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Feeding Unrest: Food prices, food security and protest participation in Africa and South Africa

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Feeding Unrest: Food prices, food security and protest participation in Africa and South Africa

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Dedicated to my parents.

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Feeding Unrest: Food prices, food security and protest participation in Africa and South Africa

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Recent food riots throughout much of Africa and the Middle East in the wake of spikes in international food commodity prices have fueled a renewed academic and popular interest in the long-recognized connection between food prices and social unrest. This dissertation addresses the question how do rising prices and food insecurity contribute to socio-political unrest of all types, rather than focusing on events labeled food riots in the popular media. The dissertation addresses this question at the macro and the micro levels. It begins with a macro-level analysis of changing consumer food price indices and the occurrence of unrest in 40 African countries. It then proceeds to a case study of protest of in South Africa. This case study first reviews the history of political protest in South Africa and the context of a rash of protests that have plagued South Africa over the past decade focusing on local government service delivery. Next a careful examination of trends of economic inequality and food spending in South Africa provides an understanding of the structural factors contributing to relative deprivation in South Africa. Finally,

the results of an original survey conducted in a service delivery protest hotspot in Cape Town, reveals that food insecurity is a significant determinant of individual protest participation. These macro and micro level studies lead to the conclusion that food insecurity and rising food prices contribute to increased relative deprivation and predisposition to political protest at the individual level and, consequently, to increased incidence of socio-political unrest.

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Chapter 1

Introduction

> Already long ago, from when we sold our vote to no man, the People have abdicated our duties; for the People who once upon a time handed out military command, high civil office, legions – everything, now restrains itself and anxiously hopes for just two things: bread and circuses
>
> Juvenal, *Satire 10*, Second century A.D.

> Them belly full, but we hungry;
> A hungry mob is a angry mob.
> A rain a-fall, but the dirt it tough;
> A pot a-cook, but food no 'nough.
>
> Bob Marley, *Them Belly Full*, 1974

In early 2007, the FAO Food Price Index, which measures prices of internationally traded food commodities, began to rise. Although gradual at first, monthly price increases quickly began to skyrocket. The index reached a record high in June of 2008 of 225.8, 43.1% higher than the year before. Then, just as quickly, prices fell again, dropping to 143 in February of 2009, roughly the same level as in April of 2007. Then prices began to rise again, reaching a new record of 235.2 in June of 2011. (See Figure 1.1 and Appendix A.)

Also in 2008, a rash of socio-political unrest began to spread across the globe. Much of this unrest was attributable to the global financial crisis sparked

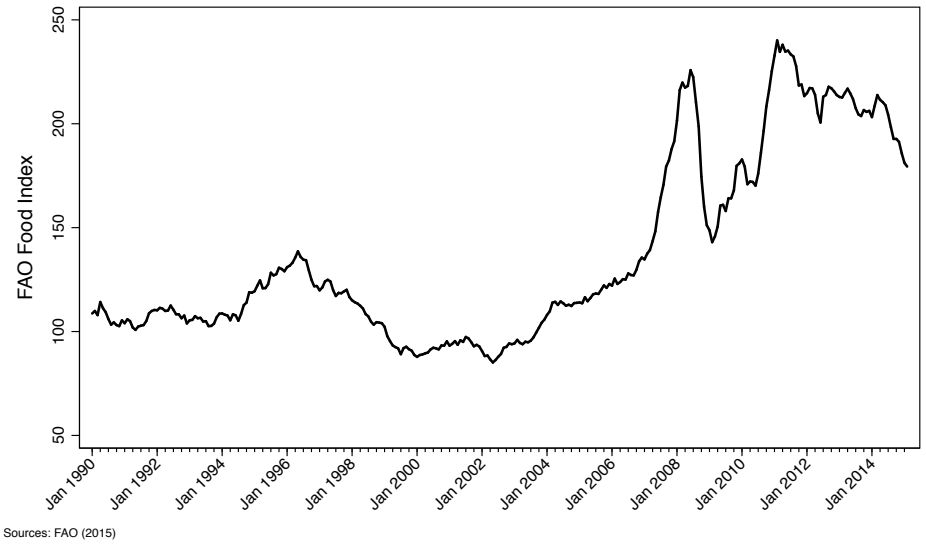

Figure 1.1: FAO Food Price Index

by the collapse of the U.S. housing market. But some of the protesters, especially in Africa and the Middle East, cited rising food prices among their grievances, which also included rising fuel prices. Soon photos of protesters waving loaves of bread appeared in major news outlets. Then, in December 2010, a Tunisian street vendor set himself on fire, sparking revolutions that toppled dictators in Tunisia, Libya, Egypt, and Yemen. Major protests also erupted in Algeria, Jordan, Kuwait, Morocco, and Sudan and minor protests broke out in many other countries.

This previously unseen volatility in food prices and the coincident outbreak of widespread unrest brought on a renewed academic and policy interest in the connection between food prices and social unrest, including widespread speculation and debate about the role of food prices in the Arab Spring (Ciezadlo, 2011; BBC, 2011; Harsch, 2008; BBC, 2008; IRIN, 2011; Aljazeera, 2012). Dramatic

weather events, diversion of crops for fuel production, and continuing volatility in international grain markets have led many to postulate that food riots will become more frequent, pervasive, and disruptive in the future. One group of researchers published a report that was picked up in the popular media that suggested that if international commodity prices continued to rise the world will become engulfed in riots by August of 2013 (Lagi et al., 2011b; Brandon, 2011).

Existing academic literature, both large-N and case study, that has been concerned with food insecurity and food prices as a driver of unrest has focused almost exclusively on so-called *food riots* as the dependent variable. But this narrow focus ignores significant factors on both sides of the equation. To think that food riots are simply about food is a dangerous reduction. Such a view could easily lead one to focus on controlling the cost of food while ignoring political or social injustices.

But it is equally blind to ignore that the cost of food can be a driver of unrest that manifests in other ways or is directed at targets seemingly unrelated to the food system. Academic literature focusing on other types of unrest has not adequately considered food security and food prices as a significant source of grievance.

With this dissertation, I attempt to remedy these shortcomings in the literature by examining the link between rising food prices and socio-political unrest more broadly defined at the macro and micro levels. In so doing, I contribute to an understanding of the psychological, social, and political factors that lead to socio-political unrest, which in this research includes non-violent protest methods that

may not fall into the often used definition of "collective violence," but are, nonetheless, outside the range of institutionalized conflict resolution techniques, such as elections, court proceedings, collective bargaining, etc.

1.1 Research Questions

The research questions to be addressed by this dissertation are the following:

1. *Do increases in local consumer food prices lead to an increase in the likelihood of socio-political unrest in African countries?*
2. *What explains the increase in service delivery protests in post-apartheid South Africa?*
   (a) *How have changing patterns of economic inequality contributed to the increase in service delivery protests?*
   (b) *Has food insecurity or rising consumer food prices contributed to the increase in service delivery protests in South Africa?*

The primary independent variable is stress on the food security of individuals and households resulting from rising or unstable market prices of food. The World Food Summit Plan of Action maintains that "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO, 1996). This definition includes four pillars of food security: availability, access, stability, and appropriate use. In urban areas where populations depend on the purchase of food, access requires that food be affordable and stability requires confidence that the food prices will remain affordable in the foreseeable future. When food prices rise unexpectedly these pillars are undermined and food security

is undermined. This is especially true in African cities where rising food prices have an undeniably disproportionate impact on poor populations who often devote over half of their income to food purchases (Kendall et al., 1996; Ruel et al., 1999; Maxwell et al., 2000).

In chapter 3 the primary dependent variable is politically disruptive collective action, or unrest. This encompasses several of types of events including but not limited to labor strikes, student protests, electoral demonstrations and violence, and communal conflict. This is focus of the study of contentious politics, which are defined and discussed in more detail below. In the remaining sections, the dependent variable is the micro-level decision to participate in political protest. This is also defined and discussed in more detail in the next chapter.

Throughout this dissertation I attach no normative value judgment to various types of collective action or the decision to participate in such action. From an ethical perspective such a judgment would depend on (1) the legitimacy of the objective and (2) the degree to which the chosen methods impinge upon to the legitimate interests of others. Food security is undoubtedly a legitimate interest of all human beings. Food falls into the lowest category of Maslow's hierarchy of needs, *physiological*, while food security falls into the second category of *security* needs (Maslow, 1943). It would, therefore, be presumptuous to pass judgment on social conflict, even the use of violence, as illegitimate to obtain these needs. Rather, this dissertation aims to understand the role that degrees of food insecurity and rising food prices may play as a motivation in social conflict that is not expressly about securing these needs

Many authors in this field focus on political violence with the assumption that either the protesters or the state make the rational decision to engage in violence. First, some assume that protesters make the conscious decision to engage in violence. In other words, individuals choose between institutionalized venues of political expression, e.g. the ballot box, and non-institutionalized venues, e.g. street protests (Machado et al., 2011; Dunning, 2011; Booysen, 2007). Alternatively, others assume that authorities make the conscious decision to violently repress collective political expression of grievances (Escribà-Folch, 2013; Carey, 2010). These assumptions, however, may not be valid. What is otherwise a legitimate and peaceful protest can devolve into violence in the absence of any deliberate group or individual decision on the part of the protesters or the authorities. In this dissertation, I do not assume that individuals or groups make a rational decision to engage in violence. I do, however, maintain that violence is more costly than non-violence. Similarly, Gurr maintains that collective violence can be good, bad or neutral, but it is often costly, destructive, and inefficient. He writes, "Violence generally consumes men and goods, it seldom enhances them" (Gurr, 1971, 5).

1.2 Case study selection: South Africa

This micro-level analyses in this dissertation focus on South Africa as a case study of political protest. Since at least 2004, the urban areas of South Africa have been plagued with incessant protests over the perceived failure of the government to provide expected benefits including: affordable housing projects, accessible electricity, improved sanitation and water, transportation, education, healthcare, and

police services. Although such protests involve many different issues, they are often grouped together around the general heading service delivery protests. This provides an opportunity to study the contribution of food insecurity and food prices to individual level decisions to engage in protest.

South Africa is also an important subject for research because of its role as a leader in sub-Saharan Africa. In 2011 South Africa produced 31.4 percent of GDP of sub-Saharan Africa. Instability in South Africa could have repercussions across the region. Comparatively, it is considerably more developed than most of its African neighbors and, therefore, might not be as economically analogous to them. Nonetheless, political and policy lessons learned in South Africa can provide valuable guidance as other African nations strive to replicate its development success. As a diversified economy with a highly urbanized populous, 64.8% in 2015, South Africa represents the model that many other African nations are striving to become. This future, however, includes a food distribution system in which Africans will increasingly meet their food needs by purchasing imported food in urban markets.

Finally, South Africa can provide some valuable policy lessons for other BRICS countries. In many ways it is more comparable to these countries, especially Brazil, than its African neighbors. Both South Africa and Brazil are regional leaders if not hegemons. Both have federalist governments with considerable decentralization. Table 1 shows that economically the two countries are quite similar. In PPP terms the GDP per capita of the two countries is very close. Inequality in both countries is quite similar, amongst the highest in the world. Agriculturally, both countries are similarly productive, although Brazil has considerably more

Table 1.1: Comparison of South Africa and Brazil

	South Africa	Brazil
GDP per capita, PPP (current international $)	$10,959.74	$11,639.72
GDP per capita growth (annual %)	1.91%	1.84%
GINI index (2009)	63.14	54.69
Food production index (2004-2006 = 100)	116.12	127.04
Food imports (% of merchandise imports)	6.11%	4.54%

Source: World Bank Development Indicators

arable land. Finally, both countries import similar amounts of food as a percentage of total merchandise imports making domestic food prices similarly vulnerable, or not, to changes in international markets.

Most importantly, because the focus of the research is on how individuals make decisions about disruptive politics, lessons learned in the South African context will provide valuable insight into human political behavior in general. South Africans are not fundamentally different than other people regardless of how similar or dissimilar the context may be to any other.

1.3 Outline

The dissertation begins with a review of two bodies of relevant literature. The first is a body of mostly historical studies on food-related unrest over the past three centuries. The second is literature on theories of social movements and contentious politics.

In chapter 3, I present a macro-level study of changing food prices and the

occurrence of socio-political unrest in African countries. I use an instrumental variable approach to disentangle the endogenous causal relationship between rising consumer food prices and socio-political unrest of all types. I use international commodity price changes and local rainfall as instrumental variables for changes in consumer food prices.

Having established that a causal connection does exist between changing food prices and socio-political unrest at the macro-level, I turn my attention to the micro-level. Chapter 4 reviews the history of socio-political protest in South Africa from the anti-apartheid movement of the last century to the service delivery protests in the past ten years. This chapter concludes with a brief case study of service delivery protests through the analytical lens of alternative social movement theories.

In chapter 5 I apply relative deprivation theory to individual decisions to participate in service delivery. This includes a review of previous sociological studies of relative deprivation in South Africa in the years after the end of apartheid and an analysis of changing patterns of economic inequality in South Africa before turning the Afrobarometer survey data to determine what factors contribute to individual and group relative deprivation and how this contributes to protest participation.

Having answered my research questions as well as possible using publicly available data, in chapter 6 I present the results of a survey about food security and protest participation that I conducted in Cape Town, South Africa, in late-2014.

Finally, I draw some conclusions about these macro and micro level studies relate to our understanding of protest behavior in general and food as a driver of protest specifically. In the conclusion I also briefly discuss the policy implications of these findings and plans for future research.

Chapter 2

Literature review

This dissertation draws primarily on two bodies of literature. The first is a fairly limited body of research that has focused on the historical occurrence of food-related unrest. The second is a much broader area of research concerned more generally with contentious politics and the development of social movements. In this chapter I first review the literature on food-related unrest. (Recent large-N studies are discussed in the next chapter.) I then provide a brief overview of the literature on contentious politics and social movements as it relates to the analysis presented later in the dissertation.

2.1 Food riots in history

Historians, political scientists, and sociologists have all documented and studied the historical role of food and food prices on revolution, rioting, and unrest. Much has been written about the bread riots in 18th and 19th century England and France (Rudé, 1964). In both countries, failed harvests during the last half of the 18th century led to corresponding food price peaks and attendant outbursts of food-related unrest in both the countryside and urban centers. It would be a mistake, however, to think that these riots, or protests, were all of the same type, carried out

by crowds of similar composition, or with common targets of discontent. These so-called food riots took on many different forms with many different objectives including: the *retributive action* or *market riot*, an act committed by crowds against people believed to be hoarding or profiteering; the *blockage* or *entrave*, the prevention of food from leaving the area of production; and, the price riot or *taxation populaire*, the seizure of food to be sold publicly at a proper price as set by the people (Tilly, 1978, 1971; Stevenson, 1974).

Rudé (1964) also makes the point that the food riot was a more common form of social unrest than the strike amongst many industrial workers. Later, however, "these workers, although more prone in times of hardship to seek redress from grain factors and millers than from their own employers, were also on occasion involved in purely industrial disputes" (Rudé, 1964, 66). Stevenson (1974) makes the same point and contends that these food riots eventually gave way to other forms of protest.

So-called food riots largely disappeared from the world stage from the mid-19th century through the 1970s (Rudé, 1964; Tilly, 1978; Walton and Seddon, 1994). Beginning in the late 1970s, however, widespread unrest, erupted in countries subjected to austerity programs imposed by international financial institutions in the wake of the debt crisis of the early 1970s (Walton and Seddon, 1994). In the context of changes to food systems, the period of structural adjustment was the historical analogue of the late eighteenth century. Although individual outbreaks of unrest in the 17th and 18th centuries coincided with bad harvests and price spikes, the broader trend of unrest in eighteenth century was not a consequence of food

shortage; they emerged at a time when per capita food supply was probably on the rise. Rather, they were attributable to three trends that accompanied the rise of the nation state and the increasing salience of the market in food systems: (1) households became more reliant on the market for the provision of food; (2) food production became increasingly commercialized, which led to an increasing prioritization of national markets over local needs; (3) institutionalized local controls over the distribution of food were increasingly dismantled (Tilly, 1978). Similarly, late 20th century "food riots in the developing nations are generated by processes analogous to economic liberalization policies that produced classical food riots, but today's transformation is taking place at the international level. Neo-liberalism simultaneously affects all Third World countries in much the same fashion as laissez-faire policies within nations once affected particular towns and regions, although the two processes are distinct in other ways" (Walton and Seddon, 1994, 24).

In sum, two related lessons emerge from these historical studies. First, the protests of the 17th and 18th centuries and the 1970s and 1980s were the product of structural changes to the economic and political systems that governed the distribution of food. These changes were often perceived by as unfair or unjust by the public and consumers took action against those perceived to be culpable for or profiting from the injustice. Regardless of the underlying causes, however, periods of unrest were triggered by sharp increases in the price that consumers paid to feed themselves and their families.

Second, grievances about the cost of food are often commingled with other grievances, especially labor disputes, and the occurrence of a particular type of

unrest is often determined more by a viable target and perceived culpability than the source of hardship. Goldstone (1982) writes: "Two grievances stand out as the chief cause of revolutionary urban tumults: the cost of food and the availability of employment." Fundamentally, both of these issues are really about the income necessary to provide the essentials of life, primarily food. When the ability of people to provide these essentials is strained they may seek relief either in the form of lower expenses or higher incomes. How aggrieved groups choose the targets of their ire is a question that is largely outside the scope of this dissertation but is undoubtedly an important theoretical question with obvious practical import.

2.2 Contentious politics and social movements

In my analysis of micro-level determinants of participation in political protests I draw on a body of literature concerned with contentious politics and social movements. Tilly and Tarrow (2006, 4) define *contentious politics* as follows:

> Contentious politics involves interactions in which actors make claims bearing on someone else's interests, leading to coordinated efforts on behalf of shared interests or programs, in which governments are involved as targets, initiators of claims, or third parties. Contentious politics thus brings together three familiar features of social life: contention, collective action, and politics.

Most authors consider contentious politics to be compromised of political action outside the realm of institutionalized avenues of politics, types of actions often referred to as legitimate, acceptable or normal. McAdam is an exception. He

argues that "the study of politics has too long reified the boundary between official, prescribed politics and politics by other means. As an unfortunate consequence, analysts have neglected or misunderstood both the parallels and the interactions between the two" (McAdam et al., 2001, 6). The argument is that processes and mechanisms that give rise to both types of contention are part of the same dynamic system. Nonetheless, he focuses largely on "transgressive contention," which he distinguishes from the more institutionalized "contained contention."

The literature on social movements is focused on the organization, mobilization, and tactics of episodes of contentious politics. Tilly and Tarrow (2006, 202) define a social movement as "a sustained campaign of claim making, using repeated performances that advertise that claim, based on organizations, networks, traditions, and solidarities that sustain these activities." McCarthy and Zald (1977, 1217–1218) define a social movement as "a set of opinions and beliefs in a population which represents preferences for changing some elements of the social structure and/or reward distribution of a society."

Political protest and street demonstrations are a visible tactic, or *repertoire* (Tilly and Tarrow, 2006) of contentious politics in the modern world. There is often disagreement about what type of actions can constitute protest. Lipsky (1968, 1968) defines *protest activity* as "a mode of political action oriented toward objection to one or more policies or conditions, characterized by showmanship or display of an unconventional nature, and undertaken to obtain rewards from political or economic systems while working within the systems." Turner (1969, 816) writes: "An act of

protest includes the following elements: the action expresses a grievance, a conviction of wrong or injustice; the protestors are unable to correct the condition directly by their own efforts; the action is intended to draw attention to the grievances; the action is further meant to provoke ameliorative steps by some target group; and the protesters depend upon some combination of sympathy and fear to move the target group in their behalf."

In this dissertation, I seek to understand why individuals choose to participate in political protests, primarily in South Africa, and how food security and food prices contribute to such participation. In doing so, I rely largely on two fundamental theories of contentious politics: relative deprivation and resource mobilization.

2.2.1 Relative deprivation literature

Relative deprivation (RD) theory was first introduced by psychologist Samuel Stouffer in 1949 to help explain why U.S. Army Air corpsmen reported higher levels of frustration over promotion than military police even though the corpsmen enjoyed a relatively higher rate of promotion than the military police. Stouffer argued that the corpsmen compared themselves to other corpsmen and the military police were not an appropriate reference group (Smith et al., 2012). The idea was that individuals perceived entitlements in comparison to others within a comparison group rather than objectively. In 1957, Merton extended the idea to a group framework (Merton, 1968; Smith et al., 2012).

Runciman (1961) distinguished between *egotistic* and *fraternalistic* relative deprivation. Egotistic RD is the comparison of one's personal position to others

within one's reference group while fraternalistic RD is the comparison of the relative position of one's group to other groups with the social structure. Others have referred to this as individual and group RD (Smith et al., 2012; Walker and Pettigrew, 1984). (I adopt these terms in Chapter 5.)

In 1968, Gurr applied the idea of RD to political science. He used the idea to help explain violent civil conflict. He writes: "My basic premise is that the necessary precondition for violent civil conflict is relative deprivation, defined as actors' perception of discrepancy between their *value expectations* and their environment's apparent *value capabilities*" He defined *value expectations* as "the good conditions of life to which people believe they are rightfully entitled" and *value capabilities* as the conditions that "they are capable of getting and keeping." (Gurr, 1971, 24) (Gurr, 1968b, 252-53). In addition to applying RD to an explanation of political behavior, he also argued that perceived political voice was a contributing factor to perceived value capabilities.

Gurr proposed a three-stage process leading to violent political behavior (Gurr, 1968a, 1971). The first stage of the process in Gurr's framework is the generation of discontent, which is the product RD defined as stated above (Gurr, 1971). The key here is the subjective perception of deprivation. When people have expectations of values that are higher than those that they believe they are capable of attaining they become frustrated.

In the second stage, the discontent must become *politicized*, that is it must be focused on political objects or actors. "Deprivation-induced discontent is a general spur to action. Psychological theory and group conflict theory both suggest that the

greater the intensity of discontent, the more likely is violence. The specificity of this impulse to action is determined by men's beliefs about the sources of deprivations, and about the normative and utilitarian justifiability of violent action directed at the agents responsible for it" (Gurr, 1971, 13) Furthermore, the degree to which the frustration becomes focused aggression is a function of societal and cultural normative values regarding the acceptability of overt aggression, "the extent and degree of success of past political violence, the articulation and dissemination of symbolic appeals justifying violence, the legitimacy of the political system, and the kinds of responses it makes and has made to relative deprivation" (Gurr, 1971, 13).

The third stage of the process toward collective violence is *actualization*. This stage involves marshaling of resources and calculations of probability of success and expected recriminations given those resources. "Politicized discontent is a necessary condition for the resort to violence in politics. But however intense and focused the impetus to violence is, its actualization is strongly influenced but the patterns of coercive control and institutional support in the political community" (Gurr, 1971, 14). Civil war is most likely when regimes and opponents command roughly equal amounts of coercive control and share equal amounts of institutional support within society.

2.2.2 Resource mobilization literature

Citing ambiguous empirical evidence, McCarthy and Zald (1977) argued that RD theory fails to explain participation in social movements because some underlying degree of relative deprivation is always present in society. They write:

> We are willing to assume (Turner and Killian [1972] call the assumption extreme) "... that there is always enough discontent in any society to supply the grass-roots support for a movement if the movement is effectively organized and has at its disposal the power and resources of some established elite group" (p. 251). For some purposes we go even further: grievances and discontent may be defined, created, and manipulated by issue entrepreneurs and organizations.

McCarthy and Zald (1977, 1215) do not want to remove grievance from the causal process entirely. Instead, they "want to move from a strong assumption about the centrality of deprivation and grievances to a weak one, which makes them a component, indeed, sometimes a secondary component in the generation of social movements." In so doing, they emphasize the "mobilization process" (McCarthy and Zald, 1977, 1215). They present a confusing causal model in the form of eleven *illustrative hypotheses* through which they seek to explain the emergence, growth, and success of a social movement organization on the political left in the United States. Explanatory variables as synthesized by (Opp, 2009) include: (1) extent of societal support for movement goals; (2) amount of resources provided by external actors; (3) amount of resources provided by members of the organization; (4) control of authorities; and (5) incentives of the target to yield.

Tilly (1978) also focused primarily on group mobilization. He proposed a model that includes five components of collective action: interests, organization, mobilization, opportunity, and collective action itself. Interests are defined as the "the gains and losses resulting from a group's interaction with other groups." Organization involves features of group structure that affect the capacity of a group

to engage in collective action. Mobilization is "the process by which a group acquires collective control over the resources needed for action." Resources consist of a diverse set of things needed for collective action, such as labor, goods and assets, weapons, communication networks, votes, and community support. Opportunity involves the relationship of the group to the world around it and changes in the world that affect the interests of the group (Tilly, 1978).

The resource mobilization perspective as presented by McCarthy and Zald (1977) and Tilly (1978) does not explicitly provide a clear micro model for individual participation in social movements (Opp, 2009). Klandermans (1984) sought to remedy this shortcoming by including social-psychological approaches, specifically expectancy value theory, within a resource mobilization framework. He found support for this approach using data from a labor movement campaign in the Netherlands in 1979, but this approach has not been more widely tested.

2.2.3 An integrated approach

These two approaches are not contradictory; rather the focus of the analysis is different. Relative deprivation is concerned with the individual psychological motivations while resource mobilization is focused on group collective action. A complete analysis of political protest should to include elements of both approaches. Indeed, shortly after the publication of the 40th anniversary edition of *Why Men Rebel*, Gurr reflected that the absence of an explanation of resource mobilization was likely the most glaring shortfall of his framework. He suggests that this shortfall could be overcome by complementing his framework with analysis from mo-

bilization literature such as Charles Tilly's *From Mobilization to Revolution* (Gurr, 2012).

Opp (2009) expressly seeks to integrate existing theories into what he calls a *structural-cognitive* model. He proposes a model in which protest is a function of the interaction between discontent and perceived influence plus moral and social incentives to protest minus the interaction between the probability and expected severity of repression. This model includes both macro and micro level factors and expressly recognizes that these factors are interdependent. For example, high discontent and perceived influence raise moral and social incentives. Conversely, repeated interactions with other protests can raise discontent and perceived influence.

2.2.4 Other theories

There are a few other authors that have some influence on this dissertation. The dynamics of contention approach of McAdam et al. (2001), later refined by Tilly and Tarrow (2006), places more importance on the role of history and social processes in the development of social movements. This approach recognizes that individuals often have allegiances to multiple groups that may have conflicting interests. Individuals may join or defect from groups in times of crisis. Existing groups may form alliances or entirely new groups may form. In other words, groups are dynamic and interactions between groups and actors lead to the formation of new groups and new episodes of contention.

Social identity theory (SIT) maintains that social behavior is determined largely by beliefs about the position of one's identity group and one's ability to move between groups (Tajfel and Turner, 1986). At one extreme is the belief in "social mobility," characterized by the general assumption that individuals live in a highly flexible society and are not bound by the conditions of one's identity group. At the other extreme, the belief system of 'social change' implies that the nature and structure of the relations between social groups in the society is "characterized by marked stratification, making it impossible or very difficult for individuals, as individuals, to divest themselves of an unsatisfactory, underprivileged, or stigmatized group membership" (Tajfel and Turner, 1986, 9).

2.3 Conclusion

The focus of this dissertation is on micro-level explanations of participation in protest activities. I therefore focus on grievance formation. I propose that there is one key difference between *relative deprivation based grievances* as described by Gurr on one hand and the *preferences* of McCarthy and Zald and the *interests* of Tilly on the other. Gurr's RD approach focuses on individual level conditions. McCarthy and Zald (1977) refer to "preferences for changing some elements of the social structure" while Tilly (1978) refers to "the gains and losses resulting from a group's interaction with other groups." Both of these approaches focus on perceptions of group conditions. Social identity theory can contribute to an understanding of group RD in contexts of dynamic social change.

In chapter 5, I seek to develop a more complete understanding of micro-level incentives for protest participation, by including both individual, or egotistic, RD and group, or fraternalistic, RD in an analysis of protest participation. My treatment of these concepts in the context of South Africa is influenced by the dynamics of contention approach, social identity theory and the structural-cognitive model. Chapter 5 will also illustrate that dynamic social change in the post-apartheid era has led to changes in identities and group allegiances. The end of apartheid also changed beliefs about the ability of individuals to move between social groups. Combined with changing patterns of economic inequality has this has led changes in group RD. Furthermore, persistent poverty and the continued cycle of service delivery protests over the past decade, discussed in chapter 4, continues to drive intra-group comparisons and individual RD.

Chapter 3

Disentangling the causal relationship between food price spikes and socio-political unrest in African countries[1]

3.1 Introduction

Rising food prices can and do lead directly to food riots. This rather axiomatic proposition is widely accepted and not particularly controversial. Prognostications based on this simple correlation are, however, dangerous for a number of reasons, especially when the observed correlation is between food riots and international commodity prices. Firstly, it ignores that the connection between international prices and local prices is not always clear; countries use agricultural subsidies, export restrictions, and price controls to stabilize markets. This observation calls into question the most commonly advanced theory that rising international commodity prices drive up domestic consumer prices, which, in turn, lead people to take to the streets under increased economic pressure. Secondly, many different types of events are often referred to as 'food riots.' Rising food prices might be a catalyst for unrest but more deep-seated grievances might mean it manifests in

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different ways or is directed at different targets. Thirdly, such predictions disregard the endogenous nature of the relationship between food prices and unrest. Rising food prices cause unrest and unrest can drive up food prices. Furthermore, both rising prices and unrest can result from a third factor, such as rising fuel prices or political corruption.

In this chapter, I unravel the endogenous relationship between food prices and urban unrest in Africa by introducing several theoretical and methodological innovations. From a theoretical perspective, I first pose the previously unaddressed question of whether food price shocks are a contributing causal factor, or catalyst, of any type of socio-political unrest, including spontaneous and organized demonstrations and riots involving a variety of issues, rather than just so-called 'food riots.' Secondly, I use domestic consumer food price indices as the primary independent variable because they better represent the prices that consumers pay for food, thereby providing better insight into the economic causal mechanisms. Thirdly, I analyze the question at a unit of analysis and coverage not previously used: country-months for 40 countries over a period of 275 months (23 years). Lastly, I employ an instrumental variable analysis to address the endogenous relationship between food prices and social unrest and further isolate the direction of causality. In so doing, I evaluate and use two instrumental variables, separately and together: international grain commodity prices and local rainfall deviations.

I find that a sudden and sharp increase in consumer food prices in a given month compared to expected variation in the given country is significantly correlated with an increase in the probability of unrest in that month, which, because

of the instrumental variable specification, provides evidence of causality. Although more research is necessary to determine why people choose particular protest methods and targets, I argue that this is evidence that economic pressure from rising food prices increases the proclivity of urban consumers to engage in unrest activities.

3.2 Literature

Two related lessons emerge from historical studies of food riots. First, the bread riots of 18th and 19th century England and France as well as austerity protests in the last half of the 20th century were the product of structural changes to the economic and political systems that governed the distribution of food. These changes were often perceived as unjust and consumers took action against those perceived to be culpable for or profiting from the injustice. Regardless of the underlying causes, however, periods of unrest were triggered by sharp increases in food prices. Second, grievances about the cost of food are often commingled with other grievances, especially the availability of employment (Goldstone, 1982). Fundamentally, both of these issues are about the ability to provide basic necessities, and when this ability is strained, the resulting unrest may be determined more by perceived culpability or the viability of particular targets or methods than the source of hardship. How aggrieved groups perceive culpability and choose methods or targets is a question that is largely outside the scope of this chapter but is undeniably important.

The more recent rash of food riots, like earlier periods, is a crisis not of production but of access and stability.[2] Despite record grain harvests in 2007, structural changes mean that while food is often available in local markets, prices are unaffordable for many consumers (Holt-Giménez, 2008). In the two years preceding the Arab Spring, food price increases in Egypt, as in 18th century Europe, provided 'a catalyst for political mobilization and an opportunity to voice out dissent about a much broader range of concerns.' This unrest was often commingled with other types of unrest, particularly labor strikes, such as a strike in April 2008 in which workers demanded higher wages to cover the increasing cost of food (Bush, 2010, 119).

An emerging large-N literature has sought to identify a statistical relationship between food prices and political and social unrest. Lagi et al. (2011a) present a simple and compelling but potentially misleading graph of the Food and Agriculture Organization (FAO) Food Index[3] together with media reports of observed food riots in individual countries during the spikes of 2007–08 and 2010–11. The proposed causal explanation for this correlation is a breakdown of state authority

[2]The World Food Summit Plan of Action maintains that 'Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.' This definition includes four pillars: availability, access, stability, and appropriate use. In urban areas *access* requires that food be affordable and *stability* requires confidence that the food prices will remain affordable in the future (FAO, 1996).

[3]This index is 'a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices (representing 55 quotations), weighted with the average export shares of each of the groups for 2002–2004' (FAO, 2013).

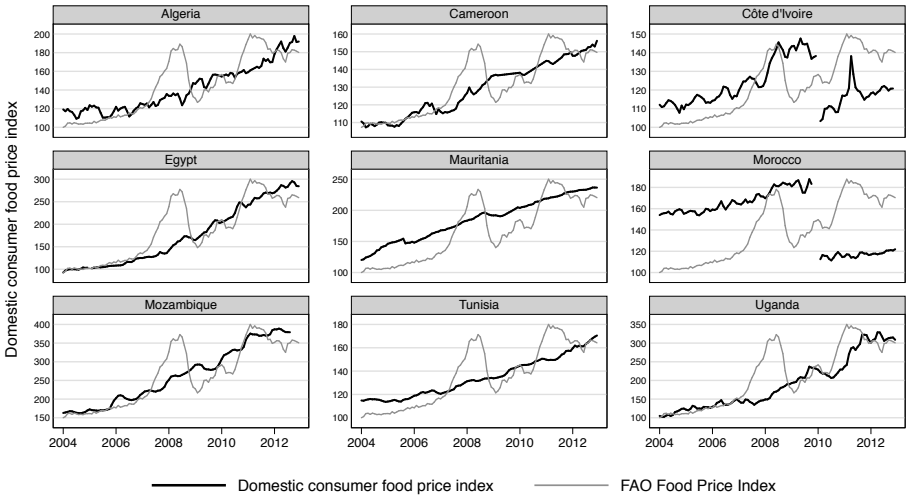

Figure 3.1: Domestic consumer food indices and the FAO Food Price Index

and political order when the state fails to provide food security. Upon closer examination, however, local consumer food indices in the individual countries usually do not exhibit the same spikes as the FAO Index (See Figure 3.1). Only in Côte d'Ivoire and Cameroon can associated peaks be identified and these are delayed. At best, this makes the proposed causal mechanism dubious and, at worst, could be the result of media bias in the reporting of riots during the spikes. Similarly, Bellemare (2012) finds a link between monthly global FAO data and media reports of food riots between 1990 and 2011. Recognizing the potential for endogeneity, he attempts to isolate causality with an instrumental variable approach. Much like Lagi et al. (2011a), however, his causal explanation is based on the flawed assumption that changes in international commodity prices are directly reflected in domestic prices (Bellemare, 2012).

Others have recognized the correlation between rising food prices and unrest and have sought to identify the underlying structural drivers. Arezki and Brückner (2011) find that political institutions in low-income countries deteriorate significantly when international food prices increase largely because those increases 'significantly increased the likelihood of civil conflict and other forms of civil strife, anti-government demonstrations and riots' (Arezki and Brückner, 2011, 11). Berazneva and Lee (2013) find that higher levels of poverty and political repression were associated with a higher likelihood of riots in Africa during the 2007–08 international commodity prices spike. The generalizability of this finding is, however, questionable due to the focus on the particular episode of global economic crisis and an ambiguous definition of 'food riots.'

3.3 Theory

The question posed here is: *Do sudden increases in domestic consumer food prices lead to an increase in the likelihood of social or political unrest in urban areas of African countries?* The innovation of this question is two-fold; (1) the independent variable, increases in domestic food price indices, more accurately reflects prices paid by average consumers; and (2) the dependent variable is the occurrence of broadly defined socio-political unrest in urban areas rather than a nebulous definition of 'food riots' that is suspect to reporting bias.

Firstly, while the FAO Index is not a good proxy for domestic prices, international commodity prices do pass through to some extent to consumer prices (Dawe, 2008; Ferrucci et al., 2010). This is not, however, the only mechanism

through which commodity prices could lead to unrest. Theoretically, increased international prices of export commodities should benefit the domestic agricultural sector though higher farm-gate prices, increased revenue, increased income for agricultural workers, improved welfare, and reduced unrest. Alternatively, elite capture of increased revenue could lead to increased unrest driven by grievances over structural inequities. Therefore, if the intent is to capture the effect of rising food prices on unrest driven by consumer grievance over increased economic pressure, one should focus on consumer food prices and on unrest in urban areas where people are more reliant on markets for food. Furthermore, food prices naturally fluctuate due to changes in supply and consumers develop coping mechanisms to absorb these fluctuations (Joshi and Gandotra, 2006). Still, sharp unexpected increases may overwhelm coping mechanisms and increase grievances and propensity to engage in unrest activities. By using monthly price increases outside the observed long-term volatility as the independent variable and unrest in a given month as the dependent variable, I further isolate the causal mechanism to consumer response to economic pressure.

Secondly, because the definition of 'food riots' is elusive, the dependent variable used here includes unrest in urban areas regardless of the cited grievance. In Africa, rising food prices have an undeniably disproportionate impact on poor urban dwellers who often devote over half of their household income to food purchases (Kendall et al., 1996; Ruel et al., 1999; Maxwell, 1999; Verpoorten et al., 2013). People facing increased economic pressure may seek relief from the government through control of food prices or in other sectors such as housing or fuel

or through the wholesale removal of a government perceived to be inept or corrupt. Alternatively, people may seek other forms of relief such as higher wages. In other words, rising food prices may drive unrest even if not cited as a primary grievance by protesters. While this is difficult to identify, there are numerous examples of protests where food is just one of many grievances, including in Nigeria, Uganda, and South Africa (Nossiter, 2012; Kron, 2011; BBC, 2008).

Based on these assumptions, the proposed hypothesis is: *Higher monthly spikes in domestic consumer food prices will increase the short-term probability of the occurrence of urban socio-political unrest.*

Testing this hypothesis is, however, complicated by the endogenous relationship between food prices and unrest. Rising food prices can lead to unrest, and unrest can drive up domestic food prices, or both may be driven by other factors. For example, in Nigeria in December 2011 and January 2012 rising fuel prices were likely the driver of both rising food prices and social unrest. This endogeneity makes it difficult to isolate the causal relationship. I use an instrumental variable approach to predict the endogenous independent variable, cleansing it of the feedback effect of the social unrest or other drivers of both higher food prices and social unrest. Two potential instrumental variables are employed and empirically evaluated individually and jointly: *international food commodity prices* and *rainfall scarcity*.

3.4 Data and methods

The unit of analysis used is country-months, i.e. calendar months in individual African countries. This temporal disaggregation helps to better identify more

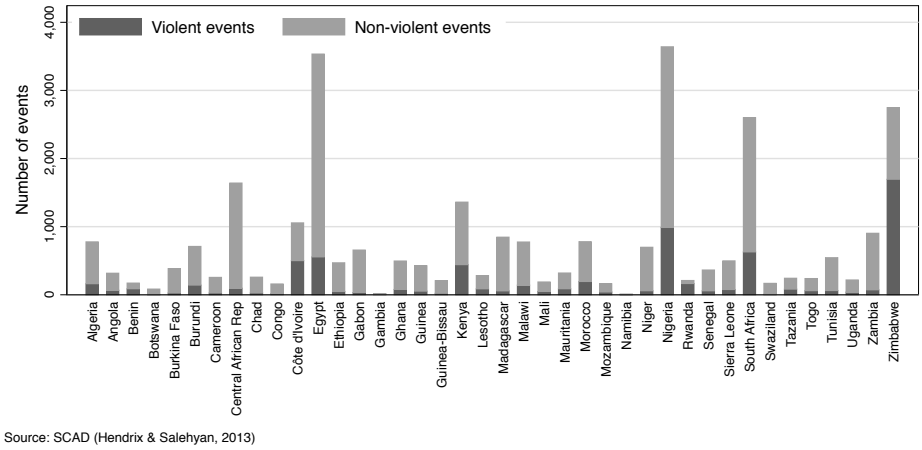

Figure 3.2: Social unrest events by country (1990–2012)

immediate connections between food price changes and the occurrence of unrest events. Geographic aggregation to the national level allows for the use of fixed effects to control for country level characteristics that are likely to affect food prices and unrest, such as natural endowments of arable land and weather conditions; internal transportation and food storage infrastructures; access to external markets; and national trade and agricultural policies, such as tariffs, export controls, and subsidies.

3.4.1 The dependent variable: Urban socio-political unrest

The dependent variable is the occurrence of urban socio-political unrest, broadly defined, and is derived from the Social Conflict in Africa Database (SCAD) developed by Hendrix and Salehyan (2013). SCAD includes data on over 10,300 occurrences of demonstrations, protests, strikes, riots, coups, and communal con-

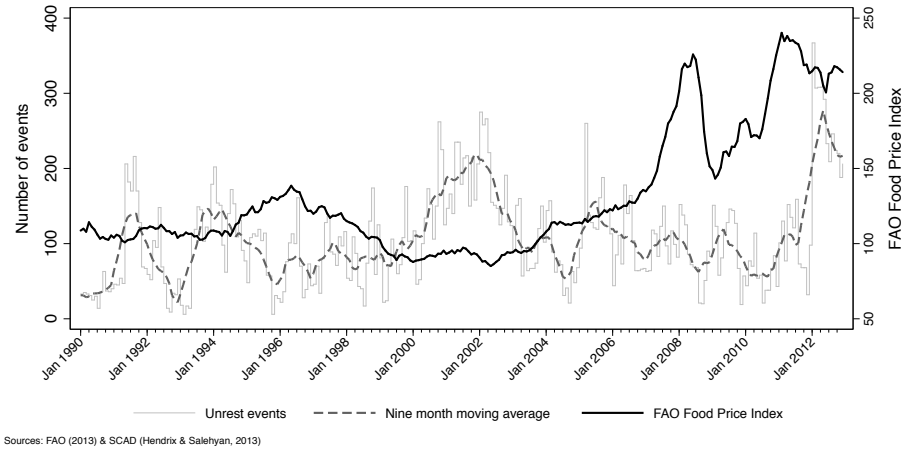

Figure 3.3: Social unrest events and international food commodity prices

flicts in 48 African countries[4] between 1990 and 2012. These events are compiled from Associated Press and Agence France Presse news reports and are coded for event type[5] actors involved and targeted, motivating issue(s), and location type. Only events occurring in urban areas are included in the analysis.[6] Figure 3.2 shows the distribution of events by country and Figure 3.3 shows the distribution of events over time.[7] I recode the SCAD data into a binary variable for the occurrence of

[4]African countries with a population of less than one million – Cape Verde, Comoros, Djibouti, Equatorial Guinea, São Tomé and Príncipe, and Seychelles – are excluded from SCAD.

[5]SCAD event classifications: (1) organized demonstrations; (2) spontaneous demonstrations; (3) organized violent riots; (4) spontaneous violent riots; (5) general strikes; (6) limited strikes; (7) pro-government violence (repression); (8) anti-government violence; (9) extra-government violence; (10) intra-government violence.

[6]SCAD location classifications: (1) Capital city; (2) Other major urban area (population greater than 100,000); (3) Rural (including small towns, villages with population less than 100,000); (4) Multiple urban areas; (5) Multiple rural areas; (6) Province/region listed, exact location unknown; (7) Nationwide. Effects several cities and rural areas. Events coded 1, 2, 4, and 7 are included in the analysis.

[7]Bivariate Prais-Winsten regression with the moving average of SCAD events as the dependent variable results in a coefficient for the FAO Food Price Index of 0.140 with a standard error of

any event unrest in an urban area within a given country and given month because measuring the intensity of unrest is subjective and using event counts relies on distinguishing between events that may be related.

