STRUCTURAL ADJUSTMENT, ECONOMIC WELFARE AND ELECTORAL BEHAVIOR IN THE 1992 GHANAIAN PRESIDENTIAL ELECTION

by

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Abstract

In this thesis, we evaluate the impact of Ghana's Structural Adjustment Program (SAP) on the welfare of various groups in society, including rural and urban households, producers of exportables, and food producers using a micro-macro approach. The results indicate that, to the extent that the SAP was beneficial, these benefits were largely appropriated by rural households in the export producing regions. However, to the extent that the SAP was costly, the costs were largely borne by food producers and urban households.

After nine years of implementing the SAP, Ghana was returned to a constitutional democracy in January 1993 after elections in November 1992. The results of the 1992 Presidential election indicated that rural voters tended to vote for the incumbent and urban households tended to vote against the incumbent. Is there a link between the welfare impact of the SAP on rural and urban households and how these households voted in the 1992 Presidential elections? This question was addressed in the context of previous studies on the links between the economy and electoral behavior. That is, around the questions of egotropic, sociotropic, retrospective and prospective voting.

Absence of macro (time-series or pooled cross-section) and micro-level data on voting behavior in Ghana, necessitated the collection of data from the field. To address the issue of the sensitivity of questions relating to voting behavior in countries without a tradition of western democracy, two micro estimation techniques: the Randomized Response Technique (RRT) and the Anonymous Direct Response Technique (ADRT) were employed.

The RRT and ADRT surveys offer qualitatively similar findings. They both show that for Ghana as a whole, proportionately more rural voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the incumbent's economic policies, the opposite being the case for urban voters. However, this pattern was more apparent in the export producing regions. In the non-exporting regions, the RRT and ADRT surveys found that proportionately more voters (rural and

urban) voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP.

While the rural-urban dichotomy observed for the economy as a whole was observed for the least poor regions, this was not manifested in the poorest regions. In the poorest regions, the RRT survey found that proportionately more voters (rural and urban) voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. The ADRT survey on the other hand found that whilst proportionately more voters in the poorest regions voted against the incumbent because of economic considerations, more rural (urban) voters voted for (against) the incumbent because they perceived an improvement (deterioration) in their well-being as a result of the SAP. The results reinforce the earlier finding rural voters in the poorest regions did not fare as well as those in the least poor regions in the previous nine years of structural adjustment. Non-Economic factors were found to dominate voting behavior in the Volta and Ashanti regions of Ghana.

DEDICATION

I dedicate this thesis to my parents and the entire Bawumia Family.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE
INTRODUCTION

1.1 The Economy and People of Ghana

Ghana, with a total land area of 239,460 square kilometers is bordered in the south by the Gulf of Guinea and to the North, East and West by the states of Burkina Faso, Togo and Cote d' Ivoire in West Africa. The country is divided into 110 districts and 10 administrative regions. The regions are Greater Accra, Central, Western and Volta regions in the south with Eastern, Ashanti and Brong-Ahafo regions in the middle. The northern end of the country contains the Northern, Upper East and Upper West regions (Government of Ghana, 1991).

Table 1.1 Rural and Urban Population in March 1984 by Region

Region	Total	Rural	Urban	%Rural	%Urban
Western	1,157,807	896,041	261,766	77.4	22.6
Central	1,142,335	813,139	329,196	71.2	28.8
Eastern	1,680,890	1,214,614	466,276	72.3	27.7
GT. Accra	1,431,099	242,821	1,188278	17.0	83.0
Volta	1,211,907	964,001	247,906	79.5	20.5
Ashanti	2,090,100	1,410,350	679,750	67.5	32.5
Brong-Ahafo	1, 206,608	885,502	321,106	73.4	26.6
Northern	1,164,583	871,121	293,462	74.8	25.2
Upper West	438,008	390,459	47,549	89.1	10.9
Upper East	772,744	673,237	99,507	87.1	12.9
All Regions	12,296,081	8,361,285	3,934,796	68.0	32.0

Source: Population Census 1984

The distribution of Ghana's population by region is shown in Table 1.1. The 1984 population census defines a locality as rural if it has a population of less than 5,000 and as urban if it has a population of more than 5,000. Most of the population of Ghana (68%)

reside in the rural sector. With the exception of the Greater Accra Region, which is the smallest region and the seat of government, every region has over 67% of its population in the rural areas.

1.2 Economic Activities by Region

As shown in Table 1.2, there are significant regional differences with regard to major economic activities.

Table 1.2 Major Economic Activities by Region

Region	Main Crops	Other Activities
Greater Accra	cassava, maize, groundnuts, vegetables, groundnuts, pineapples, shallots	Manufacturing, fishing
Ashanti	Cocoa,oilpalm,cotton,maize, plantain, cocoyam,cassava,	Mining and timber processing
Brong-Ahafo	Cocoa, plantain, cocoyam, oil palm, maize	Manufacturing and timber processing
Western	Cocoa, coffee, rubber, oil palm, citrus, coconut, rice, cassava	Mining, timber and fishing
Eastern	Cocoa, coffee, oil palm, pineapples, colanut,	Mining, manufacturing and fishing
Central	Cocoa, vegetables, coconut, rice.	Fishing
Northern	maize, rice, sorghum, yams, tomatoes, sheanuts,	Livestock, agro-based processing
Upper East	rice, tomatoes, millet, groundnuts,	Livestock
Upper West	Guinea corn, millet, rice, yams, Cotton, sheanuts	Livestock
Volta	cassava, maize, rice, yam shallots, cocoa, coffee, pineapple	Fishing

Source: Government of Ghana, (1991)

As in many developing economies, agriculture dominates economic activity in Ghana, accounting for about 45% of GDP. Agricultural products make up 74% of exports, of which cocoa comprises 70% and forestry products 4%. About 57% of the total labor force is employed in agriculture. Cereals account for 7% of agricultural GDP, roots and tubers for 55%, cocoa for about 18%, forestry for 10 % livestock for 10% and fishing for 3%. (Sarris, 1991, p.20). Non-traditional export crops like pineapples and rubber account for about 12% of agricultural GDP. In every respect, therefore, agriculture is the "prime mover" of the national economy.

Ghana's major exports comprise cocoa, timber, bauxite, manganese, diamond, gold, and kola nuts. These commodities are largely produced in Ashanti, Eastern, Brong-Ahafo, Western, and Central Regions. We will hereafter refer to these regions as the *export producing regions.* Even though a small amount of cocoa is produced in some parts of the Volta Region, and sheanuts in the Northern Region, these regions are excluded from our classification of export producing regions because these activities are relatively small.

1.3 Structural Adjustment and Economic Welfare

A persistent economic decline in Ghana between 1974 and 1983 persuaded the military government of the Provisional National Defense Council to adopt a Structural Adjustment Program (SAP) in 1983 under the auspices of the World Bank and the International Monetary Fund (IMF).

Under the aegis of "adjustment" are *stabilization* (IMF) and *structural adjustment* (World Bank) policies. Stabilization policies are short-term in perspective and aim to reduce aggregate demand. Structural adjustment policies on the other hand are longer term in perspective and "involve changing the institutions and regulations which govern exchange" (Addison and Demery, 1987). These policies are directed at increasing aggregate supply.

For the IMF, the inflation and balance of payments problems experienced by many developing countries in the late 1970s and early 1980s were primarily the result of overvalued exchange rates and increasing government budget deficits which were financed by increases in the money supply (IMF, 1986 p.7). The stabilization package primarily includes (i) devaluation of the domestic currency (ii) fiscal and monetary restraint. Thus the stabilization package involves expenditure switching and expenditure reducing measures to tackle the balance of payments problems.

The World Bank structural adjustment programs aim at increasing output by changing the structure of incentives for current production and investment oriented towards future production. The policy package includes (i) devaluation (ii) trade liberalization (iii) financial liberalization and (iv) privatization

How does the IMF/World Bank policy package affect the welfare of rural and urban households? There is considerable debate about the effects of each of the major policy components.

(1) **Devaluation**

In the standard neoclassical trade model with labor and capital mobility between the two sectors, and differing factor intensities, a switching policy will result in factors specific to or intensive in the tradable good having their real incomes raised and the opposite is the case for factors specific to or intensive in the non tradable sector.

If we assume that tradables are mainly produced in the rural sectors and non-tradables in the urban areas, a devaluation would redistribute income from urban to rural areas. This does not, however, mean that incomes would be redistributed from urban to rural dwellers. If production of exportables is in the hands of large-scale commercial farmers who dwell in urban areas, then incomes would be redistributed towards this group and devaluation might not necessarily improve income distribution. If however, the

production of exportables were in the hands of small-scale peasant farmers, devaluation might improve income distribution.

Corden and Jones (1976) have shown that a devaluation will cause real profits to rise in the tradable sector and fall in the non-tradable sector but with money wages constant, an increase in the domestic price of tradables and a decrease in the price of non-tradables real wages could rise or fall.

Demand differences can also account for income distribution effects of switching. When prices of tradables rise relative to non-tradables then consumers of tradables will find their consumption wage has declined and thus are likely to lose relative to those who have preferences for non-tradables. Therefore if rural households' consumption baskets are dominated by tradables (non-tradables), their real incomes would fall (rise) disproportionately. If the export crop is the staple food, the real incomes of rural producers of the exportable are likely to fall disproportionately. On the other hand if urban households' consumption baskets are dominated by tradables (non-tradables), they would experience a fall (rise) in real incomes.

Addison and Demery (1987a) have argued that in practice it is common for urban organized workers to be in a better position for indexing their earnings than rural small holders, who constitute the bulk of the working population. Thus better organized labor in the form al sector may protect its real income at the expense of rural producers by passing on the increased costs of a constant real wage through increases in the price of domestically produced goods.

Devaluation, by raising the domestic price level, reduces the real value of assets in domestic currency. This negative wealth effect has potentially expenditure reducing effects. Also, devaluation increases the domestic currency price of imports resulting in increases in the costs of production and contraction in real output.

Lal (1984) has argued that the income redistribution that occurs during the stabilization phase simply reverses what occurred during the destabilization phase. Thus

we have a monetary neutrality result. As Demery and Addison (1987b) have pointed out, however, it does not follow that those who gained during the destabilization phase are the same as those who lose as a result of stabilization.

Lal (1984), also argued that devaluation, by setting prices right, will shift incentives from directly unproductive to directly productive activities. The increased cost of imports will lower the rents accruing to import quota holders. The price signals will also favor the domestic production of exports and import substitutes (tradables) and thus increase domestic output.

(2) **Fiscal Restraint**

Fiscal restraint policies take the form of tax increases and government expenditure reductions. Johnson and Salop (1980) have argued that in the majority of developing countries, the immediate burden of increases in taxation tends to fall on producers of exported goods, consumers of imported goods, income earners in large firms in the modern private sector, and wage and salary earners in the public sector. Evidence shows that taxes on goods and services affect the distribution between rural and urban sectors and between different consumption patterns of individuals more than they redistribute between income groups, (IMF, 1986).

A major criticism of SAPs has been their adverse effects on poor and vulnerable groups in society (Streeten, 1987, Cornia et al, 1987, Emmerij, 1987). One of the most controversial policies in the stabilization package is the expenditure reduction required on wages and salaries, food and petroleum subsidies and transfers to cover losses of public enterprises. Wage and salary policies in the programs have tended to redistribute incomes in favor of the agricultural poor and pricing policies have been directed at reducing the incomes of firms and individuals who profit from government created monopolies in the importation and distribution of goods. Cuts in public investment will reduce the earned and/or social incomes of potential beneficiaries (rural or urban). Cuts in subsidies to food

are likely to adversely affect the real incomes of urban households if as exists in many developing countries, urban households are net consumers of food and increase the incomes of rural households if they are net producers of food. Also, government sector employees who are primarily urban based, usually bear the burden of cuts in government expenditures (Khan and Knight, 1981). In fact, these authors hypothesize that in most developing countries the impact of monetary and fiscal restraint falls disproportionately on urban as opposed to rural incomes. Thus in these respects, the most controversial aspects of the SAP may in fact be income distribution improving, (IMF, 1986, p.3).

Carvalho et al (1988) argue that cuts in public expenditure may slow investment and have a lasting adverse impact on productive and social infrastructure. Also, by constraining the budgets for maintenance, supplies and operation of public services, expenditure cuts have led to a deterioration of public infrastructure and services which may hurt the poor because these services can be an effective way to reach the poor and provide a social safety net if well targeted. However, since cuts are unavoidable, the key is for governments to avoid across-the-board reductions, instead allocating available reductions to priority investments.

We should also take account of the interest payments to be received in the future by the central bank on retained foreign exchange reserves as a result of deficit reduction. These expected interest payments represent real income increases for taxpayers. Whilst this could in principle, outweigh all the other effects, it is unlikely to do so if wage earners heavily discount future expected incomes (Corden, 1985 p.29).

(3) **Financial Liberalization and Credit Restraint**

Financial liberalization involves the removal of ceilings on interest rates. During periods of financial repression, interest rates are kept low, supposedly, to allow poorer households access to cheap credit. In many countries, such financial repression resulted in a rationing of credit. Poorer households (mainly rural households and the urban poor) in

many countries are rationed out of the official credit markets and thus resort to curb markets where they pay higher interest rates. Financial liberalization is thus likely to adversely those households who already have access to rationed credit. Also, stabilization policies include a requirement that the rate of money supply growth be reduced. Policies to achieve this objective include raising the discount rate, reserve requirements and moral suasion. Johnson and Salop (1980) argue that such credit restraint tends to bias access to available productive resources in favor of producers and consumers in the urban sector as opposed to those in the rural sector since access to credit may depend on such factors as the foreign exchange it earns, its past record of repaying credit lines and non bank sources of funds.

(4) **Privatization**

Privatization involves the divestiture of state-owned enterprises. In many countries, these public enterprises are subsidized and thus contribute to government budget deficits. Privatization usually involves the retrenchment of employees, the majority of whom reside in urban areas. For these employees, the cost of adjustment is very high. However, to the extent that privatization results in efficient production, it would contribute to macroeconomic stability and growth, resulting in an improvement in the welfare of other households. Thus both rural and urban households could benefit in the long run from privatization but the short-run costs of retrenchment are likely to be borne by urban households.

In summary, it can be seen that the impact of the stabilization and structural adjustment reform package on the welfare of rural and urban households is apriori indeterminate. A lot depends on the status quo ante reform. A devaluation is likely to improve (decrease) the welfare of rural households if they are largely engaged in the production (consumption) of tradables. Expenditure reduction through cuts in subsidies for example, are more likely to hurt urban households more if they were the primary

beneficiaries of the initial subsidies. The empirical analysis of the distributional and welfare impacts of SAP is laden with methodological problems.

1.4 Methodological Problems in Assessing the SAP

We have to consider the fact that SAPs are not implemented in isolation and thus it is not meaningful to analyze the effects of various components of the SAP as if they operate independently of other influences. In essence the evaluation of every adjustment policy requires the solution of a general equilibrium model. The data requirements for this task make it impractical for most countries as the following quote from the IMF reveals:

> " There is a serious dearth of information on the socioeconomic characteristics of the poor, since international organizations and the national authorities have only recently focused on the plight of the poor within the context of adjustment programs. It is therefore highly unlikely that any country would possess adequate quantitative information for a complete analysis of the socioeconomic position of the poor and, thus, even more unlikely, data on the status of the before and after an adjustment program.....The only realistic alternative is to survey the links between policy measures and the real incomes and the real incomes and consumption patterns of the population, and to draw inferences based on the best identifiable poverty characteristics" (IMF, 1988 pp.11).

Ideally, a detailed income and expenditure survey for rural and urban households at the onset of the SAP will be required to provide a picture of the pre-program distribution of income. We can then compare this with other surveys at different points in time. However, even if such information were available, it would be difficult to determine how much of any observed change should be imputed to the effects of the Bank/Fund adjustment program and how much to the effects of other factors affecting the economy since the last survey (IMF, 1986). Simulation exercises within Computable General Equilibrium (CGE) models allow for counterfactual experiments as well as the adoption of different model closure assumptions. Addison and Demery, (1987a) also point out that

the results from simulation exercises usually reflect the model builder's inclinations. Keynesian models (Taylor, 1979) tend to have more significant redistributive effects than neoclassical models (Dervis et al, 1982). Also, the simulation exercises "fail to do sufficient justice to the complex political economy that lies behind both the emergence of the trade deficit and the choice of corrective measures" (Addison and Demery, 1987a, pp.26).

Another approach is based on an analysis of the economic environment and household structure before and after policy changes. This approach suffers from the fact that it is rare that there exist adequate and comparable household-level micro surveys for the periods of interest. This deficiency applies in the case of Ghana.

There are also methodological problems in the measurement and comparison of indicators of welfare changes. Considering goods and services provided free of charge to the public, it is difficult to determine the value of these programs to the recipients. Also, for investment expenditures (e.g. education) the immediate imputation of the full amount of expenditure to the presumed target group may substantially overstate actually received during the year.

The presence of a large informal sector makes official statistics on incomes received by different groups less reliable. The impact of a devaluation on the incomes of farmers who had previously engaged in smuggling activities to obtain higher prices would be smaller than for farmers who sold all their produce to an official marketing board. By not taking into account incomes from the informal sector, poverty measures based on household income surveys are likely to overstate the extent of poverty, especially in the urban sectors of many developing economies where the informal sector is large.

Another difficulty is the choice of time horizon. There may be a tendency for poverty to increase in the short run as a consequence of reduced consumption and employment, but this may be outweighed in the long run if stabilization increases economic growth.

Also, there is the problem of the counterfactual. Ideally, what is required is a comparison of the effects of any given adjustment package with the outcomes of another package - which could either be an alternative adjustment program or no action on the part of the government. There is thus, a need for an economy-wide model through which such alternatives can be analyzed.

1.5 Central Problem and Methods Used in the Research

After nine years of implementing a SAP, Ghana was returned to a constitutional democracy in January 1993 after elections in November 1992. The results of the 1992 presidential election indicated that rural voters tended to vote for the incumbent (who had implemented the SAP in the previous nine years and promised continuity) and urban households tended to vote against the incumbent. The central problem of the research is to investigate if there is a link between the welfare impact of the SAP on rural and urban households and how these households voted in the 1992 presidential elections.

The literature on the economy and electoral behavior has generally attempted to address three inter-related questions: Does the economy influence voting behavior? Is voting based on individual (egotropic) or collective (sociotropic) rationality? Is voting retrospective or prospective in nature? Methodologically, the role of economy in affecting electoral behavior has been investigated at two levels: (1) The aggregate macro-economic level using times-series or pooled cross-section analysis and (2) The individual micro-economic level using survey data. The macro-level econometric studies essentially regressed voting share in elections or polling data against economic variables like income inflation and unemployment. Whilst the aggregate level analysis sheds some light on the broad relationship between the economy and electoral behavior the results obtained from the methodologies applied are largely inconclusive and have been subject to the criticism of spuriousness because of the different sample sizes, estimation measures, and model specifications of the various studies. Also, the aggregate data do not tell us anything about the behavior of individual voters.

The individual level analysis, using survey data, allows some investigation into the reasons why individuals voted in a particular way and is thus more informative. Nevertheless, the existing micro-level studies are not without their problems. One of the major problems of existing micro-level studies arises from the fact that the survey questions do not provide a direct link between economic welfare and voting behavior. Thus, the results from these studies can also be subjected to the same criticism of spuriousness leveled at the macro-level studies.

In choosing a methodology for this research, it was noted that in Ghana's case, the data for an aggregate time-series and/or survey level analysis was not available. Survey data on electoral behavior is absent in many countries without a tradition of western democracy because firstly, elections are infrequently held, and secondly, citizens in many countries would be loathe to answer questions about their voting intentions for fear of retribution.

To address the issue of the sensitivity of questions relating the economy to electoral behavior in countries without a tradition of democracy like Ghana, two survey methods were employed: the *Randomized Response Technique* (RRT) and the *Anonymous Direct Response Technique* (ADRT). Under the RRT, information is requested on a probability basis rather than a direct reply to a given question. The respondent is asked to select, by means of a chance device, a single question from two or more questions, only one of which is sensitive, without revealing to the interviewer which of the questions is being answered. The respondent's privacy is thus protected. However, knowing the probability distribution of the chance device, the interviewer can obtain unbiased estimates of the proportion of the population with the sensitive characteristic.

The ADRT on the other hand, involved respondents answering questions from a questionnaire which was then returned to the interviewer anonymously (by post). This also guaranteed a high degree of privacy to the respondent.

Both surveys were conducted across the ten regions of Ghana in rural and urban areas and each survey tried to elicit responses about the primary consideration influencing a particular voting decision.The voting behavior of exporting and non-exporting regions, poor and non-poor regions, and different occupations, is also examined.

CHAPTER TWO

THE ECONOMY AND ELECTORAL BEHAVIOR: A LITERATURE REVIEW

2.1 The Economy and Electoral Behavior

There are several different influences on voting behavior. These include political ideology, kinship, and economic influences. This chapter presents a review of the literature on economic influences on voting behavior. The review presented here has drawn from earlier reviews by Monroe (1979) and Nannestad and Paldam (1994). The literature has largely addressed voting behavior in the major western democracies and revolves around three inter-related questions:

1. Does the economy influence electoral behavior?
2. Is voting based on individual or collective rationality?
3. Is voting retrospective or prospective in nature?

The extent and nature of the influence of the economy on electoral behavior has long intrigued political economists. As Monroe (1979) points out, John Barnhart's (1925) analysis of rainfall and voting for the Populist Party is one of the earliest works analyzing the impact of economic hardship on the emergence of new political parties. Barnhart compares maps of population, drought, and agricultural conditions in Nebraska in the 1880s and 1890s to determine the impact of economic hardship resulting from drought on the decline of the Republican Party and the emergence of the Populist Party. Barnhart concludes that the economy is a factor in voting because the drought had put the farmer in a receptive frame of mind for the arguments of the Populist Party.

Rice (1928) compares the business cycle with the proportion of Republican candidates in New Jersey assembly districts over 48 successive elections and finds that fluctuations in Republican party voting tend to follow the rise and fall in this business

cycle, with Republican voting increasing with economic well-being and decreasing during economic depression. On the basis of this simple correlation of time-series data, Rice concludes there is a relationship between Republican voting and economic prosperity, with Republican voting increasing with economic prosperity and decreasing with economic depression. Tibbits (1931) uses a cross-sectional analysis of voting behavior in 94 congressional districts in 1882 and 1884 (years of economic prosperity and depression respectively) to determine whether the popularity of political parties is related to economic conditions in existence during the election. He assumes that voters have short memories for economic changes and therefore rejects time-series analysis in favor of examining voting only in periods of economic expansion and economic depression. Tibbits concludes that *ceteris paribus,* elections occurring during or just following periods of expansion result in the incumbent party receiving a vote of confidence while an election during a depression will result in a loss of vote for the incumbent party.

Ogburn and Coombs (1940) undertook in a cross-sectional analysis of the Roosevelt vote from 1932 to 1936. They employ several indicators of economic conditions including the average wage in manufacturing and wholesale trade and the average value of farm per person employed in farming, weighted by the proportion of the population in farms and in towns. They find no systematic relation between economic prosperity and the change in Roosevelt's vote .

Pearson and Myers (1948) consider the hypothesis that people vote for the incumbent administration during prosperous times but vote against it during or just after the depression. The sole indicator of economic well-being is defined only as a "general price level." They classify the presidential elections from 1828 to 1924 into low or declining price periods versus higher or rising price periods. They find that the presidential candidate of the incumbent party won 11 of the 13 elections when prices

were low or declining. The candidate of the incumbent party lost 16 of the 18 elections held when prices were rising or high. These findings support the hypothesis that the economy influences presidential voting.

Gosnell and Coleman (1949) examine the relationship between income changes and the Presidential vote in 65 Pennsylvania counties from 1928 to 1936. Using an index of economic well-being based on wage and salary income for manufacturing, the value of principal crops weighted by the relative importance of agriculture and industry, and the number of people employed in each group within the county, they find a weak relationship between the decline in this index and the shift in votes for the Democratic presidential candidate from 1928 to 1932 and again from 1932 to 1936.

Rees et al. (1962) consider the economy's influence on cross-sectional Congressional voting from 1946 to 1958. Economic well-being is measured by the state insured unemployed as a percent of covered employment and by net income per farm in the state. Using simple bivariate tabulations, they determine whether low unemployment and high farm income is associated with party voting in 41 states. They find that there is a positive relationship between Republican voting and high employment for slightly more than half the cases. They find no relationship between voting and farm income.

The results from these early studies are inconclusive. Monroe (1979) describes the level of sophistication of these earlier works as " quite primitive" and "ad hoc empiricism without developed theoretical work presented to support it" (p.142). Downs (1957) provided the theoretical foundation the literature had been waiting for by his postulation of the responsibility hypothesis. This hypothesis states that voters hold government responsible for the development in the economy. Thus if the economy goes well, so will the popularity of the government. Goodhart and Bhansali (1970), along with Mueller (1970) and Kramer (1971) spawned a large literature on the VP-function. This function

explains the support for the government as a function of economic and political outcomes. These studies sought to explain the support for the government, as measured in national public opinion polls. This variable was regressed against a number of variables like unemployment, the rate of inflation, rate of growth of output, etc. over time.

The Goodhart and Bhansali (1970) study for example, examined government popularity in Britain and conclude that unemployment (with a lag of four to six months) and the present rate of inflation "... were able to explain a large proportion of variations in the recorded popularity of the two parties." (p.86). Furthermore, they find support for a so-called election cycle effect, in which the popularity of a government decreases in the periods after an election and rises again in the periods before the next election, independent of the effect of other variables.

In Kramer's (1971) paper, an explicit theoretical framework was presented in which a rational economic-political man was assumed. For Kramer, past economic performance reflects actual policies of a party or incumbent and this easily available information forms the basis of the rational voter's decision. The decision rule assumed is that, the incumbent party is supported if its performance is considered "satisfactory" in some sense. In this case, the voter wants to continue the present situation. If on the other hand the incumbent's performance is considered "unsatisfactory" the voter decides to vote for the opposition party. As to what is "satisfactory", Kramer assumes that voters form expectations on economic conditions in a period using experience concerning these conditions in the preceding year. These expectations are then taken to represent the "satisfactory" level of economic welfare for the present period and deviations from these expectations cause vote shifts. Kramer employed a multivariate statistical model of voting in congressional elections from 1896 to 1964 and finds that fluctuations in unemployment

have no appreciable influence on elections but that fluctuations in real per capita income are influential.

Stigler (1973) reanalyzed Kramer's data, making several modifications. In particular, Stigler uses two-year rather than one-year units to calculate economic change. This change causes unemployment and real income to lose significance. He argues that this result is not surprising since it would be unreasonable for a voter to give much weight to short-term economic fluctuations since the rational individual would only be concerned about permanent changes. According to Stigler, distributional policies concerning income may be expected to have a greater effect than average performances. Arceleus and Meltzer (1975) argue that earlier models disregard the possibility of abstention, whereas variations in turnout are often greater than shifts in party preferences. As a consequence, they present a two-step model of turnout and party choice in congressional elections. With respect to the turnout decision, the voters are essentially divided into two groups. One group, the partisans, always consider benefits from voting to outweigh the costs; the other group may be induced to vote because costs are lower due to the simultaneous occurrence of presidential elections or because the expected benefits are affected by economic factors. The economic factors distinguished are the percentage changes in consumer prices, unemployment rate, and real wage per man-hour. They conclude that "with the possible exception of inflation, aggregate economic variables affect neither the participation rate in congressional elections nor the relative strengths of the major two parties" (p.1238). Goodman and Kramer (1975) re-estimate the Arceleus and Metzler (1975) model after correcting for "errors in their model, the data they apply to it, and the statistical method they use to estimate it..." (p.1255). They find that unemployment, inflation and real income do influence congressional elections.

