ⁸ | 667 | 2.937 | 1.071 | 0.041 | 2.856 | 3.018 | 1 | 4 |
| EDUCATION ⁹ | 667 | 2.205 | 1.921 | 0.074 | 2.060 | 2.351 | 0 | 9 |
| Ethnicity | | | | | | | | |
| WOLOF | 667 | 0.382 | 0.486 | 0.019 | 0.345 | 0.419 | 0 | 1 |
| PULAAR | 667 | 0.288 | 0.453 | 0.018 | 0.253 | 0.322 | 0 | 1 |
| SERER | 667 | 0.162 | 0.369 | 0.014 | 0.134 | 0.190 | 0 | 1 |
| MANDINKA | 667 | 0.067 | 0.251 | 0.010 | 0.048 | 0.087 | 0 | 1 |
| DIOLA | 667 | 0.043 | 0.204 | 0.008 | 0.028 | 0.059 | 0 | 1 |
| Region | | | | | | | | |
| DAKAR | 667 | 0.270 | 0.444 | 0.017 | 0.236 | 0.304 | 0 | 1 |
| DIORBEL | 667 | 0.088 | 0.284 | 0.011 | 0.067 | 0.110 | 0 | 1 |
| KAOLACK | 667 | 0.076 | 0.266 | 0.010 | 0.056 | 0.097 | 0 | 1 |
| LOUGA | 667 | 0.060 | 0.238 | 0.009 | 0.042 | 0.078 | 0 | 1 |
| SAINT LOUIS | 667 | 0.070 | 0.256 | 0.010 | 0.051 | 0.090 | 0 | 1 |
| THIES | 667 | 0.088 | 0.284 | 0.011 | 0.067 | 0.110 | 0 | 1 |
| ZIGUINCHOR | 667 | 0.058 | 0.235 | 0.009 | 0.041 | 0.076 | 0 | 1 |

¹ 1=very bad, 5=very good; ² 1=strongly disapprove, 4=strongly approve; ³ 1=rural, 0=urban; ⁴ 1=farmer, 0=no farmer; ⁵ 1=women, 0=men; ⁶ 1=muslim, 0=other; ⁷ 0=no lived poverty, 4=high lived poverty; ⁸ 1=not at all interested, 4=very interested; ⁹ 1=no formal schooling, 9=post graduate

Source: own data

distribution of the sample, shows that a majority, 27% is from Dakar, the other regions are all represented with only 6-9% of the sample share. Furthermore, 57% of the sample are from rural regions (RURAL) and 54% work in the farming sector. The numbers are very close to the last census, which reported a rural population of 57.5%. The sample contains slightly more women than men (GENDER) and the mean age is 38 years, with the youngest respondent being 18 years old at the interview and the oldest being 86 years old (AGE). Further, 95% of the sample are Muslims, which again resembles the census data from 2011 (MUSLIM). The level of education is quite low, 19% of the sample did not enjoy any formal schooling and another 28% only got an informal education, which in Senegal mainly includes Koranic schools. Only 5% of the sample completed at least secondary school (EDUCATION). Income was measured with the Lived Poverty Index (LPI). The mean LPI of our sample is 1.84, the mean of the total sample is slightly lower 1.76. Although the index appears to be low, when comparing it to the other Afrobarometer survey countries, Senegal has the highest lived poverty index after Togo, Burundi, Niger and Guinea and hence belongs to the five poorest Afrobarometer survey countries. Finally, to measure general interest in policies, respondents were asked *How interested would you say you are in public affairs?* (POLINT). Most of the Senegalese are not interested in public affairs (68%), only 14% are very interested and 18% are somewhat interested in public affairs.

8.4 Estimation of Voting Behavior

8.4.1 Multinomial Logit Model

To gain further information on voting behavior in Senegal, we estimated a multinomial logit model (ML)³. In Table 8.3 the output of seven model specifications is displayed. From model one to model six, exogenous variables were added in groups and estimated together with a party specific constant. Each group of added variables corresponds to a voting motive respectively. Hence, model one only includes policy oriented voting, in model two retrospective voting is added and model three further includes party identity measured as general approval with the president (non policy voting). In model four individual specific characteristics like gender, religion and age were added; model five includes ethnicity as another individual specific characteristic and model six further accounts for different regions. The goodness of fit of each model is measured with McFadden's R^2 and the Log-Likelihood value. From model one to model six the R^2 increases from 0.009 to 0.25. Policy oriented voting on it's own is not able to explain voting behavior in Senegal, the goodness of fit in model one is extremely poor and the likelihood ratio test is not even significant. Still, two of the policy issues are significant and all of them have the right algebraic sign. The only coefficient that is significant on the ten percent level throughout all model specifications is the issue AGRICVSIND. The result confirms the importance of the agricultural sector, which is due to the quantitative dominance of the rural voter that was already mentioned in the literature review of this section. The addition of

³Please note that the dummy variables for Farmer, Diola and Dakar were dropped from the model because of collinearity.

retrospective voting increases model fit significantly, the coefficients are alternative specific and displayed for the opposition parties AFP and PDS. All alternative specific coefficients are interpreted in comparison to the incumbent party, Macky Sall's APR. Only the coefficient RETRO-PAST is significant throughout all model specifications. Neither the present nor the future situation of the country and the voter have significant influence on vote choice. The negative coefficient for retrospective voting indicates that the better people evaluate their own living situation and the situation of the country compared to the past, the higher is the probability to vote for the APR and the lower is the probability to vote for the AFP or the PDS. Although, please note that the coefficient is only significant for the PDS. Still, the negative sign confirms the hypothesis that Senegalese impute the positive development of their own situation and the situation of the country to the current president. In model three party identity, measured as the general approval with the president was added. The variable is highly significant for both political parties and increases the R^2 from 0.031 to 0.14. Non policy voting measured through APPROVAL has strong influence on voting behavior in Senegal. The stronger people approve with the current president, the lower is the probability to vote for one of the opposition parties. From model four to model six individual specific variables are added, starting with model four most of the sociodemographic characteristics have no influence on vote choice. Rurality, poverty and political interest are significant in at least one of the model specifications. Living in a rural region has negative influence on voting for the opposition. The effect is significant for the PDS in all model specifications, hence the hypothesis that the incumbent is rather supported by rural voters can be confirmed. Poverty has a positive significant effect for the AFP in model six, hence poorer voters prefer the AFP compared to the APR. Political interest again, is just like rurality in favor of the incumbent. The more someone is interested in public affairs, the higher is the probability to vote for the APR. In model five and model six, ethnicity and region are introduced. Most of the dummy variables have no significant effect on either the one or the other political party. Please note that the main ethnic group Wolof is not biased towards one of the political parties, the coefficient is not significant. In contrast the smaller ethnic tribes have their favorite political parties, Pulaar and Serer clearly favor the APR. Regional ties are stronger towards the opposition parties, Diourbel and Ziguinchor have a strong tendency to vote either for the PDS or the AFP. Kaolack prefers the AFP to the APR, but the APR to the PDS.

For a better overview and to reduce the number of parameters in the model we additionally estimated model seven. In this model, variables were stepwise dropped from model six until model fit decreased significantly following a likelihood-ratio test. Hence, model seven is the best fit model, which does not include insignificant coefficients any more. We assume that the variables that were dropped from this model do not explain voting behavior in Senegal, hence we do not consider them any further. Model seven shows that the only sociodemographic variable apart from ethnicity and region that influences vote choice significantly is RURAL. Further, vote choice is driven by the policy issue AGRVSIND, RETRO-PAST, APPROVAL, ethnicity (PULAAR, SERER) and region (KAOLACK, ZIGUINCHOR).

Table 8.3: Results from different voter model specifications

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | | Model 7 | |
|-------------------------|---------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value |
| APP:INTERCEPT | 0.136 | 0.000 | -2.066 | 0.000 | -0.426 | 0.439 | -0.189 | 0.856 | 0.326 | 0.761 | -0.245 | 0.836 | -0.145 | 0.809 |
| PDS:INTERCEPT | 0.106 | 0.000 | -1.541 | 0.000 | 2.373 | 0.000 | 2.985 | 0.002 | 3.893 | 0.000 | 3.468 | 0.001 | 2.835 | 0.000 |
| STRONGSWEAKSTATE | 0.118 | 0.054 | -0.226 | 0.058 | -0.195 | 0.107 | -0.179 | 0.145 | -0.190 | 0.127 | -0.118 | 0.368 | | |
| AGRSIND | 0.171 | 0.073 | -0.328 | 0.057 | -0.307 | 0.080 | -0.307 | 0.092 | -0.347 | 0.058 | -0.484 | 0.014 | -0.458 | 0.015 |
| TPV3MA | 0.249 | 0.362 | -0.170 | 0.509 | 0.167 | 0.581 | 0.252 | 0.416 | 0.163 | 0.612 | 0.145 | 0.654 | | |
| FOODVCSAGHROPS | 0.363 | 0.401 | -0.246 | 0.507 | -0.053 | 0.893 | -0.107 | 0.791 | -0.112 | 0.790 | 0.110 | 0.803 | | |
| APP:RETRO-PAST | | | 0.000 | 0.999 | 0.025 | 0.853 | 0.057 | 0.681 | 0.021 | 0.882 | -0.053 | 0.720 | -0.082 | 0.569 |
| PDS:RETRO-PAST | | | -0.367 | 0.001 | -0.296 | 0.015 | -0.293 | 0.021 | -0.356 | 0.007 | -0.329 | 0.016 | -0.289 | 0.024 |
| APP:RETRO-PRESENT | | | -0.183 | 0.172 | -0.144 | 0.291 | -0.167 | 0.253 | -0.156 | 0.299 | -0.074 | 0.643 | | |
| PDS:RETRO-PRESENT | | | -0.158 | 0.135 | -0.037 | 0.757 | -0.061 | 0.628 | -0.067 | 0.609 | -0.035 | 0.793 | | |
| APP:RETRO-FUTURE | | | -0.068 | 0.642 | 0.006 | 0.969 | -0.020 | 0.895 | -0.014 | 0.924 | -0.034 | 0.827 | | |
| PDS:RETRO-FUTURE | | | -0.283 | 0.007 | -0.056 | 0.644 | -0.066 | 0.593 | -0.073 | 0.565 | -0.027 | 0.842 | | |
| APP:APPROVAL | | | | | -0.538 | 0.003 | -0.533 | 0.004 | -0.491 | 0.010 | -0.584 | 0.004 | -0.617 | 0.001 |
| PDS:APPROVAL | | | -1.432 | 0.000 | -1.432 | 0.000 | -1.393 | 0.000 | -1.393 | 0.000 | -1.413 | 0.000 | -1.383 | 0.000 |
| APP:RURAL | | | -0.311 | 0.318 | -0.290 | 0.368 | -0.311 | 0.318 | -0.290 | 0.368 | -0.311 | 0.368 | -0.290 | 0.368 |
| PDS:RURAL | | | -0.485 | 0.080 | -0.544 | 0.062 | -0.485 | 0.080 | -0.544 | 0.062 | -0.602 | 0.050 | -0.567 | 0.023 |
| APP:GENDER | | | -0.050 | 0.966 | -0.012 | 0.966 | -0.012 | 0.966 | -0.012 | 0.966 | -0.012 | 0.966 | -0.012 | 0.966 |
| PDS:GENDER | | | -0.268 | 0.298 | -0.191 | 0.473 | -0.186 | 0.496 | -0.191 | 0.473 | -0.186 | 0.496 | -0.191 | 0.473 |
| APP:AGE | | | -0.004 | 0.978 | -0.004 | 0.978 | -0.004 | 0.978 | -0.004 | 0.978 | -0.004 | 0.978 | -0.004 | 0.978 |
| PDS:AGE | | | 0.009 | 0.932 | 0.008 | 0.932 | 0.008 | 0.932 | 0.008 | 0.932 | 0.008 | 0.932 | 0.008 | 0.932 |
| APP:MUSLIM | | | -0.710 | 0.155 | -0.575 | 0.316 | -0.747 | 0.224 | -0.575 | 0.316 | -0.747 | 0.224 | -0.575 | 0.316 |
| PDS:MUSLIM | | | -0.118 | 0.835 | 0.684 | 0.293 | -0.118 | 0.835 | 0.684 | 0.293 | -0.118 | 0.835 | 0.684 | 0.293 |
| APP:LP1 | | | 0.209 | 0.210 | 0.202 | 0.238 | 0.209 | 0.210 | 0.202 | 0.238 | 0.209 | 0.210 | 0.202 | 0.238 |
| PDS:LP1 | | | 0.027 | 0.850 | 0.011 | 0.943 | 0.027 | 0.850 | 0.011 | 0.943 | 0.027 | 0.850 | 0.011 | 0.943 |
| APP:POLINT | | | 0.023 | 0.860 | -0.011 | 0.934 | 0.023 | 0.860 | -0.011 | 0.934 | 0.023 | 0.860 | -0.011 | 0.934 |
| PDS:POLINT | | | -0.205 | 0.073 | -0.251 | 0.035 | -0.205 | 0.073 | -0.251 | 0.035 | -0.259 | 0.035 | -0.259 | 0.035 |
| APP:EDUCATION | | | 0.117 | 0.158 | 0.080 | 0.346 | 0.117 | 0.158 | 0.080 | 0.346 | 0.117 | 0.158 | 0.080 | 0.346 |
| PDS:EDUCATION | | | 0.075 | 0.325 | 0.075 | 0.325 | 0.075 | 0.325 | 0.075 | 0.325 | 0.075 | 0.325 | 0.075 | 0.325 |
| APP:WOLOF | | | | | -0.278 | 0.557 | -0.278 | 0.557 | -0.278 | 0.557 | -0.278 | 0.557 | -0.278 | 0.557 |
| PDS:WOLOF | | | -1.398 | 0.000 | -0.872 | 0.061 | -1.398 | 0.000 | -0.872 | 0.061 | -1.398 | 0.000 | -0.872 | 0.061 |
| APP:PULAAR | | | -1.220 | 0.027 | -0.476 | 0.430 | -1.220 | 0.027 | -0.476 | 0.430 | -1.220 | 0.027 | -0.476 | 0.430 |
| PDS:PULAAR | | | -1.783 | 0.000 | -1.404 | 0.003 | -1.783 | 0.000 | -1.404 | 0.003 | -1.783 | 0.000 | -1.404 | 0.003 |
| APP:SERER | | | -1.116 | 0.050 | -0.270 | 0.676 | -1.116 | 0.050 | -0.270 | 0.676 | -1.116 | 0.050 | -0.270 | 0.676 |
| PDS:SERER | | | -2.443 | 0.000 | -1.939 | 0.001 | -2.443 | 0.000 | -1.939 | 0.001 | -2.443 | 0.000 | -1.939 | 0.001 |
| APP:MANDINKA | | | 0.008 | 0.990 | 0.606 | 0.380 | 0.008 | 0.990 | 0.606 | 0.380 | 0.008 | 0.990 | 0.606 | 0.380 |
| PDS:MANDINKA | | | -1.249 | 0.023 | -0.725 | 0.216 | -1.249 | 0.023 | -0.725 | 0.216 | -1.249 | 0.023 | -0.725 | 0.216 |
| APP:DIOURBEL | | | | | 0.060 | 0.930 | | | 0.060 | 0.930 | | | 0.060 | 0.930 |
| PDS:DIOURBEL | | | 0.579 | 0.267 | 2.206 | 0.000 | 0.579 | 0.267 | 2.206 | 0.000 | 0.579 | 0.267 | 2.206 | 0.000 |
| APP:KAOLACK | | | -1.550 | 0.151 | -0.900 | 0.404 | -1.550 | 0.151 | -0.900 | 0.404 | -1.550 | 0.151 | -0.900 | 0.404 |
| PDS:KAOLACK | | | -0.486 | 0.544 | -0.486 | 0.544 | -0.486 | 0.544 | -0.486 | 0.544 | -0.486 | 0.544 | -0.486 | 0.544 |
| APP:LOUGA | | | -0.768 | 0.467 | -0.768 | 0.467 | -0.768 | 0.467 | -0.768 | 0.467 | -0.768 | 0.467 | -0.768 | 0.467 |
| PDS:LOUGA | | | 0.685 | 0.137 | 0.685 | 0.137 | 0.685 | 0.137 | 0.685 | 0.137 | 0.685 | 0.137 | 0.685 | 0.137 |
| APP:SAINT LOUIS | | | 0.231 | 0.654 | 0.231 | 0.654 | 0.231 | 0.654 | 0.231 | 0.654 | 0.231 | 0.654 | 0.231 | 0.654 |
| PDS:SAINT LOUIS | | | 0.148 | 0.742 | 0.148 | 0.742 | 0.148 | 0.742 | 0.148 | 0.742 | 0.148 | 0.742 | 0.148 | 0.742 |
| APP:THIES | | | 1.832 | 0.002 | 1.832 | 0.002 | 1.832 | 0.002 | 1.832 | 0.002 | 1.832 | 0.002 | 1.832 | 0.002 |
| PDS:THIES | | | 1.410 | 0.007 | 1.410 | 0.007 | 1.410 | 0.007 | 1.410 | 0.007 | 1.410 | 0.007 | 1.410 | 0.007 |
| APP:ZIGUINCHOR | | | -427.700 | 0.140 | -418.560 | 0.158 | -427.700 | 0.140 | -418.560 | 0.158 | -427.700 | 0.140 | -418.560 | 0.158 |
| PDS:ZIGUINCHOR | | | -481.970 | 0.031 | -481.970 | 0.031 | -481.970 | 0.031 | -481.970 | 0.031 | -481.970 | 0.031 | -481.970 | 0.031 |
| Log-Likelihood | | | -492.980 | | -492.980 | | -492.980 | | -492.980 | | -492.980 | | -492.980 | |
| McFadden R ² | | | 0.009 | | 0.009 | | 0.009 | | 0.009 | | 0.009 | | 0.009 | |
| | | | | | | | | | | | | | | |

Source: own estimation

The coefficients of a logit model are not linear and hence not directly interpretable, that is why we will also provide the marginal effects of model seven. A one unit shift of a party's policy position on the issue agriculture vs. industrial sector changes the mean probability to vote for the incumbent by 2.2%, whereas the changes for AFP and PDS are -0.08% and 1.3% respectively. The relatively low effects result because the sign of the individual marginal effects is not the same for every voter, a change of the policy position closer towards the industrial sector can increase the distance between party and voter for some voters and decrease the distance for others. Hence, the effects equalize each other and the mean effect is rather low. In Figure 8.4 election probabilities were calculated for each party for the policy positions one to five, c.p. constant policy positions of all other political parties. All three political parties have their maximum at position two, which is close to their empirical position. The changes in voting probability are small for PDS and AFP, the range is 8% for the former and only 2% for the latter. Thus they are not able to gain or loose many of their votes by changing their policy position on the issue of agricultural policies. The results for the APR are different, moving away from position two towards the left or the right reduces the probability to win the elections. While a position closer to the rural population and the agricultural sector (policy position one) would only reduce the election result by 3%, a movement towards the urban population and the support of the industrial sector results in a loose of 60% of the votes. Especially for the incumbent party policy oriented voting is important and they have to adapt their policy program to the requirements of their electorate. The mean marginal effect of retrospective voting is negative for the PDS and the AFP, both political parties loose votes, when the evaluation of retrospective voting increases (PDS 2.8% and AFP 0.1%). Contrariwise the effect of the APR is positive, the party gains 2.9% when the evaluation of retrospective voting increases by one unit. Marginal effects for non policy voting are considerably bigger than those of policy and retrospective voting. When approval with the president increases, the probability to vote for the APR increases by 15.4%, while the PDS loses 13% of their votes. The effect for the AFP is also negative, but less severe only 2.4% of the people refrain their vote. Finally, we calculated the effects of ethnicity and region. Pulaar and Serer have positive effects to vote for the incumbent of 11.4% and 9%. For the two regions included in the Model, we determine clear strongholds of the opposition parties. The marginal effect of Ziguinchor is positive for the PDS (15.8%) and Kaolack strongly favors the AFP (31.5%). The marginal effect of living in a rural area is positive for the incumbent (7.8%) and negative for the opposition parties. Hence, the expected incumbent advantage in the rural regions is confirmed by our data.

The importance for the different voting motives in Senegal is displayed in Figure 8.5, non policy voting is most important in Senegal, followed by policy voting and last is retrospective voting. The mean relative importance is 10.5% for retrospective voting, 56% for non policy voting and 33.5% for policy voting. Especially the high importance of policy voting is surprising and does not confirm the expectations we had after studying the literature on voting behavior in Senegal. Also retrospective voting is far less important than we expected beforehand.

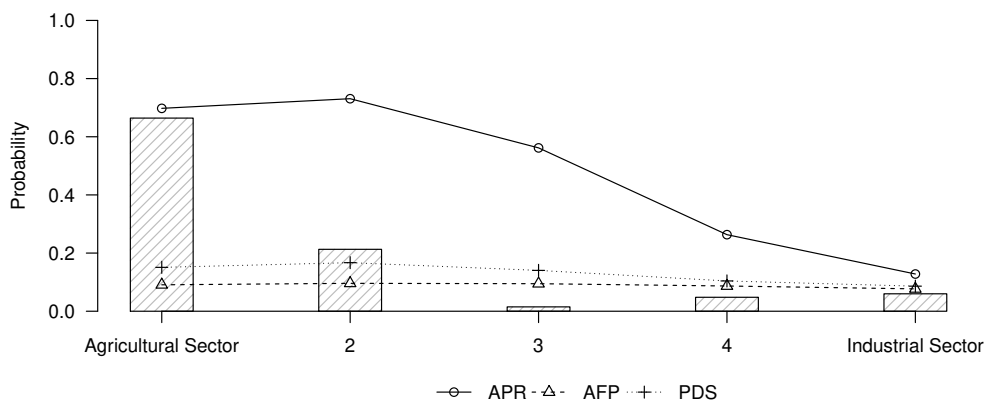


Figure 8.4: Changing policy positions: AGRVSIND
Source: own data

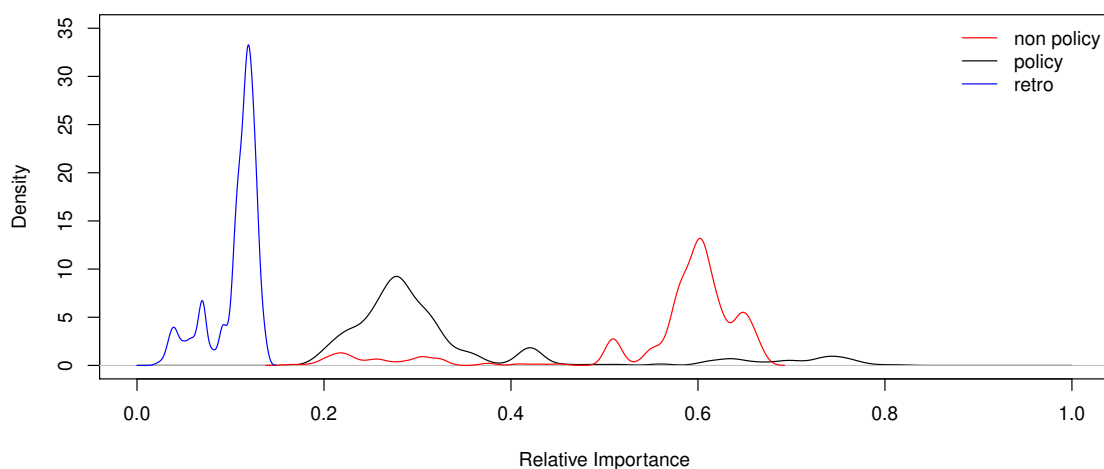


Figure 8.5: RI of non policy, policy and retrospective voting
Source: own data

8.4.2 Heterogeneity

In the previous section, voting behavior was described in general. In Senegal, non policy voting plays an important role, followed by policy and retrospective voting. However, the results presented always relied on average values and did not further consider heterogeneity among individuals. Taking a closer look at Figure 8.5 shows that voting motives differ strongly from person to person, hence voting behavior is not homogeneous among the population of Senegal. Considering the literature as

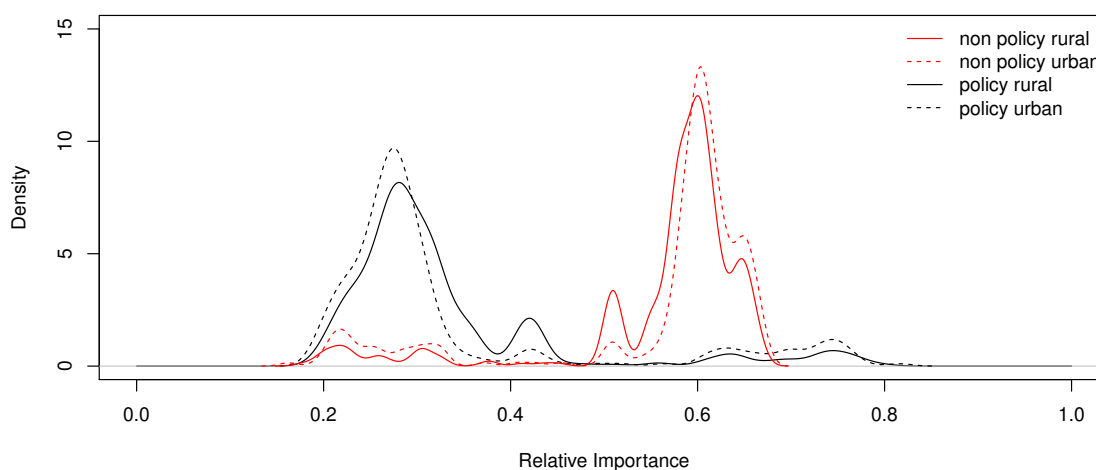


Figure 8.6: RI of non policy and policy voting in rural and urban areas
Source: own data

well as the first empirical results from the previous section, we expect that whether someone lives in a rural or in an urban area strongly influences voting behavior. While the hypothesis that rural voters are biased towards the incumbent could be confirmed with our data in the previous section already, now we want to investigate why they actually prefer the incumbent. If it is clientelistic voting motives that drive the electorate, we will find evidence that non policy voting is more important in rural regions than it is in urban areas. In Figure 8.6 we plotted the importance of non policy voting as well as policy voting for urban and rural regions separately. The graph shows that actually rural regions vote a bit more policy oriented than urban areas, the opposite is true for non policy oriented voting which is more pronounced in urban areas. The results point out that people from rural areas vote for the incumbent in this case Macky Sall, because he provides the best policies for them and not because of clientelistic behavior. However, the differences are only small and do not fully explain heterogeneity in voting behavior. We will further analyze the difference between rural and urban regions, another way to explore heterogeneity is the latent class analysis. We estimated the LC model by taking the same variables already used in the ML estimation, but only included policy oriented voting, retrospective voting and approval voting in the choice model and used all personal characteristics in the class model. The estimation results of the two class solution are printed in Table 8.4. Other model specifications were estimated as well, but did not converge⁴ and are thus not presented at this point, but of course they are available on request from the author.

Class membership is distributed unevenly in the sample, two thirds statistically

⁴The problem of local maxima, which leads to models that do not converge frequently occurs in latent class models, especially when the number of estimated classes is high (Vermunt and Magidson, 2005).

