

**THE IMPACT OF WORLD BANK AND INTERNATIONAL
MONETARY FUND PROGRAMME LENDING ON HEALTH
CARE DELIVERY, HEALTH CONDITIONS AND HEALTH
STATUS IN SUB-SAHARAN AFRICA: 1980 TO 1992**

Christopher J. Evans

**A Thesis Submitted for the Degree of PhD
at the
University of St Andrews**



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Andrews



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Abstract

The World Bank and the International Monetary Fund have been active in Africa for several decades. In the early 1980s both institutions expanded the role that they play in the restructuring of African economies through the introduction of structural adjustment loans. These programme loans sought to provide the basis for sustainable economic expansion following a period of near economic collapse in the region. In the case of the Fund, public expenditure reducing and expenditure switching policies were encouraged. The Bank, also, was active in these areas and focused on long-term measures to restore efficiency to the ailing economies. These policies, although not novel, were implemented on a large scale were perceived to have a pervasive influence on the economic and social performance of African countries.

It was theorised by some that such programme lending would have a long-run beneficial impact on social development. However, other authors, observers and researchers have criticised the activities of the Bretton Woods institutions. First, the loans have been heavily criticised in the past for the supposedly heavy handed nature that Bank and Fund staff use in implementing their programmes. The main idea is that the institutions have too much leverage when bargaining with African governments to undertake reforms. Second, it has been said that the use of programme loans will have adverse consequences for national welfare. UNICEF, the main critic, has pointed out, and provided evidence, to indicate that vulnerable groups in society may suffer under adjustment schemes.

This thesis looks at the areas of macroeconomic reforms and the impact that they may have on one part of the social area: the health sector. The thesis examines the pre-adjustment situation in Sub Saharan Africa and reviews the role and the tools that the Bank and the Fund have at their disposal to tackle economic problems. The thesis then moves on to explore the linkages between these policy weapons and changes in health care development. In order to fully understand the implications for Africa considerable attention is devoted to exploring the health problems that the region faces and the health care delivery systems and health conditions that are prevalent in many of the countries. The last part of the thesis provides an aggregate study and a case study analysis of the impact of adjustment in Africa. Although, it is determined that the impact, overall, has not been unfavourable, recommendations for the future design of adjustment programmes is offered in the conclusion.

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Chapter 1

Introduction

The impact of economic development on improvements in health status or health conditions is not easy to quantify. This is for several reasons. First, the relationship between development and changes in health status is not in a one way causal direction. Economic development and health status changes are more properly thought of as acting synergistically. Improvements in health status depend upon what is occurring on both macro and micro levels. Changes in national economic performance can offer the opportunity or may impede improvements in individual or household health status. For instance, as economic development increases, in the aggregate, the incomes of householders rises and the additional income obtained by householders may be spent directly on health improving activities such as the purchase of provider care or the consumption of nutrients deemed to be beneficial for improving health status. Indirectly, increases in incomes may be spent on improving the health conditions or the environment that surrounds individuals. Money may be spent on improving household stock or on the installation of water, sanitation and sewerage facilities.

Moreover, increases in national income offer the opportunity for governments to increase tax revenues. Such increases may be spent on improving and increasing health services or in providing improvements in health conditions. These improvements may take several forms. For instance, in the health services, the number of doctors may be increased, which may serve to improve health status in

urban areas but not in rural areas. Health conditions might be improved if additional revenue can be directed to improving water quality or in improving roads which would be beneficial to urban and rural groups. On the other hand, changes in health status are likely to affect economic development through increases or decreases in worker productivity.

However, this is not meant to suggest that improvements in economic development will necessarily lead to positive or large improvements in health status. For instance, increases in income may not be spent on health improving activities, but may be squandered on other consumption goods that do little to improve health status. Indeed, and most obviously increases in GNP per capita mask the distributional aspects of development. As GNP per capita is simply calculated by dividing GNP by the population of a particular country in a particular year, it is possible that a small portion of the population is reaping the benefits of growth in income, while a large segment of the population is experiencing little change in their welfare. A further problem arises to the extent that there is little information available about household activities in developing countries. Even if increases in national income were spread evenly in a country, it is possible that some households may prove more adept at apportioning the increased income in such a way as to maximise improvements in health status, while some households may choose to spend the extra income in a way so that the lifestyle of one family member is enhanced at the expense of other family members. For instance, income may be controlled by the senior male in a family. If he chooses, in the extreme, to gamble or drink or otherwise waste the family's budget there is likely to be no improvement in the health status of other family members.

But, in general, improvements in economic performance are hypothesised to lead to improvements in health status. However, there are enough exceptions to make one weary of forming a rule or recommending policy changes based on such evidence. Two effects appear to work simultaneously in this area. For instance, life expectancy at birth has been demonstrated to increase with national income. However, there is an effect quite independent of changes in national income. It has

also been shown that life expectancy at birth increases approximately every thirty years irrespective of income level. Similarly, infant and child mortality rates have been shown to decline with increases in national income. Yet, there are several countries that do much worse or much better than expected on health status indicators based on evidence regarding their gross national products.

Nonetheless several international agencies have taken a rather axiomatic approach to health care development in African countries. The International Monetary Fund, and to a lesser degree the World Bank, treat economic progress as the key to improving the health status of millions of people in African countries. The line of reason taken by the Fund is that poor economic policies formulated by national bureaucrats are the main reason that Africa has failed to make sufficient progress on social indicators. In the view of the Fund staff, national governments have failed to emphasise agricultural growth, instead favouring inherently flawed industrialisation strategies. In addition, direct government ownership of industry or control of agricultural marketing boards has led to several managerial and technical inefficiencies. Moreover, governments have tended to favour overvalued exchange rates, which benefit national elites, over-use of subsidies which are mistargeted, and allow inflation to reach uncontrollable levels. The advice offered by the Fund concentrates on offering a firm anti-inflationary stance, the promotion of a realistic exchange rate, reform of public enterprises and the liberalisation of the economy. Once these reforms are made then the foundation for sustained economic growth has been established. This foundation becomes the precursor to social improvements.

The Bank operates under much the same ideological orientation. However, the emphasis on causes and possible solutions is different. For instance, the Bank recognises that internal problems are a major factor in the poor performance of African economies. However, the Bank notes that exogenous shocks can hurt African economies in the short run. In addition, the Bank, in recent years, has conceded that economic reforms, even where improving the overall economy are likely to have adverse consequences for different sectors of the economy, and on different income

and occupational groups. Thus, the Bank promotes alongside traditional economic reforms, such as tariff reform and export incentives, tax reforms, public expenditure control and the removal of price controls, the promotion of social safety nets that should mitigate against the adverse effects of reform programmes. This idea, which is more closely associated with UNICEF has been termed "Adjustment with a Human Face" (Cornia, Jolly and Stewart 1987). The main notion is that economic reforms and social advances need not be mutually exclusive. Both may be pursued simultaneously and the twin benefits of growth and health care development may be achieved as long as the policy mix is correct.

Such economic reforms promoted by the Bank and the Fund have been lumped under two main headings: stabilisation and structural adjustment. Stabilisation policies are run by the IMF while structural adjustment programmes are mainly pursued by the Bank and more recently jointly with the Fund. There are two central problems associated with stabilisation and structural adjustment policies. First, the question arises as to whether they are effective tools in promoting economic growth. The second issue relates to the way they are promoted in developing countries.

Conditionality has always been the most contentious issue surrounding Fund and Bank lending. Several authors, as well as many African governments, take the view that the two institutions take a heavy handed approach to policy based reform. The critique is that in return for financial assistance — assistance that cannot always be obtained from other sources — African governments and other developing countries are required to undertake severe economic reforms, often bordering on shock treatment, in the short run. The governments facing these reforms are doubly critical in so far as they view that the reforms as being imposed upon them instead of being agreed upon in advance through a consensus based procedure. The use of conditionality is further derided in that it has been hypothesised that growth promoting reforms may in fact lead to a deterioration in living standards.

The degree and length of such a decline is subject to dispute. Bank staff believe that economic reforms will only have a temporary or frictional impact on the

social sector. Moreover, this transitional stage will not hurt all groups in society equally. Some groups will benefit while others will become relatively worse off. However, the impact is not clear cut. For example, a devaluation, probably the most powerful tool at the disposal of national governments, sends powerful signals, amongst other things, to labour markets. Labour markets will adjust in favour of tradable activities at the expense of nontradable activities. However, if labour is relatively immobile or there exist other structural factors that work to prevent the expansion of the tradable sector then unemployment might actually increase in both sectors. However, this may not be the actual outcome as employment may increase in informal sector activities. Yet, again, reliance on the informal sector to mop up excess employment in the formal sector may only serve to drive down wages (incomes) in informal activities. Thus, the net effect will not always be positive; instead dependent on the unique situation of individual African economies and the mix of policy reforms utilised.

The income changes, and price changes, as well as alterations in physical and social infrastructure, will, it is believed, have an impact on health status, health care delivery and health conditions. For those individuals who are fortunate to face declines in the prices that they pay for goods and services and increases in incomes it is reasonable to assume that health status will improve, and those that face the reverse situation the opposite is likely to transpire. For those individuals that face a mixed situation; concomitant increases in prices and decreases in incomes, the situation is not clear at all. For these individuals the net change in health status will be dependent on the relative strength of the changes as well as any additional offsetting mechanisms available to families. These offsetting factors may take the form of changes in government health care provision or survival mechanisms deployed by the family. Such coping strategies may take the form of seeking additional employment, increasing the household labour supply, reliance on extended family networks and friends for support, or the switching of health care providers from expensive to cheaper ones.

This thesis explores the relationship between macroeconomic reform and changes in health status, health conditions and health care delivery. The aim of this thesis is to investigate the linkage between the reforms sponsored by the IMF and the World Bank and health care development in Sub Saharan Africa. This thesis does not attempt to provide a cause and effect explanation, but aims instead at providing a reasoned explanation as to how health care delivery, health conditions and health status alter during periods of macroeconomic reform.

More specifically, Chapter two of this thesis provides a background to the economic, political and social crisis in Africa from the 1970s to the early 1980s. The chapter makes the distinction between external and internal causes for economic collapse and structural factors which work to inhibit the growth of African economies. The chapter provides an examination of the demographic characteristics of Africa and trends in their development. The economic situation is then explored to highlight the reasons for continued stagnation. For instance, it is shown that the agricultural sector despite being the largest area of economic activity for the African labour force continues to remain the Achilles heel to future economic progress. In addition, the performance of the manufacturing sector is reviewed to show that the progress has been extremely slow and overall the development of industry remains far behind other regions. Chapter two concludes with a broader account of the factors that have worked to keep Africa from obtaining substantial positive growth rates. Amongst these factors are exogenously generated problems related to oil price increases and interest rate rises, and internal conflict caused by political instability and differences in religious convictions.