3.4.2 The independent variable: Domestic food price shocks

National food price indices are obtained from the International Labor Organization (ILO) for 47 countries between 1976 and 2012 (the panel is not complete across all years and countries) (ILO, 2013). These data are collected for a basket of relevant foodstuffs and are reported to the ILO by each country.[8] Because countries exhibit varying degrees of volatility in monthly food price changes (See Figure A.6 for country-specific histograms), the data are operationalized as the percentage change from the previous month and standardized by country.[9] This operationalization: (1) captures the immediate economic pressure felt by consumers of drastic short-term changes; (2) enables valid comparison of food price changes across countries that use indices based on different foodstuffs and different currencies; (3) inherently controls for different volatility in food prices across countries; and (4) minimizes any inherent autocorrelation bias.

0.113, which does not support the hypothesis of a statistically significant correlation between the total SCAD events and the FAO Food Price Index. Prais-Winsten regression is used to minimize autocorrelation bias.

[8] In the case of overlapping indices (Madagascar, Namibia, Sierra Leone, Swaziland, and Zambia), the most complete index is chosen. For Tanzania, mainland Tanganyika index is used and the index for Zanzibar is excluded.

[9] Long-term (1990–2011) mean of monthly change for a given country divided by the long-term standard deviation.

3.4.3 The instrumental variables

A successful instrument must satisfy three assumptions: (1) it must not be affected by either the independent or dependent variable – *exogeneity*; (2) it must be associated with changes in the independent variable – *relevance*; and (3) it must not lead to changes in the dependent variable, except indirectly through the independent variable – *exclusivity* (Cameron and Trivedi, 2010, 210).

International food commodity prices. The first instrument captures monthly changes in international commodity prices and each country's vulnerability to such changes, and thus theoretically satisfying the above criteria. Firstly, it is exogenous because African countries are not significant exporters of grain so local production does not impact international prices.[10] Secondly, changes in world prices of a particular commodity are relevant because they are likely to be reflected in domestic food prices but only by a fraction of the commodity price change and depending on the extent to which the country is reliant upon imports of that commodity as well as currency exchange rates (Dawe, 2008; Ferrucci et al., 2010). Thirdly, any real economic pressure felt by urban consumers resulting from international commodity prices should be through domestic food prices, thereby satisfying the exclusivity requirement. Although commodity price increases could affect unrest through the elite capture mechanism, this is highly unlikely since African countries do not export significant quantities of grains.

[10] According to the USDA, for market-year 2012 Egypt accounted for 2.181% of global exports of rice and South Africa accounted for 2.385% of global exports of corn. Total African wheat exports were 0.991% of global total (USDA, 2013).

The variable is operationalized as a composite of monthly changes in the price index as reported by the International Monetary Fund (IMF, 2014) of the three most widely traded grain commodities, wheat, rice, and corn,[11] adjusted for the trade balance, exports less imports as reported by the United States Department of Agriculture (USDA, 2013), of each commodity in each country. A composite is used because import and export data are not available for each commodity for every country. The standardized grain instrument, SGI, is calculated as follows:

$$TBGC_{it} = \frac{1}{n}\sum_{j=1}^{n}\left((EXP_{jit} - IMP_{jit})\left(\frac{P_{jt} - P_{jt-1}}{P_{jt-1}}\right)\right) \tag{3.1}$$

$$SGI_{it} = \frac{TBGC_{it} - \overline{TBGC}}{\sigma_{TBGC}} \tag{3.2}$$

$TBGC_{it}$ is the trade-balance adjusted grain price composite for country i in time t; EXP_{jit} and IMP_{jit} are the exports and imports of commodity j for country i in time t; P_{jt} is the IMF reported monthly average price for commodity j in time t.

Rainfall scarcity. The second instrument, negative deviations in accumulated rainfall over the previous nine months, also satisfies the necessary assumptions. Firstly, rainfall is exogenous to the system since rainfall is unaffected by food prices or unrest. Secondly, it is relevant because rainfall anomalies significantly impact domestic food prices. Late season or insufficient rainfall leads to poor harvests, lower supplies of food stuffs, and higher prices (Brown et al., 2006; Latiri et al., 2010; Tadesse and Shively, 2009).

[11] Specifically: Wheat No.1 Hard Red Winter ordinary protein FOB Gulf of Mexico price; Rice 5% broken milled white rice Thailand nominal price; and Maize (corn) U.S. No.2 Yellow FOB Gulf of Mexico U.S. price.

Although the third assumption, exclusivity, is admittedly more questionable, I argue that in the short-term, a single month, the sole causal pathway from rainfall scarcity to urban unrest is through food prices. Although space does not permit a thorough discussion of the rainfall / conflict literature, it is increasingly clear that there is likely some correlation between long-term rainfall deviations and conflict (Levy et al., 2005; Hendrix and Glaser, 2007; Hendrix and Salehyan, 2012; Raleigh and Kniveton, 2012). The causal mechanisms, however, remain unclear and different mechanisms have been proposed for both rainfall abundance and rainfall scarcity, i.e. drought.

Rainfall abundance has the potential to affect conflict through several causal mechanisms. Above-average rainfall can be beneficial for crops and livestock and lead to increased rent-seeking behavior (Raleigh and Kniveton, 2012; Meier et al., 2007). Climatological natural disasters may decrease economic growth and lead to conflict (Bergholt and Lujala, 2012). In the short-term, extreme rainfall can cause floods, which may destroy infrastructure, displace populations and lead to conflict when migrant groups can come into conflict with local populations (Reuveny, 2007). Because of this, I use separate variables for negative and positive deviations in expected rainfall and limit the instrument to negative deviations, i.e. rainfall scarcity.

Several theories have been proposed for the connection between rainfall scarcity and conflict. The resource scarcity theory postulates that in times of scarce rainfall, conflict will intensify as conflicting groups compete for dwindling resources (Raleigh and Kniveton, 2012; Fjelde and von Uexkull, 2012). Other studies

have found little support for the proposition that drought increases the onset of civil war (Theisen et al., 2011). Building on a body of literature that suggests that economic growth is connected with civil war (Collier and Hoeffler, 2004; Fearon and Laitin, 2003), Miguel et al. (2004) found that reductions in annual rainfall decreased agricultural productivity and economic growth, which, in turn, increased the risk of civil war. Ciccone (2011), however, questioned the finding and mechanism. In sum, there seems to be a connection between long-term rainfall scarcity and communal conflict but the connection between drought and civil war is questionable and theoretical causal mechanisms have yet to be robustly substantiated. Nevertheless, none of these mechanisms are relevant here because: (1) any potential impacts on pastoralist or communal conflict is excluded by limiting the dependent variable to urban unrest, and (2) any potential long-term effects of drought are minimized by the focus on short-term impacts on socio-political unrest. This leaves the changes in food prices as the sole causal mechanism linking short-term rainfall scarcity with socio-political unrest in urban areas.

The instrument is calculated using data from the Global Precipitation and Climatology Centre (GPCC) (Schneider et al., 2013). Monthly rain gauge data at a resolution of 0.5 degrees is aggregated to monthly totals over each country and transformed into a moving standardized cumulative precipitation, $MSCP$. This is defined as the cumulative rainfall of n months (current month plus the previous $n-1$ months) minus the moving average of the analogous period over the previous 20 years divided by the moving standard deviation (SD) of the previous 20 years.

The formula is written as follows:

$$CP_{it}^{n} = \sum_{k=0}^{n} P_{it-k} \tag{3.3}$$

$$MSCP_{it}^{n} = \frac{CP_{it}^{n} - \frac{1}{20}\sum_{z=1}^{20} CP_{it_{y-z}}}{\sigma_{CP_{it}}} \tag{3.4}$$

P is monthly precipitation and CP is the cumulative precipitation over the previous n months. This differs from the more widely-used Standard Precipitation Index (SPI) (Guttman, 1999) because: (1) rainfall is aggregated to the country-level; and (2) the base period for the long-term mean and SD is the 20 years prior to the year of interest rather the total period. The latter modification inherently controls for the expectations of the population, particularly farmers, regarding rainfall (Sovey and Green, 2011; Koubi et al., 2012). Admittedly, this does not address the potential cross-border effects of rainfall anomalies in one country on the agricultural conditions of downstream countries, but this is minimal in Africa where irrigation infrastructure is lacking and agriculture is almost entirely rainfed. Intra-country differences in rainfall are also not captured, but food prices in urban centers are theoretically the sum of changes in local conditions across the country. Lastly, this single $MSCP$ variable is bifurcated into two separate variables, $dryMSCP$ and $wetMSCP$, which are the absolute values of negative and positive deviations respectively. $DryMSCP$ is used as the instrument for changes in food prices. $WetMSCP$ is not used as the instrument but it is, nonetheless, kept in the model because of the potential for above average rainfall to boost food supply and reduce prices as well as its potential to affect unrest through alternative mechanisms.

Table 3.1: Summary statistics of main sample

	Mean	SD	Min	Max
Occurrence of unrest	0.278	0.448	0.000	1.000
Standardized change in domestic food price index	0.007	1.003	-10.724	15.117
Trade balance adjusted grain price instrument	0.011	1.012	-19.504	21.792
Nine month dry MSCP	0.442	0.655	0.000	7.400
Six month wet MSCP	0.482	0.814	0.000	9.912
Monthly change in international wheat price	0.005	0.065	-0.197	0.258
Monthly change in international rice price	0.005	0.069	-0.245	0.509
Monthly change in international corn price	0.006	0.059	-0.223	0.246
National elections	0.032	0.175	0.000	1.000
Polity IV democracy	2.840	3.092	0.000	9.000
Polity IV autocracy	2.686	2.610	0.000	10.000
Occurence of armed conflict	0.167	0.373	0.000	1.000
Population (millions)	18.567	24.793	0.853	170.806
Population growth (monthly %)	0.204	0.104	-1.740	2.804
Urban population (% of total)	36.106	16.630	5.385	86.447
Youth population (% of total 14 & under)	42.873	4.983	23.184	50.096
GDP per cap (in 000, constant 2005 USD)	1.184	1.538	0.122	7.725
Life expectancy at birth total (years)	54.053	7.776	26.764	75.100
Infant mortality rate (per 1,000 births)	76.262	28.874	13.600	155.300
Observations	10,102			

Because the effect of rainfall on crop production is inherently a product of timing and total rainfall during the growing season, accumulation periods of three, six, nine, 12, 15 and 18 months were tested. $DryMSCP$ over nine months had the most pronounced negative effect while $wetMSCP$ over six months had the most pronounced positive effect. Additionally, both variables are lagged by one month to account for the time it takes precipitation changes to have a noticeable effect on the market.

3.4.4 Control variables

Based on the hypothesis that more unrest will occur in months when national elections take place (Dunning, 2011; Linebarger and Salehyan, 2012), I include a variable for the occurrence of national elections in each country-month (Nunley, 2012). A variable is included for the occurrence of armed civil conflict within a country, taken from the UCDP/PRIO Armed Conflict Datasest (Themnér and Wallensteen, 2013). Other control variables include: the relative institutional democracy or autocracy, separately, of countries from the Polity IV Project (Marshall and Jaggers, 2011); size of youth population (ages 0-14) because of an association between youth bulges and the likelihood of conflict (Urdal, 2006); urban population as a percentage of total population; GDP per capita because the relative wealth or poverty of a population may be associated with the likelihood of conflict in a given country; and indicators of life expectancy at birth and infant mortality rates as proxies for the relative poverty or development of countries (WDI, 2015).

Finally, indicator variables are included for individual calendar months and individual years. The former is intended to control for the seasonality of crop production and rainfall expectations for the susceptibility for unrest during different times of the year. For example, Islamic societies may be less inclined to protest during Ramadan than during other months. Year indicators should capture changes in global economic conditions and political changes.

The compilation of all these data resulted in a complete dataset of the primary variables of interest for 10,080 country-months over 40 African countries for

the 275 months between February 1990 and December 2012. Table 3.1 presents the summary statistics of the final sample. (Figure A.7 shows sample coverage.)

3.5 Estimation and results

Because the dependent variable is a binary for the occurrence of unrest, I choose to use a two-stage endogenous probit model that restricts the dependent variable to values, interpreted as the probability of unrest, between zero and one. Although somewhat biased in the coefficients because the dependent variable is modeled incorrectly as a linear function, a two-stage fixed effects model is also estimated to evaluate the instrumental variables and check robustness to model specification.

Regardless of the second stage estimation, the first stage model predicts the standardized percentage change in consumer food prices, FP_{it}, using the instrumental variables and all other covariates included the second stage and follows the general form:

$$FP_{it} = \beta_0 + \beta_1 SGI_{it} + \beta_2 dryMSCP_{it-1} + \beta_3 wetMSCP_{it-1} + \beta_4 SU_{it-1} + \sum \beta X_{it} + \sum \beta M + \sum \beta Y + \sum \beta C + u_{it} \quad (3.5)$$

SGI_{it} is the standardized grain price instrument in month t; $MSCP_{it}$ (wet and dry) are the rainfall anomalies in country i and month $t-1$; SU_{it-1} is a binary variable for the occurrence of social unrest in country i in month $t-1$; X is a vector of time varying control variables; M is a vector of binary variables for each calendar

Table 3.2: First-stage model results

	(1)	(2)	(3)	(4)	(5)
Trade balance adjusted	0.026**	0.027**	0.027**	0.030**	0.029**
grain price instrument	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Nine month dry MSCP	0.066*	0.076**	0.062**	0.066**	0.057*
(t–1)	(0.016)	(0.003)	(0.007)	(0.006)	(0.012)
Occurrence of unrest			0.081*	0.073*	0.073*
(t–1)			(0.017)	(0.028)	(0.029)
Six month wet MSCP			-0.030+	-0.031+	-0.030+
(t–1)			(0.087)	(0.072)	(0.082)
National elections				0.036	0.036
				(0.509)	(0.510)
Polity IV democracy				-0.004	-0.004
				(0.637)	(0.643)
Polity IV autocracy				0.017	0.017
				(0.145)	(0.144)
Occurence of armed				0.013	0.013
conflict				(0.781)	(0.792)
Population (millions)				-0.002	-0.002
				(0.613)	(0.601)
Population growth				0.013	0.014
(monthly %)				(0.889)	(0.868)
Urban population (% of				-0.010	-0.010
total)				(0.514)	(0.524)
Youth population (% of				-0.016	-0.016
total 14 & under)				(0.366)	(0.369)
GDP per cap (in 000,				-0.159	-0.156
constant 2005 USD)				(0.204)	(0.211)
Life expectancy at birth				-0.007	-0.007
total (years)				(0.576)	(0.592)
Infant mortality rate				-0.001	-0.001
(per 1,000 births)				(0.692)	(0.690)
Trade bal adj grain					0.005
price instrument (t+1)					(0.474)
9 month dry MSCP (t+1)					0.013
					(0.658)
Observations	10,583	10,583	10,560	10,102	10,096
Adjusted R^2	0.002	0.032	0.033	0.034	0.034

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; Cluster robust standard errors in parentheses; Model 1 is a pooled OLS model; Models 2, 3, and 4 include country, year, and calendar month fixed effects.

month; Y is a vector of binary variables for each year; and C is a vector of country fixed effects.

The first stage results are presented in Table 3.2. Model 1 is the most parsimonious, model 2 adds country, year, and calendar month indicator variables, and models 3 and 4 include additional covariates. Regardless of the specification, the instrumental variables are significantly different from zero and in the expected direction. $WetMSCP$ is also significant (at $\alpha = 0.1$) and in the expected direction, indicating that above average rainfall brings food prices down in the near term. Occurrence of unrest in month $t - 1$ is also significant and positive, which is evidence of the endogenous relationship between food prices and unrest. Following the example of a 'false experiment' in Miguel et al. (2004), the instrumental variables in month $t + 1$ are included in Model 5 and are found to be near zero, which confirms that they are orthogonal to food price changes in month t.

Next, the two-stage fixed effects results are presented in Table 3.3. Model 1 is the fixed effects models without instrumental variables and is presented for comparison. The coefficient of the standardized change in food prices is near zero. In contrast, the coefficients for the same variable, although potentially biased, are significant (at $\alpha = 0.1$ or lower), in the expected direction, and stable in the instrumental variable (IV) estimations. An increase in domestic food prices of one SD above the long-term mean increases the probability of unrest between 14.3 and 17.8%.

Table 3.3: Fixed effects results

	(1)	(2)	(3)	(4)
Standardized change in	0.007	0.145*	0.182	0.167*
domestic food price index	(0.117)	(0.011)	(0.103)	(0.019)
Trade balance adjusted	0.004*		-0.001	
grain price instrument	(0.022)		(0.777)	
Nine month dry MSCP	0.010	0.002		
(t–1)	(0.151)	(0.767)		
Six month wet MSCP	0.011*	0.016**	0.017**	0.016**
(t–1)	(0.013)	(0.000)	(0.006)	(0.001)
Unreported covariates	yes	yes	yes	yes
Observations	10,102	10,102	10,102	10,102
Adjusted R^2	0.100	-0.035	-0.105	-0.076
Log psuedolikelihood	-4559	-5180	-5511	-5377
Anderson cannon corr LR		9.445	14.938	23.934
Anderson LR X^2 p-value		0.002	0.000	0.000
Hansen J		0.000	0.000	0.084
Hansen J X^2 p-value				0.772
Cragg-Donald F		9.435	14.927	11.963

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; Cluster robust standard errors in parentheses; All models include year, and calendar month fixed effects; Unreported covariates: national elections; Polity IV democracy and autocracy; occurrence of armed conflict; total population; population growth; youth population; urban population; GDP per capita; life expectancy; and infant mortality.

These models are presented primarily for evaluation of the instrumental variables. The Anderson canonical correlation likelihood ratio is an underidentification test with a null hypothesis that the model is not identified, i.e. that the instruments are not relevant. The p-values indicate that this null can be rejected in all cases and when combined with the significance findings of the instruments in the first stage provide evidence of relevance. The Hansen J statistic is a test of overidentification and is only applicable when using both instruments. The null hypothesis is that the model is not overidentified and this cannot be rejected. The Cragg-Donald F statistic tests weak identification when compared to critical values established by Stock and Yogo (2005) for the maximum IV estimator bias. In model 3 the Cragg-Donald F, 19.863, exceeds the critical value at 10%, 16.38, which provides evidence that the instrument, $dryMSCP$, is not an overly weak instrument. In model 2, however, the Cragg-Donald F, 9.453, exceeds the critical value at 15%, 8.96, but not 10%, 16.38, indicating that the standardized grain commodity instrument, while not weak is not as robust as possible. Similarly, when both instruments are used the Cragg-Donald F, 14.445, exceeds the 15% critical value, 11.59, but not the 10% critical values, which indicates that one cannot rule out the potential for limited bias in the IV estimation. Exogeneity tests of the instruments are included in the models presented in Table 3.4. The null hypothesis that the instruments are not exogenous can be rejected at the $\alpha = 0.05$ level in all models. There is some doubt about the exogeneity of $dryMSCP$ when fixed effects are not included (see Table A.3) but the inclusion of fixed effects improves the efficiency of the estimation and determination of exogeneity. In sum, the standardized grain commodity

instrument is exogenous but weaker than $dryMSCP$ and $dryMSCP$ is a stronger instrument but one cannot be as confident in its exogeneity. When used together, the instruments perform well and do not lead to significantly different estimation results, which provides good support for the substantive findings.

For the reasons discussed above, a second stage probit model provides the most reliable coefficient estimates of the probability of the binary outcome, the occurrence of unrest. These models follow the general form:

$$\Pr(SU) = \Phi\big(\gamma_0 + \gamma_1 \widehat{FP_{it}} + \gamma_2 wetMSCP_{it-1} + \gamma_3 SU_{it-1} + \sum \gamma X_{it} + \sum \gamma M + \sum \gamma Y + \sum \gamma C + (u_{it} + v_{it})\big) \quad (3.6)$$

$\Pr(SU)$ is the probability of social unrest; Φ is defined as the normal cumulative distribution function; FP_{it-1} is the predicted percentage change in the food price index from the first stage equation and all others variables are defined as above in the first stage equation. When used as the instrumental variable the grain instrument and the $dryMSCP$ are excluded from the second-stage equation. Each is, however, included in the first stage when the alternative is the sole instrumental variable. The *ivprobit* routine is used to estimate the equation (Newey, 1987; Cameron and Trivedi, 2010; StataCorp, 2013).

The results are presented in Table 3.4. Again model (1) is a single stage probit model without instrumental variables and is presented for comparison. The estimates presented show that changes in domestic food prices are not statistically significantly different from zero. The grain commodity price instrument and $dryMSCP$ are both statistically significant but very small in magnitude.

Table 3.4: Endogenous probit model results

	(1)	(2)	(3)	(4)
Occurrence of unrest				
Standardized change in	0.025	0.484**	0.594*	0.558**
domestic food price index	(0.124)	(0.009)	(0.010)	(0.001)
Trade balance adjusted	0.016*		-0.004	
grain price instrument	(0.039)		(0.710)	
Nine month dry MSCP (t–1)	0.046+	0.010		
	(0.064)	(0.717)		
Occurrence of unrest (t–1)	0.716**	0.604**	0.549**	0.569**
	(0.000)	(0.000)	(0.000)	(0.000)
Six month wet MSCP (t–1)	0.046**	0.055**	0.056**	0.055**
	(0.006)	(0.000)	(0.000)	(0.000)
National elections	0.589**	0.508**	0.466**	0.481**
	(0.000)	(0.000)	(0.001)	(0.000)
Polity IV democracy	-0.068**	-0.059**	-0.054*	-0.056**
	(0.001)	(0.001)	(0.013)	(0.005)
Polity IV autocracy	-0.052*	-0.054**	-0.053**	-0.053**
	(0.020)	(0.007)	(0.006)	(0.006)
Occurence of armed conflict	-0.047	-0.048	-0.046	-0.047
	(0.574)	(0.535)	(0.534)	(0.531)
Population (millions)	0.012	0.012	0.011	0.011
	(0.290)	(0.255)	(0.270)	(0.261)
Population growth (monthly	-0.137	-0.128	-0.120	-0.124
%)	(0.684)	(0.645)	(0.632)	(0.634)
Urban population (% of	-0.015	-0.009	-0.007	-0.007
total)	(0.504)	(0.693)	(0.759)	(0.735)
Youth population (% of	-0.032	-0.021	-0.017	-0.018
total 14 & under)	(0.408)	(0.467)	(0.567)	(0.531)
GDP per cap (in 000,	-0.155	-0.065	-0.037	-0.047
constant 2005 USD)	(0.280)	(0.645)	(0.777)	(0.717)
Life expectancy at birth	-0.015	-0.010	-0.009	-0.009
total (years)	(0.438)	(0.512)	(0.559)	(0.538)
Infant mortality rate (per	-0.005	-0.004	-0.004	-0.004
1,000 births)	(0.407)	(0.433)	(0.466)	(0.452)
Observations	10,102	10,102	10,102	10,102
Log psuedolikelihood	-4,527	-18,694	-18,694	-18,694
Positive predictive value	69.91	62.19	58.63	60.03
Negative predictive value	81.72	81.31	81.11	81.21
Correctly classified	79.54	77.29	76.05	76.57
Wald X^2	.	4.36e+10	3221	5097
X^2 p-value	.	0.000	0.000	0.000
Wald X^2 test of exogeneity		4.391	3.597	6.164
Exogeneity X^2 p-value		0.036	0.058	0.013

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; Cluster robust standard errors in parentheses; All models include year, and calendar month fixed effects.

Models (2), (3), and (4) better isolate the causal effect of that regressor on the dependent variable and provide the most unbiased estimates for the effect of changes in domestic food prices on the probability of unrest. The coefficients of a probit model are not as easily converted into odds ratios as the coefficients of a logit model and the marginal effects differ depending on the baseline variables. They are, however, comparable to other coefficients in the model and across models. The estimates reveal that a monthly increase in domestic food prices of one SD above the long-term mean increase has a positive effect of roughly the same magnitude across models. (Tables A.1, A.2, A.3, and A.4 presents additional specifications of these models.) These estimates are not statistically different from each other and provide evidence of the true effect of food price increases on the probability of unrest. Moreover, the coefficient for $dryMSCP$ is not statistically different from zero in model (2), which provides evidence that the sole mechanism connecting rainfall scarcity and urban unrest is through its effect on domestic food prices as captured in the first stage estimation. Similarly, the coefficient for the standardized grain commodity instrument is not statistically different from zero in model (3), providing similar evidence about the exclusivity of the causal mechanism. Additionally, rainfall abundance, measured by $wetMSCP$, increases the probability of unrest despite lowering food prices as shown in Table 3.2, indicating that another as yet unidentified causal mechanism connects the two.[12]

[12]One possible explanation is that an over-abundance of rainfall leads to flooding in urban areas, which can displace populations and lead to conflict over relief supplies.

Model (4) of Table 3.4 is likely the most reliable because it uses both instruments and produces the most efficient parameter estimate for standardized change in domestic food prices. Again, the coefficients of the probit models are not easily interpreted. Nonetheless, the estimates reveal that, all else equal, the effect of a one SD increase in domestic food prices has a positive effect comparable in magnitude to the occurrence of unrest in the previous month and a larger effect than the occurrence of national elections. Accumulated rainfall in the previous six months of one SD above the expected mean leads to a small but statistically significant increase in the probability of unrest. Although outside the scope of this dissertation, the probability of unrest are lower with higher levels of both democracy and higher levels of autocracy, which could be a subject of future research into the motivations and opportunities for mobilization of unrest activities.

Understanding the magnitude of these effects is complicated by the fact that changes in probability are dependent on the baseline probability. Figure 3.4 shows the country specific difference between the predicted probability of unrest given a monthly increase in food prices equivalent to the long-term mean, versus an increase of one SD over the long-term mean, holding all other variables at their means. (The country specific long-term means and SDs as well as the predicted probabilities and confidence intervals are given in Table A.9.) Increases of one SD or more occur in 12% of the months in the sample. The highest probabilities of unrest given an increase of one SD are in Nigeria and South Africa, 0.942 and 0.904 respectively. But these countries also have the highest baseline probabilities of unrest, 0.844 in Nigeria and 0.772 in South Africa. The largest increases in

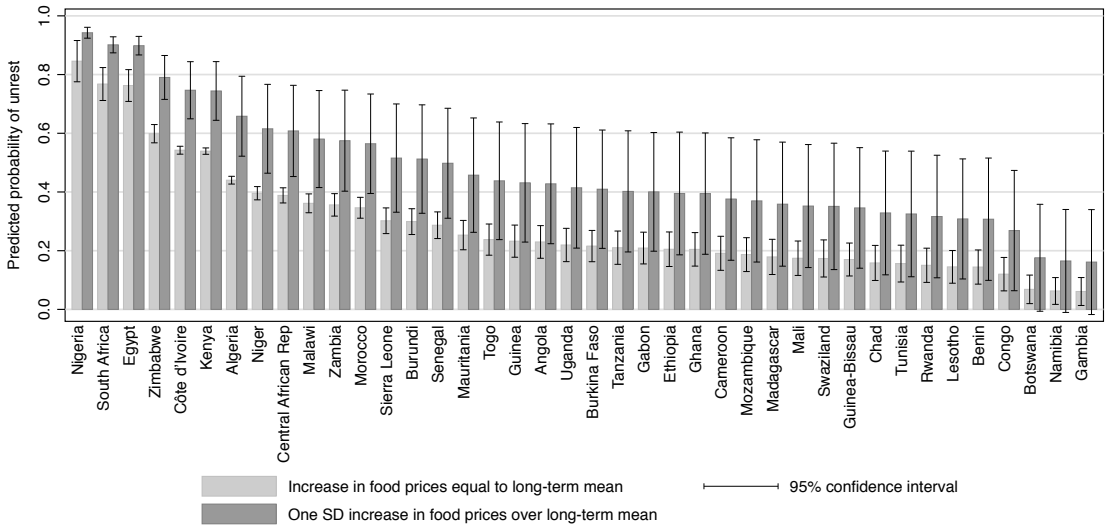

Figure 3.4: Predicted probabilities of unrest by country

probabilities occur in Niger, Central African Republic, Malawi, Zambia, Morocco, and Algeria.

3.5.1 Different types of unrest

The question remains as to what types of unrest are more likely to be triggered by higher food prices. Table 3.5 presents the effect of changes in food prices on categories of different types of unrest as coded by SCAD. (See Table A.5 for full model results.) These models provide some evidence that rising food prices are most likely to lead to violent events, riots, and spontaneous events. The effect is the strongest when limited to spontaneous violent riots (SCAD event code 8). The effect on organized events is not significantly different from zero and the effect on strikes, which generally require considerable organization, is close to zero. Taken

Table 3.5: Probit model results for different unrest outcomes

Type of unrest	Country-months with unrest type	Effect of a one SD spike in food price price index
Violent unrest	1,202	0.459*
Riots (spontaneous and organized)	720	0.626*
Spontaneous events (demonstrations and riots)	1,551	0.724**
Spontaneous violent riots	648	0.623*
Demonstrations (spontaneous and organized)	1,043	0.582*
Spontaneous demonstrations	1,551	0.483*
Organized events (demonstrations and riots)	718	0.091
Strikes	985	0.046

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$.

together these results suggest that increases in food prices increase popular propensity to engage in disruptive behavior but without time to properly organize. Planned events, on the other hand, might proceed irrespective of short-term changes in food prices.

3.5.2 Robustness checks

A number of additional models confirm the robustness of the main finding to various model specifications and subsamples. First, two models, one with no fixed effects and no control variables and one with control variables but no fixed effects, were estimated to ensure against overspecification. Next, Egypt, South Africa, and Nigeria were excluded in order to ensure that they were not biasing the results from either the fact that Egypt and South Africa both have relatively developed irrigation infrastructure or that South Africa and Nigeria also account for a disproportionate amount of unrest events in SCAD. A model was run on a

subsample for post-1997 in order to eliminate any potential reporting bias due to an increase in the events captured by SCAD after the use of the Internet became more widespread by media outlets. Next, I tested whether the results are driven by the dramatic rise in international prices in 2007–08 and 2010 by excluding 2007 and later from the analysis. I also used 6 months and 12 months of accumulated rainfall as the basis of the MSCP transformation. Finally, I used the Global Precipitation and Climatology Project (GPCP) (Adler et al., 2003) and a transformation more consistent with the accepted Standardized Precipitation Index[13] as the basis of the rainfall instrument. None of these robustness checks lead to an estimate of the main effect of rising prices that is substantially different from the estimate of the main model. (For full model results see Tables A.7 and A.8.)

Further robustness checks could be conducted using alternative datasets for the dependent variable. Initial analysis using the Armed Conflict Location and Event Data (ACLED) (Raleigh et al., 2010), has not yielded similar results, which might indicate reporting bias in one or both datasets. ACLED tracks riots and protests since 1997 using a wider set of source material, but the events are not as easily disaggregated by type or location in an urban area. Using the Global Database of Events, Language and Tone (GDELT) (Leetaru and Schrodt, 2013), I have begun to explore the relationship in other regions of the world but this requires a different specification of the grain instrument due to different relationships of local economies with global food commodity markets. The UCDP Georeferenced

[13]The full coverage, 1979 to 2008, was used as the base period for the mean and SD.

Event Data (GED) (Sundberg and Melander, 2013) tracks armed conflict, including low-level conflict, which might make it possible to explore whether rising food prices increase the likelihood of other types of conflict.

3.6 Conclusion

These results provide convincing evidence of a causal relationship between changes in domestic food prices and the probability of unrest. Furthermore, they provide evidence that in the aggregate populations respond to the short-term economic pressure of rising food prices regardless of the cause of the increase. Unrest is more likely during times of larger food price spikes regardless of other potential drivers of unrest.

These findings have important policy implications. Price stability in local markets is important to maintaining political and social stability. Two important points to remember when considering policy prescriptions are: (1) price spikes have destabilizing effects regardless of the source; and (2) maintaining consistently low prices is less important than preventing sudden price shocks. Controlling price fluctuations in international markets is important at a macro level but will have little benefit if local markets are still vulnerable to local conditions. Uncertainty around climate change and changing weather patterns must be considered here but from a different perspective than it is usually considered in adaptation circles. Increasing overall long-term production through drought resistant crops or farming techniques is less important than ensuring availability and access in times of poor conditions. This means improving irrigation infrastructure to buffer against changing rainfall

patterns, transportation networks to deliver food regionally, and storage capacity to allow for warehousing of food.

This finding does not preclude that fundamental economic or political grievances may be the real drivers of the unrest that is triggered by spikes in food prices. This chapter cannot answer the theoretical question of how and why people choose particular methods, venues, and targets, which may, in fact, be determined by the underlying grievances driving unrest that is merely triggered by rising food prices. More research is needed to answer these questions and is likely to be context specific and require in-depth case studies.

Like the bread riots of the 18th and 19th centuries and the austerity protests of the 1970s and 1980s, episodes of unrest and political instability generally involve many issues and contributing factors. The list of possible drivers of unrest is long: perceived lack of justice and equity in global food and economic systems; lack of political freedoms and avenues to voice grievances; poor governance and lack of government accountability; general high levels of poverty and the lack of public service delivery; poor workplace conditions and labor disputes. All of these issues are intimately connected with access to food and many of them will be considered at length the remaining portions of this dissertation. But rising food prices and food insecurity is a major driver of grievance and must not be ignored or considered only when protesters are waving loaves of bread.

In sum, this chapter has presented evidence that short-term spikes in food prices lead to increases in socio-political unrest. The question remains, however, about how food prices can lead to unrest that are not directly related to food. The

remaining chapters of the dissertation focus on protest in South Africa. The questions to be addressed are what factors determine individual participation in protest activities and how food security and prices contribute to such participation. Before addressing these questions, however, it is necessary to understand the history and dynamics of social movements and protest in the particular context of South Africa.

Chapter 4

From anti-apartheid movement to service delivery protest: A case study of protest in South Africa

4.1 Introduction

In this chapter, I first review the history of the anti-apartheid movement that provides a backdrop for the context of protest in South Africa today. I then provide a description of the evolution of post-apartheid grassroots movements that were the predecessors of the service delivery protests and a narrative of the emergence of widespread protests that have plagued South Africa since 2004. Labeled service delivery protests (SDPs) this unrest has cost the South African economy considerable resources and strained the ability of the police service to maintain order.[1]

In the last section of this chapter, I present a brief analysis of the outbreak of SDPs through the lenses of some of the social movement theories presented in chapter 2: political opportunity theory, resource mobilization theory, and social identity theory. Finally, I argue that although these analytical frameworks can help one understand the conditions in South Africa that permitted the emergence of the SDPs, they are better suited to understand individual campaigns within the wider outbreak. They cannot adequately explain individual participation in protests, largely because

[1] In a speech to Parliament in May 2015, the Minister of Police said that over 14,000 incidents in the previous financial year had stretched police resources to the limit (Williams, 2015).

the spread of SDPs is not a cohesive social movement but consists of related but separate campaigns and events in different urban centers with different leaders and different participants.

4.2 A brief history of the anti-apartheid movement

It is an oversimplification to claim that street protests brought down the National Party regime and the system of apartheid in South Africa. The anti-apartheid movement, however, has a long history of political protests that culminated with the dismantling of apartheid in the early 1990s. The struggle against apartheid, while seemingly disorganized and chaotic at times, was a large-scale, long-term movement led by a handful of organizations with a single and well-defined goal.

The democratic elections of 1994 marked the culmination of a long struggle of resistance for the ANC that began 82 years earlier when it was founded in Bloemfontein, the capital of the Orange Free State, as the South African Native National Congress (SANNC). The SANNC was created in response to government policies of the newly formed Union of South Africa[2] including the forced removal of Africans from their farms to cities and mines and the institution of pass laws that restricted movement of Africans through government-mandated identification cards (Welsh, 2000).

[2]The Union of South Africa became a nominally self-governing dominion of the United Kingdom by act of the British parliament on 31 May 1910, eight years after the end of the second Boer War. It consisted of the two former British Cape and Natal colonies as well as the formerly independent Boer republics of the Orange Free State and the Transvaal. The independent Republic of South Africa was declared following a referendum in 1961 (Welsh, 2000).

Employment in the South African manufacturing industry increased by 60 percent between 1939 and 1945, in support of the war effort. New factory workers, most of whom were Black Africans, settled in shantytowns and townships on the outskirts of Johannesburg and other urban centers. The appalling living and working conditions created resentment and resulted in a number of protests and strikes. One such strike occurred in in 1946 when 60,000 men organized by the African Mineworkers Union stopped work and demanded higher pay. In the ensuing police response twelve people were shot to death (Welsh, 2000).

In June 1948 the National Party came to power in South African and began instituting apartheid laws, which codified and strengthened existing discriminatory and oppressive policies.[3] In response, the ANC increased its resistance.

In 1952 it initiated the Defiance Campaign that sought to overwhelm the legal system and jails through mass violation of apartheid laws inviting arrest of the violators. The ANC initially eschewed violence but many peaceful demonstrations devolved into violence when confronted by the police. Notably, the Sharpeville Massacre of 21 March 1960 began when a crowd of 5,000 to 7,000 demonstrated outside a police station in Sharpeville, a Johannesburg township. They were protesting against *pass laws* that required all South African resident to carry documents identifying them by race group and thereby limiting where they could legally go.

[3]Key among these laws were the Population Registration Act and the Group Areas Act under which all individuals were categorized as White European Black African, or Coloured, which predetermined their place in society by restricting where they lived, worked, and went to school.

Although it is unclear how the violence started, in the end 69 people were killed when the police fired on the crowd (Welsh, 2000).

In 1961, after a heated internal debate, the ANC leadership decided that armed resistance was necessary because peaceful efforts had failed to bring about change and demonstrations were increasingly met with violence from the police. A militia group, Umkhonto we Sizwe (MK), meaning "Spear of the Nation," was founded under the leadership of Nelson Mandela and Joe Slovo. MK began a program of sabotage and tactical violence against government installations. This escalation of the struggle also led to an increase in violent street protests and in 1964 the government outlawed the ANC and Pan-Africanist Congress (PAC).[4] ANC leaders including Nelson Mandela were arrested and sentenced to life in prison during the Rivonia trial (Welsh, 2000; Mandela, 1995).

The struggle continued despite these setbacks and it became even more violent. Students also became an increasingly important part of the movement led largely by the South African Students Organization (SASO) founded in 1969 by Steve Biko. On 16 June 1976, students from across Soweto, Johannesburg, planned to march and gather at a school in Orland in demonstration against the use of Afrikaans in classrooms. Police attempted to disburse the students, which by some estimates numbered as many as 20,000. They initially used teargas but at some point began shooting killing eleven people. Hector Pieterson, a 13 year-old boy was among the dead, and a photo of his body in his sister's arms became an icon of the

[4]The PAC was another opposition party founded in 1959 by Robert Sobukwe and a often-troubled political ally of the ANC.

movement. The protests continued in the ensuing days and gave rise to other riots across the country and "by the end of February 1977 the official death toll . . . stood at 575 including 75 coloured, two white, two Indian and 496 African people. Many areas were affected including 22 townships in the Transvaal, 16 areas around Cape Town, four townships in Port Elizabeth and nine other towns" (Ndlovu, 2007, 350).

In the 1980s, widespread rebellion and mass protests continued and increased. Eventually diverse groups including students and workers under the leadership of the Congress of South African Trade Unions (COSATU)[5] were able to overcome their differences and coalesce into a strong movement. They marched and *toyi-toyi'd*,[6] under ANC banners, and Nelson Mandela and Oliver Tambo were upheld as leaders of the movement. Emboldened in part by military support from the United States for its proxy war against Cuba and the USSR in Angola, the National Party government continued to respond oppressively. Nonetheless, the anti-apartheid movement gained support from across the globe and became an international movement that put increasing pressure on the South African government through boycotts and divestments (Welsh, 2000; Tilly and Tarrow, 2006; Ndlovu, 2007).

In September of 1989, F.W. de Klerk became the president after a brief power struggle within the National Party brought on by the unexpected health problems and resignation of P.W. Botha. Understanding the need to negotiate a peaceful

[5]COSATU was launched in 1985 after four years of talks as a coalition of 33 unions opposed to apartheid.

[6]The term *toyi-toyi* is a uniquely southern African term that refers to a type of dance involving foot stomping and chanting of slogans used during political protests and labour strikes.

transition away from apartheid, de Klerk lifted the ban on the ANC and released Mandela and many other political prisoners in February 1990.

The next fours years, 1990 to 1994, were a period of transition that was not without difficulty.[7] Many South Africans were fearful of how the ANC would run the government. But the calming presence of Nelson Mandela won out and peaceful elections were held between April 26 and 29, 1994 (Welsh, 2000). Over 19.5 million voters went to the polls representing 86.9% of registered voters and over half the total population of the country of 38.3 million, 36% of which were under the age of 15 (Electoral Commission of South Africa, 2014; WDI, 2015). Nelson Mandela was inaugurated into office on May 10, 1994 and the country was changed forever.

4.3 Social movements in post-apartheid South Africa

In the heady days following the first democratic elections the streets were relatively peaceful, but the calm did not last long. Nelson Mandela stepped down after one term and Thabo Mbeki was elected president in 1999. During his term, new social struggles emerged over a range of issues. Ballard et al. (2005, 616) identify three "overlapping but distinct types of struggle."

First, some were campaigns against a specific government policy. An example was the opposition of COSATU, the largest umbrella labor organization in

[7]The country came closer to self-destruction than perhaps any time prior to 1990 after the assassination of Chris Hani, a leader of the South African Communist Party and a former member of MK, in April of 1993 by a militant right-wing Polish immigrant.

the country, to the government's Growth, Employment and Redistribution (GEAR) strategy, which embraced a trade liberalization strategy to promote economic growth and create employment opportunities, thereby redistributing wealth. Oldfield and Stokke (2004, 7) describe the period immediately following the end of apartheid as one "characterised by a remarkable political liberalisation" during which "the state-led Reconstruction and Development Programme (RDP) was designed, concomitant with other restructuring processes, to rectify socioeconomic differentiation and discrimination." In subsequent years, such state-led transformation programs gave way to other macro-economic policies designed to increase international economic competitiveness and attract private investment in the long-run. In the short term, however, these programs, the largest of which was GEAR, "perpetuated and deepened unemployment, poverty and inequality" (Oldfield and Stokke, 2004, 7).

Egan and Wafer (2004) describe the shift from RDP to GEAR similarly. In an attempt to correct "Apartheid created infrastructure disparities," the Reconstruction and Development Programme (RDP) instituted by the ANC in 1994 included a "relatively progressive set of welfare-oriented policies." These included the extension of electricity and water services through proposed free "lifeline," or basic, tariffs, cross-subsidization from areas with higher rate bases, and a government underwritten National Electricity Fund. Democratization and decentralization were seen as crucial to the success of the RDP, and "local governments were to be responsible for delivery of services, for drawing up programmes to extend service networks, and for engaging local communities in dialogue" (Egan and Wafer, 2004, 5).

With international boycotts and trade restrictions lifted, the demands of joining the highly competitive post-Cold War global market became increasingly more pressing. In 1996 the ANC began shifting economic policy toward the more growth-oriented Growth, Employment and Redistribution (GEAR) policy and away from RDP. To some GEAR was regarded as a "neo-liberal inspired policy package," but the shifts in policy that accompanied GEAR had unequal impact in terms of benefiting the majority of South Africans who continued to poor (Egan and Wafer, 2004, 5).

The COSATU campaign against GEAR emerged out of this policy environment. It was not dissimilar to anti-globalization campaigns in other countries. One distinctive aspect of the South Africa case was that the anti-globalization movement came at the same time as a transition to democracy (Ballard et al., 2005, 620). Indeed, the causal relationship between globalization and the end of apartheid is complicated and endogenous. Increasing global attention as well as the end of the Cold War both contributed to the end of apartheid. The new ANC government was unable to deliver on its promises of economic redistribution and began pursuing what in the eyes of many South Africans, especially those that had felt solidarity with international communist movements, were the same policies of the apartheid regime.