Pierson (1977) analyzes the relationship between congressional elections and economic conditions within congressional districts using both district level aggregate data and survey data for the 1974 elections. His economic predictors are prices, per capita personal income, and real disposable income. He finds no significant relationship at either the aggregate or individual level, concluding that the earlier noted economic impact must come from the voter's estimation of the national rather than the district level economic conditions.

Tufte (1975) attempts to explain the midterm congressional losses of the incumbent president's party. His model assumes that voters use midterm elections to evaluate presidential performance, especially the president's ability to manage the economy. A two stage model is proposed. The first stage explains the magnitude of congressional voting loss by the president's party in terms of both the electorate's Gallup Poll evaluation of the president at the time of the election and the economic performance (indicated by the yearly change in real disposable income per capita) in the year prior to the election. Tufte concludes that a change of $100 in real disposable income is associated with a national change of 3.5% points in the midterm vote.

Pollard (1978) considers economic influences on presidential voting at the state level from 1952 to 1972. Pooling time-series and cross-sectional data, Pollard analyzes the impact of per capita personal income and inflation on changes in the Republican share of the vote. Each economic predictor is analyzed using its growth rate, deviations from its normal growth rate, and lagged forms of the predictor with exponentially declining weights to give greater weight to more recent events. Pollard introduces several control variables to allow for the political influences on important variables. He concludes that political variables are more important than economic ones. He finds no influence from income and some influence from inflation.

Fair (1978) argues that the inconclusiveness of previous studies result not only from disagreements on statistical procedures and the interpretation of empirical results, but also from the lack of a single theory of voting behavior to which everyone subscribes. Fair attempts to remedy this by presenting a more general model. In this model, voters are assumed to form expectations on future utility in case either candidate were to be elected. These expectations are determined by past performances. The expected utility from a party is assumed to be determined by a bias term and the discounted performances in the last two elections the party was in government. The economic data used in the empirical application of the model to the US presidential elections in the 1916-76 period are the unemployment rate, the real GNP per capita, and the GNP deflator, with various lags and considering levels as ell as changes. The conclusion from various specifications, where one performance variable at a time is included, is that the present growth rate of real per capita GNP and the change in unemployment rate perform best, whilst other variables appear to have little effect.

Pissarides (1980) presents a model which takes account of the possibility of autoregression in a government's lead over the opposition, electoral cycles effects, and the impact of economic variables. The economic variables specified include the percentage growth in consumption, the change in the rate of inflation, the rate of unemployment, the change in the exchange rate, and the ratio of GDP taken in by government in income and expenditure taxes. The result obtained from an application to Great Britain for the period 1955-77, using aggregate time series data, is that the contribution of electoral and economic variables in explaining government lead is about the same, except for unemployment and inflation, which do worse than the other variables.

Whiteley (1986) specifies a model to include controls on the electoral cycle and economic shocks and uses a Box-Jenkins transfer function estimation (making the rejection of a null hypothesis more difficult). He finds that unemployment and inflation provide significant explanations of government popularity.

The econometric evidence from the above studies is inconclusive even though similar explanatory variables were used. . A major characteristic of all the above studies is that the data employed is macro-level data linking voting share with economic variables like income, inflation and unemployment. Lewis-Beck (1988, 16) provides a succinct explanation of why we have such divergent findings using time series econometric methodology. The following quote captures this explanation:

> "...From study to study, the samples tend to differ in terms of size, time span, and time unit. Further, the measures are usually different, not only of measures of economic variables, but of popularity and electoral cycle variables. And model specification, even at the conceptual level is inconsistent from equation to equation. In addition the timing of the electoral response (lag structure) invariably changes. Finally, the same estimation procedures are not always followed. It is small wonder that these researchers find themselves in disagreement."

Additionally, Lewis-Beck (1988) argues that aggregate data do not tell us anything about the behavior of individual voters even though what gives meaning to the foregoing statistical associations of between economics and elections is the underlying belief that individuals react systematically to economic stimuli at the ballot box. Fiorina (1978) also suggests that the econometric studies on retrospective voting simply may have pushed the limits of the data. He argues that many important questions in this area cannot be answered using aggregate or macro data and that we need to measure individual micro level responses to the economy.

The majority of existing micro-level studies use data from the National Election Surveys of the Center for Political Studies (CPS). This survey asks the following questions inter alia:

1. *" We are interested in how people are getting along financially these days. Would you say that your family are better off or worse-off financially than you were a year ago?*

2. *"Now thinking back five years, would you say you (and your family living there) are better off or worse off financially now than you were 5 years ago?"*

3. *"Now looking ahead - do you think that a year from now people will be better of financially or worse off, or just the same as now?*

4. *" And 5 years from now, do you expect that you (and your family living there) will be better off financially, or worse off, or just about the same as now?"*

5. *"Would you say that at the present time business conditions are better or worse than they were a year ago?"*

6. *" Now turning to business conditions in the country as a whole- do you think that during the next 12 months we will have good times financially, or bad times, or what?"*

7. *"As to the economic policy of the government- I mean steps taken to fight inflation or unemployment- would you say that the government is doing only a good job, only a fair job, or a poor job?"*

The key political item on the survey is the presidential vote intention (Republican candidate or Democratic candidate)

Fiorina (1978) using a retrospective voting model, analyzes the microeconomic influences on congressional and presidential voting from 1952 to 1974 with election data from the Survey Research Center (SRC). He tries to answer the following questions. (1) Is there an individual level basis for the aggregate relationship between the economy and voting for the president's party? (2) do citizens believe elections actually affect the economy? (3) Does a voter's personal economic situation influence his vote for or against the incumbent president's party? To determine whether the incumbent party prospers in good times and suffers in poor times, Fiorina compares presidential voting with responses to perceived changes in an individual's perceived economic situation. He finds a weak relationship when looking at percentages. When a logit model testing the monotonicity of the relationship between the perceived economic situation and support for the incumbent party is employed, Fiorina finds mixed results. (1) Presidential votes are related to an individual's current economic situation and overall economic conditions. (2) An individual's perceived economic situation has some relationship to voting in one-year congressional elections but no relationship to mid-term congressional voting.

To determine whether it is an individual's personal economic situation or his assessment of overall economic conditions which influences his vote, Fiorina adds to his analysis questions on prices and on the individual respondent's unemployment status and the individual's estimate of societal unemployment. He finds that the individual's perception of both his own economic situation and the overall economic conditions affects presidential voting. Neither has a very strong influence on congressional voting.

In an analysis of survey data concerning a panel for the US over the period 1956-1960, Weatherford (1978) looks into the individual level responses to the recession in the late 1950s, and especially into class differences in these responses. He sets out to answer four questions: (1) was the working class hurt more by the recession than the middle class?; (2) was this effect accurately perceived?; (3) do classes differ in their perception of parties' domestic economic policy?; (4) does an individual's class position influence the strength of the voting reaction? Weatherford finds that classes are affected differently

by macroeconomic cycles, and that these differences are generally perceived. Furthermore, the working class differs from the middle class with respect to the perception of party differences. Finally, working class individuals react more strongly to changes in economic conditions than those in the middle class. Voting behavior is found to be responsive to economic conditions, as reflected by the financial situations of families and individuals. Wides (1978) analyzing Center for Political Studies (CPS) national election studies for 1964, 1968, and 1972 finds that a perceived improvement in personal finances is related to support for the incumbent presidential candidate. Klorman (1978) using Survey Research Center (SRC) data from 1956 to 1974, finds a relationship between the perceived trend in family finances and voting in about half the elections analyzed. The influence varies considerably, however, depending on the office, with voting for the president and the governor being more influenced by the economy than with voting for other offices.

Sears and Lau (1983) have argued that most of the findings on pocketbook effects in the American literature can be accounted for by the close proximity of economic and political questions in the surveys. This proximity forces voters to make their answers more consistent. This hypothesis was tested by Lewis-Beck (1985) using CPS-SRC surveys (1956-82). Despite various specifications, the relationship between the standard personal finances item (measured by the number of questions in between) and the strength of personal economic voting was not found to be statistically significant.

Another strand of literature examines whether voters take individual level, group level, or macroeconomic variables into account.

Kinder and Kiewiet (1977) provide a sophisticated and thorough analysis of SRC data on congressional elections from 1956 to 1976. They distinguish between personal (egotropic) and collective (sociotropic) economic concerns. The egotropic hypothesis follows from the economic paradigm of individual or household rationality. The sociotropic hypothesis follows from the observation that economic policies try to impact the whole economy, not the economy of anyone. Therefore, the rational voter should hold

the government responsible for the way he perceives the whole economy, and not much by his personal economy.

Kinder and Kiewiet (1979) estimate the following model using CPS and surveys:

$$V = b_0 + b_1 P + b_2 C + b_3 I + e$$

where V = legislative vote; P = personal economic situation; C = collective economic judgment; I = Left-Right Ideology and e = error term

Specifically, Kinder and Kiewiet find that the influence on congressional voting comes, not from a respondent's own economic situation but rather from his judgment of the collective economic situation. They also find no relationship between an individual's unemployment status and voting. The individual's assessment of general business trends, however, does have an impact on voting. And the individual's assessment of the relative competence of the two political parties to manage the economy has an even stronger political impact.

Lewis-Beck (1983) using Euro-Barometer studies, addresses the question, "Do individual economic perceptions influence the voting decision in France?" using a regression model similar to that used by Kinder and Kiewiet (1977). He finds an affirmative answer. In explaining this inherent difference between the French and American electorate, Lewis-Beck postulates a *culture hypothesis.* According to this argument, Americans have such a strong sense of individualism that they blame themselves, not government for their personal economic difficulties. In France on the other hand, such individualistic values are not so strong. The vaunted individualism of the past has been eroded by many years of continuing centralization of political and economic authority in national government. Thus, it is reasonable for the French to express their personal economic grievances at the ballot box. Nannestad and Paldam (1993a, 1993b), analyzing 3000 and 15000 Danish households report that the factor most influencing the pro/anti government stance is an egotropic one. This result for the Danish Welfare State

with its emphasis on collective values and large scale reliance on state services appears to substantiate the culture hypothesis.

Kramer (1983) investigates the importance of individual level versus macroeconomic variables in the voting decision. He argues that a voter evaluates the variations in her or his personal income, insofar as these variations are induced by government policies. In Kramer's model, the judgment of the incumbent party is a function of the voter's partisan predisposition and the government-induced change in income in the period preceding the election. The reaction to this change is assumed constant over voters. The effects are analyzed of estimating the model with a time series of aggregate data and macro-economic variables on the one hand, and with a cross-section of individual-level observations on the other hand. In the latter case, the model is applied using individual level economic data as well as under the assumption of sociotropic voting. The conclusions are that individual-level cross-sectional analysis yields poor estimates, whereas aggregate level estimation is reasonably successful but cannot distinguish between self-interest and sociotropic effects. As a possible solution to the problem, Kramer suggests the possibility of aggregation to some intermediate level, such as groups.

2.2 Retrospective versus Prospective Voting

The issue of "retrospective" versus "prospective" voting is also, undecided. The retrospective model assumes that voters have limited abilities to decipher the complexity of the economic environment. Voters observe a few readily available information items on outcomes that are presumed to reflect the incumbent administration's performance. Without understanding complex interdependence among the variables, voters reward the

incumbent administration for desirable outcomes (economic growth) and punish it for undesirable ones (unemployment and inflation).

The retrospective model thus emphasizes the non rational or "satisficing" nature of voting behavior. The rationalist school on the other hand, in keeping with the neoclassical paradigm, emphasizes that voters maximize expected utility : Alesina and Rosenthal (1989), Chappell (1983), Chappell and Keech (1985), Chystal and Peel (1986). Central to the rationalist ideas is that voters may have sense of a socially optimal economic state and may understand feasibility constraints in evaluating economic outcomes.

Chappell and Keech (1985) draw on macro-economic theory to develop a model in which voters recognize that short-run choices by governments are constrained by economic possibilities, and reward or punish according to expected long-run effects of policies. They are assumed to do so by comparing a realized level of real output relative to a "natural" gross national product with the optimal value of this factor, as determined by the lagged level of inflation. taking account of varying weights for lagged values of economic performance variables, and non-economic effects, popularity functions are determined and estimated using quarterly data on the popularity of the US president from the period 1957-1980. The model is estimated using the naive as well as the sophisticated expectation formation process, and the conclusion is that the latter does slightly better than the former.

Panzer and Paredes (1991) using a model in which voters are presented as rational and maximizing individuals who vote for an option that enhances their expected utility, investigate the impact of economic variables on the 1988 Chilean presidential referendum. The referendum presented two options. The option Yes implied the continuation of General Augusto Pinochet as president of Chile for an eight year period;

the option No implied open general elections to be held in December of 1989. The economic variables used were the unemployment rate and the change in the unemployment rate. The results show that economic events were of utmost importance in voter's decisions. The most significant economic variable is that of average unemployment throughout the last three years prior to the election. Thus, they conclude that voters have a "good memory" and willingly write off economic trends which could be deemed as pre-electionary in nature. As in the United States (cf. Peltman, (1990)), the voting market is efficient in Chile.

Kuklinski and West (1981) analyze the 1978 CPS-SRC election survey and find that expectations about financial well-being during the coming year are significantly and strongly related to the support for Senate candidates. Fiorina (1981) analyzes the CPR-SRC surveys of 1974 and 1976 and concludes that the vote is determined by future expectations as well as past experiences.

Peltzman (1990) addresses the following question in relation to the US : do voters correctly use economic information in voting decisions?. In contrast with the political business cycle literature which assumes that voters ignore all but the most recent information, he finds that for both income and inflation, voters use information over at least the last three years of a president's term. Also, voters are concerned with permanent rather than temporary effects of policy, ignore information which is irrelevant to their welfare and ignore information about their welfare that is not policy related. They ignore expected inflation and penalize only unexpected inflation.

Aside from its theoretical appeal, the feasibility of sophisticated voting is called into question (Suzuki, 1991). It is not clear that voters can apply a complex rule, given direct evidence on decision making that individuals have limited economic knowledge and information. for example Gramlich (1983) and Fischer and Huizinga (1982) analyzed

public knowledge using opinion surveys and found that the public might not understand the trade-off relationship between inflation and unemployment that is a key concept for forming sensible expectations.

It is important to note, however, that if we assume that voting is prospective, the dividing line between egotropic and sociotropic voting becomes blurred. For example, if people vote against the government because they expect to be unemployed in the future, then surely, they must also consider employment prospects in their place of work, city, their trade, etc. (Nannestad and Paldam, 1994). It is for this reason that a sociotropic/prospective category is absent in the literature.

2.3 Problems with existing Micro-studies

The existing micro-level studies linking the economy with electoral behavior have a number of problems. They have invariably assumed that personal financial conditions, positive or negative, have symmetric consequences on voting decisions. People whose circumstances are positive are hypothesized to reward the in-party candidate, and those whose conditions are negative are hypothesized to penalize the in-party candidate. It is possible, however, (as Seigelman and Tsai, 1981, have pointed out) that financial conditions could have asymmetric consequences. Thus, citizens displeased with a President's performance may be more likely to vote against him or her than are satisfied voters likely to vote for him or her.

Also, prior researchers have taken a very literal interpretation of Downs' argument that voters cast their ballots on the basis of "utility incomes" and have thus tested the rational theory as if it related to economic benefits and costs alone. However, economic

considerations are by no means the only utility factors that a rational voter would consider.

The links between personal or household finances and voting behavior in existing micro level studies are not direct. Two separate questions are posed in the surveys on financial welfare and support for the government. In Euro-Barometer surveys for example, the following questions are posed inter alia:

1. " I want to talk to you about the last 3 years....During this time have you ever been unemployed [yes or no]?"

2. " If there were a general election tomorrow, which party would you support?"

Researchers then attempt to link these two questions in testing the rational voter hypothesis. However, it is perfectly possible for an individual to perceive an improvement in their finances and vote for or against the government primarily because of other considerations. Thus the approach adopted by previous researchers can give rise to the same spurious correlation for which the macro-level studies have been criticized. It is therefore necessary to link questions on economic welfare with those on voting behavior in the same question or set of questions. Thus, unlike the criticism offered by Sears and Lau (1983), one can argue that economic and political questions in the traditional micro surveys are not close enough.

Another issue not addressed in the micro-level studies is the truthfulness of responses given by respondents. In fact, it is implicitly assumed that the respondents have no incentive to be dishonest. There is no way of guaranteeing truthfulness and thus the potential problem of data reliability exists. In countries without a tradition of democracy, and with a history of human rights violations, micro-level data is difficult to gather. In

fact, due to the scarcity of elections, there is a dearth of such studies outside western democracies. Citizens in many countries would be loathe to answer questions about their voting intentions for fear of retribution.

This particular issue has not as yet been addressed in the literature because the problem it addresses has not existed in the countries where empirical studies have been undertaken (western democracies).

Conclusion

We can see from the above literature review of the role of economy in affecting electoral behavior has been investigated at two levels. (1) The aggregate macro-economic level using times-series or pooled cross-section analysis and (2) The individual micro-economic level using survey data. Whilst the aggregate level analysis sheds some light on the broad relationship between the economy and electoral behavior, the results obtained from the methodologies applied are open to the criticism of spuriousness. The individual level analysis allows some investigation into the reasons why individuals voted in a particular way and is thus more informative. Nevertheless, the existing micro-level studies are not without their problems. One of the major problems of existing micro-level studies arises from the fact that the survey questions do not provide a direct link between economic welfare and voting behavior. Thus, the results from these studies can also be subjected to the same criticism of spuriousness leveled at the macro-level studies.

The debate on the impact of economic factors on electoral behavior has largely taken place within the confines of western democracies. This is not least because of the absence of democracy in many developing countries. We are however seeing a movement toward "democracy" in many developing countries with pressures for economic

liberalization going hand in glove with those for political liberalization. The increasing democratization by countries (like Ghana) undertaking structural adjustment programs provides us with an opportunity to investigate the relationships between the welfare implications of these programs and the voting behavior of the electorate.

CHAPTER THREE

ECONOMIC PERFORMANCE AND POLITICAL CHANGE IN GHANA: 1951-1983

3.1 Political Regimes in Ghana (1951-1983)

In this chapter, it will be argued that since independence, the performance of the economy has been an important influence on political change in Ghana. We can distinguish three periods in Ghana's political economy between 1951-1983: (I) The Nkrumah era (1951-66); (ii) the NLC-Busia era (1966-72); and (iii) the Kalabule era (1972-83). The chronology of Ghanaian regimes during 1957 -1993 is shown in Table 3.1.

(i) The Nkrumah Era (1951-1966)

In the late 1940s and early 1950s, the British colony of the Gold Coast, as Ghana was known then, began to show signs of popular discontent. Petchenkine (1993) argues that

> The reasons for this unrest were mostly economic: the local population was inclined to link economic problems with "exploitation" by the colonialists. ...for instance cocoa beans bought at low prices were sold to Great Britain, which then resold the beans to other countries with profits largely kept in the mother country and only a small share invested in the Gold Coast.(p.3)

A surge in national self-consciousness and increasing discontent among the populace led to the popularity of the idea of political independence. The United Gold Coast Convention (UGCC), formed in 1947, was Ghana's first political party. In 1949, after a split with the UGCC, Kwame Nkrumah formed the Convention Peoples Party (CPP) with a "leftist" orientation. The constitution of the CPP stipulated the establishment of " a Socialist State in which all men and women shall have equal opportunity and where there

shall be no capitalist exploitation". Its Manifesto promised free education up to the age of 16; a free national health service; the mechanization of agriculture; and rapid industrialization. The CPP was victorious at elections held to the colony's Legislative Assembly in 1951, the CPP, ushering in a period of "self-government".

Table 3.1 Chronology of Ghanaian regimes since Independence in 1957.

Reign	Mode of Government	Mode of Installation	Head of State	Mode of Exit
6 March, 1957- June 1960	Independence Constitution (CPP)	Electoral	Prime Minister. Dr. Kwame Nkrumah	Re-election
1 July, 1960 - 24 February, 1966	First Republican Constitution	Electoral	President. Dr. K. Nkrumah	Coup d'etat
24 February, 1966 - 29 August 1969	Military-cum-Police (NLC)	Coup d'etat	Col. E.K. Kotoka Gen. A.A. Ankrah, Col. A.A. Afrifa	Hand-over
30 August 1969 - 13 January 1972	Second Republican Constitution	Electoral	Dr. K.A. Busia	Coup d'etat
13 January, 1972 - 5 July, 1978	Military (NRC/SMC I)	Coup d'etat	Col./General I.K. Acheampong	Palace Coup
5 July, 1978 - 4 June, 1979	Military (SMC II)	Palace Coup	Gen. F.W.K. Akuffo	Coup d'etat
4 June 1979, - 24 Sept., 1979	Military (AFRC)	Coup d'etat	Flt. Lt. J.J. Rawlings	Hand-over
24 Sept., 1979 - 31 December 1981	Third Republican Constitution (PNP)	Electoral	President Dr. Hilla Limann	Coup d'etat
31December 1981 - 7 January 1993	Military (PNDC)	Coup d'etat	Flt. Lt. J.J. Rawlings	Elected President under Fourth Republican Constitution

KEY:

Civilian Governments:
- CPP - Convention People's Party
- PP - Progress Party
- PNP - People's National Party

Military Governments:
- NLC - National Liberation Council
- NRC - National Redemption Council
- SMC - Supreme Military Council
- AFRC - Armed Forces Revolutionary Council
- PNDC - Provisional National Defense Council

Source: Attafuah (1993, pp. 9)

Given the CPP's development strategy, fiscal policy was expansionary. Expenditure on education, health, and physical infrastructure was dramatically increased from their colonial levels (Table 3.2).

Table 3.2 Government Expenditures on Social Services, 1940-1960 (in thousand British pounds 1920 prices)

Year	Construction roads, power	Scientific services	Education	Health
1940	505	29	194	244
1950	3203	102	2207	879
1955	6212	244	4147	1612
1956	5396	127	2784	1235
1957	3342	136	3379	1241
1958	5074	190	3478	1431
1959	6305	278	4448	1555
1960	7139	396	5261	1971

Source: Frimpong Ansah, (1991), Table 5.3

Development expenditure was dramatically increased from its pre-independence levels (Table 3.3). Development also meant more government jobs. "Jobs for the boys" were created in existing state enterprises like the Cocoa Marketing Board (CMB) and in new public enterprises such as the Industrial Development Corporation (IDC) (Frimpong-Ansah, 1991). Observing such employment in the IDC in 1958, Arthur Lewis wrote:

> The IDC has suffered from outside interference, in the shape of Members of Parliament and other influential persons expecting staff appointments to be made irrespective of merit, redundant staff to be kept on the payroll, disciplinary measures to be relaxed in favor of constituents, businesses to be purchased at inflated prices, loans to be made irrespective of security, etc. (Quoted by Killick, 1978:245)

By 1956 some significant results had been achieved: power supplies had "at best caught up with urban demand and were at the point of becoming freely available for industrial development" (Development Progress Report 1959). The educational system had been expanded with free primary education and a national system of secondary and higher education.

Table 3.3 : Macroeconomic Indicators, 1951-1974

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
GDP /Capita (Cedis)														
Constant 1960 Prices	85.1	82.9	87.3	97.5	119.1	106.6	107.7	121.1	134.2	142.1	141.3	145.2	145.4	154.3
growth rate %	-	-2.5	5.3	11.6	22.1	-10.4	1.0	12.4	10.8	5.8	-0.5	2.7	0.1	6.1
Trade Balance (million cedis)	34.6	100.1	80.8	209.6	108.0	12.1	16.2	117.0	20.9	-10	-72	13	-41	0
Current Acct. (million cedis)	77.2	46.0	20.8	160.2	7.8	-41.3	-57.4	40.8	-44.6	-129	-203	-109	-177	-130
Net Resves (million U.S $)					336	320	269	277	295	259	159	180	187	89
Terms of Trade Index (1954=100)	146	158	149	100	115	149	157	112	123	153	188	198	96	84
Inflation%	14.9	-1.4	-3.9	-0.5	0.5	4.1	1.0	0.0	2.9	0.9	6.2	5.9	5.6	15.8
Savings Deposit Rates											3.0	3.5	3.5	3.5
Saving/GDP ratio (%)	16.4	14.2	10.3	22.9	16.8	15.4	10.7	17.7	18.2	17.4	10.6	13.1	12.7	15.5
Gov't Revenue (Cedis '000)	60,866	76,160	87,222	36,882	112,044	89,432	120,222	133,822	140,272	166,456	143,582	145,803	169,717	253,330
Gov't Expend (C'000)														
Total	21,270	26,960	40,941	46,562	53,694	64,856	65,770	105,636	124,020	156,418	232,478	247,587	265,982	329,284
Current	23,662	34,888	39,142	44,464	53,444	57,688	78,404	91,276	100,592	133,986	142,087	147,334	161,572	201,602
Development	3,298	6,054	7,420	9,230	11,412	7,764	46,544	55,480	87,300	62,904	90,385	100,254	104,411	127,681
Budget Deficit (-)/ Surplus (+)(C'000)	+33,906	+35,218	+40,667	+83,188	+47188	+23980	+14586	+9,802	-16,146	-49,438	-58,891	-94,784	-96,265	-75,954
Real Minimum Wage Index 1960=100	65	92	93	93	87	98	98	104	101	100	94	86	83	75

Table 3.3 Continued

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
GDP /Capita (Cedis)										
Constant 1960 Prices	141.7	131.1	126.8	127.8	126.2	132	135.3	128.1	131.3	136.2
growth rate %	-8.0	-7.4	-0.4	0.7	1.0	4.6	2.5	-5.3	2.5	3.7
Trade Balance (million cedis)	-163	-55	26	59	81	143	-36	102.3	102.3	-205.8
Current Acct. (million cedis)	-310	-173	-117	-69	-70	-21	-191	92	107.8	-199
Net Resves (million U.S $)	-10	-39	-52	-44	-103	-24	-11	126	212	2
Terms of Trade Index										
(1954=100)	77	72	91	102	118	124.5	123.9	100.2	81.7	89.6
Inflation%	22.7	14.8	-9.7	10.7	6.5	3.0	8.8	10.8	17.1	18.8
Savings Deposit Rates	3.5	3.5	3.5	3.25	3.5	3.5	7.5	7.5	5	5
Saving/GDP ratio (%)	8.0	7.3	7.2	11.7	12.7	11.5	6.5	14.3	12.1	8.0
Gov't Revenue										
(Cedis '000)	283978	230875	254,032	294,944	332,054	437,000	451,000	420,000	382,000	584,000
Gov't Expend (Cedis '000)										
Total	361551	268377	313,738	367,153	371,064	468,400	524,000	543,000	549,000	754,000
Current	219755	203616	245,138	300,181	314,860	335,400	368,800	409,800	454,400	618,300
Development	141796	64761	68,599	66,972	56,203	133,000	155,200	133,200	94,600	135,700
Budget Deficit (-)/										
Surplus (+)(C'000)	-37502	-64321	-59,706	-69,209	-39,019	-31,400	-73,000	-23000	-167,000	-170,000
Real Minimum Wage										
Index 1960=100	59	56	61	61	57	55	51			

Source: Ghana Quarterly Digest of Statistics, Various Issues.