Having established the basic framework for analysing the crisis in Sub Saharan Africa chapter three focuses on the activities of the World Bank and the International Monetary Fund. The chapter begins with a brief description of the history and the philosophy of the Bretton Woods institutions. This is done in order to show how the approach of the institutions to developing countries differ in important respects, however it is shown that in recent years that activities of the Bank and the

Fund have become similar even though the distinction between global development bank and a multilateral body concentrating on exchange rate and balance of payments support remains in place. The second section of chapter two provides a glimpse into the workings of the institutions. Decision making, membership, financing and assistance to developing countries are examined. In this section considerable attention is paid to structural adjustment facilities run by the Bank and the Fund. The chapter then moves on to a comprehensive discussion on the criticisms directed at the Bank and the Fund. The focus of this criticism is towards the policy of conditionality: the provision of concessional finance in return for a promise to undertake substantial policy based reform by borrowers. The most common critiques are reviewed and an analysis is performed to determine the relative merits of the arguments. Chapter three concludes with a review of the literature that deals with the effectiveness of World Bank and IMF programme lending on improving economic variables and providing the framework for substantial and continued economic growth.

Chapter four lists the main tools used by the Bank and the Fund and African governments to promote economic reforms. The linkage between macroeconomic reform to labour and product markets, government investment and infrastructure are established in order to show the theoretical impact that adjustment measures will have on the population of Africa. In addition a poverty typology is established in order to show that different groups in society will likely be affected differently in the face of similar adjustment measures. Amongst the areas examined are exchange rate reform, budget and public expenditure control, fiscal policy changes and trade policy reform.

In chapter five of this thesis the discussion turns to the health care delivery system, the health conditions prevalent in Africa and the health status of the population. The discussion on health status is in terms of African specific health problems and as a comparison of health problems within the region and between other developed and developing regions. The health care delivery system is then examined. The familiar pattern of urban-based curative care is examined and a review of the more recent initiatives at rural-centred, non-technical interventions is also provided.

The continuing controversy surrounding the 'right' health care delivery system is also analysed. Given that much of, but not all, of the problems surrounding the health care delivery system in Africa can be traced to underfunding of the social sector, recent initiatives in health care financing reform are reviewed. The impact that this may have, as well as other factors, on utilisation is then examined.

Chapter six aims to bring together the elements reviewed in chapters two through five and relate them to changes in household welfare. The chapter starts with the elements apparent in a household or individual health production function and the utility function of households. The chapter, having established that the reduced-form demand equation for health depends on prices of food goods, non-food goods, the price of health care, wages, the health environment and other factors, examines how changes in any of these variables may influence health status. For instance, this chapter will show how increase in the price of food may hurt nutritional status. The chapter also shows that the linkages between macroeconomic reforms to health status changes is by no means clear. In essence there may exist several ways for households to offset one or several health threatening changes with one or more offsetting mechanisms. In addition, macroeconomic reforms may not work in one direction only. For instance, it is possible that reforms may simultaneously increase the price of health care provision while at the same time drive down the prices of some of the basic goods consumed by households. The limitations in this approach is then examined and intrahousehold behaviour is reviewed. This discussion concentrates on how household autonomy, control and budget allocation may be important factors in influencing health status. In addition the importance of education, especially for women, is examined.

Chapter seven moves on to an original analysis of the impact of adjustment on health care development. The chapter begins with an analysis of the previous studies done on the impact of Bank and Fund reforms on health status. The weaknesses of these studies are pointed out as are their strengths. The second part of the chapter aims to improve upon the previous studies both in comprehensiveness and in

methodology. In this chapter countries are compared on the basis on control and non control pairings. That is countries that have undertaken adjustment programmes in Africa will be compared with other African countries that have not undergone economic reforms sponsored by the Fund and the Bank. Furthermore, countries are not merely matched in terms of adjusters and non-adjusters, but are matched according to GNP per capita in 1981, average annual growth rate prior from 1970-1981 and the distribution of GDP to agriculture. Once the matches have been established the chapter proceeds to analyse the performance of the adjusters relative to the non-adjusters in terms of the conventional before-after approach and the with-without approach. This is done against data on government support for the health sector, health care delivery indicators, such as immunisation of infants and population per physician ratios, health condition indicators, information on nutrition status, and indicators on life expectancy and infant mortality rate, and data on education enrolment. The chapter concludes with a summary of the main findings and shows how this analysis differs from previous studies.

Chapter eight moves away from a regional analysis of the impact of adjustment on health care development and focuses on one country. The case of Ghana's adjustment from 1983 to the present is examined to determine how health status, health conditions and health care delivery have held up in a time of economic reform. In common with chapter seven, the before-after and with-without approaches are taken. However, this chapter differs in that it also examines how prices and incomes have changed during the adjustment period. Moreover, the chapter makes more explicit the short term impact of adjustment on health care development by breaking Ghana's reform programme into two stages: the transition period from 1983-86/87 and 1988 to the present. The chapter concludes with a commentary about adjustment in this west African county and offers some explanations as to why the programme has been successful in some areas and failed in other areas.

Chapter nine is the conclusion of this thesis. It takes a broad approach to the question of adjustment in Sub Saharan Africa and offers some recommendations as

well as caveats about the design and performance of World Bank and IMF sponsored programme lending as relates to health care development.

Chapter 2

The Crisis in Sub Saharan Africa

2.1 Introduction

The process of decolonization of Sub Saharan Africa began in 1957 and has continued through the 1980s. The prospect for the region looked good during the 1950s. African governments were optimistic about the future, and they began to make slow, and sometimes uneven, progress in economic and social development. However by the mid and late 1970s the countries in the region began to show worrying signs that economic growth and social advances were not sustainable. As Sub Saharan Africa embarked on the 1980s it was confronted with many of the problems familiar to it; inferior soils and harsh, fluctuating climates that led to droughts and poor harvests, low levels of investment in human capital and physical infrastructure, persistent poverty and unrepresentative and corrupt governments. However, what made the 1980s a noteworthy decade in African history is the scale of the problem and the novelty and pervasiveness of the solutions brought to bear on the region.

In recent years it has become common to talk of the 1980s in Africa as the lost decade for development. Sub Saharan Africa is viewed as unique amongst nations in that economic and social progress has, at best, been slower than in other countries and in many cases previous advances have been wiped out altogether. The problems that face Africa are complicated and there are two schools of thought that predominate discussions on Africa. The first view is that the current crisis in Africa is an offshoot

of poor national planning with its roots in flawed internal political and economic policies (World Bank 1981b, Demery and Addison 1987 and De Rosa 1991). The second holds that the problems that face the region arise from the global economic system (Ghai and Hewitt de Alcantara 1991; Svedberg 1993 and Tarp 1993).

The World Bank, in the Berg Report (World Bank 1981b), noted that the cause of Africa's poor performance was rooted chiefly in poor economic policies that relied heavily on state control of the agricultural and industrial sectors and reliance on over optimistic national development plans. These endogenous factors included lax and inappropriate fiscal and monetary policies that led to high taxes on exports and overvalued exchange rates. Price distortions, state enterprises that were run inefficiently (if they should be run by the government at all), inappropriate (excessive) protection policies and excess foreign borrowing were also viewed by experts as unsustainable policies that would not create the prospects for future growth. In addition, internal conflicts, wars with other countries and corruption have also played an important role in contributing to the poor economic and social performance of African countries.

Although, previously, the IMF and, to a lesser extent, the World Bank, approached Africa from the point of view that the crisis there was caused by problems of domestic mismanagement, there has been an increasing awareness that much of the problems were caused by external shocks. As Helleiner (1990, 107) notes:

[While] mutual interaction and cumulative processes frequently render it difficult to disentangle the separate impacts of [domestic and external] influences...there is no disagreement however, with the proposition that several external shocks have imparted heavy blows to the balance of payments and growth, and created problems of macro-economic management for all of the non-oil developing countries.

This is the notion that if problems in a nation's economy are rooted in domestic factors then the country should bear the burden of adjustment. If the disturbance is caused externally then the burden should be assumed by Western governments or by the UN system. But this brings into question what is to be considered an external factor and an internal factor. To wit, acts of nature, such as

floods and droughts, occur within a country but cannot truly be said to be generated there. Similarly, increasing the supply of exports may be hindered internally by marketing boards or it may be due to a genuine fear that industrialised countries will limit exports through protectionism.

Taylor (1988, 20) expands on this idea that Africa's performance is intertwined and, to an extent, dependent to that of developed countries. He views interest rate increases in the North as leading to a contraction in growth in the South because it increased amounts owed on floating rate debt. Furthermore, recession in the 1980s in developed countries lead to a reduction in demand for exports from Africa; especially in the area of agricultural products and minerals. For example, Svedberg (1993, 23) notes that Sub Saharan Africa's share in primary commodities markets for sugar, timber, cotton, copper, cocoa beans and coffee declined between 22 and 38 per cent from 1970-1988 and the market for vegetable oils declined by 85 per cent during the same period. The retrenchment in foreign aid and the withdrawal of large private multinational banks are seen as further explanation of the decline of Africa (Taylor 1988, 20).

It is against this backdrop that the World Bank and The International Monetary Fund rose to an unprecedented degree of prominence in the economic, political and social affairs of Africa. Given that past economic recommendations were viewed as failures these two institutions increased the role that policy based lending plays in the reform of ailing economies.

This chapter examines this crisis in generalised terms; the demographic characteristics, the nature of the African economy, problems in food production and dependence on external assistance. In doing so it loses some of its specificity. A region composed of so many different nationalities, cultures, historical traditions, and geographic and climatic conditions is not likely to fit into a neat category. For instance, countries in the Sahelian belt and the Horn of Africa are subject to a greater degree of uncertainty in their weather patterns than other Sub Saharan countries, and countries within the Franc Zone, with their pegged currency arrangement, have ceded

some of their control over monetary and exchange rate policies. In short, the economies and political conditions of Africa, as elsewhere, differ considerably.

However, that disclaimer made, the countries of Sub-Saharan Africa share several common characteristics and face many of the same problems — in broad terms, and in understanding the underlying trends and prospects for the region, the following discussion will provide a useful background. Although if one country was examined in light of the following discussion many exceptions would undoubtedly be found.