Table 8.4: Latent class estimation results

| Model for Choices | | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Class 1 | z-value | p-value | Class 2 | z-value | p-value | Wald(=) | p-value |
| Attributes | | | | | | | | |
| AFP:CONSTANT | -7.149 | -1.200 | 0.2306 | 2.640 | 2.180 | 0.0296 | 3.528 | 0.170 |
| PDS:CONSTANT | 1.865 | 1.592 | 0.1119 | 4.752 | 2.781 | 0.0056 | | |
| AGRVSIND | -1.850 | -1.420 | 0.1561 | -0.394 | -1.506 | 0.1326 | 1.180 | 0.280 |
| Predictors | | | | | | | | |
| AFP:RETRO-PAST | 5.144 | 1.461 | 0.1445 | -0.193 | -0.865 | 0.3874 | 2.376 | 0.300 |
| PDS:RETRO-PAST | -0.394 | -1.039 | 0.2992 | -0.352 | -0.858 | 0.3912 | | |
| AFP:APPROVAL | -1.753 | -1.510 | 0.1315 | -0.972 | -2.795 | 0.0053 | 0.538 | 0.760 |
| PDS:APPROVAL | -1.524 | -2.500 | 0.0127 | -1.773 | -2.715 | 0.0068 | | |
| Model for Classes | | | | | | | | |
| | Class 1 | z-value | p-value | Class 2 | z-value | p-value | | |
| Class Membership | 0.6689 | | | 0.3311 | | | | |
| Covariates | | | | | | | | |
| INTERCEPT | 0.000 | | | -0.081 | -0.162 | 0.8714 | | |
| RURAL | 0.000 | | | -1.121 | -2.599 | 0.0096 | | |
| PULAAR | 0.000 | | | -1.411 | -2.689 | 0.0074 | | |
| SERER | 0.000 | | | -1.086 | -1.848 | 0.0651 | | |
| KAOLACK | 0.000 | | | 2.878 | 2.324 | 0.0204 | | |
| ZIGUINCHOR | 0.000 | | | 5.401 | 1.694 | 0.0907 | | |

Source: own estimation

belong to Class 1 and one third belongs to Class 2⁵. The smaller size of Class 2 results out of three reasons, first, a negative intercept for Class 2 in the class model, second a negative coefficient for rural regions and third negative coefficients for Pulaar and Serer. The coefficients for Kaolack and Ziguinchor on the other hand are positive for being in Class 2. All coefficients except for the constant are significant on the ten percent level. More information on the composition of the two classes can be found in Table 8.5 where the mean of each variable is presented for Class 1 and Class 2 respectively. The p-value in the third column indicates whether the differences between the classes are significant considering a t-test. Class 1 and Class 2 do not differ from each other concerning their policy positions. But they do differ in their perception of the economic situation of the country and their own living conditions, independent of the timing, Class 1 evaluates both measures more positive than Class 2. Although only the differences between the evaluation of the present economic situation of the the country, the present living conditions and the future situation of the country are statistically significant. Additionally Class 1 also approves stronger with the performance of the president than Class 2. Considering personal characteristics, the two classes do not differ very much, farming background, gender, age, poverty and political interest are distributed equally between the two classes. However, Class 1 lives more in rural areas and has a greater share of Muslims compared to Class 2. Further, is Class 2 better educated than Class 1, which goes in line with more people living in urban areas, where access to education is generally better than in rural areas. Finally ethnicity and region also differ among classes,

⁵Class membership is probabilistic, hence every individual has a probability to be in Class 1 (π_1) and a probability to be in Class 2 ($1 - \pi_1$).

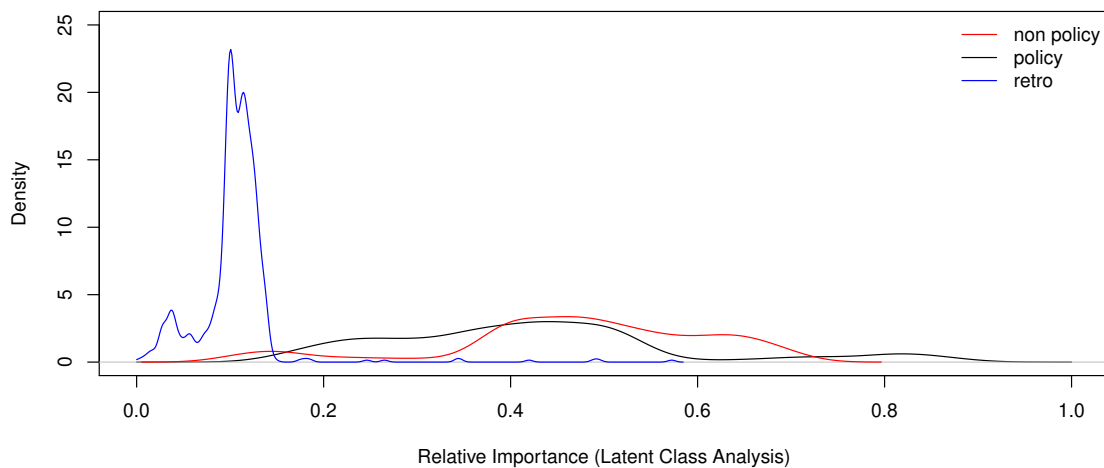


Figure 8.7: RI of non policy and policy voting (latent class)
Source: own data

while the share of Wolof, Mandinka and Diola is bigger in Class 2, the share of Pulaar and Serer is significantly bigger in Class 1. The people of Dakar and Thies split up evenly into both classes. In Class 1 more people are from Diourbel, Louga and Saint Louis and in Class 2 more people are from Kaolack and Ziguinchor. To summarize the composition of the two classes, Class 1 is the rural, lower educated class which is more satisfied with the president, the situation of the country and their own personal living conditions. Class 2 on the other hand mainly consists of urban people, who are better educated and unsatisfied with the government, the situation of the country and their own living conditions. Last we compare vote choice for both classes. Class 1 is very close to the APR, 90% would vote for Macky Sall and only 8.5% for the PDS and 0.6% for the AFP. In Class 2, 40% would vote for the PDS, 36% for the AFP and only 24% for the APR. The results show once more that especially people from urban regions vote for the opposition parties, because they are unsatisfied with the performance of the current government. Hence, disregarding the rural population will inevitably lead to a loss of votes for the APR and eventually to losing the next election. That is why Macky Sall will have to put special emphasis on improvement of the rural areas during his presidency, if he wants to keep up his current popularity and stay in office for another term.

The class model determined the composition of the two classes and showed that they differ significantly in their characteristics. The particular about the LC model is that not only the two classes differ from each other, but also the coefficients determining the choice situation. The upper part of Table 8.4 displays the just mentioned choice model. It becomes immediately obvious that apart from the coefficient for APPROVAL, no other coefficients are statistically significant for Class 1. Class 2 has positive and significant party specific constants for AFP and PDS, all other coefficients are in favor of the APR. The policy issue AGRVSIND is not significant in the

Table 8.5: Descriptive statistics by latent classes

| | Class 1 | Class 2 | p-value |
|---|---------|---------|---------|
| Policy position | | | |
| AUTVSDEM | 2.928 | 3.100 | 0.222 |
| AGRVSIND | 1.642 | 1.582 | 0.541 |
| TPVSMA | 1.980 | 1.818 | 0.170 |
| FOODVSCASHCROPS | 4.056 | 4.171 | 0.280 |
| Retrospective Variables | | | |
| Senegal (present) | 2.579 | 2.282 | 0.001 |
| Personal (present) | 2.748 | 2.576 | 0.074 |
| Senegal (past) | 3.004 | 2.935 | 0.449 |
| Personal (past) | 3.072 | 2.988 | 0.323 |
| Senegal (future) | 3.940 | 3.812 | 0.070 |
| Personal (future) | 3.994 | 3.912 | 0.213 |
| Government Performance | | | |
| APPROVAL | 3.080 | 2.824 | 0.001 |
| Sociodemographic Characteristics | | | |
| RURAL | 0.610 | 0.447 | 0.000 |
| FARMER | 0.555 | 0.506 | 0.267 |
| GENDER | 0.539 | 0.500 | 0.379 |
| AGE | 37.523 | 37.494 | 0.983 |
| MUSLIM | 0.958 | 0.918 | 0.082 |
| LPI | 1.852 | 1.815 | 0.638 |
| POLINT | 2.962 | 2.865 | 0.313 |
| EDUCATION | 2.068 | 2.606 | 0.002 |
| Ethnicity | | | |
| WOLOF | 0.342 | 0.500 | 0.000 |
| PULAAR | 0.354 | 0.094 | 0.000 |
| SERER | 0.199 | 0.053 | 0.000 |
| MANDINKA | 0.056 | 0.100 | 0.086 |
| DIOLA | 0.006 | 0.153 | 0.000 |
| Region | | | |
| DAKAR | 0.270 | 0.271 | 0.980 |
| DIORBEL | 0.107 | 0.035 | 0.000 |
| KAOLACK | 0.010 | 0.271 | 0.000 |
| LOUGA | 0.076 | 0.012 | 0.000 |
| SAINT louis | 0.080 | 0.041 | 0.045 |
| THIES | 0.097 | 0.065 | 0.169 |
| ZIGUINCHOR | 0.000 | 0.229 | 0.000 |

Source: own data

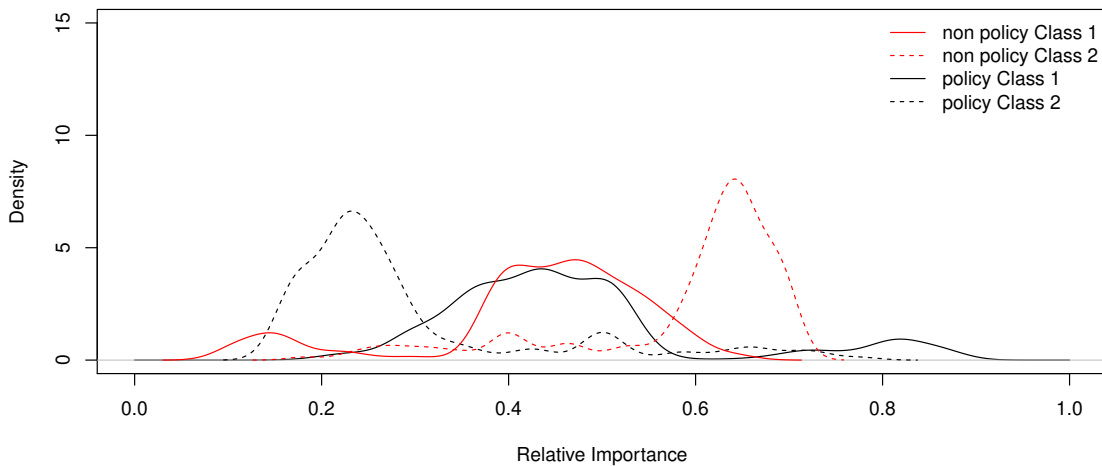


Figure 8.8: RI of voting motives in latent classes
Source: own data

LC model, neither for Class 1 nor for Class 2. The same holds true for retrospective voting, which is also not significant. Still, the marginal effects of the LC model are very similar to the effects from the ML model and are hence not further described at this point. However, although the average marginal effects are almost the same, the relative importance of the voting motives differs depending on the model of choice. While the relative importance of retrospective voting is again 10.5%, the importance of non policy voting is only 47.1% and the importance of policy voting is 42.4%. Consequently the results of the LC analysis further emphasize the important role of policy voting in Senegal. Figure 8.7 shows the density plots for the relative importance on the basis of the LC results. Especially the effects for policy and non policy voting are a lot more equally distributed compared to the ML model. Also the density plot for retrospective voting is less peaked and more widely distributed for the LC model. Further, Figure 8.8 investigates whether the found heterogeneity can be explained with the class membership variable. The plot shows a clear separation of the sample into two groups, Class 1 and Class 2. While Class 1 votes far more policy oriented, Class 2 heavily relies on non policy voting. Recalling the class specifications, Class 1 was considered as the rural class and Class 2 as the urban class. Hence, the results from the LC analysis confirm the results already obtained in the ML model. Rural voters vote very policy oriented, while urban voters rely more on non policy voting.

8.5 Voting Behavior and Government Performance

The main findings of the previous section are twofold, first, in Senegal voters rely mainly on policy and non policy voting while retrospective voting is of minor importance. Second, voting behavior is not at all homogeneous, but very heterogeneous.

The differences in voting behavior in the survey were identified with a latent class analysis that discovered two groups of voters: a small, well educated, urban class (Class 2) and a bigger, less educated, rural class (Class 1). The urban class relies heavily on non policy voting and hence on clientelistic policies, while the rural class votes because of policy issues, especially because of agricultural policy issues. In this section we will take another step towards explaining not only voting behavior but also its effects on government performance. From the results already achieved, we expect that actually the rural population will have a higher voting weight in Senegal and capture the government in their favor, because they vote more policy oriented instead of non policy oriented. As policy voting is crucial in Senegal, we also expect that accountability of the government towards the voter will be high.

8.5.1 Government Accountability

Just like in the previous section for the case of Ghana, we also calculated the three already known government accountability indices for the case of Senegal. The results are printed in Table 8.6 for the ML model as well as for the LC model. We assume that the exact level of the index lies somewhere in between both model specifications, probably further towards the LC result as it is rather able to sufficiently cope with heterogeneity. GA_1 equals 0.38 when the ML model outcome is used for the calculation and 0.5 for the LC model. Hence, interest groups and lobbying accounts for up to 50-62% of the total power in the political process in Senegal. The remaining 38-50% belong to the voter. Considering the long history of democracy and multi-party elections in Senegal, the accountability index and the political power of the voter are low. When the political process is dominated by interest groups with more than 50% of the total power, elections as the main mechanism to ensure democracy are not working well. Interest groups are favored by the government at the expense of the individual voter. Next to voters and interest groups also intrinsic policy preferences of the governmental party determine the political process. GA_2 measures the importance of intrinsic policy preferences in the political process. As no data on intrinsic policy preferences is available, the ratio of intrinsic policy preferences in the current situation and intrinsic policy preferences in a situation with only policy oriented and retrospective voting is calculated instead. Being below one generally indicates low intrinsic policy preferences. But when considering the LC result the index is very close to one, which actually complicates interpretation as no information on the absolute level of intrinsic policy preferences is available. However, we can conclude that the importance of intrinsic policy preferences does not differ very much whether non policy voting is applied or not. A possible solution for that finding is that intrinsic policy preferences are generally low in Senegal. The relative high importance of policy voting and the fact that the government has to serve interest groups as well as voters, leaves no leeway for their own intrinsic policy preferences. The theory is supported by the high GA_1 index. Further, the GA_2 index calculated from the ML model results indicates that the relative weight of intrinsic policy preferences of the government is 0.45 times lower than in a hypothetical case when no non policy voting exists, support the assumption that intrinsic policy preferences are low in the political landscape of Senegal. Though for better interpretation and

Table 8.6: Government accountability indices (ML and LC Analysis)

| | ML | LC |
|--------------------------|------|------|
| GA ₁ | 0.38 | 0.50 |
| GA ₂ | 0.55 | 0.99 |
| GA ₃ AGRVSIND | 0.45 | 0.30 |

Source: own calculations

classification of GA₂, we would need explicit data on intrinsic policy preferences of the political actors.

The third indicator GA₃, measures the range within which policy positions can be shifted by the incumbent without losing office. Reasons for changing policy positions are for example to please interest groups by taking policy positions that are close to their interests or to please ones own intrinsic policy preferences. From Figure 8.4 we already know that the APR has an electoral advantage compared to the other two parties. We calculated an actual margin of 45% with the results of the ML model and still 30% for the results of the LC model. Put differently, the APR can choose a policy position between one (total support of the agricultural sector) and 3.25 (ML) or 2.52 (LC) without losing the majority of votes. The wide range allows them to especially please special interests and lobbying groups. The importance of agricultural policies and the possibility to move their policy position totally towards the agricultural sector suggests that especially the agricultural lobby has a big weight in the policy process in Senegal. For the individual voter a high GA₃ index means that the government is not accountable towards them, as a change in policy position does not harm a candidate's chance of winning the election. Although policy voting is important in Senegal, the government is not bound to specific policy positions by voter's political requirements.

Summarizing all three indicators results in a government that on the one hand has relatively low intrinsic policy preferences (GA₂), but on the other hand provides accountability mainly towards interest groups and not towards the voter. Hence, once more the mechanism of voting that is supposed to work as the main tool to ensure a well functioning democracy is not working sufficiently in Senegal.

8.5.2 Government Capture

In the previous chapter we showed that government accountability is low towards the voter but high towards interest groups. In this part we will further examine which groups have higher weights and are hence able to capture the government on the cost of other groups. In this context, groups are defined as people with the same demographic characteristics e.g. people living in rural areas. They are not synonymous with organized interest groups. To analyze capture we calculated an individual voter weight. In a well functioning perfect democracy, everybody has the same weight depending on his or her population share. In the present case (n=667) the individual weight in an optimal situation would be 1/667. However, the optimal situation is only a theoretic construct, voter weights are never totally

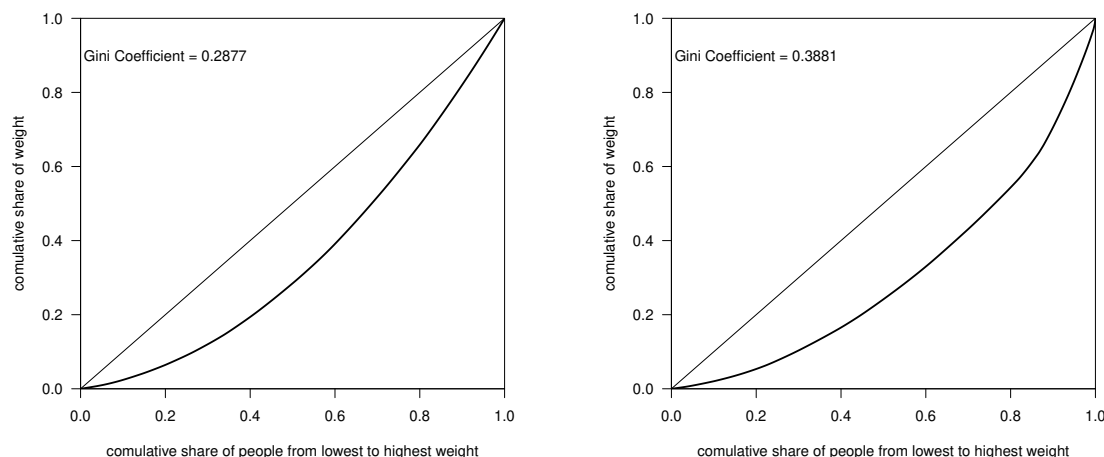


Figure 8.9: Lorenz curve (left: ML - M7, right: LC)

Source: own data

equally distributed. In Senegal the Gini coefficient, which measures the statistical dispersion of the voter weight, is 0.28 for the ML model results and 0.39 for the LC model results. Both coefficients are relatively low and do not imply great inequality in Senegal. In Figure 8.9 the Lorenz curves are plotted, they show the distribution of the voter weights and the corresponding Gini coefficient.

Although the distribution is not heavily biased, it is still possible that certain groups are less represented in the political process than others that is why we additionally calculated an index measuring capture among groups of voters. Therefore, we took the average weight of one group in relation to the average weight of its antagonistic group. In comparison to Ghana we would actually expect the poor and rural people to have higher weights in Senegal, as they vote mainly policy oriented compared to the urban voters that rely more on non policy voting. Figure 8.10 shows the results of the capture indices. If the bar points towards the right side this group has a greater average weight than the group on the left and vice versa. The capture index between urban and rural regions is 1.27, which means that the average urban weight is 27% higher than the average rural weight. Hence, the urban regions are capturing the rural areas. An index of one would indicate that their average weights are equal and no capture persists. The direction of the capture index is mostly the same for the ML and LC model, the only time it points in opposite directions is in the case of the Wolof tribe. While the ML model calculates that the Wolof tribe captures all the other tribes, the LC model results in other tribes slightly capturing the Wolof. Further, there is a bias towards the richer, well educated population. Surprisingly in Senegal, a mainly Muslim country, women are actually capturing men and not vice versa. Regional and ethnic inequalities are only displayed for Dakar and the Wolof tribe. Dakar as the capital of Senegal and a mainly urban region that displays the countries elite, is capturing all other regions. In the last row, the capture index is also displayed for the two classes identified in the LC model. The larger rural Class 1 is capturing the smaller urban Class 2. The result is surprising as the urban population is capturing the rural population. However, the difference is only

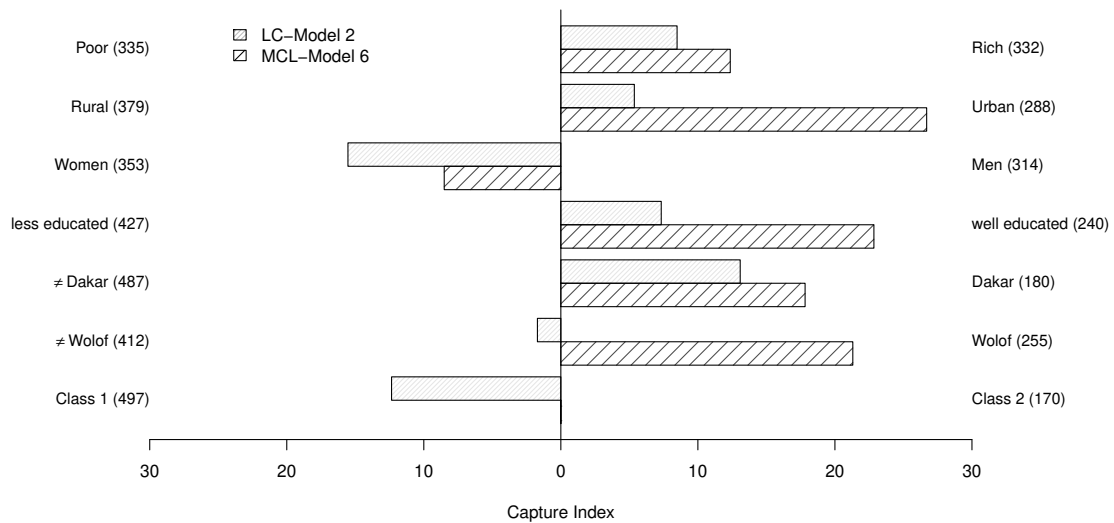


Figure 8.10: Capture indices (ML and LC model)
Source: own data

small and further the composition of the classes is not one dimensional, rather the classes are made up of many different characteristics. Class 2 is not only the urban class, but also includes all the people from Ziguinchor, whose average voting weight is 20% lower compared to everyone else. That among other reasons is responsible for the lower average weight of Class 2.

Although the average political weight of the rural population is lower than that of the urban population, they still make up almost 60% of the population. To win the elections in Senegal, political parties have to rally the rural population behind them. For rural people especially agricultural policies and the support of the agricultural sector is important. In this sample the rural population has a mean policy position of 1.52 on the issues agricultural vs. industrial sector compared to 1.77 for the urban population. The differences between the policy positions are small, although theoretically they should strongly diverge. Agriculture plays an important role in the rural regions, where it provides the means of subsistence for most households. In urban areas people rather work in the industrial sector and the service sector. However, also urban people favor the support of the agricultural sector over the industrial sector. Caplan (2007) explains the misjudgment of their own policy position as the irrationality of the voter. They are manipulated by election campaigns and the media, which leads to biased ideas concerning economics and hence policy positions.

The incumbent party APR is positioned in between the rural and the urban voters, but closer to the rural people (1.58). The result is a first evidence that policy programs in Senegal are not only implemented to benefit the urban population, but that politicians are actually moving closer towards the rural population. Although government accountability towards the voter is low in Senegal and the rural population

is captured by the urban population, they are still very well represented concerning agricultural policies. One reason therefore is government accountability towards interest groups, when i.e. agricultural interest groups and farmer unions are well organized the total weight of the rural interests can still be high although the individual weight of a rural voter is low. Intrinsic policy preferences of the governmental party or the president himself are another explanation that the APR positions itself further to the left side of the scale, closer to the rural voters, although they have a lower average political weight. The empirically optimal policy position of the APR can be calculated by multiplying a voter's weight with its individual policy position and summing it up for all voters. The empirical policy position results in 1.73 with the actual weights and 1.62 when equal voting weights are assumed (see equation 5.28 and 5.29). The position of the APR is actually much closer to the situation with equal weights than it is to the empirical situation. The result reveals that although the political process is biased towards urban interests, the policy positions do not reflect this bias. Policy positions are further adjusted towards other interests that were not measured by our data, namely special interests of lobbying groups and intrinsic policy preferences of the government. Another conclusion that can be drawn from this is that government accountability towards the voter can be low, but that does not automatically mean that policy positions in the country are biased as well. The case of Senegal shows that the bias is actually reduced because the government behaves accountable towards itself and interest groups instead of being accountable towards the voter. In this empirical application we did not focus on the role of interest groups and intrinsic policy preferences in the political process, but it is an interesting topic for future research how much policy positions are actually influenced by these other factors. For the case of Senegal, it remains to be seen were Macky Sall and the APR will position themselves in the policy space and whether they will focus more on the urban or the rural interests in the near future.

So far we found out that voting behavior in Senegal is twofold, there is the rural population that votes more policy oriented and the urban population that votes more non policy oriented. Retrospective voting is less important for both groups. Further, we investigated the individual weights of the two groups and saw that in contrary to our expectations the urban population on average has higher voter weights than the rural population although they vote more non policy oriented. Hence, we analyzed the connection between voting behavior and voting weights, to draw further conclusions on government performance in Senegal. In Figure 8.11 we plotted the share of non policy voting in the representative utility on the x-axis and the voter weight on the y-axis. The graph on the left side is plotted with the results of the ML model, it shows a clear reversed U-shape with its maximum around minus two. The maximum is not at zero for Senegal, because we do not have a two party case and hence the voter weight is not equal to $P^*(1-P)$ anymore. The result reveals that pure policy voting does not automatically lead to the biggest voting weights, hence although the rural population votes more policy oriented than the urban people their average weight is lower and they are being captured. The graph on the right plots the results from the LC model, a very slight reversed U-shape is visible. However, it seems that with the LC analysis it is very difficult to explain voting weights in a multiparty case. Another reason is that while non policy voting

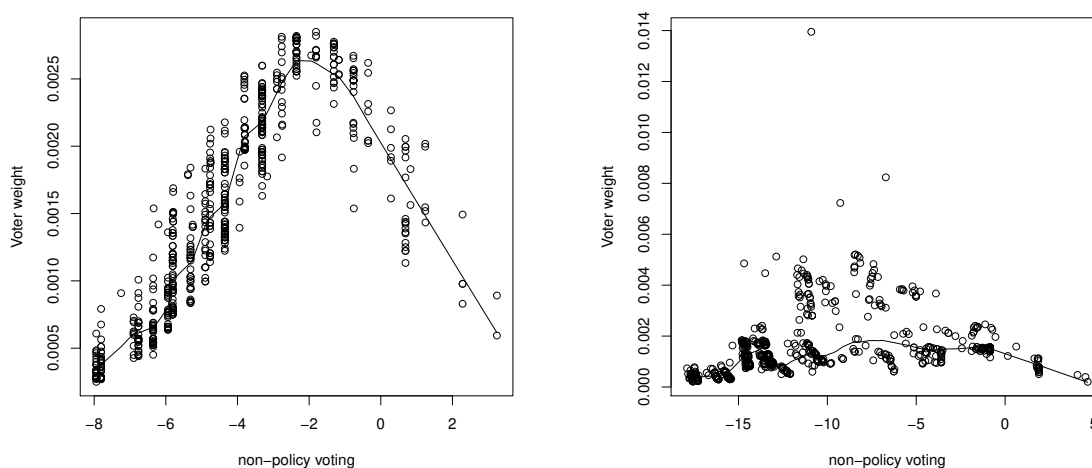


Figure 8.11: Relationship between voter weights and voting behavior (left: ML, right: LC)

Source: own data

includes also personal characteristics of the voter in the ML model specification, in the Latent Class model only approval with the president is included because all other individual specific characteristics are part of the class model and not of the choice model. But, although the connection is not perfectly clear, both plots show that a certain degree of non policy voting increases the political weight of the voter. However, once a certain level of non policy voting is exceeded, the correlation is negative.

8.6 Summary

Senegal is one of the oldest democracies in Africa, since 1978 it witnessed seven multiparty elections and three peaceful turnovers of power. The last turnover took place in 2012, when Macky Sall replaced Abdoulaye Wade as president. In this chapter we analyzed the current voting behavior in Senegal, why people vote for a certain candidate, what are their voting motives and finally how does voting behavior translate in governmental performance, measured by government accountability and capture. Compared to most other papers on voting behavior in Senegal we do not analyze the last presidential election, but the current situation one year after Macky Sall became president.

Senegalese voted for Macky Sall in 2012, because they were dissatisfied with Abdoulaye Wade and were hoping for a change. One year later there are three reasons why more than 60% would do the same again. First, people agree that their personal situation as well as the economic situation of the country has improved. Additionally they expect the situation to improve even further in the near future. Second, after only one year in office, almost 80% of the population approve with the way President Sall has performed his job. Accordingly identification with the political leader is already very pronounced. Finally the third reason is that the policy po-

sitions of the APR are in line with the expected and requested policy positions of the voters. While the last point corresponds to policy oriented voting, the first is considered to be retrospective voting and the second point corresponds to non policy voting. With a relative importance of 47-56% (depending on the estimated voter model) non policy voting is most important in Senegal. Retrospective voting only accounts for 11% and policy voting for 34-42%. Furthermore, voting behavior is heterogeneous in Senegal, with a latent class analysis we identified two distinct classes. Mostly rural, poor and less educated people belong to Class 1, they are optimistic considering their evaluation of the economic situation of the country and their own personal situation. The second class is smaller and contains the urban, rich and better educated people. While Class 1 is very close to Macky Sall, Class 2 is more or less indifferent between PDS and AFP, but also not disinclined to vote for the APR. Voting motives also differ between the two classes, actually the elite from the urban regions votes far more non policy oriented than policy oriented, while the rural and poorer Class 1 votes almost equally policy and non policy oriented.