The quality of rural life had also been improved: field units delivered medical care and water supplies were provided in many areas ((Development Progress Report 1959). Table 3.3 also shows the GDP per capita grew at an annual average of 5.2% between 1952 and 1956 and real minimum wages increased over the same period.

Ghana attained independence from British colonial rule in March 1957. Preceding this was the general election of 1956 in which there were three competing political parties, the CPP, the National Liberation Movement (N.L.M) and the Northern Peoples Party (N.P.P). The latter two parties were federalist in orientation, with the N.L.M. drawing its support mainly from Ashanti and the N.P.P. from the Northern region. The CPP, on the other hand, was a nationally based party. The CPP, under the leadership of Kwame Nkrumah, won a majority and subsequently formed the first government of independent Ghana. The victory of the CPP can also be partly attributed to the actual and promised improvements in the economy brought about by the Nkrumah government:

> ...the CPP's success in the 1956 elections was due to the positive changes that had taken place during the period of "self-governing". During that time, the number of roads was increased by one-third, new rail-road sections were built, and construction of a seaport in Tema was begun. The annual harvests of cocoa beans-the main export commodity-increased by 30 percent and GNP grew steadily. The number of children attending primary schools more than doubled, and this schooling was offered free throughout the country. (Petchenkine, 1993, p.4)

The economy, however, took a turn for the worse after 1957. The external reserve position deteriorated significantly between 1957 where net reserves stood at US$269 million and 1966 when they were -US$391 million (Table 3.3). This reflected a deteriorating balance of payments position and also the poor credit rating accorded the country. The country registered three consecutive years of negative growth in per capita GDP between 1964 and 1966. Inflation increased from 1% in 1957 to an annual average of 17% between 1964-66.

Between 1960-66, there was a sharp decline in the incomes of cocoa farmers from an index of 100 in 1960 to 34 in 1966. There were also similar declines in the real

minimum wage and the earnings of industrial workers (Killick, 1978). The evidence thus points to a decline in the standard of living of urban residents and unskilled workers earning the minimum wage.

Ghana's declining economic performance was mirrored by the dwindling political fortunes of Kwame Nkrumah and the CPP. The broad public support the leadership had enjoyed began to erode in the last two or three years of its rule (Chazan, 1988). The deteriorating economic situation was used by a group of military and police officers, led by Lt. Colonel Emmanuel Kotoka, Major Akwasi Afrifa , General Joseph Ankrah, and John Harlley, to stage a coup d'etat on February 24, 1966 which overthrew the CPP. Colonel Kotoka, speaking on radio on the day of the coup, justified the overthrow by referring to the chaos the CPP allegedly created in the country's economy:

> The coup was met with rejoicing by people in Accra and many other cities, crowding streets and showing support for the putschists". The people took the change as a promise of better times to come. (Petchenkine, 1993, p.34)

Thus, the state of the economy provided a pretext for Ghana's first change of government and even though Ghanaians had not been given the opportunity to express their opinions about the Nkrumah government, it can be argued that they (including many of Nkrumahs' former ministers) tacitly and actively supported the overthrow of the Nkrumah government. The new supreme body of state authority was named the National Liberation Council (NLC) with General Ankrah as Chairman. The N.L.C. subsequently handed over power in 1969 to the civilian elected Progress Party (PP) government of Dr. K.A. Busia. The PP was a reincarnation of the N.L.M. The ideological stance of these two governments (NLC and PP) was pro-private capital and opposed to Nkrumah's "socialist" policies.

(ii) The NLC-Busia Era (1966-1972)

On coming into office, the NLC immediately embarked on an IMF supported stabilization program aimed at improving the adverse balance of payments, cutting the budget deficit, reducing the government sector, and stimulating private enterprise.

There was a reduction in absolute domestic investment, tighter control over import licenses and a devaluation of the cedi (Killick, 1978). As shown in Table 3.3, the objective of stabilization was largely achieved. The balance of trade moved into surplus and the current account and government budget deficits were also reduced. Many of Nkrumah's development projects were abandoned. Inflation fell from an average of 18% between 1964-66 to an average of 9% between 1967-69.

However, economic stabilization during the NLC era was attained at the cost of economic growth. GDP per capita fell by -0.4% in 1967 and rose only by 0.7% in 1968 (Table 2.3). Worker discontent with the economic achievements of the regime was demonstrated by the fact that even though strikes were banned and their organizers persecuted, in 1966 there were 32 strikes; in 1967, 27, in 1968, 36; and in 1969, the last year of NLC rule, 51 strikes (ILO, 1982, p.675). The strikes significantly undermined support for the regime and sensing possible removal from power, the junta announced a transition to civilian rule with general elections to be held in 1969. Once again, the economy had proved the undoing of yet another government.

However, the NLC took steps to ensure that the former CPP, in any guise, did not win the elections. In particular, the CPP was proscribed and a decree was issued (No. 358) banning the Nkrumaist Peoples Popular Party from participating in the elections. In the general election, Busia's Popular Party was victorious. The PP faced as it's opposition, the National Alliance of Liberals (NAL) headed by K.A Gbedemah a former disaffected minister in the Nkrumah regime. The NAL was Ewe-dominated and the PP was Akan dominated. The PP, was therefore, not as broadly based as the CPP, and did not carry as much political clout despite their victory.

The PP continued the NLC policy of providing every incentive for development of a market economy and privatization. Busia derived his political support from the rural

areas and favored, in his design of economic policy, "a shift of resources to the rural areas" Under the financial constraint in which the government found itself, however, this shift in resources toward the rural areas could only be achieved at the expense of a reduced welfare in the urban areas (Frimpong-Ansah, 1991 pp.100). However, Frimpong-Ansah (1991) argues that, in terms of economic policy, the state under Busia was just as interventionist as under Nkrumah:

> ...the empirical evidence of the NLC and the Busia periods would indicate that the policy regarding industrialization and project-based programs, as opposed to price based incentives, was not significantly different from that which Nkrumah pursued (Frimpong-Ansah, pp.101) .

By 1971 the economy found itself in the same position as it was in 1965 with increasing fiscal and current account deficits. The economic situation was aggravated by a dramatic drop in cocoa prices in 1971 resulting in a balance of trade deficit (Killick, 1978). The government responded with a devaluation of the cedi by 42% in December 1971. Also, a new nationwide tax on development was levied on annual profits above 1,000 cedis. Bank interest rates were raised, gasoline prices were raised and the free medical care system introduced under Nkrumah was abolished. Government employees and servicemen lost their discounts for rent and upkeep of cars. Severe cuts in military expenditure were implemented. No new armaments ordered and the officer corps was deprived of many fringe benefits, including discounts on the upkeep of cars, subsidies for water and electricity bills, etc.(Petchenkine, 1993 p.52).

These measures resulted in some goods disappearing from the domestic market while the prices for others increased. The trade unions were at the head of a mass movement for improved living conditions. In an attempt to check the growing anti-government sentiment, the Busia government made a move to dissolve the Trade Union Congress (TUC). In September 1971, the PP passed a bill in parliament dissolving the TUC and transferring its assets to the government. This unconstitutional act resulted in a chain of strikes, mass rallies and marches against the government. The government had lost it's social and political base.

The devaluation, and preceding economic difficulties provided the pretext for another coup d'etat on 13 January, 1972 which ended Ghana's second democratic experiment. The military, under the National Redemption Council (N.R.C) led by Colonel I.K. Acheampong, had yet again denied the Ghanaian electorate the chance to pass judgment on the government by way of the ballot box. The NRC claimed that the economic policies of the PP had been wrong from the start, and that it was necessary to pursue a new path.

The economy had, again, apparently provided the rationale for the change in government, and the coup was, once again, met with mass demonstrations of support for the coup makers by workers, in anticipation of better things to come.

(iii) The Kalabule Era : 1972-1983

The NRC announced a revaluation of the cedi by 42% on February 5, 1972 (reversing Busia's devaluation) and restored many of the fringe benefits the Busia government had taken away from government employees, including the military. Pay raises for government employees were also announced. The trend toward privatization pursued in the NLC-Busia era was reversed.

Large mining companies controlled by foreign capital were nationalized among others. The principle of self-sufficiency for the country (especially of food) was proclaimed. The NRC unilaterally repudiated foreign debts which it deemed "unjust". This refusal to repay debts caused Ghana to lose western financing as well as the confidence of creditors. Nevertheless, an increase in the world prices for gold, cocoa and timber helped move the trade balance into a surplus, increasing the gold and foreign reserves of the country (Killick, 1978).

These favorable initial conditions helped the NRC to consolidate its position. In 1972, the number of strikes declined to 10 from 79 the previous year and remained low at 13 in 1973 (ILO,1982). However, rising domestic prices were to pose a major problem for the regime. Inflation increased from 10% in 1972 to 18% by 1974 and to an annual

average of 94% between 1977-78. (Table 3.4). 1974 also saw a drop in the world price of cocoa as well as an increase in the world price of oil resulting in a trade deficit (Killick, 1978). This marked the beginning of a decade of economic decline. Under considerable pressure from professional and trade union organizations, the NRC, now reconstituted as the Supreme Military Council (SMC I) advanced the idea of a government of national unity ("Union Government") to include representatives of the military, police and civilians. A referendum on this proposal was held on March 30, 1978. The official results indicated that the Union Government proposal was accepted. However the "unofficial" results released by the electoral commissioner indicated that this referendum was rigged (New African, June 1978).

Table 3.4 Ghana: Macroeconomic Indicators 1974-1983

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Real GNP per capita 1975 Prices (Cedis)	520	459	404	403	435	408	393	365	325	320
Money Supply (million cedis)	697	1009	1430	2386	4088	4631	6058	9415	11440	16861
Current Account (million U.S $)	-	-2,7	-25.5	-144.4	-109.3	40.4	-53.7	-508.1	-192.3	-294.2
Inflation (%)	18.4	29.8	56.1	116.5	73.7	53.9	50.1	116.5	122.3	122.8
Govt Bud Deficit (million cedis)	357	624	870	1479	1906	1646	4440	4675	3593	4511
Agric. Prod.(000, t)										
Cereals	890	672	689	639	540	780	674	725	543	308
Starchy Staples	7988	7462	4435	5995	4105	3927	4349	4114	4431	3657
Cocoa	382	397	327	277	268	281	254	220	179	159
Exports Index 1968=100	55.1	56.4	59.1	48.7	40.1	38.2	39.5	40.7	46.0	32.6
Index of Mineral Production 1975=100	-	100	97	87	76	65	64	60	54	46
Timber Production Cubic Metres	-	623	565	586	591	285	185	222	-	-
Terms of Trade 1968=100	100.7	95.5	99.6	103.4	94.6	95.1	95.0	61.6	48.2	48.2
Real Minimum Wage 1977=100	292	225	144	100	77	50	44	46	38	32

Source Ghana, Quarterly Digest of Statistics, Various Issues

Following the referendum, the overwhelming majority of teachers, lawyers, physicians, engineers, pharmacists bank and clerical employees, went on strike. Many

banks and hospitals were closed; industrial production was disrupted. The inflation rate surpassed 100% by the spring of 1978 and there was a shortage of many goods. Many thousands of people demonstrated in Accra and the provincial towns carrying banners that read "we no longer want Acheampong!" "The Military Go back to the barracks!" "SMC must be disbanded!" (Chazan, 1988). The regime of General Acheampong had lost all popular support. In a palace coup on 5 July, 1978, Acheampong was dismissed from all his posts and arrested.

The economy had once again played an important role in bringing about political change. The new regime, SMC II was headed by General Fred Akuffo. Akuffo laid the blame for the failures of the economy on the incompetence of General Acheampong. The economic program introduced by SMC II included a package of austerity measures, mostly at the expense of workers. New taxes on income, including vacation and retirement benefits were introduced. Wages were frozen (Petchenkine, 1993).

The economic program introduced by SMC II proved unpopular. The number of strikes in the second half of September increased. On November 2, 1978, workers of the state-owned electricity corporation went on strike and the utilities stopped operating (Patchenkine, 1993). Price controls became pervasive and a lucrative black market, thus, evolved in consumer goods. Such dealings were affectionately christened "Kalabule" by the Ghanaian public. The term came to refer to all types of illegal transactions including smuggling, the diversion of goods from official to unofficial channels, tax evasion, bribery and over-invoicing imports and under-invoicing exports. Green (1987) estimates that about 35 per cent of the population were predominantly involved in informal market and quasi-legal activities. Under pressure from the TUC and professional associations, Akuffo announced the lifting of the ban on party politics to take effect on January 1, 1979. The economy was yet again instrumental in bringing about political change.

Sixteen political parties were registered by January 31, 1979, including the Peoples National Party (PNP), the Popular Front Party (PFP) Action Congress Party (ACP), Social Democratic Front (SDF), Third Force Party (TFP) and the United National Convention (UNC). The PNP was founded by former CPP activists and thus claimed the

Nkrumaist mantle. The PFP on the other hand was founded by former PP activists. The PNP and PFP were the two largest parties.

Before the elections, Flt. Lt. Jerry John Rawlings was catapulted onto the Ghanaian political scene on May 15th 1979 in a failed attempt to overthrow General Akuffo's Supreme Military Council (SMC II) government. During his trial with his seven accomplices, Rawlings' integrity and popular appeal endeared him to the junior ranks and many civilians in the audience (Yankah, 1986). He cited the corruption and continuing economic decline during the Akuffo regime as the rationale for the attempted coup. It had become clear to many Ghanaians that they shared the ideals of social justice and the elimination of corruption which Rawlings was espousing during his trial. Rawlings was sprung from jail on June 4th 1979 by a group of junior officers and proceeded to form the Armed forces Revolutionary Council (AFRC) government. His government engaged in what they called a "house cleaning exercise" where they tried to rid Ghanaian society of the corruption of the *kalabule* era. Military executions, Public Tribunals, and Citizen's Vetting Committees became hallmarks of the regime.

In the meantime, presidential and parliamentary elections were held in June 1979 and were won by the PNP. The AFRC handed over power to the PNP on 24th September 1979. However, the economy was again to prove the downfall of this regime. Between 1979 and 1981, GNP per capita was on the decline and inflation was on the increase (Table 3.4). The economic deterioration required strong but unpopular measures. Wary of possible mass discontent, the PNP government refused to devalue the cedi. A lack of resolve, inconsistency, and incompetence in the government, destroyed the PNP's credibility with business leaders. Workers resumed their protest movement over deteriorating living conditions through numerous strike actions (Petchenkine, 1993 p.103).

Rawlings, apparently unhappy with the economic performance of the PNP, staged another coup d'etat on 31st December 1981, and established the Provisional National Defense Council (PNDC). Between January 1982 and November 1983 the PNDC was characterized by socialist revolutionary policies and measures, tinged with populism. The government, in this era, was composed of avowed socialist intellectuals, junior military

officers, a Catholic Father, a student activist and a radical trade union leader (Ray, 1986). The government drew its support from the discontented urban masses, disaffected ranks in the military, students, the urban unemployed, lower level trade unionists, a group of radical left-wing intellectuals and some politicians. Frimpong Ansah (1991:112) notes that " all these were hard-core constituents of the urbanized vampire state". The business community, large scale farmers, and professionals were the regime's declared enemies.

Economic policy was interventionist. The PNDC sought to reduce "the stranglehold of privatization" on the economy and to increase state control of essential services as a means of protecting people from unscrupulous local and foreign capitalists (Attafuah, 1993:157). Price controls, import duties and tariffs were imposed on certain commodities produced in or imported into the country. The PNDC was hostile toward the prescriptions of western financial institutions such as the International Monetary Fund (IMF) and World Bank. In fact the PNDC initially blamed Ghana's economic woes on its "neocolonialist" structure, and an IMF/World Bank stabilization and structural adjustment program was seen as inimical to the interests of the country.

The government sought the support of workers, students, and the rest of the urban population to bring about a radical change in the economy. In an attempt to rally working-class support behind the regime, one of the first acts of the regime was the enactment of *Rent Control Law* 1982 (PNDC5). This reduced rents on residential properties by fifty per cent and set a C50.00 limit for rents on single rooms. PNDC Law 7 also stipulated that if any unoccupied room/house was identified in rental premises and the owner refused to rent or could not be traced, the premises could be let out lawfully by the local community PDC and local rental Control Unit to persons who had no dwelling places. These laws were music to the ears of many urban workers who generally faced high rents because of housing shortages. Workers Defense Committees (WDCs) and Peoples Defense Committees (PDCs) were established to mobilize the population. Herbst (1993: 28) notes that while helping the urban workers, the PNDC seemed to accentuate the urban bias of previous regimes by imposing controls on food, the major source of income for the 70 per cent of the population that live in the rural areas.

By late 1983, a combination of frequent coup attempts against the regime, a severe Sahelian drought, sporadic bush fires, the flight of capital from the country, and continuing miserable performance of the economy had threatened the very existence of the regime. This precarious situation was compounded by the mass expulsion of over one million Ghanaians from Nigeria in 1983. For the first time in Ghana's history, the threat of hunger began to loom large for a significant proportion of the population. In the absence of a realistic alternative from the intellectual left (and the Eastern Bloc countries), the Rawlings regime was convinced by August 1983 that the best possible solution to the challenge posed to its survival by subversive political activities and the desperate economic situation was to seek help from the Bretton Wood Sisters (Ray 1986). On 28 August 1983, Chairman Rawlings delivered an address on national radio and television to the people of Ghana. The speech was essentially a close-up analysis and critique of the populist and economically unproductive elements in the "31st December Revolution" as it had evolved to date:

> We can no longer postpone the time for halting the populist nonsense and for consolidating the gains of the past 20 months and making a noticeable leap forward .... Production and efficiency must be our watchwords. Populist nonsense must give way to popular or unpopular sense ... to scientific sense, whether it is popular or not. Many of us have spent too much time worrying about who owns what. But there can be no ownership without production first. The only resources which do not have to be produced are those given to us by nature, and these must be used for the benefit of all the people of today and tomorrow. Everything else has to be produced, and until we all fully recognize and act upon this fact, we shall be deceiving ourselves with empty theories. (West Africa, September 12, 1983.) [Emphasis added].

Rawlings' rejection of "popular nonsense" reflects a timely recognition of the simple truth, that revolutionary rhetoric and "mobilization" are by themselves inherently unproductive, and are inadequate vehicles for sustaining a revolution. There was an urgent need to achieve some economic victories in the short term in order to contain the

people's mounting disillusionment with the revolution. Economic productivity was subsequently moved to the top of the PNDC's revolutionary agenda.

In other words, the regime had to concretely demonstrate not only a commitment but also a real capacity to effect positive or noticeable improvements in the living conditions of the masses. Hence, Rawlings declared that unless lessons were drawn and new ground broken, it was clear

> from all indications, particularly the lag in production and the persistently unfavourable climatic conditions, that we will be adding to the already intolerable suffering of our people. We have no right to do this, and we do not intend to do so (West Africa, September 12, 1983).

The significance of the speech lies not only in the fact that it constituted an open admission by the PNDC that its economic performance had thus far been unsatisfactory but also it represented the first real indication of impending policy decisions that would significantly alter the course of the revolution and remove the protective armor which had hitherto insulated the slogan-shouting intellectuals and idle workers from scrutiny. Thus, focusing on the barriers to progress in the revolution, Rawlings vehemently attacked the "in-built traditions of waste, red tape and inertia" in government agencies and criticized the lack of initiative and the pervasive insensitivity to the "seriousness of our economic situation". He observed that these tendencies have sometimes been a "mark of sheer disloyalty if not downright sabotage of government policy" (Attafuah, 1993).

The 1983 Budget, announced by Dr. Kwesi Botchwey, the Finance Secretary, signaled the governments' change of course. This Budget contained a significant devaluation of the cedi (an act which was anathema to Rawlings in 1979), and an increase in the prices of basic foodstuffs. This marked the beginning of Ghana's Structural Adjustment Program. In parting with a "socialist" approach toward the economy, Rawlings also parted company with the "socialist" wing of the PNDC, many of whom felt betrayed by the apparent U-turn. Many were accused of complicity in attempts to overthrow the PNDC (Chazan, 1988).

3.2 The Welfare Impact of Economic Policies during the Kalabule (1972-83) Era

The period between 1972 and 1983 is important for this chapter because it was the decade immediately preceding the 1983 Structural Adjustment Program (SAP). Also, this period was one of a sustained deterioration in the economy under five "different" governments. By no means did these governments pursue the same policies.

Table 3.5 Average Annual Growth Rates of Selected Basic Indicators (1970-1983) %

Indicator	Annual Rate of Growth (%)
Population	2.6
GDP	-0.6
GDP Per Capita	-3.2
Agriculture	-0.2
Industry	-4.2
Services	1.5
Exports	-6.2
Imports	-9.0
Terms of Trade	-3.7
Cocoa Output	-6.1
Cereal Output	-3.4
Starchy Staples	-4.7
Inflation	41.6
Minimum Wage	-15.9
Average Earnings	-16.3
Cocoa producer price	-11.3

Source: Tabatabai (1986)

However, for the most part, the policies of this period emphasized import substitution, underpinned by a restrictive foreign exchange regime, quantitative restrictions upon imports and price controls, with the state playing a major role as producer. Changes in welfare during this period are therefore very relevant to an analysis of the implications of the SAP for welfare since it gives us a glimpse at one possible counterfactual situation.

As shown in Table 3.5, the dramatic contraction between 1970 and 1983 entailed a decline in GDP per capita by more than 3% a year, in industrial output by 4.2% a year and in agricultural output by 0.2% a year. The main foundation of the economy, cocoa, was on the decline. Although in 1983 food production was affected by the worst drought in Ghana's history, the decline was probably due to the massive migration suffered by the rural sector (Tabatabai, 1986). This exodus was partly a result of the deteriorating economic conditions and also to the 1973/4 oil boom in Nigeria which induced more than two million Ghanaians to leave in search for greener pastures in Nigeria. Particularly hard hit was the government's tax base as those activities that provided it with the bulk of it's revenues shrank disproportionately. Central government revenues which amounted to 21% of GDP in 1970 fell to only 5% of a smaller GDP in 1983 (Tabatabai, 1986). The revenue collapse increased the reliance on the banking system to finance expenditures. Between 1974 and 1983 the monetary base expanded from 697 to 11,440 million cedis. The loss of monetary control accelerated inflation which increased from 18.5 in 1974 to 116.5% by 1981 in the midst of a regime of controlled prices (Table 3.4). The period of decline was also characterized by negative real interest rates, and domestic savings and investment decreased from 12 and 14% of GDP respectively to less than 4% (IMF, 1987).

In the meantime, successive governments continued the policy of overvaluing the cedi, quietly cognizant of the fate that befell the Busia governments attempt at devaluation. Between 1974 and 1983 the Ghanaian cedi had been devalued only once in 1978 (from 1.15 to 2.75 cedis to a US dollar) despite a hundred-fold increase in domestic prices. The current account deficit of US$ 2.7 million in 1975 increased to US$ 294 million by 1983 (Table 3.4). The current account deficits not only depleted gross official foreign reserves but also involved an accumulation of external debts. Arrears amounted

to the equivalent of 90% of annual export earnings in 1982 (IMF, 1987). Successive governments responded with import controls which fell disproportionately on consumer goods. Consumer goods as a proportion of imports fell from 20.2% in 1975 to 17.1% in 1980 . The scarcity value of such goods was high, and by and large they assumed the title of "essential commodities" within the urban Ghanaian community.

Formal sector wage and salaried employees were severely affected by the decline in national income. By 1983, the real minimum wage had fallen to 11 per cent of its 1974 value UNICEF (1986). As UNICEF (1986) points out, for many Ghanaians this was not a living wage " and for many employees the real remuneration for formal sector work could not support the food requirements of one single adult, let alone let alone those of the family, plus their clothing education, health and housing requirements" . Putting this in context, UNICEF (1986) estimates that the minimum socially acceptable household budget would have been of the order of 31,500 cedis a month in mid-1984. At that time the minimum wage was under 1,000 cedis a month, and upper middle level civil service salaries were 2,000 cedis a month.

Rent-seeking on the part of formal sector workers provided the "magic" needed to overcome their precarious situations. This rent-seeking took the form of obtaining goods (or chits/licenses which allowed them access to scarce goods or foreign exchange) from official channels and on selling them on the parallel markets. The kalabule economy benefited mainly urban residents (especially traders, public officials) and impacted detrimentally on the welfare of the urban poor and rural dwellers. However, rural residents living in the cocoa producing border areas also benefited from smuggling. May (1985, p.6a) estimates that 50,000 tonnes of cocoa were smuggled annually over this period.

Nevertheless, it is our contention that during the *kalabule* era, the rural sector was relatively worse off because the access of rural residents to the "magic" needed to survive the harsh realities of the economy was very limited. However, the distribution of the rents within the urban sector were skewed towards a small proportion of residents. Huq (1990) in a survey conducted in 1984, reports that about 53 to 60 per cent of respondents from Accra did not have access to goods supplied through official channels. the comparative

figure for those with jobs at the university of Cape-Coast was 33 per cent. In Assin Awarabo (a village), 80-100 per cent did not have access to goods from official channels. One has to remember that during most of the Kalabule era, Ghana was under military rule. These military rulers had more to fear from urban unrest and were not too responsive to the silent cries from the rural areas.

In fact, urban interest groups in Ghana were relatively small and thus able to organize more effectively whereas rural interest groups were large and diffused and thus the former benefited from the kalabule economy. During the *kalabule* era, rural dwellers saw their incomes dwindle because of the fall in agricultural cash crop production and the high inflation rates. Real incomes of cocoa farmers in 1983 was 12 percent of their value in 1974 (Tabatabai, 1986). Food producers' incomes, due to the increase in food prices, seem to have been less severely affected than most other groups (Horton, 1985).

However, the trend in the real income of food growing farmers is less certain and more diversified given the declining per capita production. Farmers in the Northern and Upper regions for example fared particularly badly with respect to prices and production. Their main cash crops -yams and groundnuts- showed the lowest real price increase, while they were worst affected by drought (UNICEF, 1986). Bequele (1983) argues that while the larger farmers were protected by the rise in food prices, small farmers were made worse off by that rise since many of the small farmers were net purchasers of food. Also, part of the decline in cash crop and food production was more apparent than real. The differences in producer prices between Ghana and her neighbors encouraged smuggling . For farmers engaged in such activities, their incomes were protected.

During the kalabule era, many people from the rural areas, in response to their declining incomes, increasingly migrated from the villages to the towns and abroad (Huq, 1990). This resulted in a decline in agricultural output and further economic decline. The foreign exchange constraint considerably reduced the availability of imported inputs for the social services. Between 1972 and 1982, the government budget as a percentage of GNP fell from 18.3 to 10.1 (UNICEF 1986). This led to a fall in real expenditure (in absolute and per capita terms) in the education and health sectors (Table 3.6).

Table 3.6 Ghana: Index of Real Government Health and Education Expenditure Per Capita,1969/70-1981/82

	Education Expenditure Per Capita	Health Expenditure Per Capita
1969/70	77.3	71.6
1975/76	100	100
1978/79	94.4	84.9
1979/80	55.2	47.2
1980/81	35.7	35.8
1981/82	28.7	22.6

Source: World Bank (1985) Vol.II, cited in UNICEF (1986) Table 4-5.

As in many other sectors, equipment in health institutions went into a state of disrepair due to lack of spare parts. Basic drugs such as nivaquine and aspirin and consumables such as bandages, needles and syringes were in desperately short supply, and often not available in many rural clinics. The poor road system and lack of a fleet of vehicles in good running condition (again due to shortages of spare parts) made the distribution of the few supplies extremely difficult in rural areas. The country lost more than 50 per cent of its doctors between 1981 and 1983, and about 8.5 per cent of nurses in 1982 alone (UNICEF, 1986) and probably more between 1974 and 1981.