However before preceding directly to the problems facing the region two more potential problems need to be discussed. First, data on Sub Saharan Africa is notoriously unreliable. Often there are substantial gaps in countries' data and the presence of a large unrecorded informal sector means that a degree of caution is advisable when examining the record of the regions performance. The volume of subsistence production is only ever a subjective estimate. Bernstein (1991) emphasises this point with respect to food production, when he reports that in many Sub Saharan countries food production is only known within a broad range of plus or minus twenty per cent. Per capita estimates suffer from the problem that total populations are not known with certainty. Occasionally population estimates have had to be scaled up, as in the case of Ethiopia, which moved from 35 million to 42 million in 1984 (O'Connor 1991, 8) and Nigeria whose population was scaled down considerably in the early 1990s. Second, this chapter concentrates on the more recent causes or contributing factors to the current crisis in Sub Saharan Africa. The colonial legacy is not considered. Although colonialism has no doubt played an important role in the (under) development of Africa, its effects are beyond the scope of this thesis.

2.2 Demographic Characteristics

Sub Saharan Africa¹ with 489 million people, is the most underdeveloped region in the world. The crude death rate and birth rates in Africa are higher than in any other region. In Sub Saharan Africa the crude birth rate was 46 per 1000 population in 1991, while in the next worst region, the Middle East and North Africa, it was 38 per

1000. In OECD member countries the figure was only 13 per 1000. The crude death rate was 16 per 1000 population in Africa in 1991. In South Asia, the next worst region, it was only 11 per 1000. The total fertility rate, which represents the number of children that would be born to a female provided that she survived to the end of her childbearing years and had children consistent with age specific fertility rates, is also the highest of any other region (World Bank 1993). Although some other regions have seen substantial declines in their fertility rates, Africa's rate has remained high and constant: in 1970 the rate was 6.6 by 1991 this had only fallen to 6.4. Life expectancy at birth is 51 year as compared to 68 years in Latin America and the Caribbean and in East Asia and the Pacific and 70 years in Europe and Central Asia.

A lack of concern by national governments in previous decades, and the desire of parents for a large number of children to work in order to support the household and provide a social security net in their old age has led to a rapid increase in population during the 1980s. The age structure of the population in Africa supports this fact. Nearly half of the total population is under 15 years old. Moreover, there is no major variation from this figure for any African country. This age structure has important implications for services as increasing burdens are placed on the social sectors by the young.

Although infant mortality rates have been decreasing continuously in the region, they remain high relative to other developing regions. This factor explains why population has expanded so quickly given that fertility rates have remained constant. The regions annual growth in population, one of the highest in the world, is 3.1 per cent for the period 1980-1991. Population in the region currently doubles approximately every 21 years. The increase in population in the region, obviously, means that per capita income growth will remain minimal, if at all. In addition, it can stifle future economic prospects, it can lead to degradation of the natural environment (which in turn can lead to a scarcity of fuel woods), and can put pressure on already inadequate health and education services, and drive down wages (World Bank 1986a, 3). There is an assumption by the World Bank (1986a) that birth rates will eventually

decline in the region if they follow the same path as other regions. The model based on demographic transition, where birth rates decline following increasing prosperity may not be applicable to the region. O'Connor (1991, 48) remains sceptical if this will occur in this century.

Sub Saharan Africa contains 9.1 per cent of the total world population. The area of the region comprises 23,066,000 square kilometres or 20.7 per cent of the world total. This makes Sub Saharan Africa the most sparsely populated region in the world with relatively low population density. However, although there are several areas that are under populated there also exists areas of high population density and, consequently, population pressure. The main nodes of population in Sub Saharan Africa are central Ethiopia, inland areas around the Gulf of Guinea from Côte d'Ivoire to Cameroon, Rwanda-Burundi and areas surrounding Lake Victoria (Grigg 1985, 138 and Griffiths 1994, 26). The Zaire/Zambia copperbelt also contain high levels of urban population (Griffiths 1994, 26). Several portions of the region are for all practical purposes uninhabited: the Sahara, Kalahari and Namibian deserts. Population pressure in high density areas is relieved somewhat by outward migration. From Rwanda and Burundi people move North into Uganda (Griffiths 1994, 26). From 1970, at least, there has been a high level of rural-urban migration (ECA/ATRCW and ILO 1990, 186). Approximately 29 per cent of the population lives in urban areas, as compared to 16 per cent in 1970.

The average annual growth rate of urban population has been nearly six per cent from 1970-1991. This represents the second highest growth rate in the world next to East Asia and the Pacific. Several African cities have seen major increases in urbanisation following independence. Botswana, Tanzania, Mozambique and Swaziland saw urban growth rates balloon to ten per cent per annum from 1970-1990. Where urbanisation has been pronounced it has tended to be heavier in capital cities. One third of all urban population is located in African capital cities. Conkery, Dakar, Dar es Salaam, Harare, Kampala, Lomé, Luanda and Maputo account for more than

50 per cent of the total urban population of their countries respectively (Griffiths 1994, 160).

2.3 Economic situation

The total GDP of Sub Saharan Africa in 1991 was only \$164 billion (World Bank 1993). This is approximately equal to the GDP of Austria. The average annual per capita income for the region is \$350 (1991 dollars) as compared to \$2,390 in Latin America and the Caribbean and \$21,530 for OECD members. However, per capita income is a crude measure to use as it does not capture the inter-regional distribution of this paltry level of income. For instance, the low-income countries of Sub-Saharan Africa had, in 1980, a per capita income of only \$239 compared to \$3,155 for upper-middle income countries in the region. Generally, the poorest countries are in the Sahel and the Horn with poor natural resources or countries ravaged by war: Liberia, Sudan, Somalia, Uganda, Ethiopia, Rwanda, and the poorest country, Mozambique. Due to the high level of unemployment and underemployment 7 out of every 10 Africans, in 1980 was either "destitute" or near the poverty line (UNECA 1983, 8).

Some countries in the region have fared relatively well during the crisis years. Botswana, an outstanding example, due mainly to its mineral resources, has weathered the crisis and has been able to boast of an average annual growth rate of GNP per capita of 5.6 per cent from 1980-1991. This points out that it is possible to have favourable shocks. That is, a temporary windfall for an increase in the price of an export, say due to a bumper harvest. But, even here, the picture is not completely beneficial. Although the increase in the price of the export will increase tax revenues and encourage bank lending, this could in the long run lead to more being spent on imports, a bloated government and higher indebtedness. This occurred in Kenya and Côte d'Ivoire when export prices collapsed (Killick 1993, 41). However, the majority of countries have shown declines in per capita GDP over the same period. Table 2.2 outlines the differences in per capita GDP growth rates in Sub Saharan Africa. Thus, the main characteristic of almost all Sub-Saharan African countries during the 1970s

and early 80s has been the low or negative levels of growth and population growing faster than output growth (Table 2.1).

Table 2.1. Growth Rate of Per Capita GDP for 35 Sub Saharan African Countries

Average Annual growth rate of per capita GDP 1980-1991	Countries with populations of			
	0-5 million	5-10 million	10-20 million	Greater than 20 million
Greater than 2 %	Botswana Cape Verde Equatorial Guinea Cape Verde	Chad		
1-2%	Guinea Bissau	Burundi Burkina Faso		
0-1%		Malawi Senegal		Kenya
0- -1%	Benin Congo The Gambia Lesotho	Mali Zimbabwe	Cameroon Ghana Mozambique	Tanzania
-1 - -2%	CAR Comoros Mauritania Namibia Sierra Leone Togo			Ethiopia
Less than 2%	Sao Tome & Principe	Niger Rwanda	Côte d'Ivoire Madagascar	Nigeria

Source: World Bank (1993)

Table 2.2. Economic Indicators for Sub Saharan Africa (percentage)

Indicator	1970-1980	1980-1991
Average Annual Growth Rate GDP	4.0	2.1
Average Annual Growth Rate of GNP per capita	0.5 ^a	-1.2
Average Annual Growth Rate of Agriculture	1.5	1.8
Average Annual Rate of Inflation	13.9	18.4
Average Annual Growth of population	2.8	3.1

Source: World Bank (1993 and 1985); ^a figure is for the period 1973-80, World Bank (1989).

2.3.1 Agriculture

Agriculture has been characterised as the Achilles' heel to future economic progress in Sub Saharan Africa (Eicher 1990, 503). The exploitation of the land and its resources

play the dominant role in Sub Saharan Africa. Although the soils are mainly poor, except in the major rift valleys, the use of fertilisers and pesticides low compared to other regions, the use of capital equipment limited in favour of hoe, machete and oxen and the climate subject to wide fluctuations, agricultural activities are the main source of employment and foreign exchange.

Eventhough the contribution of agriculture to GDP is only 31 per cent, approximately 60 per cent of the labour force is engaged in agricultural activities (Table 2.3). This suggests that, overall, productivity of the agricultural labour force is low. However, this pattern is not true to all of Sub Saharan Africa. Mozambique's agricultural share of GDP is 64 per cent and Tanzania's 60 per cent, while Kenya's share is 27 per cent and Lesotho's only 14 per cent.

Table 2.3. Percentage of Labour Force Engaged in Economic Activity in Sub Saharan Africa

Sector	1965	1981
Labour force in agriculture	70	60
Labour force in industry	11	16
Labour force in services	19	24

Source: World Bank (1985a)

The proportion of women in the agricultural labour force is higher than that of men except in Ghana, Burkina Faso, Rwanda, Angola, Equatorial Guinea, Lesotho and Swaziland (ECA/ATRCW and ILO 1990, 165). The service sector is dominated by males. However, recent years have seen an expansion in female participation. In Senegal the proportion of women in the service sector has increased from 3 to 8.3 per cent, from 7 to 13.6 per cent in Côte d'Ivoire and 19.8 to 30.5 per cent in Nigeria (ECA/ATRCW and ILO 1990, 167).

Progress in the area of agriculture is limited due to marginal and erratic rainfall and the increasing pressure put on arable land. In Sub Saharan Africa drought is endemic in the Sahel (or Saharan Margins), in the area around the Ethiopian Highlands and in portions of southern Africa. In 1980 severe drought hit the Ogaden in Ethiopia, Somalia and the Karamoja district in Uganda (Griffiths 1994, 20). The period 1983-85 saw drought again in Ethiopia and parts of Botswana, Zimbabwe and

Zambia. During the period 1991-1992 droughts occurred in Southern Africa and Somalia. Efforts to diversify out of crop growing and into livestock production is hindered by the prevalence of the tse tse fly. This also hinders the use of horses and oxen in production. Trypanosomiasis spread by the fly effects over four million square miles in Africa (Kamarack 1988, 265).

Rainfall in Africa rarely occurs in the right amount: it is either too much or too little. Rainfall on an annual basis fluctuates considerably. Torrential rains often destroy exposed soils and wash away essential minerals (Kamarack 1988, 20). Exposed soil also suffers the ravages of the sun which kills microorganisms that maintain the soils fertility. Exposed soil may become laterite; almost devoid of minerals with only iron oxides and hydroxides of aluminium left. Such soil becomes as hard as rock and absolutely useless for farming (Kamarack 1988, 204). Advances in agricultural techniques are hindered by the lack of frost which means that many pests are kept alive that hinder agricultural expansion. Desert locusts in west and east Africa, red locusts in southern, central and eastern Africa, and brown locusts in southern Africa periodically attack tropical plants and devastate agriculture (Kamarack 1988, 204).