The second type of campaign focused on the government's failure to deliver basic human needs and address socio-economic rights.[8] Ballard et al. cite the

[8]The new Constitution of South Africa 1996 guaranteed a number of previously unrecognized rights to all South African citizens. Section 26 provides:

Landless People's Movement (LPM) and the Treatment Action Campaign (TAC) as examples of such campaigns.

Third, some struggles emerged to resist the local government policies or actions that were perceived to be unjust or oppressive. "The Soweto Electricity Crisis Committee (SECC), the Concerned Citizens Forum (CCF) and the Anti-eviction Campaign (AEC) are all attempts to organize poor and marginalised communities to resist local, provincial and national governments' attempts to cut off electricity and water, and to evict residents" (Ballard et al., 2005, 616). These three campaigns were the organized forerunners to the emergence of widespread and disorganized SDPs that sought to replicate their tactics and, hopefully, their successes. As such they deserve closer attention.

4.3.1 The Soweto Electricity Crisis Committee

In 2001, faced with electricity arrears of 1 to 1.2 billion rand from defaulting electricity customers in Soweto ESKOM, the monopolistic parastatal energy

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(1) Everyone has the right to have access to adequate housing.

(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right.

(3) No one may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. No legislation may permit arbitrary evictions. Section 27 provides:

(1) Everyone has the right to have access to-

(a) health care services, including reproductive health care;

(b) sufficient food and water; and

(c) social security, including, if they are unable to support themselves and their dependents, appropriate social assistance.

(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.

(3) No one may be refused emergency medical treatment.

producer/distributer, made the decision to proceed with an aggressive cost recovery program that involved disconnecting customers in default. The Soweto Electricity Crisis Committee emerged in response to the perceived injustice in disconnecting poor residents, many of whom were pensioners or unemployed, and to alleged corruption on the part of ESKOM employees. The SECC was a loose coalition of Soweto residents that formed informal alliances with COSATU, the SA Municipal Workers Union (SAMWU) and the Anti-Privatisation Forum, a coalition of activists and organizations opposed to iGoli 2002, a World Bank supported plan to turn around the troubled finances of Johannesburg in large part by privatizing many city functions. SECC embarked on a widespread campaign that at one point reconnected electricity to over 3,000 households within six months.

The SECC also launched many protest activities and demonstrations. In April 2002, 87 activists were arrested when they attempted to disconnect the electricity at the home of the mayor of Johannesburg. They staged protests at the World Conference Against Racism in Durban and staged a march from Alexandra township to Sandton in August 2002 to protest the World Summit on Sustainable Development (WSSD), a march that as of 2002 was the largest single protest undertaken in the post-apartheid era. Many of SECC actions and protests were directed at the ANC or opposed to ANC policies. Indeed, the de facto leader, Trevor Ngwane, was a former ANC councilor who was dismissed from his post because of his opposition to iGoli 2002. Still, "most SECC members voted for the ANC in the 2004 General Election as the SECC/APF leadership implicitly acknowledged by not calling explicitly for a stayaway. In contrast to the political and academic backgrounds of

some of the founding members of the SECC, the majority of branch level members are probably less educated. They articulate their concerns as immediate and material, related to their daily lives rather than abstract ideas about privatisation and globalisation" (Egan and Wafer, 2004, 18).

4.3.2 The Concerned Citizens Forum

The Concerned Citizens Forum (CCF) emerged in the early 2000s in eThekwini Municipality (Durban) largely in response to municipal government actions such as evictions from informal settlements and disconnection of households from water or electricity. It was a "loose association of individuals and organisations ... united by what they bring to the CCF: a broad array of shared living experiences, identities, symbols and resources that they draw on (and continually create and exchange) as a source of mobilisation and campaigning" (Dweyer, 2004, 2). Like the SECC, the CCF did not have a formal structure. Rather, it was a network or coalition that employed various tactics, including swapping skills and training plumbers and electricians to illegally reconnect disconnected homes, protesting against the ANC government at the World Conference Against Racism in August 2001, and participating in protest marches outside the WSSD in 2002. Within the CCF there was considerable debate about whether to participate or not in local elections. Dweyer quotes one interviewee, "one day the CCF in one area could be voting and in another area maybe 5 kilometres away this very same CCF was campaigning vigorously against the vote in Bayview" (Dweyer, 2004, 20).

4.3.3 The Western Cape Anti-Eviction Campaign

In Cape Town, the Western Cape Anti-Eviction Campaign (AEC) was formed in February 2001 in response to the city's eviction of families from state-owned flats in two Coloured townships, Valhalla Park and Tafelsig. The campaign quickly evolved to oppose other cost-recovery actions. The Anti-Eviction Campaign employed many of the same tactics as the SECC and CCF, most notably informal reconnections of households that had been disconnected from municipal water and electricity. But in its efforts to resist evictions and repossessions in many areas of the Cape Flats, the AEC was more engaged than the SECC or the CCF with state institutions and private banks, including the Municipality, Provincial Minister of Housing, and Servcon, a parastatal that negotiates between banks and homeowners in arrears on bond payments. This mix of opposition and engagement was the source of considerable tension, especially in neighborhoods with a mix of both formal and informal housing, but yielded positive results in other areas.

These three campaigns, the SECC, the CCF, and the AEC, represent similar movements in the three largest urban areas in South Africa. All three were organized in opposition to local government policies perceived to be unjust and in contradiction to ANC campaign policies and expectations of post-apartheid redistribution of wealth. Indeed, part of the SECCs explicit demands were "free basic supply of electricity and water the ANC had promised during the 2000 municipal elections campaign and a return to the flat-rate monthly pricing system that the community had managed to wrest from the apartheid regime in the 1980s" (Egan and Wafer, 2004, 10). All three of these campaigns employed similar tactics, or

repertoires, including large-scale demonstration marches at high-profile events and illegal reconnections of households to public utilities (Tilly and Tarrow, 2006). This indicates considerable learning between them either as the result of direct communication or of an indirect connection through media reports.

The tactics employed by these campaigns also reveal a genuine tension within the movements between participation in formal political institutions and undermining the official government functions. This tension is also manifested in the internal debates regarding participation in elections and the continued support for the ANC despite opposition to ANC policies and leaders, notably Thabo Mbeki and his shift toward trade liberalization and growth strategies and the privatization of government services.

4.4 The outbreak of service delivery protests

These more organized movements seemingly gave rise to more grassroots and hyper-localized protests. Researchers have identified 2004 as the year that a new protest phenomenon began to emerge (Alexander, 2010; Booysen, 2007; Atkinson, 2007). In July 2004, 3,000 protesters marched through Diepsloot, an informal settlement located on the periphery of Johannesburg with a population of approximately 150,000 at the time. They demanded that their local councilors be dismissed for failure to deliver basic services such as water, sewage, electricity, and rubbish removal (Alexander, 2010). In September, protests erupted in Harrismith, a town in the eastern Free State municipality of Maluti-a-Phofung (population 360,549

in 2001 (Statistics South Africa, 2015)). Alleging inept service delivery, unresponsiveness, corruption (municipal officials requesting cash in exchange for RDP houses), and nepotism, residents demanded the resignation of the councilors and the removal of the town from the larger municipality. One young boy was killed during skirmishes with police when the protests turned violent (Alexander, 2010).

Soon after the protests in Harrismith, protests erupted in the Phumelela towns of Warden, Memel, and Vrede. Atkinson (2007) describes the protest as follows:

> As in Harrismith, tyres were burned, buckets of excrement and rubbish were emptied into the streets, and a night-soil truck was overturned .... Residents accused the local council of poor service delivery, unacceptable living conditions, nepotism, unwarranted salary increase, irregularities in the allocation of tenders and Reconstruction Development Programme (RDP) houses, and weak management which had resulted in failed development projects. The mayor and councilors were shouted down by young people when they tried to address the crowd. Some councilors were briefly held hostage, and were released only on the condition that the Free State Premier, Beatrice Marshoff, would visit the municipality (Atkinson, 2007, 55).

In the same month, similar incidents took place all around the country. In Ekhurhuleni Metropolitan Municipality just east of Johannesburg, residents of Harry Gwala informal settlement protested in the streets of Benoni against poor service delivery. In the North West Province town of Vryburg, residents petrol-bombed the homes of two allegedly corrupt local councilors. In Mitchells Plain, a large Coloured township in the Cape Flats area of Cape Town, residents blocked

roads with barricades of burning tires complaining about the poor quality of RDP houses and evictions for non-payment of rent. In the Mpumalanga town of Delmas, the police fired on street protesters demanding the resignation of the municipal manager over the poor handling of a typhoid outbreak (Alexander, 2010, 55).

Similar events continued in to 2005. Between March and May street protests alleging nepotism, corruption, and poor service delivery took place in all of the following: the Emalenhle township of Secunda in Govan Mbeki Municipality, Mpumalanga; Harding in Umuziwabantu Municipality, KwaZulu-Natal; Uitenhage in Nelson Mandela Municipality, Eastern Cape; the New Brighton, Motherwell and Veeplaas townships of Port Elizabeth in Nelson Mandela Municipality, Eastern Cape. Protestors in some cities began to get attention by barricading major thoroughfares with burning tires, including the residents of King Williams town in Buffalo City Municipality, Eastern Cape who blocked the N2; residents of Kwa Nomzamo near Humansdorp in Kouga Local Municipality, Eastern Cape who blocked the R330; residents of Khayalitsha and Gugulethu in Cape Town that invaded city land and blocked the N2; and residents of Hopetown in Thembelihle Municipality, Northern Cape who blocked the N12 (Alexander, 2010).[9]

A report to the South African parliament in 2005 estimated that 5,085 'legal' protests, that is "protests for which official permission was sought and obtained," and 881 'illegal' protests had occurred in the 12 months between March 2004 to the end of February 2005 (Booysen, 2007, 23). Booysen (2007) estimates that between

[9]See Alexander (2010) for a more thorough discussion of the 2004-05 protests.

1,500 and 2,000 protests occurred in the two-year period from March 2004 to March 2006. Citing data from Visible Policing Unit (VPU) of the South African Police Service and compiled by Natasha Vally, Alexander puts the number of protests between 2004 and 2008 at 34,610, 31,749 of which were peaceful and 2,861 of which were "unrest related" (Alexander, 2010).

4.4.1 Tracking service delivery protests

Although these protests involve many different grievances, including housing projects, electricity, improved sanitation and water, transportation, education, and police (Alexander, 2010), the South African media began to group them under the general heading of service delivery protests. And different organizations began to track the occurrence of protest throughout the country. Municipal IQ is a for-profit consulting firm that sells access to its "Hotspots Monitor,"[10] a database that purportedly "collates major protests staged by community members (who can be identified as living in a particular ward) against a municipality, as recorded by the media (or other public domain sources such as SAPS releases)." It is not clear what they consider to be a "major" event but the estimates of Municipal IQ are unrealistically low: 32 in 2007 and 27 in 2008. Using a broader definition of service delivery protest, Karamoko and Jain (2011), report the number of community protests to be 96 in 2007, 118 in 2008, and a previously unseen peak of 213 in 2009. They further report that the number of SDPs declined in the second half of 2010 with the arrival of the FIFA World Cup and remained low in the first half of 2011. The Multi-level

[10] Available at http://www.municipaliq.co.za/index.php?site_page=hotspots.php

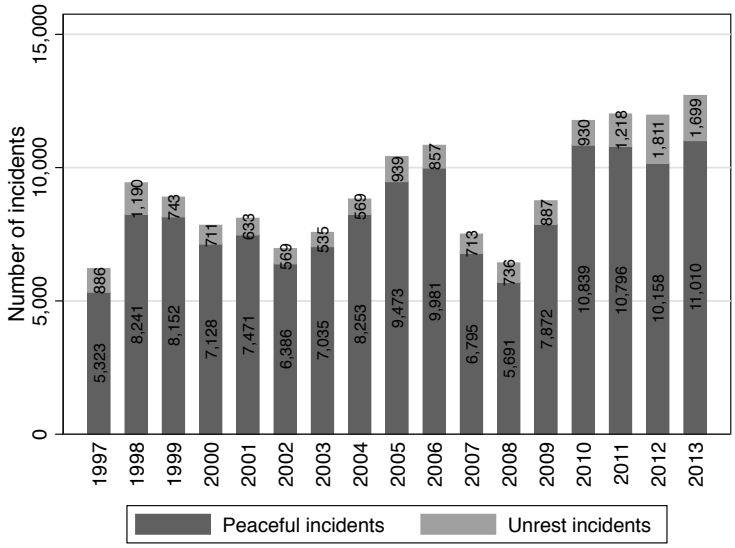


Figure 4.1: Crowd incidents by year (1997–2013)

Source: South Africa Police Service IRIS data as compiled and reported in Alexander et al. 2015

Government Initiative, a government agency that published Karamoko and Jain report, tracks service delivery protests using a similar definition and methodology in the Service Delivery Protest Barometer.[11] They reported that there were 226 SDPs in the first eight months of 2012 (de Visser and Powell, 2015).

A LexisNexis search of all English language South African national news sources appearing in the database between the first democratic elections in April 1994 and the end of March 2015 yields 8,923 unique mainstream print articles containing the search terms "service delivery" and "protest."[12] Those two terms appeared together for the first time in a *Financial Times* article on 16 July 1999.

[11] Available at http://mlgi.org.za/barometers/service-delivery-protest-barometer

[12] The initial search returns 12,592 articles but 3,472 are duplicates and another 197 are from online or trade sources (BBC Monitoring, Health-e, ITWeb Online, JSE News Service, and PlusNews).

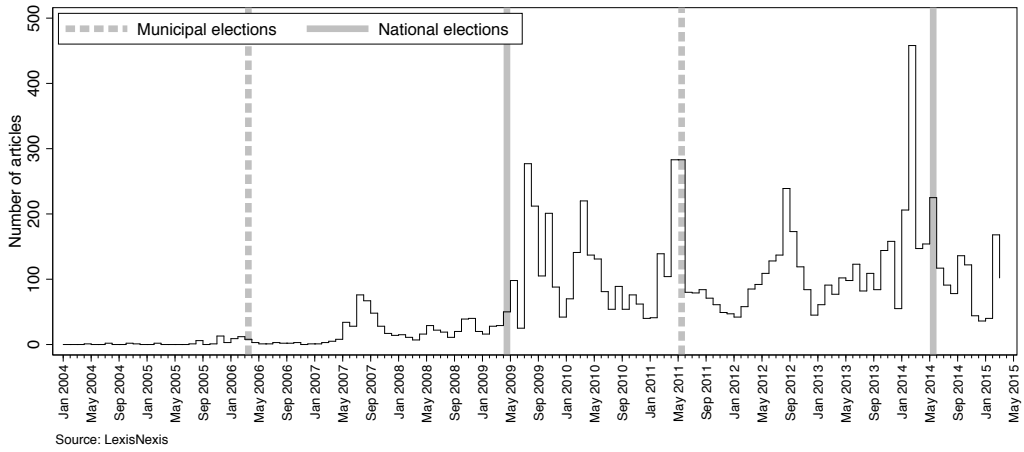


Figure 4.2: Articles including "service delivery" and "protest"

Figure 4.2 shows the distribution of these stories by source. (Table A.10 shows the distribution, frequency of publication, circulation, and readership of each source.) To be sure, the number of articles mentioning service delivery protests is not the best method to track protests. There is likely considerable reporting bias in the numbers because media outlets have an incentive to report on the issues that are important to their audience and may often mislabel events. Furthermore, the frequency of media mentions of SDP might have in one area a causal effect on the occurrence of events in other areas as communities learn from each other about how to get media attention and, thereby, the attention of local authorities.

Figure 4.2 also shows that more articles about service delivery protest appear in the months around elections. This may indicate an increase in the number of incidents or it may be the result of election attention to the issue. Assuming the former, it remains unclear whether this is the result of protesters trying to influence

elections or recently elected candidates or whether it indicates dissatisfaction with the process.

4.4.2 Protests and rising food prices

The increases in international food commodity prices of 2007-08 did not go unnoticed in South Africa. Figure 4.3 shows the trend in domestic food prices in South Africa compared to the FAO food price index. It reveals that, excluding the initial volatility in the last half of 1994, food prices have been steadily increasing since the end of apartheid. The mean monthly change in the domestic food price index between January 1995 and December 2013 was 0.57% with a standard deviation of 0.71%. This steady increase would place greater pressure on the households that spend the greatest proportion of household income on food. This increasing pressure could be one reason why individuals report that lack of food contributes to higher RD.

There have been periods that food prices rose at higher rates. Between October 2001 and January 2003 the mean increase was 1.37%. Between April 2007 and January 2009 the mean increase was 1.23% and during this period the rate of increase was the highest in the six months between March 2008 and September 2008, the mean increase was 1.49%. These increases in food prices had a more adverse effect on the poorest South Africans who spend a higher proportion of their household income on food. Figure 4.4 shows the distribution of household food spending by income quintile in 2005-06 and 2010-11. (The relationship between household food spending and population growth will be discussed in detail in the

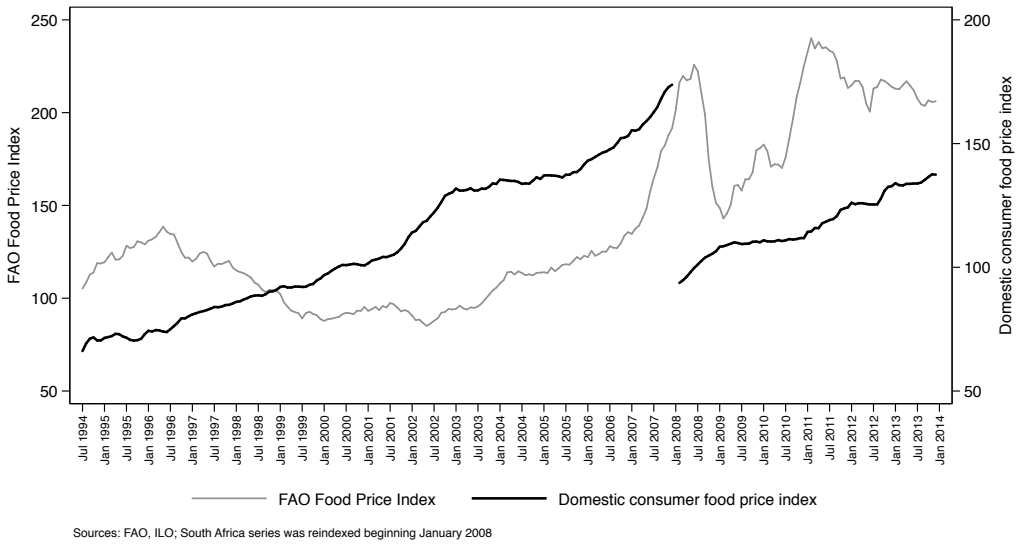


Figure 4.3: South African domestic food price index

next chapter.) These periods do not, however, correspond to periods of a high reports of service delivery protests (see Figure 4.2). And Figure 4.1 shows that the period between 2007 and 2009 was a period of relatively few crowd events.

In May of 2008, however, a rash of anti-immigrant violence spread across South Africa. Residents of the predominantly Black townships in the major cities, particularly Johannesburg and Cape Town, attacked immigrants from Mozambique, Zimbabwe, DRC, and elsewhere leaving 62 dead, 670 wounded, and 100,000 displaced (Claassen, 2014; Misago et al., 2010; Steinberg, 2008). Some attributed this violence in part to rising food prices. One newspaper report from 18 May 2008 quoted the head of the National Consumer Forum as saying. "The poor are being squeezed. It is becoming impossible for many to survive. . . . The recent attacks in Alexandra in the name of xenophobia could actually be linked to poverty because

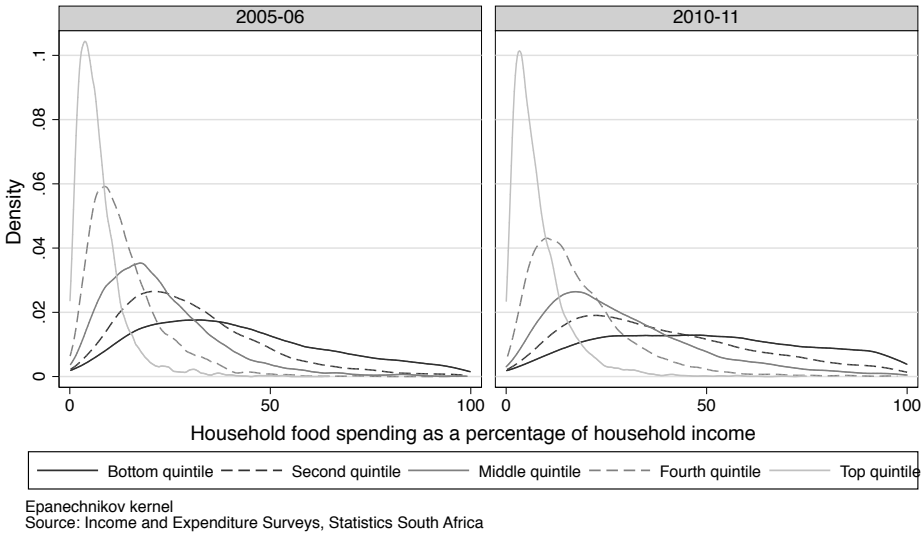


Figure 4.4: Household food spending by income quintile (IES)

if people had enough for themselves and if they could afford it, they would not begrudge anyone else from having more than them" (Naidu, 2008a,b).

It remains unclear whether the anti-immigrant violence was really driven by rising consumer food prices. Media reports from the period generally cited rising commodity prices rather than consumer prices. One reporter wrote, "The cost of wheat has rocketed by 120 percent in the past year. The price of maize has more than doubled since the beginning of 2006" (Robbins, 2008). Given that the increases in consumer prices were much less extreme, as discussed above, this connection is questionable. Nonetheless, some trade unions, most notably COSATU, rallied their membership to protest against the rising food prices and resulting corporate profits (Robbins, 2008; Pheko, 2008). These protests often included grievances about rising electricity prices (BBC, 2008; Mackay, 2008), which

suggested that to the extent that rising food prices were a causal factor they were only one of multiple drivers. The impact of food security on individual decisions to participate in protest is discussed further in chapters 5 and 6.

4.5 Service delivery protests and social movement theories

While these service delivery protests that have plagued South Africa since 2004 represent a new phenomenon, the question remains whether SDPs constitute a cohesive *social movement*. Tilly and Tarrow (2006, 202) define a social movement as "a sustained campaign of claim making, using repeated performances that advertise that claim, based on organizations, networks, traditions, and solidarities that sustain these activities." McCarthy and Zald (1977, 1217–1218) define a social movement as "a set of opinions and beliefs in a population which represents preferences for changing some elements of the social structure and/or reward distribution of a society."

Booysen (2007, 21) defines the phenomenon of service delivery protests as "grass-roots protests against both the quality of service delivery and public representation of the grass-roots' service delivery needs." Alexander (2010, 26) refers to local political protests or local protests and defines them as "locally-organised protests that place demands on people who hold or benefit from political power (which includes, but is not limited to, local politicians). These have emanated from poorer neighbourhoods (shack settlements and townships rather than suburbs)." These protests were undoubtedly about more than bureaucratic failure. They also

involve a strong perception on the part of participants of a lack of appropriate political representation. McLennan and Munslow (2009, 21) write "Service delivery is commonly understood to mean the provision of goods or services, by a government or other organisations, to those who need or demand them. However, in South Africa, given apartheid, the provision of services by the government is linked to the larger task of redistribution, social justice, poverty alleviation and economic growth."

Arguments exist for and against defining SDPs as a social movement. One could define specific protest actions as individual *events* within larger *episodes*, which might be defined by location, time period, or both. Alternatively, one might define the movements as distinct but aligned, learning from the failures and leveraging the successes of each other. The events appear similar and are often portrayed by the media in the same way because the claimants employ a broad range but common set of tactics or *repertoires of contention* (Tilly and Tarrow, 2006) including: "mass meetings, drafting of memoranda, petitions, *toyi-toying*, processions, stay-aways, election boycotts, blockading of roads, construction of barricades, burning of tyres, looting, destruction of buildings, chasing unpopular individuals out of townships, confrontations with the police, and forced resignations of elected officials" (Alexander, 2010, 26).

An examination of the *political actors* involved could also lead to differing conclusions. On the one hand, SDPs all involve aggrieved residents making claims against their own municipal and departmental representatives who they accuse of ineffectiveness or misconduct. On the other hand, the particular actors on both sides

(Tilly and Tarrow, 2006) differ by location, specific demand, and authority to act. The grassroots nature of SDP often makes it difficult to identify distinct leadership structures or networks. It is, therefore, often difficult to identify how particular actions are organized or mobilized.

It remains unclear whether one should consider service delivery protests to be a series of episodes of contentious politics bounded by geography and defined claims but within a larger SDP movement or whether they should be analyzed as separate movements. Such a determination is largely dependent on the level of analysis. In the remaining chapters of this dissertation I examine the micro-level factors that determine individual participation in protest, regardless of whether that protest is part of a larger movement. If, however, one assumes that SDPs represent a cohesive movement, one might analyze the emergence and success of the movement through the following theoretical lenses: (1) the political opportunity structures within which the movements develop; or (2) the networks, structures and other resources used to mobilize participants.

4.5.1 Political opportunity theory

Political opportunity structure reflects the relative openness or responsiveness of a given polity to social movements (Eisinger, 1973). An analysis within this framework examines changes in the political opportunity structure to explain the emergence or success of social movements within the polity.

The history of the anti-apartheid movement resonates in South African society today. The long struggle against the apartheid system was ultimately successful

in bringing down the regime without an outright civil war that plagued many of South Africa's neighbors. It gave rise to myriad organizations around different interests and united them in a common cause. It produced numerous leaders and heroes that are honored today through the naming of municipalities, airports, parks, and highways. All of this has resulted in a strong South African tradition of political protest and resistance to perceived injustice. Many of the songs from the freedom movement are popular today and are often sung during rallies, demonstrations, and marches.

The present context for social movements and political protest is very different than before 1994. Under the apartheid system, Black and Coloured South Africans had virtually no voice in the formal political system. Demonstrations and protest were the only method of political participation available to the vast majority of South Africans. Today, however, liberal democracy is fairly well entrenched in South Africa. Voter turnout for the most recent election in 2014, while lower than previous elections, remained high by international standards at 73.48% (Electoral Commission of South Africa, 2014; Nunley, 2012). (See Table 4.1). Although the African National Congress remains the dominant political force in the country, 48 parties participated in the most recent election and 13 parties won seats in the National Assembly. Furthermore, South Africa's liberal democracy is deeper than free and fair elections. South Africa has a strong civil society and free press. South Africa ranks 39th on the 2015 World Press Freedom Index, one place behind France and 10 places ahead of the United States. As of May 2015, no fewer than 181 trade unions were registered with the Department of Labour (Labour Guide, 2015).

Table 4.1: South African election turnout

Election	Registered voters	Total votes cast	Voter turnout
2014 National	25,388,082	18,654,771	73.48%
2011 Municipal	23,654,347	13,719,569	57.64%
2009 National	23,181,997	17,919,966	77.30%
2006 Municipal	21,054,954	*	48.40%
2004 National	20,674,923	15,863,558	76.73%
2000 Municipal	18,477,932	8,882,734	48.07%
1999 National	18,172,751	16,228,462	89.30%
1994 National	22,709,152	19,726,610	86.87%

* – Registered voters x ballot types = 55,654,643; votes cast for all ballots = 26,938,560.

Source: South Africa Electoral Commission

This new environment is largely permissive of protest despite response from the police service that has on occasion resulted in violence. The state has not embarked on a widespread campaign of repression and any such campaign would in all likelihood be met with widespread resistance and condemnation, not just from the protesters but from other segments of the population who treasure their hard won ideals of freedom as well as from the international community who revere South Africa, the so-called "rainbow nation," as an example of victory over oppression.

From a political opportunity perspective one might conclude that social movements could thrive in the new more permissive environment. But there were relatively fewer protests in the decade between 1994 and 2004 than in the decade after 2004. As reflected in the dual tactics of the SECC and the CCF, that is participating in elections and protesting against authorities, there remains a tension between embracing the new democracy and a skepticism of government.

At a micro-level, the question remains of whether participants in protest

consider protest to be an alternative or a complement to elections and other formal institutions. Are protesters the more impoverished residents of informal settlements who feel disenfranchised from the new democracy? Or are they citizens who believe in the new democracy and consider protest to be a legitimate means of political communication and debate (Dunning, 2011; Booysen, 2007)?

4.5.2 Resource mobilization theory

Next, resource mobilization theory seeks to explain the emergence and success of social movements such as SECC, CCF and AEC by examining the tangible and intangible resources available to the movement (McCarthy and Zald, 1977; Tilly and Tarrow, 2006). These resources include the networks in which the actors operate and communicate with supporters and the established repertoires of claim making and their perceived legitimacy. In this context, the various grassroots actors benefit from the strong civil society present today in South Africa. Myriad and overlapping labor unions, political party structures, and community organizations facilitate repeated communication with potential supporters.

The success of the anti-apartheid movement contributed to the perceived legitimacy of political protest. Furthermore, the symbolism of apartheid and racism continue to have considerable mobilizing power today and are often used by grassroots movements. In the post-apartheid era, the relative success of the SECC, the CCF, and the AEC in early 2000s demonstrated the power of community action in the post-apartheid era. Many of the smaller grassroots protests borrow heavily from the repertoires and symbols of both of these movements. For example, barricading

highways with burning tires or throwing human feces onto passing cars are often effective ways to disrupt the daily lives of other citizens and get the attention of the news media.

4.6 Conclusion

In conclusion, after the long struggle against apartheid, South Africa experienced a brief period of calm during the presidency of Nelson Mandela. Within a decade, however, a new wave of unrest was sweeping the country. Initially, this was more organized, focused, and confined to the large urban areas, but in 2004 an increasing number of smaller scale events began to appear throughout the country. These became a new wave of unrest that continues to plague municipal governments.

Political opportunity theory and resource mobilization theory provide some insight into the structural factors that contributed to the spread of the SDPs in South Africa. In the early 2000s, conditions in South Africa were primed for the outbreak of protests. The legacy of the anti-apartheid movement contributed to a perception of street protest as a legitimate method to raise political issues. The transition to democracy provided a dynamic of change that raised economic and political expectations, which were likely unrealistic but not unexpected. The transition of the political system also meant sudden and drastic change in governmental structures and new and often inexperienced leadership as well as new opportunities for elite capture of governmental largess.

Ultimately, however, these theoretical perspectives cannot explain micro-level participation in SDPs. Political opportunity theory describes the macro conditions necessary for the emergence of social movements, but it provides very little insight into the differences between individuals that choose to participate in protest and those that do not. Resource mobilization theory explains why some movements succeed and others fail by assessing the movement's resources, but, again, it does not explain why some people protest and others do not. In the next chapter I turn to relative deprivation theory to explain micro-level motivations. Ultimately, both a micro-level understanding and an appreciation of the context are needed for a broad understanding of service delivery protests.

Chapter 5

Relative deprivation, inequality, and food security as drivers of service delivery protests

5.1 Introduction

By most objective measures, living conditions and access to government services have dramatically improved in South Africa over the past two decades (Mattes, 2014). According to government estimates, access to piped water increased from 60% of the total population in 1995 to 95% in 2012 while access to basic sanitation increased from 50% to 83% over the same time period. Access to electricity increased from 50% in 1994/95 to 86% in 2013/14 (Presidency, Republic of South Africa, 2014, 71-72). Since 1994 the government has built and delivered approximately 3.7 million subsidized houses, providing a home to 12.5 million people. The proportion of the population living in formal housing has increased from 64% in 1996 to 77.7% in 2011 (Presidency, Republic of South Africa, 2014, 68-69).

Relative deprivation theory, however, predicts that people's sense of satisfaction or grievance is based primarily on subjective comparisons rather than objective conditions. To review, relative deprivation can be the result of comparisons between one's individual conditions and those of others, individual RD, or

between the conditions of one's identity group and other groups, group RD (Runciman, 1961). Similar to social identity theory group RD may depend on the strength of group identification and the perceived mobility within groups (**?**).

In this chapter, I will first examine earlier studies of relative deprivation in South Africa between 1994 and 2000. I will then examine changing trends in income inequality between groups within South Africa between 1995 and 2011. Based on past studies of RD and changing income inequality I will propose hypotheses about factors that contribute to the development of RD which I will test using data from the Afrobarometer surveys. Finally, I will present and test hypotheses about the contribution of RD to micro-level participation in protest actions.

In the end I find that individuals that experience high levels of individual RD experience lower group RD and vice versa. Personal living conditions, particularly food security and lack of income, are the strongest predictors of individual RD. Group RD is higher among individuals who are better informed about political and economic conditions in the country. I also conclude that people with higher levels of either individual or group RD are more likely to participate in protest but that group RD is a stronger predictor than individual RD. The strength of this finding is, however, because the Afrobarometer surveys were not intended to measure protest participation.

5.2 Relative deprivation in South Africa, 1994–2000

Although most South Africans experienced very little, if any, change in their living conditions in the five years after the ANC took control of the government and

many of the old inequities continued to persist into the next decade, the changed political context could still have strong effects on grievances. The question becomes how these changes in the political system and in available economic opportunities affects discontent amongst non-white South Africans even in the absence of change in de facto economic circumstances. RD theory could suggest different outcomes.

Klandermans (2015, 125) writes, "On the one hand, changes in the socio-political context could trigger the formation of new grievances. On the other, old grievances could disappear because people feel that their situation is improving or they hope for a better future." Social identity theory would predict that grievance would diminish because beliefs about social mobility changed. People believed that they were no longer bound by the old system of discrimination. In Gurr's framework, the perception that people have a voice in their own destiny may, in itself, reduce grievances (Gurr, 1971). As a time of dramatic social change, the years following the first democratic elections was a period during which South Africans reevaluated the position of their respective group's position in the social landscape of the new country (de la Sablonnière et al., 2013, 2015).

Klandermans (2015) attempted to answer the question about how the changing political landscape had affected grievance formation in South Africa between 1994 and 2000. He conducted a series of annual surveys in South Africa between 1994 and 2000. He concluded that living conditions seemed to determine whether respondents were satisfied at the individual level while ethnicity seemed to retain its importance for in-group comparisons. "Feelings of satisfaction and dissatisfaction

appear to depend much more on processes of social comparison than on objective circumstances, both quantitatively in terms of the intensity of grievances and qualitatively in terms of the framing of grievances. Indeed, group grievances were almost completely determined by comparisons and not by the objective situation of the person who was making the comparison" (Klandermans, 2015, 141).

Interestingly, Black South Africans seemed to believe that their personal situation was relatively worse than others but that their group was doing fine, while White South Africans seemed to believe that personally they were doing better than others but that their group situation was worsening. Furthermore, race and ethnicity seemed to be lessening in importance for group identification while class was becoming more important, although in South Africa class and race are strongly correlated. When evaluating the relative position of ones group, however, ethnicity remained the most important single dimension (Klandermans, 2015).

This research suggests that RD was on the decline during the first decade after the introduction of democracy, but the question remains about whether this decrease continued into the second post-apartheid decade. de la Sablonnière et al. (2015) argue that during situations "an interaction between group status and RD trajectory will predict well-being and adjustment to change." The authors define a "high decreasing" trajectory as one in which current RD is high but the expectation is that group conditions will improve rapidly in the future. They argued that Black South Africans were a low-status group and that members of such groups who perceived a high-decreasing trajectory experienced higher well-being and better adjustment to change than those that perceived little change in their conditions.

They found evidence supporting this in a 2006 survey. "This may be because it creates the impression that positive change is possible in the future" (de la Sablonnière et al., 2015, 116). They also found that members of the high-status group, White South Africans, who perceived the same change reacted negatively and suggested that they considered the change to be a threat to their position.

In another study, de la Sablonnière et al. (2013) argue that different social groups understand historical changes differently based on the perceived impact of those changes on their own social group. The authors rely on social identity theory which suggests that strong in-group identification is needed to perceive group disparities (Tajfel and Turner, 1986). They present evidence from another 2006 survey that some Black South Africans perceived a decreasing group-based deprivation trajectory, i.e. that economic conditions had greatly improved between the apartheid and post-apartheid periods. The majority of Black respondents, however, perceived a relatively stable group trajectory. de la Sablonnière et al. (2013, 713) argued that "the majority of Africans indicated that economic conditions in South Africa remained relatively the same from the apartheid period until the present, and that it will not really improve in the future."

5.3 Income inequality in South Africa

The World Bank estimates that inequality in South Africa decreased slightly between the end of apartheid and the turn of the century. As shown in Table 5.1, the World Bank estimated the Gini coefficient to be 59.33 in 1993, 56.59 in 1995, and 57.77 in 2000 using household survey data. Between 2000 and 2006, however,

Table 5.1: Estimates of income inequality in South Africa

Year	Gini coeff.
1993	59.33
1995	56.59
2000	57.77
2006	67.40
2009	63.14
2011	65.02

Source: World Bank Development Indicators

inequality actually increased to an estimated Gini coefficient of 67.40, higher than at the end of apartheid (WDI, 2015). Also using household surveys, the Luxembourg Income Study estimated the Gini coefficient for South Africa to be 59.4 in both 2008 and 2010 (LIS, 2015).

5.3.1 The deracialization of income inequality

Inequality in South Africa today is becoming *deracialized* (Seekings and Nattrass, 2008; Durrheim et al., 2011). This is most clearly evident in the expanding Black middle class. The lower socio-economic class has grown and continues to be predominantly Black, although a significant portion is Coloured, especially in the Western Cape.[1] Seekings and Nattrass (2008) demonstrate overall inequality in South Africa changed very little between 1995 and 2000. Interracial inequality, however, changed significantly. The White population group's share of total income declined from 49 percent to either 46 percent or 40 depending on survey weights

[1]Recognized population groups in South Africa are Black African, Coloured, Indian/Asian, White, and Other.

used in the calculations (Seekings and Nattrass, 2008, 304). This decline in interracial inequality was the result of rising intraracial inequality, most notably the rising Black elite. The proportion of Blacks in the top income decile rose from 18% in 1995 to either 25% or 31%, again depending on survey weights used (Seekings and Nattrass, 2008, 306).

5.3.2 Decomposing income inequality, 1995–2011

With these findings in mind, I investigated trends in income inequality over the past two decades using the the Income and Expenditure Surveys (IES) conducted by Statistics South Africa (previously the Central Statistical Service) every five years. The surveys consist of in-person interviews with a nationally representative sample of South African households (South Africa Central Statistical Service, 1995; Statistics South Africa, 2000, 2006, 2011b).[2]

I computed the Theil index of inequality for each of the four waves of survey data since the end of apartheid and examined the contributions to overall inequality and within-group inequality of each of the four major population groups. The Theil index is an endlessly decomposable measure; that is the between-group and within-group inequality as well as group contributions to overall inequality can be examined by any defined groups and sub-groups (Bourguignon, 1979; Conceição and Ferreira, 2000; Conceição and Galbraith, 1998). Unlike the Gini coefficient, the Theil index is not bounded by absolute limits and is largely uninterpretable as

[2]The total number of households surveyed for each wave is as follows: 1995 29,595 households; 2000 26, 263 households; 2005/06 21,144 households; 2010-11 25,328 households.

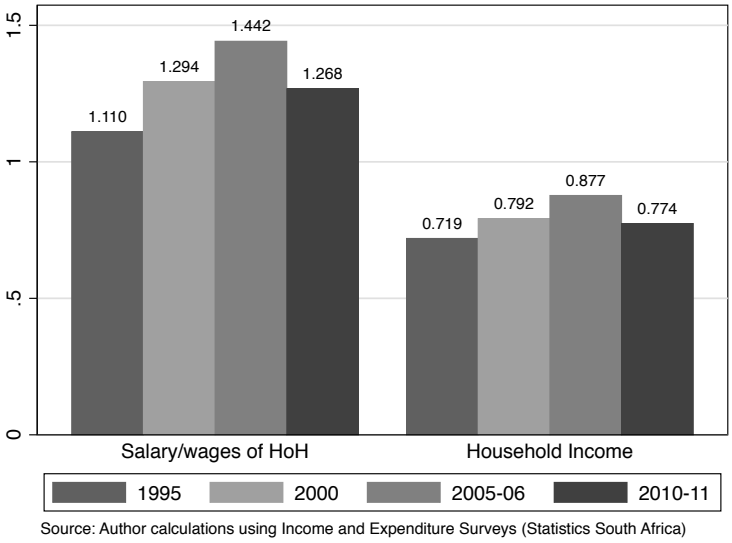


Figure 5.1: Overall Theil index of income inequality

a single data point. It is, however, very useful for comparing trends across time or inequality between groups. I use the Theil here to compare income inequality between and within population groups. I use two measures of income to calculate inequality: (1) the salary/wage income of the head of household; and (2) the total household income. Household income is derived from multiple sources and often leads to different conclusions than wage data alone. This may be especially true when unemployment is high and differs across comparison groups, which leads to different levels of household reliance on alternative sources of income including social grants. Such is the case in South Africa.

The changes in overall inequality over time are shown in Figure 5.1. The overall Theil index of inequality calculated using the individual salary/wage data was 1.110 in 1995. The Theil index increased to 1.294 in 2000 and increased further

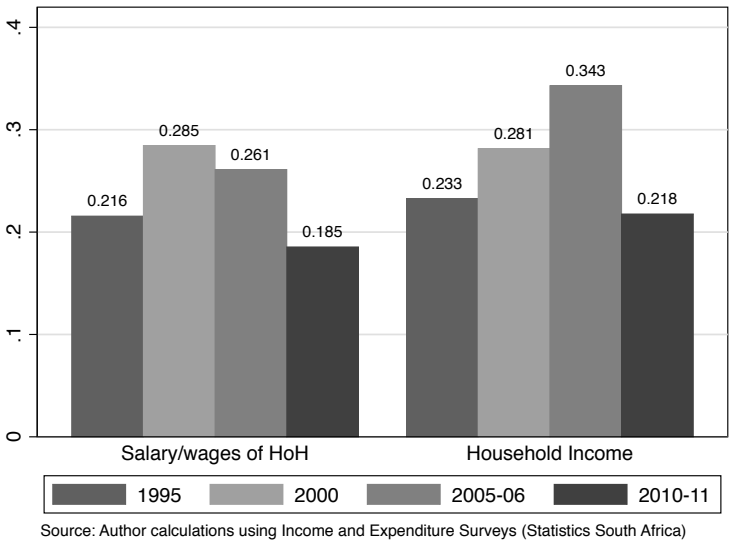
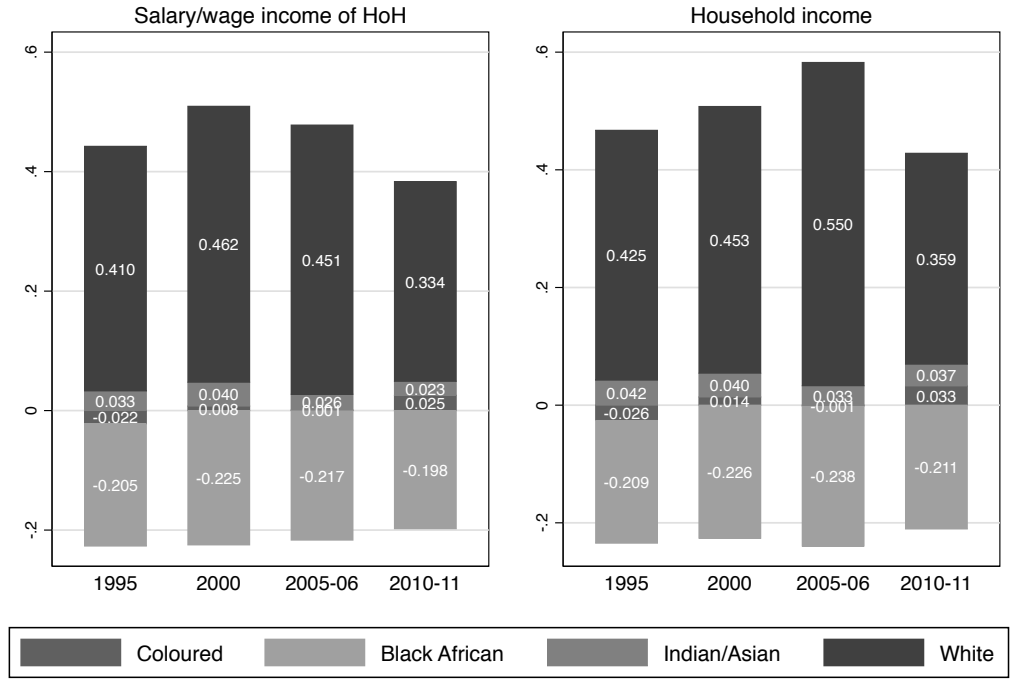


Figure 5.2: Between-group income inequality

in 2005-06 to 1.446. Then in 2010-11 the Theil index decreased to 1.268 but this is still higher than it was in 1995, one year after the first democratic elections. An examination of the Theil index using the household income data shows the same trend. In 1995, the Theil index using household income data was 0.719. This increased to 0.792 in 1995 and 0.877 in 2005-06 before decreasing to 0.774 in 2010-11.