Voting behavior influences government performance. In Senegal, government is mainly accountable towards interest groups. We calculated an index GA_1 of 38-50%, which indicates that the voters have the same or less power than interest groups in the political process. Furthermore, political parties can vary their policy position by up to 45% to please interest groups or their own intrinsic policy preferences. Considering the long history of democracy and the recent turnover of power, the degree of government accountability we measured in Senegal is quite low. This is especially due to the strong role of non policy voting. We do not call it party identity, as people do not mainly identify with the APR but rather with the party leader, Macky Sall. The party leader effect is more important than policy voting and retrospective voting together. We could further identify that voting weights are connected to voting behavior, while in a two party case voting weights are higher when people vote mainly policy oriented, in the three party case of Senegal a low degree of non policy voting actually leads to maximum voting weights. Though if the absolute degree of non policy voting is too high, voting weights are decreasing again. This leads to a situation, where voting weights are biased towards certain groups. Although the distribution of voting weights is not heavily biased in Senegal, the urban population captures the rural population and rich people capture poor people. However, we also found out that the bias in actual policy positions is only small, because of the power of interest groups and intrinsic policy preferences.

We conclude that on the positive side, voting weights are not heavily biased in Senegal and the degree of capture present in the country is relatively low compared to other countries in Sub-Saharan Africa. However, we also figured out that although policy and retrospective voting are applied, non policy voting is dominant and leads to low accountability towards the voter. Policy positions can further be altered depending on the intrinsic preferences of the government or the demands of interest groups. Fortunately, the pressure of interest groups actually leads to policy positions that are less biased than without interest group interference. Nevertheless, if Senegal wants to stay one of the showpieces of African democracies, the current government under President Macky Sall has to increase accountability towards the voter and reduce the power of interest groups in the political process.

Chapter 9

Uganda

Of the three case study countries compared in this book, Uganda is the only one located in East Africa and further the only country that is landlocked. Uganda shares a border with Rwanda, the Democratic Republic of the Congo, Kenya, South Sudan and Tanzania. Lake Victoria, Africa's largest lake is situated in the south of the country and defines part of its southern boundary. Uganda is divided into four administrative regions, the Central, Western, Eastern and Northern Region and 111 districts (see Figure 9.1). 35.9 million people live in Uganda, it has the largest population compared to Ghana and Senegal and is further the second most populated landlocked country in the world. Uganda is ethnically very diverse with more than 40 ethnic tribes, most of them speak their own tribal language. The largest and politically and economically most important tribe are the Baganda people, 16.9% of the population belong to that tribe. They live mainly in the Central Region around the country's capital Kampala. Other large tribes are the Banyankole (9.5%), the Basoga (8.4%), the Bakiga (6.9%), Iteso (6.4%) and the Langi (6.1%). The ethnic heterogeneity of the country that is due to the former colonial boundaries created by Britain, is one reason for the political instability especially during the regimes of Idi Amin and Milton Obote.

Uganda's Economy is growing with a GDP growth rate of 4.6% in 2012 and expected growth rates for the next years are between 6-7%. Those growth rates are high, especially compared to the average growth rates of Sub-Saharan Africa that will reach 4-5.5% in the following years. Uganda's economy still strongly relies on the agricultural sector, which has a share of 23.1% of the countries GDP and an employment share of over 80%. The main export good is coffee, furthermore the country is rich in natural resources, copper, gold and other minerals can be found in Uganda. Lately, oil was also discovered in Uganda which will further increase income from exports. The World Bank (2013) classifies Uganda as a low income country with a GNI per capita (Atlas method) of \$440 in 2012.

Compared to Ghana and Senegal, Uganda only has a short history of multi party elections and has not witnessed any peaceful electoral turnovers yet. Freedom House classifies Uganda as a partly free country, with a political rights ranking of five and a civil liberties ranking of four. The polity IV score of Uganda is minus one, which defines it as an anocracy (Marshall et al., 2012).

9.1 From Independence to Democracy

Uganda was a British colony until it gained independence in 1962. Milton Obote leader of the Uganda People's Congress (UPC) became the first prime minister of the country. In 1966 he changed the constitution and removed the positions of president and vice president, which gave himself even greater power. Additionally he abolished the traditional kingdoms, which led to bloody riots all over the country. Five years

later the leader of the armed forces, Idi Amin, led a military coup against Obote and his government. Amin became the next president of Uganda and just like Obote helped himself to absolute power with rather undemocratic methods. Henceforth he ruled the country in a military way, the opposition was oppressed and former supporters of Obote and other political opponents were prosecuted and murdered. The number of victims during the Amin regime fluctuates between 100.000 and 500.000 (Harff and Gurr, 1989). The reign of terror went on until 1979, when finally the Uganda National Liberation Front around Yusuf Lule captured Kampala and ousted Idi Amin from power. Amin fled first to Libya and later to Saudi Arabia, where he lived in exile until his death in 2003 (Keatley, 2003).

After the coup instability persisted. Uganda saw three presidents within a year, first Yusuf Lule himself, who was replaced by Godfrey Binaisa and finally once more Milton Obote. Actually in December 1980 the first elections since independence took place (Brett, 1995), however they were neither free nor fair. When the result did not resemble the intended result, Paulo Muwanga, the chairman of the governing Military Commission, first declared himself to be the leader of the election commission and later declared Obote to be the new and old president of Uganda. Muwanga himself became vice president and minister of defense (Tindigarukayo, 1988). There were many groups that did not accept Obote as president, especially Lule's National Resistance Movement and its military arm the National Resistance Army (NRA) under the lead of Yoweri Museveni kept on fighting against the government. It took five years of war between the Ugandan army and the NRA, until finally Obote's own army rebelled against him, forcefully took over power and installed Tito Okello a former army chief as new president. Although there were peace talks between the new government and the NRA, once more peace only lasted a few months until the NRA took over Kampala forcefully in January 1986 and declared Museveni the new president of Uganda. The NRA was renamed to Uganda Peoples Defense Force (UPDF) and still presents the armed forces of Uganda to this day.

After Museveni gained power, the activities of political parties were strongly restricted. Although political parties still existed they were not allowed to actively campaign in elections, instead candidates were running for office as individuals and not as members of a political party (Carbone, 2003). Under the so called *Movement System*, Museveni reigned the country for almost twenty years, until in 2005 a national referendum in Uganda decided to change the political system towards a multi-party system. Simultaneously presidential term limits were abolished, which cleared the way for Museveni to run for a third term in the elections in 2006. Before that in a first referendum in 2000 the population had still voted against a multi party system and in favor of the Movement system. In the meantime, Museveni won the presidential elections in 1996 and 2001. In the first multi party elections since Museveni gained power in 1986, six presidential candidates were listed. However, Museveni's only serious opponent was the leader of the Forum for Democratic Change (FDC) Kizza Besigye, who already stood for presidency in 2001. In the end Museveni won the election in 2006 with 59.26% of the votes followed by Besigye who still got respectable 37.39%. In 2011 Besigye challenged Museveni once more, but also lost in his third attempt to gain presidency. Museveni even increased his vote share by almost ten percent to 68.38% compared to the election in 2006,

while Besigye only achieved 26.01%. The next presidential election will take place in 2016, that year Museveni will also celebrate 30 years of presidency which is even for African standards a very long time. Although recently rumors were spread that Museveni has already chosen his first-born son Muhoozi Kainerugaba as his successor and might not candidate for presidency again (Izama and Wilkerson, 2011).

9.2 Literature Overview

The presidential election in 2011 were only the second multiparty election in Uganda since the Museveni Regime began in 1986. Hence, the amount of existing literature is low compared to other countries with a longer history of multiparty elections. So far, like in many other Sub-Saharan African countries most of the studies on voting behavior are focusing on ethnicity and region as explaining factors. Uganda is ethnically very diverse and belongs to the most heterogeneous countries in the world (Alesina et al., 2003; Carlson, 2011). Furthermore, the history of ethnic cleavage is long and has always influenced electoral competition, during the movement system as well as under the multiparty system. President Museveni e.g., is a Banyankole, and his tribe strongly identifies with him during elections (Carlson, 2011). Museveni's main challenger in the last three elections, Kizza Besigye is from the Bakiga ethnic group. His political party the Forum for Democratic Change (FDC) is a rather young party and has no regional or ethnic background, they are claiming to be a national party rather than a regional party (Kim, 2012). Carlson (2011) analyzed the importance of ethnicity on voting behavior with an experiment. She created an artificial voting situation, where the respondent could choose between two candidates who differ in ethnicity, education, prior office, personal record and political platform. The experimental set up allowed her to control for other variables like performance or educational background, to solely analyze the effect of ethnicity. The results show that ethnicity is only important for vote choice when it interacts with the performance record of the candidate, ethnicity on its own is effectless. Voters are more responsive to the actions of their co-ethnics and expect to gain future benefits like public goods from them, once they are in office. When considering the large amount of different ethnic groups in Uganda and the fact that only two candidates were seriously competing for presidency, voting for co-ethnics cannot be the only factor determining vote choice. To understand the outcome of the 2011 election, other factors have to be considered too.

Another well known phenomenon in African elections is the incumbent advantage (Rakner and van de Walle, 2009; Lynch and Crawford, 2011). Museveni heavily relied on the incumbent advantage in the election in 2011. He had access to the state apparatus and state finances and used them effectively for election campaigning (Helle and Rakner, 2013b), hence the political parties were acting on an unlevelled playing fields (Gibb, 2012). The election was known to be the most expensive in the history of Uganda (Izama and Wilkerson, 2011; , EU-EOM). The money was used for traditional election campaigning, but also for direct vote buying and the provision of public goods. Conroy-Krutz and Logan (2012) analyzed Afrobarometer data and found no significant effects of vote buying on the results of the presidential election. The existing literature suggests that there are actually two main reasons that account

for the outstanding victory of Museveni and the NRM. First the inability of the opposition to unite and support a common candidate and second the satisfaction of the population with their current president. Prior to the election the opposition parties were hopeful that Uganda will soon witness its first electoral turnover, but instead of building a strong coalition each party fought it's own battle and they finally lost valuable votes not only to the NRM but also to each other (Helle and Rakner, 2013a). Museveni on the other hand looked back on five partially very successful years. He had put an end to the war against Joseph Kony and the Lords Resistance Army (LRA). The people in the north could finally settle back to their homes, after they have lived in refugee camps for many years to protect themselves from Joseph Kony and the LRA. Further, the infrastructure, such as roads schools and health centers improved during the era of the NRM (Juma, 2011). Carlson (2011) puts it this way "Despite valid criticism of his regime, it is difficult to dispute that security and development have improved under Museveni.". Conroy-Krutz and Logan (2012) agree that most Ugandans and especially those of the North are actually better off with President Museveni now than they have been a few years ago. Hence, they did not bother voting for the opposition but rather gave their vote to the incumbent.

But what were the political issues of the election in 2011? In Uganda just like in most other African countries, agriculture provides the livelihood for the majority of the population. Only 15.6% (Central Intelligence Agency, 2013) of all Ugandans live in urban areas, that is why the rural population and the agricultural sector plays a crucial role for the election outcome. Urban people are often closer to the opposition than their rural counterparts. Another advantage that Museveni used for his purposes and finally for his election victory. The NRM had always kept strong ties to the rural areas and never stopped emphasizing the importance of agriculture for the reduction of poverty, especially for the rural population (Helle and Rakner, 2012, 2013a). Although, when reading the NRM's party manifesto it is not obvious that agriculture is an important sector for them, further they only spent 3.2% of the national budget for 2012/2013 on agriculture (Naluwairo, 2011). Hence, there is still unused potential concerning spending on agriculture and agricultural policies. This potential has to be used to cope with future challenges. With an already high population density and a further growing population, the development of the agricultural sector and the implementation of the right agricultural policies will be crucial for the development of Uganda and equally important for the ongoing political success of president Museveni and the NRM.

9.3 Data Description

When we decided to include Uganda in our country sample, Afrobarometer had started their fifth survey round in Uganda already. Hence, it was not possible to cooperate with them anymore. That is why we decided to do our own voter survey in Uganda, just like we did in Ghana before. The survey was conducted in collaboration with Wilsken Agencies Ltd. during June 2013. Wilsken Agencies Ltd. is a very experienced agency that has also conducted the Afrobarometer surveys for Round 4 and Round 5. The survey questionnaire was almost identical to the one

used in Ghana, only some small country specific modifications were made. The last presidential election in Uganda took place in 2011 and the next one will be in 2016, hence the timing of the survey is not optimal concerning the vote choice question. Although, while it is not suitable for a forecast, mid term evaluation of Museveni's performance during his fourth term of presidency is possible.

9.3.1 Sampling Procedure

The sample of the voter survey in Uganda is based on the 2002 National Housing and Population (UBOS) census and the 2012 district-level single year population projections. The survey covered the whole country, including the formerly insecure areas of North East and Northern Uganda. To give every Ugandan citizens of voting age an equal chance of being chosen for the sample, respondents were selected with probabilities proportionate to the population size. Furthermore, the sample was stratified across the five regions (Kampala, West, East, North and Central) and urban-rural divides. At every stage of sampling methods of random selection were applied. In total 624 interviews were conducted in 52 Primary Sampling Units (PSUs). The PSUs are at the Parish level, one level above the official EA level and constitute the smallest administrative unit where reliable census population data is available. In each PSU twelve households were randomly selected for interviews. To ensure that women are not under represented, there is a gender stratum of an equal number of men and women in the overall sample. To accomplish this stratum, the gender of respondent is alternated after each interview.

The English questionnaire was translated into nine local languages, namely Luganda, Runyankole-Rukiga, Runyoro-Rutooro, Lugbara, Alur, Luo, Ateso, Ngakiri-mojong, and Lumasaba. The interviews were conducted face-to-face in the respective first language of the interviewee. All interviewers were intensively prepared and trained before the actual survey, to guarantee a smooth interview procedure.

9.3.2 Questionnaire and Variables

The sample contains 620 individuals, who were interviewed in 26 different districts all across Uganda. The questionnaire includes questions on socioeconomic characteristics, voting behavior, policy positions and network characteristics. It is very similar to the Afrobarometer surveys in many ways but also includes additional questions and abandons some of the questions that are not necessary for analyzing voting behavior. Especially missing questions asking for policy positions have strongly restricted the application of probabilistic voter models in former surveys. Thus policy positions were explicitly included in this survey. The seven different policy issues, include general economic/social issues but also issues focusing on agricultural policies (e.g. taxation or support of agricultural sector).

For further analysis some observations were deleted from the sample. This was especially due to missing values concerning the vote choice question, but also missing values concerning voters' own policy position. After data cleaning 325 complete observations were available for the analysis of voting behavior. In the following part variables used in the section are introduced and explained in more detail. For

comprehensibility the variables are split up into dependent and independent variables and into their category of voting: policy, retrospective and non policy.

Dependent Variable A probabilistic voter model is estimating vote choice. Depending on the kind of data available actual or intended vote choice is used as the dependent variable. Just like in the Afrobarometer survey, in our questionnaire respondents were asked:

B2. If a presidential election were held tomorrow, which party's candidate would you vote for?

In Uganda 77% of the respondents answered the vote choice question correctly naming a political party. 15.65% refused to answer the question, 6.77% said that they don't know who they would vote for and another 0.81% replied they would not vote at all. In Table 9.1 the official results of the presidential election 2011 and the survey results are displayed. The candidates of the four parties all gained more than one percentage of the vote, for the NRM the incumbent Yoweri Kaguta Museveni ran for his fourth presidency, the FDC challenger was once again Kizza Besigye, following the elections in 2001 and 2006, Norbert Mao was the candidate of the DP and Olara Otunnu ran for office for the UPC. The smaller parties candidates were combined in the category others¹. Although the last presidential election is more than two years ago, the survey result resembles still very much the official election result of 2011. The two main parties both lost some votes, while especially the Democratic Party (DP), but also the other small parties gained additional votes. Just like in Ghana, in Uganda electoral competition is a duel between two parties the NRM and the FDC. While the other parties only play a marginal role and do not have any realistic chance to win the election. Hence, for the empirical part of this section we will treat Uganda as a two party case and assume that dropping those individuals that vote for another political party does not change the results of the analysis significantly.

Table 9.1: Presidential election results from Uganda

| | NRM | FDC | DP | UPC | other |
|-----------------------------|-------|-------|------|------|-------|
| Presidential elections 2011 | 68.38 | 26.01 | 1.86 | 1.58 | 2.17 |
| Own survey 2013 | 67.94 | 24.63 | 3.40 | 1.27 | 2.76 |

Source: African Elections Database (2014c), own data)

Independent Variables

¹Beti Kamywa for the Uganda Federal Alliance (UFA), Abed Bwanika for the People's Development Party (PDP), Jaberu Bidandi Ssali for the People's Progress Party (PPP) and Samuel Lubega as independent candidate

Policy Voting To measure policy voting in Uganda, we took the same approach already introduced for the case of Ghana. In the questionnaire respondents were confronted with seven different policy issues, for each issue they were requested to place themselves and the four main parties (NRM, FDC, DP and UPC)² on a five point scale. Each issue was presented with two endpoint statements (The exact phrasing of the questions can be found in the questionnaire printed in the annex of this book).

- 1-Agree with liberal policies, 5-Disagree with liberal policies LIBERAL
- 1-Tax revenues should be used to provide public goods, 5-Tax revenues should be used to improve economic growth ECONOMIC
- 1-Economic growth shall be achieved through the agricultural sector, 5-Economic growth shall be achieved through the industrial (non-agricultural) sector AGRVSIND
- 1-Economic growth through technological progress, 5-Economic growth through better market access TPVSMA
- 1-Promotion of cash crops, 5-Promotion of food crops CASHVSFOODCROPS
- 1-Agricultural sector should be taxed, 5-Agricultural sector should be supported TAXVSPROTECT
- 1-Governmental decision making process without the population, 5-Governmental decision making process including the population STRONGVSWEAKSTATE

While the first two statements measure general policy issues, the latter are specific for the study of agricultural policy positions in developing countries. In Figure 9.2 the distribution of voters' policy positions is plotted separately for urban and rural respondents. Depending on the issue at hand we would expect that the policy positions differ, depending on the area of residence. While inhabitants of rural regions will be more oriented towards the agricultural sector, as it provides their means of livelihood. People from urban areas will rather support the industrial sector. The hypothesis can be confirmed for the issue agricultural vs. industrial sector. While 58% of the rural population strongly agree that the agricultural sector should be further developed, only 42% of the urban population have the same opinion. When they were asked how economic growth in the agricultural sector should be achieved, the rural population wants to rely more on technological progress (54%) and the urban population thinks that improving market access is the right way (50%). Further, the support of food crops is more important in urban areas (75%) than it is in rural areas (54%). The result is surprising, as rural people depend strongly on food crops for their own consumption. In cities and urban areas, people buy their products at local markets and do not grow them themselves. Hence, we would have expected that the urban population is more focused on cash crops than on food crops. Both groups agree that the agricultural sector should be protected, although the number of rural people agreeing with the statement that the agricultural sector should be taxed is larger than the number of urban people. This finding is also contradictory to the hypothesis stated before. The perception of liberal policies is very

²For later analysis only responses for the NRM and FDC were taken into account as the election campaign is almost solely a duel between the two parties.

similar in rural and in urban areas, more than 75% disagree with liberal policies, like legalization of abortion or homosexuality. The usage of tax revenues is again seen differently in urban and rural areas. The rural population would rather invest tax revenues in public goods (75%), while only 61% of the urban population agree with this statement. Most Ugandans independent of their place of living want a political decision making process that includes the citizens and provides more accountability. In general, the differences between respondents from urban and respondents from rural areas in their preferred policy positions are small.

Besides their own policy positions, respondents were also asked to evaluate the policy positions of the main political parties. In the case of Uganda we assume that the true party position is the mean of the perceived party positions of all voters. But as people are not fully rational they make mistakes when estimating policy positions, with the survey data we are able to calculate the cognition error for each voter. Figure 9.3 shows the positions of NRM and FDC as well as the distribution of the voters perceived positions of both parties. Especially for the issue strong vs. weak state the two parties are perceived very different from each other. The long term ruling party NRM has a position much closer to the strong state, without much interference of the citizens. The opposition party FDC on the other hand is located further towards the weak state that allows citizen participation and leads to more government accountability. In contrary to the literature overview, the FDC seems to be closer to the rural population, as they rather support the agricultural sector and also want the sector to be protected instead of taxed. On all other issues voters do not see any significant differences between the two political parties. Further, apart from the issue of liberal policies, where both parties take a more extreme position towards disagreeing with liberal policies, they mainly take neutral policy positions at the center of the scale.

Retrospective voting In the questionnaire we approximate retrospective voting by asking the respondents to evaluate the economic situation of the country and their own personal living conditions. While retrospective voting usually only considers the evaluation of the past economic situation, we further add two time dimensions. The respondents are asked to assess the present situation, the situation compared to twelve month ago and the situation in twelve month time. Hence, we have three variables measuring the perception of the economic situation of the country (present, past, future) and another three variables measuring the perception of people's own living conditions (present, past, future). As those variables tend to be highly correlated and to decrease the amount of variables included in the model, we factor analyzed these six variables and gained one common factor. In contrary to Senegal and Ghana where the variables loaded high on the three time dimensions, in the case of Uganda all variables loaded equally high on only one factor (RETRO).

Considering the general perception of the situation of the country and Ugandan's own living conditions, the respondents have rather pessimistic evaluations. 63% consider the present economic condition of Uganda as very bad or fairly bad, only 23% think it is fairly good or very good. The remaining 14% responded that the conditions are neither good nor bad. Their own present living conditions are perceived slightly better, 25% consider them as neither good nor bad and 53% as bad.

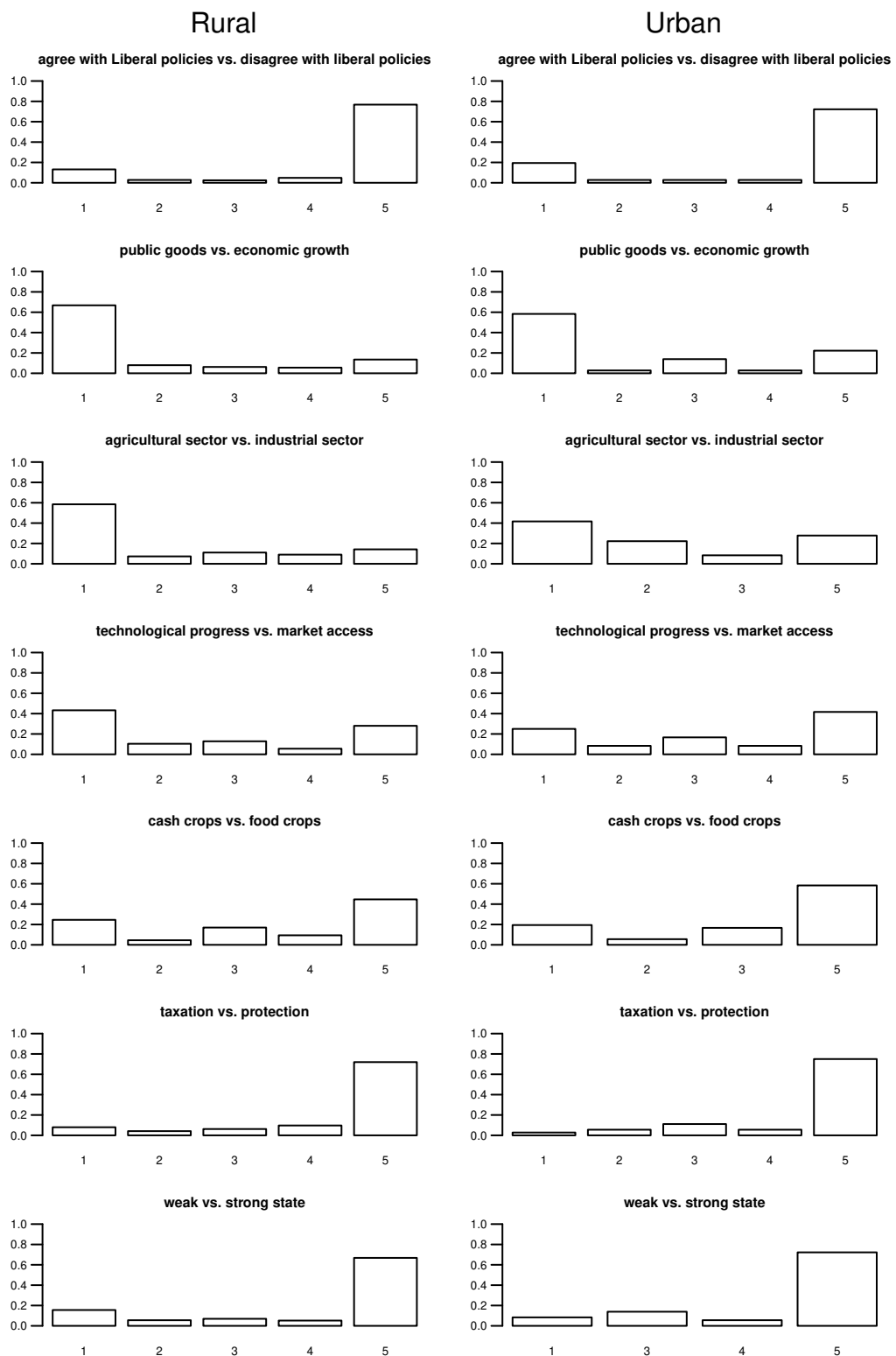


Figure 9.2: Voter positions in Uganda
Source: own data

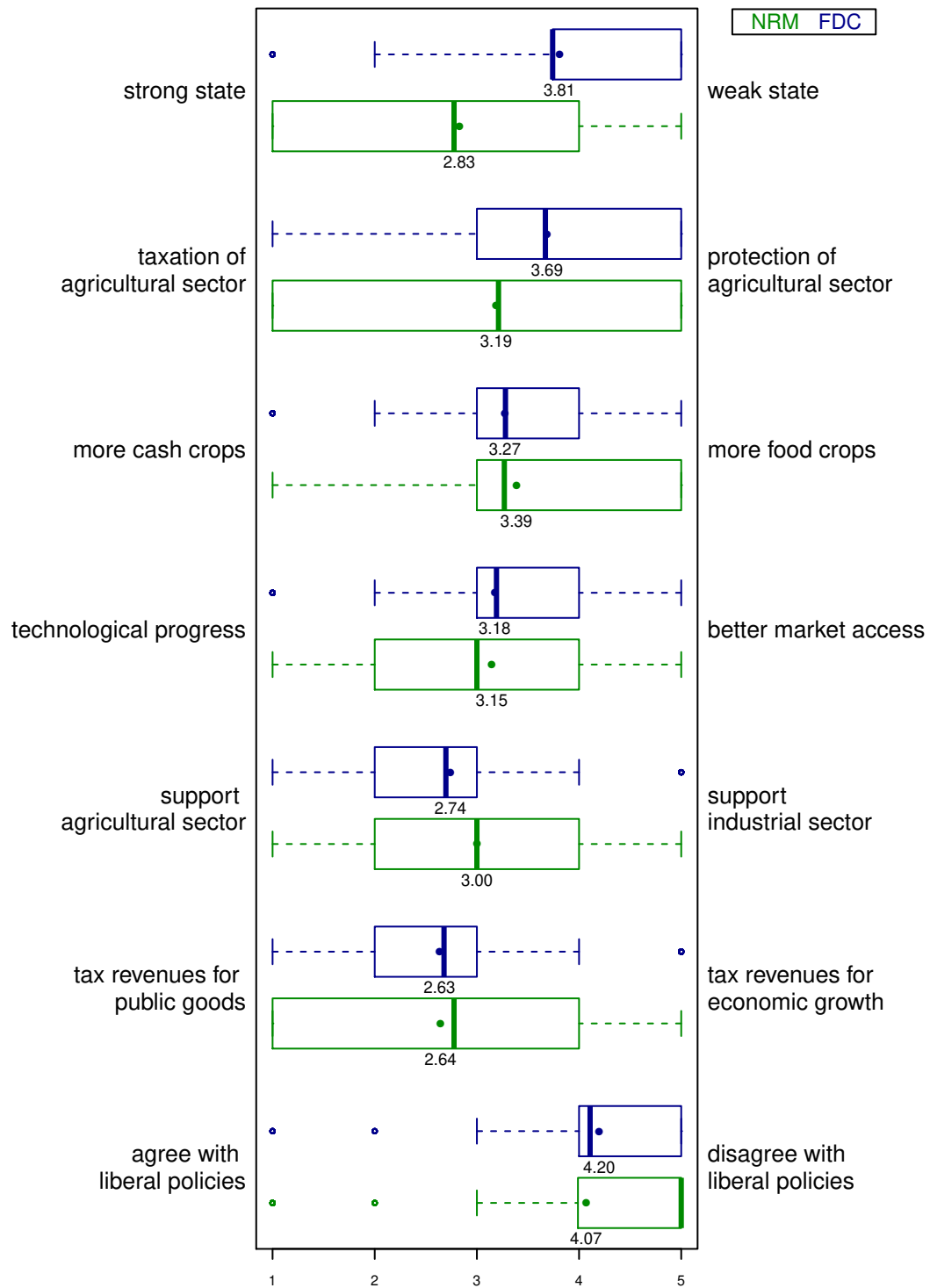


Figure 9.3: Party positions in Uganda
Source: own data

When asking the interviewees how they think the situation has changed compared to twelve month ago, the answers are very similar to the present situation. Though the personal situation took a turn to the better, 43% think that the situation is worse now, 32% said that it is the same and 25% think that the situation is better now. For the economic condition of the country, only 17% answered that the situation is better than twelve month ago, while 56% replied the contrary. At last we asked every respondent to think how the situation will change in twelve month time. At this point people are more optimistic, more than one third (36%) replied that they think the situation of the country as a whole will improve and even 44% think the same of their personal situation. Although there are still 33% that worry that the situation will get worse for Uganda's economy and 28% that fear the same for their personal situation. Summarizing the results shows that a majority of Ugandans is unsatisfied with the economic conditions of the country as well as with their own personal living conditions. Looking ahead, the perceptions are more optimistic, more than one third of the population expects things to improve in the near future.