Due to population pressures more land is being cultivated. Once cleared the soil loses much of its organic materials that made it fertile in the first place. Fertility can be maintained by extending the fallow periods, however increases in population have led to a shortening of the fallow period thus leaving little time for the soil to recover (Ohse 1988, 232). The threat of desertification by an expanding population moving into marginal areas is real and the Sudan-Sahel region has suffered ecological degradation.

The policy of governments towards the agriculture sector during the 1970s and early 1980s was weak. Producer prices were set so low as to discourage investment. Government marketing arrangements were inefficient and serve only to provide a few well-paid jobs to the politically elite. Kamarack (1988, 202) provides Nigeria as an example of a country that has neglected agricultural development. Nigeria benefited

from the oil boom of the 1970s. This led to an increase in domestic incomes and coupled with the fact that the Naira (The Nigerian currency) was kept artificially low, foreign goods became relatively cheaper. Thus, incomes were spent on imported foods such as rice and wheat instead of locally available cassava and yams. In Tanzania under Nyerere's socialist Ujamma villagization policy agriculture was run inefficiently. Kamarck (1988, 202) notes that the policy of centralised purchase of crops was run inefficiently by parastatal organisations. This led farmers to cutback production to just enough to feed themselves.

However, the agricultural situation in Africa need not be viewed in the biblical terms of famine and disease. Given that water is plentiful; sunlight for growth is abundant, plants in rain forests produce five times as much organic matter than temperate plants and the absence of frosts lengthens the growing season (Kamarck 1988, 206). Improved varieties of maize or hybrid strains, which offer drought and pest resistance offer some hope of improvement. However (Ohse 1988, 233) notes that the use of hybrid maize SR52 in Zambia requires a long growing season and is sensitive to small environmental fluctuations. Thus, the adoption of one maize variety may effectively limit farmers' responses to drought.

Table 2.4. GDP and Other Economic Indicators (percentage)

Indicator	1970	1979	1983	1989	1991
GDP (millions of dollars)	40,073			161,820	164,339
Agriculture in GDP	35	32	26	32	31
Industry in GDP	23	31	33	27	29
Manufacturing in GDP	8		8	11	
Services in GDP	41	37	42	38	40
Share of fuels, minerals metals and other primary commodities in merchandise exports	92			89	92

Source: World Bank (1993; 1991a; 1985a) and World Bank (1981b) for 1979 figures

Note: manufacturing is a subset of Industry.

Export earnings are heavily reliant on the exploitation of raw material and primary commodities. Ninety per cent of merchandise exports are composed of primary commodities, fuels, minerals and metals (Table 2.4). The heavy reliance on agriculture as a source of export earnings and employment is at the core of the crisis. Changes in consumption patterns, dependence on only a few primary commodities to

generate revenue and price decreases have all adversely effected the region. Consumption of Sub Saharan Africa's exports to developed countries has declined in recent years due to changes in industrialised countries (Musiolek 1992). In industrialised countries, over the past decade, manufacturers have begun to use materials and energy more economically (Musiolek 1992, 35). In addition, new technologies have led to savings in energy and materials and the replacement of some materials with others (for instance, the use of synthetics) (Musiolek 1992, 35).

Export revenues for Sub Saharan countries remain heavily reliant on primary products (World Bank 1994, 221). Revenues earned from primary commodities are vulnerable due to the fact that each African country specialises in a narrow range of commodities. For example, in 1982-1984 twenty out of thirty countries earned fifty per cent of their export revenues from just one primary commodity, and of the twenty nine earned more than 75 per cent from one commodity (Gersovitz and Paxson 1990, 4). In addition all but four countries earned at least 50 per cent of their revenues from no more than three commodities. Table 2.5 outlines the share of commodities in total exports for selected Sub Saharan African countries.

Table 2.5. Shares of Commodities in Selected Countries Total Exports (percentage)

Country/product	1974-79	1980-81	1982-1984
Burundi			
Coffee	88	89	87
The Gambia			
Groundnuts & processed products	84	54	50
Ghana			
Cocoa	60	56	57
Wood	8	3	3
Aluminium	8	20	....
Kenya			
Coffee	26	21	25
Tea	12	11	19
Petroleum prod.	19	32	22
Mauritania			
Fish	11	29	48
Iron	81	71	52
Tanzania			
Coffee	29	27	34
Cotton	13	11	14
Sisal	9	6	4
Uganda			
Coffee	85	99	92

Source: IMF cited in Gersovitz and Paxson (1990)

According to Stewart, Lall and Wangwe (1992, 30) there are several disadvantages to concentrating on a narrow range of primary commodities;

Specialization on primary product offers less in the way of economies of scale and learning than manufactured exports. Moreover, the large share of world exports of African economies in certain commodities, together with the low price elasticities, mean that increases in output result in less than proportionate increases in earnings.

Due to the high elastic supply of primary products and price instability in international markets (UNECA 1983, 13) Africa's export earnings have been adversely effected.

Of Sub Saharan Africa's 20 major agricultural products, 17 have experienced declines in export volumes (ODI 1987, 1). In addition, real commodity prices from 1980-85 declined (Cornia 1987, 14). This process has continued throughout the decade. In 1992, the prices of primary products have continued to remain depressed and the value of exports has increased by only 2 per cent in 1992, following several years of decline (United Nations 1993, 64). Prices for food, tropical beverages, agricultural raw materials and minerals have declined in 1992. Since 1980, due to weak demand for raw materials and increased supply from the former Soviet Union and Eastern Europe, even in the area of primary commodities Africa's share of international trade has been declining (United Nations 1993, 65). Indeed world trade in agricultural products had grown slower than the growth in trade in manufactures from 1965-1988 (Killick 1993, 19).

Based on problems in agriculture the terms of trade, which measures the relative movement of export prices against a countries import prices, declined through out the 1980s. Taking 1980 as the base year, the terms of trade index for the region had fallen to 91.2 in 1985, fell to 69.8 and 70.2 in 1986 and 1987 respectively, rose to 92.0 in 1988 before falling back to 73.0 in 1989 (Tarp 1993, 21). By the early 90s the situation was not much better, and some countries, notably Nigeria, Uganda and Burundi were doing much worse than the numbers suggest (World Bank 1993).

An examination of the domestic part of the agricultural problem reveals a bleak situation as well. Although output of food has increased since 1960, the rate of increase has declined. During the 1960s the increase was 2.6 per cent per year. By the 1970s this had fallen to 1.5 per cent per year. The problems in this area are exacerbated due to the fact that population growth has outstripped food production. During the 1970s when food production in all of Africa was rising by approximately 1.5 per cent while the population was growing at around 2.8 per cent (UNECA 1983, 8). Production of cereals, meat, roots, tubers and pulses, during the 1970s, stagnated, while food demand was increasing in line with population expansion (UNECA 1983, 8). The World Bank (1986a) estimates that in order to sustain current nutrition levels, which are already poor, agriculture production in the region would have to grow by 3 per cent for the next 20 years — a highly unlikely scenario.

The 70s and 80s saw Africa becoming increasingly reliant on food imports and aid. Food imports doubled in the 1970s. This placed an increasing burden on African countries because the price of cereals, a large component of food imports, increased sixfold. By 1980 the cost of food imports was equivalent to Sub Saharan Africa's export earnings from agricultural products (Grigg 1985, 136). By 1980 food aid reached 1.5 million tons (UNECA 1983: 8). During 'the Great African Famine', 1984-85 12 million tons of food grain imports (commercial plus food aid) found its way to Africa. Despite this massive increase, and due to poor distribution and storage problems, in food imports, Africa, as a whole, remains deficient in calories and around 20 per cent of the population experiences food intake levels below the critical minimum level (UNECA 1983, 9).

2.3.2 Industry

The poor performance of the agricultural sector has been matched by laggard performance of the industrial sector. Traditional manufactures utilising simple technologies with high labour intensities dominate the structure of production. The production of intermediate and capital goods is not done on a large scale, instead the

Although Africa's energy resources are substantial with 8.5 per cent of world's proven reserves in crude oil, 7.9 per cent of world's proven reserves in natural gas, approximately 2 per cent of world's estimated coal reserves, 25 per cent of world's resources of uranium, and 35.4 per cent of world's potential hydroelectric capacity (UNECA 1983, 9), the large increases in oil prices 1973-1974 and 1979 did not help matters as most Sub Saharan countries are reliant on oil as a major component of energy consumption as most are importers of petroleum (except Angola, Cameroon, Congo, Gabon and Nigeria which are oil exporters).

2.3.3 Other Factors

The poor performance of the agricultural and industrial sectors are not the only factors that explain the crisis in Sub Saharan Africa. Recession in developed countries, lack of private external finance, substantial increases in interest rates, the appreciation of the dollar, and domestic turmoil have also played a pivotal role. Compared with the period 1976-80, the early 1980s saw a slowdown in economic growth in developed market economies. This fed through to African countries who saw potential export markets contract. When economic recovery began to improve in developed countries, Sub Saharan countries were unable to benefit substantially. For instance, as world trade expanded, 90 per cent of the increase was made up of manufactured products; mainly going to the United States. Thus, Sub Saharan Africa, reliant on primary commodities was unable to reap many benefits (Cornia 1987, 14).

The weak performance of the agricultural and manufacturing sectors have resulted in a worsening of the current account deficit. This is a reflection of the decline in price of many agricultural and mineral exports in the early 80s. Oil exporters in the region were hit particularly hard by the decline in crude prices (ODI 1987, 1). Conversely, countries dependent on outside supplies of oil were hit by an import shock when prices jumped in 1973-74 and 1979-80. In previous decades governments were able to finance their balance of payments deficits by increased taxation on exports of primary commodities or by increasing the level of borrowing,

by the early 80s this option was no longer available to the bulk of countries. According to Sutton (1985, 2) from 1973-74 commercial banks were able to loan some non-oil producing developing countries OPEC surpluses in order to finance their current account deficits, however after the second oil shock this option was limited due to high exposure levels and a sharply deteriorating debt and debt service ratios (Table 2.6).

Table 2.6 Debt Service and Interest Payments

Indicator	1980	1989	1991
Total debt service as a percentage of exports of goods and services	10.0	20.8	22.1
Interest payments as a percentage of exports of goods and services	5.7	10.5	10.2

Source: World Bank (1993; 1991a; 1985a)

The debt problem has been made that much worse due to the fact that the net flow of financial resources has been reversed: new inflows of foreign capital trail interest payments on accumulated external debt in developing countries (Helleiner 1990, 107).