Changes in between group inequality is shown in Figure 5.2. Between group inequality in both salary/wages and household income was lower in 2010-11 than in 1995. Between group inequality in salary/wages did, however, increase between 1995 and 2000 before decreasing in 2005-06 and then again in 2010-11. Between group inequality in household income also increased between 1995 and 2000 and again in 2005-06 before dropping precipitously in 2010-11. In sum, between group

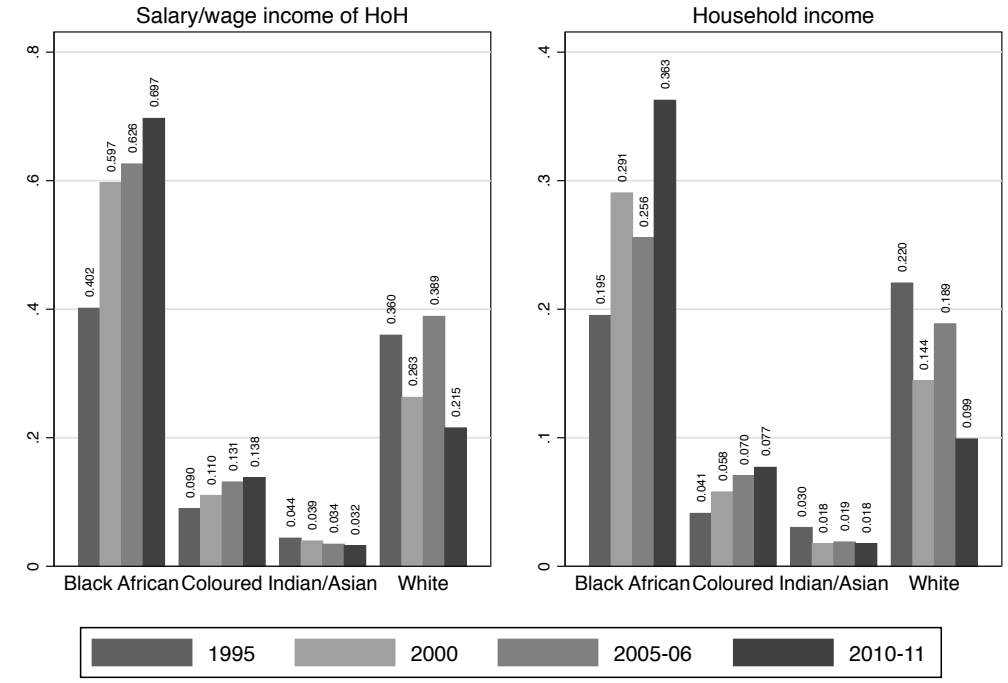


Source: Author calculations using Income and Expenditure Surveys (Statistics South Africa)

Figure 5.3: Group contributions to income inequality

inequality in 2010-11 was at or below the 1995 level, but it increased in in the interim.

The Theil coefficient broken down by the contribution of each population group to overall inequality is shown in Figure 5.3. The contribution of the White population group to wage inequality increased between 1995 and 2000 but decreased in 2005-06 and again in 2010-11. The contribution of the Black African population group to overall wage inequality has, for the most part, remained constant between 1995 and 2010-11, although it did increase in 2000 before decreasing in 2005-06 and again in 2010-11. The contribution of both the White and Black



Source: Author calculations using Income and Expenditure Surveys (Statistics South Africa)

Figure 5.4: Within-group income inequality

African population groups to inequality in household income increased between 1995 and 2000 and again between 2000 and 2005-06 before decreasing in 2010-11.

More interesting is an examination of the within group inequality of the White and Black African population groups, shown in Figure 5.4. Wage inequality within the Black African population group increased every five years between 1995 and 2010-11. In contrast, wage inequality within the White population group decreased over the entire period, although it did increase in 2005-06. Within group inequality of household income exhibited similar trends, increasing over the entire period for Black Africans and decreasing over the entire period for Whites.

These findings are consistent with those of Seekings and Durrheim. Although overall income inequality continued to increase in the years following the end of apartheid, it decreased between 2005 and 2011. While considerable inequality continues to exist between population groups it was less pronounced in 2011 than in 1995. The decrease in inequality is driven by decreased inequality within the White population group and between Whites and Blacks. Inequality has increased within the Black African population group. This is consistent with the growth of a Black middle class and the rise of a Black elite while Blacks continue to constitute the overwhelming majority of the more destitute South Africans.

Taken together the sociological studies present a picture of RD in post-apartheid South Africa that is consistent with the economic evidence on inequality. South Africa continues to be one of the most economically unequal societies in the world. This is undoubtedly a legacy of the apartheid system, which relegated Black South Africans to lower quality education and less desirable and lower paying jobs predominantly in manual labor, e.g. mining, and service sectors, while securing the privileged position of Whites who controlled the vast majority of wealth in the country. Most Blacks expected that the new democracy would bring new educational and economic opportunities that would in turn lead to a more equitable distribution of wealth. Surveys conducted in the last half of the 1990s seem to suggest that feelings of relative deprivation declined in the years following the introduction of democracy. This is likely driven more by the political changes and newfound freedoms rather than any improving economic conditions. Again, relative deprivation is driven not by objective conditions but by a combination of subjective comparisons,

expectations of the future, and perceptions of personal ability to change one's conditions. While objective economic conditions did not change after apartheid, for the first time Black South Africans were free to participate in the political process and to have their voices heard.

The expected changes in economic conditions did not come for the majority of Black South Africans. Overall economic inequality increased between 1995 and 2000 and between 2000 and 2005-06 according to both the World Bank estimated Gini coefficients and according to my calculations of the Thiel index using the Income and Expenditure Surveys. The nature of this inequality, however, changed. It became increasingly deracialized. Between group inequality began to decrease in the early 2000s while within group inequality began to increase as a new Black elite and middle class began to emerge. This should lead to a decrease in group based RD. The vast majority of Black South Africans, however, remained poor, which might lead to an increase in individual RD as most Blacks did not experience improvements in their own living conditions.

5.4 Relative deprivation and protest participation in South Africa, 2002 to 2011: Afrobarometer surveys

The Afrobarometer project, "an independent, non-partisan research project that measures the social, political, and economic atmosphere in Africa," has conducted six rounds of nationally representative surveys in South Africa since 2000: round 1 in 2000; round 2 in 2002; round 2.5 in 2004; round 3 in 2006; round 4 in 2008; and round 5 in 2011 (Afrobarometer, 2015, 2000, 2002, 2006, 2008, 2011,

2004). These surveys provide time-series data to examine changes in perceptions of living conditions. Unfortunately, the questionnaire phrasing and coding of the round 1 survey in 2000 and the round 5 survey in 2011 makes longitudinal comparisons difficult. The following analysis, therefore, focuses on the six years between 2002 and 2008. (See Appendix B for a table of common questions and responses that were merged across survey rounds.)

The Afrobaromter surveys ask a series of questions about the respondents' subjective perceptions of their personal living conditions as well as the economic conditions of their identity group. More objective measures about how often respondents' go without basic necessities are asked in a battery of questions called the Lived Poverty Index. Together this data helps determine whether different objective conditions or other factors account for different perceptions of individual and group RD. First, I provide an overview of changes in aggregate perceptions over time.

I start with perceived living conditions compared to others. Afrobarometer respondents were asked the question: "In general, how do you rate: Your living conditions compared to those of other South Africans?" Responses were on a five-point Likert scale: 1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better. Figure 5.5 presents the mean response by population group and year. (Means and standard errors are presented in Tables A.11 and A.12 in Appendix A.) The graph illustrates that the mean response for Whites was increasing across the time period, with the exception of 2008. The mean response for Blacks, however, exhibited a

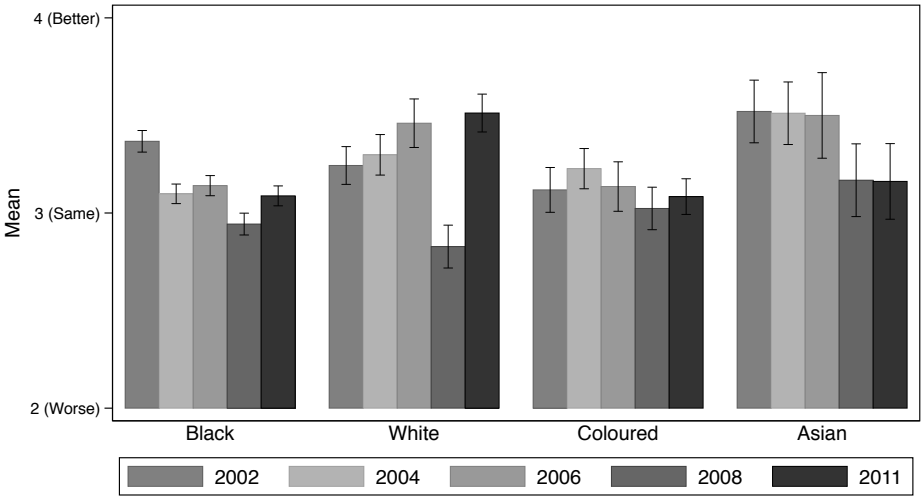


Figure 5.5: Personal living conditions compared to others

downward trend across the entire period, although there was a small but not statistically significant increase from 2004 to 2006 and a more substantial increase from 2008 to 2011.

The Afrobarometer survey data suggests that despite objective improvements in housing, water infrastructure, and electricity, Blacks perceived that their own personal living conditions were increasingly worse between 2002 and 2008. This suggests that the subjective comparisons may have shifted away from racial divisions and toward within group comparisons. These changes in comparisons also came at a time when political authorities were no longer predominantly of a separate population group. These increased perceptions of relative deprivation were likely felt by many of the participants in the service delivery protests. This does not, however, explain why people chose to engage in the particular tactics of service de-

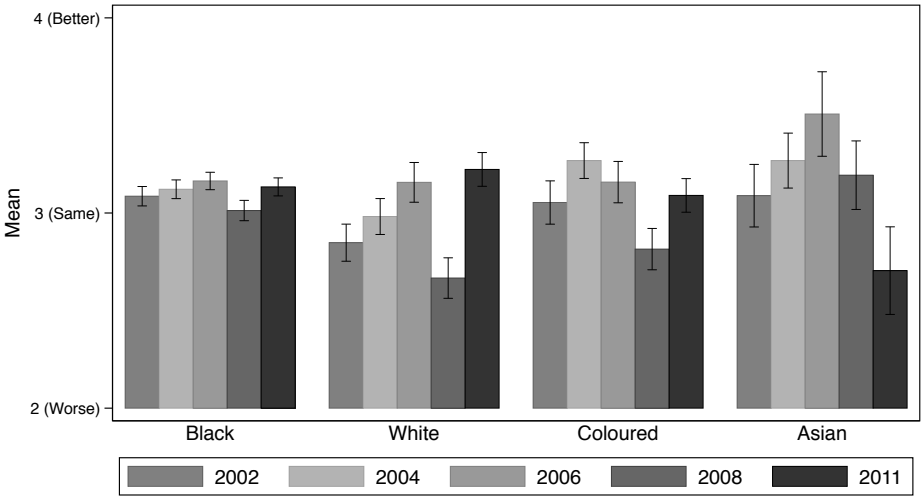


Figure 5.6: Present living conditions compared to the past

livery protests. In order to gain more insight into that question, the next section draws on a separate approach to the issue.

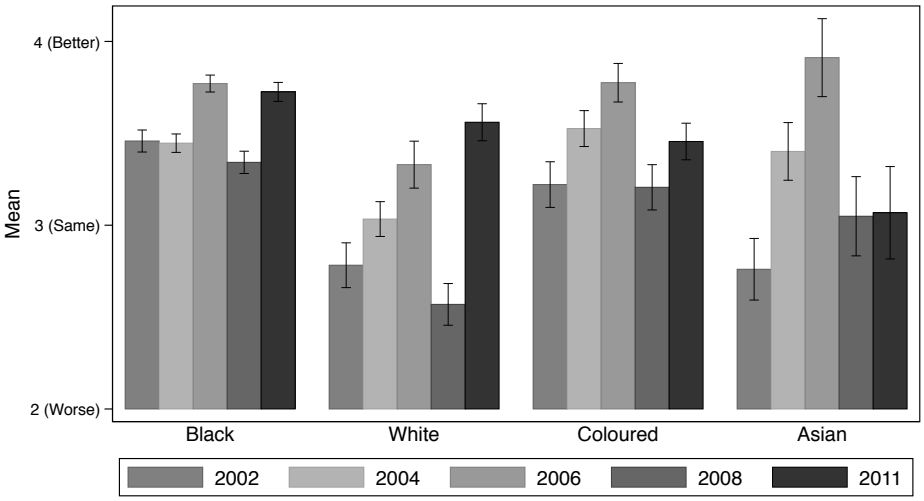
Recall from the IES survey analysis that within group inequality increased between 2000 and 2011. This downward trend in perceived personal living conditions compared to others is consistent with the theory that many Black South Africans, who may have expected an improvement in their situation after the introduction of democracy, became increasingly aggrieved as some within their group benefited economically while the majority did not. The increase in the mean in 2010-11 may indicate a change in this trend but this remains to be seen.

Research suggests that temporal comparisons are at least as important as social comparisons (de la Sablonnière et al., 2013, 2015). I, therefore, also examine responses to two additional questions: (1) perceptions of present living conditions

compared to 12 months ago; and (2) expected living conditions in 12 months compared to the present. Responses to the question: "Looking back, how do you rate the following compared to twelve months ago: Your living conditions?" Responses were on the same Likert scale as above. Figure 5.6 shows the mean response by population group and year. The data suggest that they perceived very little change in their personal living conditions compared to the recent past and this did not significantly change across the period with the exception of a decrease in the mean response in 2008. The mean response of Whites, on the other hand, increased between 2002 and 2006 then decreased in 2008 and rebounded in 2011. The dip in 2008 is consistent across all population groups and is most likely attributable to the global financial crisis and recession of 2007-08.

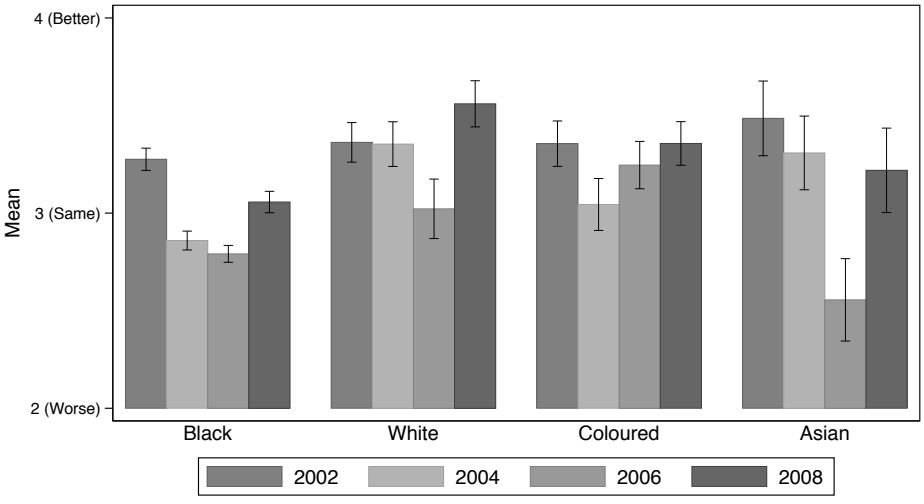
Next, Afrobarometer asked the question: "Looking ahead, do you expect the following to be better or worse: Your living conditions in twelve months time?" Responses were again on the same Likert scale as above and the mean response by population group and year is presented in Figure 8. In 2002, the mean response for Blacks was 3.458, significantly higher than all other population groups. The mean response for Whites, Coloureds, and Asians increased in 2004 while it remained statistically constant for Blacks, 3.446, and the mean response increased for all groups in 2006 and decreased sharply in 2008.

In order to gauge perceptions of group relative deprivation I examined responses to the question: "Think about the condition of _____ [respondent's identity group] Are their economic conditions worse, the same as, or better than other groups in this country?" Responses were again on the same five-point



1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better
Source: Afrobarometer South Africa

Figure 5.7: Expected future living conditions compared to present



1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better
Source: Afrobarometer South Africa

Figure 5.8: Group economic conditions compared to other groups

Likert scale. The mean response by population group and year are presented in Figure 5.8. The mean response for Blacks was 3.276 in 2002, which was statistically lower than the other three population groups, although the difference was not statistically significant at the 95% confidence level. This mean dropped sharply in 2004 to 2.859, significantly lower than all other groups and remained low in 2006. The perceptions of group economic conditions rose for all groups in 2008. This is somewhat confusing in light of the drop in perceived personal living conditions for all groups. Nonetheless, the increase in the mean response for Blacks was lower than that for Whites and the mean remained lower than it was in 2002 unlike that for Whites.[3]

5.4.1 Hypotheses

Based on the findings of the sociological studies, the examination of the changing trends in economic inequality, and the initial analysis of group means and aggregate attitudes from the Afrobarometer surveys, I develop three testable

[3]I should note, however, here that a comparison of responses to this question across time is complicated somewhat by the fact that this question was preceded in the questionnaires by different questions about the respondent's identity group. In the Round 2 survey in 2002 the question was immediately preceded with the question: "We have spoken to many South Africans and they have all described themselves in different ways. Some people describe themselves in terms of their language, ethnic group, race, religion, or gender and others describe themselves in economic terms such as working class, middle class, or a farmer. Besides being South African, which specific group do you feel you belong to first and foremost?" Response choices included race, region, religion, occupation, class, and gender, as well as others. In 2004 and 2006, however, the question was immediately preceded with the question: "What is your tribe? You know, your ethnic or cultural group." In 2008, the question was preceded by the same question as in 2004 and 2006 but it was phrased slightly differently, reading: "Think about the condition of _____ [R's Ethnic Group]. Are their economic conditions worse, the same as, or better than other groups in this country?" In the brackets identity group was replaced with "Ethnic Group."

hypotheses. Individuals compare their personal living conditions to the observable conditions of others within their community. I hypothesize that objective conditions play a bigger role in individual RD.

> H1: *Higher levels of objective poverty as measured by the Lived Poverty Index lead to higher levels of individual RD.*

Next, I expect that individuals who have more interaction with others in their own group have more sympathy with others. I also expect that people who are more informed about and interested in public issues are more sensitive to group issues.

> H2a: *Individuals who have more interaction with other community members have higher levels of group RD.*
>
> H2b: *Individuals who are more informed about politics and community issues have higher levels of group RD.*
>
> H2c: *Individuals who are more interested in public affairs have higher levels of group RD.*

Finally, I turn my attention to the effect of RD on participation in protest activity. Based on relative deprivation theory I hypothesize:

> H3: *Individuals with higher levels of either individual or group RD are more likely to participate in protest actions.*

The interaction between individual and group RD is unclear. On the one hand, individuals with higher levels of both individual and group RD might be the

most inclined to protest. On the other, individual and group RD might be mutually exclusive. That is, because individual RD is driven by intra-group comparisons and group RD is driven by inter-group comparisons, it would be unexpected for a given individual to have high levels of both.

5.4.2 The first-stage analysis: Relative deprivation

In the first stage of the analysis I examine two dependent variables: *individual RD* and *group RD*. Individual RD is defined as the overall perceptions of personal living conditions and operationalized as the mean of the responses to the three questions about perceived personal living conditions: (1) compared to others, (2) compared to the past, and (3) expectations of the future (Cronbach's α of the interitem correlation for these items is 0.6538). As such, I make no distinction here between social RD and temporal RD at the individual level. This mean is then reversed for ease of interpretation and results in a variable on a scale of 1 to 5 with higher values indicating higher levels of grievance (The mean is 3.24 and the standard deviation is 0.80).

Group RD is defined as individual perceptions about the position of one's own identity within society. I operationalize this as the inverse of the survey responses to question regarding group economic conditions. Again, no distinction is made between the social and temporal aspects of group RD because no questions were asked in the Afrobarometer surveys regarding opinions about the present position of one's group compared to the past or expected group conditions in the future.

In order to test H1, I include as independent variables responses to measures of the Afrobarometer Lived Poverty Index (LPI) that were asked consistently across the survey years (Mattes, 2008). These questions ask, "Over the past year, how often, if ever, have you or your family gone without: _____?" for each of the following categories: (1) enough food to eat; (2) enough clean water for home use; (3) medicines or medical treatment: (4) enough fuel to cook your food; and (5) a cash income. Responses are collected on a 5 point scale: 0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always (Afrobarometer, 2002). The means and standard deviations of these variables are given in Table 5.2.

In order to test hypothesis H2a, I first include a variable for whether respondents are members of a community group. In order to test hypothesis H2b, I include a variable for how often the respondents get news from a newspaper. The question is "How often do you get news from the following sources: Newspapers?" and available responses are: 0 = Never, 1 = Less than once a month, 2 = A few times a month, 3 = A few times a week, 4 = Every day. Finally, I test hypothesis H2c, using responses to the question, "How interested are you in public affairs?" Available responses are: 0 = Not interested, 1 = Somewhat interested, 2 = Very interested.

Finally, I include responses to the question, "How much of the time do you think elected leaders, like parliamentarians or local councilors, try their best: To listen to what people like you have to say?" Available responses are: 0 = Never, 1 = Some of the time, 2 = Most of the time, 3 = Always. Non-responses or "Dont know" responses are coded as missing and the observation is omitted from the analysis. Summary statistics are given in Table 5.2 (Afrobarometer, 2002).

Table 5.2: Summary statistics of Afrobarometer sample

	Mean	SD	Min	Max
Participated in protest more than once or twice	0.115	0.318	0	1
Indvidual RD	2.742	0.809	1	5
Group RD	2.948	1.014	1	5
Gone without food	0.729	1.079	0	4
Gone without water	0.697	1.217	0	4
Gone without medical care	0.771	1.165	0	4
Gone without cooking fuel	0.670	1.080	0	4
Gone without cash income	1.118	1.314	0	4
Gone without electricity	0.897	1.292	0	4
Member of community group	0.358	0.479	0	1
Newspaper news	2.281	1.546	0	4
Interest in public affairs	1.914	0.794	1	3
Local govt councilors listen	0.897	0.889	0	3
Black African	0.714	0.452	0	1
Coloured	0.110	0.313	0	1
Primary shcool completed	0.833	0.373	0	1
Secondary school completed	0.425	0.494	0	1
Female	0.491	0.500	0	1
Age	38.390	15.092	18	91
Urban	0.645	0.478	0	1
2002	0.265	0.441	0	1
2004	0.254	0.435	0	1
2006	0.251	0.434	0	1
2008	0.229	0.421	0	1
Eastern Cape	0.143	0.350	0	1
Free State	0.076	0.265	0	1
Gauteng	0.189	0.392	0	1
KwaZulu-Natal	0.172	0.378	0	1
Limpopo	0.101	0.302	0	1
Mpumalanga	0.082	0.274	0	1
North West	0.102	0.302	0	1
Northern Cape	0.040	0.197	0	1
Western Cape	0.094	0.291	0	1
Observations	6,436			

I include control variables for whether the respondents are Black African or Coloured. I also controlled for whether the respondent has completed primary school and secondary school. (These categories are not mutually exclusive. All respondents that have completed secondary school have also completed primary school and are coded accordingly.) I also controlled for the gender of the respondent with an indicator variable for female and the age of the respondent with linear and quadratic terms. I included indicator variables for the survey year and the province of the respondent. Finally, I included interaction terms between Black and each of the survey years to capture different levels of change across years and population groups.

The analysis was conducted using ordinary least squares. OLS is used because the dependent variable is continuous. This specification does assume a linear relationship between the independent and dependent variables, which may not be a valid assumption. For this reason quadratic and logarithmic transformations of the independent variables were tested, but, in the end, these transformations did not provide a significantly improved model fit. For this reason, only the results of the OLS models on the untransformed variables are presented.

The results are presented in Table 5.3. The dependent variable in model (1) is individual RD and the R-squared value indicates that the model explains 17.2% of the variation individual RD. Model (2) explains 11.1% of the variation in group RD. Because the dependent variables are on a somewhat artificial scale, the coefficients are largely uninterpretable except in relationship to each other. In other words,

it's difficult to gauge the objective meaning of a one unit change in questionnaire responses. In general, however, larger coefficients indicate a stronger effect.

The strongest predictors of individual RD are in order lack of sufficient food ($\beta = 0.084$), lack of medical care ($\beta = 0.056$), lack of a cash income ($\beta = 0.048$), and lack of electricity ($\beta = 0.030$). All of these coefficients are statistically significant at the $\alpha = 0.01$ level. All of these provide support for hypothesis H1.

Membership in a community group ($\beta = 0.144$) and interest in public affairs ($\beta = 0.102$) are both strong and statistically significant ($\alpha = 0.01$) predictors of group RD. These coefficients support hypotheses H2a and H2c respectively. Respondents who regularly read newspapers are more likely to have lower levels of individual RD ($\beta = -0.047$) but higher levels of group RD ($\beta = 0.026$). Similarly, respondents who have completed a secondary education are more likely to have lower levels of individual RD ($\beta = -0.094$) but higher levels of group RD ($\beta = 0.097$). There is undoubtedly some correlation between these two variables but newspaper readership increases group RD even controlling for education. This supports hypothesis H2b and suggests that there are differences between individuals that experience higher levels of individual RD and those that experience higher levels of group RD.

Among Blacks individual RD is lower than other population groups. This may be the result of comparisons to other similarly or more impoverished individuals within the same group. Holding other factors constant, however, Blacks have higher levels of group RD than non-Blacks. More interesting is the change in RD levels over time. The coefficients of the year dummy variables in model (1) show

Table 5.3: Individual and group relative deprivation: OLS regression results

	(1)		(2)	
Gone without food	0.084**	(0.014)	-0.008	(0.019)
Gone without water	-0.017	(0.013)	-0.029+	(0.017)
Gone without medical care	0.056**	(0.013)	-0.015	(0.018)
Gone without cooking fuel	-0.006	(0.015)	-0.028	(0.020)
Gone without cash income	0.048**	(0.011)	-0.029*	(0.015)
Gone without electricity	0.030**	(0.011)	0.004	(0.015)
Member of community group	-0.044	(0.027)	0.144**	(0.036)
Newspaper news	-0.047**	(0.008)	0.026*	(0.011)
Interest in public affairs	-0.108**	(0.014)	0.102**	(0.019)
Local govt councilors listen	-0.112**	(0.012)	0.131**	(0.016)
Black African	-0.557**	(0.050)	0.174**	(0.064)
Coloured	-0.350**	(0.044)	0.079	(0.061)
Primary shcool completed	-0.054	(0.034)	-0.056	(0.044)
Secondary school completed	-0.094**	(0.025)	0.097**	(0.033)
Female	-0.019	(0.021)	0.028	(0.028)
Age	0.017**	(0.004)	-0.004	(0.005)
Age (squared)	-0.000**	(0.000)	0.000	(0.000)
Urban	-0.039	(0.026)	-0.024	(0.035)
2004	-0.304**	(0.053)	0.300**	(0.072)
2006	-0.334**	(0.055)	0.410**	(0.075)
2008	0.243**	(0.061)	-0.092	(0.075)
Observations	6,436		6,436	
R^2	0.172		0.111	
Adjusted R^2	0.168		0.106	

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; robust standard errors in parentheses; province dummy variables included but not displayed.

that in the aggregate individual RD was lower in 2004 and 2006. The coefficient of the interaction term between Black and 2004 (β = 0.311) has a higher absolute value than the coefficient for the 2004 indicator variable (β = 0.304). The interpretation is that the decrease in individual RD is largely driven by non-Black population groups and that among Blacks, individual RD decreased much less between 2002 and 2004. Individual RD did not decrease significantly for non-Blacks or Blacks between 2004 and 2006. Individual RD increased for non-Blacks and Blacks alike between 2006 and 2008 but increased less for Blacks.

In model (2) group RD was higher in 2004 and 2006 than in 2002 overall and even higher for Blacks than for non-Blacks. Group RD remained statistically constant in 2006 for non-Blacks and Blacks and decreased in 2008 overall, but decreased less for Blacks. The trends in individual and group RD are illustrated in Figure 5.9.

Respondents who believe that local government councilors listen to their concerns have lower levels of individual RD but higher levels of group RD. One explanation for these potentially confusing results is that the more impoverished respondents feel that they have less of a voice in local government while those that are better educated and less impoverished feel that they have more of a voice. In other words, there is likely an endogenous relationship between relative deprivation and feelings of voicelessness. This will be discussed more in the context of predicted protest participation.

Taken together, the results of these two models suggest that, controlling for population group and age, more impoverished and less educated individuals

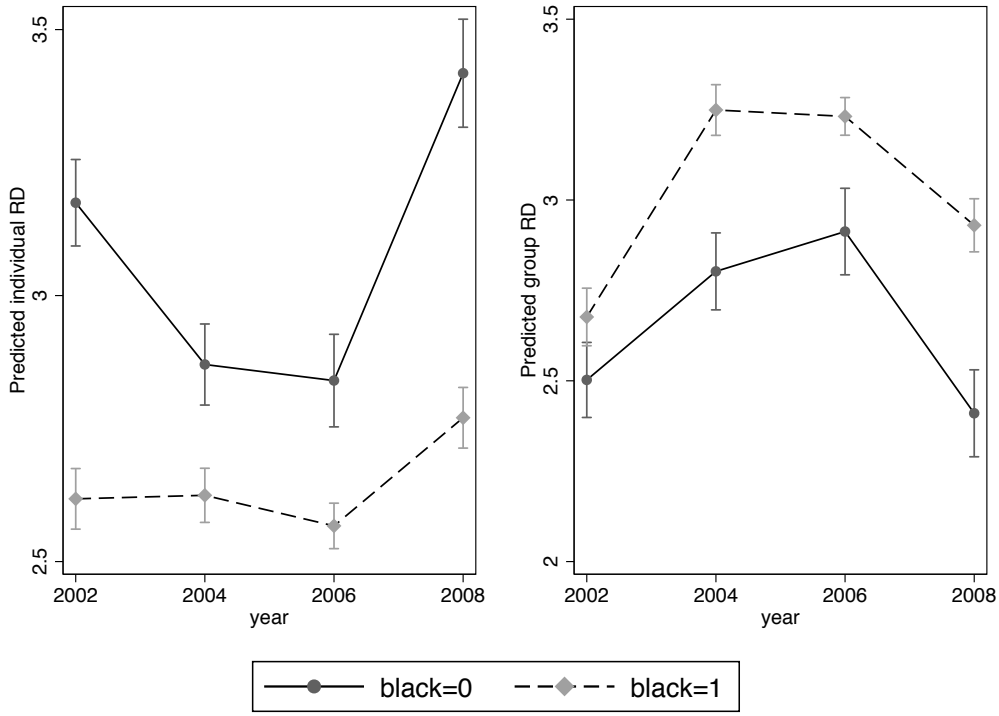


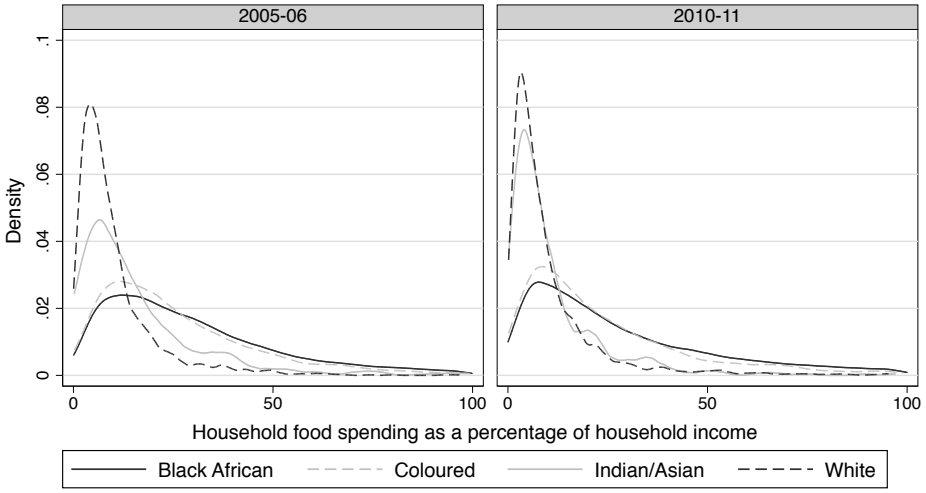
Figure 5.9: Predicted individual and group RD by year

have higher levels of individual RD but are less politically engaged than their less impoverished, better educated, and more informed counterparts. The latter group, however, have higher levels of group RD despite feeling that they have more voice in local government.

5.4.3 Food as a driver of relative deprivation

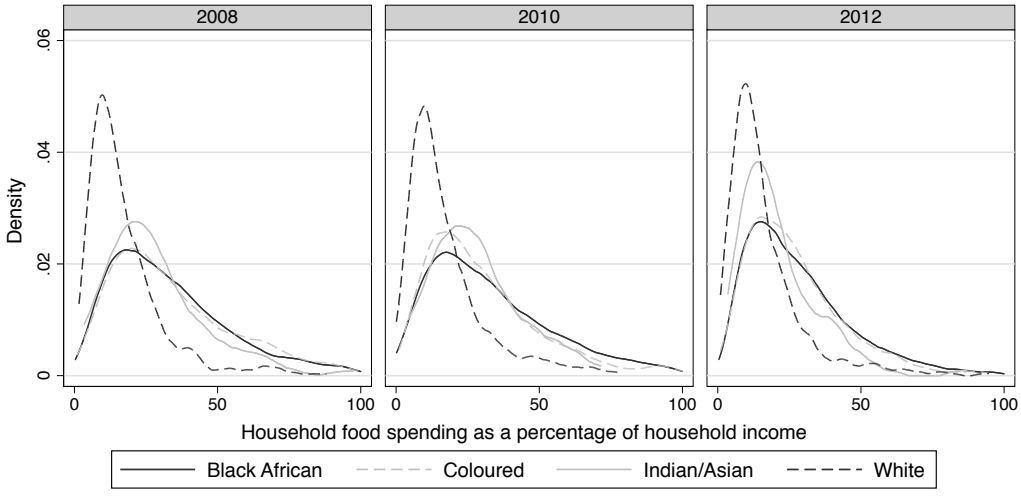
Responses to another set of survey questions included in the 2002 survey help explain the finding that lack of sufficient food is the strongest driver of individual RD. Respondents were asked to identify the top three answers to the question "In your opinion, what does it mean to be 'poor'?" Of the 2,400 respondents, 1,418 included "lack of food" as one of the their answers, making it by far the top response followed by "lack of money" included by 1,138 respondents, "lack of shelter" included by 1,035 respondents, and "lack of employment" included by 1,008 respondents.

Black South Africans spend a higher proportion of their income on food than other population groups. According to calculations using data from the Income and Expenditure Surveys (Statistics South Africa, 2000, 2006, 2011b), the mean of household food spending as a percentage of household income for White headed households was 10.18% (SD = 10.34) in 2005-06 and 10.37% (SD = 12.53) in 2010-11. In contrast the mean for Blacks was 29.09% (SD = 21.10) in 2005-06 and 27.60% (SD = 22.77) in 2010-11). (Differences in survey methodology made comparisons to earlier surveys difficult.) Figure 5.10 shows the distribution of household food spending as a percentage of household income for each of the



Epanechnikov kernel
Source: Income and Expenditure Surveys, Statistics South Africa

Figure 5.10: Household food spending by population group (IES)



Epanechnikov kernel
Source: National Income Dynamics Surveys, SALDRU

Figure 5.11: Household food spending by population group (NIDS)

four population groups. This graph illustrates that while the majority of the distribution of White headed households are concentrated around the mean, Blacks have much more variation with much more of the distribution on the higher end of the scale. Figure 5.11 shows the same distributions using the National Income Dynamics Surveys (SALDRU, 2008, 2010, 2012). Again, the graphs illustrate that Blacks on the whole spend a higher percentage of their household income on food.

These data on food spending are no doubt largely driven by the fact that poor households spend a much higher proportion of household income on food than wealthier households as discussed in the previous chapter and illustrated in Figure 4.4. Taken together with Afrobarometer responses about what it means to be poor, it suggest that social comparisons of one's relative position may be largely based on food security and food purchasing power. This helps explain why the LPI question regarding food seems to be the largest driver of individual relative deprivation.

A further analysis of the relationship between individual and group RD supports the mutual exclusivity hypothesis. There is a negative correlation between individual RD and group RD, Pearson's r = -0.3427. Figure 5.12 illustrates this negative and statistically significant relationship. Because the variables are survey response scales and are, therefore, ordinal rather than continuous, especially group RD, it was necessary to introduce some artificial noise in the graph to see the relationship. Nonetheless, it should be clear that individuals who have a stronger feeling of individual RD are less likely to experience strong group RD. I interpret this as evidence that individuals who compare their personal living conditions to

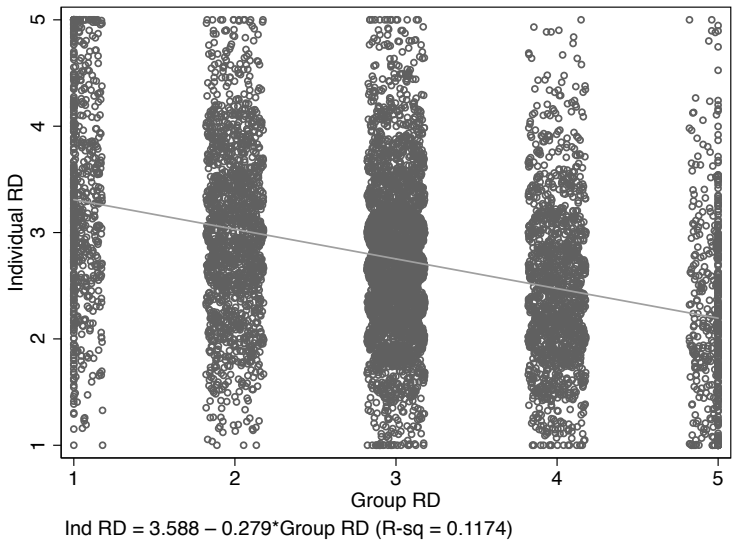


Figure 5.12: Relationship between individual and group RD

those of others within their own group are less likely to identify strongly with that group in comparisons to other groups.

5.4.4 The second stage: Protest participation

The next step was to test how individual RD and group RD contribute to protest participation. To do this, I examined an Afrobarmeter question phrased, "Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. If not, would you do this if you had the chance: Attended a demonstration or protest march?" Responses included: 0 = No, would never do this, 1=No, but would do if had the chance, 2 = Yes, once or twice, 3 = Yes, several times, 4 = Yes, often (Afrobarometer, 2002). I excluded refusals and missing data as well as responses

of "Don't know," which did not account for more than 2.25% of the observations in any of the survey rounds. I used the responses to this question to generate an indicator variable for whether the respondent said that he/she had participated in a demonstration or protest more than once or twice. In other words, the variable was coded as a success, "1", if the response was "3" or "4" and as a failure, "0", if it was anything else.

Because this variable is a binary response variable, I use probit regression. Logistic regression is also appropriate for binary outcome variables and yields similar results but only the probit results are presented for the sake of making valid comparisons to the results of the instrumental variable probit regression described below. I regressed all of the independent variables in the above analysis on the Protest binary variable. The results are shown in model (1) of Table 5.4. Of the LPI components only having gone without food is statistically significant and only at the α = 0.1 level. The coefficient is positive and suggest that respondents who had gone with food more often were more likely to have participated in protest more than once or twice. Being a member of a community group, reading a newspaper more often, having an interest in public affairs, and believing that local councilors listen to community concerns are also all positive and statistically significant at the α = 0.01 level. Again, most of the coefficients have no objective interpretation because of the subjective nature of the survey responses and the model specification. Comparisons between variables are possible but must be done with care because some variables are binaries while others are ordinal scales. So, for example, while it looks like being a member of a community group has more than twice the size

of the effect as reading a newspaper, the former is a binary and the later is scaled 0 to 4. The correct interpretation is that being a member of a community group has more than twice the effect of a one point move on the response scale for reading a newspaper but a smaller effect than a three point move.

Next, I conducted a probit analysis using the composite individual RD and group RD variables and omitted the drivers of each as determined in the above analysis. The results are presented in model (2) of Table 5.4. Neither RD variable is statistically significant but the coefficients for the demographic variables remained fairly stable. Only the coefficients for the year dummies changed. For example, compared to 2002, respondents in 2004 were more likely to have participated in protest more than twice in model (1) but that effect was not found in model (2). This is possibly because the increased RD nullifies the effect in 2004.

In model (3) I introduce an interaction term between individual and group RD. This helps control for the effect of the negative correlation between individual RD and group RD. Individuals with high levels of both individual and group RD are less likely to participate in protest (β = 0.066) and the effect is statistically significant at the α = 0.05 level. It remains unclear why individuals with high levels of both individual and group RD are less likely to protest, but controlling for the interaction effect, the effect of individual RD is positive (β = 0.156) and statistically significant at the α = 0.1 level and the effect of group RD is positive (β = 0.196) and statistically significant at the α = 0.05 level. This supports hypothesis H3.

Table 5.4: Protest participation: Probit regression results

	(1)		(2)		(3)	
Indvidual RD			-0.038	(0.034)	0.156+	(0.083)
Group RD			0.019	(0.026)	0.196**	(0.074)
Ind RD * Group RD					-0.066*	(0.026)
Gone without food	0.056+	(0.031)				
Gone without water	0.033	(0.030)				
Gone without medical care	0.019	(0.027)				
Gone without cooking fuel	0.006	(0.032)				
Gone without cash income	0.002	(0.024)				
Gone without electricity	0.007	(0.024)				
Member of community group	0.244**	(0.066)				
Newspaper news	0.107**	(0.020)				
Interest in public affairs	0.187**	(0.033)				
Local govt councilors listen	0.048+	(0.028)	0.063*	(0.028)	0.064*	(0.028)
Black African	0.706**	(0.129)	0.722**	(0.127)	0.737**	(0.129)
Coloured	0.264+	(0.153)	0.266+	(0.154)	0.273+	(0.156)
Primary shcool completed	0.162*	(0.080)	0.246**	(0.076)	0.256**	(0.076)
Secondary school completed	-0.081	(0.060)	-0.024	(0.058)	-0.029	(0.058)
Female	-0.117*	(0.052)	-0.167**	(0.050)	-0.167**	(0.050)
Age	0.027**	(0.009)	0.030**	(0.009)	0.030**	(0.009)
Age (squared)	-0.000**	(0.000)	-0.000**	(0.000)	-0.000**	(0.000)
Urban	0.009	(0.064)	0.019	(0.060)	0.018	(0.060)
2004	0.293**	(0.087)	0.086	(0.070)	0.090	(0.070)
2006	0.146+	(0.082)	0.006	(0.068)	0.005	(0.068)
2008	0.048	(0.087)	-0.077	(0.076)	-0.077	(0.076)
Observations	6,436		6,436		6,436	
Psuedo R^2	0.098		0.066		0.067	
Log psuedolikelihood	-2139		-2214		-2210	

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; robust standard errors in parentheses; province dummy variables included but not displayed.