Of the health personnel remaining in the country, the vast majority of them were located in the urban areas and largely concentrated in the Greater Accra, Eastern and Ashanti regions (Ubugo and Umo, 1986). They note that although the nine administrative capitals in Ghana accounted for only 15 per cent of the population, they controlled 55.4 per cent of the hospitals and 51.3 per cent of the hospital beds. UNICEF(1986) quote hospital records which show that annual attendance dropped considerably. For example, in Korle Bu Hospital (the nations' foremost), the outpatient attendance in 1983 was 117,000 compared with 198,000 in 1979. This trend also reflects the increasing importance of private medical services during this period.

Nutritional studies undertaken by UNICEF in 1982 and 1983 " indicate that the caloric and protein intake of children was below 69 per cent and 87 per cent of requirements respectively... and 5 per cent of children under 5 years were severely

malnourished , and 50 per cent were under 90 per cent of the standard weight for age" (UNICEF, 1986 p.15). There was an increase in the deficiency of calorie availability. Average calorie availability as a percentage of requirements declined from 92 per cent in 1960 to 68 per cent by 1980 with an attendant increase in child malnutrition. This was the result of the decreased food production, the increase in food prices and the declining purchasing power of Ghanaians. As households became poorer, child labor became more crucial to making ends meet. This contributed to high drop out rates -especially among girls - as well as irregular attendance. As the UNICEF (1986) study notes, child labor in the informal urban sector is most apparent in hawking and a modern form of "child pawning" into domestic service to reduce the domestic costs of poor households during the period economic decline reached a level much higher than in the previous 20 years.

From the above discussion, one cannot but agree that " there can be no doubt that Ghanaians on the average became much poorer between, say 1974 and 1983. As to relative deprivation, it seems safe to assume that households or family units that had access not only to land but also to the labor to work it, and were able to respond to opportunities such as emigration and kalabule, fared best" (Rimmer 1992, p.177). The economic deterioration resulted in five changes of government between 1972 and 1983.

Under the threat of economic collapse, the government of Fl. Lt. Jerry Rawlings was persuaded to adopt a Structural Adjustment Program (SAP) in 1983 under the auspices of the International Monetary Fund and the World Bank.

CHAPTER FOUR

STABILIZATION AND STRUCTURAL ADJUSTMENT IN GHANA (1983-1992)

4.1 Overview

The Structural Adjustment Programme (SAP) in Ghana has been implemented in the context of the governments' Economic Recovery Programme (ERP). Between 1984 and 1992, we can identify two phases of the implementation of the ERP. The first phase (ERP I (1984-86)) was designed to control inflation, restore overseas confidence, arrest and reverse the decline in production, particularly in agriculture, rehabilitate the decayed productive and social infrastructure, stimulate exports, curb the consumption of luxury imports, and mobilize domestic and external resources to restore living standards. The goals for ERP II (1987-92) were to ensure economic growth at around 5% per annum in real terms, stimulate significant increases in savings and investment, improve public sector management, and place the external sector on a sound footing through trade and exchange rate liberalisation, public sector reform, and public investment(Government of Ghana, 1984, 1985, 1987). Ghana's adjustment efforts have been supported by successive arrangements with the International Monetary Fund (IMF) and World Bank. Overall, the total amount of IMF financial resources committed to Ghana during 1983-91 amounted to SDR 1,208 million (IMF, 1991).

The major themes of policy conditionality in Ghana between 1983 and 1991 were the following (Toye, 1991):

1. increasing the producer price of cocoa;
2. reducing the cocoa marketing costs of the Ghana Cocoa Marketing Board;
3. removal of subsidies and price controls;
4. liberalisation of the trade and foreign exchange regime
5. cost recovery and removal of subsidies in health and education
6. public expenditure programming
7. state enterprise divestiture
8. public sector management

9. banking reform

4.2 Major Components of the Structural Adjustment Program (1983-1992)

In line with the expressed goals, the reforms implemented under the SAP included the areas of exchange rate liberalisation, fiscal policy, monetary policy, and privatization. Each will be discussed in turn.

(i) Exchange Rate Policy

At the onset of the SAP, there was a wide divergence between the parallel market and the official exchange rate of the cedi, reaching some 2,100 percent in 1982 (IMF, 1991). The official exchange rate was adjusted in stages from C2.75 per US dollar in 1983 to C90.00 per US dollar by January 1986. A two window exchange rate system was introduced on September 19, 1986 under which one window was to be operated as a foreign exchange auction. The first window exchange rate (fixed at 90.00 cedis) covered official transactions like debt service payments and the importation of drugs and petroleum products. The second window covered all other transactions, but the earnings from cocoa and residual oil products were to be surrendered at the first window rate. The official exchange rate depreciated from 128 cedis per US dollar in at the first auction to 154 cedis to the dollar by the end of 1986. The quantitative restrictions on imports were virtually eliminated with most goods no longer requiring a Special Import License (SIL) . However, most imports could not be financed with foreign exchange from the banking system. Most importers were to finance their imports with their own foreign exchange resources. In effect, this formalized the trading that was previously channeled through the black market. Thereafter, (Feb. 1987) the official exchange rates were unified at C150.00 per US dollar, ending the discrimination against cocoa exports and also removing the artificially low supply price of petroleum products (IMF, 1991). There was, however, a spread between the official and parallel market exchange rates which was undermining the governments efforts and in an attempt to bridge this gap, foreign exchange bureaus were established on February 1, 1988. this led to the virtual absorption of the parallel

foreign exchange markets. The exchange rate further depreciated to 270 cedis to the dollar by early 1989. On April 27, 1990, the Bank of Ghana began a wholesale foreign auction and discontinued the retail auction. All authorized dealer banks and eligible forex bureaus could purchase foreign exchange from the Bank of Ghana for sale to their customers. In April 1992 the wholesale auctions were abolished, and the Central bank's management of the exchange rate has taken place directly in the interbank markets (Leechor, 1994).

(ii) Fiscal Policy

Fiscal policy under adjustment has been aimed at correcting the fiscal imbalances through reforming the tax system, and rehabilitating the nation's physical and social infrastructure. By 1983, the government's total revenue had declined to 5.6% of GDP and the tax revenue to 4.6% or about one-third of the 1975 level (Table 4.1). Successive governments reacted to the fall in revenue by cutting capital expenditure and holding down wage increases. Government expenditure as a percentage of GDP fell from 20 percent in 1980 to 10.5 percent in 1982.

This state of affairs moved the budget from a surplus in 1970/71 to a deficit of 14.7 percent of GDP by 1980/81 financed mainly by the banking system (IMF, 1987). Tax policies under the SAP were gradually restructured, with an emphasis on broadening the tax base and lowering tax rates. Tax collection was improved by the recruitment of professional staff . These revenue generating measures were successful, with tax revenue rising from 4.6 percent of GDP in 1983 to 16.9 percent by 1993 (Table 4.1). In terms of composition, corporate taxes and indirect taxes on imports and domestic goods now account for a larger proportion of revenue as opposed to the pre-reform era where most revenue was generated from individual income and export taxes.

Table 4.1. Central Government Revenue and Expenditure; 1975/76 - 1993/94. Percent of GDP

	1975/76	80/81	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94
Total revenue	15.4	8.1	6.0	5.6	8.4	11.8	14.4	14.9	14.6	15.1	13.2	15.2	12.2	18.3
Tax revenue	13.8	7.4	5.9	4.6	6.6	11.3	13.6	12.7	12.3	13.3	10.8	12.4	10.0	16.7
Income and profits	3.2	2.1	1.7	1.0	1.5	2.2	2.8	3.2	3.9	3.2	2.7	2.4	2.1	2.8
Goods and services	2.6	3.8	2.5	0.9	2.1	2.7	3.8	3.5	3.7	3.7	3.5	5.4	4.3	4.4
Sales tax	-	-	-	-	-	-	-	1.1	1.2	1.3	1.1	1.1	0.9	0.8*
Excise duties	-	-	-	-	-	-	-	2.3	2.5	2.4	2.4	4.2	3.3	4.8*
Customs duties	8.1	1.4	0.9	2.1	2.7	3.0	4.6	5.6	6.0	4.8	5.4	4.6	4.6	3.7
Non-Tax revenue	1.6	0.6	0.9	0.9	1.4	1.8	1.5	1.4	1.2	1ÿ3	1.0	1.4	1.1	3.7
Total expenditure and net lending	22.9	20.0	10.5	8.2	10.2	14.0	14.3	14.3	14.3	14.4	13.0	13.6	16.9	20.8
Current expenditure	17.2	16.3	9.2	7.4	8.6	11.3	11.9	10.8	10.6	10.5	9.8	10.2	12.4	I6.3
Wages and salaries	-	-	2.4	2.0	2.0	4.2	5.1	4.8	4.7	4.4	4.0	4.1	5.7	5.8
Other	-	-	2.0	1.9	3.8	3.8	3.1	3.2	2.5	2.5	2.2	2.3	2.3	3.6
Interest payments	-	-	2.5	1.2	1.3	1.5	2.2	1.4	1.1	1.3	1.3	1.6	2.0	3.4
Subsidies and transfers	-	-	2.3	2.3	I.6	1.7	1.4	2.1	2.2	2.2	2.1	2.1	2.4	3.5
Capital expenditure	4.5	2.9	0.9	0.6	1.2	2.2	1.9	2.5	2.8	2.7	2.3	2.6	3.3	3.0
Budget deficit (-) excluding grants	-	-	-4.5	-2.7	-2.3	-2.2	0.1	-0.3	-0.7	-0.8	-1.2	0.1	-5.9	-4.2
Overall deficit (-) including grants	-	-	-4.0	-2.7	-3.1	-2.7	-0.7	-0.5	0.4	0.7	0.2	1.5	-4.8	-2.5
External financing	-	0.9	0.3	0.4	0.7	1.0	-1.1	-0.2	0.2	0.3	1.2	4.9	0.01	1.3
Domestic financing	7.6	10.1	4.2	2.3	1.1	1.2	1.0	-0.3	-0.3	-0.1	-1.3	-2.0	4.8	1.1
Banking system	7.0	3.8	0.5	1.4	1.1	0.9	0.5	-1.0	-1.1	-1.5	-1.0	-1.9	3.4	0.6
Non-Bank	0.6	6.3	3.7	0.9	-	0.3	0.5	0.7	0.8	1.4	-0.3	-0.1	1.8	0.5

Source: Ghana Statistical Service.

On the expenditure side, total government expenditure and net lending rose steadily from 8.2 percent of GDP in 1983 to 14.4 per cent in 1989, before declining to 13.0 per cent in 1990 (Table 4.1). The general increase in spending reflects an increased emphasis on developing and rehabilitating the economic and social infrastructure. In this sense, the SAP in Ghana was not one with a prolonged period of austerity. There was, however, a shift in the composition of expenditure. Current expenditure in total spending declined, as the share of both interest payments and subsidies fell. Some emphasis was given to cost recovery measures in areas such as health care and education. Fees for hospital beds and consultations were sharply raised in 1985 in advance of the World Bank's Health and Education Rehabilitation project. The credit for this project contained the formal requirement that 15 percent of the recurrent revenues should be met from cost-recovery measures (OECD, 1992).

The budget deficit was reduced from 4.5 per cent of GDP in 1982/83 to a surplus of 0.1 percent of GDP by 1991. However, the progress made in reducing the deficit from its 1980 levels was compromised in 1992 with an increase in civil sector wages and salaries on the eve of the Presidential and Parliamentary elections. This contributed to a deficit of 5.9 per cent of GDP in 1992. This deficit was largely financed by borrowing from the domestic banking sector and thus turning around a situation of net repayments to the banking sector between 1987 and 1991 to one of net borrowing of 3.4 per cent of GDP in 1992 (Table 4.1)

(iii) Monetary Policy

Monetary policy under the SAP initially (1983-86) aimed at reducing the rate of growth of the money supply. Thus the thrust of credit policy was aimed at reducing government dependence on the banking system. Credit ceilings were also used to control and direct credit to the productive sectors of the economy. This policy resulted in excess liquidity in the banking system and wide margins between lending and borrowing rates as

banks attempted to cover their costs and make profits (IDS, 1994). A systematic deregulation of the system thus took place between 1987 and January 1992 when ceilings were completely removed. Also, before 1987, interest rates were administratively determined by the Central Bank in line with inflationary pressures. By February 1988, all interest rates were deregulated.

(iv) Privatization

The public enterprise reform process in Ghana aimed to reduce the managerial and financial burden these enterprises placed on public resources while promoting efficiency of the economy. Thus, the plan involved the divestiture of selected enterprises, improvements in the performance of priority enterprises[4] and restructuring of others. In the first few years of adjustment, however, the government showed little interest in fundamental reform of public enterprises. In June 1988, the government set up a Divestiture Implementation Committee and announced its decision to privatize 32 public enterprises. By 1991, 26 enterprises had been liquidated and 37 were sold. More recently, the government has shown it's commitment to privatization by selling some of its shares, thereby relinquishing against widespread protests, its majority holding in Ashanti Goldfields, (a profitable mining enterprise), and placing for sale it's stake in wholly-or partly-owned banks including the Standard Chartered Bank, Ghana Commercial Bank, Social Security Bank, and National Savings and Credit Bank. The rationalization of state enterprises is, however, proving increasingly difficult. Labor disputes over redundancies and severance pay has bolstered the resurgence of the Trades Union Congress. The redundancy and severance pay demanded by workers is the major sticking point in the restructuring process. The government has argued that it cannot afford to make too many workers redundant.

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[4]/ The 14 priority enterprises are Ghana Water and Sewerage Corporation, Electricity Corporation of Ghana, Volta River Authority, Ghana Posts and Telecommunications Corporation, Ghana Airways Corporation, Ghana Supply Commission, State Shipping Corporation, Ghana Ports and Harbors Authority, Ghana Railway Corporation, Ghana National Petroleum Corporation, Ghanaian Italian Petroleum Company Limited, Ghana Oil Company Limited and State Gold Mining Corporation.

4.3 The Macroeconomic Results of the SAP (1983-1992)

The data in Tables 3.4 and 4.2 show a marked contrast in the performance of the Ghanaian economy in the pre and post-1983 periods. The Ghanaian economy has recorded a remarkable recovery since the institution of the SAP in 1983. Since 1983, the GDP growth rate has averaged 5 percent per annum, with the output of cocoa, minerals and timber recording significant increases. Inflation has fallen from the very high pre- reform levels (122% in 1983), declining to 10 percent in 1992. However, over the adjustment period, urban prices have increased faster than rural prices, with the urban/rural CPI increasing from 0.83 in 1983 to 1.02 by 1991 (Table 4.2).

Table 4.2 Macroeconomic Indicators 1983-1992

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
GDP growth rate (%)	-4.6	8.6	5.1	5.2	4.8	5.6	5.1	3.3	5.3	3.9
Agric. Production ('000 tonnes)										
Cereals	308	669	676	867	1057	1146	1177	845	1436	1254
Starchy Staples	3657	3814	5868	5362	6001	6815	6840	5208	10808	10277
Cocoa	159	175	219	226.4	205.2	246.6	296.1	284.4	276.7	
Manufacturing output										
Index 1977=100	18.0	25.0	39.3	49.3	54.2	56.8	63.0	63.5	71.3	76.9
Current Account ($m)	-156.9	-76.5	-156.5	-85.3	-98.0	-66.9	-89.7	-223.1	-251.6	-376.2
Inflation (%) 122.8	39.6	10.4	24.6	39.8	31.4	25.2	37.2	18.0	10.0	
Savings/GDP (%)	3.0	5.9	7.1	8.2	11.3	12.5	13.7	11.6		
Savings Deposit rates	12.5	14.5	16.5	18.5	21.5	21.5	19.0	18.0	19.5	19.0
Investment/GDP (%)	3.7	6.9	9.6	9.7	13.4	14.2	15.5	16.0		
CPI 1977=100										
Urban CPI 2102.6	2959.7	3329..2	4267.1	6118.7	8118.8	10266.2	14331.0	17062.9		
Rural CPI	2639.6	3652.4	3973.6	4824.3	6590.6	8581.0	10636.9	14309.9	16783.8	
Minimum Wage Index										
1985=100	54	56	100	103	120	91	84	79	83	117
Av. Real earnings in										
the public sector	48	67	100	-	122	160	167	164	171	270

Sources: IMF International Financial Statistics, Ghana, Quarterly Digest of Statistics, various issues

Also, real interest rates turned positive (Table 4.2) and the government budget recorded surpluses from 1986 to 1991 . In 1992 however, the economy showed signs of adjustment

fatigue. The government budget recorded a large deficit equivalent to almost 5 percent of GDP which was financed largely by borrowing from the banking system. (Table 4.1).

4.3.1 Agricultural Prices and Output

The SAP was aimed largely at improving incentives for production (especially of exportables). As a consequence, the food sub-sector has benefited only marginally from the program. Table 4.3 shows the growth rates of the sub-sectors within agriculture between 1985-88.

The cocoa sub-sector expanded at an average annual rate of 6.7% which was higher than the rate for real GDP for the same period (Table 4.3). This performance contrasts sharply with an average annual growth rate of about 2.7% recorded for the agricultural sector as a whole. We see from Table 4.3 that the performance of the agriculture and livestock sub-sector (of which food production is the main sub-sector) has been modest, growing at an average rate of 2.8%. Comparing the data in Tables 3.5 and 4.2, this growth performance contrasts favorably with the 1970-83 period when agriculture grew at -0.2% (Table 3.6).

Table 4.3 Agricultural GDP Annual Growth Rates, 1985-90. Percent.

Sub-sector	1985	1986	1987	1988	1989	1990	1983-90
Agriculture and Livestock	-1.9	0.2	-0.3	6.0	5.1	-4.3	2.8
Cocoa	13.2	18.2	3.3	6.3	3.1	3.0	6.7
Forestry and Logging	0.1	1.2	1.5	3.4	1.2	4.0	1.8
Fishing	11.9	14.0	-10.1	2.3	0.9	2.7	4.1
Total Agriculture	0.6	3.3	2.0	3.6	4.2	-2.0	2.7

Source: Statistical Service, 1992

Agricultural pricing policies, together with good rainfall resulted in increases in the output of cocoa as well as cereals and starchy staples (Table 4.2) from the pre-1983 levels. The real producer price of cocoa was increased by four-fold between 1982/83 and 1987/88 (OECD, 1992). Since cocoa is mainly produced in the southern rural areas of

Ghana, the real price increase is likely to have increased the incomes of these rural households (both rich and poor).

The nominal prices of all major food crops have risen sharply since 1980. Compared to 1980, prices in 1986 were six times higher for guinea corn, eight times higher for maize and millet and ten times higher for rice, cassava and plantain. Over the same period, the producer price of cocoa increased more than twenty times (Ministry of Agriculture, 1989). On the inputs side, fertilizer supply has improved since the launching of the ERP in 1983. The subsidy on fertilizer was phased out, and its distribution privatized by 1990. This is likely to adversely affect food producers.

There was a decline in the real prices of food crops between 1970 and 1986 with the exception of cocoyam and plantain (Table 4.4).

Table 4.4 Index of Real Wholesale Prices of Major Food Crops and Cocoa: 1970-86.

	Maize	Rice	Corn	Cassava	Yam	Cocoyam	Plantain	Cocoa
1970	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1980	109.49	74.18	122.55	110.46	78.55	93.13	118.88	41.43
1983	365.96	274.02	401.75	424.86	225.58	484.08	389.61	74.18
1986	81.02	77.09	69.75	104.47	75.13	93.93	122.50	81.79

Source: IFAD, 1988

Between 1981 and 1983, the terms of trade favored food producers mostly due to the shortages created by natural calamities. Since 1983, the terms of trade have turned dramatically against food producers and markedly in favor of cocoa producers (Table 4.5). Given that urban households spend proportionately more (49.8% of total expenditure) on food (GLSS,1987/88), the decline in the terms of trade is likely to have improved the welfare of urban households. On the other hand, given that rural households derive 73.1% of their income from farming, a decline in the terms of trade is likely to have deteriorated their welfare. Nonetheless given that rural households spend 35% of their total expenditure on food (GLSS, 1987/88), many rural households also benefited from the decline in the food/non-food terms of trade.

Table 4.5 Relative Prices of Food, 1977-87 (1977=100)

	1977	1980	1981	1982	1983	1984	1985	1986	1987
Terms of Trade									
Food/Non-food Consumer Items	100	96	91	112	138	86	60	57	55
Relative Prices of Food/Cocoa Production	100	131	92	125	184	136	64	51	42

Source: Loxley 1988, p.29

The decline in the terms of trade of food relative to non-food commodities has mainly been the result of exchange rate policies which have caused non-food prices to rise faster than food prices

The exchange rate policies after 1983 and the resulting deterioration in the terms of trade of food producers is more likely to have adversely affected farmers in the Upper East, Upper West and Northern Regions.

4.3.2 Fiscal Policy and Social Welfare

An important aspect of fiscal policy is the extent to which it aids the poorest members of society. Poverty in Ghana is largely a rural phenomenon (Boateng et al., 1990) and public expenditure policies can improve the well-being of the poor either by providing services consumed in large part by the poor, or by channeling goods and services to the rural areas.

The extent to which government expenditure policy has addressed the social needs of the society can be gauged by examining the level of resources directed toward education, health, and social security and welfare. Provision of such services (if accessible) represents a means for many households to escape poverty. Government spending on these three categories increased from 2.3 % of GDP in 1983 to 5.8% of GDP

in 1989, and from 29.1 % of total government expenditure in 1983 to 41.7 % in 1989 (Table 4.6).

Table 4.6 Central Government Social Welfare Expenditure, 1975-89

	1975	1980	1983	1984	1985	1986	1987	1988	1989
				(in percent of GDP)					
Narrow Measure[1]	8.7	5.9	2.3	3.3	4.4	5.2	5.3	5.7	5.8
Broad Measure[2]	9.5	6.5	2.6	3.7	4.8	5.7	6.2	6.7	7.1
				(in percent of central government expenditure)					
Narrow Measure[1]	39.9	30.6	29.1	33.0	32.8	37.6	38.6	41.5	41.7
Broad Measure[2]	43.8	33.7	32.5	37.4	36.3	41.2	45.2	48.6	51.2

Source: Kapur et al. 1991, Table 11 p.40)

[1] Includes expenditure on education, health, and social security and welfare.

[2]Includes the narrow measure plus spending on housing and community amenities, other community and social services, and special efficiency.

Measuring the social welfare element of fiscal policy in this way is, however, problematic. First, much spending on education, health, and social security and welfare does not benefit the needy. It would be preferable to consider only the outlays for primary education and basic health care, both in aggregate and by geographic region but such data is not available.

Despite the note of caution cited above, the figures cited (Table 3.6) provide evidence of an increase in poverty reducing government expenditure, assuming that the share of such spending benefiting the poor has not declined significantly during the period. In fact the opposite appears to be the case. Between 1987 and 1991, the share of primary education in the recurrent budget of the Ministry of Education increased from 40% to 43%, and primary school enrollment is estimated to have risen from 65% to 72% (IMF, 1991).

There is an additional element involved in estimating the social impact of government spending from the data presented above, namely that some spending that benefits the poor or those adversely affected by adjustment is excluded from the categories of health, education, and social security and welfare. For instance, the special

efficiency budget for retraining and supporting redeployed public sector employees can be seen as part of a general effort to provide a safety net.

In addition, expenditure on housing and community amenities, as well as other community and social services provides substantial benefits to the poor and disadvantaged. Including these categories provides a broader measure of social welfare spending; such spending was raised from 2.6% of GDP in 1983 to 7.1% in 1989; as a percentage of total government expenditure, the increase was equally dramatic: from 32.5% to 51.2% (Table 4.6)

Recognizing that adjustment will inevitably worsen the plight of some "vulnerable groups" in society, a Program of Action to Mitigate the Social Costs of Adjustment (PAMSCAD) was initiated in 1987. Vulnerable groups included retrenched employees, the rural and urban poor (particularly, women and malnourished children). The program categories under PAMSCAD are geared toward the rehabilitation of social and economic infrastructure, employment creation, training and basic needs i.e. water, health and nutrition for malnourished children. Laudable as its goals are, a World Bank (1991) review revealed that the targeting of projects toward the rural poor was inadequate.

4.3.3 Rehabilitation and Provision of Physical Infrastructure

A major plank of the SAP has been the rehabilitation and provision of physical infrastructure to help improve productivity. This program was guided through the Public Investment Program launched in 1984 with a focus on roads, highways, water, sanitation and electrification projects.

(i) Transport Sector: Roads, Highways, and Railways etc.

At the inception of the SAP, most of Ghana's roads and highways were in a state of disrepair (Huq, 1990). More than half the serviceable vehicles were off the road for lack of tires, batteries, or fast moving spare parts. The railways were in their worst condition since the system was established. The ports, Black Star Line (the nations' shipping line) and Ghana Airways were all saddled with dismal finances. Cocoa and other

export products produced in the hinterland could not find their way to the ports for lack of adequate transportation facilities (Government of Ghana, 1986). It was therefore a priority of the SAP to rehabilitate the nations' infrastructure. After all, what good is a liberalized market if the goods cannot get there?

To improve the accessibility of rural areas, particularly cocoa, timber and food producing areas, a program of construction of bailey and steel assembly bridges throughout the country was instituted. Three major bridges were completed in Jumoroin the Western region, Ejisu in Ashanti region and Dadieso in Eastern region. Major roads rehabilitated included the 136 km Anyinam-Kumasi road, the 120 km Kintampo-Morno-Yapei road and bridge approaches, the 40km Duayaw Nkwanta-Sunyani road, the 180km Kumasi-Cape Coast road, Kumasi-Sunyani-Berekum road, the Awiankwanta-Yamoransa road, and the Beposo Bridge. Rehabilitation of city roads started in Accra and Kumasi. Under this program, all major roads in Accra and Kumasi were asphalted. The Western, Eastern and Central Railway Line was rehabilitated by 1991.

The roads and highway rehabilitation program was successful in opening up many rural areas. Priority was given to roads linking export producing regions however. To this extent the rural towns and villages of the Northern, Upper East and Upper West Regions were not major beneficiaries of road rehabilitation projects under the SAP.

Under the Ports Rehabilitation Project, infrastructure at the two major ports of Tema and Takoradi was rehabilitated, leading to improved efficiency. In the area of telecommunications, a new six-digit telephone system was introduced in Accra and new automatic telephone exchanges were installed at Obuasi, Bekwai, Tarkwa, Dunkwa and Teshie-Nungua which enable these areas to have direct dial access to the rest of the country.

(ii) Electricity

Out of the 110 districts established in 1988, 64 were without electricity from the national grid. A major program of supplying electricity to the Northern, Upper East, Upper West, and Brong-Ahafo regions from the National Transmission Grid began in 1987. This was

completed in 1991 and established the basic infrastructure for the supply of electricity form the national power system for virtually the whole of Ghana. Under this program, many rural areas, for the first time since Ghana's independence, had access to electricity. Under the Volta Region Rural Electrification Project, for example, coastal towns and villages from Denu to Keta were electrified. Other areas include Akatsi, Sogakofe, Jasikan, Kadjebi-Likpe, New Abirem, and Donkorkrom.

The government also instituted a Self-Help Electrification Scheme to assist rural communities which have embarked on Self-Help electrification and have provided labor and funds to purchase local materials including poles, to complete their electrification projects. Under this scheme, over 100 towns and villages were connected to the national grid by the end of 1992.