The appreciation of the dollar, in which most of the region's debt is denominated, made it more expensive to pay back variable interest rate loans. The creditworthiness of borrowing countries was under question by large multi-national private banks due to widespread defaults on debt payments. During this period, due to relatively high interest rates, the United States was able to attract capital flows from other countries in order to finance its growing current account and budget deficits. This contributed to a net transfer of resources which favoured developed countries, at the expense of developing countries.

An increase in inflation in the 1970s in industrialised countries did not help developing countries either. Interest rates during the same period rose, but not by as much as inflation, which encouraged countries to go into debt. By the 1980s inflation began to fall, but interest rates did not decrease by a like amount (Krugman 1988, 57). The increase in interest rates had an obvious impact on floating rate debt. However, for debts with short maturities part of the debt would have to be rolled over into a new

loan at a higher interest rate to pay off the old debt (Krugman 1988, 61). However, it should be noted that such interest rate volatility may have little impact on Africa because most of its debt is fixed rate with long maturities.

Coup d'états have undoubtedly played a role in the instability of the region.² Most African governments are not democratically elected or for that matter even civilian. Military rule and one party states constitute the governments of the majority of countries. Under military rule leaders may have little or no experience in domestic economic management, may prefer patronage to hiring qualified bureaucrats, and be more concerned with staying in power (and sometimes in amassing a fortune) than in providing social reforms.

However, this should not be looked upon as necessarily bad, at least in the sense that one evil is merely replacing another evil. Corruption is prevalent in civilian rule as much as it is in military or one party political systems. The problem is rooted in the fact that the coups tend only to lead to new coups once the original group has broken into factions (Griffiths 1994, 83). This leads to abrupt policy changes and lack of consistent attention to the economy. Green (1990, 5) notes that although African governments are responsible for the plight of their people this must be viewed in the context that "these [policy] decisions were taken on external advice and are now being attacked by those who pushed them."

The commencement and continuation of wars in some African states has led to the immiseration of millions of people (Green 1990, 5).³ War disrupts normal patterns of living, it prevents crops from being planted, it reduces the labour force through conscription and death, and leads to wide scale migration. Government resources that could be spent on investment in human capital or on promoting industrial development are diverted to domestic military expenditure and the import of armaments. Violence contained in one area often has implications for other areas as wide scale refugee movements place hardship on neighbouring countries.

Kamarck (1988, 212-23) reports that the competition between Islam and other religions has led to conflict in several countries. Islamic convictions contributed to

the conflict between Christian Ethiopia and Moslem Eritrea. Guerrillas in Mozambique have allegedly been financed by Islamic sources. As of 1987, UNICEF (1990, 1992) estimates that over 140,000 Mozambiquen and Angolan children under the age of five died due to war in their countries. Indeed, hundreds of thousands of Angolans have suffered displacement and nearly four million Mozambiquens were at risk of famine due to internal conflict. The coups in Nigeria and the Sudan have also involved rivalries between Christians and Moslems. Ethnic rivalries and minority persecution have often led to violent conflict in Rwanda (1959 and 1994), Burundi (1972), the expulsion of Ghanaians from Nigeria, non-Ghanaians from Ghana and Asians from Uganda and Tanzania.

2.4 ODA

Moreover, aid flows from multilateral and bilateral resources retreated during the early 1980s, which hindered the ability of government to make progress in social and development areas (Table 2.7). The amount of overseas development assistance was stagnant in the early 1980s and has not made any major advances since 1988. In real terms ODA began a decline in 1987 (Africa South of the Sahara 1989, 26).

Table 2.7. Net disbursements of ODA from all sources in millions of dollars to Sub Saharan Africa

1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
6,889	7,102	6,889	7,941	9,006	11,093	12,500	14,077	14,505	16,810

Source: 1981-1983 figures from World Bank (1989). All other figures from World Bank (1992).

Note: consists of loans and grants made on concessional financial terms by all bilateral official agencies and multilateral sources to promote economic development and welfare.

The amount of overseas development assistance means that donors may be able to exercise control over African countries. Development assistance is not always an altruistic exercise, with the promotion of export markets being a primary objective of donor countries. Flows to all Sub Saharan countries totalled 10 per cent of GNP or approximately \$33 per capita in 1991. Two countries in the region showed that ODA comprised a substantial portion of GNP; Mozambique with 69 per cent and Tanzania with 39 per cent in 1991. The contribution of ODA to some countries' GNP remains

low; Nigeria with less than one per cent of ODA as a percentage of GNP and Mauritius with only 3 per cent.

Although flows to the region have been increasing steadily, as a percentage of donor's GNP flows have declined. In 1965 the countries that comprise the Organisation for Economic Cooperation and Development (OECD) devoted 0.47 per cent of their GNP to ODA. However, by 1991 this figure had declined to 0.33 per cent. For OPEC members ODA was at 2.3 per cent of GNP in 1965. By 1980 the assistance had declined to 1.9 per cent and by 1991 ODA comprised only .21 per cent of GNP.

2.5 Conclusion

The structure of production in Sub Saharan Africa is dominated by agriculture, mainly peasant agriculture, and services, which together account for approximately 70 per cent per cent of the total gross domestic product of the region as a whole. The poor performance of the agricultural sector feeds through to the industrial sector in so far as revenues generated from the export of agricultural commodities are used to finance the expansion of the industry. Thus the region's industrial base remains small, fragmented, and only weakly linked to the region's natural resource base. Advances in industrialisation is inhibited by protection and poor public sector management. Skills and technical knowledge have not met the requirements of manufacturers or proven capable of competing in a global environment characterised by rapid change. The decline in primary commodity volumes and prices has led to a shortage of foreign exchange. This lack of foreign exchange forces output and investment to be cut due to the lack of imported inputs. Further damage has been done to the extent that inflation has ensued due to commodity shortages which could not be offset by purchases from abroad (Taylor 1988, 18).

Due to the openness and smallness of the countries in the region external trade constitutes the single major stimulus to Africa's internal socio-economic progress (UNECA 1983, 15). The favourable commodity prices in the early 70s was replaced

with a dramatic shift in prices in the 80s with falling volumes and prices. The limited range of export commodities and inherent technological content of imports has continued to impede growth prospects in the region. Continued high birth rates in the region has led to stagnation, and in some cases decline in per capita incomes.

The combination of a sharp increase in interest rates, recession in the West, lower commodity prices and higher oil prices (for some countries) contributed to the problems Sub Saharan countries had in servicing their debts. When oil prices declined some oil exporters were hurt, particularly those with large external debts. With such a level of debts, the region continues to suffocate under the burden of debt servicing.

As the 1980s came to a close, Sub Saharan Africa found itself in a period of economic and political transition every bit as significant as the change that took place when the colonial powers seceded their sovereignty over the area several decades earlier. Whereas in earlier decades the dominant powers in Africa were seen as Western governments acting individually in their own national interests, the 1980s are viewed as a time when international organisations began to exert considerable influence in the area. Whether or not national sovereignty has again been infringed upon and the consequences of this new type of intervention will be discussed in the following chapters.

Chapter 3

The World Bank and the International Monetary Fund Policies

3.1 Introduction

Since the early 1970s the Fund and the Bank have come under attack from academics, journalists, non governmental organisations, and other United Nations agencies. The reason for this assault is perceived to be the incompetence of both agencies in the lending arrangements and the technical assistance they provide to developing countries. This intense debate has continued into the 1980s and has focused on the effect that IMF and World Bank lending arrangements have on improving economic growth and social conditions.

This chapter, thus, seeks to provide a background to these two controversial institutions. A brief history of the Bank and Fund are provided to show how the ideological orientation of these institutions has been altered since their creation. Decision making and control of the institutions is also reviewed. Major lending arrangements to Africa are highlighted and their effectiveness in restoring growth is examined. Criticisms of the institutions are examined to determine their merit and to see how firmly they are rooted in fact.

3.2 History and Objectives

The International Monetary Fund and the International Bank for Reconstruction and Development were established at the United Nations Financial and Monetary Conference held July 1-22, 1944 at Bretton Woods, New Hampshire under the

of gold. However, this system came under pressure by the mid 1960s. By 1967 the pound was devalued and in 1971 the United States suspended the convertibility of officially held dollars into gold. This led to the par value system being replaced with one dominated by floating exchange rates. Also, during the late 1960s the IMF introduced the standard drawing right (SDR) and the stand-by arrangement became the primary way in which member governments could utilise fund resources. During this time access to resources was made conditional on an agreement being reached between the Fund and the member country on monetary and fiscal policies.

The 1970s saw the concerns of developing countries beginning to emerge in the thinking of IMF officials. As indebtedness increased in developing countries, oil and food prices increased, and recession gripped the world (1974-75) the IMF began to establish facilities that would directly benefit developing members. In 1974 the oil facility and the extended facility providing medium term assistance were established. However, it was not until the early 1980s that the Fund began large scale interventions in developing countries.

Prior to the 1980s the Fund was viewed as disclaiming any role in the determination of income distribution or the formulation of a long-run development strategy⁴ (Cassen 1986). The World Bank, and other regional development banks, were seen as the institutions most capable of dealing with 'development' problems. However, a concern for social progress is becoming increasingly apparent in IMF-sponsored publications. The current managing director, Michel Camdessus believes that there are seven "pillars" that support strategies for achieving sustained growth. They are (IMF 1993):

- (1) fiscal consolidation and government's efficient use of scarce resources;
- (2) in monetary matters, a firm anti-inflationary policy, liberalization of the financial sector, and a realistic exchange rate;
- (3) opening up the economy to international trade and foreign capital;
- (4) price liberalization;
- (5) the reform of public enterprises;
- (6) a creative adaptation of social policies, to improve the working of the labour markets and enhance the effectiveness of social safety nets;

(7) 'good governance'; "meaning accountable governments, which not only respect human rights but also endeavour to establish adequate institutional conditions for the participation of all sectors of society..."

While the first five "pillars" are traditionally associated with the workings of the Fund, the last two represent a foray into an area normally associated with World Bank activities. Indeed, Camdessus goes further in redefining the role of the IMF. Breaking with the traditional view of the IMF as an organisation constrained by a strict reading of the Articles of Agreement, he states (IMF 1993) that the goal of the IMF is to achieve "high quality growth". That is, "growth that is sustainable, that brings lasting full employment and poverty reduction, that reduces excessive income inequalities, and that respects human freedom and the environment" (IMF 1993).