Non policy voting Non policy voting is measured with two kinds of variables, first we included sociodemographic characteristics, ethnicity and region, and second we measure party identity with the following question (APPROVAL):

C14. Do you approve or disapprove of the way President Museveni has performed his job over the past twelve month, or haven't you heard enough about him to say?

Although people are not very satisfied with the current situation of the country and with their own living conditions, they approve with their president. 71% of the people approve or strongly approve with the way President Museveni has performed in his job and only 12% strongly disapprove with him. Once more the differences between rural and urban areas are of special interest, while 73% of the rural people approve or strongly approve with president Museveni, only 58% of the urban population think so. The result confirms the general assumption that people from urban areas are rather unsatisfied with the government and hence tend to support the opposition candidate.

The sociodemographic characteristics of the sample are displayed in Table 9.2. The majority of respondents is from rural regions, they represent 89% of the sample (RURAL). The number is comparable to the latest census, which measured that 84.4% of the population live in rural settlements. The gender stratum also worked out well, 48% of the sample are women and 52% are men (GENDER). The mean age of the sample is 36 years, the oldest respondent is 83 years old and the youngest is just 18 years old (AGE). The education level of the sample is quite high, only 11% did not enjoy any formal schooling, 43% went to primary school, 34% visited secondary school and 12% have post secondary school qualifications (EDUCATION). Uganda is a mainly Christian country and the data affirms that with 83% of the sample being Christians (RELIGION). The average household expenditures are 205591 Ugandan Shilling/UGX which corresponds to \$82³, the minimum household expenditures are 1000UGX (\$0.40) and the maximum household expenditures are 3500000UGX

³1UGX=\$0.0004

(\$1397) (EXPENDITURES). Wealth was further measured with the Lived Poverty Index (LPI). In the sample the mean LPI is 1.13. The index is quite low compared to other Sub-Saharan African countries and denotes a low degree of lived poverty. In Round 5 of the Afrobarometer survey Togo has the highest LPI with 1.89 and Mauritius the lowest with 0.2. Further, the LPI of Uganda measured with the Afrobarometer data is 1.41 (LPI). Political interest is rather high in Uganda especially in comparison to Senegal and Ghana, 18% of the population are very interested, and 41% are at least interested in public affairs (POLINT). The distribution of the sample to the different regions is evident from Table 9.2, roughly 20-25% of the sample are from each region with the exception of Kampala, where only 4% of the sample live. Finally, the different ethnic groups of Uganda, the Baganda⁴ are the largest tribe in Uganda. They represent 21% of the sample and are slightly over represented compared to the official census data. The rest of the sample divides relatively equally into the other five big tribes, which is evident from Table 9.2 as well.

9.4 Estimation of Voting Behavior

Voting behavior influences not only the election outcome but also government performance and hence the development of a country. In the former sections we learned that especially in developing countries non policy voting plays an important role. Further, we could show that in Ghana as well as in Senegal next to non policy voting also policy oriented voting is important. To get a first impression, we asked respondents in Uganda directly for their voting motives:

C17. When you consider voting for a certain candidate, which of the following things are important for your choice?

In the Table 9.3 the outcome of the question is displayed. There are only three characteristics that more than 80% of the sample consider as important or very important: character, political knowledge and past political performance. While character is a difficult construct that consists of policy as well as non policy voting, past political performance and political knowledge can both be considered as policy voting, the former more specifically as retrospective voting. The typical non policy explanation factors like outer appearance, ethnic and regional origin are considered unimportant by two thirds of the sample. Further, it strikes out that party affiliation is considered as unimportant by almost 40% of the respondents, the number confirms that it is not the political party people vote for but rather the party leader. Another non policy factor which is considered to be important by almost 70% of the sample is election campaigning, hence a costly and elaborate campaign is effective in gathering votes and definitely privileges the incumbent. Of course the results have to be considered with care, as people are always biased when answering questions with desirable outcomes. That is why in the following sections we econometrically estimate voting behavior in Uganda and analyze which voting motives are important and how they influence government performance.

⁴The singular of Baganda is Muganda.

Table 9.2: Description of survey data

| | N | mean | sd | se | CI-left | CI-right | min | max |
|---|-----|--------|--------|-------|---------|----------|--------|---------|
| Retrospective Voting | | | | | | | | |
| RETRO | 325 | 0.169 | 0.914 | 0.037 | 0.097 | 0.241 | -1.728 | 2.357 |
| Uganda (present) ¹ | 325 | 2.348 | 1.182 | 0.047 | 2.255 | 2.441 | 1 | 5 |
| Personal (present) | 325 | 2.434 | 1.152 | 0.046 | 2.343 | 2.525 | 1 | 5 |
| Uganda (past) | 325 | 2.421 | 1.023 | 0.041 | 2.340 | 2.501 | 1 | 5 |
| Personal (past) | 325 | 2.671 | 1.070 | 0.043 | 2.587 | 2.755 | 1 | 5 |
| Uganda (future) | 325 | 2.902 | 1.159 | 0.047 | 2.811 | 2.993 | 1 | 5 |
| Personal (future) | 325 | 3.081 | 1.178 | 0.047 | 2.988 | 3.173 | 1 | 5 |
| Government Performance | | | | | | | | |
| APPROVAL ² | 325 | 2.795 | 0.906 | 0.036 | 2.723 | 2.866 | 1 | 4 |
| Sociodemographic characteristics | | | | | | | | |
| RURAL ³ | 325 | 0.889 | 0.314 | 0.013 | 0.864 | 0.914 | 0 | 1 |
| GENDER ⁴ | 325 | 0.477 | 0.500 | 0.020 | 0.438 | 0.516 | 0 | 1 |
| AGE | 325 | 35.692 | 13.516 | 0.543 | 34.628 | 36.753 | 18 | 83 |
| EDUCATION ⁵ | 325 | 2.428 | 1.099 | 0.044 | 2.341 | 2.514 | 0 | 5 |
| RELIGION ⁶ | 325 | 0.834 | 0.373 | 0.021 | 0.793 | 0.874 | 0 | 1 |
| FARMER ⁷ | 325 | 2.218 | 0.789 | 0.032 | 2.156 | 2.281 | 1 | 4 |
| EXPENDITURES ⁸ | 325 | 205591 | 389235 | 15632 | 174953 | 236229 | 1000 | 3500000 |
| LPI ⁹ | 325 | 1.132 | 0.765 | 0.031 | 1.072 | 1.192 | 0 | 3 |
| POLINT ¹⁰ | 325 | 2.625 | 0.927 | 0.037 | 2.552 | 2.698 | 1 | 4 |
| Regions | | | | | | | | |
| KAMPALA | 325 | 0.043 | 0.203 | 0.008 | 0.027 | 0.059 | 0 | 1 |
| CENTRAL | 325 | 0.215 | 0.412 | 0.017 | 0.183 | 0.248 | 0 | 1 |
| EAST | 325 | 0.246 | 0.431 | 0.017 | 0.212 | 0.280 | 0 | 1 |
| NORTH | 325 | 0.255 | 0.437 | 0.018 | 0.221 | 0.290 | 0 | 1 |
| WEST | 325 | 0.240 | 0.428 | 0.017 | 0.206 | 0.274 | 0 | 1 |
| Tribes | | | | | | | | |
| LUGBARA | 325 | 0.083 | 0.276 | 0.011 | 0.061 | 0.105 | 0 | 1 |
| MUGANDA | 325 | 0.206 | 0.405 | 0.016 | 0.174 | 0.238 | 0 | 1 |
| MUGISHU | 325 | 0.117 | 0.322 | 0.013 | 0.092 | 0.142 | 0 | 1 |
| MUNYANKOLE | 325 | 0.105 | 0.307 | 0.012 | 0.080 | 0.129 | 0 | 1 |
| MUSOGA | 325 | 0.095 | 0.294 | 0.012 | 0.072 | 0.119 | 0 | 1 |
| MUTOORO | 325 | 0.083 | 0.276 | 0.011 | 0.061 | 0.105 | 0 | 1 |

¹ 1=very bad, 5=very good; ² 1=strongly disapprove, 4= strongly approve; ³ 1=rural, 0=urban; ⁴ 1=women, 0=men; ⁵ 1=no formal schooling, 7=University; ⁶ 1=Christian, 0=other; ⁷ 1=farmer, 0=no farmer; ⁸ in UGX; ⁹ 0=no lived poverty, 4=high lived poverty; ¹⁰ 1=not at all interested, 4=very interested

Source: own data

Table 9.3: Voting motives in Uganda

| | very unimportant | unimportant | important | very important |
|----------------------------|---------------------|-------------|-----------|-------------------|
| character | 5.54 | 6.15 | 33.23 | 55.08 |
| outer appearance | 34.46 | 35.08 | 16 | 14.15 |
| ethnic origin | 36.31 | 32 | 18.77 | 12.92 |
| regional origin | 31.38 | 33.85 | 20.92 | 13.85 |
| political knowledge | 7.69 | 10.15 | 43.08 | 37.85 |
| party affiliation | 12.31 | 25.85 | 34.15 | 27.38 |
| past political performance | 3.38 | 9.85 | 44.31 | 42.46 |
| election campaign | 10.46 | 18.46 | 51.38 | 18.46 |

Source: own data

9.4.1 Multinomial Logit Model

After Table 9.3 provided a first impression of the importance of different voting motives in Uganda, we estimated a multinomial logit model (ML) to dig deeper and econometrically estimate voting behavior. Table 9.4 shows the output of seven different model specifications. While model one only includes policy oriented voting and an alternative specific constant, in models two to six further explaining variables corresponding to different voting motives were added. The goodness of fit of each model specification was measured with McFadden R^2 and the Log-Likelihood value. From McFadden R^2 it becomes obvious that model quality increases steadily from model one to model six. For all individual specific variables an alternative specific coefficient is estimated, the coefficients of the NRM are normalized and set to zero. Hence, all other coefficients have to be interpreted compared to the incumbent party, Museveni's NRM.

Model one includes all the policy issues introduced in section 9.3, except from the issue TAXVSPROTECT all variables are in line with literature and have a negative sign indicating that the probability to vote for a certain party decreases when the distance between political party and voter increases. Further, only two of the seven issues have significant influence on vote choice, these issues are ECONOMIC and CASHVS-FOODCROPS. Although CASHVSFOODCROPS is an agricultural issue it is surprising that besides neither AGRVSIND nor TAXVSPROTECT are significant. From the importance of agriculture mentioned in the literature overview we were expecting that the agricultural issues are primarily responsible for vote choice. Nevertheless model one already provides a R^2 of 16.3 and is on it's own able to explain voting behavior quite well. In model two retrospective voting was added, the common factor of the six retrospective variables - RETRO - is not significant in any model specification. Once more the result is unexpected, especially when considering that almost 90% of the respondents mentioned past political performance as an important factor for their vote choice. Past political performance of the president (APPROVAL) on the other hand is highly significant and increases model fit from $R^2=16.6$ to $R^2=32.5$. The coefficient is negative, which indicates that the more someone approves with

the performance of President Museveni the higher is the probability to vote for him. Model four to model six include sociodemographic variables, like gender, age and education (model four), but also ethnicity (model five) and home region (model six). Neither ethnicity nor region are significant in model specifications five and six. Even the coefficient for the presidents own ethnic tribe the Munyankole is insignificant and hence has no influence on vote choice. The same is true for rural, whether someone lives in a rural or urban area has no significant impact on voting behavior. Furthermore, vote choice is influenced by GENDER, AGE, EDUCATION and RELIGION. Women rather vote for the NRM, while men are supporting the FDC. Additionally age impacts the probability to vote for the NRM positively, the older someone is the higher is his probability to support Museveni. Older people experienced the time after independence, when Milton Obote and also Idi Amin ruled as dictators and Uganda was in very bad shape. They also experienced that the NRM and Museveni brought stability and economic revival to the country. Hence, their situation improved and they continue to support the incumbent. Education on the contrary has a positive effects on voting for the FDC, the effect is common in developing countries. The better educated and often urban elite is unsatisfied with the current government and supports the opposition instead. Finally there also exists a religious bias, Christians vote for the NRM with a higher probability or put the other way around, Muslims favor the FDC over the NRM when they make their decision at the ballot box.

Table 9.4: Estimation results of the multinomial logit model

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | | Model 5 | | Model 6 | | Model 7 | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value | Coef. | p-value |
| FDC:INTERCEPT | -1.405 | 0.000 | -1.372 | 0.000 | 2.409 | 0.000 | 5.400 | 0.000 | 6.013 | 0.000 | 6.600 | 0.000 | 5.503 | 0.000 |
| LIBERAL | -0.040 | 0.229 | -0.040 | 0.234 | -0.002 | 0.965 | 0.031 | 0.482 | 0.026 | 0.559 | 0.030 | 0.517 | | |
| ECONOMIC | -0.105 | 0.000 | -0.103 | 0.000 | -0.097 | 0.001 | -0.115 | 0.000 | -0.116 | 0.001 | -0.119 | 0.000 | -0.1131 | 0.000 |
| AGRSIND | -0.042 | 0.113 | -0.040 | 0.145 | -0.027 | 0.369 | -0.021 | 0.520 | -0.014 | 0.695 | -0.010 | 0.773 | | |
| TPVNSMA | -0.033 | 0.181 | -0.032 | 0.205 | 0.004 | 0.907 | 0.022 | 0.513 | 0.025 | 0.474 | 0.022 | 0.526 | | |
| CASHVSFOODCROPS | -0.048 | 0.057 | -0.046 | 0.066 | -0.049 | 0.090 | -0.100 | 0.004 | -0.100 | 0.005 | -0.098 | 0.007 | -0.089 | 0.007 |
| TAXVSPROTECT | 0.002 | 0.929 | 0.003 | 0.898 | -0.029 | 0.309 | -0.052 | 0.131 | -0.066 | 0.092 | -0.068 | 0.090 | -0.052 | 0.063 |
| WEAKVSSTRONGSTATE | -0.023 | 0.263 | -0.022 | 0.285 | 0.011 | 0.636 | 0.011 | 0.678 | 0.005 | 0.854 | 0.007 | 0.805 | | |
| FDC:RETRO | | | -0.176 | 0.273 | 0.017 | 0.925 | -0.183 | 0.382 | -0.260 | 0.246 | -0.271 | 0.232 | | |
| FDC:APPROVAL | | | | | -1.440 | 0.000 | -1.585 | 0.000 | -1.693 | 0.000 | -1.706 | 0.000 | -1.518 | 0.000 |
| FDC:RURAL | | | | | | | 0.092 | 0.863 | -0.062 | 0.914 | 0.390 | 0.656 | | |
| FDC:GENDER | | | | | | | -1.295 | 0.001 | -1.317 | 0.002 | -1.299 | 0.002 | -1.288 | 0.001 |
| FDC:AGE | | | | | | | -0.073 | 0.000 | -0.074 | 0.000 | -0.073 | 0.000 | -0.067 | 0.000 |
| FDC:EDUCATION | | | | | | | 0.328 | 0.092 | 0.349 | 0.083 | 0.364 | 0.074 | 0.320 | 0.089 |
| FDC:RELIGION | | | | | | | -1.448 | 0.003 | -1.546 | 0.005 | -1.531 | 0.005 | -1.377 | 0.003 |
| FDC:EXPENDITURES | | | | | | | 0.000 | 0.384 | 0.000 | 0.518 | 0.000 | 0.535 | | |
| FDC:POLLINT | | | | | | | 0.212 | 0.348 | 0.201 | 0.394 | 0.178 | 0.460 | | |
| FDC:LUGBARA | | | | | | | | | 0.147 | 0.843 | 0.229 | 0.784 | | |
| FDC:MUGANDA | | | | | | | | | -0.538 | 0.358 | -0.864 | 0.348 | | |
| FDC:MUGISHU | | | | | | | | | -0.422 | 0.542 | -0.525 | 0.530 | | |
| FDC:MUNYANKOLE | | | | | | | | | -0.555 | 0.491 | -0.784 | 0.423 | | |
| FDC:MUSOGA | | | | | | | | | -0.255 | 0.719 | -0.273 | 0.761 | | |
| FDC:MUTOORO | | | | | | | | | 0.995 | 0.209 | 0.828 | 0.381 | | |
| FDC:CENTRAL | | | | | | | | | | | -0.793 | 0.492 | | |
| FDC:EAST | | | | | | | | | | | -0.928 | 0.521 | | |
| FDC:NORTH | | | | | | | | | | | -1.115 | 0.429 | | |
| FDC:WEST | | | | | | | | | | | -0.861 | 0.497 | | |
| Log-Likelihood | -158.89 | | -158.29 | | -128.09 | | -104.33 | | -102.17 | | -101.84 | | -106.37 | |
| McFadden R ² | 0.16 | | 0.17 | | 0.35 | | 0.45 | | 0.46 | | 0.46 | | 0.44 | |

Source: own estimation

In the last column you find model seven, which is a reduced model specification. In this model variables that did not significantly add value to the model were dropped stepwise. After dropping a variable a likelihood ratio test was conducted to review whether the reduced model differs significantly from the complete model. Hence, model seven only includes variables that significantly explain voting behavior. Among the variables are three policy issues, ECONOMIC, CASHVSFOODCROPS and TAXVSPROTECT, the non policy variable APPROVAL and sociodemographic characteristics of the interviewee, GENDER, AGE, EDUCATION and RELIGION. In the following parts we will use model seven for further analysis and interpretations.

To get an enhanced overview about the effects of the variables and also because the coefficients of a logit model are not linear to interpret, we calculated marginal effects for all variables from model seven. When a political party changes its policy position, as a matter of fact the probability to vote for that particular party also changes. Depending on the position of the voter, the effect can be positive or negative. When we measure the average marginal effect of a one unit change in the policy position, the effect is negative for the issue ECONOMIC and positive for CASHVSFOODCROPS and TAXVSPROTECT. The average effect for all three issues is small. The probability to vote for the NRM decreases by 2% when they increase their policy position on the economic issue by one unit. An increase in the position cash crops vs. food crops results in an increase of the probability to vote for the NRM of 0.4% and when the position is moved towards protection of the agricultural sector, the probability increases by 1.6%. Figure 9.4 shows the effect graphically for the issue TAXVSPROTECT, it is obvious that changing the policy position hardly effects the voting probability for either of the two political parties. Independent of the policy position on this issue, the NRM gains more than 60% of the vote and will always win the election. When plotting the other two issues, the figure looks very much alike. Hence, moving the policy position is not an efficient way to gain further votes for the opposition party.

The effect of APPROVAL is considerably larger, when approval with the president is increased by one unit, the probability to vote for the NRM increases by 15.6% while the probability to vote for the FDC decreases by the same percentage. Also the effects of the individual specific variables are reasonable. The probability to vote for the incumbent increases by 13.5% when someone is female and by 15.6% when someone is a Christian. The effect of education is negative for the NRM, when the level of education increases by one unit, the probability to vote for the FDC increases by 3.3%, in a hypothetical scenario where the whole population would increase their education level from no education to a university education, the FDC would gain additional 16.5%. Age is another factor that increases the probability to vote for the NRM, an additional year of age increases the probability to vote for the NRM by 0.7%. The marginal effects show, just like the model output that most factors are in favor of Museveni and the NRM. The only way for the FDC to improve its results in elections is to raise the general education level or to convince the voter that Museveni is not performing very well in his job. To know how important the actual voting motives are, we calculated relative marginal effects (RIs). Usually the RIs are calculated for policy oriented, non policy oriented and retrospective voting. However, in the case of Uganda, retrospective voting does not influence vote choice,

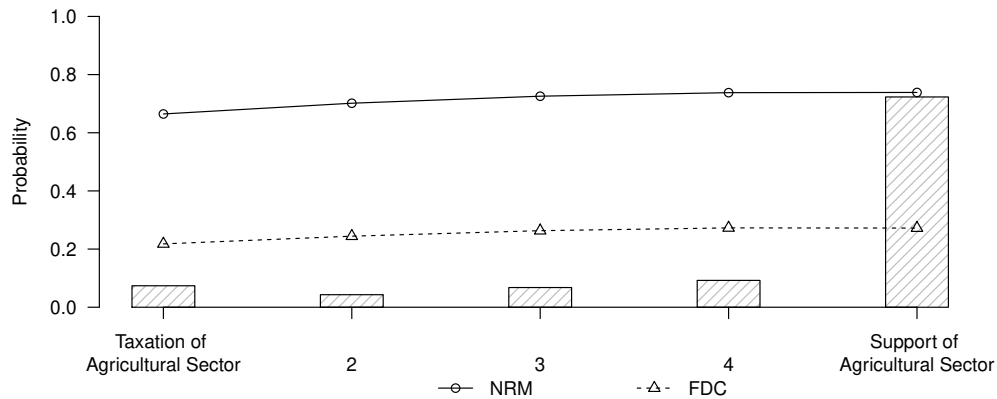


Figure 9.4: Changing policy positions: TAXVSPROTECT
Source: own data

hence only the RIs for policy oriented and non policy voting are calculated. Because there are only two voting motives, RI_P equals $1 - RI_{NP}$. The distribution among individuals is displayed in Figure 9.5. The average RI of policy voting is 28.5% and the average RI of non policy voting is 71.5%. The results point towards very non policy oriented voting behavior in Uganda, which would in turn lead to low government accountability.

9.4.2 Heterogeneity

In the ML model it is assumed that every voter behaves the same, the coefficients do not differ from one person to another. However, when taking a look at Figure 9.5 it becomes obvious that voting behavior partially differs heavily between individuals. Policy voting has a relative importance of zero for some Ugandans, but for others it is around 60% and hence even more important than non policy voting. These differences are interesting, as they suggest that there exist certain groups of voters that vote policy oriented compared to other groups that vote rather non policy oriented. Combining the results with government performance would lead to a bias towards the groups that vote more policy oriented. While we will concentrate on finding out more about heterogeneity in voting behavior in Uganda at this point, the connection to government performance will be drawn in the following section.

Although the rural/urban divide was not significant in explaining vote choice in the ML model, it might have an influence on voting behavior in general. In the literature it is widely accepted that policy oriented voting is cognitively more demanding and hence needs a better educational background. That is why urban areas usually vote more policy oriented than rural areas, as a result of better schools and education in the cities. Hence, we hypothesize the same for the case of Uganda. In Figure 9.6 relative importance is plotted depending on the area of living. The results are contrarious to the assumptions we just made. The urban population

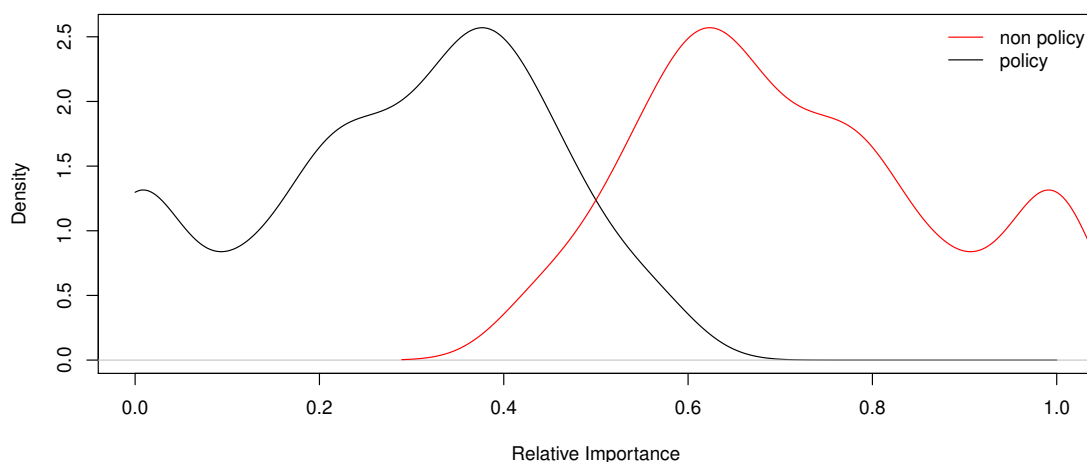


Figure 9.5: RI of non policy and policy voting
Source: own data

relies more heavily on non policy voting, while the rural population actually votes more policy oriented. The average RI for policy oriented voting is 28.9% for the rural respondents and 25.6% for the urban respondents. Although the differences are not huge, they give another hint that voting behavior differs among individuals and is by no means homogeneous.