In all of these probit models presented in Table 5.4 there is likely considerably endogeneity between the RD variables and the dependent variable. Participating in protest is likely to increase RD, especially group RD. Furthermore, as discussed above the circumstances in South Africa were considerably more volatile during 2004 than 2002. These circumstances are likely to contribute to both protest participation and RD and simply including a year dummy variable is not sufficient to cleanse the bias from this endogeneity.

As in chapter 3, one analytical method to minimize bias from endogeneity is to use an instrumental variable approach. Because only one endogenous IV can be specified at a time, I use this approach in all models in Table 5.5. In models (1) and (2), individual RD is instrumented using the LPI components because the earlier analysis revealed that these are all useful predictors of individual RD. In models (3) and (4) I use member of a community group, reading newspapers, and interest in public affairs as instruments for group RD. In all models, individual RD and group RD are positive and statistically significant. There is likely still bias in the estimate of the non-instrumented IV, group RD in model (2) and individual RD in model (4). The true effect of individual RD is between 0.505 and 0.424. The true effect of group RD is likely between 0.943 and 1.012. Therefore, I argue that while higher levels of individual RD contributes to likelihood of protest participation, higher levels of group RD is a stronger driver of protest participation.

As discussed in chapter 3, a good instrument must satisfy three assumptions: (1) exogeneity; (2) relevance; and (3) exclusivity. As evidenced in the first-stage models, these instruments satisfy the second assumption, relevance. That is, each

Table 5.5: Protest participation: Endogenous probit regression results

	(1)		(2)		(3)		(4)	
Indvidual RD	0.505**	(0.117)	0.424**	(0.129)			0.335**	(0.025)
Group RD			0.118**	(0.036)	0.943**	(0.031)	1.012**	(0.026)
Gone without food					0.030	(0.022)		
Gone without water					0.043*	(0.020)		
Gone without medical care					0.023	(0.021)		
Gone without cooking fuel					0.027	(0.023)		
Gone without cash income					0.027	(0.018)		
Gone without electricity					-0.000	(0.017)		
Member of community group	0.247**	(0.063)						
Newspaper news	0.123**	(0.019)						
Interest in public affairs	0.228**	(0.031)						
Local govt councilors listen	0.102**	(0.029)	0.107**	(0.029)	-0.106**	(0.022)	-0.084**	(0.020)
Black African	0.870**	(0.128)	0.801**	(0.125)	-0.043	(0.084)	0.042	(0.079)
Coloured	0.405**	(0.152)	0.372*	(0.152)	0.026	(0.092)	0.112	(0.085)
Primary shcool completed	0.179*	(0.076)	0.293**	(0.074)	0.135*	(0.055)	0.145**	(0.052)
Secondary school completed	-0.029	(0.061)	0.045	(0.060)	-0.118**	(0.039)	-0.099**	(0.037)
Female	-0.098*	(0.049)	-0.165**	(0.048)	-0.082*	(0.035)	-0.067*	(0.033)
Age	0.016	(0.010)	0.021*	(0.009)	0.015*	(0.006)	0.007	(0.006)
Age (squared)	-0.000*	(0.000)	-0.000**	(0.000)	-0.000*	(0.000)	-0.000	(0.000)
Urban	0.019	(0.061)	0.067	(0.060)	0.042	(0.042)	0.030	(0.039)
2004	0.300**	(0.082)	0.021	(0.067)	-0.329**	(0.051)	-0.343**	(0.048)
2006	0.194*	(0.079)	0.003	(0.065)	-0.394**	(0.047)	-0.389**	(0.044)
2008	-0.038	(0.082)	-0.188*	(0.075)	-0.110*	(0.053)	-0.160**	(0.049)
Observations	6,436		6,436		6,436		6,436	
Psuedo R^2	-9361		-9272		-11061		-10875	

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; robust standard errors in parentheses; province dummy variables included but not displayed; individual RD instrumented in models (1) and (2); group RD instrumented in models (3) and (4).

of the instruments does have a significant effect on RD. As for the other assumptions, the LPI components are plausible. One has difficulty imagining how protest participation could increase objective levels of poverty. Similarly, objective poverty would only effect protest participation by increasing individual RD.

The instruments for group RD are admittedly more problematic. Community involvement, newspaper consumption, and interest in public affairs could increase protest participation by facilitating mobilization rather than increasing RD. Furthermore, protest participation could cause individuals to become more involved in the community, pay closer attention to news media, or have an increased interest in public affairs. These theoretical difficulties are limitations on the strength of the findings, but are set aside for the remainder of this dissertation.

Taken as a whole, I argue that relative deprivation is a significant driver of micro-level decisions to participate in protest activities in post-apartheid South Africa but that individual RD and group RD are based on different factors. Protest participants are likely to fall into two categories: (1) the most impoverished and least educated community residents; and (2) those that are better educated, materially better off, more informed about the political and economic situation of the community, and more concerned with the position of their group.

I further argue that objective levels of poverty as measured by the Lived Poverty Index contribute to individual RD but are not the only drivers. Subjective comparisons to others are also a significant factor and at the individual level these comparisons are likely to be to other individuals within one's own population group. For example, Blacks tend to compare their own personal conditions to other Blacks

and in the aggregate tend to judge their personal situation favorably. Temporal comparisons to the past and expectations for the future are also important components of individual RD. Unrealized, and possibly unrealistic, expectations of a better life in post-apartheid South Africa has contributed to higher levels of RD.

Finally, I argue that group RD is higher among those that are in a better position materially and better informed about the community. Secondary education contributes positively to both of these aspects. Such individuals are likely to be more concerned about the community as a whole.

The strength of these findings is limited. Because the survey did not ask about the timing of protest, it is difficult to draw causal inferences. For example, many respondents may have participated in numerous protests in the apartheid era and responded accordingly. Clearly, having higher levels of RD in the 2000s could not cause that participation. It is plausible, however, that individuals who were more active in the apartheid struggle might have higher expectations for post-apartheid redistribution and, therefore, higher levels of RD today. For these reasons, it is necessary to conduct a focused study among a community that has been the site of numerous service delivery protests over the past several years. This is the subject of the next chapter.

5.5 Conclusion

In this chapter, I have argued that individual RD and group RD should be considered separately and that changes in income inequality have affected each differently. According to data from the Afrobarometer surveys, individual RD was on

the decline at the beginning of the 2000s but increased between 2006 and 2008. The opposite is true for group RD. These changes are in part the result of the deracialization of income equality in South Africa.

I presented evidence that both individual and group RD are drivers of micro-level decisions to participate in protest activity. The strongest predictor of individual RD is food insecurity. Those that are more food insecure are more likely to have higher levels of individual RD and steadily rising food prices put more pressure on poor, Black households that devote a larger proportion of their household income to food. Food insecurity is, therefore, the strongest indirect predictor of participation in protest activity despite the relative rarity of food among the cited grievances in service delivery protests.

Food insecurity may also play a role in protest participation as an indirect driver of group RD. Afrobarometer survey respondents, regardless of their own circumstances, associated food insecurity with poverty. In chapter 4 I observed that in 2008 rising food prices were a rallying call from labor unions and that this was often linked to other issues. Members of labor unions are not, however, the most impoverished and food insecure. In other words, food insecurity might contribute to group RD when one observes other members of one's identity group struggling to meet their food needs and rising food prices might contribute to both individual and group RD because of the impact not only on one's own finances but also on other members of one's identity group.

The next chapter will test the direct effects of individual food insecurity on decisions to participate in protest through an original survey in Cape Town, South

Africa. The survey also examines the effects of food insecurity in comparison to other drivers of individual and group RD. This interaction of food insecurity with political affiliations is also examined. The indirect effects of food insecurity and rising food prices on protest participation through group RD are, however, more difficult to test without a longitudinal study.

Chapter 6

Determinants of individual participation in service delivery protest: Survey evidence from Cape Town, South Africa

6.1 Introduction

This chapter presents evidence from a survey conducted in late-2014 in the Cape Flats, a protest hotspot in Cape Town, South Africa, to identify common grievances that lead to protest participation, individual characteristics that make people more likely to engage in protest, and group memberships that contribute to protest mobilization. In the end, this study finds that contrary to the common perception of protesters as angry and violent young men who throw feces from overpasses (BBC, 2013) and burn buses on freeways (Nombembe et al., 2014), half of the survey respondents who have participated in protests in the past year were over the age of 36 and nearly half, 46.53% were women. Using logistic analysis with a binary outcome of participation in service delivery protest, this study finds that living in informal housing, experiencing food insecurity, and lack of acceptable employment are all significant sources of grievance that drive protest participation. It also finds that, although some protesters may have defected from the formal political process, those that are the most politically engaged are most likely to participate

in protest. Finally, I provide some evidence that political parties and community policing organizations are important mobilizing forces behind protests.

6.2 Earlier survey studies of micro-level determinants of protest participation

The study of micro-level participation in protest activity has generally either been through indirect sources or through interviews with protest participants. There are very few studies that have sought to randomly survey populations to determine the difference between those that choose to participate in protest and those that choose not to participate. Two studies that did conduct such surveys are discussed here.

In a survey of participants and non-participants Christian-Muslim riots in Kaduna and Jos, Nigeria, Scacco (2008) found that individual grievances alone were a weak predictor of participation in riots but were not a primary driver. Connection to other riot participants and attendance at community meetings were a stronger predictor, but it was difficult to distinguish whether this was a causal connection or merely that individual personality traits were the driver of both community network connections and riot participation. The interaction between grievance and community networks was the strongest predictor of riot participation. The author argues "what distinguishes the broader class of people with grievances from actual rioters is the 'pull' factor of neighborhood-level social networks. People who are centrally embedded in local social networks are more likely to be pulled to

the battlefront than people who are relatively marginalized in their communities" (Scacco, 2008, 25).

In a 2011, Claassen (2014) conducted a survey of residents of Alexandra, a Black township in Johannesburg, about participation in the anti-immigrant violence of 2008. He found that, in contradiction to the "angry young man theory," participants were not especially young and included a substantial number of women. Also, participants were more likely to be members of the opposition party, and to attend community policing meetings. It is, however, unclear from the analysis whether this is causal or both participation in party politics, community meetings, and communal violence are all driven by some other latent variable.

6.3 Theory and Hypotheses

This chapter focuses on the micro-level decision to participate in protest and relies primarily on the Gurr three-stage process of political action (Gurr, 1971, 2012), with influences from social identity theory (Tajfel and Turner, 1986), the dynamics of contention approach (McAdam et al., 2001; Tilly and Tarrow, 2006), and the structural-cognitive model (Opp, 2009). The three stages are: (1) the development of discontent; (2) the politicization of discontent; and (3) the actualization of protest. In the first stage, potential participants in political protest develop discontent based on certain deprivation-based grievances. This discontent is necessary but for it to lead to political action it must be focused on political actors. That is, aggrieved individuals or groups must believe that they can obtain redress from a specific actor and that the anticipated action can achieve the desired result based

on past success of such action. Finally, politicized discontent must be actualized. That is aggrieved individuals with a political target must be mobilized into group action. This process is not, however, strictly linear. There are dynamic interactions between the three stages and between groups as individuals move from group to group. For example, members of community groups may be more likely to develop group-based grievances based on the deprivation of other group members. Or previous protesters may be more likely to focus discontent on political actors found to be amenable to demands.

Based on this theory, I develop four testable hypotheses. The first of which is:

> H1: *Individuals are more likely to participate in protest if they experience one or more of three objective sources of grievance: (a) food insecurity, (b) un- or underemployment, or (c) living in informal housing.*

In the previous chapter, I found evidence in the Afrobarometer surveys that lack of food and lack of a cash income are predictors of individual RD but only food insecurity was found to be a direct correlate with protest participation. Another major source of grievance in South Africa has been and continues to be access to affordable housing. This hypothesis tests the direct and policy actionable conditions of poverty rather than the indirect sociological link.

The second hypothesis is related to the politicization of protest. While there was observable tension between participating in or defecting from the electoral process in the SECC, the CCF, and the AEC, as discussed in chapter 5, all three campaigns ultimately supported continuing political engagement. The two years of service delivery protests preceding the 2006 municipal elections were widely seen as "a systematic revolt against" the ANC Booysen (2007, 21). Nonetheless, in five of the directly affected municipalities turnout was maintained and support for the ANC increased. Booysen (2007, 22) argued that this was evidence of "dual-action repertoires to effect service delivery." As was discussed in chapter 4, turnout in national and municipal elections has not significantly fallen in the election since 2004. My second hypothesis is:

> H2: *Individuals that are more engaged in the election process are more likely to participate in protest.*

Third, membership in community organizations and political parties can effect protest participation at all three stages. First, in chapter 5 I found evidence that membership in community groups increases group relative deprivation. Second, the Democtratic Alliance (DA) the main opposition party, has repeatedly accused the ANC of using service delivery grievances to foment dissent against the municipal government. Third, resource mobilization theory predicts that political parties and community organizations are important mobilizing agents for political protest (Eisinger, 1973; Tilly, 1978). This gives rise to the third major hypothesis and a sub-hypothesis:

H3: Individuals that are members or frequent participants in political parties or other community organizations are more likely to participate in protest.

H3a: Individuals identify strongly with the ANC are more likely to participate in protest than those that identify strongly with the DA.

6.4 Survey Methods and Data

From October through December of 2014, I conducted individual level surveys in Cape Town, South Africa. The intent was to determine individual level differences that distinguish protest participants from non-participants. The target area for the study was an area with a high concentration of protest activity rather than the entire area of Cape Town.

6.4.1 Questionnaire design

The questionnaire consisted of four modules: (1) demographic and household characteristics; (2) community affiliations and political attitudes; (3) food security; and (4) protest participation. The demographic and household characteristics module contained questions on basic demographic data, e.g. age, population group, origin, and home language, and socio-economic status, e.g. education level and employment status, of the respondent. It also elicits data about the household, e.g. household size; number of children, number of income earners, dwelling type, tenure status, and source household drinking water. Many of these questions were drawn directly from on based on questions from the South African census questionnaire (Statistics South Africa, 2011a). Data is also collected about assets owned by

the household; the poverty level of the household using the Lived Poverty Index battery of questions from the Afrobarometer surveys (Afrobarometer, 2011); and the household income.

The community affiliations and political attitudes module collects data about membership and frequency of participation in a different community and political organizations, e.g. religious groups, labour unions, community policing groups, parent/teacher associations, volunteer or development organizations, sports leagues, arts or theatre groups, and vigilante groups. Again using questions based on those included in the Afrobarometer questionnaire, data is elicited about whether the respondent identifies closely with any particular party and how much the respondent trusts specific political institutions and actors (Afrobarometer, 2011).

Food security was measured with a battery of six questions designed by the USDA USDA (2012). Also included in the food security module were a series of questions about food consumption, a section designed to measure household expenditures on food, and questions about individual perceptions of changes in food prices and changes in consumption of particular food items due to changing prices.

The protest participation module began with questions about whether the respondent had ever participated in any form of protest. These were followed by questions about participation in protest in the past year. These included questions about the primary issue of the protest, advance notice of the action and how the respondent learned of it, and whether the action involved violence. In order to encourage truthful answers the respondent was not asked directly whether he or she

had engaged in violence. Rather, four questions were asked about what occurred during the action, including whether property was damaged, whether anyone was physically injured, whether the police were present, and whether the police used force.

The order of the food module and the protest participation module was alternated on even and odd days in order to ensure no systematic bias in responses as a result of question order. The full questionnaire is included in Appendix C.

6.4.2 The study area

I chose to focus on the Cape Flats after a geoanalysis of protest events in Cape Town. The Armed Conflict and Event Location Dataset (ACLED) is a dataset of conflict events in Africa sourced from an online search of local media sources. ACLED contains events coded to as "riots" and "protests" (Raleigh et al., 2010). I used this dataset to identify the study area but was initially faced with some challenges. ACLED contains geocoordinates, i.e. latitude and longitude, of each event. An initial analysis of a subset of these geocoordinates, however, found that these coordinates were often inaccurate and identified the center of the reference administrative division rather than the actual location of the event. For the purposes of this high resolution analysis this was not sufficient. ACLED also contains considerably more events beginning in January 2012 for reasons that remain unclear. Together with two research assistants[1] I re-geocoded over 800 events between January 2012 and October 2014.

[1] Daniel G. Moody and Matthias Krönke, graduate students at UCT.

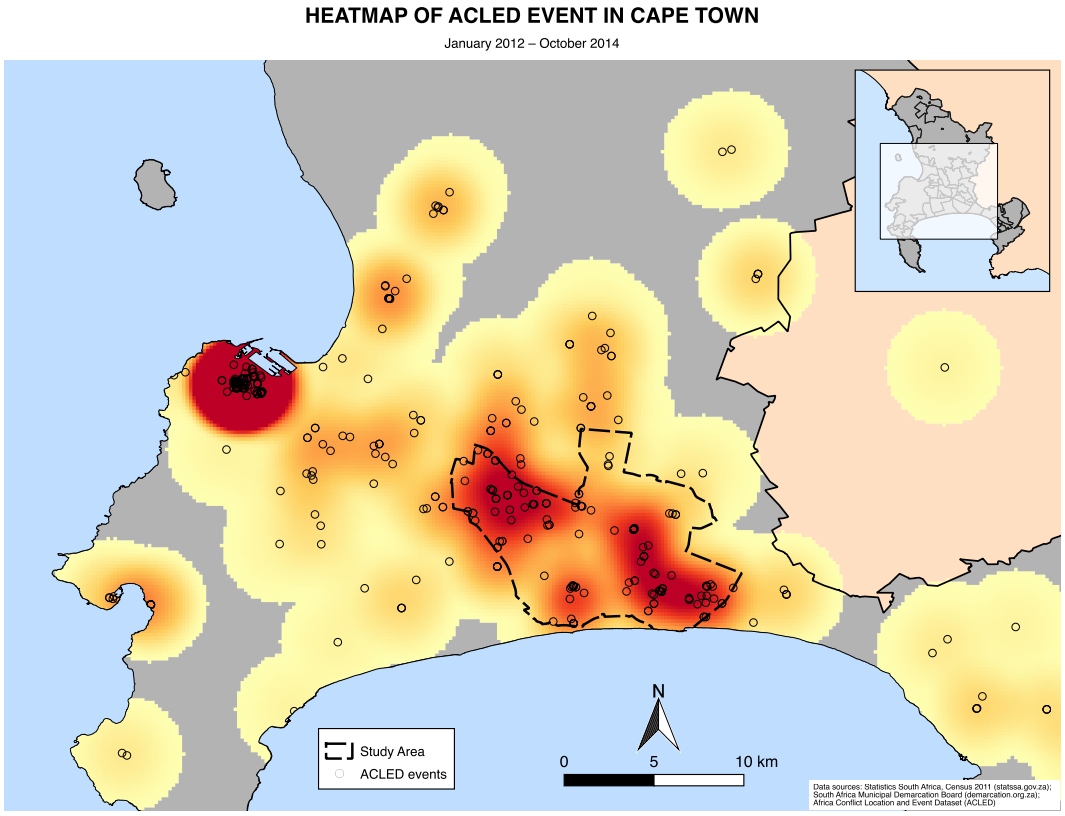


Figure 6.1: Heatmap of protest events in Cape Town, Jan. 2012 – Oct. 2014

I then mapped these and generated a heatmap to identified the highest concentration of events. The resulting heatmap is shown in Figure 6.1. The highest concentration of events was in the Central Business District where Parliament, the Provincial government offices, and the Municipal government offices are all located. The events here are, for the most part, events that people have taken to those government buildings. The next highest concentration was on the Cape Flats. The participants in these events are generally residents from the area.

Under South Africa's apartheid regime prior to 1990, Black and Coloured

populations of Cape Town were forced to live in designated townships, the largest concentration of which were located on the windswept, sandy plain just north of the False Bay coastline and southeast of Cape Town's central business district and the wealthier white suburbs in the more desirable real estate in the shadow of Table Mountain. Today the Cape Flats still consists of a collection of highly segregated areas, either Black or Coloured, that conform to the old township borders, which are divided by arterial roads and railroads. The most impoverished areas of Cape Town, the largest informal settlements, and the areas of highest crime rates are on the Cape Flats. Also, much of the political unrest is centered here.

The South African national government today is controlled by the African National Congress (ANC), while the Democratic Alliance (DA), the main opposition party, controls the Cape Town municipal government as well as the Western Cape provincial government. The Economic Freedom Fighters (EFF) is a new party formed by Julius Malema, the former leader of the ANC Youth League, after he was convicted of hate speech and ejected by the ANC. Population group is highly predictive of party affiliation. Whites and Coloureds are likely to support the DA while Blacks are highly likely to support the ANC or the EFF. In Cape Town the percentage of the population by ward that identifies as Black is highly correlated with the percentage of the vote in the 2014 national elections cast for the ANC, Pearson's r of 0.9787. Similarly, the percentage of the population that identifies as Coloured or white is highly correlated with the percentage of vote received by the DA, Pearson's r of 0.9735. (See Figure 6.2.) Additionally, many in the Coloured community are Muslim and especially active in pro-Gaza demonstrations of the past year.

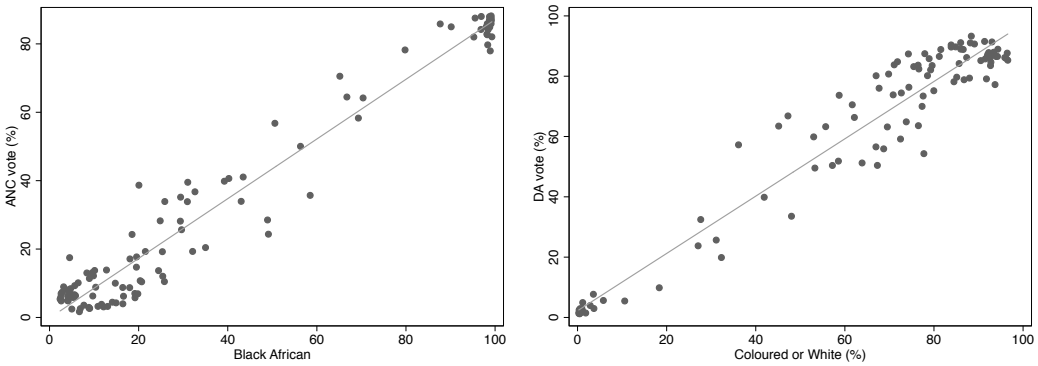


Figure 6.2: Correlation between population group and party support by ward

6.4.3 Sampling design

An historic legacy of apartheid is that Cape Town today remains an extremely segregated city. According to the 2011 Census over half of Cape Town's 5,339 enumeration areas[2] were over 90% comprised of a single population group and over three quarters were more than 73% comprised of a single group. Because of this segregation, the party allegiances of population groups, and the political context protest in Cape Town, I used a stratified sampling design to ensure representation of population groups in the target areas.

The strata were selected based on census enumeration areas in the Cape Flats. Three strata were delineated around traditionally Black townships: Gugulethu, Nyanga/Crossroads, and Khayelitsha; two were delineated based on traditionally Coloured townships: Manenberg and Mitchells Plain; and one was a newer more

[2]An enumeration area is the smallest unit of the sampling frame used by the Census. In the Cape Town Municipality the mean population by enumeration area is 699 with a median of 660, a minimum of 72, and a maximum of 1,737.

integrated area: Delft (see Figure C.1). I attempted to delineate areas that were similar in income but more informal settlements are found in the Black townships (see Figure C.2). As expected, ANC support is high in the Black strata while the Coloured strata tend to support the DA (see Figure C.3).

The target population of the survey was defined as the adult South African citizens of economically active age, i.e. 18 to 64, residing in the Cape Flats area. Because of the segregated nature of the Cape Flats townships, I used a stratified sampling design to ensure comparable representation of population groups. Six strata were delineated in three pairs that were roughly matched by household income, concentration of informal housing, access to piped water, and education level but one of which was predominantly Coloured and one that was predominantly Black. Table 6.1 shows the demographics of the population by stratum. Enumeration areas were randomly selected and ranked from each stratum and assigned to one of two teams of field workers by stratum.

6.5 Survey implementation

Training was conducted the first week of November and fieldwork began on November 10 and went through December 2, 2014. It involved ten fieldworkers, eight enumerators[3] and two team leaders.[4] The fieldworkers were split into two teams, one team of Black Xhosa speakers who worked in the predominantly

[3]Mona Africa, Rasheda Ariefdien, Andrew Bantham, Amanda Malan, Lonwabo Nduku, Loyiso Nduku, Nobesuthu Sigcu, and Mkuseli Sofika.

[4]Bernadette Johnson and Shepherd Ngqakayi.

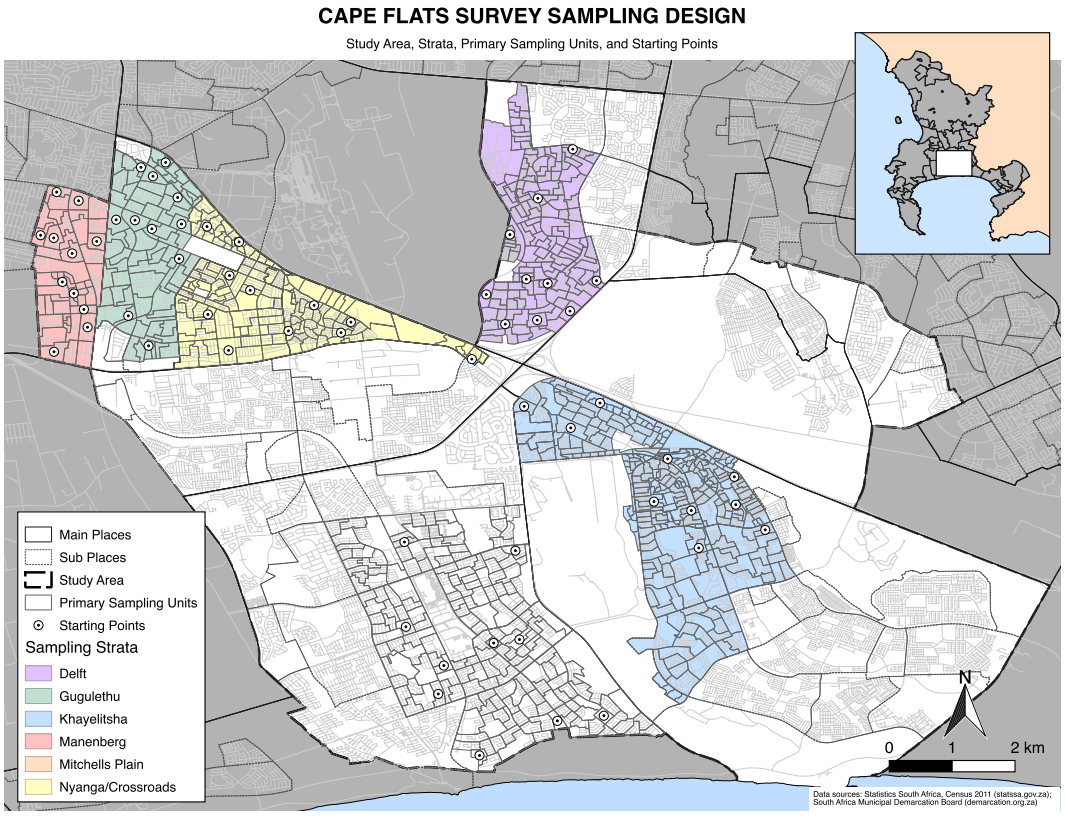


Figure 6.3: Cape Flats Survey Sampling Design

Table 6.1: Strata demographics

	Delft	Gugulethu	Khayelitsha	Manenberg	Mitchells Plain	Nyanga/ Crossroads	TOTAL
I: GENDER							
Male	32,553	19,659	59,694	15,042	54,027	34,014	214,989
Female	34,497	21,603	64,140	16,839	58,515	35,922	231,516
II: POPULATION GROUP							
Black	43,215	40,548	122,538	3,972	4,920	68,853	284,046
Coloured	21,792	399	516	26,205	104,955	744	154,611
Asian	219	30	102	186	552	21	1,110
White	81	24	75	21	129	60	390
Other	2,103	282	1,029	1,197	1,413	507	6,531
III: AGE GROUP							
Age 18-24	16,140	8,667	31,320	7,389	24,387	17,388	105,291
Age 25-34	23,091	13,116	42,885	8,220	30,570	25,074	142,956
Age 35-44	15,972	8,748	25,188	6,861	21,279	14,151	92,199
Age 45-54	9,117	6,744	15,903	5,931	21,624	8,238	67,557
Age 55-64	2,730	3,987	8,538	3,480	14,682	5,085	38,502
TOTAL	67,050	41,262	123,834	31,881	112,542	69,936	446,505

Source: Statistics South Africa, Census 2011

Black areas and another team of Coloured Afrikaans speakers who worked in the predominantly Coloured areas.

Each team was assigned two enumeration areas per day, one in the morning and one in the afternoon. The field teams began their walk patterns at the nearest intersection to each centerpoint as identified using Google Maps and skipped three houses between interviews. (The protocol instructions are included in Appendix C.) Enumerators alternated between male and female respondents and selected a respondent of the appropriate gender by the next birthdate of all eligible members of each randomly selected household. Figure 6.3 is a map of the study area, the sampling strata and PSUs, and the walk pattern starting points. The Selection Instructions are included in Appendix C.

Table 6.2: Survey response

Item	Number	Per cent
Completed survey	1,390	52.65
Household / premises vacant or locked	429	16.25
No eligible household members	134	5.08
Refused / did not have time	296	11.21
Did not fit gender requirement	368	13.94
Not a citizen / spoke a foreign language	17	0.64
Deaf / did not speak a survey language	6	0.23
Total	2,640	100.00

The surveys were conducted on Android tablets that were connected to a cellular network and the questionnaire was implemented using Google Forms. I was able to monitor the data collection in real time and conduct data checks every couple of days. The survey took between 20 and 45 minutes to complete. In the end, the teams made 2,640 calls and successfully completed 1,390 surveys for a response rate of 52.65% (see Table 6.2).

6.5.1 Data

The final sample consists of 1,380 observations from 704 female respondents and 676 male respondents. The sampling strategy resulted in a survey sample that roughly matches the target population when weighted according to the stratification design.

Panel I of Table 6.3 shows that the target population is 48.15% male and 51.85% female. The weighted sample is 49.22% male and 50.78% female. Panel II shows that 63.59% of the target population is Black and 34.61% is Coloured.

Table 6.3: Stratified sample demographics

	Population	Sample	Corrected for Stratified Survey Design			
			Mean	Std. error	95% conf. interval	
I: GENDER						
Male	48.15%	48.99%	49.22%	0.53%	48.16%	50.28%
Female	51.85%	51.01%	50.78%	0.53%	49.72%	51.84%
II: POPULATION GROUP						
Black	63.59%	54.71%	58.63%	2.57%	53.49%	63.78%
Coloured	34.61%	44.93%	40.96%	2.53%	35.90%	46.03%
Asian	0.25%	0.29%	0.35%	0.18%	-0.02%	0.72%
White	0.09%	0.07%	0.05%	0.05%	-0.05%	0.16%
Other	1.46%	0.00%	0.00%	0.00%	0.00%	0.00%
III: AGE GROUP						
Age 18–24	23.58%	18.41%	20.33%	1.36%	17.61%	23.06%
Age 25–34	32.02%	29.28%	29.51%	1.48%	26.55%	32.46%
Age 35–44	20.65%	17.54%	17.55%	1.38%	14.77%	20.32%
Age 45–54	15.13%	17.39%	15.69%	1.36%	12.97%	18.42%
Age 55–64	8.62%	17.39%	16.92%	1.04%	14.84%	19.00%

The final sample consists of 1,380 respondents of which 755 were Black, 620 were Coloured respondents, four were Indian/Asian, and one was white. After the sample is weighted it is, however, 58.63% Black and 40.96% Coloured, which is statistically similar to the target population. Panel III shows that the 18–24 and 35–44 age groups are slightly underrepresented in the sample and the 55–64 age group is somewhat overrepresented compared to the target population. Nonetheless, on the whole the sample is comparable enough to the population to yield valid results.

Also as expected the party distribution closely aligns with strata. The majority of respondents, 931, said that they did not identify closely with any particular party. Of those that did identify with a party, 311 identified with the ANC, 89 identified with the DA, 25 identified with the EFF, and 22 identified with another party. Unsurprisingly, the majority of those who identify with the ANC reside in Khayelitsha, Nyanga/Crossroads and Gugulethu while those that identify with the DA reside in Delft, Mitchells Plain, or Manenberg. This concentration of party support is even more apparent by examining the responses of individuals when asked for which party they would vote if a presidential election were held tomorrow (see Figure 6.4).

The first objective of the survey was to describe the Cape Flats residents that participate in protest activities and the issues over which they protest. Of the 1,380 respondents in the final sample, 397 (28.77%) reported that they had participated in some sort of protest during their lifetime. By comparison, in the Afrobarometer Round 5 survey of South Africa conducted in 2011, 9.60% of respondents said

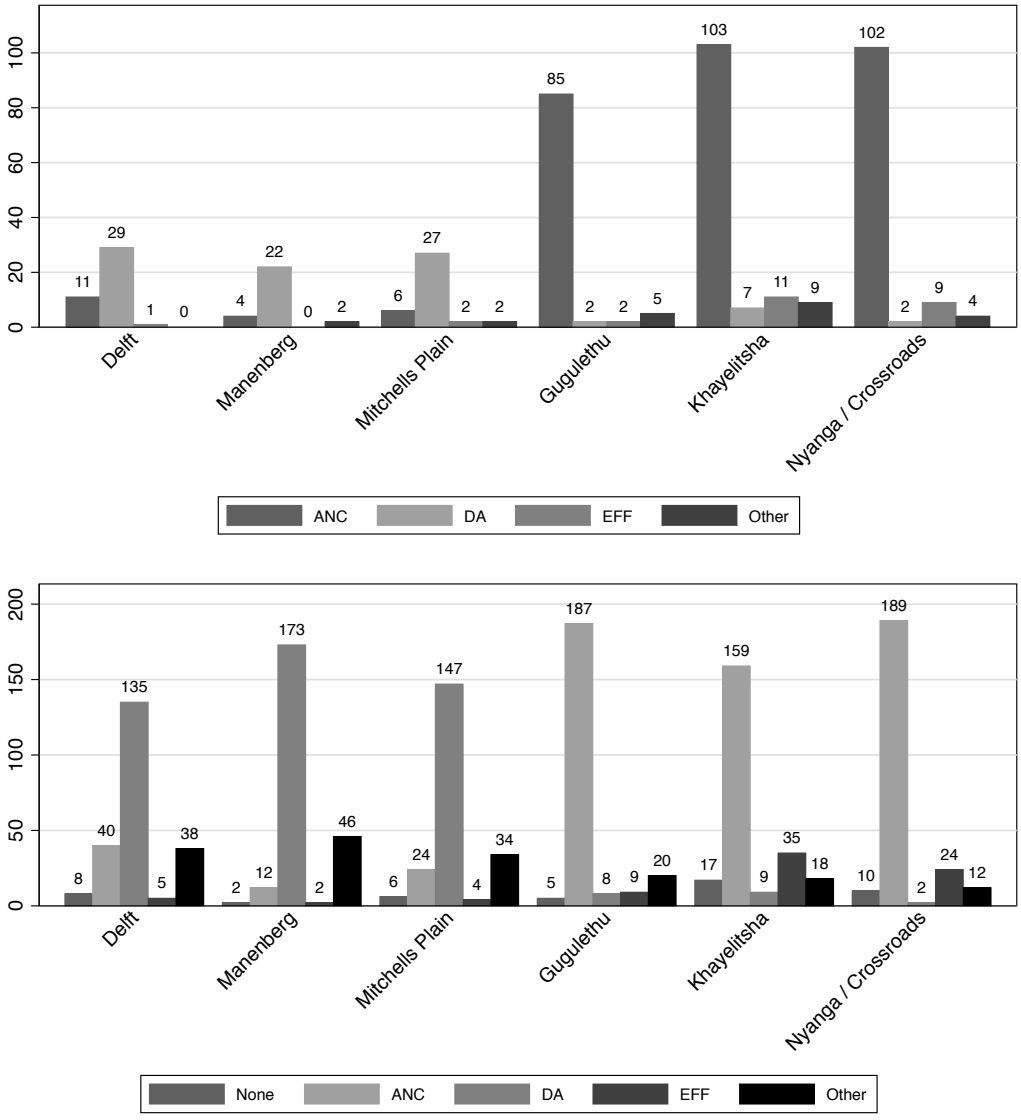


Figure 6.4: Party identification and favored party by stratum

they had "attended a demonstration or protest march" at least once in their lifetimes; 8.39% said they had gone on strike in order to demand a higher salary or better working conditions" at least once; and 3.19% said they had "used force or violence for a political cause at least once. After accounting for overlap in these questions, 12.59% of respondents reported that they had engaged in one of these behaviors at least once in their lifetime (Afrobarometer, 2011). The proportion that reported participating in protest in the current survey is more than twice that from the Afrobarometer survey. This is, however, to be expected because the Afrobarometer survey is a representative sample of the entire South African population while the target population of the current survey was chosen because it's members are more likely to have participated in protest and the questionnaire was designed to elicit responses about participation. Table 6.4 shows that when the sample is weighted slightly more lifetime protest participants were male. This difference is not statistically significant in the raw data (Pearson χ^2 statistic of 2.2208 with a p-value of 0.1360). When it is weighted, however, the difference is marginally significant (Pearson χ^2 statistic of 5.0923 with a p-value of 0.1360), which provides some initial evidence that men are more likely to participate in protest than women.

Figure 6.5 shows the issues about which respondents reported that they have protested.[5] The most contentious issue has historically been the issue of *cost or availability of housing*, over which 133 people reported that they have protested at

[5]Respondents who reported that they had ever participated in protest were asked whether they had participated in protest over the list of issues shown in Figure 6.5. As such, respondents could reply that they had protested over multiple issues. The sum of all reported issues is, therefore, greater than the number of lifetime protest participants, 397.

Table 6.4: Gender and protest participation in respondent's lifetime

Protested in one's lifetime	Gender		
	Female	Male	Total
No	514 (52.29%)	469 (47.71%)	983
Yes	190 (47.86%)	207 (52.14%)	397
Total	704 (51.01%)	676 (48.99%)	1,380

Row percentages given in parentheses.

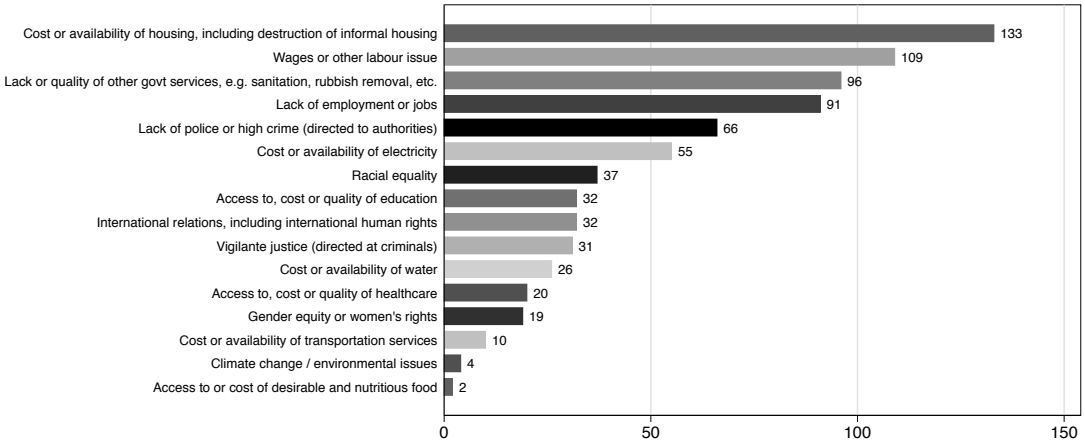


Figure 6.5: Reported issues of protest in respondent's lifetime

some point. The issue of *wages or other labour issue* follows this closely, but it should be noted that this was separated in the list of issues from the *lack of employment or jobs*, which is the fourth most reported issue. Only two respondents reported that they have protested over access to or cost of desirable and nutritious food.

This adds context but the focus of the survey was recent protest. Out of the 1,380 survey respondents, 144 (10.43%) reported that they have participated in

protest in the past year. Table 6.5 shows that, like lifetime protest, slightly more males have participated in protest in the past year than females but again the difference is not statistically significant.[6] The weighted mean age of protest participants is 36.66 years, which is not statistically different from the mean age of non-participants, 37.97 years.[7] These basic results are consistent with Claassen (2014), which found that 8.5% of Alexandra survey respondents had participated in communal violence in 2008, that the median age of participants was 34 and 30% of participants were women. Like Claassen (2014), the results provide initial evidence against the theory that protest is the arena of angry young men, although this does not necessarily hold if limited to violent protest as discussed later. Additionally, of those that have participated in protest in the past year, only 37 had done so only once or twice; 74 said they have done so more than twice but fewer than ten times; and 20 said they have done so more at least ten times but fewer than 20; and nine said they have done so at least 20 times. This suggests that many of the protests on the Cape Flats involve the same repeat protesters.

Respondents who said they had participated in protest in the past year were asked to report the primary issue of the last protest activity in which they participated, regardless of how many protests in which they have participated in the past year. Figure 6.6 shows that the *cost or availability of affordable housing* has also been a contentious issue in the past year. But an equal number of respondents said they have protested over international relations and the lack of other government

[6]The Pearson χ^2 statistic is 1.2951 with a p-value of 0.2550. When weighted the Pearson χ^2 statistic is 3.0425 with a p-value of 0.1518.

[7]The unweighted mean age is 38.16, the median is 36 and the inter-quartile range is 29 to 47.

Table 6.5: Gender and protest participation in the past year

Protested in the past year	Gender		
	Female	Male	Total
No	637 (51.54%)	599 (48.46%)	1,236
Yes	67 (46.53%)	77 (53.47%)	144
Total	704 (51.01%)	676 (48.99%)	1,380

Row percentages given in parentheses.

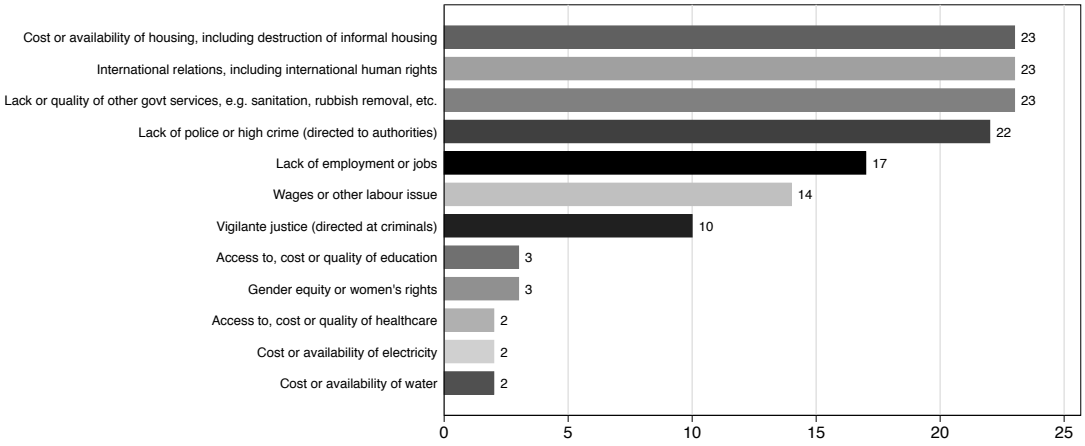


Figure 6.6: Reported issues of protest in the past year

services. The issue of *cost or availability of desirable and nutritious food* did not appear on the list of issues of the most recent protest.