Although, currently, the rhetoric of the Managing Director is running ahead of a real commitment to poverty alleviation in almost all areas, there are some instances where it has become evident that the IMF is attempting to assist member countries. In the area of technical assistance provided to member countries, for instance, the Fund has provided assistance to Bolivia and Brazil on social security reforms. The changing nature of Fund facilities is also demonstrated as leaning towards the problem of poverty alleviation. The creation of the Structural Adjustment Facility and the Enhanced Structural Adjustment Facility in 1986 and 1987 are two examples of this.

The World Bank, in contrast to the activities of the IMF, has from its outset had a broad mandate over promoting development in developing countries. The first years of the IBRD were dominated by reconstruction loans to Europe, with loans totalling \$497 million approved for Denmark, France, Luxembourg and the Netherlands in 1947 (Williams 1994, 112). However, once the Marshall Plan was in operation the IBRD's role in European reconstruction diminished quickly. By the early 1950s the Bank was a full fledged development institution that sought to promote economic growth by improving industrialization and infrastructure. By the 1960s the main recipients of loans were Latin American countries. The International

Development Association (IDA), the 'soft loan window', so named because of its highly concessional credits, was established 1960 as an affiliate of the World Bank.

The establishment of the IDA allowed lending to be expanded into the agriculture and social sectors. Loans and credits for poverty alleviation began to take prominence in the mid-70s under the then President Robert McNamara (April 1968-June 1981). During this time period there was a realisation that improvement in economic conditions would not necessarily 'trickle down' to poorer members of society. A more egalitarian approach was proposed that emphasized redistribution rather than growth for growth's sake. The International Labour Organization, an early proponent of a basic needs approach, stressed that employment generation should be given priority over economic growth (Hettne 1990, 167). However, Chenery et al (1974) of the World Bank and the Institute of Development Studies did not see the two goals as incompatible and proposed a strategy of redistribution with growth. This strategy was viewed as being capable of delivering a 'development guarantee' (Hettne 1990, 170) to the poorest members of society through a mix of instruments targeted at them. Efforts to increase the productivity of farmers and increase labour intensive processes to benefit the urban poor as well as land reform, changes in the distribution of education and other public services, the provision of basic consumer services to the entire population and the redistribution of assets to poverty groups were all part of this plan (Chenery et al 1974, xvi and Clayton 1983, 34).

Subsequently, the primary target of lending was reoriented to the rural poor and resources were redirected in that area. The main impetus of this move was to raise the productivity of small farmers and give the rural poor greater access to public services. The research wing of the Bank focused its energies on poverty issues, and the concept of human capital was accepted within the Bank. During the 1970s Bank funds and technical assistance were increasingly channelled to the poorer segments of society. By end of 1970s lending to infrastructure had fallen to one third of total lending and nearly half of Bank lending directed to sectors such as agriculture and rural development, education, population and nutrition, urbanisation, and small scale

industries (Selim 1983). By the end of the decade research experience had demonstrated that outlays in the areas of primary education, family planning, nutrition and basic health care produced gains in productivity that made them worthwhile economic investments as well as justifiable on humanitarian grounds (World Bank 1983a). Thus, poverty alleviation and growth became complements. In addition, lending was focused on a sectoral level and commitments were shifted regionally.

In the early 1980s McNamara left and was replaced by A.W. Clausen (July 1981-June 1986). By this time the Redistribution with Growth strategy was discredited due to its overreaching nature and lack of realistic goals (Clayton 1983, 355). Consequently the focus on poverty shifted to a 'balanced strategy' — one of faster economic growth combined with pragmatic measures to reduce absolute poverty (Annis 1986). In line with IMF thinking, a greater emphasis on the free market and the private sector to fuel development was also discernible. Mosley et al (1991, 23) state that "if growth in the 1970s had been pursued regardless of stability, stability must now be pursued regardless of growth: hence the new policy objective becomes structural adjustment with growth—as much consistent with stability." Clausen's Bank elevated the importance of the neo-liberal approach to development. Neo-liberalism in its pure form is an ideology that is more of a reaction against failed economic policies based on the welfare state and the power exercised by unions and state bureaucracies rather than an active endorsement of a particular set of values (Hettne 1990, 215). However, this is not to suggest that its importance is limited — far from it. Neo-liberalism presents a counter revolution in development thinking (Hettne 1990, 216). The central tenant of neo-liberalism is that economic management and central planning by the government should be replaced with a philosophy of letting markets operate without intervention. The implication is that the state must disengage from ownership or control of industries and lessen its regulatory activities.

Such thinking began to dominate the Bank's agenda during the 1980s. However, this does not mean that the Bank is a 'neo-liberal monolith' (Mosley 1991:

24). The Bank, as is consistent with its development role, has never embraced liberalism to the extent that the IMF had. The Bank continues to carry out studies that encourage some form of social engineering (Mosley 1991, 24) and appears to tolerate some government control and the provision of social security networks.

By the late 80s under the presidency of Barber Conable a consensus was beginning to emerge over the approach the Bank (and the Fund) should take in Sub Saharan Africa. This approach, termed pragmatic neo-structuralism, holds that the markets role in Africa should be increased, but at the same time remains sceptical about the benefits this may produce (Helleiner 1986, 58). The role of governments is still castigated but there is a belief that with reform there is a "potential for a productive and selective role for the state" (Helleiner 1986, 58). In addition, Conable re-elevated poverty alleviation and the social costs of structural adjustment onto the Bank's agenda.

The role of women in agricultural development also began to gain attention. In 1991 Lewis T. Preston replaced Conable at the helm and the focus on poverty alleviation was again at the forefront of Bank thinking. Overall, throughout the 1980s lending for poverty alleviation increased substantially. However attention to agriculture and rural development began to stagnate, whereas lending to the education and health sectors increased significantly. Table 3.1 outlines this change.

Table 3.1. World Bank Lending for Poverty Alleviation (millions dollars) 1981-93.

Sector	Average 1981-83	Average 1987-89	Average 1991-93
Education	603 (4.5)	756 (4) 124 (*)	2047 (9) 362 (2)
Population, health and nutrition	57 (*)	303 (2) 78 (*)	1,447 (6) 221 (*)
Agriculture and rural development	3,513 (26)	3,638 (19) 612 (3)	3,623 (16) 507 (2)
Water supply and sewerage	60 (4)	765 (4) 115 (*)	1,097 (5) 207 (*)
Total Bank lending to all sectors	13,261	19,421	22,696

Source World Bank (1993a)

Notes: numbers in parenthesis represent sectors percent of total. Numbers in bold are for Sub Saharan Africa. * denotes less than one percent.

Currently the World Bank operates in twelve areas. The sectors receiving attention are; (in shorthand; non-poverty based lending) development finance companies, energy, industry, telecommunications, tourism, transportation, urbanisation, and (poverty-based lending) water supply and sewerage, agriculture and rural development, (primary) education, small-scale enterprises and health and nutrition. Operations in developing countries occur mainly through lending money or providing credits for development projects or by the use of structural and sectoral adjustment loans in an effort to provide countries with higher growth rates that are sustainable. A full listing of structural adjustment and sectoral adjustment loans sponsored by the Bank in Sub Saharan Africa are located in the Appendix (table A.2). Outside of the conventional lending operations the Bank also provides technical assistance to member governments, and also provides a "consciousness raising role" for individuals in both developed and developing countries through the publication of the World Development Reports.

3.3 Structure and Decision Making

3.3.1 IMF

Membership in the IMF is open to any country regardless of the domestic economic system or state ideology. Membership in the IMF in 1993 comprised 177 countries with three applications pending. Each member country is required to pay to the Fund the amount of its initial quota and subsequent increases partly in the member's own currency and the remainder in the form of reserve assets. A members quota is determined by its current account transactions, size and composition of foreign trade, export dependence and GNP. A members quota can only be increased with the members consent. The quotas are used in determining voting rights.

The ultimate decision-making body is the Board of Governors, on which each member is represented (usually by the finance minister of a country). But, in practice, most decisions are taken by the Executive Board, currently with 22 members; the five largest members based on the size of their quota are automatically represented, the

other countries are grouped into constituencies. The percent of total Fund votes controlled by the largest member, the United States, is 17.82 per cent. Germany and Japan control 5.55 per cent each and France and the UK. control 4.99 per cent each (IMF 1993, 166). The two African constituencies (which comprise all Fund members in Sub Saharan Africa except Ghana) control only 4.09 per cent of all votes (IMF 1993b, 168-69). Decisions in the IMF are made, usually, by simple majority or reached by consensus. The Board is chaired by a managing director.

The Fund makes its resources available to its members in accordance with policies on the use of its resources by selling to members, in exchange for their own currency, SDRs, or currencies of other members. The use of Fund resources is dependent on a balance of payments need, and access to Fund resources is meant to be temporary. When members make purchases, they incur an obligation to repurchase, within the periods specified by the Fund, the Fund's holdings of their currencies by the payment to the Fund of SDRs or the currencies of other members specified by the Fund. A listing of the relevant loans to Sub-Saharan Africa is located in the appendix (table A.1).

The IMF (IMF 1992, 932) derives its finances from the following areas:

- (1) resources in the General Resources Account, which may be used to provide balance of payment support to all members, and are derived from members' subscriptions and the IMF's borrowing. General resources are used to finance stand-by and extended arrangement as well as special facilities,
- (2) resources in the Special Disbursement Account, which are used for concessional balance of payments assistance to low-income developing countries through SAF and ESAF, and are derived from the reflow of Trust Fund resources; and
- (3) resources from the ESAF Trust, which are used by the IMF as trustee, for concessional balance of payments assistance to low-income developing countries through the ESAF, and are derived from members' loans and donations.

3.3.2 International Bank for Reconstruction and Development

The International Bank for Reconstruction and Development (IBRD), the first unit created in the World Bank Group, had a membership of 176 in 1993 with applications pending for 4 countries. Each country joining the IBRD is assigned a capital subscription following consultation between the Bank and the applicant and approval by the Bank Board of Governors. Upon joining a country pays in ten percent of its subscription (one per cent in gold or US dollars and nine per cent in the country's own currency) and the remaining 90 percent of its subscription is callable; not paid in but subject to call by the Bank if it is required to meet Bank obligations for borrowings or guaranteeing loans. The capital base supplied from subscriptions is used as collateral to enter national and international bond markets with the sale of its securities. The callable capital is solely for the protection of bondholders; it cannot be used in the Bank's operations, for disbursements, or to cover administrative expenses.

The IBRD's Articles of Agreements lay upon it an extremely conservative proviso, that outstanding and disbursed loans cannot exceed 100% of its subscribed capital plus reserves and surplus. In other words, the IBRD has an extremely conservative 'gearing ratio'. The Bank has made a profit every year since 1947, for the past five years the profit has been \$1 billion each year (this contributes to the high credit standing).