To identify the heterogeneity in voting behavior in Uganda further, we estimated a latent class (LC) model. The LC model contains two sub models, a choice model that is similar to the ML model and determines which political party is chosen and a class model that estimates class membership. For the choice model we only included the voting motives already identified in the former section, policy voting in terms of policy distances (ECONOMIC, CASHVSFOODCROP, TAXVSPROTECT) and non policy voting, measured as the general approval with the president (APPROVAL). Retrospective voting is once more left out, as it could be shown in the ML model that it does not influence vote choice significantly. All personal characteristics are included in the class model, where they determine class membership. While the choice model was held constant in all model specifications, we estimated different class models. The overview results are displayed in Table 9.5. In the first row we replicated the ML model from the former section. The second model is a two class model but without any covariates explaining class membership. Model three also resembles the ML model, as it includes the same variables, but with all personal characteristics (GENDER, AGE, RELIGION and EDUCATION) in the class model instead of in the choice model. Models three and four are variations of model two, in model three education was dropped from the class model, as it was not significant and model four also contains region and ethnicity. Compared to Senegal, in Uganda except from the four class models most other model specifications converged. Considering once more the AIC3 criterion to choose the best fit model results in the two class solution of model three which has apart from the model without covariates the smallest number of parameters but the highest model fit. Classification and prediction errors are low

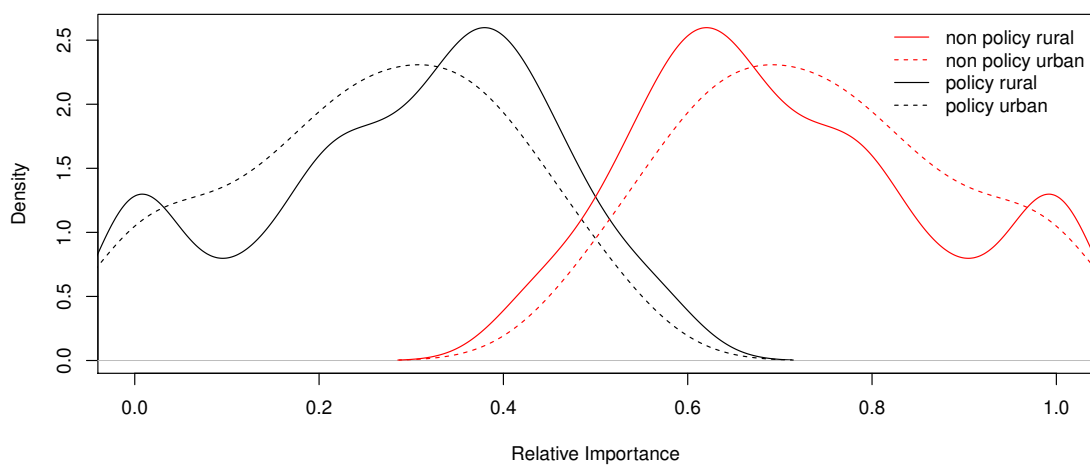


Figure 9.6: RI of policy and non policy voting in rural and urban areas
Source: own data

Table 9.5: Comparison of different LC model specifications

| | LL | BIC | AIC | AIC3 | CAIC | Npar | df | Class.Err. | Pred.Err | Conv. |
|---|---------|--------|--------|--------|--------|------|-----|------------|----------|-------|
| MCL Model | | | | | | | | | | |
| 1-Class | -106.37 | 264.80 | 230.74 | 239.74 | 273.80 | 9 | 315 | 0.00 | | yes |
| Model 1: no covariates | | | | | | | | | | |
| 1-Class | -128.65 | 286.22 | 267.31 | 272.31 | 291.22 | 5 | 297 | 0.00 | 0.18 | yes |
| 2-Class | -121.19 | 306.00 | 264.38 | 275.38 | 317.00 | 11 | 291 | 0.33 | 0.08 | yes |
| 3-Class | -117.23 | 332.79 | 268.47 | 285.47 | 349.79 | 17 | 285 | 0.38 | 0.04 | yes |
| 4-Class | -116.87 | 366.76 | 279.73 | 302.73 | 389.76 | 23 | 279 | 0.55 | 0.03 | no |
| Model 2: gender, age, religion, education | | | | | | | | | | |
| 1-Class | -128.65 | 286.22 | 267.31 | 272.31 | 291.22 | 5 | 319 | 0.00 | 0.18 | yes |
| 2-Class | -104.76 | 296.28 | 239.52 | 254.52 | 311.28 | 15 | 309 | 0.08 | 0.11 | yes |
| 3-Class | -90.39 | 325.37 | 230.77 | 255.77 | 350.37 | 25 | 299 | 0.11 | 0.09 | yes |
| 4-Class | -81.02 | 364.47 | 232.04 | 267.04 | 399.47 | 35 | 289 | 0.17 | 0.07 | no |
| Model 3: gender, age, religion | | | | | | | | | | |
| 1-Class | -128.65 | 286.22 | 267.31 | 272.31 | 291.22 | 5 | 319 | 0.00 | 0.18 | yes |
| 2-Class | -105.08 | 291.14 | 238.16 | 252.16 | 305.14 | 14 | 310 | 0.09 | 0.11 | yes |
| 3-Class | -95.51 | 324.05 | 237.02 | 260.02 | 347.05 | 23 | 301 | 0.21 | 0.07 | yes |
| 4-Class | -90.02 | 365.12 | 244.04 | 276.04 | 397.12 | 32 | 292 | 0.30 | 0.05 | no |
| Model 4: gender, age, religion, rural, central, east, north, muganda, munyankole | | | | | | | | | | |
| 1-Class | -128.65 | 286.22 | 267.31 | 272.31 | 291.22 | 5 | 320 | 0.00 | 0.18 | yes |
| 2-Class | -97.01 | 309.69 | 234.02 | 254.02 | 329.69 | 20 | 305 | 0.04 | 0.11 | yes |
| 3-Class | -84.32 | 371.07 | 238.64 | 273.64 | 406.07 | 35 | 290 | 0.13 | 0.06 | no |
| 4-Class | -68.91 | 427.01 | 237.82 | 287.82 | 477.01 | 50 | 275 | 0.13 | 0.03 | no |

Source: own estimation

Table 9.6: Latent class estimation results

| Model for Choices | | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Class 1 | z-value | p-value | Class 2 | z-value | p-value | Wald(=) | p-value |
| Attributes | | | | | | | | |
| FDC:CONSTANT | 0.139 | 0.165 | 0.869 | 6.568 | 4.372 | 0 | 12.765 | 0.000 |
| ECONOMIC | -0.117 | -2.407 | 0.017 | -0.114 | -2.168 | 0.031 | 0.002 | 0.970 |
| CASHVSFOODCROP | -0.087 | -1.724 | 0.086 | -0.066 | -1.133 | 0.258 | 0.065 | 0.800 |
| TAXVSPROTECT | -0.055 | -1.339 | 0.182 | -0.027 | -0.536 | 0.592 | 0.180 | 0.670 |
| Predictors | | | | | | | | |
| FDC:APPROVAL | -1.086 | -3.248 | 0.001 | -2.591 | -4.684 | 0 | 4.760 | 0.029 |
| Model for Classes | | | | | | | | |
| | Class 1 | z-value | p-value | Class 2 | z-value | p-value | Wald | p-value |
| Class Membership | 0.5771 | | | 0.4229 | | | | |
| Covariates | | | | | | | | |
| INTERCEPT | 0 | | | 18.127 | 1.386 | 0.167 | 1.920 | 0.170 |
| GENDER | 0 | | | -6.402 | -1.901 | 0.058 | 3.613 | 0.057 |
| AGE | 0 | | | -0.298 | -1.673 | 0.095 | 2.800 | 0.094 |
| RELIGION | 0 | | | -6.035 | -1.215 | 0.225 | 1.477 | 0.220 |
| EDUCATION | 0 | | | -0.130 | -0.162 | 0.871 | 0.026 | 0.870 |

Source: own estimation

for most two class models, only model one is unable to correctly classify individuals into classes. This is however due to the missing covariates. The distribution among classes is quite even, with the first three models having an average class membership for Class 1 of 58% and for Class 2 of 42%. In model four the average class membership is 50% for both classes. Because the issue of this book is also to compare the results of the ML and LC model, we only display the output of model two at this point (see Table 9.6), however all other model outputs are available from the author on request. Furthermore, apart from model one, which does not include any covariates, the coefficients of the choice model for the other three models are very similar. In the class model of model two all coefficients except from the intercept are negative, however most of them are insignificant except from GENDER and AGE, which have a significant positive effect for being in Class 1. The positive intercept shows that there is a bias towards being in Class 2 which cannot be explained by the variables included in the model. Table 9.7 shows the mean values of all descriptive variables for Class 1 and Class 2, additionally the p-value of a t-test is displayed to find out whether the means for the two classes differ significantly from each other. Taking a look at the sociodemographic characteristics allows us to further characterize the two classes, from the model output we were already aware of the fact that women and older people are rather represented in Class 1 than in Class 2. Further, there are significant differences in education, religion, farming background and the level of poverty. The share of poorer and less educated people is greater in Class 1, further there are more Christians and farmers in that particular class. The two classes do not differ from each other concerning rural/urban, political interest and household expenditures. More respondents are from Kampala in Class 2, while the West is more represented in Class 1. Additionally there are significantly more Lugbara and Muganda in Class 2 and more Munyankole in Class 1. Summing up Class 1 rather consists of the poorer, less educated, farming households in the Western region, while

Class 2 is dominated by richer, better educated people from Kampala that belong to the Lugbara and Muganda tribe. Finally, concerning their policy positions, the two classes only differ significantly in their position on the issue AGRVSIND. The Kampala class (Class 2) positions itself further towards the Industrial sector, while the poorer, farming class rather wants to support the rural, agricultural sector. Vote choice also varies strongly between the two classes, the NRM is the dominant party in Class 1, people vote for Museveni with a probability of 88%. Although Museveni would also win the majority in Class 2, the result would be much closer. Only 51% of Class 2 favor the NRM and remarkable 49% would actually vote for the opposition party FDC.

After having a better idea of the composition of the two classes and their vote choice, we will next investigate the choice model printed in the upper part of Table 9.6. The signs of the coefficients are identical in both classes and also the values of the policy issues are very similar. What distinguishes both classes are the values of the constant as well as of the coefficient for approval with the president. The alternative specific constant of Class 2 is almost 50 times larger than the constant of Class 1 and also the coefficient for approval with the president is more than twice as high for Class 2. Taking a look at the marginal effects for both classes reveals that they hardly differ for the three policy issues, they are between 0.3% for Class 2 (CASHVSFOODCROP) and 2.1% for Class 1 (ECONOMIC). The combined effect of both classes is close to the effects from the ML model, further the result is independent of the choice of LC model (M2, M3, M4). The marginal effect for approval with the president is only 8.6% for Class 1, but 29.3% for Class 2. Hence, non policy voting in terms of approval with the president is more important in Class 2 than it is in Class 1. The combined effect is 17.6%, which is two percentage points higher than the result from the ML model. Furthermore, the relative importance of non policy voting for both classes is 73.4% consequential the relative importance of policy voting is 26.6%. Again, the results are very much alike to the outcomes of the ML model. In Figure 9.7 the relative importance of both voting motives is plotted for Class 1 and Class 2 separately. While Class 1 relies much more on policy voting, Class 2 votes non policy oriented. Recalling the composition of the two classes and combining it with the outcome of Figure 9.7, shows that the "Kampala Class" (Class 2) with it's well educated and wealthier members votes actually less policy oriented than its more simple, rural counterparts.

9.5 Voting Behavior and Government Performance

In the previous section we analyzed voting behavior in Uganda applying a multinomial logit and a latent class model. The results showed that non policy voting is the dominant voting motive with a relative importance of more than 70%. Retrospective voting on the other hand does not have any influence on voting behavior, the coefficient was insignificant in all model specifications. Accordingly, the relative importance of retrospective voting is zero. Finally policy voting has a relative importance of 28%. The dominance of non policy voting already suggests that government accountability is low, as voters do not choose their political party because of their policy position but because of good election campaigning and hence strong party

Table 9.7: Descriptive statistics by latent classes

| | Class 1 | Class 2 | p-value |
|---|---------|---------|---------|
| Policy Position | | | |
| SOCIAL | 4.342 | 4.163 | 0.276 |
| ECONOMIC | 1.858 | 2.081 | 0.189 |
| AGRICVSIND | 2.021 | 2.385 | 0.038 |
| TPVSMA | 2.663 | 2.807 | 0.451 |
| CASHVSFOODCROP | 3.511 | 3.437 | 0.691 |
| TAXVSPROTECT | 4.416 | 4.252 | 0.247 |
| ACCOUNTABILITY | 4.100 | 3.993 | 0.530 |
| Governmental Performance | | | |
| APPROVAL | 2.941 | 2.588 | 0.000 |
| Sociodemographic Characteristics | | | |
| RURAL | 0.900 | 0.874 | 0.472 |
| GENDER | 0.721 | 0.133 | 0.000 |
| AGE | 39.800 | 29.911 | 0.000 |
| EDUCATION | 2.316 | 2.585 | 0.023 |
| RELIGION | 0.953 | 0.667 | 0.000 |
| FARMER | 2.305 | 2.096 | 0.021 |
| EXPENDITURES | 208274 | 201815 | 0.885 |
| LPI | 1.254 | 0.961 | 0.001 |
| POLINT | 2.595 | 2.667 | 0.482 |
| Region | | | |
| KAMPALA | 0.021 | 0.074 | 0.035 |
| CENTRAL | 0.205 | 0.230 | 0.602 |
| EAST | 0.242 | 0.252 | 0.842 |
| NORTH | 0.242 | 0.274 | 0.519 |
| WEST | 0.289 | 0.170 | 0.011 |
| Ethnicity | | | |
| LUGBARA | 0.042 | 0.141 | 0.004 |
| MUGANDA | 0.174 | 0.252 | 0.094 |
| MUGISHU | 0.121 | 0.111 | 0.783 |
| MUNYANKOLE | 0.132 | 0.067 | 0.048 |
| MUSOGA | 0.100 | 0.089 | 0.736 |
| MUTOORO | 0.084 | 0.081 | 0.930 |

Source: own data

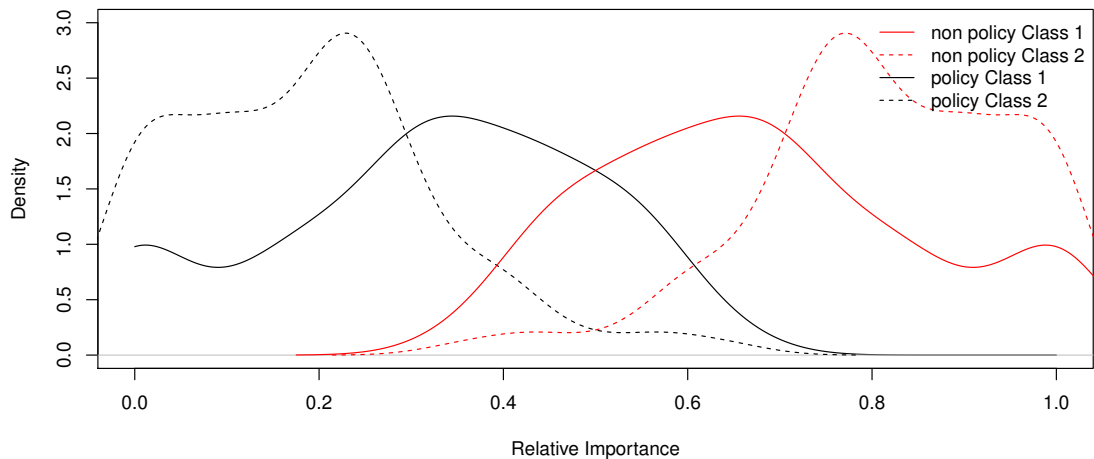


Figure 9.7: RI of voting motives in latent classes
Source: own data

identification. Furthermore, Uganda is basically a two party state, with a dominant incumbent president who gained more than two thirds of the votes in the last presidential election. While government accountability seems to be low in Uganda, we will further investigate government capture. Capture is due to different average voting weights between groups of voters. In the latent class analysis we already identified two groups that differ in their voting behavior: the rural and poor people (Class 1) and an urban elite (Class 2). From the theory we assume that especially groups that vote more non policy oriented are vulnerable to capture by other groups that vote more policy oriented. Taking the results from the previous section that would result in rural people capturing the urban elite, as the former vote far more policy oriented. However, the hypothesis is not in line with the general literature on developing countries, which assumes that the urban elite captures the rural and poor population (urban bias). Further, it has to be kept in mind that the rural population has a population share of more than 80%, even if their average weight in elections is low, they still provide the majority of votes and consequently their power in the political process is of special interest.

9.5.1 Government Accountability

We hypothesized from the results in the former section that government accountability will be low in Uganda. To verify this assumption we calculated the already known government accountability indices. The results can be found in Table 9.8. The first government accountability index (GA_1) ranges between 10% and 14% depending on the model of choice. Government policies do only correspond to the needs and desires of voters to a very low extend, while lobbying groups dominate the political process. Their total political weight accounts for around 90% of the sum of the political weight of all voters and lobbying groups. Although being accountable towards lobbying groups is not per se a bad sign for the government performance

Table 9.8: Government accountability indices (ML and LC Analysis)

| | | ML | Latent Class Model | | |
|-----------------|-----------------|-----------|--------------------|-----------|-----------|
| | | M7 | M2 | M3 | M4 |
| GA ₁ | | 0.14 | 0.11 | 0.11 | 0.10 |
| GA ₂ | | 0.29 | 0.25 | 0.25 | 0.23 |
| | ECONOMY | 1 | 1 | 1 | 1 |
| GA ₃ | CASHVSFOODCROPS | 1 | 1 | 1 | 1 |
| | TAXVSPROTECT | 1 | 1 | 1 | 1 |

Source: own calculations

of a country, it indicates that the pure mechanism of voting does not function well in Uganda. Some of the literature argued that Museveni and the NRM only won the last election because of the incumbent advantage and the very expensive election campaign. We can confirm this results partly, as we measured empirically that the government is not accountable towards the voter, but rather serves organized interest groups, which in turn give campaign contributions to the NRM.

The second index, GA₂, measures the degree of intrinsic policy preferences of the governmental party. For the case of Uganda data on θ is not available, hence we use the short cut introduced in chapter 5 and calculate the ratio of intrinsic policy preferences that are achieved in the current situation compared to the percentage of intrinsic policy preferences that are achieved if all voters based their vote choice solely on policy indicators and observed economic performance. For Uganda GA₂ ranges from 23.5% to 28.7%, which indicates that intrinsic voting is actually less important in the real case scenario compared to the pure policy oriented scenario. There are good reasons to believe that the low degree of intrinsic policy preferences present in the political process is also due to the dominance of organized interest groups in Uganda. However, the index GA₂ is suffering from the missing information on actual intrinsic policy preferences, so far it's interpretation is not straight forward and the index needs further improvement.

Finally the last index, GA₃, measures the leeway the governmental party has when choosing their policy positions, without loosing the majority of votes. In the case of Uganda, the index is one for all policy issues and all model specifications. Figure 9.4, which shows how the probability to vote for the NRM and the FDC changes when the political parties change their policy position on the issue tax vs. protect, already suggested that changing policy positions hardly influences the electoral outcome. Independent of the policy position, the NRM always gains more than 50% of the votes. The same is true for all other policy issues included in the model. If GA₃ equals one for all policy issues, it means that the governmental party can change it's policy positions arbitrarily without any implications on it's electoral success. The result is a president and a ruling party that have absolutely no incentives to implement good policies, which again leads to missing governmental accountability towards the voter. The president can rather choose it's policies to serve his self interests or to please special interests and lobbying groups. Especially the later is important for Museveni, as it will provide him with further campaign contribution

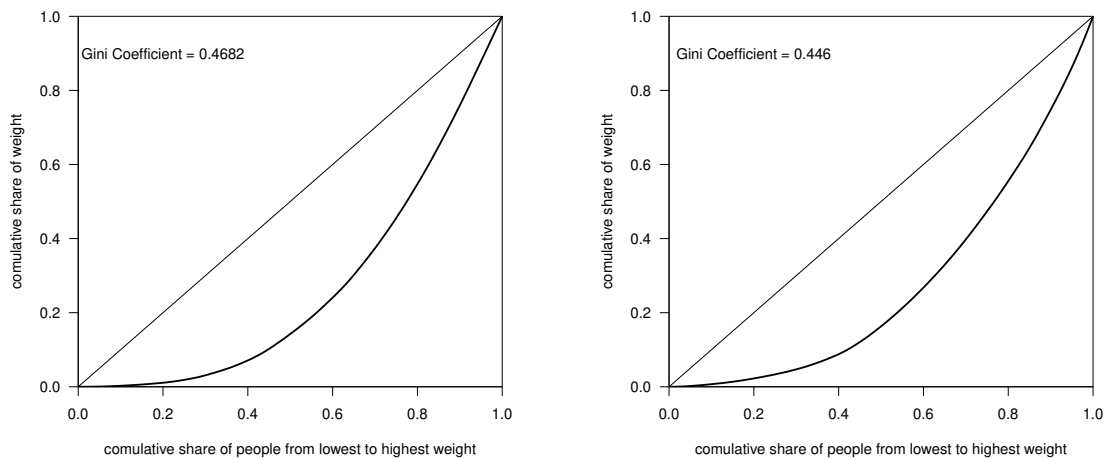


Figure 9.8: Lorenz curve (left: ML - M7, right: LC - M2)

Source: own data

by interest groups, which are in turn taken to convince non policy voters to give their vote to the incumbent.

9.5.2 Government Capture

Government accountability towards the voter is low in Uganda, but accountability towards interest groups is high. Hence, there must be some interests that are favored over others. In a perfect democracy, without lobbying the government would be only accountable towards the voter. If this is the case, every voter is of the same importance for the ruling party, quasi *one man one vote*. In this study with a sample size of 325, every individual would have a weight of $1/325$. Taking a look at the actual distribution of the voting weights, reveals that they are not at all equal for everybody. Figure 9.8 shows the Lorenz curve and the corresponding Gini coefficient. In Uganda about 20% of the people own 45% of the total weight and the Gini Coefficient is around 0.45, depending on the corresponding model. There exist individual voters in Uganda that have a significantly bigger weight than others, further we assume from the theory that the political process is biased towards those voters that possess the highest voting weights.

The capture index gives further information about this bias, it relates the average voting weight of one group with the average voting weight of it's antagonistic group. If the ratio equals one, both groups have the same average weight and no capture exists. In the LC analysis we already identified two groups of voters, of which one was voting rather policy oriented compared to the other. Hence, we are expecting that Class 1 is capturing Class 2. When considering the composition of the two classes that would mean that poor people, who live in rural regions are capturing the rich people from urban settlements. Figure 9.9 shows the results for Uganda. Independent of the model of choice, the capture indices always point in the same direction with only one exception which is capture between rich and poor people. The different LC models are further very similar in their magnitude of the index,

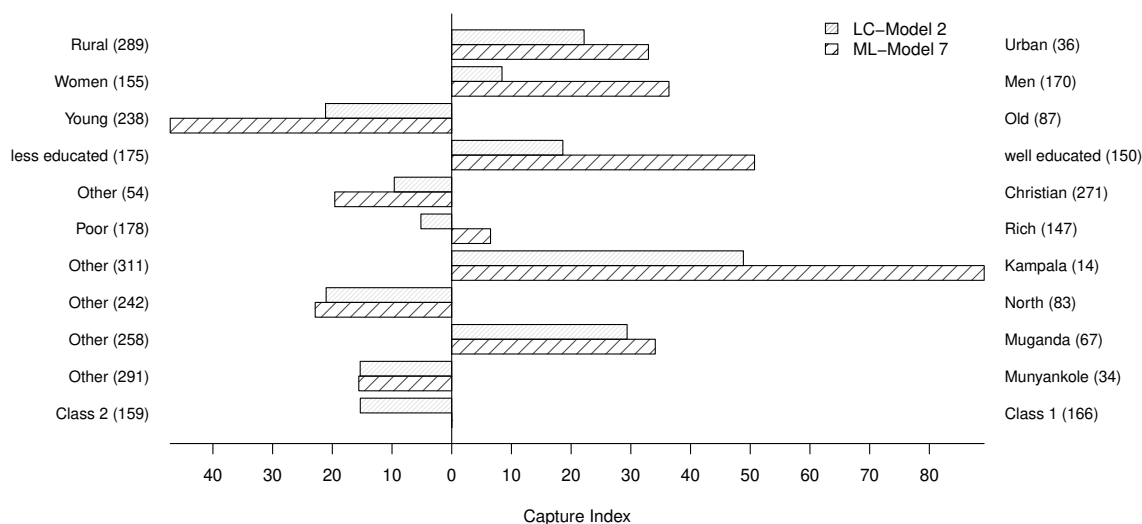


Figure 9.9: Capture in Uganda
Source: own data

the exact results are available from the author on request.

Although Class 1 votes more policy oriented, they cannot capture Class 2. It is the other way around, the average weight of Class 2 is 15% lower than the average weight of Class 1, which is depicted by the bar pointing towards Class 2. Voters from Kampala have a very high average weight, which is about 90% higher than the average weight of all other voters. In the sample there are only 14 observations from Kampala, but when projecting the result on the whole population of Kampala, the city has a lot of power in the political process. Generally the urban population has higher voting weights than their rural counterparts. The same is true for men, who are capturing women and young people who are capturing the older population. The capture index for poor and rich is not distinct, depending on the model either the poor have a higher weight or the rich. However, their weights are very similar and the degree of capture is small. The biggest ethnic group of Uganda, the Muganda are also able to capture all other ethnic groups, while the Munyankole, which is the tribe of President Museveni are captured by the other tribes. The capture indices reveal a different picture from what we expected, although we could identify groups that vote policy oriented, those were not the groups with the highest average weight. On the contrary, the results actually describe very well the general literature about power distributions in Africa. The urban, well educated, male elite is capturing the less educated, female and rural population.

As capture is present in Uganda, the policy positions of the governmental party should be biased in favor of the groups with higher weights, in this case the urban and educated population. Recalling Figure 9.3, the NRM took a policy position on the issue taxation vs. protection of the agricultural sector of 3.19 compared to 3.69, which is the position of the FDC. Considering the voters preferred policy

positions, they all demand protection of the agricultural sector. The average policy position of a rural voter is 4.34, but the position of the average urban voter is even further to the right (4.44). Even the respondents from Kampala are in favor of protecting the agricultural sector, their position is the most right in the whole sample (4.79). Overall differences in policy positions are small and the pro agricultural policy position of the urban population is hard to explain with existing theories. One possible explanation is the irrationality of the voter, missing information or education and convincing election campaigning lead to systematically biased ideas concerning economics and hence policy positions (Caplan, 2007). Going one step further, when the voter's policy positions are compared with positions of the two political parties, the distance between voter and FDC is always smaller than the distance between voter and NRM, anyway Ugandans continue to vote for the NRM. Strictly speaking that means that the NRM could actually increase their already outstanding election result further by moving its own policy position closer towards the policy positions of the voter. There are three possible explanations why the NRM is not trying to do so. The first and simplest solution is that there is just no need for additional votes, GA_3 equals one for all policy issues, whichever policy position Museveni takes does not change the fact that he wins the election. The marginal effect of changing the policy position on the issue tax vs. protect and also on all other issues is very small, because policy oriented voting is not important in Uganda. The cost of moving the policy position further towards the voter, would probably exceed the gained utility of additional votes. Hence, as long as Museveni is confident that he will win the election with a clear margin, it is rational for him and his party to keep the current policy positions instead of changing it. The second reason goes back to the very low GA_1 index, which indicates that the Ugandan government is only accountable towards the voter to a very low degree. It is further lobbying and interest groups that have around 90% of the political power and shape the political process. A policy position of the NRM further towards taxation of the agricultural sector could also be due to pressure from certain lobbying groups, e.g. the oil or gold industry. These industries might claim additional support for the industrial sector, instead of supporting the agricultural sector. Unfortunately we have no information on the power of interest groups in Uganda, which could shed further light on this issue. The last possible explanation for the gap between the mean policy position of the voters and the NRM's policy position is that the intrinsic policy preferences of the NRM are to tax the agricultural sector instead of supporting it. Once more we have no data on the intrinsic preferences of the ruling party, but when the NRM's policy position neither converges with the voter's position nor with interest groups position's, their intrinsic policy preferences might be a good explanation for that.

With the political weights of each voter at hand, we are able to calculate the optimal empirical policy position the NRM should take if they would act only accountable towards the voter (see equation 5.28). Further, we can also calculate the situation when voter weights are not biased and *one man one vote* applies (see equation 5.29). With equal weights, the optimal policy position equals 4.35. When the calculated weights are consulted the position is be further to the right, 4.45. In more specific terms, this means that although government is not acting accountable towards the voter and capture is present in Uganda, the actual policy position of the

NRM is closer to the unbiased situation where all voters have the same weight and no capture persists. Whether it is the pressure of lobbying groups or the intrinsic policy preferences of the political party cannot be exactly determined, but whoever is influencing the NRM's policy position is actually reducing the bias which would otherwise be induced by unequal voting weights.

The connection between voting behavior and government performance is not quite clear yet. In Figure 9.10 we linked both of them, plotting the voting weight on the y-axis and the utility share of non policy voting on the x-axis. In the left part the outcome of the ML model is depicted, it shows a clear reversed U-shape with its maximum close to zero. Hence, non policy voting, in this case measured by the personal characteristics included in the model as well as by approval with the president, has a negative effect on the personal weight of a voter, once a certain threshold is passed. The results from the latent class model resemble the results from the multinomial logit model very much, though the maximum of the curve is shifted even further to the left. While in the left picture non policy voting includes personal characteristics as well as approval with the president, the LC case does only include the alternative specific constant and approval with the president as non policy voting, because all personal characteristics are part of the class model and not of the choice model anymore. The plots also explain why the poor and rural class does not capture the rich, Kampala class, although they are voting more policy oriented. Especially in the LC plot, but also in the ML plot the maximum of the curve is not exactly at zero, hence a certain amount of non policy voting actually increases the personal voting weight. Urban people capture rural people and the rich capture the poor, because they vote partly non policy oriented. The results show that voting behavior and policy weights are related, but the exact relationship is not yet discovered. It requires further research and more data to fully understand this complex connection. Especially the threshold level, when the influence of non policy voting changes from positive to negative is of special interest.