(iii) Water

At the beginning of the SAP in 1983, 117 towns in Ghana were supplied with pipe-borne water (57.6% of the population). There is a clear urban bias in access to water facilities (Table 4.7)

Table 4.7 Population Served with Water Supply Facilities, 1983

	Rural	Urban	Total
Total Population ('000)	7,858	4,863	12,721
Percentage served with Water	43.7	80.0	57.6
No. of Localities served	3,529	132	3,661

Source: Ewusi, 1983 Table 8.7 p.68

Table 4.7 shows that the discrepancy between the rural and urban populations was quite significant with only 43.7% of the rural population having access to water supply facilities as compared to 80% of the urban population. About 86% high proportion of

urban residents across Ghana had access to water facilities in 1989 compared to 58% of rural residents.

Table 4.8 Percentage of Population Served with Water Supply Facilities, 1989

	Rural	Urban	% Regional Total
Ashanti	59	88	68
B-Ahafo	42	96	56
Central	67	95	75
Eastern	47	98	61
G-Accra	45	99	91
Northern	7	88	27
Upper Regions	33	95	39
Volta	29	69	45
Western	59	77	63
Ghana	58	86	65

Source: Ghana water and Sewerage Corporation (GWSC) 1990, p.F1

Greater Accra, Western, Central, and Eastern Regions are the best served areas (Table 4.8). The worst regions include Northern, Upper and Volta regions. A higher proportion of the rural and urban population are now being served with water supply facilities when compared to 1983.

The electricity, road networks and water sectors were rehabilitated and the electricity power grid was extended to northern Ghana- its regional capital and major districts. Again, the extension of electricity and water services and rehabilitation of roads mainly benefited rural areas which had been ignored by previous governments.

4.3.4 Wages and Salaries

As argued earlier, the real wages of workers suffered a decline during the pre-adjustment period with a resultant loss of morale and an increasing propensity to engage

in rent-seeking activity. Under the SAP, the PNDC government pursued the objective of increasing the real wages of public sector employees.

This is yet another sense in which the SAP in Ghana was unorthodox. In the civil service, the salaries of senior management were increased by more than three-fold between 1983 and 1988 while those for unskilled labor increased only by 50%, increasing the ratio of the highest to the lowest salary in the civil service from 2.5:1 in 1984 to 9.5:1 by 1990. (OECD, 1992).

Table 4.2 shows that real wages and salaries increased between 1983 and 1992. The real minimum wage increased from an index of 54 in 1983 to 117 by 1992. Real public sector earnings on the other hand, increased from an index of 48 in 1983 to 270 by 1992. This increase in real earnings since 1983 was also evident in the agricultural, manufacturing and trade sectors (Table 4.9).

Table 4.9 Indices of Real Earnings (1970=100)

	Agriculture	Manuf.	Trade
1970	100.0	100.0	100.0
1971	110.7	143.3	100.2
1972	101.4	143.3	100.9
1973	94.4	99.3	101.1
1974	109.9	121.9	108.1
1975	96.6	100.7	109.7
1976	65.5	70.7	101.1
1977	65.2	59.7	69.1
1978	41.4	47.8	88.8
1979	28.1	37.2	79.6
1980	30.9	40.7	106.6
1981	22.5	23.1	130.6
1982	20.5	21.6	143.4
1983	14.1	16.7	144.1
1984	26.7	25.5	148.8
1985	29.9	42.1	169.4

Source: IFAD 1988, p.158

With both salaries and agricultural incomes increasing in real terms after 1983, one can expect that the well-being of households improved generally at all levels. Nevertheless,

the increase in wages and salaries was made possible, in part, from the retrenchments which took place in the public sector. By August 1989, the PNDC government had laid off 29,052 public sector employees, to whom full benefits had been paid. Another 34,500 have been dismissed from the Cocoa Board. Again, these retrenchments have impacted more negatively on urban households.

4.3.5 Cost recovery measures

In the areas of health, education and water, the SAP called for the introduction of user fees. This was to militate against the situation in which the economy found itself pre-reform, with an inability to provide continuing subsidies to these sectors as a result of depleted public finances. Thus, while in principle, many services provided by these sectors were "free", in practice, they were unavailable. Thus in 1985, the PNDC government introduced fees for hospitals and clinic consultations and laboratory tests. At the same time, government health expenditure as a share of GDP/Budget which fell between 1980-83 has been on the increase since 1983. Table Ephson (1985), reports that between June and August 1985, there was an immediate 25% drop in the visits to the Korle-Bu (Ghana's pre-eminent hospital located in Accra) hospital and a 50% decline in the much more heavily used polyclinic of Korle-Bu. To the extent that rural residents relied more on traditional sources of medicine, one can argue that the increase in hospital user-fees is more likely to have negatively impacted the urban rather than rural households. Kraus (1991) reports that "after an initial decline in the use of health facilities following the start of the higher fees, there has apparently been an increase again in use" (p.142).

New and increased book user fees were also introduced in the elementary schools and fees for housing and feeding costs were introduced in the universities. Water rates were also raised by hundreds of per cent in 1986 and later years and electricity rates by lesser amounts (Kraus, 1991).

In a comprehensive examination of the welfare impact of adjustment on equity in Ghana, the OECD (1992), concludes that:

> ...it is not an unreasonable view that equity overall may have been somewhat increased by adjustment. This is the case both for the rural/urban balance and for the general comparison between "rich" and "poor" since the **richer urban populations have certainly been exposed to more negative effects** (emphasis added).

The evidence discussed so far suggests that rural households in the export producing regions benefited from the SAP given the higher prices they received for their products as well as the increased access to physical infrastructure. Rural households in the non-exporting regions did not fare as well in terms of access to infrastructure.

Conclusion

This chapter has highlighted the methodological difficulties involved in any assessment of the welfare impact of the SAP on households. Even when all the necessary data is available, we would still be unable to separate the influences of non-SAP influences like rainfall. The policies implemented during the period under consideration (1983-1992) included exchange rate devaluation and liberalization, trade liberalization, fiscal reform, financial liberalization and infrastructure rehabilitation.

Exchange rate devaluation increased the relative price of tradables. This policy largely benefited the producers of cash crops like cocoa. Cocoa producers, largely in the rural south, also benefited from increases in producer prices. The terms of trade, moved against food producers and in favor of cocoa producers. Producers of cash crops were largely located in the western, eastern, Brong-Ahafo, Ashanti and greater Accra regions. Farmers in the northern, upper east and upper west regions on were more likely to have suffered more the terms of trade movements. To the extent that a significant proportion

(35%) of rural households purchase food, the decline in food prices was beneficial to these households.

The cost recovery measures implemented in health care, education, sanitation and other areas, it was argued was more likely to impact urban households. For rural households, the existence of free health care in the pre-reform period was not borne out by reality since many rural households did not have access.

Under the SAP, there has been a major program of rehabilitation of the road, water, and electricity infrastructure throughout Ghana with the rural areas as the primary beneficiaries. Also. public sector reform has seen the retrenchment of more than 50,000 people largely in the urban sector.

While there appears to be evidence to suggest that the negative effects of the SAP were generally borne by urban households, rural households in the export-producing regions appear to have fared better than those in the non-export producing regions. Also, many urban households benefited from the SAP.

CHAPTER FIVE

STRUCTURAL ADJUSTMENT AND ELECTORAL BEHAVIOR IN GHANA

5.1 Overview

As was indicated in chapter three, the PNDC's adoption of a Structural Adjustment Program (SAP) in 1983 represented a U-turn in economic policy. This U-turn alienated the urban working class and students, on whom Rawlings initially relied for support (Mikell, 1989) . The P.N.D.C. thus turned to the peasants for support and sought to create a rural constituency for its reforms. The P.N.D.C. aimed to break the cycle of rural disengagement by creating a constituency which was integral to Ghana's livelihood, and hence, acted aggressively on behalf of rural areas by creating militant *mobi-squads* and self-help labor groups, or *nnoboa* in the cocoa growing areas in 1984. These activities were successful, and the rural producers became consistent supporters of P.N.D.C. (Mikell, 1989). Mikell writes that "certainly the farmers I met in Sunyani in 1986 were more enthusiastic about Rawlings and the P.N.D.C. than many of the bureaucrats and teachers in Accra and the Inland towns...they were responding positively to the restoration of their agrarian economy..." (p.456). On July 1, 1987, the P.N.D.C. initiated political reform at the local level with proposed elections for District Assemblies in 1988. The District Assemblies were presented as the "bodies exercising state power as the people's local government" and formed the basis for a grassroots democracy. As Chazan (1991) notes, the electoral patterns in the district assembly ballot revealed key features of state-society relations by the end of the decade. The very high participation rates (59.1 percent) compared with the low turnouts of 32.25 and 18.4 percent in the parliamentary elections of 1979 and the district council elections of 1978 respectively.

> For the first time in post colonial Ghanaian history, a regime derived its support primarily from rural constituencies....Indeed voter participation in the large cities was much below national and regional averages... This distribution was indicative of the relative strength of the PNDC in the countryside and its waning credibility in the cities...". (Chazan, 1991 : 36-37)

The balance of power, under PNDC had thus shifted in favor of the rural sector and this was further emphasized in the November 1992 when the PNDC submitted itself to popular elections after nine years of implementing the Structural Adjustment Program (SAP). The P.N.D.C. formed a political party, the National Democratic Congress (N.D.C.) to contest these elections. The N.D.C. ran under the banner of "continuity". That is, continuity with the SAP which was the axis around which the economic policies of the P.N.D.C. revolved.

The results of the Presidential election[1] suggested that Jerry Rawlings derived his support largely from rural constituencies. As shown in Table 5.1, the turnout in the 1992 presidential election was higher than the turnout in the 1979 Parliamentary election. Rawlings obtained more than 50% of the votes in each region except Ashanti. We can see in Table 5.1 that the Ashanti and Volta regions do not appear to have followed the national pattern, with the Ashanti region voting overwhelmingly against the incumbent and the Volta region voting overwhelmingly for the Incumbent. The role of ethnicity might have been important in producing these results.

The PNDC was (and is) largely perceived as being Ewe-based. Herbst (1993: 87) quotes a senior community official as saying,

> The region [Ashanti] feels discriminated against...People feel the projects which have been established in Ashanti have been done with wealth from

[1]The Parliamentary elections were boycotted by the opposition parties after they alleged that the Presidential election was rigged. The Presidential election was, however, declared by an international group of monitors to have been largely " free and fair".

the region- especially the cocoa which pays the East German firms for the roads- but that other regions get aid. People in Ashanti region do not feel they are getting their fare share. (Herbst, 1993:87)

Table 5.1 Voter turnout (%) in 1979 and 1992 Presidential elections and percentage of votes cast for Rawlings in the 1992 election

Region	Turnout 1979	Turnout 1992	Rawlings' Share 1992
Western	34.04	45.96	60.71
Central	33.40	45.57	66.49
Eastern	35.95	50.92	56.69
Volta	33.65	60.90	96.25
Ashanti	41.99	46.78	32.8
Brong-Ahafo	33.16	42.55	61.48
Northern	32.09	46.88	62.51
Upper East	-	50.57	50.79
Upper West	-	47.66	50.96
Greater Accra	44.33	46.2	51.78

Source: Ghana Electoral Commission, 1993

Thus, even though there has been an increase in economic activity in the Ashanti region, with a rehabilitation of infrastructure and the cocoa and mining sectors, "many in Kumasi (the Ashanti regional capital) attribute most of the development to the resources of the region itself generates. In some cases, the overall animosity toward the perceived Ewe-based regime causes some citizens to ignore the welfare gains they may have experienced" (Herbst, 1993: 88). The vote in the Volta region on the other hand, might also be attributed to the fact that Rawlings hails from this region, and thus the voters were making sure that the interests of the region were being protected by returning their "son" to power.

The 1992 results, as presented in Table 5.1 hide important rural-urban variations across the country. Even though Rawlings won the majority of the votes in each region (except Ashanti) he lost in many urban constituencies: Upper East -Bolgatanta and Navorongo, Eastern- Koforidua and Nkawkaw, Brong-Ahafo- Sunyani East, Northern- Yendi, Western- Sekondi and Takoradi. In the Central region Rawlings won in Cape-coast (the capital) but with only 45.85 percent of the vote. Table 5.2 shows the voting results from the major urban cities across the ten administrative regions.

Table 5.2 Regional Voting Results by Major Urban Constituency, 1992

Region	% Voting for Rawlings	% Voting against Rawlings
Greater Accra	41.7	58.3
Upper East	39.81	60.19
Ashanti	16.81	83.19
Upper West	55.87	44.13
Eastern	41.51	58.49
Brong-Ahafo	40.35	59.65
Northern	41.16	58.84
Central	45.87	54.13
Western	33.48	66.52
Volta	94.15	5.85

Source: Ghana Electoral Commission, 1993

The results thus emphasize the earlier point about the rural-urban dichotomy in voting behavior, with the rural areas generally voting for the incumbent (Rawlings), and the urban areas doing the opposite.

The Ashanti and Volta results notwithstanding, the rural-urban voting pattern in the country as a whole requires further investigation. We shall attempt to seek answers to the following questions: (1) To what extent did the personal economic situation of voters

(rural and urban) affect the way they voted in the 1992 presidential elections? (2) Was voting retrospective or prospective? and (3) Was voting sociotropic or egotropic?
There has been no previous study on the economy and electoral behavior in Ghana and thus in addressing these issues, we will be breaking new ground.

5.2 Research Methods.

In choice of methods for this study, I was constrained by the lack of data. Time series and cross-sectional regression analysis at the macro level were ruled out because of the lack of data. A micro-approach was thus opted for. However, given the absence of micro-survey data on voting behavior in Ghana, we decided to collect the data from the field. A further constraint was imposed by the sensitivity (in the context of developing country politics) of the nature of the questions to be asked in the survey. It is likely that many people will be unwilling to reveal their voting behavior for fear of retribution or victimization. The interviewer might be considered a government agent. Such suspicion is unlikely to elicit truthful answers or co operation. It was thus imperative that the technique(s) chosen should protect the privacy of the respondents. To accomplish this goal, two types of survey techniques were implemented : The Randomized Response Survey Technique (RRT)) and the Anonymous Direct Response Technique (ADRT). Each method will be described in turn.

(i) The Randomized Response Technique

Randomized Response is a survey technique first introduced by Warner (1965). It is designed to elicit truthful answers to questions of a sensitive nature. These questions

include those regarding peoples accumulated wealth, intentional tax evasion, crimes, health status etc. Questions of this nature have reduced response rates as well as high response bias (Chowdury and Mukherjee, 1988). RRT is a way of assuring the respondents of their privacy to an extent which encourages them to give truthful responses to these questions. Under the RRT, information is requested on a probability basis rather than a direct reply to a given question. The respondent is asked to select, by means of a chance device, a single question to be answered from two or more questions, only one of which is sensitive, without revealing to the interviewer which of the alternative questions is being answered. When the characteristics and ranges of the possible responses are the same for each of the alternative questions, no respondent can be classified with certainty with respect to the sensitive characteristic. Thus the privacy of each respondent is protected (Horvitz, Greenberg and Abernathy, 1976). Unbiased estimates of the proportion of the population with the sensitive characteristic can be obtained, with knowledge of the probability distribution generated by the random device, from the information obtained from a sample of respondents. The RRT assumes that respondents are truthful and also that an outcome of the randomization experiment implemented through an appropriate device does not depend on the respondent's characteristics.

Various measurement designs have been proposed for the execution of the Randomized Response (RR) survey[2]. In the initial Warner (1965) design, the respondent was provided with a random device for choosing one of two statements of the form:

I belong to group A (selected with probability P)

I do not belong to group A (selected with probability 1-P).

[2]See Chowdury and Mukherjee (1988) for an excellent survey of various RR designs

The randomization device prevents the interviewer from identifying a respondent as belonging or not belonging to group A on the basis of a "yes" or "no" reply. The randomization is performed by the interviewee himself and the interviewer is not permitted to observe the outcome of this randomization. Thus, although the interviewer gets a "yes" or "no" reply, because of the randomization procedure, he or she cannot identify a particular respondent as belonging or not belonging to group A. However, the probability P is chosen by the interviewer as part of the design and an appropriate choice of P will be important for maintaining the confidence of the respondent whilst at the same time ensuring the efficiency of the estimates. The problem in the Warner setup is to estimate π_A ($0< \pi_A <1$), the unknown proportion of population members in group A. The probability of getting a "yes" response is,

$$\begin{aligned} \lambda &= \pi_A P + (1-\pi_A)(1-P) \\ &= (1-P) + (2P-1)\pi_A \end{aligned} \qquad (5.1)$$

Denoting the number of "yes" responses in the sample by n_1, an unbiased estimator of λ is n_1/n, the sample proportion of "yes" responses. From equation (5.1) a maximum likelihood estimate of π_A (assuming $P \neq ½$) is obtained as

$$\pi_{AW} = \frac{\lambda - (1-P)}{2P-1} \qquad (5.2)$$

with a variance given by :

$$\text{var}(\pi_{AW}) = \frac{\pi_A(1-\pi_A)}{n} + \frac{P(1-P)}{n(2P-1)^2} \qquad (5.3)$$

To illustrate the importance of the choice of P, we see from (5.3) that with P=0 or 1, the resulting variance, is the same as that obtained under direct response and thus will have high efficiency since a "no" (or "yes") answer imply a high probability that the

respondent belongs to A and thus there will be little protection of his or her privacy and hence little possibility of truth reporting. On the other hand, with P =1/2, the interviewee is well protected but the var (π_{AW}) blows up. In Particular if P =1/2, the interviewee gets the maximum protection but π_A becomes inestimable since by (1.1) λ no longer involves π_A . Thus, there is a conflict between efficiency and maintenance of confidentiality with the RRT.

(ii) The Vector Response Randomization Method

Extending the RRT from dichotomous to polychotomous populations where there are more than two naturally occurring classes, the data acquired through a single sample may be adequate for the unbiased estimation of the proportions in different classes if polychotomous (vector) responses are allowed in such situations. The general theory of the vector response method is set out by Chowdury and Mukherjee (1988) as follows:

Let there be t mutually exclusive and exhaustive classes according to a sensitive attribute, the corresponding unknown proportions being $\pi_1,...\pi_t$. The randomization device is such that an interviewee belonging to the ith category (i = 1,...,t) reports 1, 2,... or t with respective probabilities p_{1i}, p_{2i}, ...p_{3i}, where

$$\sum_{j=1}^{t} pji = 1 \qquad (i = 1,...,t) \tag{5.4}$$

Then the probability λ_j of the randomized response j is given by

$$\lambda_j = \sum_{i=1}^{t} P_{ji}\pi_i \quad (j = 1,...,t) \tag{5.5}$$

Defining $\lambda = (\lambda_1 ....., \lambda_t)'$, $\pi = (\pi_1 ...., \pi_t)'$ one obtains in matrix notation

$$\lambda = P\pi \qquad (5.6)$$

where the square matrix P, of order t is given by $P = ((p_{ji}))$. The matrix p is called the design matrix. With a simple random sample with replacement of size n, let $\hat{\lambda}$ be the vector of sample proportions corresponding to λ. Then, assuming the non singularity of the design matrix P, by (5.5) an unbiased estimate of π emerges as

$$\hat{\pi} = P^{-1}\hat{\lambda} \qquad (5.7)$$

Bourke and Delenius (1976) describe a procedure for actually obtaining the data in a polychotomous situation allowing vector responses. The randomization device is such that each respondent states his or her true category (in the form of an integer between 1 and t) with probability p or one of the numbers 1,...,t with respective probabilities p_1,..., p_t, where $p + \sum_{i=1}^{t} p_i = 1$. Then the probability of getting the randomized response j is

$$\lambda_j = p\pi_j + p_j \qquad (5.8)$$

The problem becomes one of estimating π_i which, as will be shown below, is obtained by simple arithmetic.

5.3 Some Previous applications of the Randomized Response Technique

The RRT has been applied in many studies involving sensitive issues. Abernathy et al (1970) investigated the incidence and prevalence of induced abortion in urban North Carolina. The authors found that the incidence of abortion was much higher for the RRT survey than that reported by direct surveys. Also, a study of organized crime in Illinois by

the IIT Research Institute (1971) used the Warner RRT to estimate the proportion of the adult population in four metropolitan areas of the state that bet on sports events; gamble with pin ball machines etc. Madigan et al (1975) used the RRT to estimate the extent of purposive concealment of deaths in household interviews in the Philippines. Brown and Harding (1973) used the RRT to investigate Marijuana use in the United States army. Kitine (1993) employed the RRT to estimate the extent of the Underground economy in Tanzania.

There has been no previous application of the RRT in the literature on the economy and voting behavior.

5.4 A Description of the Randomized Response Survey used in this Study

The survey was conducted between September 1994 and January 1995, in rural and urban areas in Ghana, spanning the ten regions of Ghana. Within each chosen area, individuals who voted in the 1992 Presidential election were were randomly selected and interviewed. Language and reading barriers were be overcome by employing native speakers of the respective indigenous languages/dialects as translators. The research team spent between 8 and 16 days in each region.

To ensure that no biased or false responses would be made by respondents, the following six step explanation was given to the interviewees:

(1) This is purely an academic exercise, so please be as truthful as possible in your responses.

(2) Read the sample cards A, B, C, D, E, F, G and H very carefully, then read different cards in the box to satisfy yourself that the sample cards represent exactly the same statements as those written on the cards contained in the box.

(3) Pick one card from the box, turn your back and read the card quietly and without smiling or laughing.

(4) If you pick a type A-card, then respond by just stating the number of the category to which you belong: #1, #2, #3, #4, #5, #6, or #7. Do not mention you have a type A- card.

(5) If you pick a type B, C, D, E, F, G, or H card, read the card and state the relevant number, #1, #2, #3, #4, #5, #6, or #7 written on the card you have picked. Do not mention the letter-type of your card and

(6) Put the card you have picked back in the deck and shuffle the cards in the box till you are satisfied that they are mixed well enough and that there is no way anybody can tell which card you have picked and read.

It was stressed, before hand, that the interviewer would have no way of knowing the question the respondent was answering. After reading and giving his/her response, the respondent would be asked to put the card back into the box and shuffle all the cards in the box to ensure that they are thoroughly mixed to his/her satisfaction such that his/her response could not be identified or associated with any particular statement/card.

Within each region, a random sample of 100 and 70 people in the rural and urban areas[3], i.e. a total of 1,700[4], were interviewed using a single deck of 120 cards marked in

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[3]The numbers are chosen in proportion with the respective shares of the rural and urban areas in the population of Ghana.

[4] The sample size was chosen to obtain a 90% confidence that the estimated proportions lie within 0.2 of the true proportions.

eight letter groups A, B, C, D, E, F, G and H. The proportions of each type of card will be as follows:

A (50), B(10), C(10), D(10), E(10), F(10), G(10), H(10)

Type A - Cards

Each of the type A- cards will carry the following statement:

I voted for President Jerry Rawlings in the 1992 Presidential elections **primarily** because:

(1) In the **nine years** preceding the election, his government's economic policies had improved my household's well-being.

(2) I **expected** an improvement in my household's well-being if he was elected.

(3) In the **nine years** preceding the election, his government's economic policies had improved Ghana's economy.

I did not vote for President Jerry Rawlings in the 1992 Presidential elections **primarily** because :

(4) In the **nine years** preceding the election, his government's economic policies led to a deterioration in my household's well-being.

(5) I **expected** a deterioration in my household's well-being if he was elected.

(6) In the **nine years** preceding the election, his government's economic policies led to a deterioration in Ghana's economy.

(7) My vote in the 1992 Presidential elections was not **primarily** influenced by economic considerations

" To which of the seven categories do you belong: #1, #2, #3, #4 , #5 #6 or #7?"

Type B, C, D, E, F, G, H -Cards

Each of the these cards will carry the following statement:

" Pretend to read this statement carefully, consider for a moment, and give your answer as number": (1), (2), (3), (4), (5), (6) or (7) respectively

I danced all night during the festival **primarily** because:

(1) In the **nine years** since having a baby, Mansa is looking better.

(2) I **expected** a bank cheque in addition to the one I received the other year.

(3) In the **nine years** preceding Ali's wedding he was a very hardworking man. But now he does not need to work as hard since his wife is very rich.

I did not dance all night during the festival **primarily** because :

(4) In the **nine years** since having a baby, Mansa is not looking better.

(5) I **expected** a bank request cheque in addition .

(6) In the **nine years** preceding the Ali's wedding he was a very hardworking man.

(7) I wrote to everyone about Ama's impending departure to the United States.

The problem is to estimate the proportion of the population, π_j , j = (1,...7) belonging to each of the seven categories enumerated above. For example, π_1 is the proportion of the population that voted for the incumbent primarily because they perceived an improvement in their welfare under the SAP and π_4 is the proportion of the population that voted against the incumbent primarily because they perceived a deterioration in their welfare. The population will be divided into rural-urban sub-groups.

5.5 Estimation Method for RRT

Let λ_i be the probability of getting the answer i = 1, 2, 3, 4, 5, 6, 7 and P(A) , P(B), P(C), P(D), P(E), P(F), P(G), P(H), be the probability of selecting a card of type A, B, C, D, E, F, and H respectively. Then,

$$\lambda_1 = P(A)\,\pi_1 + P(B)$$
$$\lambda_2 = P(A)\,\pi_2 + P(C) \qquad (5.9)$$
$$\lambda_3 = P(A)\,\pi_3 + P(D)$$
$$\lambda_4 = P(A)\,\pi_4 + P(E)$$
$$\lambda_5 = P(A)\,\pi_5 + P(F)$$
$$\lambda_6 = P(A)\,\pi_6 + P(G)$$
$$\lambda_7 = P(A)\,\pi_7 + P(H)$$

This implies that the π_j's can be estimated by,

$$\pi_1 = [\,\lambda_1 - P(B)\,] \,/\, P(A)$$
$$\pi_2 = [\,\lambda_2 - P(C)\,] \,/\, P(A) \qquad (5.10)$$

$\pi_3 = [\ \lambda_3 - P(D)\ ] \ / P(A)$

$\pi_4 = [\ \lambda_4 - P(E)\ ] \ / P(A)$

$\pi_5 = [\ \lambda_5 - P(F)\ ] \ / P(A)$

$\pi_6 = [\ \lambda_6 - P(G)\ ] \ / P(A)$

$\pi_7 = [\ \lambda_7 - P(H)\ ] \ / P(A)$

where λ_i is the proportion of i answers in the sample. The variance of these sample proportions can be estimated as :

$$V(\pi_i) = V(\lambda_i) \ / P(A)^2 \qquad (5.11)$$

where,

$$V(\lambda_i) = [\ (\lambda_i)\ (1-\lambda_i\ ]\ / N \qquad (5.12)$$

The probabilities for the deck of 120 cards of groups A, B, C, D, E, G and H are as follows:

$P(A) = 50/120 = 0.417$

$P(B) = P(B) = P(C) = P(D) = P(E) = P(F) = P(G) = P(H) = 10/120 = 0.083 \qquad (5.5)$

The size of the combined sample, N = 1700 respondents. For the rural only sample, N= 1000 with N= 700 for the urban only sample.

5.6 The Anonymous Direct Response Technique (ADRT)

This survey method was devised as an alternative to the RRT. Like the RRT survey, it has never been applied in investigating the links between the economy and voting behavior. As the name suggests, it is designed to provide direct responses to survey questions but at the same time provide the respondent with privacy by ensuring his/her anonymity. The ADRT is expected to provide more information and as well as more efficient estimates than the RRT. It can thus act as a check on the accuracy of the RRT.