6.6 Analysis and results

Because different issues lead to different types of protest directed at different targets, I divided this list of issues into four different types of protest for further analysis. International relations issues are concerns about that rights or treatment of

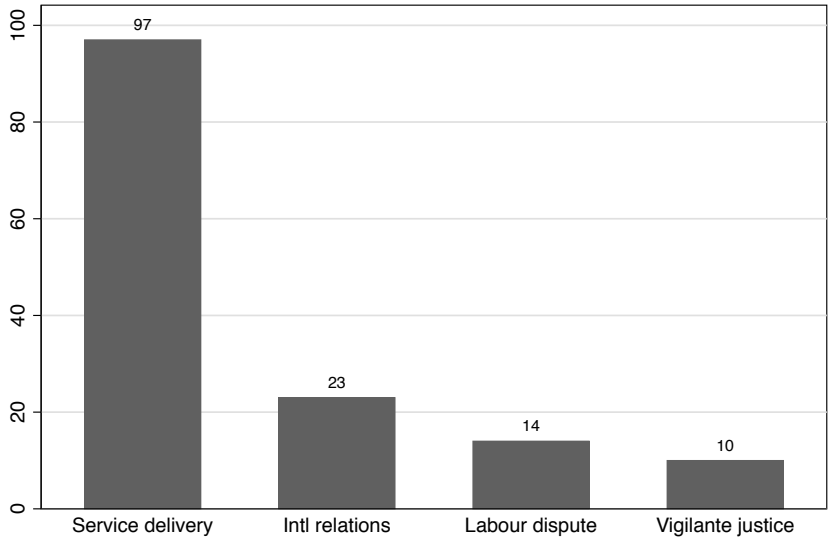


Figure 6.7: Protest by category

those outside of South Africa and are directed at the national government, foreign governments, or private companies. This was classified as a distinct type of protest. The category of wages or other labour issues was separate from lack of employment or jobs because protests over the former generally take the form of labour strikes, are directed at employers, and are generally organized by labour unions. In contrast, protests over the lack of employment are not organized by labour unions and are often directed at local or national government authorities. Vigilante justice is a product of the lack of adequate police, but it is directed at the criminals themselves rather than the authorities. For that reason, it is considered a separate category of protest. The remaining issues are grouped together under the broad category of service delivery protest. Figure 6.7 shows the four categories of protest.

The question then becomes who participates in these different types of protest.

Table 6.6: Participant age and gender by protest category

	N	Mean age in years	Std err	Proportion male	Std err
No protest	1,236	38.42	0.40	48.46%	1.42%
Service delivery	97	37.55	1.16	53.61%	5.09%
International relations	23	39.13	2.80	65.22%	10.15%
Labour dispute	14	37.79	2.92	35.71%	13.29%
Vigilante justice	10	42.40	3.79	50.00%	16.67%
Total observations	1,380				

These means and standard errors are based on the raw data and not weighted. When it is weighted there is still no statistically significant difference.

The mean age of protest participants and the gender distribution by protest type is shown in Table 6.6. Without controlling for other factors, there is no statistically significant difference in age or gender between protest participants and non-participants.

The probability with standard errors of a Cape Flats resident participating in different types of protest is shown by stratum in Figure 6.8; by gender in Figure 6.9; by age group in Figure 6.10; by population group in Figure 6.11; by party identification in Figure 6.12; and by food security category in Figure 6.13. Residents of Khayelitsha were the most likely to participate in service delivery purposes while residents of Mitchells Plain were the most likely to have participated in protests related to international relations. Men were slightly more likely than women and individuals aged 35 to 44 were the most likely to have participated in service delivery protests. Blacks were more likely to have participated in service delivery protests while Coloureds were more likely to have participated in protests related to international issues. Residents who identified closely with a party were more

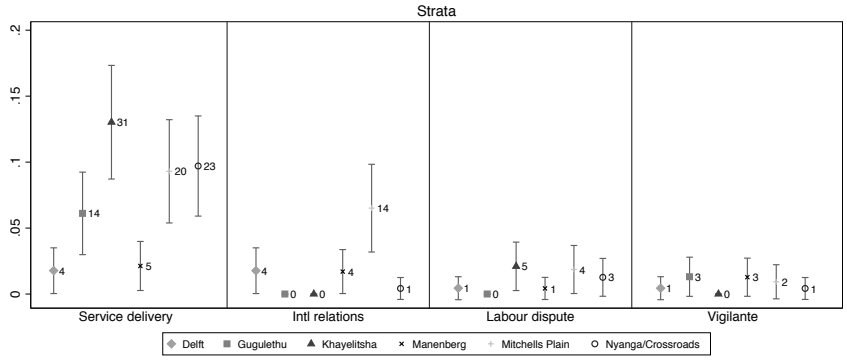


Figure 6.8: Probability of participation by stratum

Figure 6.9: Probability of participation by gender

likely than those that did not to have participated in SDP and those who identify with the EFF were most likely to have participated in SDP. Finally, residents who were food insecure or food insecure with hunger were more likely to participate in service delivery protest than those who are food secure. This bivariate analysis is, however, problematic because of the high correlation between stratum, population group, and party identification.

Because this chapter is primarily concerned with service delivery protests,

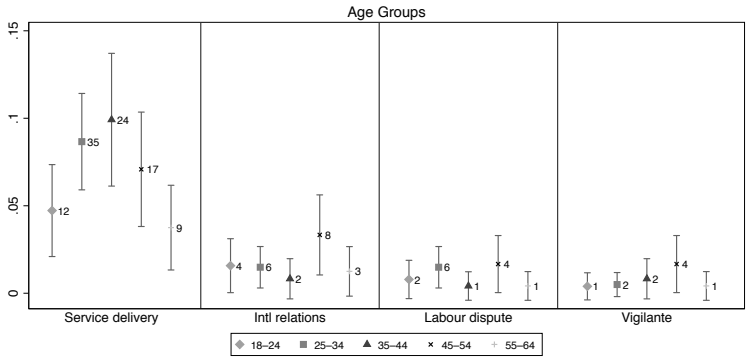


Figure 6.10: Probability of participation by age group

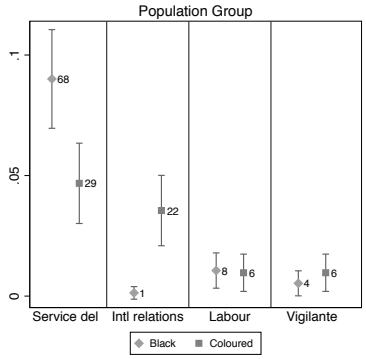


Figure 6.11: Probability of participation by population group

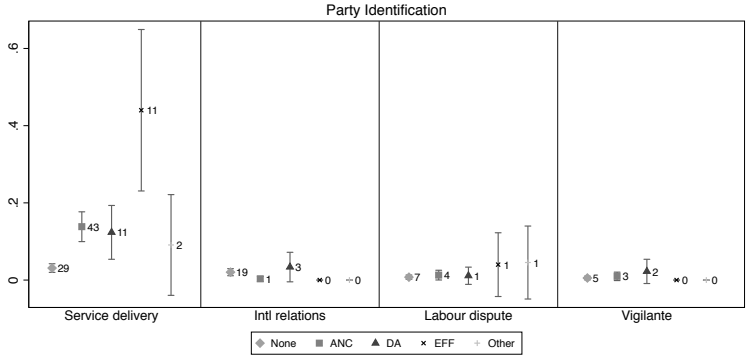


Figure 6.12: Probability of participation by party

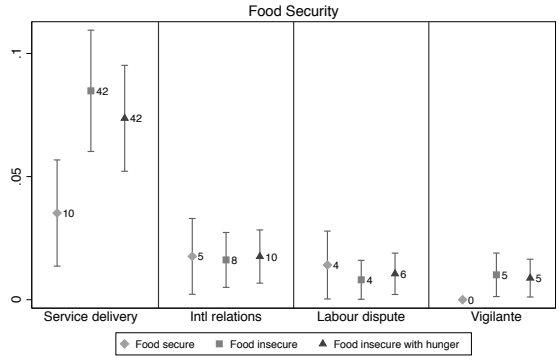


Figure 6.13: Probability of participation by food security category

I analyzed two dependent variables: (1) participation in service delivery protest in the past year, and (2) participation in violent SDP in the past year. Because both dependent variables are binary outcomes, logistic regression was used to test the stated hypotheses.[8]

The dataset used for this analysis included 1,310 observations; missing data for the remaining observations were not imputed. Control variables included were: a dummy for male; a dummy for Black; dummies for a age groups 18 to 24, 25 to 34, and 35 to 44 (the excluded baseline is the 45 to 64 age group); a dummy for never married; dummies for education achievement, less than primary school and completed secondary school (the excluded baseline is completed primary school); household size; number of children; a dummy for primary income earner; a dummy for primary household purchaser; and a dummy for the first eight days of survey to

[8]I also conducted multinomial logit analysis including all four types of protest. The results were not substantively different and only the logistic regression analysis are included for ease of interpretation.

Table 6.7: Summary statistics

	Mean	SD	Min	Max
Participated in SDP	0.067	0.250	0	1
Participated in violent SDP	0.030	0.170	0	1
Informal housing	0.177	0.382	0	1
Actively seeking employment	0.376	0.485	0	1
Food Insecure	0.590	0.492	0	1
Lived Poverty Index	0.624	0.682	0	4
Voted	0.591	0.492	0	1
Tried to influence others	0.079	0.270	0	1
Attended campaigan rallies	0.053	0.223	0	1
Worked or volunteered for a campaign	0.044	0.204	0	1
ANC	0.230	0.421	0	1
DA	0.067	0.250	0	1
EFF	0.018	0.131	0	1
Union member	0.076	0.266	0	1
Aged 18 to 24	0.182	0.386	0	1
Aged 25 to 34	0.291	0.454	0	1
Aged 35 to 44	0.176	0.381	0	1
Aged 45 to 54	0.174	0.379	0	1
Aged 55 to 64	0.177	0.382	0	1
Less than primary school	0.197	0.398	0	1
Completed secondary school or higher	0.350	0.477	0	1
Household size	4.853	2.312	1	17
Number of children	1.547	1.467	0	10
Primary income earner?	0.353	0.478	0	1
Primary household purchaser?	0.508	0.500	0	1
Observations	1,310			

control for potential bias at the beginning of the fieldwork. Summary statistics are presented in Table 6.7.

The model results are presented in Table 6.8 and odds ratios are reported for ease of interpretation.[9] None of the unreported control variables were statistically

[9]The displayed standard errors were calculated using Taylor-linearized variance estimation and implemented using the Stata *svy* command prefix.

Table 6.8: Service delivery protest logistic model results

	(1)		(2)		(3)	
Informal housing	1.526+	(1.876)			6.488**	(4.265)
Food Insecure	2.034+	(1.986)			4.132*	(2.007)
Actively seeking employment	1.501+	(1.803)			0.735	(-0.750)
Voted			0.495+	(-1.891)	0.393*	(-2.360)
Tried to influence others			2.680+	(1.915)	2.246+	(1.949)
Attended campaigan rallies			2.125+	(1.781)	1.781	(1.371)
Worked or volunteered for a campaign			3.195*	(2.450)	2.543+	(1.906)
ANC			2.885*	(2.245)	7.991**	(3.605)
DA			3.047**	(3.313)	8.486*	(2.149)
EFF			12.517**	(3.926)	27.513**	(5.628)
Union member			0.346+	(-1.736)	0.428	(-1.237)
Member of comm policing group			3.914**	(3.846)	4.426**	(3.684)
Member of volunteer/development org			1.205	(0.482)	1.169	(0.401)
Member of vigilante group			0.869	(-0.202)	0.943	(-0.087)
Informal housing * ANC					0.089**	(-3.363)
Food insecure * ANC					0.398	(-1.137)
Seeking employment * ANC					3.684*	(2.261)
Informal housing * DA					0.130*	(-2.491)
Food insecure * DA					0.238	(-1.293)
Seeking employment * DA					3.550	(1.176)
Male	1.080	(0.239)	0.867	(-0.323)	0.848	(-0.358)
Black African	1.526	(1.043)	1.130	(0.195)	0.712	(-0.499)
Male * Black	2.004+	(1.691)	2.083	(1.432)	2.646+	(1.819)
Observations	1,310		1,310		1,310	
Wald F-statistic	3.7		11.9		20.1	
F-test p-value	0.000		0.000		0.000	

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; Survey linearized standard errors in parentheses; 6 strata; 63 PSUs; Unreported controls variables: never married; less than primary school; completed secondary school; age; age (squared); household size; number of children; primary income earner; primary household purchaser; dummy for first eight days of survey.

significant in any of the models except primary income earner which was significant at $\alpha = 0.05$ and had a negative effect on the probability of participating in protest (odds ratio of 0.518). The odds ratio for Black males was greater than one in all models, meaning Black males were more likely than others to participate in protest. But this effect was statistically significant ($\alpha = 0.1$) only in models (1) and (4). Controlling for Black males, males were not more likely than females and Blacks were not more likely than non-Blacks to participate in protest in any of the models.

In model (1) of Table 6.8 only the grievance variables and controls were included, all of which were statistically significant at $alpha = 0.1$. Living in informal housing raises the odds that someone had participated in SDP by 52.6%. The odds of SDP participation are 103.4% higher for food insecure individuals (defined as those scoring three or higher on the 6-point food security scale). The odds of SDP participation are 50.1% higher for those who were actively seeking employment. This provides initial support for H1 and indicates that of the three grievances tested food insecurity is the strongest driver of protest participation.

Next, I tested H2 and H3 together because there is considerable correlation between participation in elections and party identification. The results are shown in model (2) of Table 6.8. On the whole, the results support H2 and provide evidence for the proposition that protest in Cape Town is complementary to other forms of political engagement. The four variables about election / campaign engagement are mutually exclusive and considered to be graduated levels of engagement. The lowest form of engagement in the election process is voting; the next level is trying to influence others to vote in a particular way; third is attending campaign rallies; and fourth is working or volunteering for a candidate or party. In model (2), trying to influence others (odds ratio = 2.680), attending campaign rallies (odds ratio = 2.125), and working for a campaign (odds ratio = 3.195) are all associated with increases in the odds of participating in SDP over not voting. The coefficient for *tried to influence others* is not statistically different than the coefficient for *attended campaign rallies*. There is some evidence that those who defect entirely from the political process are more likely to protest than those who merely vote because the

odds ratio of *voted* is below one, 0.495, meaning the those who vote are 50.5% less likely to protest than others.

Model (2) also provides evidence in support of H3. All of the political party variables increase the odds of participating in SDP. Those who identify with the ANC are 188.5% more likely to participate in SDP; those who identify with the DA are 204.7% more likely to participate in SDP; and those who identify with the EFF are 1,151.7% more likely to participate in SDP. There is, however, no support for H3a because there is no statistically significant difference between ANC supporters and DA supporters. Next, members of community policing groups are 291.4% more likely to participate in SDP than non-members. The coefficients for volunteer/development organizations and vigilante groups are not statistically significant.

Model (3) of Table 6.8 combines the models (1) and (2) and adds interaction terms between the grievance variables and political party identification. For the most part, these results continue to support H1, H2, and H3. In this model the odds ratios for living in informal housing and food insecurity continue to be statistically significant and are even stronger than in model (1). This is likely due to the negative coefficients for the interaction terms between these variables and the variables for supporting the ANC and the DA. There is very little correlation between party support and the three grievance variables (see Table 6.9). I interpret this to mean that, although party identification in general is associated with higher levels of protest participation, those with a source of grievance are more likely to protest if they do not feel that they have a voice in either major party.

Table 6.9: Correlation between party support and grivance

Variables	ANC	DA
Informal housing	0.136	-0.093
Food Insecure	-0.117	0.062
Actively seeking employment	-0.050	-0.001

Conversely, the variable for seeking employment is no longer significant in model (3) but the interaction variables between party support and seeking employment are statistically significant and positive, meaning that unemployed party supporters are more likely to participate in SDP. It remains unclear whether this is because unemployed individuals are more motivated are whether they simply have more time available and are, therefore, more easily mobilized.

Finally, I conducted the analysis using violent SDP as the dependent variable. Of the 88 individuals who had participated in SDP in the past year, 39 of them reported that the protest involved some form of violence, i.e. public or private property was damaged or destroyed, someone was injured, or the police used force to control the action. The results of these models are reported in Table 6.10. Model (3) does not include interaction terms because the smaller number of *successes*, that is violent SDP participants, made valid estimation difficult. Models (1) and (3) continue to support H1. Those that live in informal housing are between 85.1% and 118.2% more likely to participate in violent SDP than those that live in formal housing. Food insecure individuals are between 247.7% and 517.8% more likely to participate in violent SDP than food secure individuals. Again, support is found for the proposition that those who identify with political parties are more likely to participate in violent SDP than those who do not identify with a political party. There

Table 6.10: Violent protest logistic model results

	(1)		(2)		(3)	
Participated in violent SDP						
Informal housing	1.851+	(1.899)			2.182*	(2.081)
Food Insecure	3.747*	(2.650)			6.718*	(2.364)
Actively seeking employment	1.657	(1.277)			1.264	(0.404)
Voted			0.447	(-1.324)	0.402	(-1.608)
Tried to influence others			2.612	(0.792)	2.663	(0.980)
Attended campaigan rallies			1.572	(0.674)	1.626	(0.644)
Worked or volunteered for a campaign			2.500	(1.180)	1.947	(1.034)
ANC			4.655**	(3.450)	7.882**	(3.990)
DA			4.310**	(2.967)	5.690**	(3.319)
EFF			19.018**	(5.137)	37.804**	(5.618)
Union member			0.115*	(-2.569)	0.103*	(-2.420)
Member of comm policing group			7.174**	(3.062)	6.918**	(2.954)
Member of volunteer/development org			1.279	(0.538)	1.362	(0.549)
Member of vigilante group			0.413	(-0.878)	0.373	(-1.030)
Male	1.525	(0.872)	1.068	(0.123)	0.873	(-0.205)
Black African	2.097	(1.091)	1.288	(0.359)	0.664	(-0.552)
Male * Black	2.458	(1.635)	2.567	(1.595)	6.751*	(2.368)
Observations	1,310		1,310		1,310	
Wald F-statistic	6.6		32.3		24.0	
F-test p-value	0.000		0.000		0.000	

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; Survey linearized standard errors in parentheses; 6 strata; 63 PSUs; Unreported controls variables: never married; less than primary school; completed secondary school; age; age (squared); household size; number of children; primary income earner; primary household purchaser; dummy for first eight days of survey.

is still no statistically significant difference between ANC supporters and DA supporters. The biggest difference in these models and the models presented in Table 6.8 is that the political engagement variables are not statistically significant.

6.7 Conclusion

This chapter has presented a preliminary analysis of a survey of nearly 1,400 individuals in the Cape Flats, a collection of relatively poor and often underserved Black and Coloured townships in Cape Town, South Africa. A number of findings come out of the survey. First, 10.43% of respondents participated in some sort of protest in the past year; 5.36% participated in at least two episodes of protest; and 7.03% participated in protest related to service delivery. Contrary to the narrative of protest perpetrated by mostly angry young men, half of the protesters were 36 or older and nearly half, 46.53%, were women.

An estimated 12.78% (CI: 9.66–15.90%) of residents in the study area participated in some form protest last year (10.43% of survey respondents). An estimated 44.65% were female. The estimated mean age of protesters was 36.66 years. An estimated 8.90% (CI: 5.79–12.01%) of residents in the study area participated in service delivery protest last year (7.03% of survey respondents). An estimated 41.77% were female. The estimated mean age of protesters was 35.66 years.

A more thorough logistic regression analysis of the data provides evidence that living in informal housing, experiencing higher levels of food insecurity, and lack of employment are all sources grievance that have the potential to encourage participation in service delivery protest. The results also provide evidence that

South Africans who are more engaged in the election process are the most likely to engage in service delivery as well. For these individuals, protest would seem to be considered a legitimate political activity and complementary to the formal political process. There is some evidence, however, that those who voted but did nothing else were less likely to engage in SDP than those that did not even vote, which suggests that some protesters have defected from the formal political system entirely. The results further show that those who identify closely with political parties, specifically the ANC, the DA, or the EFF, as well as those that are members of or frequent participants in community policing organizations are more likely to participate in SDP. Considering that the analysis controlled for individual levels of political engagement by including variables about election activities, this suggests that political parties and community policing organizations are significant mobilizing forces behind service delivery protest. Although SDPs often occur in areas that are political strongholds of the ANC, there is little evidence that those that identify with the ANC are more likely to participate in SDP than those that identify with the DA.

In conclusion, the service delivery protests that have plagued Cape Town over the past several years are not fringe activities of disenfranchised angry young men and cannot be easily dismissed or repressed. Neither are they solely the efforts of the political opposition to destabilize the local authorities. Typical protesters are politically engaged members of society that have substantial ties to the community and links to both major parties and they have significant grievances about the availability of housing, employment, and affordable food.

Chapter 7

Conclusion: Review of the findings, contributions, and policy implications

In this dissertation, I have demonstrated that food insecurity and rising food prices contribute to an increase in personal grievance and socio-political unrest. This finding has policy implications and gives rise to many additional questions. In this chapter, I first review the findings of the previous chapters. Then I discuss the policy implications and finally, I conclude with some thoughts about future research.

7.1 Summary of findings and contributions

The causal link between rising food prices and socio-political unrest is generally not direct and is rarely singular. Even so-called food riots are the result of structural changes to economic or political systems that are perceived to be unjust. As the literature review in chapter 2 revealed, this was the case in the bread riots of the 18th and 19th century and later during the austerity protests of the 1980s and 90s. This was also the case in the most recently observed food riots in Africa and the Middle East. To the extent that rising prices contributed to the Arab Spring, it was merely one of myriad causes.

In this dissertation I have sought to determine if food insecurity and rising food prices contribute to protest participation and, if so, which individuals choose to protest and why. In so doing, this dissertation makes several significant contributions to the conflict studies literature.

In chapter 3, I demonstrated that the causal relationship between rising food prices and unrest is endogenous. Causality runs in both directions and both are often linked to other causes. Nonetheless, I found evidence that an abnormal spike in consumer food prices does lead to an increase in the probability of unrest, but not just food riots. This finding was possible because the analytical method used isolated causality better than that in previously published studies. Furthermore, the analysis was performed at a level of aggregation not previously used. While this analysis answered one question, it raised additional questions about why people react to rising food prices with protest. To gain some insight into that question, chapter 4 examined service delivery protests in South Africa over the past decade.

In chapter 4, I provided context for the outbreak of service delivery protests by examining of the history of protest in South Africa from the anti-apartheid movement through the present. This included a look at three different campaigns including protests against perceived failures of local government; privatization of government functions; and the increased costs of utilities, especially electricity and water. These campaigns soon gave rise to the grassroots and disorganized phenomenon of widespread service delivery protests. Chapter 4 concluded with a brief analysis of the phenomenon through the frameworks of prevailing theories of social

movements. In the end, however, these theories do not help us understand why individuals participate in protest activities.

In chapter 5, I turn to relative deprivation theory to provide some answers to the question of why individuals participate in protest. Through a close examination of trends in economic inequality in South Africa since the end of apartheid, I provided some context to two types of subjective comparisons, including an individual's perception of personal living conditions compared to others and perceptions of group economic opportunities compared to other groups. Sociological studies supported the understanding of a period of dynamic change in South Africa between 1994 and 2000. Since then, however, the rise of a Black elite has led to increasing individual relative deprivation and changing identities that contribute to a decrease in group relative deprivation. An analysis of the Afrobarometer survey data further supported this idea and revealed that lack of food was amongst the strongest drivers of individual relative deprivation. Other drivers include a lack of a cash income and a lack of medical care.

In the final analysis of chapter 5, I found that both individual and group relative deprivation were predictors of participation in protest activities, but that different types of people were subject to individual and group relative deprivation. More impoverished and less educated individuals are likely to have higher levels of individual RD while less impoverished, better educated, and more informed individuals are likely to have higher levels of group RD. This distinction between individual and group RD, while somewhat established in sociology, is new to the conflict studies literature. Recently, the role of relative deprivation in conflict has

been the subject of renewed research interest. Relative deprivation as described by Gurr over 40 years ago is primarily individual RD. The distinction between group and individual RD is an innovation that may help resolve the apparent incongruent findings between segment of research. On the one hand, some social movement researchers, especially in American politics, find that protest participants tend to be younger and wealthier. On the other hand, other researchers argue that the more destitute segment of the population have the lowest opportunity cost and are, therefore, the most likely to engage in revolt. Furthermore, the distinction between individual and group RD may prove useful in developing a unified theory of social conflict that includes grievances and resource mobilization.

In chapter 6, I discussed the results of a survey carried out in the Cape Flats area of Cape Town, a hotspot of protest over the last few years. Unlike earlier studies of protest participants, this original survey targeted a random sample of Cape Flats residents in an effort of determine what proportion of the residents have participated in protest and what distinguishes participants from non-participants. In the analysis of the results, I found that food insecurity was a strong predictor of participation in service delivery protest. Other predictors were living in informal housing, unemployment, membership in community policing groups, and identification with political parties. I found that individuals who are more engaged in the formal electoral process are also more likely to participate in protest. This supports the understanding of protest and elections as complementary tactics of political engagement.

7.2 Policy implications

The findings of this dissertation have important policy implications at both the national and international levels. Based on the specious correlation between commodity prices and food riots, prominent policy opinion-makers, such as economist Jeffrey Sachs and former World Bank President Robert Zoellick, have suggested the appropriate response is to focus on increasing global production, regulating speculation on food crops, and reducing biofuel production. While these may be laudable goals (although the last is debatable), they divert attention away from the real problem. The world produces enough food to feed everyone, the failure is in getting it on people's plates. This is often a result of failed local markets. Controlling price fluctuations in international markets is important on a macro level but will have little benefit if local markets are still vulnerable to local conditions.

This research shows that price spikes have destabilizing effects regardless of the source (e.g., a local drought or global speculation), and maintaining consistently low prices is less important than preventing sudden price shocks. These principles should guide efforts to prevent food-related instability (though it does not mean countries should institute or maintain price control and subsidy regimes; such policies may control prices but also have other adverse effects that can contribute to political instability). Priority should be given to improving irrigation infrastructure to increase local production and buffer against changing rainfall patterns; expanding transportation networks to deliver food regionally; increasing local storage capacity to allow for warehousing; and bolstering local and regional commodity exchanges to reduce reliance on international markets, as Ethiopia has done. These efforts

would help stabilize food prices in vulnerable countries in more productive ways than the existing paradigm and help us understand when instability really is related to food.

At the national level, more attention should be given to domestic social programs that aim to provide nutritious food to the most impoverished members of society. Such programs are likely more effective at ensuring food security than trying to regulate food prices through producer subsidies or trade regulations. Expansion of food voucher programs and school feeding programs are policies directly targeted at promoting increased food security amongst the poor. Direct cash transfers to those in need, however, may facilitate food security while promoting markets in underserved areas. The relative efficacy and efficiency of different types of domestic food security policies and the political acceptance of or resistance to such programs remains a topic of future research.

This research also has implications for the policies of sectoral inter-governmental bodies (IGOs), such as the World Food Programme, bi-lateral aid agencies, such as the U.S. Agency for International Development, and non-governmental organizations (NGOs), such as OxFam, that operate in the food security arena. In emergency situations the immediate priority of such organizations is and should be relieving hunger by distributing food to those in need through the most efficient means. These organizations should recognize, however, that some food distribution programs can have unintended consequences that distort local market forces, which can in turn have detrimental consequences to local and regional political stability. Relief organizations should include these long-term consequences in their policy calculations

and advocacy efforts. Programs that provide relief in the short-term but undermine political consequences in the long-term can make a bad situation worse and lead to more suffering. To the extent possible, agencies should design and implement food distribution programs that promote long-term food price stabilization as well as immediate relief. Such programs would include food vouchers to purchase food locally combined with support for local food markets and local and regional sourcing of food purchases for distribution.

IGOs, aid agencies, and NGOs should also prioritize national price stability in their advocacy programs. As mentioned above, the stabilization of international commodity prices is over-emphasized in global economic discussions. Agencies should direct more focus on U.S. and European food policies, particularly subsidy programs, that undermine the development of local agriculture sectors and markets in other parts of the world, especially sub-Saharan Africa. The continued support in the United States and Europe for such policies is doubly damaging because it encourages the adoption of protectionist and food sovereignty policies by African governments at a time when Africa should be cooperating toward regional food production and distribution systems. Discussions around these issues has typically been relegated to economic forums but this dissertation has demonstrated that food security is an inherently political issue and should be more central in discussions of political stability.

7.3 Future research agenda

Many questions remain unanswered and additional research will further hone these recommendations. The first step of my future research agenda is to replicate the Cape Flats survey in Johannesburg and Durban. Cape Town is a fairly unique political context. It is the only municipality in South Africa not governed by the ANC and it is the only municipality in which the majority population is not Black African, rather it is Coloured. Therefore, whether the findings of chapter 6 are generalizable to other parts of South Africa remains an open question. The results of similar surveys in other South African cities would either strengthen the findings or raise additional questions about how different local contexts affect individual level protest participation. The surveys could then be extended to cities in other African countries to determine how different national contexts affect such decisions.

More research is also needed into the myriad local campaigns that emerge in the landscape of service delivery protest in South Africa. Few protests in South Africa have explicitly cited food insecurity or food prices as a significant grievance but this research suggests that food insecurity is, nonetheless, a significant driver of individual participation. I had originally planned to interview local organizers in Cape Town and Johannesburg about framing of issues and mobilization strategies. This was not possible with available resources, but any future surveys in Cape Town, Johannesburg, or Durban should include an additional research component for more open-ended interviews with protesters and with organizers about these issues.

Next, I have argued that certain economic and social programs may help prevent socio-political unrest. Which policies are more effective and efficient, however, remains a question for future research. Is it better to ensure stable food prices through producer subsidies, enable more decentralized production through urban agriculture programs, or provide direct cash transfers to the most impoverished and food insecure citizens? These are questions that beg answers.

Finally, I plan to conduct additional research into the extent to which South African policy-makers consider the effects on socio-political unrest in their deliberations about food and agricultural policies and how these decisions could be improved. This line of inquiry would also include research into the economic and social cost of any potential unrest. Such research combined with the probability of unrest from differing policies could be used in cost-benefit analyses that could inform future policy decisions.

Appendices

Appendix A

Supplemental tables and figures

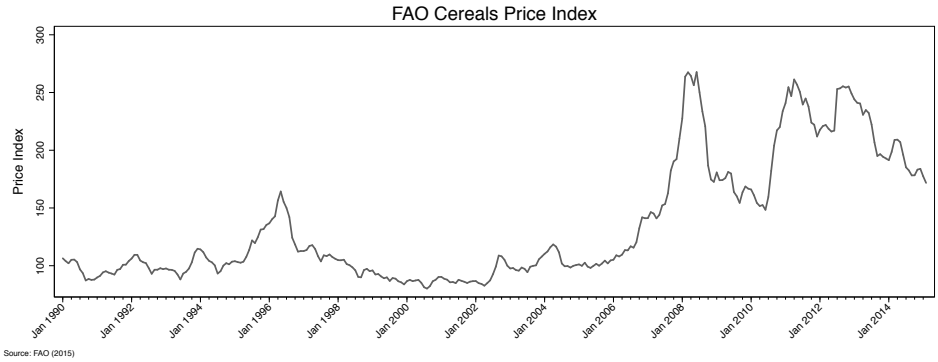


Figure A.1: FAO Cereals Price Index

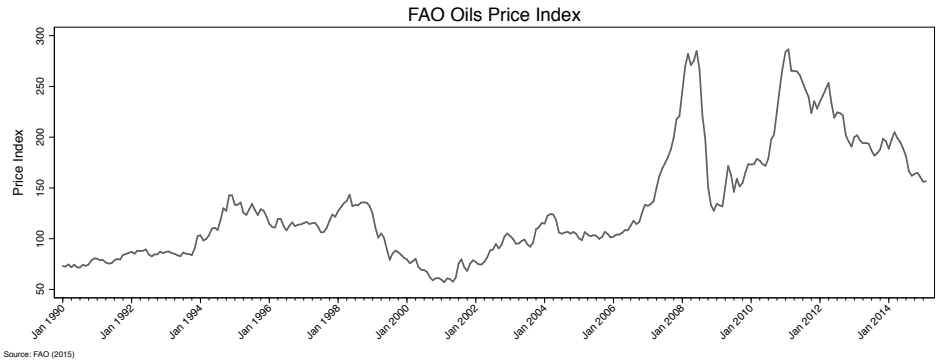


Figure A.2: FAO Oils Price Index

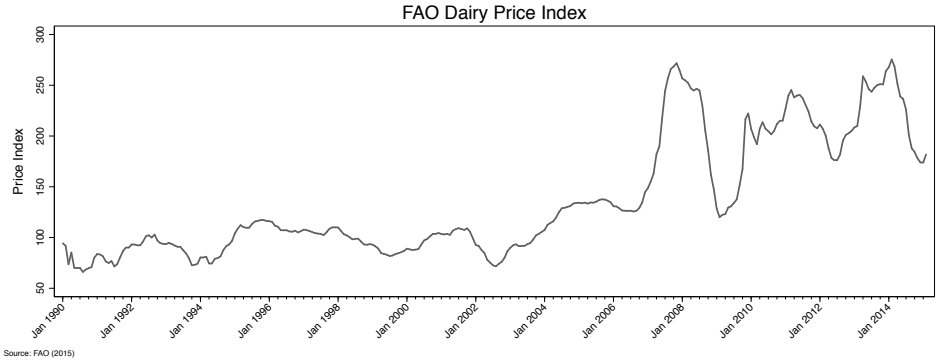


Figure A.3: FAO Dairy Price Index

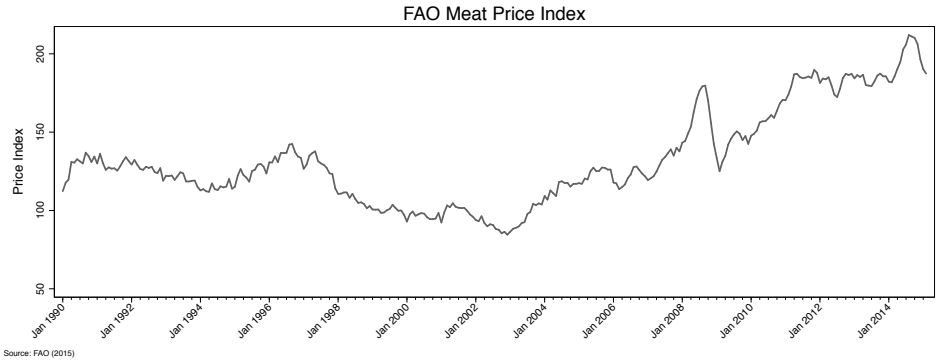


Figure A.4: FAO Meat Price Index

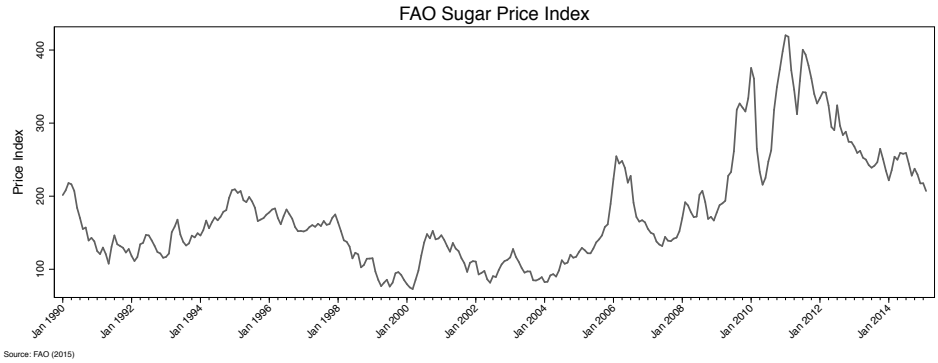


Figure A.5: FAO Sugar Price Index

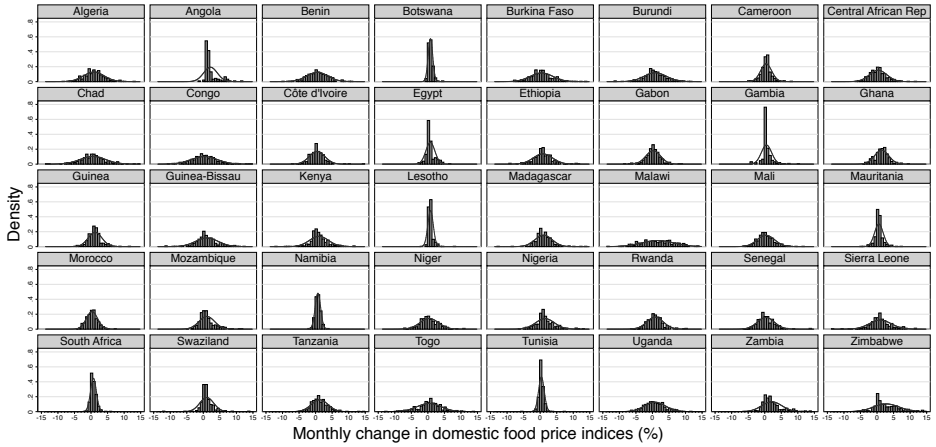


Figure A.6: Distribution of monthly percentage changes in domestic food prices by country

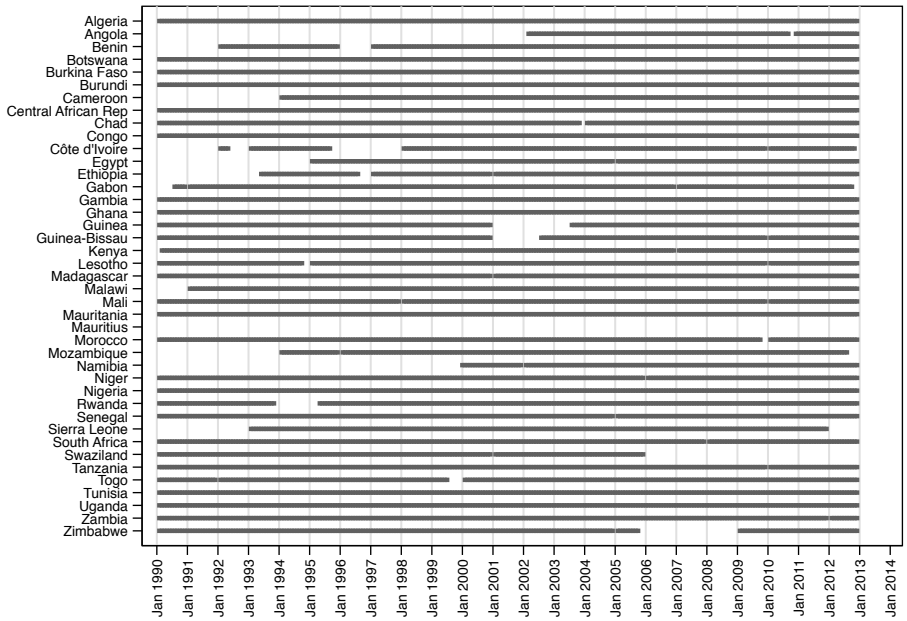


Figure A.7: Sample coverage by country and month

Table A.1: Probit results

	(1)	(2)	(3)	(4)	(5)	(6)
Occurrence of unrest						
Standardized change in	0.020	0.038*	0.009	0.027	0.023	0.025
domestic food price index	(0.219)	(0.046)	(0.494)	(0.100)	(0.134)	(0.124)
Trade balance adjusted			0.029**	0.017+	0.015*	0.016*
grain price instrument			(0.001)	(0.055)	(0.036)	(0.039)
Nine month dry MSCP (t–1)			0.038+	0.040	0.050*	0.046+
			(0.095)	(0.173)	(0.036)	(0.064)
Occurrence of unrest (t–1)			1.178**	0.744**	0.965**	0.716**
			(0.000)	(0.000)	(0.000)	(0.000)
Six month wet MSCP (t–1)			0.022	0.046**	0.039*	0.046**
			(0.273)	(0.009)	(0.014)	(0.006)
National elections					0.523**	0.589**
					(0.000)	(0.000)
Polity IV democracy					-0.046*	-0.068**
					(0.010)	(0.001)
Polity IV autocracy					-0.068**	-0.052*
					(0.000)	(0.020)
Occurence of armed conflict					-0.139	-0.047
					(0.141)	(0.574)
Population (millions)					0.013**	0.012
					(0.000)	(0.290)
Population growth (monthly					-0.142	-0.137
%)					(0.619)	(0.684)
Urban population (% of					-0.000	-0.015
total)					(0.986)	(0.504)
Youth population (% of					-0.028*	-0.032
total 14 & under)					(0.015)	(0.408)
GDP per cap (in 000,					-0.031	-0.155
constant 2005 USD)					(0.610)	(0.280)
Life expectancy at birth					-0.021	-0.015
total (years)					(0.145)	(0.438)
Infant mortality rate (per					-0.004	-0.005
1,000 births)					(0.301)	(0.407)
Country, year, & cal month FE	no	yes	no	yes	no	yes
Observations	10,102	10,102	10,102	10,102	10,102	10,102
Log psuedolikelihood	-5,972	-4,837	-5,148	-4,585	-4,850	-4,527
Positive predictive value	.	69.67	57.74	68.96	65.80	69.91
Negative predictive value	72.17	79.32	83.66	81.53	80.62	81.72
Correctly classified	72.17	77.92	76.47	79.20	77.93	79.54
Wald X^2	2	.	181	.	988	.
X^2 p-value	0.219	.	0.000	.	0.000	.

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses

Table A.2: Endogenous probit results using international commodity price instrumental variable

	(1)	(2)	(3)
Standardized change in	0.501+	0.518**	0.484**
domestic food price index	(0.075)	(0.010)	(0.009)
Nine month dry MSCP (t–1)		0.002	0.010
		(0.942)	(0.717)
Occurrence of unrest (t–1)		0.613**	0.604**
		(0.000)	(0.000)
Six month wet MSCP (t–1)		0.056**	0.055**
		(0.000)	(0.000)
National elections			0.508**
			(0.000)
Polity IV democracy			-0.059**
			(0.001)
Polity IV autocracy			-0.054**
			(0.007)
Occurence of armed conflict			-0.048
			(0.535)
Population (millions)			0.012
			(0.255)
Population growth (monthly			-0.128
%)			(0.645)
Urban population (% of			-0.009
total)			(0.693)
Youth population (% of			-0.021
total 14 & under)			(0.467)
GDP per cap (in 000,			-0.065
constant 2005 USD)			(0.645)
Life expectancy at birth			-0.010
total (years)			(0.512)
Infant mortality rate (per			-0.004
1,000 births)			(0.433)
Observations	10,102	10,102	10,102
Log psuedolikelihood	-19,037	-18,764	-18,694
Positive predictive value	57.69	60.62	62.19
Negative predictive value	79.26	81.02	81.31
Correctly classified	75.12	76.69	77.29
Wald X^2	1124652	1040056	4.36e+10
X^2 p-value	0.000	0.000	0.000
Wald X^2 test of exogeneity	1.900	4.028	4.391
Exogeneity X^2 p-value	0.168	0.045	0.036

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; all models include country, year, and calendar month fixed effects.