9.6 Summary

Uganda only experienced two real multiparty elections and never witnessed a peaceful turnover of power so far. While the economy is growing at a promising growth rate, the country is still a low income country with restrictions in political rights and civil liberties. Museveni has been in power for almost 30 years and is the dominant figure in the political playing field in Uganda. He won the last two elections with 59% and 68% of the vote leaving the opposition far behind. Uganda is further affected by many different ethnic groups and hence great heterogeneity within the country. When we estimated a probabilistic voting model, interestingly neither ethnicity nor region had significant influence on vote choice. Additionally, retrospective voting is not applied in Uganda and proved to be insignificant in the model. Most of the literature agrees that the situation of the country has improved since Museveni is in power. However, when only considering the current situation of the country and the situation compared to twelve month ago, people are very unsatisfied. But they do not punish the government for their disaffection, in our sample still 68% would vote for the NRM, although 63% consider the current economic situation to be very

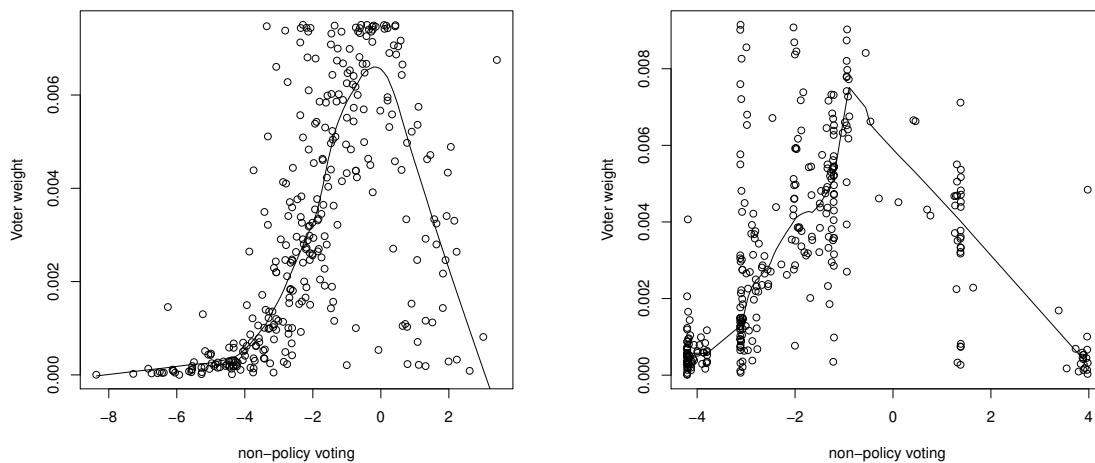


Figure 9.10: Relationship between voter weights and voting behavior (left: ML - M7, right: LC - M2)

Source: own data

bad or fairly bad. Ugandan's strongly identify with President Museveni and also approve with the way he has performed in his job during the last twelve month. It seems that presidential performance and the economic situation of the country are perceived as independent of each other. The coefficient for approval with the president is significant and heavily in favor of the NRM. Voters choose Museveni because they strongly approve with him and they do not blame him for their pessimistic views on the situation of the country and on their own personal living situation.

The power of the party leader effect is also obvious when taking a look at the importance of different voting motives. Non policy voting, which is measured through approval with the president, has a relative importance of more than 70% compared to only 30% for policy voting. However, not everyone acts the same way in Uganda, we found that voting behavior is heterogeneous depending on the personal characteristics of the voter. With the Latent Class Analysis we identified two classes of voters, Class 1 consists of the poorer, less educated farming households that almost exclusively votes for the NRM. Class 2 on the other hand, votes almost equally for NRM and FDC and consists of the urban and rich people. Further, we identified that Class 1 votes rather policy oriented compared to Class 2. Nevertheless, Class 1 has a lower average voting weight compared to Class 2. Voting weights are unequally distributed in Uganda, and some groups have higher average weights than others. The urban population is capturing the rural population, men are capturing women and people from the capital, Kampala, have more than 50% higher voting weights than those from the rest of the country. Hence, the political process in Uganda is biased towards special interests. However, the bias is not decisive when the governmental party chooses its policy positions. Quite on the contrary, the policy position of the NRM is actually closer to the unbiased situation, where all voters have the same weight, than to the empirically optimal position, when voting weights are taken into account. This inconsistency is due to a very low level of accountability towards the

voter. Policy voting and policy positions do only influence the outcome of elections marginally. The NRM can choose any position on the policy scale without losing the majority of the votes. Hence, Museveni is not accountable towards the voter, but only towards his party's own intrinsic policy preferences and towards interest groups. The power of interest groups and lobbying is high in Uganda, with the right amount of money they are able to move policy positions towards their own interests.

In Uganda the mechanism of elections to ensure democracy does not work well yet. So far there has been a dominant leader, who reigns the country at his will. Museveni's dominance is only possible because people strongly identify with him and have accepted him as their unchallenged leader. The majority of the population have not yet realized that policy voting and retrospective voting are tools to hold government accountable. Another reason is fear, especially the older generation still remembers the time before Museveni took over power and they are afraid that things will take a turn for the worse when turnover takes place. However, there are already some voters that are aware of the connection between government performance and the situation of the country, the educated, urban population. It remains to be seen, whether the rest of the population will start blaming Museveni for poor performance in the future or if they continue to prefer that everything stays the same.

Chapter 10

A Comparative Perspective

Ghana, Senegal and Uganda, three developing countries located in Sub-Saharan Africa, but very different in geographic location, ethnic diversification, economic development and level of democracy. While in Ghana the process of democratization is already very advanced, in Uganda it has just begun and although Senegal is known to be one of the oldest democracies in Sub-Saharan Africa, it is behind considering its democratic consolidation. In the previous three chapters we analyzed voting behavior empirically in these three countries. Further we identified the relative importance of different voting motives, namely policy, non policy and retrospective voting, and drew a connection to government performance, measured by government accountability and capture. In each of the countries we conducted an individual voter survey and interviewed between 600 (Ghana, Uganda) and 1200 (Senegal) citizens. The surveys in Ghana and Uganda were organized and supervised by ourselves, while the survey in Senegal was conducted by Afrobarometer. Hence, the questionnaires held in the former two countries are very similar, with only some country specific modifications. The most important difference compared to the Afrobarometer questionnaire regards the measurement of party's policy positions. In Senegal, only voters policy positions were requested, which likewise served to calculate the party's policy positions. In our own surveys, respondents indicated their own policy positions, but also their perceived party positions. When issue distances between political parties and voters are calculated, the first approach takes constant party positions and varying voter positions, while the second approach takes varying voter positions as well as varying party positions, hence it includes more variability. Furthermore, the timing of the voter surveys was very different in the three countries. In Ghana the survey was conducted two months before the presidential elections in 2012 which represents an optimal timing to gather election data, accordingly the reliability of the data is very good. In Uganda, the last election took place in 2011 and the next one will be held in 2016. Our survey was conducted in June 2013, which represents a rather suboptimal timing. Similar issues have an impact on the survey in Senegal, further as it was conducted by Afrobarometer we had no influence on the timing of the survey. Afrobarometer went to the field in February 2013, exactly one year after the last presidential election. Although survey timing was not optimal in Senegal and Uganda, and further the Afrobarometer data differs to some extent from our own survey data, we still assume that the empirical results from the three countries are comparable. Especially the main results concerning our theoretically derived indices are not significantly affected by these drawbacks.

The results of our analysis are summarized and depicted for Ghana, Senegal and Uganda in Table 10.1. The first row shows the sample size and the second row indicates the share of respondents from rural areas. In all three studies our focus was not simply on explaining the election outcome, but why people voted the way they did and which were their main voting motives. The importance of the

Table 10.1: Comparison of the results of Ghana, Senegal and Uganda

| | Ghana | Senegal | Uganda |
|---------------------------|-------|---------|--------|
| N | 333 | 667 | 325 |
| Rural | 0.261 | 0.568 | 0.889 |
| Voting Motives | | | |
| Policy Voting | 0.315 | 0.335 | 0.285 |
| Policy Voting - LC | 0.330 | 0.424 | 0.266 |
| Non Policy Voting | 0.602 | 0.560 | 0.715 |
| Non Policy Voting - LC | 0.559 | 0.471 | 0.734 |
| Retrospective Voting | 0.083 | 0.105 | 0.000 |
| Retrospective Voting - LC | 0.111 | 0.105 | 0.000 |
| Accountability | | | |
| GA1 | 0.421 | 0.383 | 0.143 |
| GA1-LC | 0.450 | 0.495 | 0.109 |
| GA2 | 0.601 | 0.554 | 0.287 |
| GA2-LC | 0.563 | 0.986 | 0.248 |
| GA3 | 0.135 | 0.451 | 1.000 |
| GA3-LC | 0.131 | 0.303 | 1.000 |
| Capture | | | |
| Urban/Rural | 0.878 | 1.267 | 1.330 |
| Rich/Poor | 0.765 | 1.124 | 1.065 |
| Gini | 0.613 | 0.288 | 0.468 |

Source: own data

different voting motives was measured by their relative importance. The relative importance of policy voting is approximately one third in all three countries. In the literature voting behavior in Sub-Saharan Africa has often been described as non policy oriented, with voters that are unaware of politics and rather rely on ethnicity or regional identity when voting. Our result shows that voters from Sub-Saharan Africa, just as voters from industrialized countries gather information on policy positions and party platforms when making their vote choice. Though the issues of interest are different. While in industrialized countries traditionally issues on social and economic policies are considered, in developing countries agricultural policies play an important part. Further in European and American voter studies, often the ideological left-right scale is considered. In the surveys in Ghana and Uganda, we asked the respondents whether they were familiar with the term left-right in the context of politics. The majority of respondents had never heard of the terms. Important issues were, whether to support the agricultural or the industrial sector, the taxation or support of the agricultural sector and the promotion of either cash crops or food crops. However, although similar policy issues are of interest in Ghana, Senegal and Uganda, differences in the degree of policy oriented voting exist. The lowest importance of policy voting was measured in Uganda, with a relative importance of only 0.285. Further does retrospective voting, which also depends on policy platforms, not influence vote choice of Ugandan voters at all. Hence, non policy voting is the dominant voting motive with a relative importance of 0.715. Policy voting and especially retrospective voting is more important in Senegal and also in Ghana. Combining retrospective voting and policy oriented voting and comparing

it to non policy oriented voting, results in a ratio of 40:60 in Ghana and 44:56 in Senegal. The results go in line with the historical development of democracy in the three countries, Senegal has the longest history of multiparty elections and votes most policy oriented. Ghana has also experienced several multiparty elections and also votes quite policy oriented. Finally, Uganda which only experienced two multiparty elections so far, is behind concerning the degree of policy voting. Elections in Uganda are still dominated by non policy voting motives instead.

Further theoretically derived indices were calculated measuring government performance. From the calculated indicators, GA_1 , which measures the degree of accountability towards the voter is most suitable to represent the level of democracy in a country. The index is very low for Uganda, which goes in line with the very low Polity IV Score, but also with the low degree of policy voting in the country. Ghana and Senegal have an index that is close to 50%, hence in both countries government acts accountable towards the voter. However, the weight of special interests is still higher and provides interest groups with the bigger part of power in the political process. Additionally, we calculated GA_3 , an index that measures the possibility of the governmental party to shift its policy position to please intrinsic policy preferences as well as the political preferences of interest groups. An index of 1, which was calculated for the case of Uganda, basically allows the ruling government to take any policy position they wish, without consequences on the electoral outcome. While Museveni is the dominant figure in Uganda and can do as he likes, in Ghana and Senegal, President Mahama and President Sall hold less power. Especially in Ghana, the policy position of the NDC can only be moved by up to 13.5% without losing the majority of votes. Hence, the leeway of President Mahama and the NDC to move their policy position towards the interests of lobbying groups is relatively limited. Once more the Index of Senegal is in between the indices of Ghana and Uganda, GA_3 equals up to 45%. Government is not only very accountable towards interest groups in Senegal, but also has the possibility to actually change its policy positions to please their demands without fearing to lose the election. While the level of democracy is usually measured with macroeconomic figures like GDP per capita or with indices like the Polity IV democracy index and the Freedom House index, with our approach we are able to produce very similar outcomes, by taking micro data and the electoral process into account. Elections are considered to be the main mechanism for promoting democracy, which is why analyzing the level of democracy should always involve analyzing electoral competition. Especially the first government accountability index, GA_1 , seems to be an appropriate measure and should be applied more widely to evaluate democratic development and government performance within a country and also between countries.

However, showing that our accountability indicators are in line with macroeconomic variables is just one outcome of the empirical application. Further we explicitly analyzed heterogeneity by applying latent class models in all three countries. The approach is especially important when analysing capture, as heterogeneity among voters is a necessary condition for the existence of capture. The latent class estimations always resulted in a two class solution, in which one class would represent the rural, poor part of the population and the other class the urban rich. While the rural and poor people are very close to the incumbent, the other class favors

the opposition. The result is the same in Ghana, Uganda and Senegal and confirms what is already known from the literature on voting behavior in developing countries. Further, we calculated personal voting weights for each voter and also group specific indices. In contrary to the existing literature, which assumes that in developing countries there exists a bias towards the urban population (Lipton, 1977, 1993), in Ghana the rural and poor people actually have higher average voting weights in the political process and are hence able to capture their urban and rich counterparts. Also the distribution of the weights is most unequal in the case of Ghana with a Gini coefficient of 0.61. In comparison, the Gini coefficient in Senegal is only 0.29 and in Uganda it equals 0.47. Further, in Uganda and Senegal the urban and rich people have higher average voting weights and are capturing the rural and poor part of the population. The result is much more in line with the already mentioned literature on developing countries. In comparison to many other studies, with our approach we are actually able to empirically measure capture. We also partly explain the connection between voting behavior and government performance, i.e. the connection between non policy voting and the individual voting weights. The relationship illustrates a reversed U-shape in all three countries, for the results of the latent class analysis as well as for the results of the multinomial logit model. The functional form was expected, as the individual voter weight is equal to $P_{jG}(1 - P_{jG})$ in the two party case and also in the multiparty case both terms are closely related. Further, from the linear utility function it follows that the probability to vote for the incumbent party increases (decreases), when the degree of non policy voting in favor of (against) the incumbent increases. As the voter weight is maximized when $P_{jG} = 0.5$, it will decrease when the absolute level of non policy voting increases, which is why the relation between non policy voting and individual voting weights will resemble a reversed U-shape. However, the location of the maximum of the function is not clear. Especially in the two party cases (Uganda, Ghana) the voting weight is maximised, when non policy voting is close to zero. But in the three party case of Senegal the weight is maximised at around minus two, which corresponds to a small degree of non policy voting. It seems that there is a certain level of non policy voting that does not harm an individual's voter weight. However, once this level (threshold) is passed, non policy voting influence voter weights negatively. The result can also be transferred from the individual voter level to the whole electorate, the more non policy oriented a country votes, the lower is the average voting weight and consequently government accountability towards the voter. The level that maximises a countries average voting weight does not correspond to zero non policy voting, but to a country specific threshold that is not known to us yet.

Interestingly, we did not find a clear relationship between the individual weights and the policy position of the governmental party. While we would theoretically expect that the political parties locate their policy positions at the weighted mean of the voters' policy positions, to please those voter groups with the highest weights, we did not find any empirical evidence for it in our data. For Uganda and Senegal, we actually find that the policy position of the governmental party is closer to the unbiased situation, where everybody has the same voting weight than to the situation with the empirical weights taken into account. We conclude that the fact that party's policy positions do not coincide with the empirical voter positions is due

to the fact that government is not only accountable towards the voter, but to an even greater degree towards organized interest groups. Accountability towards interest groups results in policy positions that differ from the empirical voter position, but the results show that interest groups do not per se bias the political process negatively. Like in Senegal and Uganda, interest groups are actually able to reduce the bias from unequally distributed voting weights. Although we have to admit that especially the missing information on the influence of interest groups and also on intrinsic policy preferences is a weak point of our analysis. In this study we assumed that interest groups determine voting behavior through party identification and we estimated the degree of intrinsic policy preferences with the index GA_3 . For future research we will explicitly collect data on the influence of interest groups and on intrinsic policy preferences, and integrate the data in the empirical application.

Compared to most other papers that estimate voting behavior we did not only apply a simple multinomial logit model, but also a latent class model. The latent class model is used when a sample is suspected to be very heterogeneous and when the researcher is especially interested in measuring capture. It is an explorative analysis that explicitly includes covariates to determine different groups within a sample. But, although the latent class model is very suitable in explaining heterogeneity in voting behavior, it also suffers from a few drawbacks. Depending on the data and the number of classes estimated, latent class models tend to suffer from local maxima which lead to solutions that do not converge (Vermunt and Magidson, 2005). Further the estimation of latent class models is more complicated, takes more time and requires special computer programs. Last but not least, when we compared the outcome of the multinomial logit model and the latent class model, the results were almost identical. Especially the marginal effects and also the indicators we calculated from the estimation results hardly differed from each other. Hence we conclude that heterogeneity in voting behavior does not call for the latent class model. Furthermore, heterogeneity can also be detected with multinomial logit model, e.g. by including individual specific sociodemographic variables.

Chapter 11

Conclusion

During the Millennium Summit in 2000, all United Nations member states¹ committed to help achieve the so called Millennium Development Goals (MDGs). The participating countries agreed on achieving the eight main goals, which range from eradicating extreme poverty and hunger, to combat of HIV/AIDS, to the ensuring of environmental sustainability, until 2015. Especially the first MDG, *eradicate extreme poverty and hunger*, is intimately connected with economic development and increasing personal income, particularly in rural areas. These factors on the other hand go along with democratic development. It is a commonly accepted view that democracy when compared to other non-democratic systems is a superior political system promoting economic growth and well-being (Przeworski et al., 2000). Hence, the promotion and consolidation of democracy especially in developing countries is crucial for economic development and to achieve the MDGs. However, controlling for demographic and economic structures a large variance regarding policies, implied growth and well-being can be observed across democratic countries. The question arises how these differences across economically similar democratic countries can be explained. We assume that it is an incentive problem that especially governments in developing countries are facing. Depending on the political system, different incentive mechanisms exist. In democratic systems, electoral competition is understood as a fundamental mechanism to guarantee that governmental policies reflect society's interests. But, although multiparty elections take place in most African countries by now, electoral competition is often restricted and leads to biased policy outcomes as well as poor government performance. Basically, policy biases result from two major mechanisms: government capture and a lack of governmental accountability. Consequently, there exists a relationship between individual voting behavior and government performance.

In this thesis, we measure voting behavior in Ghana, Senegal and Uganda and empirically analyze the implications on government performance, in particular on government accountability and capture. The comparative approach of the three Sub-Saharan African countries required an extension of the already existing theoretical models and the application of econometrical methods that are novel in the analysis of voting behavior. The extended Baron-Grossman-Helpman (BGH) model of Bardhan and Mookherjee (2000) forms the basis of the theoretical model applied in this thesis. In their paper, Bardhan and Mookherjee (2000) model the relationship between voting behavior and government performance theoretically, but also emphasize the need for empirical verification. To comply their request and apply the model empirically to our three case study countries, we conducted the following modifications: (1) assume that voter specific preferences are extreme value distributed; (2) include variables measuring policy voting, non policy voting and retrospective voting; (3) account for heterogeneous voting behavior; and (4) derive indices from

¹2000 the UN had 189 member states, currently there are 193.

the theoretical framework that measure government accountability and capture. In the second part of the thesis we analyzed the relationship between voting behavior and government performance empirically, by estimating a multinomial logit model and a latent class model. While the former is the standard model in empirical voter studies, the latter also provides a methodological contribution to the existing literature. The latent class analysis explicitly includes heterogeneity in the probabilistic voter model. In comparison to the multinomial logit model, it estimates different classes of voters with class specific coefficients and allocates each voter a class membership probability. It follows that the coefficients are unique for every observation. The inclusion of heterogeneity in the sample is a necessary condition when measuring capture, hence it is crucial for the analysis of voting behavior and government performance.

Probabilistic voter models were estimated for the presidential elections in Ghana, Senegal and Uganda. All three countries conduct multiparty elections and are more or less described as democracies. While in Ghana and Uganda electoral competition is mainly a two party contest, in Senegal there exist three important political parties. Hence, we compared two two-party systems and a three-party system with each other. As described in detail in chapter 6 the countries differ from each other not only in their history of multiparty elections but also in their economic development and democratic consolidation.

The results of the probabilistic voter models estimated in the three countries can be interpreted at the micro, meso and macro level. On the micro level we found that in Ghana and Senegal citizens vote policy oriented, non policy oriented and retrospective. The relative importance of the three voting motives differs strongly from person to person. While some people vote mainly policy oriented and only marginally non policy oriented, others vote just the other way around. In Uganda retrospective voting is not significant, hence only policy voting and non policy voting determine vote choice. Furthermore, although Uganda is ethnically very diverse, neither ethnicity nor regionality do influence the election outcome. The result is in contrast to many existing studies, which assume that voting behavior in developing countries is mainly driven by ethnicity and regionality (Ferree, 2006; Horowitz, 1985; Lever, 1979; McLaughlin, 2008). In Ghana and Senegal we find some evidence for the assumption. For example in Senegal, the Serer tribe and Pulaar tribe have a significantly greater probability to vote for the opposition candidate than the country's largest tribe, the Wolof, and in Ghana, the Akan tribe traditionally supports the incumbent, NDC, while the Ewe tribe supports the opposition party, NPP. Similar patterns are visible for different regions in Senegal and Ghana. However, apart from ethnicity and regionality, in all three countries policy issues significantly determine vote choice. Just like in industrialized countries, the probability to vote for a party decreases when the distance towards that particular party increases. Important issues in Ghana and Uganda are agricultural policies, like the taxation of the agricultural sector or the promotion of food crops or cash crops. In Senegal in turn the issue whether the agricultural sector or the industrial sector should be supported is significant. The most important variable in all three countries is approval with the president, which we consider as non policy voting and strongly manipulable by election campaigning. The marginal effect of the variable approval with the president is

considerably larger than the effect of the variables for retrospective voting or policy oriented voting. Considering the meso level, we also analyzed group specific voting behavior. From the literature it is well known that voting behavior differs strongly between the rural population and the urban population. Mostly, the incumbent was supported by voters from rural regions, while the opposition gained the majority of votes from urban settlements. Although we can confirm that the election outcome differs between rural and urban inhabitants, we only found very small differences between the voting motives of rural and urban voters, further other than expected the rural population votes more policy oriented than the urban population. The result is the identical in Ghana, Senegal and Uganda. Next to social groups, we can also analyze voting behavior in the different classes identified with the latent class analysis. The classes consist of individuals with similar characteristics, but not with equal characteristics². While Class 1 represents the poorer part of the population that lives in rural regions and has a lower education level. The country's elite, who lives in urban settlements, has a higher education level and higher household income is more present in Class 2. Voting behavior differs more heavily between the two classes than it differs between rural and urban voters. The results show that class allocation does not only depend on regionality, but on a variety of variables. Class 1 votes more non policy oriented in Ghana, but more policy oriented in Senegal and Uganda. For Class 2 it is the other way around. Finally on the macro level, we found that policy voting and retrospective voting together are most important in Senegal with about 44%, followed by Ghana with 40% and last is Uganda, where the relative importance of policy voting is only 29%. However, as already mentioned retrospective voting is not significant in Uganda, hence the relative importance of retrospective voting is zero. While it is 11% and 8% in Senegal and Ghana, respectively.

Next to measuring voting behavior, we further derived indicators from the theoretical framework to calculate government accountability and capture. Government accountability is especially low in Uganda, where voters possess only 14%³ of the total political weight, compared to 86% that belong to organized interest groups. Furthermore, we calculated how far the incumbent party can shift its policy position without losing the majority of votes in the election. In Uganda, President Museveni can shift his policy position to wherever he pleases, without any consequences on the electoral outcome. Hence, he is missing any incentives to act on behalf of society and as a consequence, government accountability is extremely low. The results are biased policy outcomes in favor of organized interest groups that do not correspond to the needs and desires of the population. In Senegal, government accountability towards the voter is 38% and policy positions can be shifted by up to 45%. Finally, in Ghana government is most accountable towards the voters (42%) and also the range for shifting policy positions is small (14%). Although government accountability is considerably larger in Ghana and Senegal, still organized interest groups

²Please note that class membership is stochastic, hence every observation has a probability π_j^1 to belong to Class 1 and $(1 - \pi_j^1)$ to belong to Class 2. However, for the descriptive statistics we assigned a person to Class 1 when $\pi_j^1 \geq 0.5$ and to Class 2 when $\pi_j^1 < 0.5$.

³In the conclusion we refer to the results of the multinomial logit model. The latent class model results are very similar and explained in more detail in the respective country chapters.

hold the majority of power in the political process and are the dominant players in the democratic system. While government accountability is measured on the macro level, capture is group specific (meso level). Following once more the literature, we expected that the urban population will be privileged in the political process, as they present the country's elite, are more aware of policies and usually better educated (Lipton, 1977). However, empirically we can only confirm this hypothesis for the cases of Senegal and Uganda, where an urban bias exists and the urban population captures the rural population. Further, we also find a capital bias in these two countries. Inhabitants from Dakar and Kampala have on average greater voter weights than the rest of the population. In Ghana it is the other way around, the well educated, urban elite is captured by poor people from rural areas.

Combining the results from voting behavior and government performance, our central hypothesis is that the absolute degree of non policy voting influences voting weights negatively. The individual voter weight is equal to $P_{jG}(1 - P_{jG})$ in the two party case and also in the multiparty case both terms are closely related. Further, from the linear utility function it follows that the probability to vote for the incumbent party increases (decreases), when the degree of non policy voting in favor of (against) the incumbent increases. As the voter weight is maximized when $P_{jG} = 0.5$, it will decrease when the absolute level of non policy voting increases, which is why the relation between non policy voting and individual voting weights will resemble a reversed U-shape. In the empirical application, we find the reversed U-shape for Ghana, Senegal and Uganda. Further, the relationship is observable with the results of the multinomial logit model as well as with the latent class model results, although it is less pronounced for the latter. Another interesting fact is that the maximum of the curve is not the same in the three countries. While it is located at zero for the case of Ghana, in Senegal it is shifted further towards minus two and in Uganda it is situated between minus one and zero depending on whether the results of the multinomial logit model or the latent class model are considered. Hence, depending on the country, on purely policy oriented voting does not always maximize the voting weight. Instead, there exists a range, where the degree of non policy voting and the personal voting weight are actually positively related. That non policy voting does not necessarily imply a disadvantage, is obvious when considering once more voting behavior and capture indices on the meso level. In Senegal and Uganda, the urban population votes more non policy oriented than the rural population, nevertheless they have the greater average voting weights. Further, in Ghana Class 1 votes more non policy oriented than Class 2, but still captures them. Consequently, the effect found on the micro level cannot directly be transferred to the meso level. When we consider the macro level, which corresponds to the country level, we find a negative correlation of non policy voting and government accountability. In Uganda, where non policy voting is least pronounced, also government accountability is lowest. In addition, we found that for example the age of a democracy is positively related to policy oriented voting, which in turn leads to government accountability. Senegal is the oldest democracy in the sample, followed by Ghana and Uganda. The order is the same for the relative importance of policy voting⁴. Hence, it seems that political awareness and the ability to vote policy oriented only develop over time and are not

⁴In this case policy voting is considered as policy voting and retrospective voting together.

immediately present at the first or second multiparty election. However, with only three country studies, we do not have enough data points to verify the relationship statistically.

When the political process is biased because of missing government accountability or capture, observed policy positions do not correspond to the optimal policy positions anymore. While missing accountability leads to policies that are in favor of organized interest groups or intrinsic policy preferences, capture results in policies that are biased towards those groups of voters with the highest average weights. For example, in Senegal and Uganda, due to urban people capturing rural people, we expected the political process to be biased towards the urban population. With the calculated weights, we were able to calculate the theoretical government policy position, when political parties act only accountable towards the voter. In this case, the policy position corresponds to the weighted mean of the voters' policy positions. The scenario ignores the bias induced by missing accountability. Further, we also calculated the policy position, when the bias induced by capture is also set to zero. In that case the governmental policy position would be equal to the simple mean of all voters' policy positions, with equal weights. The latter is considered to be the theoretically optimal policy position, that maximizes the welfare of the society. In Senegal and Uganda, the observed policy position of the governmental party is actually closer to the policy position with equal weights than to the position with empirical weights. As the existence of capture is not responsible for the biased policy outcomes, it must be the fact that government is rather accountable towards interest groups and intrinsic policy preferences instead of towards the voter. Taking a look at the discrepancy between observed policy positions and calculated policy positions with empirical weights, reveals the degree of distorted policy outcomes. Once more the difference is largest in Uganda, followed by Senegal and last Ghana. We conclude that it is possible that although the political process suffers from missing government accountability and unequal voter weights, the political outcome does not have to be biased, as both effects might equalize each other. In the cases of Ghana, Senegal and Uganda this is not the case, as the observed policy position and the optimal policy position are not conform. However, the results only apply if we assume that voters act rational and know which policy positions maximize their welfare. Caplan (2007) argues that voters are not aware of the utility they derive from certain policy positions and act irrational instead. Further, they have biased policy beliefs that result from missing information, low education levels and convincing election campaigning. If Caplan is right, we cannot evaluate whether the policy positions we defined as optimal are in fact optimal. Instead, also the policy positions that are biased because of the dominance of organized interest groups might be the best choice. To clarify the point, exogenous knowledge about optimal policy positions is necessary, which could be compared with observed and theoretical policy positions.