The lending rate for IBRD loans has a spread of approximately .50% above IBRD's cost of borrowing. This cost (weighted by amount and maturity) is estimated for a twelve month period, using the actual cost of borrowing during the preceding six months and the estimated cost of borrowing for the succeeding six months. The repayment period is 15-20 years, the grace period is 3-5 years and a guarantee by the member government is required (Selim 1983). This means that this type of multilateral finance is provided on a non-concessional basis. Funding is provided on quasi-commercial terms since the IBRD raises a major portion of its capital from private markets and charges an interest rate that although below commercial rates is

still above the amount necessary to qualify for a grant equivalent element. Because of this, IBRD loans are categorised as Other Official Flows (not ODA).

3.3.3 International Development Association

Membership to the International Development Association (IDA) is available to all members of the IBRD. The principal resources of the IDA are subscriptions, the periodic replenishments, grants to IDA from wealthier member countries, and from profits from Bank loans transferred to IDA. Replenishments are appropriations from wealthier member governments. If there are no replenishments then there is no IDA. The periodic replenishment of finances by the industrialized countries means that the IDA is occasionally on precarious ground. Recent years have seen the level of replenishments questioned. The tenth replenishment for the period 1994 to 1996 was for \$18.0 billion. There is no interest is charged on IDA credits, although there is a service charge of 3/4 of 1%. Repayment period is 50 years, the grace period is ten years and a government guarantee is required (Selim 1983).

For both the IBRD and the IDA creditworthiness applies to a country's access to private capital markets. Some indicators used to assess creditworthiness are; (1) the debt service ratio (the higher it is the lower the creditworthiness), the public sector deficit as a percent of GDP (the higher it is the lower the creditworthiness), a country's total savings and investment, a country's savings and investment rates (the higher the rates the higher the creditworthiness). Creditworthiness, level of per capita income, and a subjective estimation of a borrowers commitment to repay loans, determines whether a country receives IDA credits or a IBRD loans. As of 1992, countries with per capita GNP less than \$610 were permitted access to IDA credits. 'Absorptive capacity', which is the ability of a country to use loans or credits effectively, also plays an important role. "Blend countries" are those that receive a mix of IDA credits and IBRD loans

3.4 Activities of the Bank and Fund

3.4.1 The Fund

Stabilisation of a country's economy is traditionally handled by the IMF. The Fund takes action when there is, in their view, a problem of short-term macroeconomic disequilibria which is the result of an imbalance between aggregate demand and aggregate supply capacity. Intervention by the IMF follows a period of a persistent payments deficit where limits of domestic financing have been run-down (through borrowing or depletion of reserves). The causes, as we have seen, of the payment deficit are seen to come from two areas; domestic mismanagement and external factors.⁵

The policy packages the Fund uses consists of the reduction of domestic absorption relative to national income (reduction in aggregate demand) in order to correct a current account deficit. Normally accompanied by supply-side measures designed to promote the production of export and import substitutes. The focus is on aggregate demand because, in general, aggregate demand can be cut more quickly than income can be increased. Demand restraint policies have the objective of checking expenditures on imports and on releasing resources for export (Stewart, Lall and Wangwe 1992, 5). Moreover, effective control over the money supply, coupled with demand restraining policies, is believed to be essential for the control of inflation (Stewart, Lall and Wangwe 1992, 5).

Payment imbalances are corrected by using a combination of expenditure-reducing, expenditure-switching policies and supply-side measures. Expenditure-reducing measures frequently focus on targeting the public sector (which is viewed as a major source of excess demand). Also, there is the notion that a reduction in budget deficits can reduce major inflationary pressure but this will lead to cutbacks in services (and possibly a decline in welfare). The main policy instruments are domestic credit restrictions, reductions in government expenditures, and increases in taxation. Expenditure-switching is designed to increase national and international demand for domestically produced goods and the encouragement of the production of

tradable goods instead of non-tradable. Here, the tools used are devaluation, the liberalisation of price controls, trade restrictions and wage controls. Liberalisation and price reforms are also seen as significant in raising long-term efficiency of an economy (Stewart, Lall and Wangwe 1992, 6).

The above methods of overcoming these problems are usually lumped under the heading of stabilisation policies. A United Nations⁶ (1992) publication defines stabilisation as normally a short-term measure oriented mainly to aggregate demand management. It refers to (p. 1);

The correction of excessive inflation that has disrupted normal economic relationships, increased uncertainty, redistributed incomes away from people who have less control over the prices at which they sell their labour or by their sustenance, and in extreme cases, caused the currency as a unit of account or even as a means of payment to be abandoned.

The General characteristics of Fund programmes according to Doorodian (1993, 850) are an increase in the real interest rate, ceilings on domestic credit expansion, on credit to the public sector, and on foreign borrowing, and in an effort to switch resources to tradables, exchange rate devaluations or depreciations, and the reductions of distortions caused by subsidies, trade restrictions, monopolies and price rigidities. Cassen (1986) believes that almost all programs have similar elements, this he terms the "universal prescription approach" or the "three Ds"- devaluation, deflation, and decontrol (a short-term demand reducing approach to the balance of payments). Once a member country has agreed to undertake economic reforms it is permitted access to Fund facilities.

3.4.1.1 Stand by Arrangements⁷

The most common form of access to Fund resources is through stand-by agreements. Under a stand-by agreement the IMF assures a member that it will be able to borrow foreign exchange during a specified period and up to a specified amount, provided the member abides by the terms of the arrangement. Typically stand-bys are for one to two years in duration with a concentration on macroeconomic policy.

A members access to Fund resources is expressed in terms of credit tranches. The first tranche available to members is the reserve (gold) tranche. Funds from here are available automatically on request without any conditions due to the fact that they are considered as a part of the member's external reserves. A member has a reserve tranche position to the extent that its quota exceeds the IMF's holdings of its currency in the General Resources Account, excluding holdings arising out of purchases under all policies on the use of the IMF's general resources (IMF 1992, 933). Reserve tranche purchases are not regarded as the use of Fund credit.

The first credit tranche consists of the first 25 per cent of a members quota. The conditionality on the use of these resources is typically low, and the only requirement is that a member country makes a reasonable effort to overcome balance of payments difficulties. The upper credit (second, third and fourth) tranches (over 25 per cent of quota) require a willingness to accept agreed upon conditions of a stabilisation programme in return for finance from the Fund.

Substantial evidence of a member's willingness to overcome balance of payment problems is required and borrowers are expected to adhere to a mutually agreed upon performance criteria. Performance criteria typically cover exchange and interest rate policy, credit policy, government or public sector borrowing requirements, policies on trade, payments restrictions and foreign debt (IMF 1992, 935). If a particular performance criteria has not been met then further purchases are permitted only after the IMF and the member reach an understanding. Purchases under a stand-by arrangement in the upper credit tranches or under an extended arrangement available in instalments and specified time periods (that is, they are phased in).

Stand-by arrangements (or extended arrangements) are signed during first through fourth tranches. Repurchases (repayment) of drawings under the credit tranches and stand-by arrangements are made in 3 1/4 to 5 years (IMF 1992, 935). The period of stand-by arrangements has normally been between 12 and 18 months in recent years, but may extend up to three years (IMF 1992, 935). Most Fund lending is

at market interest rates. As of 1990 approximately 50 per cent of IMF financial assistance provided to Sub Saharan Africa was in the form of Stand-by arrangements (Osunsade and Gleason 1992, 15).

3.4.1.2 Extended Fund Facility

The Extended Fund Facility (EFF) was created (1974) to deal with world economic changes in early 1970s. The main purpose of these arrangements is to help countries with severe payment imbalances stemming from structural mal-adjustments in production and trade, and imbalances owing to a combination of slow growth and an inherently weak balance of payment position, constraining a country's pursuit of active development policies. Resources are meant to be used in the medium term. A country is permitted to draw (purchase) beyond its quota for up to 2-3 years (exceptionally up to four years), if it implements an economic stabilisation programme agreed to by the Fund and adheres to performance criteria. The borrowing country has access to 140 per cent of quota with repayment periods of 4-10 years. Stand-bys and EFFs are sometimes lumped together under the term tranche policies. As of 1990 12.5 per cent of IMF assistance to Africa was of this type (Osunsade and Gleason 1992, 15).

There was a great expansion in EFFs 1979-1981 so that a 'viable' balance of payments position could be restored. Wohlmuth (1984) states that; "the viable balance of payments position was defined as a deficit on the current account which can be financed by capital imports consistent with longer-run development perspectives, so that the debt servicing capacity of the government is taken care of." The IMF now considers the EFFs as a burden and replaces the EFFs with one-year and multi-year stand-bys, arguing that a medium-term perspective is still maintained (Wohlmuth 1984).

3.4.1.3 Enlarged Access Policy

The Enlarged Access Policy (EAP) provides additional financing from borrowed resources, in conjunction with ordinary resources, to members whose payments

imbalances are large in relation to their quotas (IMF 1992, 937). The EAP is used when the member requires financing in excess of what is available to it in the four credit tranches or under the EFF (IMF 1992, 937). The EAP is subject to phasing and performance criteria. The policy on access is reviewed annually; as of June 1990, the current access limits on stand by or extended arrangements, individually or combined, are 90 - 110 per cent of quota annually; 270 or 330 per cent of quota over three years; and a cumulative limit of 400 or 440 per cent of quota. However, limits may be exceeded in exceptional circumstances, and include drawing under the CCF and BSFF (IMF 1992, 937).

3.4.1.4 Compensatory and Contingency Financing Facility

Compensatory and Contingency Financing Facility (CCFF) was designed in 1963 for raw material exporting countries whose balance of payments were, at least partly, connected with export earnings reductions for which the countries themselves were not responsible (IMF 1992, 939-941). Resources are made available to member countries in order to cover export shortfalls and excesses in cereal import costs and in oil import costs. Repurchases are made in 3 1/4 years to 5 years. As of 1990 23.4 per cent of cumulative drawings were in this area (Osunsade and Gleason 1992, 15).

3.4.1.5 Oil Facility

Oil Facility (1974-1976) was designed to ease the impact of rises in oil prices on the balance of payments of Non-Oil Producing Exporting Countries (NOPECs) in African countries.

3.4.1.6 Buffer Stock Financing Facility

The Buffer Stock Financing Facility (BSFF) was established in 1969 in order to provide assistance to members with balance of payments need for financing their contributions to approved international commodities agreements. Repayments are made within 3 1/4 years to five years or earlier. Currently, the BSFF may be used to finance eligible members contributions to the 1987 International Natural Rubber

Agreement. This facility is rarely ever used and the cumulative drawings total only 0.1 per cent as of 1990 (Osunsade and Gleason 1992, 15).