Table A.3: Endogenous probit results using local rainfall instrumental variable

	(1)	(2)	(3)
Standardized change in	0.257	0.543+	0.594*
domestic food price index	(0.496)	(0.053)	(0.010)
Trade balance adjusted		-0.001	-0.004
grain price instrument		(0.941)	(0.710)
Occurrence of unrest (t–1)		0.600**	0.549**
		(0.000)	(0.000)
Six month wet MSCP (t–1)		0.056**	0.056**
		(0.000)	(0.000)
National elections			0.466**
			(0.001)
Polity IV democracy			-0.054*
			(0.013)
Polity IV autocracy			-0.053**
			(0.006)
Occurence of armed conflict			-0.046
			(0.534)
Population (millions)			0.011
			(0.270)
Population growth (monthly			-0.120
%)			(0.632)
Urban population (% of			-0.007
total)			(0.759)
Youth population (% of			-0.017
total 14 & under)			(0.567)
GDP per cap (in 000,			-0.037
constant 2005 USD)			(0.777)
Life expectancy at birth			-0.009
total (years)			(0.559)
Infant mortality rate (per			-0.004
1,000 births)			(0.466)
Observations	10,102	10,102	10,102
Log psuedolikelihood	-19,028	-18,764	-18,694
Positive predictive value	67.48	59.62	58.63
Negative predictive value	79.43	80.93	81.11
Correctly classified	77.58	76.33	76.05
Wald X^2	1010815	850215	3221
X^2 p-value	0.000	0.000	0.000
Wald X^2 test of exogeneity	0.317	2.233	3.597
Exogeneity X^2 p-value	0.573	0.135	0.058

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; all models include country, year, and calendar month fixed effects.

Table A.4: Endogenous probit results using both instrumental variables

	(1)	(2)	(3)
Standardized change in	0.329	0.534**	0.558**
domestic food price index	(0.192)	(0.006)	(0.001)
Occurrence of unrest (t–1)		0.605**	0.569**
		(0.000)	(0.000)
Six month wet MSCP (t–1)		0.056**	0.055**
		(0.000)	(0.000)
National elections			0.481**
			(0.000)
Polity IV democracy			-0.056**
			(0.005)
Polity IV autocracy			-0.053**
			(0.006)
Occurence of armed conflict			-0.047
			(0.531)
Population (millions)			0.011
			(0.261)
Population growth (monthly			-0.124
%)			(0.634)
Urban population (% of			-0.007
total)			(0.735)
Youth population (% of			-0.018
total 14 & under)			(0.531)
GDP per cap (in 000,			-0.047
constant 2005 USD)			(0.717)
Life expectancy at birth			-0.009
total (years)			(0.538)
Infant mortality rate (per			-0.004
1,000 births)			(0.452)
Observations	10,102	10,102	10,102
Log psuedolikelihood	-19,023	-18,764	-18,694
Positive predictive value	64.88	60.08	60.03
Negative predictive value	79.46	81.01	81.21
Correctly classified	77.06	76.51	76.57
Wald X^2	211796	467844	5097
X^2 p-value	0.000	0.000	0.000
Wald X^2 test of exogeneity	1.185	4.602	6.164
Exogeneity X^2 p-value	0.276	0.032	0.013

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; all models include country, year, and calendar month fixed effects.

Table A.5: Endogenous probit results for different types of unrest (part 1)

	(1)	(2)	(3)	(4)
Standardized change in domestic food price index	0.459*	0.626*	0.724**	0.623*
	(0.018)	(0.017)	(0.000)	(0.026)
Six month wet MSCP (t–1)	0.037	0.066*	0.054**	0.045
	(0.168)	(0.023)	(0.003)	(0.110)
Occurrence of unrest (t–1)	0.342**	0.173*	0.279**	0.191*
	(0.000)	(0.048)	(0.000)	(0.048)
National elections	0.715**	0.626**	0.473**	0.572**
	(0.000)	(0.002)	(0.000)	(0.002)
Polity IV democracy	-0.039*	-0.031+	-0.042**	-0.042*
	(0.031)	(0.065)	(0.005)	(0.012)
Polity IV autocracy	-0.055*	-0.090**	-0.067**	-0.097**
	(0.026)	(0.001)	(0.000)	(0.001)
Observations	10,102	10,102	10,102	9,844
Log psuedolikelihood	-17,006	-16,182	-17,553	-15,676
Wald X^2	8305	3856	4000	4019
X^2 p-value	0.000	0.000	0.000	0.000
Wald X^2 test of exogeneity	4.037	2.825	18.704	2.468
Exogeneity X^2 p-value	0.045	0.093	0.000	0.116

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; all models include country, year, & calendar month fixed effects and unreported covariates; model (1) Violent unrest; model (2) Riots (spontaneous and organized); model (3) Spontaneous events (demonstrations and riots); model (4) Spontaneous violent riots

Table A.6: Endogenous probit results for different types of unrest (part 2)

	(1)	(2)	(3)	(4)
Standardized change in domestic food price index	0.582*	0.483*	0.091	0.046
	(0.029)	(0.039)	(0.900)	(0.919)
Six month wet MSCP (t–1)	0.046*	0.023	0.019	0.013
	(0.024)	(0.343)	(0.670)	(0.761)
Occurrence of unrest (t–1)	0.445**	0.419**	0.509**	0.685**
	(0.001)	(0.000)	(0.000)	(0.000)
National elections	0.381**	0.386**	0.438**	-0.259*
	(0.010)	(0.001)	(0.001)	(0.034)
Polity IV democracy	-0.064**	-0.056*	-0.074**	-0.050**
	(0.010)	(0.017)	(0.000)	(0.001)
Polity IV autocracy	-0.073**	-0.068**	-0.069**	-0.039
	(0.000)	(0.006)	(0.002)	(0.170)
Observations	10,102	10,102	10,102	10,102
Log psuedolikelihood	-17,585	-16,838	-16,250	-16,706
Wald X^2	4755	7406	5734	4415
X^2 p-value	0.000	0.000	0.000	0.000
Wald X^2 test of exogeneity	2.539	2.792	0.004	0.001
Exogeneity X^2 p-value	0.111	0.095	0.947	0.970

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; all models include country, year, & calendar month fixed effects and unreported covariates; model (1) Demonstrations (spontaneous and organized); model (2) Spontaneous demonstrations; model (3) Organized events (demonstrations and riots); model (4) Strikes; Rwanda excluded in model (4) because it perfectly predicts failure, i.e. no spontaneous violent riots

Table A.7: Robustness checks (part 1)

	(1)	(2)	(3)	(4)
Standardized change in domestic	0.570**	0.634**	0.541**	0.544**
food price index	(0.001)	(0.000)	(0.005)	(0.006)
Occurrence of unrest (t–1)		0.718**	0.555**	0.507**
		(0.000)	(0.000)	(0.000)
Six month wet MSCP (t–1)		0.052**	0.060**	0.033
		(0.001)	(0.000)	(0.155)
National elections		0.404**	0.480**	0.571**
		(0.000)	(0.000)	(0.000)
Polity IV democracy		-0.042**	-0.049*	-0.057**
		(0.005)	(0.016)	(0.005)
Polity IV autocracy		-0.067**	-0.041*	-0.031
		(0.000)	(0.047)	(0.409)
Occurence of armed conflict		-0.102	-0.034	-0.034
		(0.237)	(0.651)	(0.684)
Population (millions)		0.011**	-0.006	-0.003
		(0.000)	(0.569)	(0.781)
Population growth (monthly %)		-0.024	-0.125	0.141
		(0.911)	(0.664)	(0.759)
Urban population (% of total)		0.000	0.004	0.006
		(0.923)	(0.823)	(0.831)
Youth population (% of total 14		-0.024*	-0.031	-0.065
& under)		(0.013)	(0.307)	(0.188)
GDP per cap (in 000, constant		-0.034	0.006	-0.106
2005 USD)		(0.473)	(0.964)	(0.519)
Life expectancy at birth total		-0.020+	-0.015	-0.009
(years)		(0.063)	(0.311)	(0.651)
Infant mortality rate (per 1,000		-0.004	-0.008+	-0.003
births)		(0.130)	(0.066)	(0.685)
Country, year, & cal. month dummies	no	no	yes	yes
Observations	10,583	10,102	9,339	6,867
Log psuedolikelihood	-21,194	-19,178	-17,318	-12,185
Positive predictive value	29.35	51.52	49.76	63.00
Negative predictive value	72.51	79.05	81.41	79.28
Correctly classified	66.47	72.86	76.39	75.36
Wald X^2	10	2223	3973	173176
X^2 p-value	0.001	0.000	0.000	0.000
Wald X^2 test of exogeneity	5.808	6.559	4.682	5.732
Exogeneity X^2 p-value	0.016	0.010	0.030	0.017

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; model (1) No fixed effects; no control variables; model (2) No control variables; model (3) Excluding Egypt, Nigeria, and South Africa; model (4) Limited to post-1997 observations

Table A.8: Robustness checks (part 2)

	(1)	(2)	(3)	(4)
Standardized change in domestic	0.554**	0.510**	0.640**	0.542**
food price index	(0.003)	(0.007)	(0.000)	(0.001)
Occurrence of unrest (t–1)	0.544**	0.597**	0.526**	0.556**
	(0.000)	(0.000)	(0.000)	(0.000)
Six month wet MSCP (t–1)	0.064**	0.052**	0.056**	
	(0.000)	(0.001)	(0.000)	
Wet MSCP over 6 months (GPCP)				0.073**
				(0.006)
National elections	0.524**	0.496**	0.441**	0.500**
	(0.000)	(0.000)	(0.000)	(0.000)
Polity IV democracy	-0.056**	-0.057**	-0.051**	-0.050**
	(0.004)	(0.005)	(0.007)	(0.004)
Polity IV autocracy	-0.040*	-0.055**	-0.053**	-0.042*
	(0.041)	(0.008)	(0.006)	(0.043)
Occurence of armed conflict	0.005	-0.064	-0.060	-0.020
	(0.950)	(0.409)	(0.419)	(0.792)
Population (millions)	0.027+	0.012	0.011	0.023+
	(0.098)	(0.197)	(0.201)	(0.082)
Population growth (monthly %)	-0.012	-0.138	-0.122	-0.112
	(0.961)	(0.641)	(0.638)	(0.700)
Urban population (% of total)	-0.029	0.002	0.003	-0.028
	(0.325)	(0.919)	(0.853)	(0.345)
Youth population (% of total 14	-0.004	-0.029	-0.023	-0.005
& under)	(0.876)	(0.337)	(0.413)	(0.862)
GDP per cap (in 000, constant	0.215	-0.049	-0.014	-0.010
2005 USD)	(0.183)	(0.723)	(0.920)	(0.928)
Life expectancy at birth total	-0.008	-0.012	-0.010	-0.005
(years)	(0.693)	(0.467)	(0.519)	(0.790)
Infant mortality rate (per 1,000	-0.003	-0.007	-0.006	-0.001
births)	(0.624)	(0.121)	(0.156)	(0.887)
Country, year, & cal. month dummies	yes	yes	yes	yes
Observations	7,387	10,102	10,102	8,295
Log psuedolikelihood	-13,886	-18,701	-18,703	-15,486
Positive predictive value	58.51	61.70	56.59	59.48
Negative predictive value	82.16	81.28	80.94	82.26
Correctly classified	77.14	77.13	75.25	77.60
Wald X^2	49441	9551	3767	2442
X^2 p-value	0.000	0.000	0.000	0.000
Wald X^2 test of exogeneity	4.958	4.617	6.711	6.110
Exogeneity X^2 p-value	0.026	0.032	0.010	0.013

$^{+}p < 0.1$, * $p < 0.05$, ** $p < 0.01$; cluster robust standard errors in parentheses; model (1) Limited to pre-2007 observations; model (2) Using 6 month dry MSCP; model (3) Using 12 month dry MSCP; model (4) Using GPCP rainfall data

Table A.9: Food price changes and predicted probability of unrest by country

	Monthly change in food prices (%)		Increase in food prices equal to long-term mean			1 SD increase in food prices over long-term mean		
			Pred.	95% C.I.		Pred.	95% C.I	
Country	Mean	SD	prob (%)	lower	upper	prob (%)	lower	upper
Algeria	0.86	3.10	44.0	42.7	45.3	65.8	52.2	79.4
Angola	2.15	2.07	23.0	17.4	28.5	42.8	22.4	63.2
Benin	0.51	3.19	14.4	8.6	20.2	30.7	9.9	51.6
Botswana	0.78	0.69	6.8	2.0	11.7	17.6	-0.6	35.8
Burkina Faso	0.42	3.43	21.6	16.2	26.9	40.9	20.8	61.1
Burundi	1.03	4.27	29.9	25.5	34.3	51.2	32.7	69.7
Cameroon	0.42	1.68	19.1	13.3	24.9	37.6	16.7	58.5
Central African Rep	0.72	6.40	38.8	36.3	41.4	60.8	45.3	76.3
Chad	0.54	4.27	15.8	9.9	21.8	32.9	11.8	53.9
Congo	0.55	4.61	12.0	6.3	17.7	26.9	6.4	47.3
Côte dIvoire	0.44	2.35	54.2	52.9	55.6	74.7	64.9	84.4
Egypt	0.64	1.99	76.3	70.9	81.7	89.8	86.7	93.0
Ethiopia	0.89	3.09	20.5	14.6	26.4	39.5	18.6	60.4
Gabon	0.31	2.51	20.9	15.5	26.3	40.0	19.8	60.3
Gambia	0.53	1.56	6.1	1.3	10.9	16.1	-1.7	34.0
Ghana	1.39	2.14	20.5	14.8	26.2	39.4	18.8	60.1
Guinea	1.21	2.08	23.2	17.8	28.7	43.1	22.9	63.3
Guinea-Bissau	1.38	4.31	17.0	11.4	22.6	34.6	14.0	55.1
Kenya	1.17	3.43	53.9	52.8	55.0	74.4	64.4	84.4
Lesotho	0.80	0.83	14.5	8.9	20.1	30.8	10.4	51.3
Madagascar	1.03	2.60	17.9	11.9	23.9	35.9	14.7	57.0
Malawi	1.70	5.04	36.1	32.9	39.3	58.0	41.5	74.6
Mali	0.36	2.62	17.4	11.6	23.3	35.2	14.3	56.2
Mauritania	0.55	1.32	25.3	20.3	30.3	45.7	26.3	65.2
Morocco	0.28	1.70	34.6	31.1	38.2	56.4	39.5	73.4
Mozambique	1.05	2.34	18.7	12.9	24.4	37.0	16.1	57.8
Namibia	0.69	0.83	6.3	1.7	10.8	16.5	-1.0	34.0
Niger	0.47	3.01	39.6	37.3	41.8	61.5	46.4	76.7
Nigeria	1.46	2.82	84.6	77.5	91.6	94.2	92.4	96.1
Rwanda	0.79	2.48	15.0	9.2	20.9	31.6	10.8	52.5
Senegal	0.35	2.56	28.7	24.1	33.2	49.8	31.1	68.5
Sierra Leone	1.34	5.16	30.2	25.8	34.6	51.5	33.1	70.0
South Africa	0.73	0.89	76.8	71.2	82.4	90.1	87.4	92.9
Swaziland	0.94	2.42	17.4	11.0	23.7	35.1	13.6	56.6
Tanzania	1.23	2.51	21.0	15.4	26.7	40.2	19.6	60.8
Togo	0.45	3.87	23.8	18.5	29.1	43.8	23.8	63.8
Tunisia	0.37	0.86	15.6	9.3	21.9	32.5	11.1	53.9
Uganda	0.88	3.44	21.9	16.3	27.6	41.4	20.9	62.0
Zambia	2.46	3.69	35.6	31.8	39.4	57.5	40.3	74.7
Zimbabwe	4.31	6.94	59.9	56.7	63.0	79.0	71.5	86.5

Table A.10: LexisNexis South Africa media sources metadata

Source	Number of articles	Distribution	Frequency	Circulation	Readership	Saturday circulation	Saturday readership	Sunday circulation	Sunday readership
Business Day	896	Nationwide	daily	33,690	59,000				
Cape Argus *	938	Western Cape (Cape Town)	daily	33,247	294,000	43,114	155,000	18,601	140,000
Cape Times	539	Western Cape (Cape Town)	daily	35,616	258,000				
Daily Dispatch	381	Eastern Cape (East London)	daily	28,879	238,000	22,126	130,000		
Daily News	354	KwaZuzlu-Natal	daily	32,002	295,000				
Financial Mail	159	Nationwide	weekly	27,691					
Mail & Guardian	362	Nationwide	weekly			45,279	459,000		
Post	44	KwaZulu-Natal; Guateng	Wednesdays	44,984	345,000				
Pretoria News **	673	Gauteng; Mpumalanga; North West	daily	18,775	141,000	11,382	34,000		
Sowetan	730	Gauteng; Nationwide	daily	98,258	1,646,000				
Sunday Times	336	Nationwide	Sunday					442,108	3,411,000
Sunday Tribune	203	KwaZulu-Natal	Sunday					75,304	446,000
Sunday World	95	Nationwide	Sunday					126,120	1,526,000
The Herald	599	Eastern Cape (Port Elizabeth)	daily	23,372	257,000				
The Independent on Saturday	56	KwaZulu-Natal	Saturday					44,169	219,000
The Mercury	304	KwaZulu-Natal (Durban)	daily	31,025	234,000				
The New Age	322	Nationwide	daily		107,000				
The Star	1,031	Gauteng; Nationwide	daily	106,484	615,000	76,897	249,000		
The Sunday Independent	314	KwaZulu-Natal; Gauteng; Northern Cape	Sunday					35,200	81,000
The Times	472	Nationwide	daily		287,000				
The Weekender	29	Ceased publication in November 2009							
Weekend Post	86	Eastern Cape	Saturday			22,137	194,000		

* includes Argus Weekend

** includes Pretoria News Weekend

Table A.11: Afrobarometer living conditions responses

Personal living conditions compared to others

	2002	2004	2006	2008	2011
Black	3.367	3.098	3.140	2.943	3.088
	(0.028)	(0.026)	(0.026)	(0.029)	(0.026)
	1554	1698	1769	1482	1503
White	3.243	3.298	3.460	2.828	3.512
	(0.049)	(0.053)	(0.063)	(0.056)	(0.049)
	345	275	276	372	408
Coloured	3.118	3.227	3.136	3.023	3.084
	(0.058)	(0.052)	(0.064)	(0.055)	(0.046)
	304	264	236	343	345
Asian	3.520	3.511	3.500	3.168	3.162
	(0.081)	(0.081)	(0.11)	(0.094)	(0.098)
	123	133	68	125	105

Personal living conditions compared to 12 months ago

	2002	2004	2006	2008	2011
Black	3.086	3.122	3.164	3.013	3.134
	(0.025)	(0.024)	(0.023)	(0.027)	(0.024)
	1580	1710	1791	1496	1525
White	2.848	2.982	3.157	2.667	3.223
	(0.048)	(0.047)	(0.052)	(0.053)	(0.044)
	342	277	280	387	412
Coloured	3.054	3.269	3.158	2.815	3.090
	(0.056)	(0.046)	(0.054)	(0.054)	(0.044)
	316	268	240	346	344
Asian	3.089	3.269	3.507	3.194	2.705
	(0.081)	(0.071)	(0.109)	(0.089)	(0.113)
	124	134	69	129	105

Expected personal living conditions in 12 months compared to present

	2002	2004	2006	2008	2011
Black	3.458	3.446	3.771	3.342	3.725
	(0.031)	(0.026)	(0.023)	(0.031)	(0.026)
	1449	1635	1689	1441	1471
White	2.782	3.033	3.330	2.569	3.560
	(0.062)	(0.048)	(0.065)	(0.058)	(0.051)
	294	269	267	369	398
Coloured	3.221	3.526	3.775	3.206	3.456
	(0.063)	(0.05)	(0.053)	(0.063)	(0.051)
	294	251	227	320	338
Asian	2.760	3.402	3.912	3.049	3.068
	(0.085)	(0.079)	(0.106)	(0.109)	(0.127)
	121	127	68	123	103

Source: Afrobarometer South Africa surveys

Table A.12: Afrobarometer group economic situation responses

	2002	2004	2006	2008	2011
	3.276	2.859	2.791	3.057	
Black	(0.029)	(0.025)	(0.022)	(0.028)	
	1461	1530	1648	1285	
	3.362	3.354	3.022	3.560	
White	(0.052)	(0.058)	(0.077)	(0.06)	
	298	198	227	325	
	3.356	3.044	3.246	3.357	
Coloured	(0.059)	(0.067)	(0.062)	(0.057)	
	281	158	191	255	
	3.485	3.308	2.556	3.219	
Asian	(0.096)	(0.095)	(0.106)	(0.109)	
	103	107	63	114	

Source: Afrobarometer South Africa surveys

Appendix B

Afrobarometer survey question merge

Variable name	Variable label	Questionnaire variable by survey round						Question	Response scale	Notes
		R1 (2000)	R2 (2002)	R2.5 (2004)	R3 2006)	R4 (2008	R5 (2011)			
lc_oth	Personal living conditions compared to others	Q4	Q2B	Q5	Q5	Q5	Q4	In general, how do you rate: Your living conditions compared to those of other South Africans?	1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
lc_past	Personal living conditions compared to 12 months ago		Q3B	Q6B	Q6B	Q6B	Q5B	Looking back, how do you rate the following compared to twelve months ago: Your living conditions?	1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
lc_fut	Expected living conditions in 12 months compared to present		Q4B	Q7B	Q7B	Q7B	Q6B	Looking ahead, do you expect the following to be better or worse: Your living conditions in twelve months time?	1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
lc_apart	Personal living conditions compared to apartheid		Q3SAF	Q6SAF	Q6SAF			Is your life today better, about the same or worse than it was under apartheid?	1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
grp_econ	Group economic conditions compared to other groups	Q85	Q55	Q80A	Q80A	Q80		Think about the condition of _____ [respondent's identity group] Are their economic conditions worse, the same as, or better than other groups in this country?	1 = Much worse, 2 = Worse, 3 = Same, 4 = Better, 5 = Much better, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
grp_trmt	Group treatment compared to other groups	Q86	Q56	Q81	Q81	Q82	Q85A	How often are _____s [respondent's identity group] treated unfairly by the government?	0 = Never, 1 = Sometimes, 2 = Often, 3 = Always, 7 = Not Applicable, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Always, 2 = To a large extent, 3 = Some extent, 4 = Hardly, 5 = Never, 6 = don't know, 97 = Not applicable, 98 = Refused, 99 = Missing Data
act_demo	Attended a demonstration or protest march (0-4)	Q93A	Q25D	Q31C	Q31C	Q23C	Q26D	Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. If not, would you do this if you had the chance: Attended a demonstration or protest march?	0 = Never, 1 = Sometimes, 2 = Often, 3 = Always, 7 = Not Applicable, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Yes, often, 2 = Yes, a few times, 3 = Yes, once or twice, 4 = No, but would do it if had the chance, 5 = no, would never do this, 6 = Don't know, 98 = Refused, 99 = Missing Data
act_meet	Attended community meetings (0-4)		Q25B	Q31A	Q31A	Q23A	Q26A	Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past year. If not, would you do this if you had the chance: Attended a community meeting?	0 = No, would never do this, 1 = No, but would do if had the chance, 2 = Yes, once or twice, 3 = Yes, several times, 4 = Yes, often, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	

Variable name	Variable label	Questionnaire variable by survey round						Question	Response scale	Notes
		R1 (2000)	R2 (2002)	R2.5 (2004)	R3 2006)	R4 (2008	R5 (2011)			
resp_wb	Resp for well-being: people vs. govt (1-4)	Q19	Q61	Q19	Q19			Lets talk for a moment about the kind of society we would like to have in this country. Which of the following statements is closest to your view? Choose Statement A or Statement B. A: People should look after themselves and be responsible for their own success in life. B: The government should bear the main responsibility for the well-being of people.	1 = Agree Very Strongly with A, 2 = Agree with A, 3 = Agree with B, 4 = Agree Very Strongly with B, 5 = Agree with Neither, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = A, strongly; 2 = A, somewhat; 3 = B, somewhat; 4 = B, strongly, 5 = Don't Know, 6 = Do not agree with either, 98 = Refused, 99 = Missing Data
oth_ignore	Others don't listen to you (1-5)		Q28B	Q18B	Q18B			Do you agree or disagree with the following statements? As far as politics is concerned, friends and neighbors do not listen to you.	1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
lgov_list	Local govt councilors listen		Q50B	Q62B	Q62B	Q54B	Q62B	How much of the time do think the following try their best to listen to what people like you have to say: Elected Local Government Councilors?	0 = Never 1 = Only Sometimes, 2 = Often, 3 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
comm_grp	Member of community group		Q24A	Q28D	Q28D	Q22B	Q25B	Now I am going to read out a list of groups that people join or attend. For each one, could you tell me whether you are an official leader, an active member, an inactive member, or not a member: A community development or self-help association?	0 = Not a Member, 1 = Inactive Member, 2 = Active Member, 3 = Official Leader, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	
lp_food	Gone without food	Q13A	Q9A	Q8A	Q8A	Q8A	Q8A	Over the past year, how often, if ever, have you or your family gone without: Enough food to eat?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data
lp_wat	Gone without water	Q13E	Q9B	Q8B	Q8B	Q8B	Q8B	Over the past year, how often, if ever, have you or your family gone without: Enough clean water for home use?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data
lp_med	Gone without medical care	Q13C	Q9C	Q8C	Q8C	Q8C	Q8C	Over the past year, how often, if ever, have you or your family gone without: Medicines or medical treatment?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data

Variable name	Variable label	Questionnaire variable by survey round						Question	Response scale	Notes
		R1 (2000)	R2 (2002)	R2.5 (2004)	R3 2006)	R4 (2008	R5 (2011)			
lp_fuel	Gone without cooking fuel	Q13H	Q9E	Q8D	Q8D	Q8D	Q8D	Over the past year, how often, if ever, have you or your family gone without: Enough fuel to cook your food?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – In the last twelve months, how often have you or your family: H. Gone without enough fuel to heat your home or cook your food? R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data
lp_inc	Gone without cash income	Q13D	Q9F	Q8E	Q8E	Q8E	Q8E	Over the past year, how often, if ever, have you or your family gone without: A cash income?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data
lp_elec	Gone without electricity	Q13G	Q9D	Q8F-SAF	Q8F-SAF		Q8F-SAF	Over the past year, how often, if ever, have you or your family gone without: Electricity in your home?	0 = Never, 1 = Just once or twice, 2 = Several times, 3 = Many times, 4 = Always, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never, 5 = Don't Know, 99 = Missing data
educ	Highest education level	Q113	Q84	Q90	Q90	Q89	Q97	What is the highest level of education you have completed?	0 = No formal schooling, 1 = Informal schooling, 2 = Some primary schooling, 3 = Primary school completed, 4 = Some secondary school/ High school, 5 = Secondary school completed/High school, 6 = Post-secondary qualifications, not university, 7 = Some university, 8 =	
radio	Radio news	Q42A	Q26A	Q15A	Q15A	Q12A	Q13A	How often do you get news from the following sources: Radio?	0 = Never, 1 = Less than once a month, 2 = A few times a month, 3 = A few times a week, 4 = Every day, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Everyday, 2 = A few times a week, 3 = A few times a month, 4 = Less than once a month, 5 = Never, 6 = Do not know, 98 = Refused, 99 = Missing Data
tv	Television news	Q42B	Q26B	Q15B	Q15B	Q12B	Q13B	How often do you get news from the following sources: Television?	0 = Never, 1 = Less than once a month, 2 = A few times a month, 3 = A few times a week, 4 = Every day, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Everyday, 2 = A few times a week, 3 = A few times a month, 4 = Less than once a month, 5 = Never, 6 = Do not know, 98 = Refused, 99 = Missing Data
papers	Newspaper news	Q42C	Q26C	Q15C	Q15C	Q12C	Q13C	How often do you get news from the following sources: Newspapers?	0 = Never, 1 = Less than once a month, 2 = A few times a month, 3 = A few times a week, 4 = Every day, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R1 – 1 = Everyday, 2 = A few times a week, 3 = A few times a month, 4 = Less than once a month, 5 = Never, 6 = Do not know, 98 = Refused, 99 = Missing Data
internet	Internet news						Q13D	How often do you get news from the following sources: Internet?	0 = Never, 1 = Less than once a month, 2 = A few times a month, 3 = A few times a week, 4 = Every day, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	

Variable name	Variable label	Questionnaire variable by survey round						Question	Response scale	Notes
		R1 (2000)	R2 (2002)	R2.5 (2004)	R3 2006)	R4 (2008	R5 (2011)			
int_pa	Interest in public affairs		Q27	Q16	Q16	Q13	Q14	How interested are you in public affairs?	R2.5 – R5: 0 = Not at all interested, 1 = Not very interested, 2 = Somewhat interested, 3 = Very interested, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data	R2; 0 = Not interested, 1 = Somewhat interested, 2 = Very interested, 9 = Don't Know, 98 = Refused to Answer, -1 = Missing Data

Appendix C

Cape Flats survey design and documentation

FOOD & PROTEST QUESTIONNAIRE – ODD DAYS

A01	*Enumerator number*		A02	*Date*	DD/MM/YYYY	A03	*Start time*	AM PM

A04	*Municipality*	CPT	A05	*Enumeration area*	199_____

A06	*In what language is the interview being conducted?*	Afrikaans	1
		English	2
		IsiXhosa	3
		IsiZulu	4
		Other [*Specify*]:	

A07	*Module order*	Protest module first

DEMOGRAPHIC AND HOUSEHOLD CHARACTERISTICS MODULE

Transition into module:
The first few questions are basic demographic questions. Remember that I will not record your name or any other identifying information. Still, if you are uncomfortable answering any of these questions, you are free to decline.

D01	*What is the gender of the respondent?*	Female	1
		Male	2
		Other / refused	9

D02	What is your current age?		D03	In what year were you born?

D04a	In which country were you born?	South Africa [*GO TO D04b*]	1
		Other [*Specify*]: [*GO TO D05*]	
		Don't know / refused [*GO TO D05*]	9

D04b In which province were you born?			
Eastern Cape	1	Mpumalanga	6
Free State	2	North West	7
Gauteng	3	Northern Cape	8
KwaZulu-Natal	4	Western Cape	9
Limpopo	5	Not applicable	88
		Don't know / refused	99

D05 How would you describe yourself in terms of population group?			
Black African	1	White	4
Coloured	2	Other	5
Indian / Asian	3	Don't know / refused	9

D06	Which language is predominantly used in your household? [*Select from below based on response.*]			
Afrikaans	01	Sesotho	07
English	02	Setswana	08
IsiNdebele	03	Sign language	09
IsiXhosa	04	Tshivenda	10
IsiZulu	05	Xitsonga	11
Sepedi	06	Other [*Specify*]:	12
		Don't know / refused	99

D07	What is your present marital status? [*Select from below based on response.*]			
Married	1	Widowed	4
Living together like married partners	2	Separated	5
Never married	3	Divorced	6
		Don't know / refused	9

D08	What is the highest level of education you have completed? [*DO NOT READ OPTIONS. CODE FROM RESPONSE*]			
No formal schooling	01	Post-secondary qualification (diploma or certificate with more than Grade 12 / Std 10)	06
Some primary school (less than Grade 9 / Std 7)	02	Some university but no degree	07
Primary school completed (Grade 9 / Std 7)	03	Bachelors degree	08
Secondary school diploma with Grade 12 / Std 10 (Matric)	04	Honours degree	09
Diploma or certificate with less than Grade 12 / Std 10	05	Higher degree (Masters / PhD)	10
		Don't know / refused to answer	99

D09a	How would you describe your current employment status?		
Unemployed	[*GO TO D09b*]	1
Working on a temporary or day-labor basis	[*GO TO D09b*]	2
Self-employed	[*GO TO D09b*]	3
Employed part-time (less than 30 hours per week)	[*GO TO D10*]	4
Employed full-time (more than 30 hours per week)	[*GO TO D10*]	5
Don't know / refused	[*GO TO D09b*]	9

D09b	[*IF RESPONDENT ANSWERED 1, 2, 3 OR 9 ABOVE, ASK:*] Are you actively seeking employment at this time?		
	No	0
	Yes	1
	Not applicable	8
	Don't know / refused	9

D10	How many people are in your household, including children? A household member is someone who regularly sleeps and takes meals in the household, and relies substantially on the combined household income for support.	

D11	How many children under age 18 are in your household? [*Children 17 years and under.*]	

D12	How many members of your household contribute to the household income, i.e. help pay household expenses?	

D13	Are you the primary income earner for your household?	No	0
		Yes	1
		Don't know / refused	9

D14	Are you the person primarily responsible for purchasing food and other household needs?	No	0
		Yes	1
		Don't know / refused	9

D15	Which of the following best describes the MAIN dwelling that your household occupies? [*READ OUT OPTIONS*]			
House or brick/concrete block structure on a separate stand or yard		01	House/flat/room in backyard	06
Traditional dwelling/hut/structure made of traditional materials		02	Informal dwelling (shack in backyard)	07
Flat or apartment in a block of flats		03	Informal dwelling (shack not in backyard, e.g. in an informal/squatter settlement or on a farm)	08
Cluster house in a complex		04	Caravan/tent	09
Semi-detached house		05	Other	10
			Don't know / refused	99

D16	What is the tenure status of this dwelling? [*READ OUT OPTIONS*]			
Occupied rent free		1	Rented	4
Owned and fully paid off		2	Other	5
Owned but not yet paid off		3	Don't know / refused	9

D17	In which way does this household mainly get piped water for household use? [*READ OUT OPTIONS*]	
Piped (tap) water inside the dwelling		1
Piped (tap) water inside the yard		2
Piped (tap) water on a community stand		3
No access to piped water		7
Don't know / refused		9

D18	Does this household own any of the following in working order? [*READ EACH ITEM AND RECORD RESPONSE*.]			
		No	Yes	Don't know / refused
a.	Refrigerator	0	1	9
b.	Electric / gas stove	0	1	9
c.	Vacuum cleaner	0	1	9
d.	Washing machine	0	1	9
e.	Computer / laptop	0	1	9
f.	Satellite television	0	1	9
g.	DVD player	0	1	9
h.	Motorcar	0	1	9
i.	Motorcycle / scooter	0	1	9
j.	Television	0	1	9
k.	Radio	0	1	9
l.	Landline / telephone	0	1	9
m.	Cell phone	0	1	9

D19	On what basis does your household receive regular income, if at all? [*READ OUT OPTIONS*]	
Weekly	[*Insert WEEK in questions D20 and D21.*]	1
Bi-weekly (every two weeks)	[*Insert MONTH in questions D20 and D21.*]	2
Monthly	[*Insert MONTH in questions D20 and D21.*]	3
No regular income	[*Insert WEEK in questions D20 and D21.*]	4
Don't know / refused		9

D20	How much was your ACTUAL household income in the PAST (*week / two weeks / month*), not including any social grants from the South African Social Security Agency (SASSA)?	ZAR

D21	How much is your AVERAGE household income in a NORMAL (*week / two-week period / month*), not including any social grants from the South African Social Security Agency (SASSA)?	ZAR

D22a	In the past 12 months, since November of last year, have you or anyone in your household received a Child Social Grant (CSG) or Foster Care Grant from the South African Social Security Agency SASSA)?		
	No	[*GO TO D23a*]	0
	Yes	[*GO TO D22b*]	1
	Don't know / refused	[*GO TO D23a*]	9

D22b	[*IF YES ABOVE, ASK:*] What was the approximate total amount *per month* of the Child Support Grant(s) and/or Foster Care Grant(s) received from SASSA?	ZAR

D23a	In the past 12 months, since November of last year, have you or anyone in your household received any other social grant or grants from the South African Social Security Agency SASSA)?		
	No	[*GO TO D24*]	0
	Yes	[*GO TO* D23b]	1
	Don't know / refused	[*GO TO D24*]	9

D23b	[*IF YES ABOVE,* ASK:] What was the approximate total amount *per month* of any grant or grants, other than CSGs and Foster Care Grants, received from SASSA?	ZAR

D24	Over the past year, how often, if ever, have you or anyone in your family: [*READ OUT OPTIONS*]	Never	Just once or twice	Several times	Many times	Always	No access to electricity	Don't know / refused
a.	Gone without enough food to eat?	1	2	3	4	5		9
b.	Gone without enough clean water for home use?	1	2	3	4	5		9
c.	Gone without medicines or medical treatment?	1	2	3	4	5		9
d.	Gone without enough fuel to cook your food?	1	2	3	4	5		9
e.	Gone without a cash income?	1	2	3	4	5		9
f.	Gone without electricity in your home?	1	2	3	4	5	8	9

COMMUNITY AFFILIATION AND POLITICAL ATTITUDE MODULE

Transition into module:
Now I'm going to ask you some questions about your community and political affiliations and attitudes. Again, remember that your responses are completely anonymous. Still, you are free to refuse to answer if you choose.

C01a	Are you a member of a trade / labour union?		
	No	[*GO TO C02*]	0
	Yes	[*GO TO C01b*]	1
	Don't know / refused	[*GO TO C02*]	9

C01b	[*IF YES ABOVE, ASK:*] To which union do you belong?	ENTER RESPONSE

C02	Which religion, if any, do you follow or identify with?	ENTER CODE FROM RESPONSE OR SPECIFY IF OTHER

C03 How important is religion in your life?	
Not important at all	1
Not very important	2
Somewhat important	3
Very important	4
Don't know / refused	9

C04a	Do you feel close to any particular political party?	No [*GO TO C05*]	0
		Yes [*GO TO C04b*]	1
		Don't know / refused [*GO TO C05*]	9

C04b [*IF YES ABOVE, ASK;* OTHERWISE *SELECT "888"*] Which party is that?
[*DO NOT READ OPTIONS. CODE FROM RESPONSE.*]

African Christian Democratic Party (ACDP)	01	Inkatha Freedom Party (IFP)	12
African Independent Congress (AIC)	02	National Freedom Party (NFP)	13
African National Congress (ANC)	03	National Party South Africa (NP)	14
African People's Convention (APC)	04	Pan Africanist Congress Of Azania (PAC)	15
Agang South Africa	05	Patriotic Alliance (PA)	16
Al Jama-Ah	06	Ubuntu Party	17
Azanian People's Organisation (AZAPO)	07	United Christian Democratic Party (UCDP)	18
Congress Of The People (COPE)	08	United Democratic Movement (UDM)	19
Democratic Alliance (DA)	09	Vryheidsfront Plus (VF+)	20
Economic Freedom Fighters (EFF)	10	Other [*Specify*]:	
Independent Civic Organisation Of South Africa (ICOSA)	11	Not Applicable	88
		Don't Know / Refused	99

C05 Thinking about the last election, did you take any of the following actions? [*READ EACH ITEM AND RECORD RESPONSE.*]

	No	Yes	Don't know / refused
a. Did you vote?	0	1	9
b. Did you attend a campaign meeting or rally?	0	1	9
c. Did you try to persuade others to vote for a certain presidential or legislative candidate or political party?	0	1	9
d. Did you work or volunteer for a candidate or party?	0	1	9

C06	When you get together with your friends or family, how often would you say that you discuss political matters? [*READ OUT OPTIONS*]	Frequently	2
		Occasionally	1
		Never	0
		Don't know / refused	9

C07 Here is a list of actions that people sometimes take as citizens. For each of these, please tell me whether you, personally, have done any of these things during the past 12 months, since November of last year. [*IF YES, READ OUT OPTIONS 2–4*]. If not, would you do this if you had the chance? [*FOR NO, READ OUT OPTIONS 0 AND 1*]

	Yes			No		
	Often	Several times	Once or twice	Would if had the chance	Would never do this	Don't know / refused
a. Attended a community meeting	4	3	2	1	0	9
b. Got together with others to raise an issue	4	3	2	1	0	9
c. Contacted a government department to raise an issue	4	3	2	1	0	9
d. Contacted radio, TV or a newspaper to complain about an issue	4	3	2	1	0	9
e. Refused to pay for services provided by government like water, electricity or property rates	4	3	2	1	0	9
f. Refused to pay a tax or fee to government	4	3	2	1	0	9
g. Attended a demonstration or protest march	4	3	2	1	0	9
h. Gone on strike in order to demand a higher salary or better working conditions	4	3	2	1	0	9
i. Used force or violence for a political cause	4	3	2	1	0	9

C08 If a presidential election were held tomorrow, which party's candidate would you vote for? [*DO NOT READ OPTIONS. CODE FROM RESPONSE*]

African Christian Democratic Party (ACDP)	01	Inkatha Freedom Party (IFP)	12
African Independent Congress (AIC)	02	National Freedom Party (NFP)	13
African National Congress (ANC)	03	National Party South Africa (NP)	14
African People's Convention (APC)	04	Pan Africanist Congress Of Azania (PAC)	15
Agang South Africa	05	Patriotic Alliance (PA)	16
Al Jama-Ah	06	Ubuntu Party	17
Azanian People's Organisation (AZAPO)	07	United Christian Democratic Party (UCDP)	18
Congress Of The People (COPE)	08	United Democratic Movement (UDM)	19
Democratic Alliance (DA)	09	Vryheidsfront Plus (VF+)	20
Economic Freedom Fighters (EFF)	10	Other [*Specify*]:	
Independent Civic Organisation Of South Africa (ICOSA)	11	Don't Know / Refused	99

C09	How much do you trust each of the following, not at all, just a little, somewhat, or a lot, or haven't you heard enough about them to say? [*READ EACH ITEM AND OPTIONS AND RECORD RESPONSE*.]					
		Not at all	Just a little	Somewhat	A lot	Don't know / haven't heard enough / refused
a.	The President, Jacob Zuma	1	2	3	4	9
b.	Parliament	1	2	3	4	9
c.	The Independent Electoral Commission (IEC)	1	2	3	4	9
d.	The Premier of this Province, Helen Zille	1	2	3	4	9
e.	The Western Cape Provincial Government	1	2	3	4	9
f.	The South African Revenue Service (SARS)	1	2	3	4	9
g.	The Mayor of Cape Town, Patricia de Lille	1	2	3	4	9
h.	The City of Cape Town Municipal Government	1	2	3	4	9
i.	The ruling party, the African National Congress (ANC)	1	2	3	4	9
j.	Opposition political parties	1	2	3	4	9
k.	The Police (SAPS)	1	2	3	4	9
l.	The National Prosecuting Authority (NPA)	1	2	3	4	9
m.	The Directorate of Priority Crime Investigations, the Hawks	1	2	3	4	9
n.	The Army	1	2	3	4	9
o.	Courts of law	1	2	3	4	9
p.	Government broadcasting service, SABC TV and radio	1	2	3	4	9
q.	Independent broadcasting services like E TV, Radio 702 and community radio stations	1	2	3	4	9
r.	Independent newspapers	1	2	3	4	9

C10	Are you a member or frequent participant in any of the following organizations? [*READ OUT OPTIONS*.]			
		No	Yes	Don't know / refused
a.	Community policing group / neighbourhood watch	0	1	9
b.	Parent teacher association	0	1	9
c.	Volunteer / development organisation	0	1	9
d.	Sports team / league	0	1	9
e.	Arts / theatre organisation	0	1	9
f.	Vigilante group	0	1	9
g.	Other [*Specify*]:	0	1	9
h.	Other [*Specify*]:	0	1	9
i.	Other [*Specify*]:	0	1	9

C11	How frequently do you attend any of the following types of meetings / gatherings? [*READ OUT OPTIONS*.]	Once a week or more	Once or twice a month	Only a few times per year	Rarely or never	Don't know / refused
a.	Community policing / neighbourhood watch meetings	1	2	3	4	9
b.	Parent teacher association meetings	1	2	3	4	9
c.	Sporting events (as a participant)	1	2	3	4	9
d.	Volunteering opportunities	1	2	3	4	9
e.	Arts / theatre group meetings	1	2	3	4	9
f.	Religious services	1	2	3	4	9
g.	Political party meetings	1	2	3	4	9
h.	Labour / trade union meetings	1	2	3	4	9
i.	Other [*Specify*]:	1	2	3	4	9
j.	Other [*Specify*]:	1	2	3	4	9
k.	Other [*Specify*]:	1	2	3	4	9

PROTEST PARTICIPATION MODULE

Transition into module:
Now I'm going to ask you some questions about activities in which you may have participated in the past.