In the previous paragraphs we described the main results from the thesis. We applied a theoretical model, conducted an empirical application and utilized innovative econometric methods. All three parts were essential to provide important insights into the analysis of voting behavior and government performance. However, we also have some critical points to make about each of them. Starting with the theoretical part, we focused on the empirical verification of the theoretical model and did not

derive the relationship between voting behavior and governmental performance theoretically yet. This has to be challenged in future work and will improve the value of our approach even further. Also, we assumed the assistance of local Nash equilibria. However, we only partly specified the data generating system, as we do not have any information on lobbying activities or intrinsic policy preferences. Hence, the observed policy positions will always correspond to a LNE as the unknown parameters are not estimated, but can be determined residually. If information on lobbying and intrinsic policy preferences are available in future studies, the political support function has to be estimated under the constraint that empirical policy positions are in fact LNEs. As constrained maximization is often complicated with the maximum likelihood approach, more advanced estimation techniques like Bayesian maximization have to be consulted. Considering the empirical application, we have to address the issue of data quality. While we collected perceived party positions in Ghana and Uganda, this was impossible in Senegal and deteriorates the comparability of the three case studies. Further, the timing of the survey was only optimal in Ghana, where we went to the field shortly before the last election. In Senegal and Uganda, the timing was less optimal and hence affects the reliability of the data. Another point of criticism is the neglect of nonvoters, which play an important role when analyzing voting behavior. We did not incorporate nonvoters in our study, as we hardly identified any nonvoters in our samples. In future work, we will put more emphasis on the phrasing of the questionnaire to better distinguish nonvoters and include them in the analysis. Methodologically this could be achieved via a nested logit model. The last points of criticism addresses the latent class analysis, which was applied as it explicitly allows the consideration of heterogeneous voting behavior. However, the model also presents some disadvantages and weaknesses. First, the application of a latent class model is more complicated than a multinomial logit model and asks for more computer capacities and special software. Second, quite often the problem of local maxima occurred and our model specifications would not converge. This problem is well known and especially appeared when many variables were included, or more than two classes were estimated. Finally, in this thesis we compared the results of the latent class analysis and a multinomial logit model with individual specific variables and did not find any significant differences between the results. Especially the marginal effects of both models, and the calculated government performance indicators hardly differed from each other. We have major doubts that the latent class analysis is actually advantageous to the multinomial logit model. Heterogeneity can just as good be incorporated in the model via the inclusion of individual specific variables.

Chapter 12

Zusammenfassung

Im Jahr 2000 einigten sich 189 Mitgliedstaaten der Vereinten Nationen auf die sogenannten Millenniums-Ziele. Die internationale Gemeinschaft verpflichtete sich in der Millenniumserklärung dazu acht Oberziele bis zum Jahr 2015 zu erreichen. Der Fokus liegt dabei auf der Armutsbekämpfung, der Friedenserhaltung sowie dem Umweltschutz. In diesem Zusammenhang fällt auch immer wieder die Forderung nach mehr Demokratie sowohl als Ergebnis, aber auch als Mittel um die bereits erwähnten Ziele zu erreichen. Allgemein wird davon ausgegangen, dass demokratische Regierungsformen nicht demokratischen überlegen sind (Przeworski et al., 2000). Dies ist besonders auffällig wenn es um den allgemeinen Wohlstand und die ökonomische Entwicklung eines Landes geht. In vielen internationalen Studien wird der positive Zusammenhang zwischen Demokratisierung und ökonomischer Entwicklung bestätigt (Gerring et al., 2005; Feng, 1997, 2003; Arif et al., 2012).

Weltweit hat die Anzahl der demokratisch regierten Länder in den letzten Jahrzehnten stets zugenommen. Insbesondere auf dem Afrikanischen Kontinent kam es mit der dritten Demokratisierungswelle Anfang der neunziger Jahre zu einigen Systemwechseln weg von der Autokratie hin zur Demokratie (Manning, 2005; Gibson, 2002). Obwohl der Wohlstand in einigen Ländern gestiegen ist, nachdem sie demokratisiert wurden, unterscheiden sich diese Länder trotzdem noch erheblich voneinander was das Einkommensniveau, das ökonomische Wachstum und die politischen Prozesse betrifft. Betrachtet man beispielsweise agrarpolitische Prozesse in Afrikanischen Demokratien ist immer wieder festzustellen, dass Politiken implementiert werden, die nachgewiesenermaßen nicht effizient sind um den Agrarsektor bzw. den Wohlstand der ländlichen Bevölkerung zu steigern (Anseeuw et al., 2012; Zimmermann et al., 2009). Daher stellt sich wiederholt die Frage, warum ineffiziente Politiken weiterhin implementiert und nicht durch effizientere Maßnahmen ersetzt werden. Grundsätzlich kann es sich hierbei um ein sogenanntes *knowledge Problem* oder um ein *incentive Problem* handeln. Ersteres beschreibt mangelndes Fachwissen und Kenntnisse als Ursache für die Implementierung ineffizienter Politiken, wogegen letzteres fehlende Anreizmechanismen in den Vordergrund stellt. In dieser Arbeit wird angenommen, dass Regierungen über ausreichend Informationen und Kenntnisse zum politischen Prozess verfügen, so dass wir nicht von einem *knowledge Problem* ausgehen können. Vielmehr sind es mangelnde Anreizmechanismen, die immer wieder zu verzerrten und suboptimalen Politiken führen.

Abhängig von der politischen Regierungsform existieren unterschiedliche Anreizmechanismen. In demokratischen Systemen stellen Wahlen den zentralen Anreizmechanismus dar. Sie sollen sicherstellen, dass politische Entscheidungen das allgemeine Interesse der Gesellschaft widerspiegeln. Tatsächlich funktioniert dieser Mechanismus aber nicht immer und überall gleichermaßen gut, so dass es zu verzerrten Politikergebnissen kommen kann. Als verzerrte Politikergebnisse sind beispielsweise ineffiziente agrarpolitische Maßnahmen zu bezeichnen. Diese Verzerrungen ergeben sich

hauptsächlich aufgrund von zwei Problemen: *Capture* und fehlende *Government Accountability*. Letzteres entspricht der Tatsache, dass gewählte Politiker keine ausreichenden Anreize haben um die geforderten Politiken ihrer Wählerschaft zu implementieren. Stattdessen vertreten sie primär ihre eigenen Interessen um so ihren persönlichen Nutzen zu maximieren. *Capture* beschreibt das Verhalten von Politikern, die in erster Linie die Interessen von bestimmten Gruppen vertreten und somit ebenfalls nicht dem Gemeinwohl dienen. Die Gründe für diese Art von Politikversagen sind vielfältig, Keefer and Khemani (2004) nennen beispielsweise soziale Polarisierung, fehlende Information und mangelnde Glaubhaftigkeit seitens der Politiker als Erklärungsfaktoren. In Entwicklungsländern und insbesondere in Sub-Sahara Afrika sind alle drei Punkte stark ausgeprägt. Viele Staaten sind ethnisch gespalten, das Bildungsniveau ist häufig niedrig und die Informationsdichte beziehungsweise der Zugang zu Informationen besonders in ländlichen Regionen gering. Viele Länder haben darüber hinaus bisher nur instabile politische Systeme erlebt, Jahre der Diktatur aber auch ständig wechselnde Regierungen, die teilweise gewaltsam durch das Militär eingesetzt und auch wieder abgesetzt wurden. Daher fehlt es einigen politischen Akteuren an Glaubhaftigkeit. Die Aussicht auf eine kurze Regierungstätigkeit führt außerdem dazu, dass Politiker versuchen in kurzer Zeit möglichst viel für sich und ihr Klientel zu erreichen und nicht für die Gesellschaft als solches. Die Identifikation mit bestimmten Parteien ist in Afrika oft kaum ausgeprägt, stattdessen gibt es starke individuelle Persönlichkeiten, mit denen sich die Bevölkerung identifiziert. Yoweri Museveni, der Präsident von Uganda ist ein sehr gutes Beispiel dafür. Seine Präsenz als Präsident und Oberhaupt des Staates ist so stark, dass die Opposition auch bei fairen und freien Wahlen kaum eine Chance hat die nächste Regierung zu stellen. Soziale Polarisierung, fehlende Informationen und auch mangelnde Glaubhaftigkeit verringern somit die Anreize, die eigentlich durch demokratische Wahlen gegeben sein sollten. Anstatt auf politische Maßnahmen zu setzen, besinnt sich ein erfolgreicher Kandidat eher auf seine eigene ethnische Gruppe, investiert in eine groß angelegte Wahlkampfkampagne und versucht ein bestimmtes Klientel zu befriedigen. Auf diese Weise kann er seine Wiederwahlwahrscheinlichkeit erhöhen, ganz ohne bestimmte Politiken zu implementieren. Somit erklärt sich der Mangel an effizienten Politiken in Entwicklungsländern. Die jeweiligen Regierungen können keinen Zusammenhang zwischen effizienten politischen Maßnahmen und ihrem Wahlergebnis erkennen und fokussieren sich daher auf Maßnahmen die von der Politik unabhängig sind (Klientelismus, Wahlgeschenke, Wahlkampfkampagnen).

Der Zusammenhang zwischen dem Wählerverhalten und dem daraus resultierenden Regierungsverhalten (*Government Performance*) ist Hauptgegenstand dieser Dissertation und soll empirisch analysiert werden. In der Literatur existieren bereits einige theoretische Arbeiten, die sich vor allem auf das Wählerverhalten konzentrieren, allerdings gelingt es den Autoren meist nicht auch noch einen theoretischen Zusammenhang zum Regierungsverhalten herzustellen. Eine Ausnahme stellt die Arbeit von Bardhan und Mookherjee dar, die sowohl Wählerverhalten als auch die Implikationen auf das Regierungsverhalten theoretisch modellieren (Bardhan and Mookherjee, 2000). Sie nutzen hierfür ein erweitertes Baron-Grossman-Helpman Modell, erwähnen aber bereits, dass es bisher an der empirischen Überprüfung ihrer Theorie mangelt. Unser Ansatz konzentriert sich daher darauf das Modell von

Bardhan und Mookherjee so weiter zu entwickeln, dass es empirisch angewendet werden kann. Hierfür wird davon ausgegangen, dass es sich bei den empirischen Politikpositionen der betrachteten Parteien um ein Lokales Nash Equilibrium, nach dem Konzept von Schofield (2007) handelt. Außerdem wird die Annahme von gleichverteilten Politikpräferenzen durch extremwertverteilte Politikpräferenzen ersetzt. Die Gleichverteilung stellt eine eher unrealistische Annahme dar, die auch in der empirischen Wählerforschung kaum Anwendung findet. Stattdessen werden in der angewandten Forschung fast ausschließlich logistische Modelle verwendet, die von einer Extremwertverteilung ausgehen. Mit Hilfe der Gleichgewichtsbedingung kann die Unterstützungsfunktion der Regierungspartei abgeleitet werden. Unter der Annahme, dass ein politischer Akteur seine Wiederwahlwahrscheinlichkeit und somit seine Unterstützungsfunktion maximiert, ergibt sich eine gewichtete additive Wohlfahrtfunktion. Die Gewichte sind durch die Wähler, Interessengruppen und intrinsische Präferenzen der Politiker gegeben. Mit Hilfe dieser wurden dann wiederum im Gleichgewicht lokal Indikatoren abgeleitet, die sowohl *Government Accountability* als auch *Capture* empirisch messen.

Um Bardhan und Mookherjee in der Forderung nach empirischer Überprüfung ihrer Theorie gerecht zu werden, wurden in Ghana, Senegal und Uganda Wählerumfragen durchgeführt. Der bisherige Mangel an empirischen Wahlstudien in Afrika ist hauptsächlich auf fehlende Datensätze zurückzuführen und selbst bei den vorhandenen Studien sind die genutzten Daten häufig nicht optimal. Dies zeigt sich insbesondere durch fehlende Politikpositionen, die nur in sehr wenigen Studien überhaupt Berücksichtigung finden. Bedenkt man, dass Politikdistanzen in der europäischen Wählerforschung zu den Haupterklärungsdeterminanten für die Wahlentscheidung gehören, ist das Fehlen eben dieser, in Studien zu Wahlverhalten in Entwicklungsländern kritisch zu betrachten. Demzufolge haben wir einen besonderen Fokus auf die Gestaltung des Fragebogens gelegt, um qualitativ hochwertige Datensätze zu generieren. Die Ergebnisse der Studien aus den drei Ländern zeigen zuallererst, dass Wählerverhalten in Sub-Sahara Afrika ebenso ökonometrisch modelliert werden kann wie in Industrieländern. Zwar unterscheiden sich die Modelle in den Ländern in ihrer Prognosegüte, alle leisten jedoch einen signifikanten Beitrag zur Erklärung der Wahlentscheidung. In allen drei Ländern sind Politikdistanzen signifikant, dabei spielen insbesondere die agrarpolitischen *Issues* eine wichtige Rolle. Neben Politikdistanzen ist retrospektives Wählen in Senegal und Ghana signifikant. In Uganda dagegen konnte kein Einfluss von retrospektiven Variablen auf die Wahlentscheidung festgestellt werden. Als besonders wichtig stellte sich der Einfluss nicht Politik orientierter Faktoren, sogenannter *non policy Issues*, heraus. Dabei ist vor allem die subjektive Bewertung der Regierung von großer Wichtigkeit. Wir gehen davon aus, dass diese subjektive Wahrnehmung insbesondere durch Wahlkampfkampagnen und somit finanzielle Mittel beeinflusst wird. In allen drei Ländern sind die Koeffizienten dieser Variable hoch signifikant und erhöhen den Erklärungsgehalt der Modelle erheblich. Des Weiteren wurden persönliche Charakteristika als individuenspezifische Variablen berücksichtigt. Hier zeigte sich vor allem in Ghana und Senegal, dass ethnische sowie regionale Zugehörigkeit einen erheblichen Erklärungsbeitrag liefern, wogegen diese Faktoren in Uganda nicht signifikant sind und somit keinen Einfluss auf die Wahlentscheidung haben. Stattdessen sind das Geschlecht, Alter, Bildung

und Religion signifikante Faktoren in Uganda. In Ghana hat von den persönlichen Charakteristika nur Bildung einen signifikanten Einfluss und im Senegal macht es einen Unterschied ob der Wähler in ländlichen oder städtischen Gegenden lebt.

Als zentrales Maß zur Bewertung des Wählerverhaltens, definieren wir die relative Wichtigkeit der verschiedenen Wahlmotive, Politik orientiertes, nicht Politik orientiertes und retrospektives Wählen. In den drei Ländern ist die relative Wichtigkeit von Politik orientierten Wählen jeweils etwa ein Drittel, in Uganda fallen darüber hinaus 70% auf nicht Politik orientiertes Wählen zurück. In Ghana sind es ungefähr 60% und im Senegal nur 55%. Außerdem hat retrospektives Wählen im Senegal eine Wichtigkeit von 10% und in Ghana von 8%. Wie bereits erwähnt ist retrospektives Wählen in Uganda nicht signifikant und hat somit eine relative Wichtigkeit von null. Betrachtet man retrospektives Wählen ebenfalls als Politik orientiert, ist zu erkennen, dass das Alter der Demokratie positiv mit der relativen Wichtigkeit von Politik orientierten Wählen korreliert ist. Sowohl Senegal als auch Ghana haben eine lange Geschichte demokratischer Wahlen, in beiden Ländern wird daher auch deutlich Politik orientiert gewählt. In Gegensatz dazu steht Uganda, wo Yoweri Museveni seit fast 30 Jahren an der Macht ist und erst 2006 die ersten Mehrparteienwahlen stattfanden. Politik orientiertes Wählen findet daher in Uganda kaum statt. Die berechneten Indikatoren für *Government Accountability* zeichnen ein sehr ähnliches Bild. Betrachtet man den Anteil, den die Wähler im Vergleich zu Interessengruppen und intrinsischen Präferenzen der Politiker, am politischen Prozess haben (GA_1), so ist dieser in Ghana am höchsten, gefolgt von Senegal und Uganda. Gemeinsam mit dem Index GA_3 , der die mögliche Variabilität der Politikpositionen bestimmt, lassen sich gute Schlüsse über die *Government Accountability* der einzelnen Länder ziehen. In Uganda ist der politische Prozess von organisierten Interessengruppen dominiert, ihr Anteil beträgt über 70%. Des Weiteren kann die Regierung Ugandas ihre Parteiposition variieren wie es ihr gefällt, da dies nur minimale Effekte auf ihre Wiederwahlwahrscheinlichkeit hat. Ganz unabhängig von der eingenommenen Parteiposition würde Museveni auch die nächste Wahl souverän gewinnen. Daraus resultiert, dass Politiker keinerlei Anreize haben sich für die allgemeinen Interessen der Gesellschaft einzusetzen, stattdessen kooperieren sie eher mit Interessengruppen bzw. befriedigen ihre eigenen intrinsischen Präferenzen. Betrachtet man das Ergebnis im Kontext zur politischen Entwicklung in Uganda sind ganz klar noch autoritäre Züge zu erkennen. Präsident Museveni ist die dominante Figur im politischen Geschehen Ugandas und obwohl viele Wähler mit ihrer eigenen Situation und auch mit der ökonomischen Situation des Landes unzufrieden sind, wählen sie weiterhin für den Amtsinhaber und nicht für die Opposition. Wahlen wirken daher nicht als Kontrollmechanismus und können auch nicht sicherstellen, dass die Regierung die Interessen der Gesellschaft vertritt. In Senegal und Ghana ist die Situation weniger dramatisch, zwar ist die Wichtigkeit der Wähler gegenüber Interessengruppen auch hier unter 50%, allerdings sind die Regierungen in der Wahl ihrer Politikpositionen viel stärker eingeschränkt. Insbesondere in Ghana ist die mögliche Variation der Politikposition mit 13% sehr gering. Im Senegal kann die Position um 45% verschoben werden, was deutlich mehr Spielraum bietet als in Ghana, aber die Regierung immer noch zu einem gewissen Grad an die Politikpositionen der Wähler bindet. Wie bereits beim Anteil Politik orientierten Wählen zu erkennen war, handelt es sich

sowohl bei Ghana als auch bei Senegal um Länder die bereits einige Jahrzehnte demokratisch sind und Wahlen durchführen. Daher ist der Grad an *Government Accountability* auch deutlich höher als in Uganda. Die Ergebnisse bestätigen die Erwartungen an die Studie, Länder die stärker Politik orientiert wählen (wie Ghana und Senegal) weisen auch eine deutlich höhere *Government Accountability* auf als solche die eher nicht Politik orientiert wählen (Uganda). Diese Schlussfolgerung auf der Makroebene lässt sich jedoch aufgrund der geringen Stichprobe mit nur drei Ländern nicht statistisch überprüfen.

Um auch auf Mikroebene den Zusammenhang zwischen Wählerverhalten und *Government Performance* zu untersuchen, müssen die Wähler individuell betrachtet werden. Dies wurde in der Arbeit ebenfalls berücksichtigt, neben *Government Accountability* wurden die individuellen Gewichte der Wähler aus der *Support Funktion* der Regierung berechnet. Die Gewichte variieren stark von Person zu Person und sind insbesondere in Ghana enorm verzerrt. Der Gini Koeffizient der Wählergewichte beträgt dort 0.61, was bedeutet, dass etwa 40% der Bevölkerung 60% des absoluten Gewichts besitzen. In Uganda ist der Gini Koeffizient geringer (0.47) und im Senegal mit 0.28 am geringsten. Ungleich verteilte Gewichte sind eine notwendige, aber noch keine hinreichende Bedingung für das Vorhandensein von *Capture*. Damit *Capture* existiert müssen bestimmte Gruppen relativ höhere Gewichte besitzen als andere, denn nur so können sie den politischen Prozess zu ihren Gunsten beeinflussen. Um die Existenz von *Capture* empirisch zu überprüfen wurde ein weiterer Index hergeleitet, der die durchschnittlichen Gewichte von verschiedenen Gruppen miteinander ins Verhältnis setzt. Bei diesen Gruppen handelt es sich nicht um organisierte Interessengruppen, sondern um soziale Gruppen wie beispielsweise arme und reiche Bürger, Gebildete und Ungebildete oder solche die in ländlichen Regionen leben und andere die in städtischen Regionen leben. Der *Capture Index* misst, welche dieser Gruppen im Mittel das höhere Gewicht besitzt. Besonders Entwicklungsökonomien gehen davon aus, dass in Entwicklungsländern ein Ungleichgewicht zwischen Reichen und Armen und ländlicher sowie städtischer Bevölkerung besteht. Lipton (1977) prägte mit seiner Theorie den Begriff *Urban Bias* und somit auch die Hypothese, dass die städtische Bevölkerung bevorzugt behandelt wird. Häufig wird von einer Elite ausgegangen, die sich aus der gebildeten, urbanen Oberschicht zusammensetzt und sowohl den politischen als auch den ökonomischen Prozess eines Landes dominiert. Bezogen auf das Wählerverhalten und das relative Gewicht in politischen Wahlen, konnten wir die Hypothese für Uganda und Senegal bestätigen. In beiden Ländern besitzen die städtischen und gut ausgebildeten Bürger ein höheres durchschnittliches Gewicht als weniger gebildete Bürger aus ländlichen Gebieten. Des Weiteren ist in beiden Ländern festzustellen, dass die Bewohner der Hauptstädte Kampala und Dakar die Elite stellen, welche andere Regionen politisch dominiert. Betrachtet man die absoluten Werte der *Capture Indizes*, so ist zu erkennen, dass *Capture* im Senegal am geringsten ausgeprägt ist, gefolgt von Uganda und Ghana. Ghana stellt einen besonderen Fall dar, da hier nicht die urbane Elite bevorzugt wird, sondern die ländliche, schlechter ausgebildete und ärmere Bevölkerung. Das Ergebnis ist somit nicht nur konträr zu den Ergebnissen unserer Studie im Senegal und in Uganda, sondern auch zu der gängigen Literatur. Es scheint, dass in Ghana die ökonomisch benachteiligten Gruppen inzwischen zumin-

dest politisch aufgeholt haben. Unter der Annahme der Korrektheit der theoretischen Implikationen des Modells, führt die politische Verzerrung zugunsten der armen, ländlichen Bevölkerung zu politischen Maßnahmen, die eben diese Gruppen fördert und unterstützt. Langfristig sollte daher das Ungleichgewicht und die Einkommensschere zwischen arm und reich geringer werden. Dieser Effekt tritt jedoch nur dann ein, wenn Politiker ihre Politikentscheidungen tatsächlich aufgrund der Wähler treffen und nicht vorrangig aufgrund von organisierten Interessengruppen und ihren eigenen intrinsischen Präferenzen. Die Politikposition, die von Parteien eingenommen werden müsste, wenn sie sich nur an den Wählern orientieren, lässt sich als gewichteter Mittelwert der individuellen Politikpositionen einfach ausrechnen. Als Gewichte dienen die berechneten Wählergewichte. Außerdem ist es möglich die Position zu berechnen, die sich ergibt, wenn keine Verzerrung der Gewichte vorliegt und sie stattdessen für jeden Wähler identisch sind (*one man one vote*). Die Ergebnisse aus den drei Ländern zeigen, dass sich die Regierung bei der Wahl ihrer Politikposition kaum am Wähler orientiert. Die empirischen Politikpositionen sind tatsächlich näher an der kalkulierten Position mit einheitlichen Gewichten, als an der kalkulierten Position mit den beobachteten Gewichten. Eine Ausnahme bildet Ghana, wo dies nicht der Fall ist. Am weitesten entfernt von der empirischen Position ist die Regierung Ugandas. Dieses Ergebnis war so zu erwarten, da wir bereits durch die *Accountability Indizes* zeigen konnten, dass besonders in Uganda die Interessen der Wähler kaum berücksichtigt werden. Stattdessen orientiert sich Präsident Museveni an den Positionen von Interessengruppen und an seinen eigenen intrinsischen Präferenzen. Im Senegal ist die Parteiposition der APR deutlich näher an der gleichgewichtigen Position (identische Gewichte für jeden Wähler). Es zeigt sich, dass obwohl die Gewichte der einzelnen Wähler in der Realität nicht identisch sind, sondern einige Gruppen systematisch präferiert werden, die tatsächlichen Politikpositionen der Parteien nicht zugunsten von bestimmten Wählergruppen verzerrt sind. Ganz im Gegenteil, es scheint dass die Dominanz von Interessengruppen und intrinsischen Präferenzen die Politikpositionen näher an die unverzerrte Position und somit näher an die gesellschaftlich optimale Position heranrückt. Die Hypothese, dass *fehlende Accountability* per se zu verzerrten Politikergebnissen führt konnte somit für die drei Fallstudien nicht bestätigt werden. Außerdem soll an dieser Stelle kurz erwähnt werden, dass die Annahme, dass es sich bei der unverzerrten Politikposition um die optimale Politikposition handelt durchaus kritisch hinterfragt werden kann. So geht Caplan (2007) beispielsweise davon aus, dass Wähler nicht in der Lage sind ihren Nutzen aus bestimmten Politiken korrekt einzuschätzen. Somit handeln sie irrational und die mittlere Wählerposition würde nicht zur gesellschaftlich optimalen Position führen. Ist die Annahme von Caplan korrekt, können durchaus Politikpositionen, die aufgrund von Interessengruppen eingenommen werden, den Politikpositionen von Wählern überlegen sein. Eine Überprüfung der Hypothese ist jedoch nur möglich, wenn Daten über die tatsächlichen optimalen Positionen verfügbar sind. Diese könnten dann sowohl mit den Positionen der Wähler als auch mit den Positionen der Interessengruppen verglichen werden.

Die Beziehung zwischen Wählerverhalten und *Government Performance* wurde auch auf Mikroebene genauer untersucht. Es zeigt sich, dass der Zusammenhang zwischen den individuellen Gewichten und nicht Politik orientierten Wahlen eine

umgekehrte U-Kurve beschreibt. Der Zusammenhang war so erwartet wurden, da das individuelle Gewicht von $P_{jG}(1 - P_{jG})$ abhängt und die Wahrscheinlichkeit P_{jG} wiederum teilweise durch den Anteil nicht Politik orientierten Wählens bestimmt wird. Das Maximum der Kurve befindet sich bei allen drei Ländern links vom Nullpunkt. Somit erhöht ein gewisses Maß an nicht Politik orientierten Wahlen das politische Gewicht. Ab einem bestimmten Grenzwert, ist das absolute Ausmaß an nicht Politik orientierten Wahlen jedoch negativ mit dem persönlichen Wähler Gewicht korreliert. Das Ergebnis ist in der Analyse mit den geschätzten Parametern der multinomialen Logit Analyse stets eindeutiger als das Ergebnis, welches aus der Latent Class Analyse hervorgeht. Des Weiteren ist der Zusammenhang weniger klar für den drei Parteien Fall im Senegal als für die zwei Parteien Fälle Ghana und Uganda.