The survey was conducted between September 1994 and January 1995, in rural and urban areas in Ghana, spanning the ten regions of Ghana.

Under the ADRT, the following questionnaire was handed to 1700 randomly chosen individuals who voted in the 1992 presidential election together with a stamped addressed envelope. The questionnaire was explained to each interviewee. Thus, it was made clear that answers should focus on the **primary** reasons for voting. Thus, if the economy was not a primary influence in voting choice, questions 6 and 7 on the survey were to be ignored and 8 answered as "No". On the other hand, if the economy was a primary influence on voting behavior, question 6 or 7 should be answered an question 8 answered as "Yes". The interviewee is requested to anonymously fill out the questionnaire, place it in the envelope provided, and mail. The Survey questionnaire is as follows:

This survey is intended for Academic Purposes Only. Please Answer the Question by Circling your chosen Answer. Ignore any question which does not apply to you. After answering the questions, place the questionnaire in the stamped addressed envelope provided and mail. THANK YOU VERY MUCH FOR YOUR COOPERATION.

1. I will describe my occupation as

(a) Self employed farmer (owner/tenant)

(b) Self-employed non-farmer (e.g. businessman, shopkeeper, artisan)

(c) Government employee

(d) Private sector employee

(e) Unemployed

2. I am

(a) Male

(b) Female

3. In the 1992 Presidential Election, I cast my vote in:

(a) Greater Accra

(b) Northern

(c) Ashanti

(d) Brong-Ahafo

(e) Volta

(f) Eastern

(g) Upper East

(h) Western

(I) Central

(j) Upper West

5) During the nine years preceding the 1992 presidential election, I primarily lived in a place with:

(a) Less than 5,000 people (Rural)

(b) More than 5,000 people (Urban)

6) I voted for President Jerry Rawlings in the 1992 Presidential elections primarily because:

(a) In the **nine years** preceding the election, his government's economic policies improved my household's well-being.

(b) I expected an improvement in my household's well-being if he was elected.

(c) In the **nine years** preceding the election, his government's economic policies improved Ghana's economy.

7) I did not vote for President Jerry Rawlings in the 1992 presidential elections primarily because:

(a) In the **nine years** preceding the election, his government's economic policies led to a deterioration in the well-being of my household.

(b) I **expected** a deterioration in my household's well-being if he was elected

(c) In the **nine years** preceding the election, his government's economic policies led to a deterioration in Ghana's economy.

8) Was your vote primarily influenced by economic considerations?

(a) Yes

(b) No

5.7 Estimation Method for ADRT

The problem is to estimate the proportion of the population (voters in the 1992 presidential election) belonging to the seven categories listed in the survey questionnaire. (corresponding to the categories under the RRT). The population is also sub-divided according to rural/urban residence, occupation and gender. For each of these samples, the proportion of voters, $\pi_1,...\pi_7$, belonging to the ith category (i = 1,...,7), is simply calculated as

$$\pi_{i},.= X_{i}. / N \qquad (5.13)$$

where,

X_i. = the number of people belonging in the ith category (i = 1, ...7) and

N = sample size.

Variances of the estimated proportions are, again, estimated as

$$\text{Var}\ (\pi_i) = \pi_i,(1- \pi_i) / N \qquad (5.14)$$

A priori, one expects the ADRT to provide more reliable estimates than the RRT since the proportions are obtained through direct rather than probabilistic estimation. Nevertheless, one should note that the ADRT survey is likely to be biased toward the more literate portion of the population since the illiterate would have to rely on the literate for guidance in answering the questions. This would defeat the very reason for anonymity and thus might not encourage participation and/or truthful response. also, under the RRT, the fact that only a fraction of the population is answering the question of interest effectively reduces the sample size and thus the sample could be unrepresentative of the population. The ADRT estimates should have a lower variance.

CHAPTER SIX

ESTIMATED RESULTS FROM THE RANDOMIZED RESPONSE AND ANONYMOUS DIRECT RESPONSE SURVEYS

6.1 Interpreting the Survey of Results

The following key assists in interpreting the tables of results presented in this chapter for the RRT and ADRT surveys.

(1) F-Egotropic/Retrospective (π_1) The proportion of voters who voted for (F) the incumbent primarily because they perceived an improvement in the well-being of their households attributable to the government's economic policies.

(2) F-Egotropic/Prospective (π_2) The proportion of voters who voted for (F) the incumbent primarily because they expected an improvement in the well-being of their households if the incumbent was elected.

(3) F-Sociotropic/Retrospective (π_3) The proportion of voters who voted for (F) the incumbent primarily because they perceived an improvement in Ghana's economy attributable to the government's economic policies.

(4) A-Egotropic/Retrospective (π_4) The proportion of voters who voted against (A) the incumbent primarily because they perceived a deterioration in the well-being of their households attributable to the government's economic policies.

(5) A-Egotropic/Prospective (π_5) The proportion of voters who voted against (A) the incumbent primarily because they expected a deterioration in the well-being of their households if the incumbent was elected.

(6) A-Sociotropic/Retrospective(π_6) The proportion of voters who voted against (A) the incumbent primarily because they perceived a deterioration in Ghana's economy attributable to the government's economic policies.

(7) Non-Economic (π_7) The proportion of voters who did not vote primarily for economic considerations.

6.2 Results from the Randomized Response Survey

The responses of voters surveyed across the various regions are shown in appendix A. Tables A1-A3. Using equations 5.10 and 5.11 in chapter five, the estimated population proportions (π_1... π_7) and their respective standard errors for the combined, rural and urban samples are presented in Tables 6.1-6.3 below.

6.2.1 Results for the Combined Sample and by Administrative Region.

Table 6.1 presents the estimated results of economic influences on voting behavior in Ghana as whole as well as by administrative region.

The overall results for Ghana indicate that economic considerations, and in particular the Structural Adjustment Program (SAP), were significant influences on voting behavior in the 1992 Presidential election: 77% of voters voted primarily because of economic considerations. Amongst these voters, proportionately more (43%) voted for

the incumbent, 22% of voters (proportionately more urban) did not vote primarily because of economic considerations.

A slightly higher proportion of voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP. Also proportionately more voters voted for the incumbent primarily because they perceived an improvement in Ghana's economy as a result of the SAP. Voting was largely egotropic as well as retrospective.

We can also see from Table 6.1 that, for the overall sample, proportionately more rural voters voted for the incumbent and proportionately more urban voters did the opposite primarily because of economic considerations. The results also indicate that proportionately more rural voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP. The opposite was the case for urban voters. Thus to the extent that the SAP was beneficial, the benefits were more apparent to rural households.

Also, amongst voters who voted for sociotropic considerations, proportionately more were rural and proportionately more voted for the incumbent. This suggests that rural voters are more likely to blame themselves and not the government for their personal economic misfortunes whereas urban voters are more likely to do the opposite. This interpretation is consistent with Lewis-Beck's culture hypothesis since urban households in Ghana have traditionally been more economically dependent on the government.

A regional breakdown of the aggregated results is shown in Table 6.1. From this Table, we can see that proportionately more voters from Ashanti and Volta regions voted primarily because of non-economic considerations. This result is consistent with our suggestion in chapter five that ethnicity was a probably an important explanation for the unusually high (low) percentage of votes cast for (against) the incumbent in these regions.

The results from Table 6.1 also indicate that proportionately more voters in Greater Accra, Eastern, Brong-Ahafo, and Western regions voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP.

Table 6.1 Results from the Combined Sample and by Administrative Region (RRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons				% Voted For Economic Reasons			
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings
Ghana	0.2237 (0.022)	0.1987 (0.0217)	0.1832 (0.019)	0.0977 (0.019)	0.1001 (0.018)	0.1324 (0.0210)	0.0675 (0.022)	0.4288	0.3507
Rural	0.2238 (0.0363)	0.2398 (0.0311)	0.1582 (0.032)	0.1103 (0.0289)	0.0743 (0.0311)	0.1630 (0.0304)	0.0551 (0.029)	0.5131	0.2876
Urban	0.2840 (0.036)	0.1401 (0.0311)	0.2189 (0.0328)	0.0784 (0.0289)	0.1435 (0.0311)	0.0818 (0.0303)	0.0853 (0.0293)	0.3003	0.4477
Region									
Greater Accra	0.1677 (0.0754)	0.2382 (0.0591)	0.2946 (0.0648)	0.0548 (0.0547)	0.1112 (0.0616)	0.0830 (0.0223)	0.0548 (0.0564)	0.3760	0.4606
Ashanti	0.3370 (0.0754)	0.1536 (0.0648)	0.2240 (0.0700)	0.0548 (0.0565)	0.0971 (0.0600)	0.0407 (0.0547)	0.0971 (0.0600)	0.2491	0.4139
Eastern	0.1677 (0.0685)	0.2805 (0.0748)	0.0689 (0.0600)	0.0689 (0.0591)	0.2241 (0.0624)	0.1395 (0.0640)	0.0548 (0.0547)	0.4889	0.3434
Central	0.1959 (0.0655)	0.2241 (0.0734)	0.2100 (0.0574)	0.0266 (0.0574)	0.1112 (0.0700)	0.1536 (0.0640)	0.0830 (0.0563)	0.4043	0.4042
Western	0.2241 (0.0685)	0.2241 (0.0754)	0.1254 (0.0616)	0.0971 (0.0529)	0.0689 (0.0565)	0.0971 (0.0685)	0.1677 (0.0591)	0.4183	0.3576
Northern	0.1795 (0.0700)	0.1677 (0.0700)	0.3087 (0.0624)	0.1395 (0.0600)	0.1254 (0.0574)	0.0971 (0.0600)	0.0266 (0.0655)	0.4044	0.4607
Upper East	0.2523 (0.0741)	0.1536 (0.0591)	0.1395 (0.0685)	0.1677 (0.0640)	0.0266 (0.0591)	0.2241 (0.0655)	0.0407 (0.0529)	0.5454	0.2068
Upper West	0.2382 (0.0714)	0.1112 (0.0648)	0.1254 (0.0624)	0.2100 (0.0655)	0.0548 (0.0565)	0.0407 (0.0700)	0.2241 (0.0547)	0.3619	0.4043
Volta	0.3241 (0.0707)	0.1959 (0.0616)	0.1677 (0.0624)	0.0689 (0.0685)	0.0548 (0.0565)	0.1254 (0.0700)	0.0689 (0.0547)	0.3902	0.2914
Brong-Ahafo	0.2100 (0.0685)	0.2382 (0.0200)	0.1677 (0.0565)	0.0830 (0.0574)	0.1254 (0.0565)	0.1395 (0.0721)	0.0407 (0.0547)	0.4607	0.3338

On the other hand, proportionately more voters in Greater Accra, Central, Ashanti, and Northern, regions voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP.

Proportionately more voters in the Northern, Upper East and Upper West regions voted for the incumbent primarily because they expected an improvement in their well-being if he was elected. On the other hand, proportionately more voters in the Eastern, Greater Accra, Brong-Ahafo, and Northern regions voted against the incumbent primarily because they expected a deterioration in their well-being if he was elected.

Also, proportionately more voters in the Northern, Eastern, Brong-Ahafo, and Central regions voted for the incumbent primarily because they perceived an improvement in Ghana's economy as a result of the SAP. On the other hand, proportionately more voters in the Upper West, Ashanti, and Western regions voted against the incumbent primarily because, they perceived a deterioration in Ghana's economy as a result of the SAP (Table 6.1). Finally, amongst voters who voted primarily because of economic considerations, the majority of voters in the Northern, Ashanti, Upper West and Greater Accra regions voted against the incumbent. The anti-incumbent sentiments in these regions was related to the perceived deterioration in the well-being of households in these regions as a result of the SAP (Table 6.1). The results reported in Table 6.1 appear to support the hypothesis that proportionately more rural voters voted for the incumbent because of the beneficial welfare effects of the SAP while proportionately more urban voters did the opposite. However, the combined results hide important differences between export-producing and non-export-producing regions on the one hand, and the least poor and poorest regions on the other.

6.2.2 Results by Exporting/Non-Exporting Region

The sample was also classified into two groups on the basis of regional involvement in the export sector: export-producing regions (comprising Ashanti, Brong-Ahafo, Western, Eastern, and Central regions) and non-export producing regions (comprising Northern,

Volta, Upper East, Upper West and Greater Accra Regions). This classification, as well as providing larger samples for more reliable inferences, would allow us to say something about the impact of the Structural Adjustment Program (SAP) on the exporting and non-exporting regions.

The sample sizes for this classification are as follows: Exporting regions, 850 (500 rural and 350 urban), non-exporting region, 500 (500 rural and 350 urban).

(i) Export Producing Regions

The results in Table 6.2 show that amongst voters in the export-producing sector who voted primarily because of economic factors, proportionately more (46.35%) voted for the incumbent. Furthermore, most voters in this region voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP. Most rural voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP. Also, proportionately more rural (urban) voters voted for (against) the incumbent primarily because they perceived an improvement (deterioration) in their well-being as a result of the SAP. Amongst voters who voted for prospective reasons, proportionately more urban voters voted against the incumbent primarily because they expected a deterioration in their well-being if he was elected. Also, amongst voters who voted primarily because of sociotropic considerations, proportionately more rural (urban) voters voted for (against) the incumbent because they perceived an improvement (deterioration) in Ghana's economy as a result of the SAP.

Table 6.2 Results by Exporting and Non-Exporting Regions (RRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons				% Voted For Economic Reasons			
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings
Exporting Region	0.2326 (0.031)	0.2523 (0.0321)	0.1084 (0.027)	0.0746 (0.0261)	0.1141 (0.0277)	0.1366 (0.0285)	0.0859 (0.0266)	0.4635	0.3084
Rural	0.2278 (0.041)	0.3045 (0.0436)	0.0935 (0.0351)	0.0743 (0.0304)	0.0791 (0.0327)	0.1750 (0.0389)	0.0503 (0.0327)	0.5538	0.2229
Urban	0.2394 (0.0495)	0.1778 (0.0466)	0.1298 (0.0459)	0.0750 (0.0407)	0.1640 (0.0459)	0.0818 (0.0412)	0.1230 (0.0437)	0.3346	0.4160
Non-Exporting Region	0.2608 (0.0323)	0.1507 (0.029)	0.1479 (0.029)	0.1169 (0.0278)	0.0492 (0.0250)	0.0661 (0.0257)	0.2186 (0.0310)	0.3337	0.4157
Rural	0.2134 (0.0404)	0.1990 (0.0399)	0.0983 (0.0353)	0.1414 (0.0374)	0.0503 (0.0327)	0.0455 (0.0324)	0.2613 (0.0422)	0.3859	0.4051
Urban	0.3285 (0.0530)	0.0818 (0.412)	0.2189 (0.0486)	0.0818 (0.0412)	0.0476 (0.0389)	0.0955 (0.0420)	0.1435 (0.0448)	0.2591	0.4579

The results from the exporting regions support the hypothesis that the rural voters tended to vote for the incumbent because the SAP had improved their well-being whereas the opposite was the case for urban voters.

(ii) Non-Export Producing Regions

We can see in Table 6.2 that the results for the non-exporting regions are markedly different from those of the exporting regions. Proportionately more voters in this region voted against the incumbent primarily because of economic considerations. Also, amongst voters in this region voting primarily because of economic considerations, proportionately more voted against the incumbent primarily because they perceived a deterioration in Ghana's economy as a result of the SAP.

Furthermore, a higher proportion of rural (urban) voters voted for (against) the incumbent. Proportionately more rural (urban) voters voted for (against) the incumbent because they perceived an improvement (deterioration) in their well-being as a result of the SAP. However, most rural voters in this region voted against the incumbent primarily because they perceived a deterioration in Ghana's economy as a result of the SAP. Amongst urban voters who voted primarily because of economic considerations, most voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. However, amongst urban voters in this region, twice as many voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. Thus, the anti-incumbent sentiment in this region was more predominant in the urban areas.

Voting was mainly retrospective as well as egotropic. However, amongst voters who voted for sociotropic reasons, proportionately more were rural.

The hypothesis that rural voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP does not hold in the

non-exporting regions. The results suggest that the beneficial (detrimental) effects of the SAP were more apparent in the export (non-export) producing regions.

6.3 Results by Poverty Classification

Regional income disparities in Ghana are quite significant. We have constructed a regional poverty profile to analyze the voting behaviour of in "poorest" and "least poor" regions. The poverty profile has been prepared to rank various regions using the Foster Greer Thorbecke (1984) indices.

The estimation and results are presented in appendix B. For the purposes of this analysis, the Greater Accra, Ashanti, Western, Eastern and Brong-Ahafo are classified as the *least poor* regions and Central Volta, Northern, Upper East and Upper West as the *poorest* regions.

(i) The Least Poor Regions

As shown in Table 6.3, proportionately more voters in the least poor regions voted for the incumbent primarily because of economic considerations. Amongst these, proportionately more did so because they perceived an improvement in their well-being as a result of the SAP.

Amongst voters who voted for prospective reasons, proportionately more urban voters voted against the incumbent primarily because they expected a deterioration in their well-being if he was elected.

Table 6.3 Results for the Least Poor and Poorest Regions (RRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons				% Voted For Economic Reasons			
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For	Against	For	Against	For	Against	For	Against
Least Poor Regions	0.2523 (0.0231)	0.2100 (0.0319)	0.1338 (0.0236)	0.0689 (0.0433)	0.1254 (0.0255)	0.1310 (0.0482)	0.0830 (0.0252)	0.4099	0.3475
Rural	0.2661 (0.0388)	0.2937 (0.0414)	0.1223 (0.0243)	0.0263 (0.0210)	0.0719 (0.0206)	0.1654 (0.0287)	0.0455 (0.0281)	0.4854	0.2397
Urban	0.2326 (0.0354)	0.1572 (0.0266)	0.1503 (0.0256)	0.0681 (0.0264)	0.1915 (0.0309)	0.0818 (0.0297)	0.1229 (0.0357)	0.3072	0.4647
Poorest Regions	0.2410 (0.0241)	0.1931 (0.0213)	0.2185 (0.0286)	0.1225 (0.0254)	0.0548 (0.0332)	0.0520 (0.0445)	0.1225 (0.0215)	0.3612	0.3928
Rural	0.1750 (0.0315)	0.1990 (0.0258)	0.2709 (0.0415)	0.1894 (0.0289)	0.0455 (0.0288)	0.0551 (0.0214)	0.0694 (0.0287)	0.4435	0.3858
Urban	0.3559 (0.021)	0.1024 (0.0223)	0.1983 (0.0424)	0.0887 (0.0233)	0.0681 (0.0429)	0.0476 (0.0303)	0.1435 (0.0211)	0.2387	0.4099

Also, amongst voters who voted primarily because of sociotropic considerations, proportionately more rural (urban) voters voted for (against) the incumbent because they perceived an improvement (deterioration) in Ghana's economy as a result of the SAP. Voting in this region was also largely egotropic as well as retrospective.

The rural-urban voting pattern suggests that proportionately more rural areas voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP while the opposite was the case for urban voters. Thus, the results for the least poor region support the hypothesis that the welfare impact of the SAP on rural and urban households affected the way they voted in the 1992 Presidential election.

(ii) The Poorest Regions

In the poorest regions, the results in Table 6.3 indicate that proportionately more voters voted against the incumbent primarily because of economic considerations. Furthermore, most of these voters voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP.

The rural-urban voting pattern was unlike that observed for the least poor region because proportionately more rural and urban voters voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. Also, proportionately more rural voters voted for the incumbent primarily because they expected an improvement in their well-being if he was elected. Also, amongst voters voting primarily because of sociotropic reasons, proportionately more rural voters in this region voted against the incumbent primarily because they perceived a deterioration in Ghana's economy as a result of the SAP.

The benefits of the SAP were thus less apparent in this region than they were in the least poor region. It was shown in chapter three that with regard to infrastructure rehabilitation and provision (water, electricity, roads) during the SAP, the poorer regions fared less well. Only 7% of rural households in the Northern region for example, had

access to water supply facilities in 1989 compared to 67% of rural households in Western region. Also, of the feeder roads constructed during the SAP, proportionately less were in the poorest regions. The combined total (km) of feeder roads constructed in Northern, Upper East and Upper West regions during the SAP was less than the total for the Ashanti region alone. The hypothesis that rural voters voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP does not hold in the poorest region. Voting was also largely influenced by egotropic and retrospective considerations. Proportionately more urban voters voted primarily because of sociotropic considerations.

6.4 Testing for Differences between Rural and Urban Estimates (RRT)

We have seen that the voting behaviour of the rural and urban samples differ. Are these differences statistically significant?

Table 6.4 Hypothesis tests for significant differences between Rural and Urban Estimates

Region	π_1	π_2	π_3	π_4	π_5	π_6	π_7
Ghana	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
Exporting	Rejected	Accepted	Rejected	Rejected	Rejected	Rejected	Accepted
Non-Expor	Rejected	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected
Least Poor	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
Poorest	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected

The null hypothesis is overwhelmingly rejected.

For each of the proportions estimated by the RRT, the null hypothesis, H_0: $\pi_R - \pi_U = 0$, was tested against the alternative, H_1: $\pi_R - \pi_U \neq 0$, where π_R is the proportion estimated for the rural sample and π_U is the same proportion estimated for the urban sample. The results of the hypothesis tests for the various regional groupings (Ghana, export producing, non-exporting, least poor and poorest regions) are given in Table 6.4. For each

proportion, the test indicates whether the null hypothesis was accepted or rejected. The tests were conducted at the 5% level of significance.

Conclusion

For Ghana as a whole, the results of the randomized response survey provide some support for the hypothesis that rural households voted for the incumbent primarily because they might have perceived some improvements in their well-being as a result of incumbent's policies. Also, to the extent that economic considerations motivated voting behavior, individual or household improvement/deterioration in well-being was more important than the collective improvement/deterioration in well being. Under Lewis-Beck's culture hypothesis, one can argue that the many years of centralization of political and economic authority in Ghana since independence has resulted in Ghanaians linking their personal economic fortunes to government policies.

However, it is also possible that egotropic considerations are more likely to dominate voting behavior in developing countries for two reasons. First, with lower income levels, households/individuals in developing countries are more likely to be concerned about their own survival. Secondly, access to and the ability to adequately process information about the entire economy is more likely to be limited in developing countries where communication links are weak and educational levels are low.

Comparing the results from the export and non-export sectors, as well as the least-poor and poorest regions, we see that proportionately more voters in the export producing and least poor regions voted for the incumbent primarily because they perceived an improvement in their household well-being. On the other hand, proportionately more voters in the non-exporting regions voted against the incumbent primarily because they perceived a deterioration in their well being as a result of the incumbent's policies. It can thus be argued that the SAP was beneficial for household welfare in the export producing regions and detrimental to household welfare in the non-exporting regions. In the poorest regions, proportionately more voters voted against the incumbent primarily because of economic considerations.

It should be noted that there is a strong similarity in the results for the exporting and least poor regions on the one hand, and the non-exporting and poorest regions on the other. This similarity is because they encompass common regions. The Northern, Upper East Upper West and Volta regions are common to the poorest/Non-exporting regions whilst Ashanti, Eastern, Brong-Ahafo, and Western regions are Common to the exporting/Least Poor regions.

6.5 Results from the Anonymous Direct Response Survey

The responses of interviewees across the various regions are presented in appendix A (Tables A4-A6). Using equations 5.13 and 5.14 from chapter five, the estimated population proportions and their respective variances for the combined, rural/urban, exporting/non-exporting region, least poor/poorest region, and occupation type, samples are shown in Tables 6.5-6.7 below.

The sample sizes for the various samples are as follows: exporting region, 450 (263 for rural and 187 for urban) and non-exporting region, 469 (210 for rural and 259 for urban). As was discussed in chapter five, the sample sizes were chosen to reflect the proportion of each group in the population but was ultimately determined by the number of people who mailed back the questionnaires.

6.5.1 The Results for the Combined Sample and by Administrative Region

The results presented in Table 6.5 show that amongst the voters who voted primarily for economic considerations, proportionately more voted for the incumbent. Most of these voters did so primarily because they perceived an improvement in their well-being as a result of the SAP. However, roughly the same proportion of voters voted for and against the incumbent primarily because they perceived an improvement or deterioration in their well-being as a result of the SAP.

The rural-urban voting pattern shows, however, that proportionately more rural voters voted for the incumbent because they perceived an improvement in their well-

being as a result of the SAP and proportionately more urban voters voted against the incumbent because they perceived a deterioration in their well-being as a result of the SAP.

Amongst voters who voted for prospective reasons, proportionately more rural voters voted for the incumbent primarily because they expected an improvement in their well-being if he was elected. Also, amongst voters who voted primarily because of economic considerations, proportionately more rural (urban) voters voted for (against) the incumbent.

The results support the hypothesis that rural voters tended to vote for the incumbent because they perceived an improvement in their well-being as a result of the SAP whilst urban voters did the opposite.

The regional breakdown of the results for the combined sample (Table 6.5) indicates that proportionately more voters in the Greater Accra, Ashanti, Central, and Northern regions voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP.

Table 6.5 Results for the Combined Sample and by Administrative Region (ADRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons							
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings	For Rawlings	Against Rawlings
Ghana	0.1447 (0.0001)	0.2372 (0.01)	0.2045 (0.01)	0.1534 (0.01)	0.0848 (0.01)	0.0870 (0.01)	0.0881 (0.01)	0.4776	0.3774
Rural	0.1543 (0.0141)	0.2706 (0.02)	0.1501 (0.0141)	0.1775 (0.0173)	0.0845 (0.01)	0.0824 (0.01)	0.0803 (0.01)	0.5305	0.3149
Urban	0.1345 (0.0141)	0.2017 (0.017)	0.2623 (0.02)	0.1278 (0.0141)	0.0852 (0.01)	0.0919 (0.01)	0.0964 (0.01)	0.4214	0.4439
Greater Accra	0.1632 (0.0360)	0.2245 (0.0412)	0.2653 (0.0435)	0.0816 (0.0264)	0.1224 (0.0316)	0.0612 (0.005)	0.0816 (0.0264)	0.3673	0.4695
Ashanti	0.2127 (0.0413)	0.1489 (0.0360)	0.2553 (0.0447)	0.1702 (0.0374)	0.1063 (0.0316)	0.0425 (0.004)	0.0638 (0.0224)	0.3616	0.4257
Eastern	0.1086 (0.0316)	0.2826 (0.0469)	0.1739 (0.0387)	0.1521 (0.0374)	0.0869 (0.0282)	0.0869 (0.008)	0.1086 (0.0316)	0.5216	0.3698
Central	0.0408 (0.0173)	0.1632 (0.0360)	0.3061 (0.0446)	0.2040 (0.0400)	0.1020 (0.0300)	0.0612 (0.0100)	0.1224 (0.0223)	0.4284	0.5308
Western	0.2000 (0.0412)	0.3333 (0.0489)	0.1333 (0.0346)	0.0888 (0.0300)	0.0444 (0.0200)	0.0667 (0.0244)	0.1333 (0.0346)	0.4888	0.3112
Northern	0.1052 (0.0300)	0.1894 (0.0400)	0.2947 (0.0458)	0.1473 (0.0360)	0.0210 (0.0141)	0.1052 (0.0300)	0.1368 (0.0346)	0.4419	0.4529
Upper East	0.1555 (0.0374)	0.1333 (0.0346)	0.1777 (0.0400)	0.2667 (0.0458)	0.1333 (0.0346)	0.0667 (0.0244)	0.0667 (0.0244)	0.4667	0.3778
Upper West	0.0681 (0.0264)	0.2954 (0.0479)	0.2272 (0.0435)	0.1363 (0.0360)	0.0681 (0.0264)	0.0909 (0.0300)	0.1136 (0.0331)	0.5226	0.4093
Volta	0.3232 (0.0469)	0.3030 (0.0458)	0.0808 (0.0264)	0.0707 (0.0244)	0.1010 (0.0300)	0.0404 (0.0173)	0.0808 (0.0264)	0.4141	0.2627
Brong-Ahafo	0.0400 (0.0223)	0.3200 (0.0538)	0.1066 (0.0346)	0.2400 (0.0489)	0.0533 (0.0224)	0.2133 (0.0469)	0.0266 (0.0173)	0.7733	0.1867

On the other hand, amongst voters who voted who voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP, proportionately more came from the Brong-Ahafo, Volta, Western, Upper West, and Eastern regions. The results in Table 6.5 also indicate that amongst voters who voted for the incumbent primarily because they expected an improvement in their well-being if he was elected, proportionately more were from the Central, Brong-Ahafo, and Upper East regions. On the other hand amongst voters who voted against the incumbent primarily because they expected a deterioration in their well-being if he was elected, proportionately more came from the Greater Accra, Volta, Ashanti and Central regions.