P01	Have you ever participated in a march, protest, strike or any other type of public demonstration intended to express a grievance with or demand action from any of the following types of organizations or individuals? [*READ EACH ITEM AND RECORD RESPONSE*.]	No	Yes	Don't know / refused
a.	The national government or a branch thereof?	0	1	9
b.	The provincial government or a branch thereof?	0	1	9
c.	The municipal government or a branch thereof?	0	1	9
d.	A foreign government?	0	1	9
e.	A private corporation or individual?	0	1	9

P02	Have you ever participated in any public demonstration or protest of any type for any other purpose?	
	No	0
	Yes	1
	Don't know / refused	9

SCREEN: If respondent answered "NO" all parts of P01 and P02, then skip to the next module, otherwise go to P03

P03	Approximately how many times would you say that you have participated in some sort of demonstration or protest activity regardless of the grievance or demand? [*READ OUT OPTIONS*]			
Once or twice		1	At least 20 but fewer than 50 times	4
More than twice but fewer than 10 times		2	At least 50 times or more	5
At least 10 but fewer than 20 times		3	Don't know / refused	9

P04	Have you ever participated in any public demonstration or protest in the past 12 months, since November of last year?		
	No	[*GO TO P09*]	0
	Yes	[*GO TO P05*]	1
	Don't know / refused	[*GO TO P09*]	9

P05	Thinking about the most recent demonstration or protest in which you participated, approximately how many people were involved the action? [*READ OUT OPTIONS*]			
Less than 10		1	At least 200 but fewer than 1,000	4
At least 10 but fewer than 50		2	At least 1,000 or more	5
At least 50 but fewer than 200		3	Don't know / refused	9

P06	Thinking about the most recent demonstration or protest, please answer the following questions. [*READ EACH ITEM AND RECORD RESPONSE*.]			
		No	Yes	Don't know / refused
a.	Was public or private property damaged or destroyed during the action?	0	1	9
b.	Was anyone physically injured during the action?	0	1	9
c.	Were the police present to keep order?	0	1	9
d.	Did the police use force to control the action?	0	1	9

P07	Thinking about the most recent demonstration or protest in which you participated, what was the main issue expressed? [*DO NOT READ OPTIONS BUT CODE FROM RESPONSE*.]	
Cost or availability of electricity		01
Lack of employment or jobs		02
Wages or other labour issue		03
Cost or availability of housing, including destruction of informal housing		04
Cost or availability of transportation services		05
Cost or availability of water		06
Access to or cost of desirable and nutritious food		07
Access to, cost or quality of education		08
Access to, cost or quality of healthcare		09
Lack or quality of other government services, e.g. sanitation, rubbish removal, etc.		10
Lack of police or high crime (directed to authorities)		11
Vigilante justice (directed at criminals)		12
International relations, including international human rights		13
Racial equality		14
Gender equity or women's rights		15
Climate change / environmental issues		16
Other [*Specify*]:		

P08a	Again thinking about the most recent demonstration or protest in which you participated, was the action planned in advance?			
		No	[*GO TO P09*]	0
		Yes	[*ASK P08a – P08e*]	1
		Don't know / refused	[*GO TO P09*]	9

P08b	[*IF YES ABOVE,* ASK] How far in advance did you know about the action? [*READ OPTIONS OUT*]			
One day		1	More than one week but less than one month	4
Two to three days		2	More than one month	5
Four days to one week		3	Don't know / refused	9

P08c [*IF YES TO P08a,* ASK] How did you first learn about the action? [*READ OPTIONS OUT*]			
Word of mouth, i.e. heard from friends or family	1	Notice in newspaper	5
Phone call, email or SMS directly from organizer	2	Notice on radio or television	6
Street posting or notice on community messaging board	3	Other [*Specify*]:	
Website or internet posting	4	Don't know / refused	9

P08d [*IF YES TO P08a,* ASK] Did you attend any planning or organizing meetings prior to the actual activity?		
	No	0
	Yes	1
	Don't know / refused	9

P08e [*IF YES TO P08a,* ASK] Did you tell others about the event or try to recruit others to join? [*READ OPTIONS OUT*]		
	No	0
	Yes	1
	Don't know / refused	9

P09 Thinking about ANY of the demonstrations or protests in which you have participated, please answer the following questions? [*READ EACH ITEM AND RECORD RESPONSE*.]			
	No	Yes	Don't know / refused
a. Was public or private property damaged or destroyed during the action?	0	1	9
b. Was anyone physically injured during the action?	0	1	9
c. Were the police present to keep order?	0	1	9
d. Did the police use force to control the action?	0	1	9

P10 Thinking about ANY of the demonstrations or protests in which you have participated, have any of them been about any of the following issues? [*READ OUT EACH ITEM*]			
	No	Yes	Don't know / refused
a. Cost or availability of electricity	0	1	9
b. Lack of employment or jobs	0	1	9
c. Wages or other labour issue	0	1	9
d. Cost or availability of housing, including destruction of informal housing	0	1	9
e. Cost or availability of transportation services	0	1	9
f. Cost or availability of water	0	1	9
g. Access to or cost of desirable and nutritious food	0	1	9
h. Access to, cost or quality of education	0	1	9
i. Access to, cost or quality of healthcare	0	1	9
j. Gender equity or women's rights	0	1	9
k. Lack or quality of other government services, e.g. sanitation, rubbish removal, etc.	0	1	9
l. Lack of police or high crime (directed to authorities)	0	1	9
m. Vigilante justice (directed at criminals)	0	1	9
n. International relations, including international human rights	0	1	9
o. Racial equality	0	1	9
p. Gender equity or women's rights	0	1	9
q. Climate change / environmental issues	0	1	9

FOOD SECURITY MODULE

Transition into module:
Now I'm going to ask you some questions about food used in your household and the ways you are managing to meet your food needs.

INTERVIEWER INSTRUCTIONS: *Select the appropriate fill from the parenthetical choices depending on the number of persons and number of adults in the household.*

I'm going to read you two statements that people have made about their food situation. For these statements, please tell me whether the statement was OFTEN true, SOMETIMES true, or NEVER true for (you/your household) in the last 12 months—that is, since November of last year.

F01	The first statement is "(I/We) worried whether (my/our) food would run out before (I/we) got money to buy more." Was that often true, sometimes true, or never true for (you/your household) in the last 12 months, since November of last year?	Often true	1
		Sometimes true	2
		Never true	3
		Don't know / refused	9

F02	"(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months, since November of last year?	Often true	1
		Sometimes true	2
		Never true	3
		Don't know / refused	9

F03a	In the last 12 months, since last (*name of current month*), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?	No	[*GO TO F04*]	0
		Yes	[*GO TO F03b*]	1
		Don't know / refused	[*GO TO F04*]	9

F03b	[*IF YES ABOVE, ASK*] How often did this happen – almost every month, some months but not every month, or in only 1 or 2 months?	Almost every month	1
		Some months but not every month	2
		Only 1 or 2 months	3
		Not applicable	8
		Don't know / refused	9

F04	In the last 12 months, since November of last year, did you ever eat less than you felt you should because there wasn't enough money to buy food?	No	0
		Yes	1
		Don't know / refused	9

F05	In the last 12 months, since November of last year, were you every hungry but didn't eat because you couldn't afford enough food?	No	0
		Yes	1
		Don't know / refused	9

F06	In the past 24 hours, how many times have you eaten the following food items? [*READ EACH ITEM AND RECORD RESPONSE*.]				
a.	Bread		e.	Cheese	
b.	Meat or meat products		f.	Fish or fish products	
c.	Fresh fruit		g.	Rice	
d.	Fresh vegetables		h.	Maize or maize meal	
			i.	Coffee or tea	

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F07 What proportion of your weekly household income would you estimate that you spend on food?			
Less than 10 per cent	1	30 to 40 per cent	4
10 to 20 per cent	2	40 to 50 per cent	5
20 to 30 per cent	3	More than half	6
		Don’t know / refused	9

Now I'm going to ask you some questions about places where you and your household purchase food?

F08a	First, did you or anyone in your household shop for food at a supermarket or grocery store in the last seven (7) days?	No	0
		Yes	1
		Don't know / refused	9

F08b	[*IF YES ABOVE, ASK; OTHERWISE ENTER "0"*] How much did your household ACTUALLY spend at supermarkets and grocery stores in the last seven (7) days? [*Enter "DK" if resp. does not know or refuses to answer.*]	F08b	ZAR

F08c	[*IF YES ABOVE, ASK;* OTHERWISE *ENTER "0"*] How much of this was for non-food items, such as pet food, paper products, alcohol, detergents, or cleaning supplies? [*Enter "DK" if resp. does not know or refuses to answer.*]	F08c	ZAR

F09a	Think about other places where people buy food, such as meat markets, produce stands, bakeries, and tuck shops. Did you or anyone in your household buy food from any stores such as these in the last seven (7) days?	No	0
		Yes	1
		Don't know / refused	9

F09b	[*IF YES ABOVE, ASK; OTHERWISE ENTER "0"*] How much did your household ACTUALLY spend for food at stores such as meat markets, produce stands, bakeries, and tuck shops in the last seven (7) days? [*Enter "DK" if resp. does not know or refuses to answer.*]	F09b	ZAR

F10a	In the last seven (7) days, did you or anyone in your household buy food at a restaurant, fast food place, cafeteria, or vending machine? (Include any children who may have bought food at the school cafeteria).	No	0
		Yes	1
		Don't know / refused	9

F10b	[*IF YES ABOVE, ASK;* OTHERWISE *ENTER "0"*] How much did you or your household ACTUALLY spend for food at restaurants, fast food places, cafeterias, and vending machines in the last seven (7) days, not including alcohol purchases? [*Enter "DK" if resp. does not know or refuses to answer.*]	F10b	ZAR

F11a	Did you or anyone in your household buy food from any other kind of place in the last seven (7) days?	No	0
		Yes	1
		Don't know / refused	9

F11b	[*IF YES ABOVE, ASK; OTHERWISE ENTER "0"*] How much did you or your household spend for food at any other kind of place in the last seven (7) days? [*Enter "DK" if resp. does not know or refuses to answer.*]	F11b	ZAR

INTERVIEWER INSTRUCTIONS: *Pause here to complete calculations to the right and use the total, WEEKLY FOOD SPENDING, in the indicated space in question F12a.*

Amounts from F08b	F08b
+ F09b	F09b
+ F10b	F10b
+ F11b	F11b
=	
– Amount from F08c	F08c
=	WEEKLY FOOD SPENDING

F12a	It seems that (you/your household) spent [*WEEKLY FOOD SPENDING*] on food in the past week. Now think about how much (you/your household) USUALLY spend(s). How much (do you/does your household) USUALLY spend on food at all of the different places we've been talking about IN A WEEK?		ZAR

People do different things to meet their food needs besides purchase food with their own money. I'm going to read a list of alternative ways to meet food needs, and I'd like you to tell me how often you or anyone in your household has done any of these things in the past 12 months.

F13a	Grown or produced your own food in your own household property or a community garden. How often have you done this in the past 12 months?			
Never	[SKIP TO F14a]	1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F13b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F14a	Purchased food with money received from "Social Relief of Distress" from SASSA. How often have you done this in the past 12 months?			
Never	[SKIP TO F15a]	1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F14b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F15a	Received food from a government run school feeding program. How often have you done this in the past 12 months?			
Never	[SKIP TO F16a]	1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F15b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F16a	Received food from a church, a food pantry, a food bank, or other community program. How often have you done this in the past 12 months?			
Never	[SKIP TO F17a]	1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F16b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F17a	Purchased food with borrowed money. How often have you done this in the past 12 months?			
Never	[SKIP TO F18a]	1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F17b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F18a	Received food from a friend or family member when unable to purchase food. How often have you done this in the past 12 months?			
Never [SKIP TO F19]		1	More than 2 but not every month	3
Only 1 or 2 months		2	Almost every month	4
			Don't know / refused	9

F18b	Have you done this in the past (30) days?		
		No	0
		Yes	1
		Don't know / refused	9

F19	In your opinion, how have food prices changed over the past 12 months compared to previous years?			
Fallen		1	Risen moderately	4
Stayed about the same		2	Risen a lot	5
Risen slightly		3	Don't know / refused	9

F20	In your opinion, how have food prices changed over the past 30 days compared to previous months?			
Fallen		1	Risen moderately	4
Stayed about the same		2	Risen a lot	5
Risen slightly		3	Don't know / refused	9

F21 Now, focusing on a specific food items, how have the price changed over the past 12 months compared to previous years? [*READ EACH ITEM AND RECORD RESPONSE*.]

	Fallen	Stayed about the same	Risen slightly	Risen moderately	Risen a lot	Don't normally purchase / not applicable	Don't know / refused
a. Bread	1	2	3	4	5	8	9
b. Meat and meat products	1	2	3	4	5	8	9
c. Fresh fruit	1	2	3	4	5	8	9
d. Fresh vegetables	1	2	3	4	5	8	9
e. Cheese	1	2	3	4	5	8	9
f. Fish and fish products	1	2	3	4	5	8	9
g. Cooking oil	1	2	3	4	5	8	9
h. Sugar	1	2	3	4	5	8	9
i. Rice	1	2	3	4	5	8	9
j. Maize and maize meal	1	2	3	4	5	8	9
k. Coffee or tea	1	2	3	4	5	8	9
l. Ready-to-eat / prepared meals	1	2	3	4	5	8	9

F22	In the past year have you or your household reduced consumption of and of the following items because it has become unaffordable? [*READ EACH ITEM AND RECORD RESPONSE*.]				
		No	Yes	Don't normally consume / not applicable	Don't know / refused
a.	Bread	0	1	8	9
b.	Meat and meat products	0	1	8	9
c.	Fresh fruit	0	1	8	9
d.	Fresh vegetables	0	1	8	9
e.	Cheese	0	1	8	9
f.	Fish and fish products	0	1	8	9
g.	Cooking oil	0	1	8	9
h.	Sugar	0	1	8	9
i.	Rice	0	1	8	9
j.	Maize and maize meal	0	1	8	9
k.	Coffee or tea	0	1	8	9
l.	Ready-to-eat / prepared meals	0	1	8	9

EXPERIMENT MODULE

Transition into module:
I will now read you a short news article and then ask you a few last questions.

Interviewer: Read the randomized paragraph and indicate number of paragraph, then proceed with questions E02 – E05.

E01	*Experimental condition*	1	2	3	4	5

E03	How likely are you to participate in each of the following actions? [*READ EACH ITEM AND RECORD RESPONSE*.]						
		Extremely unlikely	Unlikely	Neutral	Likely	Extremely likely	Don't know / refused
a.	A demonstration march to Parliament to demand that the government take some action to help control food prices.	1	2	3	4	5	9
b.	A protest disrupting traffic to raise awareness for the difficulties of those most affected by high food prices.	1	2	3	4	5	9
c.	A labour strike demanding higher wages to help families afford healthy food.	1	2	3	4	5	9
d.	A civil disobedience action to seize food from a local supermarket and distribute it to families in need.	1	2	3	4	5	9

E02	I'm going to read you a list of five different policy initiatives that the South African government could take. Please tell me which of these initiatives you think is MOST IMPORTANT to respond to this information. [*READ ALL ITEMS AND RECORD RESPONSE*.]	
a.	Provide subsidies to farmers to help control production costs.	1
b.	Impose export restrictions to ensure that South African agricultural products are used to meet needs in South Africa.	2
c.	Impose price controls on the consumer price of food and subsidize corporate food retailers for the higher costs.	3
d.	Increase job programs and raise minimum wages to help more people support themselves.	4
e.	Institute an expanded food voucher system to help low-income households cope with higher food prices.	5

I would now like to ask you if you are willing to sign two petitions via SMS. You may choose to sign either or both of them or not to sign either one. The first petition asks government to take measures to control food prices and the second asks government to institute or expand a food voucher system to help low-income households purchase healthy food.

E04	Would you sign a petition asking government to take measures to control food prices? If so, please send your name and "I support food price control" via SMS to 076 931 9031? Your name or number will not be connected to your responses to this questionnaire.	
YES, respondent sent SMS		1
NO, respondent did NOT send SMS		0
Respondent did not have a cell phone		9

E05	Would you sign a petition asking government to institute a food voucher system to help low-income households purchase healthy food? If so, please send your name and "I support expending food vouchers" via SMS to 076 931 9031? Your name or number will not be connected to your responses to this questionnaire.	
YES, respondent sent SMS		1
NO, respondent did NOT send SMS		0
Respondent did not have a cell phone		9

Thank you very much for your participation. The news article that I read to you was a hypothetical, that is, it was not an actual news story. You should not be concerned about food prices rising as was stated. The petition will, however, be delivered to appropriate officials for consideration.

END OF QUESTIONNAIRE

SELECTION INSTRUCTIONS

It is your job as an interviewer to select a random household (a household is a group of people who regularly eat meals together) and an appropriate member from each household to interview. Only adult South African citizens at least 18 but not more than 64 years old are eligible for participation. You must alternate between male and female respondents throughout the duration of the fieldwork. That is, if you end the day with an interview of a male you must begin the next day with a female.

Starting at the predetermined intersection each interviewer must proceed in a different direction, if possible. If there are more interviewers than branches proceeding from the starting intersection, then two interviewers may proceed in the same direction and select households from opposite sides of the street. Use a three-house interval pattern to select households. For example, beginning your walk pattern from the corner select the third house on the left, unless two interviewers are proceeding in the same direction. You should take care to include households that may not be clearly visible from the road, such as backyard flats or shacks If you get no response from the first house you stop at indicate it on the call sheet and continue to the next house until you find someone at home.

STEP 1

When you find someone at home introduce yourself with the following script inserting your name and the appropriate gender:

> **Hello, my name is _____. I do not represent the government or any political party. I am conducting interviews for a researcher affiliated with the University of Cape Town. We are asking people about consumer perceptions and political activities. You're household has been randomly selected to participate. All information obtained will be anonymous and confidential. As a token of appreciation a small amount of airtime credit will be transferred to the respondent's account in the next few days. Are you willing to help us identify an eligible [*male / female*] respondent from your household?**

STEP 2

If participation is refused or not possible, indicate the reason on the call sheet and continue to the next household. If the household is willing to participate, proceed according to the following script.

a. **How many [*male / female*] household members are between the ages of 18 and 64?** [Note the number in your notepad.]

b. **Which of these household members has the next birthday?** [Note the name in your notepad.]

c. **Is [*insert name from above*] available to be interviewed?** [If "yes", proceed to step 3. If "no" repeat questions (b) and (c) until you identify an eligible respondent. Then proceed to STEP 3.]

STEP 3

When you identify an eligible and willing participant, you must read the "Letter of Consent" to the respondent and obtain verbal consent. Leave the letter with the respondent. Once informed consent is obtained, record the gender of the respondent and the mobile phone number on the call sheet and proceed with the interview. Be sure to indicate to the respondent that the phone number is recorded on the call sheet and no identifying information is recorded on the questionnaire.

Proceed with the interview using the next questionnaire form in your stack for that day. Note that the order of the Food Security Module and the Protest Participation Module are not necessarily in the same order. The order of these modules is intended to be random. Do NOT alter the order and take care to proceed with the interview questions in the order that they appear in the particular questionnaire in use.

When you get to the Experiment Module consult the random number table below and read the number of the experimental condition paragraph they corresponds with the date and the number of interview for that day. Do NOT make any substitutions of paragraphs and do NOT expand upon the paragraph read.

	Interview											
Date	1	2	3	4	5	6	7	8	9	10	11	12
10-Nov	1	1	4	3	3	3	4	1	4	3	2	4
11-Nov	1	5	2	5	1	1	1	2	1	4	1	2
12-Nov	1	2	4	2	2	5	1	5	2	4	4	1
13-Nov	5	1	2	1	1	2	1	2	2	5	3	1
14-Nov	5	3	1	5	3	1	5	2	1	2	2	3
15-Nov	1	1	2	1	3	5	2	1	3	4	5	2
17-Nov	1	2	1	1	1	2	2	5	3	4	1	1
18-Nov	1	4	2	4	3	4	5	1	3	4	4	4
19-Nov	1	2	1	1	3	1	4	2	3	1	1	5
20-Nov	1	4	4	1	5	2	1	3	2	1	1	2
21-Nov	3	5	4	4	2	4	2	5	5	1	1	1
22-Nov	2	4	4	1	1	4	2	2	1	1	2	1
24-Nov	3	1	3	3	1	1	2	4	4	1	1	3
25-Nov	1	4	5	1	1	4	2	3	2	3	1	3
26-Nov	4	3	3	3	4	1	4	5	4	1	5	4
27-Nov	1	1	4	2	1	5	3	2	2	3	4	1
28-Nov	2	3	5	1	2	4	5	4	5	4	1	3
29-Nov	2	2	3	1	3	3	4	4	1	3	1	1

STEP 4

After the completion of the interview, thank the respondent. Be sure that you have the mobile number for transfer of the airtime credit. When you leave the household proceed in the same direction as before and select the fifth house on the same side of the street to begin the process again.

GOOD LUCK AND HAVE FUN!!

EXPERIMENTAL CONDITIONS

1. Prices of staple foods have stabilized and are set to remain constant in the next month. Favorable conditions have produced good harvests in South Africa and other large food exporting countries. Over the past several years, steady increases in food prices that have put mounting pressure on the budgets of low-income households, which dedicate a larger proportion of their monthly income to food purchases than middle and upper income households. News of steady prices is, therefore, welcome news for South African consumers.

2. Prices of staple foods are set to rise 2 to 2.5% in the next month. This increase is to due to failed rains in the maize-producing areas of South Africa. The South African Weather Service reports that the amount of rain in Limpopo and Mpumalanga is significantly below normal for this time of year. Over the past several years, steady increases in food prices that have put mounting pressure on the budgets of low-income households, which dedicate a larger proportion of their monthly income to food purchases than middle and upper income households. News of this additional price hike is, therefore, unwelcome news for South African consumers.

3. Prices of staple foods are set to rise 2 to 2.5% in the next month. This increase is due to a rise in the price of maize on international commodity markets as other major maize producing countries, particularly the US and Australia, have bolstered policies that lead maize producers to divert their crops from food to fuel production. Over the past several years, steady increases in food prices that have put mounting pressure on the budgets of low-income households, which dedicate a larger proportion of their monthly income to food purchases than middle and upper income households. News of this additional price hike is, therefore, unwelcome news for South African consumers.

4. Prices of staple foods are set to rise 2 to 2.5% in the next month. This increase is due to recent wildfires in Australia and Russia that have destroyed large tracts of maize. The fires were caused mainly by lightening strikes after long periods of below average rainfall that left fields overly dry and prone to burn. Over the past several years, steady increases in food prices that have put mounting pressure on the budgets of low-income households, which dedicate a larger proportion of their monthly income to food purchases than middle and upper income households. News of this additional price hike is, therefore, unwelcome news for South African consumers.

5. Prices of staple foods are set to rise 2 to 2.5% in the next month. This increase is due a failure on the part of the government to control the fall of the Rand against other currencies. The falling rand has made imports of food and agricultural products more expensive and South African consumers are bearing the majority of this increase. Over the past several years, steady increases in food prices that have put mounting pressure on the budgets of low-income households, which dedicate a larger proportion of their monthly income to food purchases than middle and upper income households. News of this additional price hike is, therefore, unwelcome news for South African consumers.

EKSPERIMENTELE OPSIES

1. Pryse van stapelvoedsel het gestabiliseer en is ingestel in die volgende maand konstant te bly. Gunstige toestande geproduseer goeie oeste in Suid-Afrika en ander groot kos uitvoer lande. Oor die afgelope paar jaar, het bestendige stygings in voedselpryse toenemende druk op die begroting van laer-inkomste huishoudings, wat 'n groter deel van hul maandelikse inkomste aan voedsel aankope as middel- en hoër inkomste huishoudings wy sit. Nuus van bestendige pryse is dus welkom nuus vir Suid-Afrikaanse verbruikers.

2. Alle aanduidings is daar dat die prys van basiese voedselsoorte vanaf volgende maand met tussen 2 en 2.5% gaan styg. Die verhoging is die gevolg van swak reëns in die mielie-produserende streke van Suid-Afrika. Volgens die Suid-Afrikaanse Weerdiens is die hoeveelheid reën wat in die Limpopo en Mpumalanga geval het, aansienlik laer as wat normaalweg die geval vir die tyd van die jaar is. Oor die afgelope paar jaar, het bestendige stygings in voedselpryse toenemende druk op die begroting van laer-inkomste huishoudings, wat 'n groter deel van hul maandelikse inkomste aan voedsel aankope as middel- en hoër inkomste huishoudings wy sit. Nuus van hierdie bykomende verhoging is dus onwelkome nuus vir Suid-Afrikaanse verbruikers.

3. Alle aanduidings is daar dat die prys van basiese voedselsoorte vanaf volgende maand met tussen 2 en 2.5% gaan styg. Dit is die gevolg van die styging in die mielieprys op die internasionale kommoditeits mark. Die prysverhoging kan direk daaraan gekoppel word dat die vernaamste mielieproduserende lande, veral Amerika en Europa, besluit het om meer mielies vir die vervaardiging van bio-brandstof beskikbaar te stel nadat so ‘n beleid goedgekeur is. Oor die afgelope paar jaar, het bestendige stygings in voedselpryse toenemende druk op die begroting van laer-inkomste huishoudings, wat 'n groter deel van hul maandelikse inkomste aan voedsel aankope as middel- en hoër inkomste huishoudings wy sit. Nuus van hierdie bykomende verhoging is dus onwelkome nuus vir Suid-Afrikaanse verbruikers.

4. Alle aanduidings is daar dat die prys van basiese voedselsoorte vanaf volgende maand met tussen 2 en 2.5% gaan styg. Die prysstyging is die gevolg van die onlangse verwoestende veldbrande in Australië en Rusland wat groot gebiede, waar graan verbou word, vernietig is. Die brande, wat deur weerlig veroorsaak is, het vinnig versprei as gevolg van langdurige ondergemiddelde reënval. Die baie droëmateriaal in die veld, het veroorsaak dat die veldbrande vinnig versprei. Oor die afgelope paar jaar, het bestendige stygings in voedselpryse toenemende druk op die begroting van laer-inkomste huishoudings, wat 'n groter deel van hul maandelikse inkomste aan voedsel aankope as middel- en hoër inkomste huishoudings wy sit. Nuus van hierdie bykomende verhoging is dus onwelkome nuus vir Suid-Afrikaanse verbruikers.

5. Alle aanduidings is daar dat die prys van basiese voedselsoorte vanaf volgende maand met tussen 2 en 2.5% gaan styg. Die prysverhoging kan daaraan toegeskryf word dat die regering nie instaat was om die verswakking van die rand teenoor ander geldeenhede te kon stuit nie. Dit het tot gevolg dat die invoer van voedsel en ander landbouprodukte duurder is en dat die Suid-Afrikaanse verbruiker die grootste deel van die styging sal moet dra. Oor die afgelope paar jaar, het bestendige stygings in voedselpryse toenemende druk op die begroting van laer-inkomste huishoudings, wat 'n groter deel van hul maandelikse inkomste aan voedsel aankope as middel- en hoër inkomste huishoudings wy sit. Nuus van hierdie bykomende verhoging is dus onwelkome nuus vir Suid-Afrikaanse verbruikers.

IINZAME EZILINGIWEYO

6. Amaxabiso okutya okungundoqo [ukutya okufana nomilimili, umbona, iitapile, njl njl] alindeleke ukuba ame ngxi, anganyuki kule nyanga izayo. Iimeko ezivumayo zenze ukuba kuvunwe kakuhle eMzantsi Afrika nakumazwe amakhulu arhwebayo [okanye athengisa ukutya eMzantsi Afrika.] Kwiminyaka edlulileyo, kuye kwabakho ukunyuka okungahliyo kwamaxabiso okutya nathe abeka uxinzelelo olukhulu kwiibhajethi zamakhaya arhola imivuzo emincinci nawachitha imali eninzi ekuthengeni ukutya xa uwathelekisa namakhaya arhola imivuzo ethe chatha. Iindaba zamaxabiso angaguqukiyo, zamkelwe ngabathengi baseMzantsi Afrika.

7. Amaxabiso okutya okungundoqo [okunjengomilimili; iitapili nomngqusho] alindeleke ukuba anyuke ngeepesenti ezi-2 ukuya kwezingama-2.5 kule nyanga izayo. Oku kunyuka kubangelwe kukunqongophala kwemvula kwindawo ezithile zemveliso yombona eMzantsi Afrika. Imozulu yase-Mzantizi Afrika ichaza ubungakanani bemvula eLimpopo kunye nase-Mpumalanga nokuba kuphantsi kakhulu kunesiqhelo kwelixesha lonyaka. Kwiminyaka edlulileyo, kuye kwabakho ukunyuka okungahliyo kwamaxabiso okutya nathe abeka uxinzelelo olukhulu kwiibhajethi zamakhaya arhola imivuzo emincinci nawachitha imali eninzi ekuthengeni ukutya xa uwathelekisa namakhaya arhola imivuzo ethe chatha. Iindaba zokunyuka kwalamaxabiso, azamkelekanga konke kubathengi baseMzantsi Afrika.

8. Amaxabiso okutya okungundoqo [okunjengomilimili; iitapili nomngqusho] alindeleke ukuba anyuke ngeepesenti ezi-2 ukuya kwezingama-2.5 kule nyanga izayo. Oku kunyuka kwalamaxabiso angunobangela wokunyuka kwexabiso lomilimili kwiimakethe zorhwebo zezizwe jikelele kuba amazwe amakhulu anjengeMelika ne-Australia nakwavelisa umbona, axhasa imithetho ekhokelela ukuba abavelisi abaphambili bombona batshintshele izivuno zabo zokutya kwimveliso zamafutha eenqwelo-mafutha okanye kumafutha okubasa. Kwiminyaka edlulileyo, kuye kwabakho ukunyuka okungahliyo kwamaxabiso okutya nathe abeka uxinzelelo olukhulu kwiibhajethi zamakhaya arhola imivuzo emincinci nawachitha imali eninzi ekuthengeni ukutya xa uwathelekisa namakhaya arhola imivuzo ethe chatha. Iindaba zokunyuka kwalamaxabiso, azamkelekanga konke kubathengi baseMzantsi Afrika.

9. Amaxabiso okutya okungundoqo [okunjengomilimili; iitapili nomngqusho] alindeleke ukuba anyuke ngeepesenti ezi-2 ukuya kwezingama-2.5 kule nyanga izayo. Oku kunyuka kubangelwe yimililo enwenwayo kumazwe anjenge-Australia neRashiya nethe yatshabalalisa imimmandla emikhulu nekulinywe kuyo umbona. Le mililo ibangelwe ikakhulu kukubaneka emva kwexesha elide leemvula ezithe zanetha ngaphantsi kwesiqhelo nezithe zashiya amasimi ome nko ekwalindeleke ukuba angatsha naninina. Kwiminyaka edlulileyo, kuye kwabakho ukunyuka okungahliyo kwamaxabiso okutya nathe abeka uxinzelelo olukhulu kwiibhajethi zamakhaya arhola imivuzo emincinci nawachitha imali eninzi ekuthengeni ukutya xa uwathelekisa namakhaya arhola imivuzo ethe chatha. Iindaba zokunyuka kwalamaxabiso, azamkelekanga konke kubathengi baseMzantsi Afrika.

10. Amaxabiso okutya okungundoqo [okunjengomilimili; iitapili nomngqusho] alindeleke ukuba anyuke ngeepesenti ezi-2 ukuya kwezingama-2.5 kule nyanga izayo. Oku kunyuka kubangelwa kukusilela kukarhulumente waseMzantsi Afrika ukuba alalwule ukuwa kweRandi xa ithelekiswa nezinye neemali zamanye amazwe. Ukuwa kwerandi kwenze ukuba ukungeniswa [okanye ukuthengwa] kokutya kwakunye neemveliso ezilinywayo eMzantsi Afrika [zisuka kwamanye amazwe] kubeduru kubathengi abaninzi baseMzantsi Afrika. Kwiminyaka edlulileyo, kuye kwabakho ukunyuka okungahliyo kwamaxabiso okutya nathe abeka uxinzelelo olukhulu kwiibhajethi zamakhaya arhola imivuzo emincinci nawachitha imali eninzi ekuthengeni ukutya xa uwathelekisa namakhaya arhola imivuzo ethe chatha. Iindaba zokunyuka kwalamaxabiso, azamkelekanga konke kubathengi baseMzantsi Afrika.

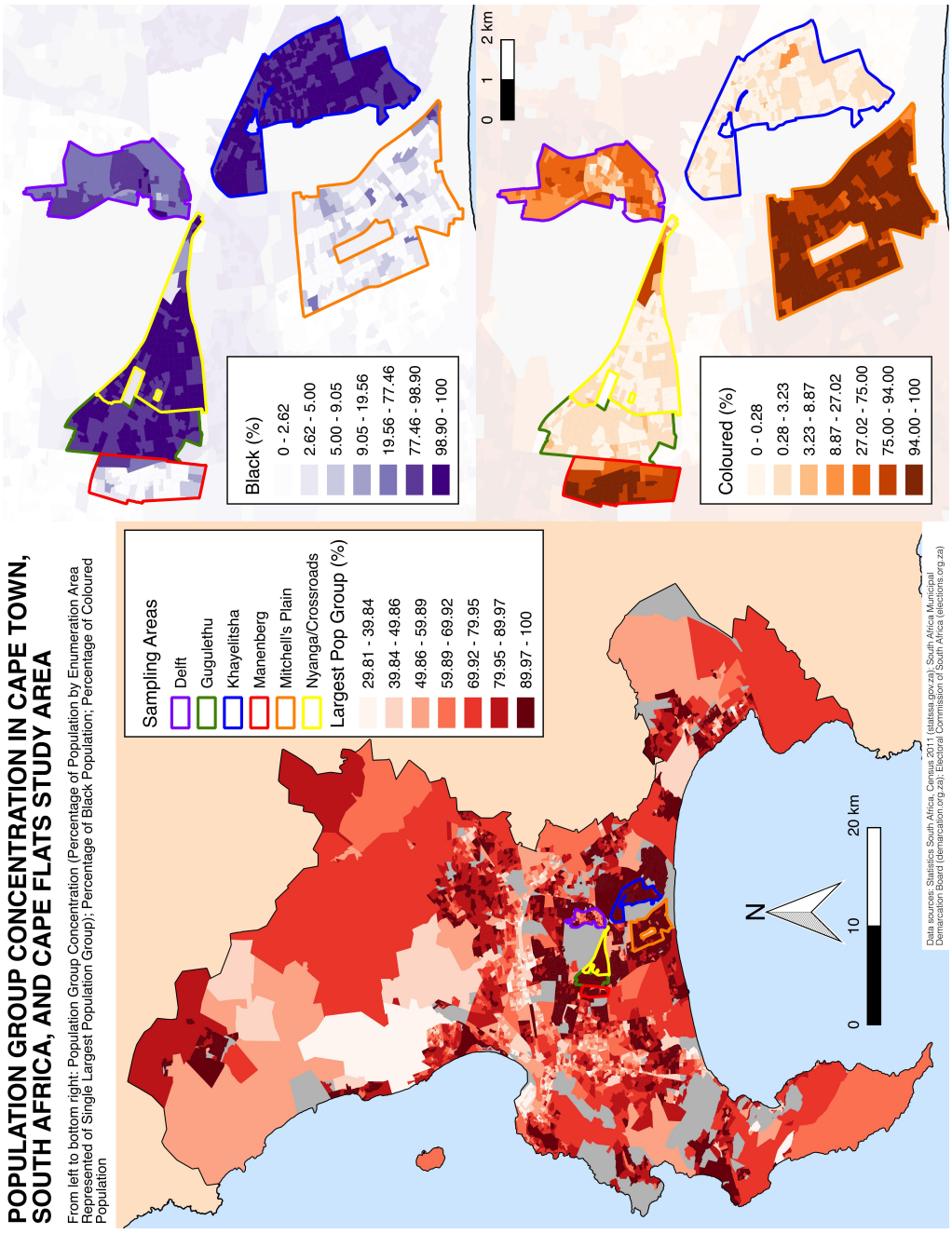

Figure C.1: Population group concentration in sampling strata

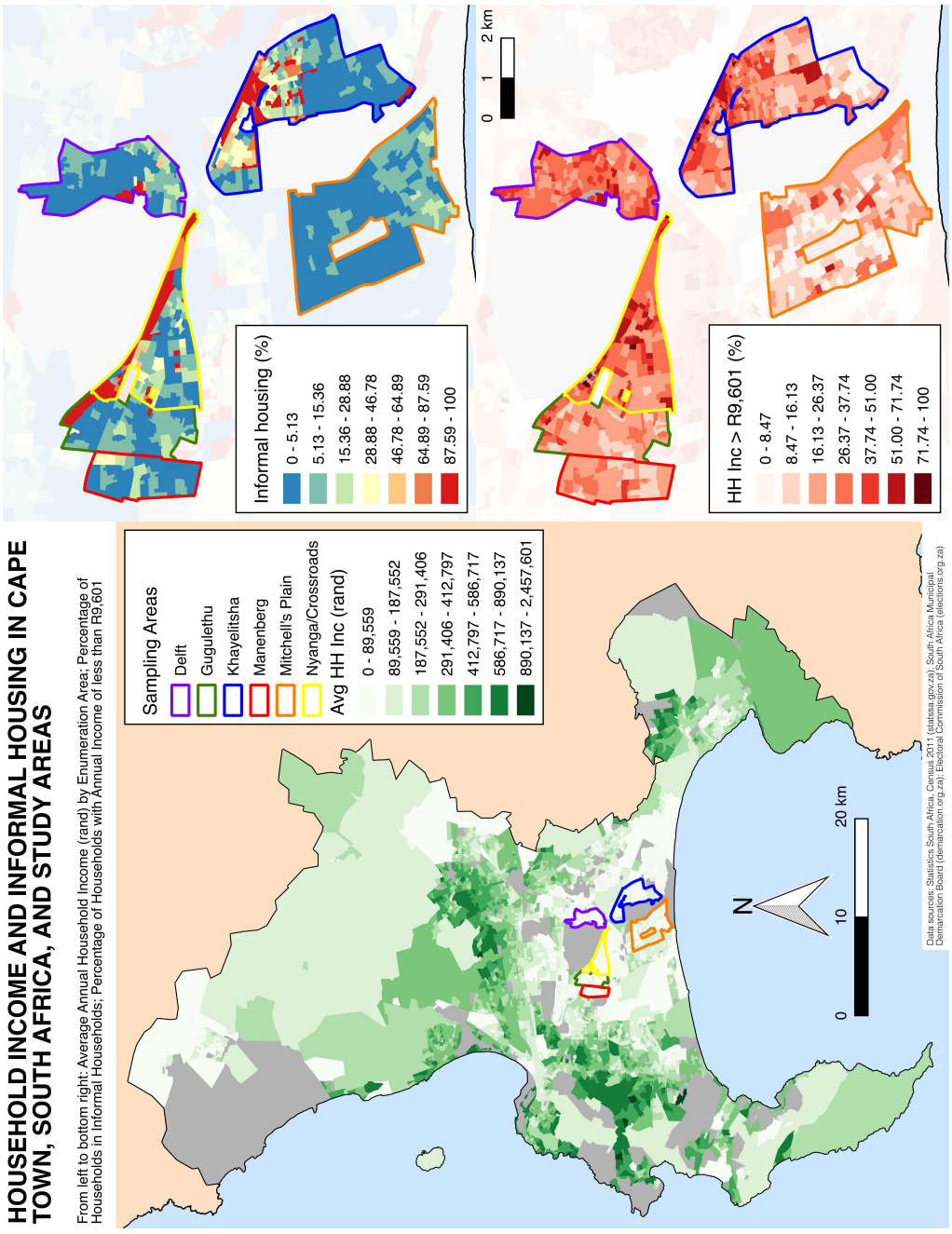

Figure C.2: Income and informal housing in sampling strata

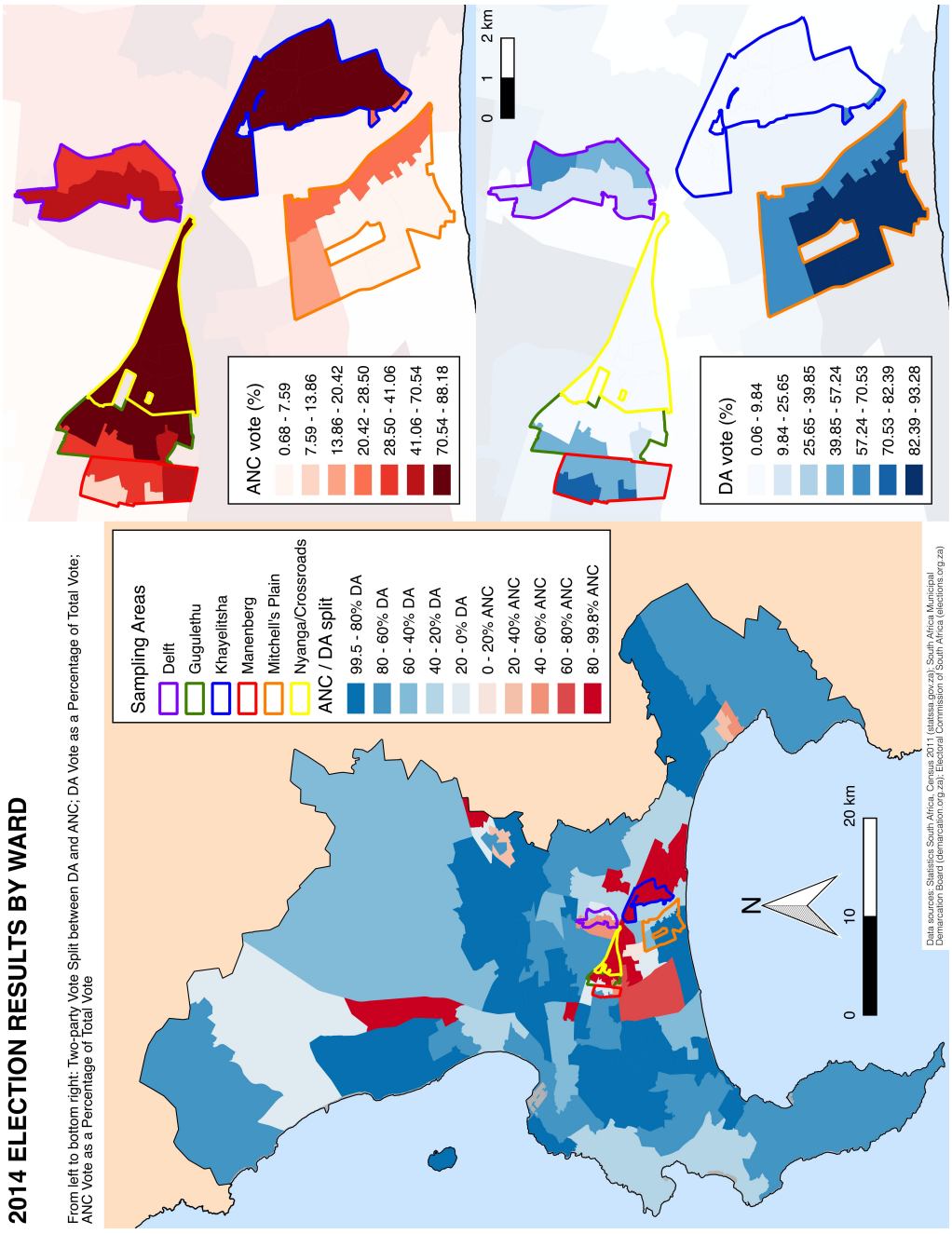

Figure C.3: 2014 election results in sampling strata

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