Neben dem bereits beschriebenen theoretischen und empirischen Ergebnissen, wurde in der Arbeit außerdem die Methode der Latent Class Analyse angewendet. Die Latent Class Analyse integriert explizit Heterogenität in das Modell und ist somit dem multinomialen Logit Modell überlegen, da dieses von homogenen Akteuren ausgeht. Die Methode wurde bisher nur sehr selten in politikwissenschaftlichen Studien angewendet und ist insbesondere in der Analyse von Wählerverhalten sehr innovativ. In dieser Arbeit konnte durch die Anwendung der Latent Class Analyse gezeigt werden, dass sich Wähler systematisch in ihrem Wählerverhalten voneinander unterscheiden. Das Modell enthält sogenannte Kovariaten, welche die Klassenzusammensetzung erklären. Somit ist die Latent Class Analyse vor allem bei explorativen Ansätzen sehr zu empfehlen. In allen drei Fallstudien wurde eine zwei Klassen Lösung präferiert, die Klassen unterscheiden sich dabei in den bereits genannten Faktoren: Bildung, Einkommen und Wohnort. Während eine Klasse stets aus ärmeren, weniger gebildeten Individuen aus ländlichen Regionen besteht, zeichnet sich die andere Klasse durch reichere, gebildetere Individuen mit Wohnhaft in städtischen Regionen aus. Dabei ist zu bedenken, dass die Klassenzugehörigkeit als Wahrscheinlichkeit gemessen wird, d.h. dass jedes Individuum mit einer bestimmten Wahrscheinlichkeit zu der einen Klasse und mit der jeweiligen Gegenwahrscheinlichkeit zu der anderen Klasse gehört. Klassenzugehörigkeit ist somit probabilistisch und nicht deterministisch¹. Anders als mit der multinomialen Logit Analyse lassen sich mit der Latent Class Analyse individuen spezifische Koeffizienten berechnen, die von den im Modell enthaltenen Variablen und dabei insbesondere von den Kovariaten, abhängig sind. Während die Latent Class Analyse sehr gut dafür geeignet ist Heterogenität in einem Datensatz nicht nur aufzuspüren, sondern diese auch entsprechend zu erklären, birgt sie jedoch auch einige Komplikationen und Probleme. Besonders die Existenz von lokalen Maxima erschwert die Latent Class Analyse erheblich. Wenn lokale Maxima existieren, konvergiert das Modell nicht und kommt somit zu keiner eindeutigen Lösung. Dieses Problem ist in der Literatur bekannt und tritt insbesondere dann auf, wenn viele Klassen geschätzt werden und die Anzahl an Variablen hoch ist (Vermeunt and Magidson, 2005). Des Weiteren ist die Schätzung der Modelle deutlich aufwendiger als die Schätzung von normalen Logit Modellen, es wird entsprechende Software benötigt und die Anforderungen an Rechnerkapazitäten aber auch an die

¹Für deskriptive Vergleiche wurde jedoch von einer diskreten Klassenzugehörigkeit ausgegangen. Ein Wähler gehört zu Klasse 1, wenn $\pi_j^1 \geq 0.5$ und zu Klasse 2, wenn $\pi_j^1 < 0.5$.

Datenstruktur sind höher. In dieser Arbeit konnten wir außerdem zeigen, dass obwohl die Methode komplizierter ist und Heterogenität explizit mit einbezieht, die Ergebnisse sich nicht stark von den Ergebnissen des Multinomialen Logit Modells unterscheiden. Betrachtet man die marginalen Effekte von beiden Modelltypen, so konnten wir zeigen, dass diese nur geringfügig voneinander abweichen, wenn identische Variablen in den Schätzungen berücksichtigt werden. Die Kovariaten der Latent Class Analyse werden im Multinomialen Logit Modell als individuen-spezifische Variablen mit einbezogen und ermöglichen so ebenfalls die teilweise Berücksichtigung von Heterogenität. Auch die von uns berechneten Indikatoren unterscheiden sich nur in geringem Maße voneinander. Daher kommen wir zu dem Schluss, dass die Latent Class Analyse ein sehr gutes Mittel ist, um Heterogenität in Datensätzen zu erklären, aber der zusätzliche Nutzen der Methode dem zusätzlichen Aufwand, zumindest in den vorliegenden Analysen nicht entspricht, da die multinomiale Logit Analyse mit geringerem Aufwand zu sehr ähnlichen Ergebnissen kommt.

Neben der methodischen Kritik an der Latent Class Analyse, sollen an dieser Stelle noch einige weitere Kritikpunkte an der vorliegenden Arbeit erwähnt werden. Erstens wurde der Zusammenhang zwischen Wählerverhalten und *Government Performance* bisher nur empirisch untersucht, die theoretische Herleitung der Beziehung steht noch aus. Des Weiteren, wird die Gleichgewichtssituation in der theoretischen Modellierung der Wahl bisher als *Black Box* betrachtet. Dabei wird davon ausgegangen, dass sich das System im Gleichgewicht befindet. Allerdings ist der datengenerierende Prozess nicht vollständig beobachtbar, es fehlen Informationen sowohl zu den Aktivitäten von Interessengruppen als auch zu intrinsischen Politikpräferenzen. Die unbekannt Parameter werden nicht geschätzt, sondern können residual so bestimmt werden, dass es sich bei den beobachteten Politikpositionen immer um ein lokales Nash Gleichgewicht handelt. Liegen in Zukunft Informationen zu Interessengruppen und intrinsischen Präferenzen vor, kann die politische Unterstützungsfunktion unter der Nebenbedingung, dass es sich bei den beobachteten Politikpositionen um ein lokales Nash Gleichgewicht handelt, geschätzt werden. Da die Maximierung unter Nebenbedingungen mit Maximum Likelihood Modellen häufig zu Problemen führt, muss in zukünftigen Arbeiten eventuell auf kompliziertere Schätzmethoden, wie die Bayesianische Ökonometrie zurückgegriffen werden. Ein weiterer Kritikpunkt ist die Vergleichbarkeit der drei Fallstudien. Es wurde zwar versucht möglichst ähnliche Datensätze zu benutzen um die Vergleichbarkeit sicher zu stellen, dies ist allerdings nur bedingt gelungen. Insbesondere die Tatsache, dass im Senegal keine Parteipositionen abgefragt wurden erschwerte die Vergleichbarkeit. Es wurde außerdem bereits in Kapitel 10 diskutiert, dass der Zeitpunkt der Befragung für die Qualität der Daten extrem wichtig ist. Leider konnte nur in Ghana zum optimalen Zeitpunkt befragt werden, wogegen der Zeitpunkt in Uganda und im Senegal nicht optimal für eine Wählerbefragung war. Als letztes sollte noch erwähnt werden, dass Nichtwähler bisher nicht in die Analyse eingeschlossen wurden. Dies liegt insbesondere an der Datengrundlage, die kaum Nichtwähler enthält. Für die empirische Analyse von Wählerverhalten sind aber auch jene Bürger wichtig die nicht zur Wahl gehen, daher wird in zukünftigen Forschungsarbeiten die Rolle der Nichtwähler stärker mit einbezogen werden. Das probabilistische Wählermodell kann dann beispielsweise als Nested Logit Modell geschätzt werden.

Trotz dieser Beeinträchtigungen leistet die Arbeit sowohl in theoretischer, empirischer als auch methodischer Hinsicht einen wichtigen Beitrag zur vorhandenen Literatur. Die ökonometrische Anwendung von probabilistischen Wählermodellen in Afrika unter Einbeziehung von Politik orientierten, nicht Politik orientierten und retrospektiven Wahlmotiven wurde so bisher noch nicht durchgeführt. Die Weiterentwicklung des BGH Modells ermöglicht außerdem aus Wählerdaten direkt Schlüsse auf die *Government Performance* zu ziehen. Weitere empirische Anwendungen der Theorie, nicht nur in Entwicklungsländern, sondern auch in Industrieländern sollten in Zukunft folgen. Denn erst durch den Vergleich von mehreren Länderstudien ist eine vollständige Evaluierung des Ansatzes auch auf Markoebene zu gewährleisten.

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Appendix A

Terminology

Theory of Voting Behavior

| Term | Description |
|-----------------|---|
| P | Probability that one's vote is decisive |
| B | Utility difference between the policies of two candidates |
| C | Cost of voting |
| D | Utility gained from the act of Voting (civic duty) |
| j | voter |
| i | district |
| k | political parties (A, B) |
| V_{jk} | Deterministic utility component |
| - P | Policy oriented voting |
| - R | Retrospective voting |
| - NP | Non policy oriented voting |
| d | policy dimension |
| ϵ_j^k | Probabilistic utility component |
| n | number of districts |
| $c(j)$ | social class of each voter |
| - p | poor |
| - m | middle income |
| - r | rich |
| β_c^i | population share |
| α_c | share of informed voters |
| π^k | policy platform |
| $U_{c(j)}(\pi)$ | Utility function |
| a_j | party preference |
| - a | nationwide preference |
| - ϵ_j | individual specific preference |
| C | campaign expenditures |
| h | marginal effectiveness of C |
| χ | $h\beta_r\alpha_r - \beta_m\alpha_m - \beta_p\alpha_p$ |
| G^k | distribution function of party preference |
| g | density of G^k |
| W_I | welfare of informed voters |
| S^k | vote share of party k |
| $V(\pi^k, C^k)$ | net effectiveness of the electoral strategy of party k |
| l | citizens contributing to interest groups |
| p^k | win probability of party k |

Table A.1: Terminology of Chapter 3

Methodology

| Term | Description |
|-----------------|--------------------------------------|
| j | decision maker, voter |
| J | number of decision makers |
| k, l | alternatives, political parties |
| K, L | number of alternatives |
| U_{jk} | Utility |
| V_{jk} | representative utility |
| x_{jk} | alternative specific characteristics |
| s_j | individual specific characteristics |
| ϵ_{jk} | error term |
| $f()$ | joint density function |
| P_{jk} | probability function |
| $I(\cdot)$ | indicator function |
| α_k | alternative specific constant |
| β | generic coefficient |
| δ_k | alternative specific coefficient |
| $L_{jk}()$ | logit probability |
| c | class |
| C | number of classes |
| π_c | population share in class c |
| z_j | covariates |
| d_{jk} | choice variable |
| t | number of simulation run |
| η | contains all estimated parameters |
| y_j | choice variable |

Table A.2: Terminology of Chapter 4

Theory and Derivation of Government Performance Indices

| Term | Description |
|--------------------|---|
| j | voter |
| NV | set of voters |
| n | number of voters |
| k, l | political party |
| NP | set of political parties |
| K | number of parties |
| U_j | utility of voter j |
| V_{jk} | observable utility |
| ϵ_{jk} | stochastic error |
| Ψ | cumulative distribution of error terms |
| S_k | vote share |
| α_j | individual relative weight of non policy voting |
| β_j | individual relative weight of policy voting |
| δ_j | individual relative weight of retrospective voting |
| γ_{dk} | policy position of party k |
| d | policy dimension |
| x_{dj} | policy position of the voter |
| z_k | party characteristics |
| G | index of government party |
| C_l | campaign spending |
| α_{jkl}^L | efficiency of campaign spending and lobbying |
| α_{jkl} | efficiency of party characteristics |
| Z_j^r | observable welfare indicators |
| δ_{jkr} | efficiency of observed welfare indicators |
| i, h | interest group |
| I, H | number of interest groups |
| u_k | intrinsic policy preferences of political party |
| ϑ_k | relative importance of intrinsic policy preferences |
| α_G | welfare weight non policy voting |
| β_G | welfare weight policy voting |
| δ_G | welfare weight retrospective voting |
| ϑ_G | welfare weight intrinsic policy preferences |
| GA_1, GA_2, GA_3 | government accountability indices |
| T, T' | social group |
| w_j | individual voter weight |
| GC | government capture index |
| γ_{dG}^* | optimal policy position when $GA_1=1$ |
| γ_{dG}^{**} | optimal policy position when $GA_1=1$ and $w_j = \frac{1}{n}$ |
| κ | indicator variable |

Table A.3: Terminology of Chapter 5

Appendix B

Voter Questionnaire Uganda

- The questionnaire used in the Ghana voter survey is not printed, but is very similar to the Uganda questionnaire with only minor country specific modifications.
- The Senegal questionnaire was taken from Afrobarometer and can be viewed at the Afrobarometer Homepage (www.afrobarometer.org).

P E B A P

PROMOTING PARTICIPATORY AND EVIDENCE-BASED AGRICULTURAL POLICY PROCESSES IN AFRICA

Questionnaire: Voter survey -UGANDA-



DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF KIEL
INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE (IFPRI)

P E B A P

PROMOTING PARTICIPATORY AND EVIDENCE-BASED AGRICULTURAL POLICY PROCESSES IN AFRICA

VOTER SURVEY

Country: UGANDA

Interviewer: _____

Interview-No: _____

PSU/EA (Code): _____

Rural/Urban: _____

Region: _____

District: _____

Address: _____

Postal Code/Village: _____

Date of Interview: _____

Time of Interview: _____

Place of Interview: _____

INTRODUCTION

This questionnaire is part of a research project financed by the German Federal Ministry for Economic Cooperation and Development. The project is conducted in joint work with IFPRI and the University of Kiel, Germany. It aims at understanding the political process and especially voting behaviour in Ghana in more detail. Before we begin, I would like to point out, that all data we collect in this interview will be treated absolutely anonymously and confidential. No individual data will be published and all data will only be used for research purposes. Further, we have designed the questionnaire in such a way, that you answer the questions as an expert for yourself. That is, what you answer is absolutely important and sufficient for us, i.e. there are no wrong answers.

PART A. PERSONAL CHARACTERISTICS

A1. Please specify the following characterisation of yourself

| Characteristics | Interviewee |
|---------------------|--|
| Name: | _____ |
| Gender: | <input type="radio"/> ♀ female <input type="radio"/> ♂ male |
| Age/Birth year: | _____ years old (Birth year: _____) |
| Marital status: | <input type="radio"/> single <input type="radio"/> married <input type="radio"/> separated <input type="radio"/> divorced <input type="radio"/> widowed <input type="radio"/> other, please specify: _____ |
| Number of children: | _____ |
| Household size: | _____ |
| Head of household: | <input type="radio"/> yes <input type="radio"/> no |
| Ethnic group: | <input type="radio"/> Muganda <input type="radio"/> Alur <input type="radio"/> Kakwa <input type="radio"/> Munyankole <input type="radio"/> Lugbara <input type="radio"/> Kumam <input type="radio"/> Munyoro <input type="radio"/> Madi <input type="radio"/> Mululi <input type="radio"/> Musoga <input type="radio"/> Japhadhola <input type="radio"/> Mwamba <input type="radio"/> Mugishu <input type="radio"/> Musamia <input type="radio"/> Nubian <input type="radio"/> Mukhonjo <input type="radio"/> Mugwere <input type="radio"/> Mufumbira <input type="radio"/> Munyole <input type="radio"/> Mukiga <input type="radio"/> Munyarwanda <input type="radio"/> Ateso <input type="radio"/> Mutooro <input type="radio"/> Kupsabiny <input type="radio"/> Acholi <input type="radio"/> Langi <input type="radio"/> _____ |
| Religion: | <input type="radio"/> Christian <input type="radio"/> Muslim <input type="radio"/> Traditional <input type="radio"/> None <input type="radio"/> _____ |
| Occupation: | <input type="radio"/> Professional/tech/mgt <input type="radio"/> Unskilled manual <input type="radio"/> Clerical <input type="radio"/> Student <input type="radio"/> Sales and Services <input type="radio"/> Retired <input type="radio"/> Skilled manual <input type="radio"/> Unemployed <input type="radio"/> Agriculture <input type="radio"/> _____ |
| Education: | <input type="radio"/> No formal schooling <input type="radio"/> Informal Schooling only (including Koranic schooling) <input type="radio"/> Primary schooling <input type="radio"/> Secondary school/high school <input type="radio"/> Post-secondary qualifications, other than university e.g. a diploma or degree from a technical or college <input type="radio"/> University How old were you, when you finished your highest level of education? _____ years old |

A2. Are you working in the farming sector?

- No
- Yes, produce primarily for own consumption
- Yes, produce for both own consumption and for market
- Yes produce primarily for market
- Yes, work on someone else's farm

A3. How high are your average monthly household expenditures?

- _____UGS
- Not appropriate
- Don't know

A4. Over the past year, how often, if ever, have you or anyone in your family gone without
(Do not read out the don't know option):

| | Never | Just once or twice | Several times | Many times | Always | Don't know |
|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Enough food to eat? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enough clean water for home use? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Medicines or medical treatment? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enough fuel to cook your food? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A cash income? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

A5. Which of these things do you personally own?

| | No (Don't own) | Yes (Do own) |
|----------------------------------|-----------------------|-----------------------|
| Radio | <input type="radio"/> | <input type="radio"/> |
| Television | <input type="radio"/> | <input type="radio"/> |
| PC | <input type="radio"/> | <input type="radio"/> |
| Motor Vehicle, Car or motorcycle | <input type="radio"/> | <input type="radio"/> |

A6. How often do you get news from the following sources (Do not read out the don't know option)?

| | Every day | A few times a week | A few times a month | Less than once a month | Never | Don't know |
|------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|-----------------------|
| Radio | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Television | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Newspapers | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Internet | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

A7. Would you say you are very proud, quite proud, not very proud, not at all proud, to be a Ugandan (Do not read out the don't know option)?

- Very proud
 Quite proud
 Not very proud
 Not at all proud
 Don't know

PART B. VOTING DECISION

B1. With regard to the most recent, 2011 national elections, which statement is true for you? *(Do not read out the don't know option)*

- You were not registered or you were too young to vote
- You voted in the elections
- You decided not to vote
- You could not find the polling station
- You were prevented from voting
- You did not have time to vote
- Did not vote for some other reason
- Don't know

B2. If a presidential election were held tomorrow, which party's candidate would you vote for? *(Do not read out the don't know option)*

- National Resistance Movement (NRM)
- Forum for Democratic Change (FDC)
- Democratic Party (DP)
- Uganda People's Congress (UPC)
- Other, please specify _____
- Don't know

B3. Do you feel close to any particular political party? *(Do not read out the don't know option)*

- No, (not close to any party) → Skip to B5
- Yes, (feel close to a party)
- Refused to answer
- Don't know

B4. Which party is that? *(Do not read out the don't know option)*

- National Resistance Movement (NRM)
- Forum for Democratic Change (FDC)
- Democratic Party (DP)
- Uganda People's Congress (UPC)
- Other, please specify _____
- Don't know

B5. To what extent would you say you are interested in politics? *(Do not read out the don't know option)*

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Not at all interested | Not very interested | Somewhat interested | Very interested | Don't know |

B6. When you get together with your friends or family, would you say you discuss political matters? *(Do not read out the don't know option)*

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Never | Occasionally | Frequently | Don't know |

B7. When you (yourself) hold a strong opinion, do you ever find yourself persuading your friends, relatives or fellow workers to share your views? Does this happen...? *(Do not read out the don't know option)*

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Often | From time to time | Rarely | never | Don't know |

PART C. POLICY ISSUES

In the following questions we would like to ask you about your own political position on several issues as well as your assessment of parties/candidates positions on these issues.

- C1.** Some people agree with liberal policies like legalizing abortion, homosexuality etc. Others disagree with such liberal policies.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| Agree with liberal policies | 1 | 2 | 3 | 4 | 5 | Disagree with liberal policies | Don't know |
|---------------------------------------|---|---|---|---|---|---------------------------------------|------------|
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

- C2.** Some people say that tax revenues should be used mainly to provide public goods like health care services, educational services or social security. Others say that tax revenues should be rather invested in further economic development via promoting Technical progress, market access etc.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| Tax revenues should be mainly used to provide public goods | 1 | 2 | 3 | 4 | 5 | Tax revenues should rather be used to further improve economic growth and economic development | Don't know |
|---|---|---|---|---|---|---|------------|
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

- C3.** To develop a country it is necessary to increase economic growth, which will lead to poverty reduction and generally a higher income. This aim can be achieved either by agricultural growth (helping the rural regions and increasing the farming sector) or non-agricultural growth (spending money on the urban region, increasing the industrial sector).

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| Economic growth shall be achieved through development of the agricultural sector | 1 | 2 | 3 | 4 | 5 | Economic growth shall be achieved through development of the industrial (non-agricultural) sector | Don't know |
|---|---|---|---|---|---|--|------------|
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

- C4.** There are different ways to achieve economic growth. One way is the promotion of technological progress, like improved fertilizers, new machinery etc.; the other one would be to improve market access via improved infrastructure and efficient market channels.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| Technological progress and innovative inputs, like fertilizer, new machineries, genetic material etc. are the only way to | 1 | 2 | 3 | 4 | 5 | Economic growth can only be promoted with better market access , like improved | Don't know |
|--|---|---|---|---|---|---|------------|
| | | | | | | | |

| | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|
| promote economic growth | | | | | | infrastructure and efficient market channels | |
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

C5. In Ghana agricultural products can be split into so called cash crops, like coffee, cotton, tea and tobacco and food crops, like plantains, cassava, sweet potatoes, millet, sorghum, corn, beans, and groundnuts. Agricultural output can be increased with the extension of either one of them.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| | | | | | | | |
|--|---|---|---|---|---|---|------------|
| It is important to promote the growth of cash crops like coffee, cotton, tea and tobacco to achieve economic growth | 1 | 2 | 3 | 4 | 5 | Food crops like plantains, cassava, sweet potatoes, millet, sorghum, corn, beans, and groundnuts should be grown more intensively to decrease hunger and increase economic performance | Don't know |
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

C6. A state generally faces two ways to deal with Agriculture, it can tax or protect the agricultural sector.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| | | | | | | | |
|--|---|---|---|---|---|---|------------|
| Agricultural sector should be taxed | 1 | 2 | 3 | 4 | 5 | Agricultural sector should be protected and supported by the state | Don't know |
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

C7. Concerning the government, there are different ways to rule a country. One would be to mainly decide on political matters without including the population, this way decision making can be very fast. The other way is to include the citizens in the decision making progress, which provides more participation but also slows the process down.

Where would you place yourself and the following candidates/parties on this issue?
(Do not read out the don't know option)

| | | | | | | | |
|--|---|---|---|---|---|---|------------|
| It is more important to have a government that can get things done, even if we have no influence over what it does <i>(Decision making process without population)</i> | 1 | 2 | 3 | 4 | 5 | It is more important for citizens to be able to hold government accountable, even if that means it makes decisions more slowly <i>(Decision making process with population)</i> | Don't know |
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |

C8. In general, how would you describe *(Do not read out the don't know option)*:

| | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Very bad | Fairly bad | Neither good nor bad | Fairly good | Very good | Don't know |
| The present economic condition of this country? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your own present living conditions? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C9. Looking back, how do you rate the following compared to twelve months ago *(Do not read out the don't know option)*:

| | | | | | | |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Much worse | Worse | Same | Better | Much better | Don't know |
| Economic condition of this country? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your living conditions? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C10. Looking ahead, do you expect the following to be better or worse *(Do not read out the don't know option)*:

| | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Much worse | Worse | Same | Better | Much better | Don't know |
| Economic conditions in this country in twelve months time? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your living conditions in twelve months time? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C11. Looking ahead to next year, 2013, do you think: it will be a peaceful year more or less free of international disputes, a troubled year with much international discord, or remain the same? *(Do not read out the don't know option)*

Peaceful year Remain the same Troubled year Don't know

C12. Looking ahead to next year, 2013, do you think: strikes and industrial disputes in this country will increase, decrease, or remain the same? *(Do not read out the don't know option)*

increase Remain the same decrease Don't know

C13. Overall, how satisfied are you with the way democracy works in Uganda? Are you *(Do not read out the don't know option):*

- Very satisfied
 Fairly satisfied
 Not very satisfied
 Not at all satisfied
 Ghana is not a democracy
 Don't know

C14. Do you approve or disapprove of the way the following people have performed their jobs over the past twelve month, or haven't you heard enough about them to say *(Do not read out the don't know option):*

| | Strongly Disapprove | Disapprove | Approve | Strongly Approve | Don't know/ Haven't heard enough |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------------|
| President Museveni | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your Member of Parliament | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Your elected local council (LCV) chairman | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C15. In your opinion, what are the most important problems facing this country that government should address?

| | 1 st important | 2 nd important | 3 rd important |
|--|---------------------------|---------------------------|---------------------------|
| Economics | | | |
| Management of the economy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Wages, incomes and salaries | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Unemployment | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Poverty/destitution | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Rates and Taxes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Loans / credit | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Food / Agriculture | | | |
| Farming/agriculture | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Agricultural marketing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Food shortage/famine | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Drought | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Land | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Infrastructure | | | |
| Transportation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Communications | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Infrastructure / Roads | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Government Services | | | |
| Education | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Housing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Electricity | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Water supply | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Orphans/street children/homeless children | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Services (other) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Health | | | |
| Health | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| HIV/AIDS | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sickness / Disease | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Governance | | | |
| Crime and Security | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Corruption | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Political violence | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Political instability/political divisions/ ethnic tensions | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Discrimination/ inequality | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Gender issues / women's rights | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Democracy/political rights | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| War (international) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Civil war (Conflict between communities) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other responses | | | |
| Other (i.e., some other problem) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Please specify: | ----- | ----- | ----- |
| Nothing/ no problems | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| No further reply | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Don't know | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C16. How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say? (Do not read out the don't know option)

| | Very Badly | Fairly Badly | Fairly Well | Very Well | Don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| A. Managing the economy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| B. Improving the living standards of the poor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| C. Creating jobs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| D. Keeping prices down | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| E. Narrowing gaps between rich and poor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| F. Reducing crime | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| G. Improving basic health services | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| H. Addressing educational needs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I. Providing water and sanitation services | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| J. Ensuring everyone has enough to eat | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| K. Fighting corruption in government | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| L. Resolving violent conflict between communities | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| M. Combating HIV/AIDS | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| N. Maintaining roads and bridges | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| O. Providing a reliable supply of electricity | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| P. Empowering women | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C17. When you consider voting for a certain candidate, which of the following things are important for your choice. (Do not read out the don't know option)

| | Very unimportant | Unimportant | Important | Very important | Don't know |
|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Character | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Outer Appearance | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ethnic origin | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Regional origin | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Political knowledge | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Party affiliation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Past political performance | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Election campaign | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (_____) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

C18. There is different attitudes vis-à-vis the society we live in. Please choose the one which best describes your own opinion. (Do not read out the don't know option)

- The entire way our society is organized must be radically changed by revolutionary action
- Our society must be gradually improved by reforms
- Our present society must be valiantly defended against all subversive forces
- Don't know

C19. Do you think that if things are not going well in Uganda people like yourself can help to bring a change for the better, or not?

- No, cannot
- Yes, can
- Don't know

C20. In political matters people talk of "Socialist" and "Capitalist". Do you know the terms "Socialist" and "Capitalist" in a political context?

- No, I don't know them → Skip to C22
- Yes, I know them

C21. If you know the terms “Socialist” and “Capitalist” in a political context, where would you place yourself on this scale? (Do not read out the don't know option)

| Socialist | 1 | 2 | 3 | 4 | 5 | Capitalist | Don't know |
|---------------------------------------|---|---|---|---|---|------------|------------|
| A. Yourself | | | | | | | |
| B. National Resistance Movement (NRM) | | | | | | | |
| C. Forum for Democratic Change (FDC) | | | | | | | |
| D. Democratic Party (DP) | | | | | | | |
| E. Uganda People's Congress (UPC) | | | | | | | |
| F. Yourself | | | | | | | |

C22. Are you yourself or is someone in your household a member of a club, an association or an organization and if yes, how active are you as a member? Please also mention the name of the organization.

| | Name of organization | Not a member | Member but not active | Active member | Leader |
|---|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| A sport club | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| An idealistic organization, for example Amnesty | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A religious association (e.g church) | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A (trade) union | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A professional association | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A political party | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A neighborhood association | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A voluntary organization, doing voluntary work | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| A Farmer Based Organization (FBO) | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other | ----- | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PART D. NETWORKS

D1. In the following question we would like to find out more about your personal social networks, especially your core network. With core network we mean those persons that you feel very close to and with whom you would discuss important personal matter (e.g. marital problems, other problems within the family etc.) or whom you would ask if you needed to borrow money. If you think about your friends and family, who belongs to your core network?

| Nr. | Name | Relation 1=family 2=friend 3=acquaintance 4=neighbor 5=colleague 999=Don't know | Sex 1=male, 2=female 999=Don't know | Age 1=<20years 2=20-30years 3=30-40years 4=40-50 years 5=50-60years 6=>60years 999=Don't know | Education 1=No formal schooling 2=informal schooling (including koranic) 3=primary schooling 4=secondary schoolin/high school 5=Post secondary, other than university 6=University 999=Don't know | Occupation 1=Professional/tech/mgt 2=Clerical 3=Sales and Services 4=Skilled manual 5=Agriculture 6=Unskilled manual 7= Student 8=Retired 9=Unemployed 999=Don't know | Place of living 1=Neighborhood 2=same region 3=other region 4=Outside Uganda 999=Don't know | Meeting frequency 1=frequently 2=sometimes 3=rarely 999=Don't know |
|------------|-------------|--|---|---|---|--|---|---|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |

D2. Please indicate for all these people the extent to which they know each other, more specifically whether they know each other “not at all” (0), “know but not close” (1), “close” (2).

| Nr. | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 1 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 2 | | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 3 | | | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 4 | | | | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 5 | | | | | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 6 | | | | | | 0/1/2 | 0/1/2 | 0/1/2 | 0/1/2 |
| 7 | | | | | | | 0/1/2 | 0/1/2 | 0/1/2 |
| 8 | | | | | | | | 0/1/2 | 0/1/2 |
| 9 | | | | | | | | | 0/1/2 |

Lebenslauf

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