Amongst voters who voted for sociotropic considerations, proportionately more from the Brong-Ahafo region voted for the incumbent primarily because they perceived an improvement in Ghana's economy as a result of the SAP. On the other hand, proportionately more voters in the from the Central, Western, Northern, and Upper west regions voted against the incumbent primarily because they perceived a deterioration in Ghana's economy as a result of the SAP.

Also, amongst voters voting primarily because of non-economic considerations, proportionately more were from Volta and Ashanti. This reinforces the findings under the RRT survey and points to the possible role of ethnicity in influencing the voting behavior in these two regions.

6.5.2 Results by Export/Non-Export Producing Regions

(i) Exporting Regions

The results from the export producing regions (Table 6.6) indicate that proportionately more voters in this region voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the SAP.

The rural-urban dichotomy shows that proportionately more rural (urban) voters in this region voted for (against) the incumbent primarily because they perceived an improvement (deterioration) in their well-being as a result of the SAP. Amongst voters who voted for sociotropic considerations, proportionately more rural voters voted for the incumbent primarily because they perceived an improvement in Ghana's economy as a result of the SAP. Proportionately more rural (urban) voters voted for (against) the incumbent primarily because of economic considerations.

The results for the export producing region support the hypothesis that welfare effects of the SAP affected the voting behavior of rural and urban households. In particular the benefits of the SAP were more apparent to rural as opposed to urban households

(ii) Non-Export Producing Regions.

The results in Table 6.6 shows that amongst voters in the non-export producing regions who voted for primarily economic considerations, about the same proportion voted for and against the incumbent. However, most voters in this region voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP.

We can also notice from Table 6.6 that proportionately more rural and urban voters voted against the incumbent primarily because they perceived a deterioration in their well-being resulting from the SAP.

Table 6.6 Results for the Exporting and Non-Exporting Regions (ADRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons							
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For	Against	For	Against	For	Against	For	Against
Exporting Region	0.1844 (0.0182)	0.2755 (0.021)	0.1511 (0.0168)	0.140 (0.0163)	0.080 (0.0127)	0.0844 (0.0131)	0.0844 (0.131)	0.50	0.3155
Rural	0.1977 (0.0245)	0.3193 (0.0287)	0.0836 (0.017)	0.1482 (0.0219)	0.0912 (0.0177)	0.0798 (0.0167)	0.0798 (0.0167)	0.5473	0.3687
Urban	0.1657 (0.0271)	0.2139 (0.0299)	0.2459 (0.0314)	0.1283 (0.0244)	0.0641 (0.0172)	0.091 (0.021)	0.0909 (0.021)	0.4332	0.4012
Non-Exporting Region	0.1066 (0.0142)	0.2004 (0.048)	0.2558 (0.020)	0.1663 (0.017)	0.0895 (0.0131)	0.0895 (0.013)	0.0916 (0.0133)	0.4562	0.4369
Rural	0.10 (0.020)	0.2095 (0.028)	0.2333 (0.029)	0.2142 (0.0283)	0.0761 (0.0183)	0.0857 (0.019)	0.080 (0.0188)	0.5094	0.3894
Urban	0.1119 (0.0195)	0.1930 (0.0245)	0.2741 (0.0277)	0.0857 (0.0193)	0.1003 (00186)	0.0926 (0.018)	0.010 (0.018)	0.4130	0.2222

Also, amongst voters who voted for prospective reasons, proportionately more rural voters voted for the incumbent primarily because they expected an improvement in their well-being if the incumbent was elected. The results indicate that the benefits of the SAP were not as apparent in the non-export producing regions as they were in the exporting regions. Thus, there were more economically dissatisfied voters in the non-exporting regions than in the export producing regions. The rural-urban dichotomy observed in the export producing region is not repeated in the non-export producing region.

6.6 Results by Poverty Classification.

(i) The Least Poor Regions

The results on voting behavior in the least poor regions (Table 6.7) show that proportionately more voters in these regions voted for the incumbent primarily because of economic considerations. In particular, they perceived an improvement in their well-being as a result of the SAP. However, this was more the case for rural voters. We can see that proportionately more rural (urban) voters in this region voted for (against) the incumbent in this region primarily because they perceived an improvement (deterioration) in their well-being as a result of the SAP (Table 6.7). Voting was largely retrospective as well as egotropic and there were no significant differences in rural and urban voting on sociotropic considerations.

The results for this region support the hypothesis that rural (urban) voters tended to vote for (against) the incumbent because of their well-being was improved (deteriorated) by the SAP.

Table 6.7 Results for the Least Poor and Poorest Regions (ADRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons				% Voted For Economic Reasons			
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For	Against	For	Against	For	Against	For	Against
Least Poor Regions	0.1488 (0.0167)	0.2577 (0.0206)	0.1911 (0.0185)	0.1422 (0.0164)	0.0844 (0.0131)	0.0977 (0.014)	0.0844 (0.0131)	0.4976	0.3600
Rural	0.1444 (0.0189)	0.2737 (0.0124)	0.1064 (0.0153)	0.1520 (0.0145)	0.0836 (0.0135)	0.0912 (0.0236)	0.0836 (0.0135)	0.5169	0.2736
Urban	0.1550 (0.0157)	0.2352 (0.0141)	0.3101 (0.010)	0.1283 (0.0208)	0.0855 (0.0134)	0.0855 (0.0155)	0.0855 (0.0134)	0.4490	0.4811
Poorest Regions	0.1407 (0.0177)	0.2174 (0.0496)	0.2174 (0.0122)	0.0852 (0.017)	0.1641 (0.0133)	0.0767 (0.0122)	0.0916 (0.014)	0.3793	0.4731
Rural	0.1667 (0.0144)	0.2666 (0.013)	0.2047 (0.0110)	0.0857 (0.043)	0.2095 (0.0457)	0.0714 (0.0201)	0.0761 (0.0152)	0.4237	0.4903
Urban	0.1196 (0.0103)	0.1776 (0.0158)	0.2278 (0.0196)	0.1274 (00122)	0.0849 (0.0304)	0.0965 (0.0224)	0.1042 (0.0121)	0.4015	0.4169

(ii) The Poorest Regions

In the poorest regions, Table 6.7 shows that proportionately more voters voted against the incumbent primarily because of economic considerations. Thus, there more economically dissatisfied voters in the poorest regions when compared to the least poor regions. However, the same proportion of voters voted for as well as against the incumbent primarily because they perceived an improvement/deterioration in their well-being as a result of the SAP. Nevertheless, the rural/urban dichotomy shows that proportionately more rural (urban) voters voted for (against) the incumbent primarily because they perceived an improvement (deterioration) in their well-being as a result of the SAP.

Also, amongst voters who were primarily influenced by prospective considerations, proportionately more rural voters voted against the incumbent primarily because they expected a deterioration in their well-being if he was elected.

The results for the poorest regions suggest that the benefits of the SAP were not as apparent as in the least poor regions.

6.7 Testing for Differences between Rural and Urban Estimates (ADRT)

We have seen that the estimates for the ADRT samples from rural and urban areas differ. Are these differences statistically significant?

Table 6.8 Hypothesis tests for significant differences between Rural and Urban Estimates

Region	π_1	π_2	π_3	π_4	π_5	π_6	π_7
Ghana	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
Exportin	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
Non-Expor	Accepted	Rejected	Accepted	Accepted	Rejected	Rejected	Accepted
Least Poor	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Accepted
Poorest	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected

For each of the proportions estimated by the ADRT, the null hypothesis, H_0: $\pi_R - \pi_U = 0$, was tested against the alternative, H_1: $\pi_R - \pi_U \neq 0$, where π_R is the proportion estimated for the rural sample and π_U is the same proportion estimated for the urban sample. The results of the hypothesis tests for the various regional groupings are given in Table 6.8. The test for each proportion indicates whether the null hypothesis was accepted or rejected. The tests were conducted at the 5% level of significance. The null hypothesis is overwhelmingly rejected for the export producing regions but is 50% accepted in the non-exporting regions. It is overwhelmingly rejected for the least poor and poorest regions

6.8 Voting Behavior by Occupational Group (ADRT)

The estimates for voting patterns by occupational group are shown in Table 6.9. The sample comprised 377 farmers, 202 self-employed, 165 government employees, and 174 private sector non-farm employees. We can see from this table that proportionately more farmers voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the incumbents policies. On the other hand, government employees tended to vote against the incumbent primarily because they perceived a deterioration in their well-being resulting from the incumbent's policies. Proportionately more private sector employees voted for the incumbent primarily because they perceived an improvement in Ghana's economy. They are followed by self-employed non-farmers, farmers and government employees.

Table 6.9 Results for Voting Behavior by Occupation Type (ADRT)

Sample	% Voted For non-economic reasons	% Voted For Economic Reasons				% Voted For Economic Reasons			
		Egotropic-Retrospective		Egotropic-Prospective		Sociotropic-Retrospective		Total	
		For	Against	For	Against	For	Against	For	Against
Occupation									
Farmer	0.2986 (0.0235)	0.3134 (0.0238)	0.1534 (0.0185)	0.0060 (0.0039)	0.1004 (0.0169)	0.1056 (0.0158)	0.1230 (0.0154)	0.4250	0.3768
Sellf Employed	0.1870 (0.0274)	0.2517 (0.0305)	0.2315 (0.0296)	0.1132 (0.0222)	0.0234 (0.0159)	0.1389 (0.0243)	0.0543 (0.0106)	0.5038	0.3092
Gov't. Empl.	0.1489 (0.0277)	0.0223 (0.0114)	0.4021 (0.0381)	0.1099 (0.0243)	0.0854 (0.0267)	0.0945 (0.0227)	0.1369 (0.0217)	0.2267	0.6244
Private Sector	0.1314 (0.0256)	0.1321 (0.0256)	0.2782 (0.0339)	0.0965 (0.0223)	0.0251 (0.0279)	0.1743 (0.0287)	0.1624 (0.0118)	0.4029	0.4657

If one considers that farmers are mostly rural, and government employees are mostly urban, then these results are in conformity with the finding that the cost of adjustment was largely borne by urban dwellers.

Conclusion

The results of the ADRT survey show that proportionately more rural voters likely to voted for the incumbent primarily because they perceived an improvement in their welfare attributable to the incumbent's policies in the nine years preceding the presidential election. On the other hand, proportionately more urban voters voted against the incumbent primarily because they perceived a deterioration in their welfare attributable to the incumbent's policies in the nine years preceding the presidential election.

It was also shown that the rural-urban dichotomy in voting behavior was more marked in the export-producing regions where the benefits of the SAP were more likely to be evident, than in the non-exporting region. In the latter, proportionately more voters voted against the incumbent primarily because they perceived a deterioration in their well being as a result of the SAP.

Also, it was found that farmers and the self-employed were proportionately more likely to have voted for the incumbent primarily because they perceived an improvement in their well-being attributable to the incumbent's policies. Government employees, on the other hand, were more likely to vote against the incumbent primarily because they perceived a deterioration in their welfare attributable to the incumbent's policies in the nine years preceding the presidential election. Voting was largely retrospective for both urban and rural regions[1].

[1] The results were also analyzed by gender. No significant differences were found between male and female voting behaviour.

6.9 Comparing The Results from the RRT and ADRT Surveys

The RRT and ADRT surveys offer qualitatively similar findings. They both show that for Ghana as a whole, rural voters were more likely to have voted for the incumbent primarily because they perceived an improvement in their well-being as a result of the incumbent's economic policies, the opposite being the case for urban voters. This was more the case for the export producing and the least poor regions.

In the non-exporting regions, the RRT and ADRT surveys found that proportionately more voters (rural and urban) voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. However, the RRT survey found that proportionately more voters in this region voted against the incumbent because of economic considerations while the ADRT found that roughly the same proportion of voters in this region voted for and against the incumbent because of economic considerations.

In the poorest regions, the RRT survey found that proportionately more voters (rural and urban) voted against the incumbent primarily because they perceived a deterioration in their well-being as a result of the SAP. The ADRT survey, on the other hand, found that whilst proportionately more voters in this region voted against the incumbent because of economic considerations, more rural (urban) voters voted for (against) the incumbent because they perceived an improvement (deterioration) in their well-being as a result of the SAP.

Both surveys also found that voting was largely influenced by egotropic and retrospective considerations. To the extent that voters were influenced by sociotropic considerations, the RRT survey found that proportionately more rural voters voted for sociotropic considerations. Under the ADRT, on the other hand, there was no significant difference between rural and urban voters on sociotropic considerations.

The RRT survey found the proportionately more voters in Greater Accra, Northern Central, Ashanti and Upper West Regions voted against the incumbent primarily because of economic considerations. In particular, they perceived a deterioration in their well-

being as a result of the SAP. The ADRT survey on the other hand found these regions to be Central, Ashanti, Greater Accra and Northern regions.

The RRT found that about 25% of voters voted primarily because of non-economic considerations as compared to 15% for the ADRT. However, both surveys also found that non-economic considerations were very significant in the voting by the Ashanti and Volta regions.

The results of both surveys are thus qualitatively similar. However, the estimates offered by both techniques differ. Are the differences statistically significant?

6.10 Testing for Differences between Estimates from the two Surveys

For each of the proportions estimated by the RRT as well as the ADRT, the null hypothesis, H_0: $\pi_R - \pi_A = 0$, was tested against the alternative, H_1: $\pi_R - \pi_A \neq 0$, where π_R is the proportion estimated using the RRT and π_A is the same proportion estimated using the ADRT.

Table 6.10 Hypothesis tests for significant differences between RRT and ADRT estimates

Region	π_1	π_2	π_3	π_4	π_5	π_6	π_7
Ghana(R)	Accepted	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
Ghana(U)	Rejected	Rejected	Accepted	Rejected	Rejected	Accepted	Rejected
Expor(R)	Accepted	Rejected	Rejected	Accepted	Accepted	Rejected	Rejected
Expor(U)	Rejected	Rejected	Accepted	Rejected	Rejected	Rejected	Rejected
Non-Exp(R)	Accepted	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
Non-Exp(U)	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
Least Poor(R)	Accepted	Rejected	Rejected	Accepted	Accepted	Rejected	Rejected
Least Poor(U)	Rejected	Rejected	Accepted	Rejected	Rejected	Rejected	Rejected
Poorest (R)	Accepted	Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
Poorest (U	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected

The results of the hypothesis tests for the various regional groupings (Rural (R) and Urban (U)) are given in Table 6.10. The test indicates whether the null hypothesis was accepted or rejected. The tests were conducted at the 5% level of significance. The null hypothesis is rejected for about 80% of the estimated proportions.

Conclusion

This chapter set out to address the issue of the impact of economic welfare on the results of the 1992 presidential elections in Ghana. To address the issue of the sensitivity of questions relating to electoral behavior in countries without a tradition of democracy like Ghana, two survey methods were employed: the randomized response technique and the anonymous direct response technique were used. The results from both surveys confirm the hypothesis that the differential voting patterns observed for rural and urban households, where proportionately more rural (urban) households voted for (against) the incumbent resulted because rural households largely perceived an improvement in their well-being as a result of the incumbent's policies with the opposite being the case for urban households.

CHAPTER SEVEN

CONCLUSION

This dissertation has attempted to investigate the links between Ghana's SAP and voting behavior in the 1992 presidential elections in Ghana. We set the stage in chapter three by arguing that, since independence in 1957, the economy has affected the nature and pace of political change in Ghana. Significant instability has characterized Ghanaian political life. In the last four decades, the military and civilian elite competed for primacy of place as the chief instrument for determining the "popular" political will and ushering in new governments. This contest has been won invariably by the might of the military. There have been nine different governments since Ghana's independence in 1957. Four of these governments have been elected through the ballot box, with differing degrees of confidence in the fairness of the electoral process, and five others were installed by the military. Five out of nine regimes have been forcibly removed from office: the country has experienced four major military coup d'etats (1966, 1972, 1979, 1981), one palace coup (1978), and several abortive coups.

The changes in government occurred at times when the economy was in an apparent state of decline. This has usually resulted in worker demonstrations and strikes. These signals of government unpopularity have been used by the military as reasons for overthrowing the democratically elected or other military governments.

The persistent economic decline between 1974 and 1983 resulted in increased rent-seeking by all households, but the rural households generally fared poorly. Farmers abandoned their farms due to inadequate prices paid for their products, their inability to obtain the scarce consumer goods which were rationed within the urban sector, and the availability of "greener pastures" in Nigeria. The increased rent-seeking nationally only served to worsen an already precarious economic situation. Under the pretext of saving the masses from the suffering imposed by the economic decline, Fl. Lt. Jerry Rawlings seized power for the second time in 1981 and promised to put the country on a revolutionary path toward socialism. The regime was populist and relied largely on the

urban working class and students for support. The western powers and their "agents", the World Bank and the International Monetary Fund were considered or regarded as the enemies of the Rawlings revolution. The economy however, continued on its downward spiral and without financial support from the Eastern bloc countries, Rawlings undertook a dramatic U-turn in 1983 when he was persuaded to adopt an economic reform program in 1983 under the auspices of the World Bank and the International Monetary Fund by the military government of the Provisional National Defense Council. The urban working class felt betrayed. Businessmen and professionals were already alienated by the initial excesses of the regime. Rawlings was left with no choice but to look to the rural constituency for support. He was able to cultivate this constituency largely because he had the support of the military (unlike Busia in 1972) which ultimately ensured the regime's survival. The increased participation of rural areas in the political process and the longevity enjoyed by the Rawlings regime gave the policies pursued under the SAP time to bear fruit.

In chapter four, we have tried to assess the impact of the SAP on the welfare of rural and urban households. It was noted that the impact of the stabilization and structural adjustment reform package on household welfare is apriori indeterminate. A lot depends on the status quo ante reform. A devaluation is likely to improve (decrease) the welfare of rural households if they are largely engaged in production (consumption) of tradables. Expenditure reduction through cuts in subsidies, for example, are more likely to hurt urban households if they were the primary beneficiaries of the initial subsidies. The methodological difficulties involved in any assessment of the welfare impact of the SAP on households were highlighted. Even when all the necessary data is available, we would still be unable to separate from the policies under the SAP, the non-SAP influences like rainfall. The policies implemented during the period under consideration (1983-1992) included exchange rate devaluation, trade liberalization, fiscal and financial reforms, and infrastructure rehabilitation.

Exchange rate devaluation increased the relative price of tradables. This policy largely benefited the producers of cash crops like cocoa. Cocoa producers, mainly in the rural south, also benefited from increases in producer prices. The terms of trade, moved

against food producers and in favor of cocoa producers. Producers of cash crops were largely located mainly in the Western, Eastern, Brong-Ahafo, Ashanti and Greater Accra regions. Farmers in the Northern, Upper East and Upper West regions on were more likely to have been adversely affected by the terms of trade movements because of these regions are major food producers.

It has been argued that the cost recovery measures implemented in health care, education, sanitation and other areas, were more likely to have had an adverse impact on urban households. For rural households, the existence of free health care in the pre-reform period was not borne out by reality since many rural households did not have access.

Under the SAP, there has been a major program of rehabilitation of the road, water, and electricity infrastructure throughout Ghana with the rural areas in the export producing regions as the primary beneficiaries. Also, public sector reform has seen the retrenchment of more than 50,000 people largely in the urban areas.

Chapter two presented a review of the literature on the economy and electoral behavior. This literature has generally attempted to address three inter-related questions: does the economy influence voting behavior?; is voting based on individual or collective rationality?; is voting retrospective or prospective in nature?. Methodologically, the role of economy in affecting electoral behavior has been investigated at two levels: (1) The aggregate macro-economic level using times-series or pooled cross-section analysis and (2) The individual micro-economic level using survey data. The macro-level econometric studies essentially regressed voting share in elections or polling data against economic variables like income inflation and unemployment.

A large number of these studies show that voters in many countries vote retrospectively. In the United States for example, the economy is said to play a more important role in presidential rather than congressional elections. It has also been shown that voting by individual or collective rationality will differ from country to country. In the United States, for example, voting is largely sociotropic and voters are more likely to blame themselves and not the government for their personal economic misfortunes. In France on the other hand, it was found that voting was more likely to be egotropic. This led to the postulation of the culture hypothesis by Lewis-Beck. He argued that since by

American culture, government was less interventionist, Americans were less likely to blame government for their personal economic misfortunes. the opposite was the case for France.

Whilst the aggregate level analysis sheds some light on the broad relationship between the economy and electoral behavior the results obtained from the methodologies applied are largely inconclusive because of the different sample sizes, estimation measures, and model specifications of the various studies. Thus, while the aggregate level analysis sheds some light on the broad relationship between the economy and electoral behavior, the results obtained from the methodologies applied are open to the criticism of spuriousness. Furthermore, the aggregate data do not tell us anything about the behavior of individual voters.

The individual level analysis, using survey data, allows some investigation into the reasons why individuals voted in a particular way and is thus more informative. Nevertheless, the existing micro-level studies are not without their problems. One of the major problems of existing micro-level studies arises from the fact that the survey questions do not provide a direct link between economic welfare and voting behavior. Thus, the results from these studies can also be subjected to the same criticism of spuriousness leveled at the macro-level studies.

There has been no previous study on the economy and electoral behavior in Ghana. For one thing, the data for an aggregate time-series and/or survey level analysis was not available. It is also the case that between 1966 and 1983, the Ghanaian electorate was not given the chance to pass judgment on an incumbent government by way of the ballot box.[2] Survey data on voting intentions in Ghana was not available. This is also the situation in many countries without a tradition of western democracy. It is likely that in countries with a history of dictatorship and human rights abuses, citizens might be reluctant to answer questions about their voting intentions for fear of retribution or the need for privacy. Their very lives or livelihoods might depend on their responses.

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[2]The referendum on the Union Government organized by General I.K. Acheampong's N.R.C. government in 1978 was seen by many as a referendum on the government's performance.

The issue of the sensitivity of questions on voting behavior in the context of micro- survey analysis in developing countries and fledgling democracies has not, as yet, been addressed in the literature. To address the issue of sensitivity of questions relating the economy to electoral behavior in countries without a tradition of democracy like Ghana, two survey methods were introduced in Chapter five: the randomized response technique (RRT) and the anonymous direct response technique (ADRT). Under the RRT, information is requested on a probability basis. The respondent is asked to select, by means of a chance device, a single question from two or more questions, only one of which is sensitive, without revealing to the interviewer which of the questions is being answered. The respondent's privacy is thus protected. However, knowing the probability distribution of the chance device, the interviewer can obtain unbiased estimates of the proportion of the population with the sensitive characteristic.

The Anonymous Direct Response Survey, on the other hand involved respondents answering questions from a questionnaire which was then returned to the interviewer anonymously (by post). This also guaranteed a high degree of privacy to the respondent. Both surveys were conducted across the ten regions of Ghana in rural and urban areas. and each survey tried to elicit responses about the primary consideration influencing a particular voting decision. The questions posed in both surveys included the following: did you vote for/against the incumbent primarily because: (1) your well-being improved/deteriorated as a result of the economic policies pursued by the incumbent in the last nine years? (2) you expected your well-being to improve/deteriorate? (3) the Ghanaian economy had improved/deteriorated as a result of the economic policies pursued by the incumbent in the last nine years? or (4) non-economic reasons. These questions provide a direct link between economic welfare and voting behavior (a link missing in previous surveys) and thus address the issue of spuriousness in the relationship between economic welfare and voting behavior.

The key results obtained under both surveys can be summarised as follows:

Randomized Response Technique

1. The Combined Sample (RRT)

- 77 % of voters voted primarily because of economic considerations.

- Same proportion of voters voted for and against Rawlings primarily because they perceived an improvement/deterioration in their well-being as a result of the SAP

- Proportionately more rural voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

- Voting was largely egotropic/Retrospective. However, rural voters voted more for sociotropic considerations.

- Proportionately more voters in Eastern, Western, Upper East, and Volta and Brong-Ahafo regions voted for Rawlings primarily because of economic considerations.

- Proportionately more voters in Northern, Ashanti, Upper West and Greater Accra regions voted against Rawlings primarily because of economic considerations.

- Non-economic considerations dominated voting in Ashanti and Volta regions.

2. The Export Producing Regions (RRT)

- Proportionately more rural voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

- Voting was largely egotropic/Restrospective

3. Non- Exporting Regions (RRT)

- Proportionately more voters (rural and urban) voted against Rawlings primarily because of economic considerations- Mainly because they perceived a deterioration in Ghana's economy as a result of the SAP.

- Proportionately more rural voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

- Most rural voters voted for sociotropic considerations

4. Least Poor Regions (RRT)

- Proportionately more voters (mainly rural) voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

5. Poorest Regions (RRT)

- Proportionately more voters voted against Rawlings primarily because of economic considerations

- Proportionately more rural voters voted against Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more rural voters voted for Rawlings primarily because of economic considerations

- Proportionately more urban voters voted against Rawlings primarily because of economic considerations

The Anonymous Direct Response Technique:

1. The Combined Sample (ADRT)

- 85 % of voters voted primarily because of economic considerations

- Proportionately more voters voted for Rawlings primarily because of economic considerations

- Same proportion of voters voted for and against Rawlings primarily because they perceived an improvement/deterioration in their well-being as a result of the SAP

- Proportionately more rural voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

- Voting was largely egotropic/Retrospective.

- Proportionately more voters in Northern, Ashanti, Central and Greater Accra regions voted against Rawlings primarily because of economic considerations.

- Non-economic considerations dominated voting in Ashanti and Volta regions.

2. Exporting Regions (ADRT)

- Proportionately more voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more rural voters voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

3. Non-Exporting Regions (ADRT)

- Roughly the same proportion of voters voted for and against Rawlings primarily because of economic considerations.

- Proportionately more rural and urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

4. Least Poor Regions (ADRT)

- Proportionately more voters (mainly rural) voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately more urban voters voted against Rawlings primarily because they perceived a deterioration in their well-being as a result of the SAP

- Voting was largely egotropic as well as retrospective.

5. Poorest Regions (ADRT)

- Proportionately more voters (rural and urban) voted against Rawlings primarily because of economic considerations

- The same proportion of voters voted for and against the incumbent primarily because they perceived an improvement/deterioration an their well-being as a result of the SAP

- Proportionately more rural voters voted against Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

-Voting was largely retrospective as well as egotropic

6. Voting By Occupation (ADRT)

- Proportionately more farmers voted for Rawlings primarily because they perceived an improvement in their well-being as a result of the SAP

- Proportionately Government employees voted against Rawlings primarily because of economic considerations. In particular, they perceived a deterioration in their well-being as a result of the SAP

- Proportionately more private sector employees voted against Rawlings primarily because of economic considerations. In particular, they perceived a deterioration in their well-being as a result of the SAP

For Ghana as a whole, the results of the randomized response survey provide some support for the hypothesis that rural households voted for the incumbent primarily because they might have perceived some improvements in their well-being as a result of incumbent's policies. Also, to the extent that economic considerations motivated voting behavior, household improvement/deterioration in well-being was more important than the collective improvement/deterioration in well being. Under Lewis-Beck's culture hypothesis, one can argue that the many years of centralization of political and economic authority in Ghana since independence has resulted in Ghanaians linking their personal economic fortunes to government policies. However, proportionately more rural voters voted for sociotropic considerations while proportionately more urban voters voted for egotropic considerations. Under Lewis-Beck's culture hypothesis, this is the case because rural households have traditionally been less reliant on the government for their economic well-being while urban households have traditionally been more reliant on the government. Thus, while urban households are likely to blame the government for a decline in their economic well-being, rural households are likely to blame themselves.

A major finding from both surveys is the substantial proportion (about 80%) of voters who voted for primarily because of economic considerations. In this regard, the major influences on voting behaviour in developing economies is not different from those in western democracies. However, the results from the Ashanti and Volta regions show the predominant influences of non-economic factors. It should be recalled that Rawlings, the incumbent, hails from the Volta region and ethnic tensions between Ashantis and Ewes was most likely, the single most important non-economic factor influencing the vote in these two regions.

Comparing the results from the export and non-export sectors, we see that proportionately more voters in the export producing regions voted for the incumbent primarily because they perceived an improvement in their household well-being. On the other hand, proportionately more voters in the non-exporting sector voted against the incumbent primarily because they perceived a deterioration in their well being as a result of the incumbent's policies. It can thus be argued that the benefits of the SAP were more

apparent to households in the export producing regions than to households in the non-exporting regions.

The results from the RRT and ADRT surveys show that proportionately more rural voters in the poorest regions voted for and against the incumbent primarily because of economic considerations. Thus the rural-urban dichotomy observed for the economy as a whole did not manifest itself in the poorest regions. This suggests that rural voters in the poorest regions did not fare as well as those in the least poor regions in the previous nine years of structural adjustment.

Also, it was found that farmers and the self-employed were proportionately more likely to have voted for the incumbent primarily because they perceived an improvement in their well-being attributable to the incumbent's policies. Government employees, on the other hand, were more likely to vote against the incumbent primarily because they perceived a deterioration in their welfare attributable to the incumbent's policies in the nine years preceding the presidential election.

The results from both surveys arrived at the same qualitative conclusions and support the hypothesis that the differential voting patterns observed for rural and urban households, where rural households largely voted for the incumbent and urban households largely voted against the incumbent, resulted largely because rural households largely perceived an improvement in their well-being as a result of the incumbent's policies with the opposite being the case for urban households.

Also, voting was largely retrospective. This observed behaviour is in line with Downs' (1957) responsibility hypothesis and conforms to findings in many western democracies. However, in the context of a developing country with a history of political instability, it is likely that voters would also be particularly retrospective in their behaviour given the high perceived probability that the party or candidate would not be around long enough to fulfill their expectations. Also, the low levels of education and limited access to information by many individuals reinforces the tendency to rely on past experience.

A major lesson to be drawn from the Ghanaian experience is that good policies would be rewarded and bad policies will be punished by the electorate. However, it is

important to note that in the Ghanaian context, the SAP policies had nine years to bear fruit (under a dictatorship) before the 1992 election. With a normal election cycle of four years, it is unlikely that "good" policies will bear fruit before the voters pass their verdict and thus, there would be a tendency for governments to undertake policies for short-term electoral gain. While this does not imply that a dictatorship is necessary nor sufficient for economic development, a longer electoral cycle (6 years for example) might allow policies pursued by governments to come to fruition.

Another lesson for policy makers in developing countries, who have been traditionally held hostage by the urban elite, is that, getting the rural regions involved in the democratic process as well as simultaneously pursuing policies of economic liberalisation (which largely benefit the rural regions) is an important way of breaking the traditional stranglehold of the urban elite on political power.

Contributions of the Thesis

This thesis makes a number of important contributions to the literature on the economy and voting behavior and the welfare implications of SAPs.

This is the first study of its kind on Ghana. It helps fill the void in the literature created by the absence of studies on voting behavior in developing countries without a tradition of western democracy. In doing so we emphasize the historical links between the economy and political change in Ghana.

Second, given the sensitivity of questions concerning voting behavior/intentions in countries without a tradition of western democracy, this thesis uses two survey techniques, the Randomized Response Technique and the Anonymous Direct Response Technique, to protect the privacy of respondents. In fact, this is the first application of both techniques in the literature on the economy and voting behavior. These techniques offer a window of opportunity for micro-level research in countries where the issue of respondent sensitivity is pertinent.

Third, unlike previous studies on the links between the economy and voting behaviour, this thesis addresses the issue of spuriousness in the correlation between

economic welfare and voting behavior in micro-level studies. It is suggested that survey questions on these issues should be linked.

Third, we were able to construct, using household survey data, a regional poverty profile of Ghana for 1989. The existing poverty profile using the available GLSS data (Boateng et al 1990) only presents a profile by geographical region. It was shown that, with the exception of the Greater Accra region, the relatively poor regions were non-export producing and the least poor regions were export producing.

Fourth, this thesis provides an evaluation of the impact of the SAP on rural and urban households in Ghana and provides another level of analysis in the debate on the welfare implications of SAPs: from a "welfarist" perspective where households assess the welfare impact of the SAP. If we assume that people are the best judges of their own welfare, then rural households voted for the SAP (largely because they perceived an improvement in their well-being) in Ghana in 1992 while urban households voted against the SAP (largely because they perceived a deterioration in their well-being). The perceptions of households on the impact of the SAP were found to be very much in line with what may have happened.

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APPENDIX A

SURVEY RESPONSES

Table A.1. Survey Responses for Randomized Response Survey. Combined Sample

Region	One	TWO	THREE	FOUR	FIVE	SIX	SEVEN	Total
G. Accra	31	18	20	35	22	18	26	170
Ashanti	25	18	17	30	21	21	38	170
Eastern	34	19	24	19	30	18	26	170
Central	30	16	23	29	24	20	28	170
Western	30	21	21	23	19	26	30	170
Northern	26	24	21	36	23	16	24	170
U. East	25	26	30	24	16	17	32	170
U. West	22	29	30	23	18	17	31	170
Volta	28	19	23	26	18	19	37	170
B-Ahafo	31	20	24	26	23	17	29	170
Total	282	210	233	271	214	189	301	1700

Table A.2 Survey Responses for Randomized Response Survey. Rural Sample

Region	One	TWO	THREE	FOUR	FIVE	SIX	SEVEN	TOTAL
G. Accra	20	11	11	15	10	11	12	100
Ashanti	16	12	10	18	13	10	21	100
Eastern	23	9	15	11	13	11	18	100
Central	16	9	15	20	14	11	15	100
Western	19	12	15	10	9	11	24	100
Northern	14	16	15	15	13	9	18	100
U. East	18	17	18	11	9	10	17	100
U. West	14	19	23	9	10	11	14	100
Volta	22	11	14	17	10	12	14	100
B-Ahafo	21	13	15	13	13	10	15	100
Total	183	129	151	149	114	106	176	1000

Table A.3. Survey Responses for Randomized Response Survey. Urban Sample

Region	One	TWO	THREE	FOUR	FIVE	SIX	SEVEN	TOTAL
G. Accra	11	7	9	10	12	7	14	70
Ashanti	9	6	7	12	8	11	17	70
Eastern	11	10	9	8	17	7	8	70
Central	14	7	8	9	10	9	13	70
Western	11	9	6	13	10	15	6	70
Northern	12	8	6	21	10	7	6	70
U. East	7	9	12	13	7	7	15	70
U. West	8	10	7	14	8	6	17	70
Volta	6	8	9	9	8	7	23	70
B-Ahafo	10	7	9	13	10	7	14	70
Total	99	81	82	122	100	83	133	700

Table A.4 Survey Responses for ADRT Survey. Combined Sample

	One	Two	Three	Four	Five	Six	Seven	TOTAL
G.Acc	22	8	6	26	12	8	16	98
Ash	14	16	4	24	10	6	20	94
East	26	14	8	16	8	10	10	92
Central	16	20	12	30	10	6	4	98
West	30	8	6	12	4	12	18	90
North	18	14	10	28	2	13	10	95
Upp/East	12	24	6	16	12	6	14	90
Volta	30	7	4	8	10	8	32	99
Up/west	26	12	8	20	6	10	6	88
Br-Ahafo	24	18	16	8	4	2	3	75
Ghana	218	141	80	188	78	81	133	919

Table A.5 Survey Responses for ADRT Survey. Rural Sample

	One	Two	Three	Four	Five	Six	Seven	TOTAL
G.Acc	8	3	4	8	4	3	11	41
Ash	10	9	3	5	6	4	16	53
East	15	11	5	7	6	4	3	51
Central	9	13	8	13	5	2	1	51
West	21	5	3	5	3	9	7	53
North	8	9	3	11	0	5	4	40
Upp/East	5	13	1	9	4	2	2	36
Volta	20	2	1	2	6	2	25	58
Up/west	14	7	2	8	3	5	3	42
Br-Ahafo	18	12	9	3	3	2	1	48
Ghana	128	84	39	71	40	38	73	473

Table A.6 Survey Responses for ADRT Survey. Urban Sample

	One	Two	Three	Four	Five	Six	Seven	TOTAL
G.Acc	14	5	2	18	8	5	5	57
Ash	4	7	1	19	4	2	4	41
East	11	3	3	9	2	6	7	41
Central	7	7	4	17	5	4	3	47
West	9	3	3	7	1	3	11	37
North	10	5	7	17	2	8	6	55
Upp/East	7	11	5	7	8	4	12	54
Volta	10	5	3	6	4	6	7	41
Up/west	12	5	6	12	3	5	3	46
Br-Ahafo	6	6	7	5	1	0	2	27
Ghana	90	57	41	117	38	43	60	446

APPENDIX B

A REGIONAL POVERTY PROFILE OF GHANA

The Concept and Measurement of Poverty

The concept of poverty "is multi-dimensional" (Grootaert and Kanbur, 1990), involving both consumption as well as non-consumption activities. One can define poverty in general terms as a state of deprivation. The question is, deprivation of what? Food consumption, non-food consumption, income, education, freedom, housing, or health care?, to mention a few. Sen (1979) distinguishes between "welfarist" and "non-welfarist" approaches to the measurement of well-being. The "welfarist" approach bases the comparison of well-being on individual utility levels as assessed by individuals themselves and the "non-welfarist" approach, on the other hand, assesses well-being on the basis of criteria (e.g. nutritional attainments or the attainment of rights to participate in society) set by the analyst with very little attention to individual utilities. In measuring living standards, the welfarist approach emphasizes the aggregate expenditure on all goods and services consumed, valued at appropriate prices and including consumption from own production (Ravaillon, 1992). This approach is predicated on the belief that individuals know what is best for themselves. Thus it rules out situations where individual judgments may be suspect either because of misinformation or incapacity for rational choice even with perfect information.

The non-welfarist approach emphasises the complexities involved in the general notion of the "living standard". "... You could be *well off* without being *well.* You could be *well* without being able to lead the life you *wanted.* You could have got the life you *wanted* without being *happy.* You could be happy without having much *freedom.* You

could have a good deal of *freedom* without *achieving* much. We can go on" (Sen, 1987, pp.1).

For Sen, " the value of the living standard lies in the living" (pp.25). Thus it is the set of available *capabilities* of a person to *function* (e.g. to be well nourished or to have a long life expectancy) which is what the standard of living ought to be about.

For operational purposes, Boateng et al (1990) point out that it is useful to have a unidimensional monetary measure of the standard of living. The question is what measure to use. Suggested measures include :

a) Per capita income

Real income is a measure of the command a person has over marketed goods and services. Thus if the rankings over which a person chooses remains constant, increases in real income will lead to increases in utility and hence welfare. It is thus a popular measure in empirical work. However, the variations in income from year to year in many developing countries suggests that (along the lines of Friedman's permanent income hypothesis) income may not be a good indicator of household welfare as indicated by consumption. Also, there is a practical problem of measuring income of the self-employed most of whom are in the informal sector where many transactions are not conducted in cash or go unrecorded. This is particularly so for the rural households who obtain their consumption from common property resources (Nordhaus and Tobin, 1972, Usher, 1973, de Soto 1989).

b) Consumption /Expenditure per capita

The variability of the income measure, as discussed above, makes consumption/expenditure a preferred indicator of welfare. However, given that household size and demographic composition, prices and access to public goods vary, we will still have differences in well-being at given expenditure levels. Equivalence scales are used to normalize consumption across households. For a household of a given size and

demographic composition, an equivalence scale measures the number of adult males which that household is deemed to be equivalent to. There is also the problem of quantifying the value of government provided services. Given the intractability of this problem, a person's standard of living is generally taken to depend on the consumption of privately supplied goods.

In this study, we will use real expenditure per capita as the relevant indicator of the standard of living. This is the about the best indicator afforded us by the data.

Estimating Monetary-Based Poverty Measures

A large theoretical literature has established several desirable properties for poverty measures (see Foster, 1984 for an excellent survey). The measure of poverty should increase when the income of the poor household decreases (the monotonicity axiom) or when income is transferred from a poor to a less poor household (transfer axiom). These criteria imply that one wishes the axiom to take account of the distribution of living standards among the poor, not simply to indicate how many people are poor. It is also desirable that the poverty measure be additively decomposable by population subgroup so that aggregate poverty can be represented as an appropriately weighted sum of poverty levels in the component subgroups of a population.

The three most commonly used measures of poverty are i) the head-count index H, the poverty gap index PG, and the Foster-Greer-Thorbecke (1984) P_2 measure (Ravaillon, 1992).

The head-count index is the proportion of the population with consumption below the poverty line z with q people poor in a population of size n, then the head-count index is:

(1) $H = q/n$

H = 0.3 implies that 30 per cent of the population are deemed poor. Whilst this index is easily understood and communicated, it has as a major drawback, a total insensitivity to differences in the depth of poverty (Sen, 1976). It is unchanged if a poor person becomes poorer.

The poverty gap index gives an indication of the depth of poverty by capturing how far away the poor are from the poverty line. Thus,

(2) $PG = 1/n \sum_{i=1}^{q}[(z - y_i)/z]$ where y_i is the consumption of the ith poor person.

PG = 0.3 implies that the aggregate deficit of the poor relative to the poverty line, when averaged over all households represents 30 percent of the poverty line (Ravaillion and Huppi, 1991) . With a poverty line at $100.00, this will imply that if perfect targeting were possible, we would require 30 dollars per annum per person to fill the gap. A drawback of the PG measure is that it may not convincingly capture the severity of poverty. Consider two distributions of consumption for four persons; A=(1,2,3,4) and B=(2,2,2,4)[1] . For a poverty line of z =3, H = 0.75 and PG =0.25 for both distributions. The poverty gap will be unaffected by a transfer from a poor person to someone who is less poor.

The FGT P_2 measure is a mean of squared proportionate poverty gaps:

(3) $P_2 = 1/n \sum_{i=1}^{q}[(z - y_i)/z]^2$

This measure has the property that an increase in your measured poverty due to a fall in standard of living will be deemed greater the poorer you are. In the above example of A and B distributions, the value of P_2 is 0.14 for A and 0.08 for B, indicating greater severity of poverty in A. This measure is, however, not easy to interpret. for poverty comparisons, however, a

[1]This example is from Ravaillon (1992)

ranking of dates places, or policies in terms of P_2 should reflect well their ranking in terms of the severity of poverty.

Foster et al (1984), in line with the above exposition, suggested a generic class of poverty measures:

$$(4) \qquad P_\alpha = 1/n \sum_{i=1}^{q} [(z - y_i)/z]^\alpha \qquad \text{where } \alpha \geq 0$$

P_α is the mean over the whole population of an individual poverty measure. The head-count index has $\alpha = 0$, while $\alpha = 1$ for PG .

A major advantage of the P_α class is that it is decomposable into sub-groups. If we divide the population into mutually exclusive categories indexed by j = 1, 2, ... , m, and let the P_α measure computed only on group j be denoted for $P_{j,\alpha}$, then if the proportion of national population located in group j is k_j; ($k_1 + k_2 + \ldots k_m = 1$) the national P_α measure is simply a weighted total of the sectoral measures:

$$(5) \qquad P_\alpha = \sum_{i=1}^{m} k_j P_{j,\alpha}$$

The "contribution", c_j , of each category to national poverty is therefore estimated as

$$(6) \qquad c_j , = (k_j P_{j,\alpha}) / P_\alpha$$

Survey measurement errors will tend to underestimate inequality if the rich underestimate their consumption proportionately more than the poor and vice-versa. For the FGT measures PG and P_2 survey underestimation of consumption by the poor will lead to overestimation of poverty. Also, although the rate of inflation is a source of error in estimates of the mean of estimates of real consumption per capita, it affects both the mean and the poverty line and so the measures of poverty remain unaffected.

Data on income distribution are usually grouped and the measurement issue becomes one of constructing poverty measures from such grouped data. Two methodologies are available (Datt, 1992) : (i) Interpolation Methods (ii) Parameterized Lorenz curves.

Interpolation methods (e.g. linear or quadratic) essentially involve fitting a distribution function to the grouped data. Linear interpolation tends to provide relatively inaccurate predictions of the distribution function at selected points whereas Quadratic interpolation suffers the drawback that it gives rise to negative densities when the slope of the distribution function becomes negative (Datt, 1992).

The Lorenz curve shows the relationship between the percentage of income recipients and the percentage of total income they did in fact receive. This curve captures the pattern of relative inequalities in the economy and can be represented as :

(5) $L = L(p; \pi)$

where L is the share of the bottom p percent of the population in aggregate income and π is a vector of parameters of the Lorenz curve. A theoretically valid Lorenz curve must satisfy the following four conditions:

(6) : 1. $L(0 ; \pi) = 0$ 2. $L(1; \pi) = 1$ 3. $L'(0^{+}; \pi) \geq 0$ 4. $L''(p ; \pi) \geq 0$ for $p \in (0, 1)$

The first two conditions are boundary conditions whereas the last two ensure that the Lorenz curve is monotonically increasing and convex. . Different functional forms can be specified in the estimation of Lorenz curves. However, Ravaillon (1992) has argued that the "two best" performers available are the generalized quadratic (GQ) model (Villasenor and Arnold, 1984) and the Beta model (Kakwani, 1980).

The Beta Lorenz curve (Kakwani, 1980) is specified as :

(7) $L(p) = p - \theta p^{\gamma} (1-p)^{\delta}$

where θ, γ, and δ are parameters all greater than zero. The boundary conditions in (6) are automatically satisfied for this functional form. The third and fourth conditions are respectively satisfied for the Beta Lorenz curve when $L'(0.001\ ;\ \theta,\ \gamma,\ \delta) \geq 0$ and $L''(p\ ;\ \theta,\ \gamma,\ \delta) \geq 0$ for $p \in \{0.01, 0.02....0.99\}$.

The various poverty measures discussed above are derived (from Datt 1992) as follows for the Beta Lorenz curve:

(8) $$H = p - \theta H^{\gamma}(1-H)^{\delta}\left[\frac{\gamma}{H} - \frac{\delta}{(1-H)}\right] = 1 - \frac{z}{\mu}$$

(9) $$PG = H - (\mu/z)\, L(H)$$

(10) $$P_2 = (1 - \mu/z)\,[2(PG) - (1 - \mu/z)H] + \theta^2 (\mu/z)^2 [\gamma^2 B(H, 2\gamma + 1, 2\delta+1) - 2\gamma\delta\, B((H, 2\gamma, 2\delta) + \delta^2 B(H, 2\gamma + 1, 2\delta-1)]$$

The Gini-Coefficient (an inequality measure) for the Beta Lorenz curve is derived by Datt (1992) as:

(11) $$G = 2\theta B(1 + \gamma, 1 + \delta)$$

The GQ Lorenz curve (Villasenor and Arnold, 1984) is specified on the other hand as:

(12) $$L(1-L) = a(P^2 - L) + bL(p-1) + c(p-L)$$

or

$$L(p) = -\frac{1}{2}\left[bp + e + (mp2 + np + e_2)1/2\right]$$

where $e = -(a + b + c + 1)$

$m = b^2 - 4a$

n = 2be-4c

The first two conditions in (6) are satisfied when $e < 0$ and $a + c \geq 1$. The third condition is satisfied when $c \geq 1$ and the fourth is satisfied when $m < 0$ or

$0 < m < (n^2/(4e^2))$, $n \geq 0$

The various poverty measures are derived as follows for the GQ curve:

(14) $H = -\frac{1}{2m}[n + r(b + 2z/\mu)\{(b + 2z/\mu)2 - m\} - 1/2]$

where, $r = (n^2 - 4me^2)^{1/2}$

(15) $PG = H - (\mu/z)\, L(H)$ and

(16) $P_2 = 2\,(PG) - H - (\mu/z)^2[aH + bL(H) - (r/16)\ln(\frac{1 - H/s_1}{1 - H/s_2})]$

where, $S_1 = (r - n)/(2m)$

$S_2 = -(r + n)/(2m)$

The Gini-coefficient for the GQ Lorenz curve is derived by Datt (1992) as :

(17) $G_2 = \frac{e}{2} - \frac{n(b+2)}{4m} + \frac{r_2}{8m\sqrt{-m}}\left[\sin{-1}\frac{(2m+n)}{r} - \sin{-1}\frac{n}{r}\right]$

if $m < 0$ and $a + c \geq 1$

or

$$= \frac{e}{2} - \frac{n(b+2)}{4m} - \frac{r_2}{8m\sqrt{m}}\ln\left[abs(\frac{2m+n+2(a+c-1)\sqrt{m}}{n-2e\sqrt{m}}(\ )\right]$$

if $m > 0$ and $a + c \geq 1$

The GQ model has as a major advantage, its computational simplicity. While all the poverty measures for the GQ model are readily calculated using a simple regression program, with the Beta model the estimation of H requires solving an implicit nonlinear equation and the estimation of P_2 involves evaluating incomplete Beta functions as shown in (Datt, 1992). We can choose between these two parameterizations of the Lorenz curve on the goodness-of-fit criterion such that the preferred parameterization is the one that yields a lower sum of squared errors up to for example, the estimated headcount index. Datt (1992) proposes a τ-statistic:

$$\tau = \sum_{i=1}^{k} (\hat{L}_i - L_i)^2 \qquad \text{where} \qquad k = [k \backslash \sum_{i=1}^{k-1} p_i \leq \hat{H} \leq \sum_{i=1}^{k} p_i]$$

Empirical Implementation

Monetary-based Poverty Measures for Ghana; 1989-90

In this section, FGT poverty measures are obtained by estimating Parameterized Lorenz curves (as illustrated in the appendix). This follows the methodology employed by Boateng et al. (1990) in estimating monetary-based poverty measures for Ghana. Unlike that study which estimated a poverty profile based on 1987/88 household survey data, we estimate a poverty profile using 1989/90 household survey data. Also, we will estimate poverty measures for the various administrative regions (the Boateng et al. study estimated measures for ecological zones). Three indices of poverty are estimated : a headcount index (P_0), a poverty gap index (P_1) and a severity of poverty index (P_2).

The data set

We use data from the Ghana Living Standards Survey (GLSS, 1989/90). The GLSS data provides records of household expenditures on food, and non-food items. The 1987-89 data is equivalence scale adjusted. These data sets provide a regional distribution of household expenditure as well as a rural-urban distribution. The 1989 survey canvassed a nationally representative sample of about 3,200 households across approximately 200 enumeration areas stratified by urban/regional and by ecological zones. A household is defined as "a group of individuals who live and eat together for a period of at least nine months of the year preceding the interview" (World Bank, 1988).

Accepting that the choice of poverty line will inevitably be arbitrary, we will follow Kanbur (1988) and Boateng et al (1990) and in choosing given fraction (2/3) of the mean per capita household expenditure. The poverty line for rural/urban households was set at 66,592 cedis (1987 constant prices). Rural and urban household expenditures were adjusted for differences in rural and urban price indices. The results are shown in Table 3.1 from which we can see that 49% of Ghanaians are estimated as poor in 1989. There is a regional dimension to poverty, however, with 67% of rural residents designated as poor as compared to 41% of urban residents. There are however considerable variations in the levels, extent and severity of poverty across regions. Using the estimated P_0, P_1 and P_2 indices from Table A.7, we can obtain rankings of various regions from least poor (1) to most poor (10). Table A.8 shows the rankings for 1989.

For 1989, regional ranking by the three poverty indices indicate a similar (but not exact) ranking of regional poverty in Ghana. The five least poor regions are Greater Accra, Ashanti, Western, Eastern, and Brong-Ahafo while the five most poor include Upper West, Northern, Upper East, Volta and Central. The P_1 and P_2 indices consistently rank the Greater Accra (Upper West) region as having the least (most) depth and severity of poverty in Ghana. The P_0 index on the other hand presents a quite different regional ranking order with more households in the Volta region, for example, poorer than households in the Northern and Upper West Regions..

Table A.7. Indices of Poverty in Ghana. 1989

Region	Total			Rural			Urban			Gini%
	P_0	P_1	P_2	P_0	P_1	P_2	P_0	P_1	P_2	
Greater Accra	25.85	6.90	2.43	37.31	10.73	3.72	22.73	5.99	2.14	59.10
Ashanti	50.87	22.89	12.53	51.25	27.64	16.58	47.79	19.12	9.35	57.52
Brong Ahafo	50.92	21.96	11.56	53.21	25.12	14.32	47.57	20.24	10.30	55.91
Central	54.70	23.67	12.55	56.82	24.58	12.90	52.78	23.07	12.43	58.65
Eastern	43.39	19.11	10.41	50.36	23.24	12.20	39.06	17.91	9.95	78.31
Northern	59.69	30.15	18.38	60.44	31,46	23.22	53.01	27.46	16.79	69.18
Upper East	64.44	31.52	18.26	73.54	35.91	20.65	56.41	12.21	5.39	62.46
Upper West	57.67	33.27	22.73	65.38	35.83	23.49	52.80	22.13	13.93	61.22
Volta	60.13	27.60	15.49	70.66	33.09	18.84	50.39	22.04	11.71	61.17
Western	37.10	12.32	5.17	34.31	14.05	6.96	39.28	11.71	4.49	48.38
Ghana	48.82	20.31	10.62	67.10	31.01	17.23	41.08	15.98	7.86	58.34

Source: Author's calculations.

Table A.8. Regional ranking by Poverty Index. 1989

Ranking	P_0	P_1	P_2
1	Greater Accra	Greater Accra	Greater Accra
2	Western	Western	Western
3	Eastern	Eastern	Eastern
4	Ashanti	Brong-Ahafo	Brong-Ahafo
5	Brong-Ahafo	Ashanti	Ashanti
6	Central	Central	Central
7	Upper West	Volta	Volta
8	Northern	Upper East	Northern
9	Volta	Northern	Upper East
10	Upper East	Upper West	Upper West