3.4.1.7 Concessional Credits:

The Trust Fund (1976-1981) provided loans in connection with Stand-by agreements to the poorest countries. It was financed primarily by the sale of parts of the IMF gold reserve. The Special Disbursement Account was activated in 1981 to receive transfers (repayments of loans and interest) from the Trust Fund which is in the process of being wound up. The Final Trust Fund Loan instalment was due 1991.

3.4.1.8 Structural Adjustment Facilities

The purpose of the SAF is to provide long term assistance to low income countries with balance of payments problems. The Structural Adjustment Facility (SAF) which was launched March, 1986 as part of the Baker initiative is operated jointly by the Fund and the Bank. Created with about SDR 2.7 billion of resources to support adjustment in low-income countries.

The Funds available to SAF come mainly from repayments of loans from the Trust Fund. Loans are highly concessional — 1/2 of one per cent interest with the principal amount repayable over 5 1/2 to ten years with a five year grace period. Disbursements are made annually and are linked to the approval of annual arrangements. Members receive the equivalent of 20 per cent of quota under the first annual arrangement, 30% under the second and 20 per cent under the third. Approximately six per cent of IMF financial assistance is provided to Sub Saharan Africa under this system (Osunsade and Gleason 1992, 15).

The Enhanced Structural Adjustment Facility (ESAF) was created in December, 1987 in response, in part, to the inadequate financing of the structural adjustment facility and to provide a facility for low income countries to refinance their obligations to the Fund (Williams 1994, 78). It was established with SDR six billion in additional loanable resources. The disbursements and monitoring are semiannual. Eligible members can receive up to 250 per cent of quota over a three year

programme, with the provision for up to 350 per cent in exceptional cases. The repayment terms are highly concessional — the same as SAF. 7.4 per cent of IMF assistance to Africa is made up of this type of lending arrangement (Osunsade and Gleason 1992, 15).

Both the Structural Adjustment Facility and The Enhanced Structural Adjustment Facility provide concessional resources to help low income countries with protracted payments problems, and to help them change the structure of economic activity so that they can achieve a high level of economic growth. In order to ensure that Fund resources are not squandered the IMF requires borrowing countries to adhere to policy framework papers (PFPs). In addition, the PFPs contain an analysis of any possible social and distributional impact that the adherence to the adjustment program may have. If any problem areas are identified then the PFP includes measures that the domestic government will undertake to eliminate it (Williams 1994, 79). These documents provide in general terms the measures a country proposes to take during the program period and identifies sources of problems as well as potential remedies. These papers are prepared by representatives of the national government with joint consultation by the Fund and the Bank.

3.4.2 The World Bank

3.4.2.1 Structural Adjustment Loans (SALs)

Although there is a pre-cursor to the modern SAL found in India 1963-64 for balance of payments support (Mosley et al 1991, 28), structural adjustment loans were formally established in 1980 by the World Bank. There is no clear, or even dominant definition as to what constitutes structural adjustment. As a starting point, the aim of a structural adjustment loan is to achieve the highest level of growth by increasing efficiency of resource use. The World Bank (1988a, 11) defines structural adjustment as reforms aimed at flawed policies and inefficient institutions. The reforms are aimed at improving resource allocation and increasing economic efficiency in order to expand growth and increase resistance to external shocks. The adjustment lending is

targeted at both microeconomic (such as tax reform) and macroeconomic (such as fiscal imbalance) level and at public sector inefficiencies. Demery, Feroni and Grootaert (1993, 2), World Bank employees, go further and say that the purpose of structural adjustment is to open up the national economy and this is accomplished through a combination of demand and supply-side policies. On the supply side trade liberalisation and currency devaluation (also on the demand side) are used to restore the incentive structure to favour exports and import substitution. On the demand side, fiscal, monetary and programmes that encourage wage restraint are advocated to increase competitiveness and efficiency.

Stewart, Lall and Wangwe (1992, 5) say that the aim of SALs is "to reorient the structure of the economy towards greater efficiency in the medium term." According to Mosley et al (1991, 9) structural adjustment of the developing economies is intended to bring down developing countries' payment deficits to the level that could be financed by stagnant aid flows plus rapidly dwindling private commercial lending. Another viewpoint is put forward by (Easterly 1991, 12), who says that the new growth theory says that aid finance (here SALs are included: but more likely project loans and sector adjustment loans) provides the money to help to cover "start-up costs" to development. That is money must be invested, in the first instance, in "building a market infrastructure and forming an educated entrepreneurial elite or educated labour force" (Easterly 1991, 12). According to the United Nations (1992) adjustment refers to;

Policy changes needed to put the economy on a sustainable growth path. [It is] necessary when external conditions change in an irreversible manner, particularly if changes are adverse and lead to an unsustainable current account deficit.

Killick (1993, 68-70) also attempts to define adjustment as a planned adaptation that will create flexibility in a country's economy. His notion, as others, is that adjustment is a response to an external shock that necessitates policy changes over the medium and long term focused at the economy's basic structure (Killick 1993, 70).

The objectives of structural adjustment are normally defined (Streeten 1987, 1470) as the reduction or elimination of balance of payments deficits, the achievement of high rates of economic growth that are sustainable, thereby eliminating the possibility of future payment crisis' and stabilisation policies. These goals are to be pursued in tandem with the goals of increased access to social services most notably in health care and education and in the alleviation of poverty.

In general all definitions of adjustment have several elements in common: adjustment will lead to a sound macroeconomic position in the medium term and set the path for future sustainable growth; adjustment will lead to increased efficiency and in the long run because a higher growth rate will lead to a higher per capita income welfare will be improved. This approach supported by the World Bank has been characterized as Growth Oriented Adjustment (or Growth Oriented Adjustment with Safety Nets).

The above objectives can be obtained by concentrating action in the following areas (Summers and Pritchett 1993, 383);

- (1) trade reform which is comprised of tariff reform and export incentives,
- (2) domestic resource mobilization which consists of tax reform which usually means broadening the tax base through increased collection or the reduction of certain taxes, public expenditure control and interest rate policy,
- (3) public sector policy, or fiscal adjustment, encompassing public enterprise reform, market deregulation which consists of the removal of price controls and subsidies, a reduction in transfers, public investment programming and a decrease in public employment,
- (4) institutional reform based on strengthening (weakening) of public and para-statal organizations in support of policy changes, and
- (5) reform of the financial system.

In order for SAL money to be dispersed there must be an agreement on objectives and measures, as well as a timetable. To this end a Letter of Development Policy is signed. In addition, in practice, an agreement with IMF is necessary in order

to proceed with a SAL operation although there is no formal arrangement between the two.⁸ The maximum amount of SALs that may be dispersed to a country is five.⁹

Mosley (1987, 5), while reminding the reader that the World Bank stresses the idea that no two countries are alike when receiving SAL finance, there are clearly areas held in common to all borrowing countries. Table 3.2 gives a breakdown of these areas:

Table 3.2. Types of Policy Measure Requested in Return for SAL Finance, 1980-October 1986

Measure	Percentage of SALs subject to conditions in this area
Trade policy:	
Remove import quotas	57
Cut tariffs	24
Improve export incentives and institutional support	76
Resource mobilization:	
Reform budget or taxes	70
Reform interest-rate policy	49
Strengthen management of external borrowing	49
Improve financial performance by public enterprise	73
Efficient use of resources:	
Revise priorities of public investment program	59
Revise agricultural prices	73
Dissolve or reduce powers of state marketing boards	14
Reduce or eliminate some agricultural input subsidies	27
Revise energy prices	49
Introduce energy-conservation measures	35
Develop indigenous energy sources	24
Revise industry incentive system	68
Institutional reforms:	
Strengthen capacity to formulate and implement public investment program	86
Increase efficiency of public enterprises	57
Improve support for agriculture (marketing, etc.)	57
Improve support for industry and subsectors (including price controls)	49

Source: Mosley (1987: 5)

Figures provided by the World Bank provide a similar picture for Sub Saharan Africa (Table 3.3). There is a high level of activity by the World Bank in the areas of trade policy, fiscal policy, budget and public expenditure, public enterprises, industrial policy and agricultural policy. Since the IMF has responsibility for exchange rate policy, the percentage of loans with conditions in this area is an underestimate, and

consequently the importance of exchange rate conditionality in the Bank's adjustment lending appears less than it actually is.

Table 3.3. The policy content of World Bank Lending Operations (percentage of total number of loans with conditions in various policy areas)

	SSA	All countries
Exchange rate	30.8	15.7
Trade policies	76.9	78.4
Fiscal Policy	61.5	64.7
Budget/public expenditure	69.2	51.0
Public enterprises	61.5	52.9
Financial sector	38.5	39.2
Industrial policy	53.8	25.5
Energy policy	7.7	23.5
Agricultural Policy	76.9	49.0
Other	23.1	13.7

Note: Lending operations under structural adjustment and sector adjustment loans in Africa (Ghana, Kenya, Malawi, and Zambia) and 11 other countries.

Source: World Bank (1988a: 58)

3.4.2.2 Sector Adjustment Loans (SECALs)

Although SALs receive the bulk of the attention Sector Adjustment Loans, after 1984, have made up a greater percentage of Bank/IDA commitments than SALs. The first SECAL was to Pakistan 1983-1984. In Africa, in 1991 IDA SALs totalled \$438.4 million while SECALs totalled \$687.7 million. In 1992 \$570.8 million and \$928.1 million were devoted to IDA SALs and SECALs respectively. In 1993 the gap narrowed and SAL finance comprised \$389.2 million while finance devoted to SECALs was only \$287.9 million.

The distinction between the two is not always clear, although, as the name implies, SECALs more narrowly focused on specific sectors. They are similar in nature to SALs but differ in the number of institutional and policy reforms required. Generally SECALs are less complex and less intrusive than SALs. SECALs, have an advantage over SALs as they are viewed as having a better chance of achieving political sustainability. They are also accepted more readily in 'problem countries' or in countries that are able to exercise some leverage because of their large debt positions (i.e. Brazil, Mexico and Argentina). In addition, SECALs can be implemented without an arrangement being reached with the IMF.

3.4.2.3 Special Facility for Sub Saharan Africa

The special facility for Sub Saharan Africa (SF) began operating July 1, 1985 (World Bank: 1985). It is funded with two types of resources: direct contributions from donors, and resources for special joint financing (originally from Federal Republic of Germany, Japan, Switzerland, UK and Saudi Arabia). The Bank has also mobilized some resources. As of June 30, 1988 resources available for SF operations totalled approximately \$2 billion. Funds from the SF are used to provide 'African Facility Credits' (AFC) and special joint financing to IDA-eligible countries with debt service ratios in excess of 30 per cent in Sub Saharan Africa. Countries, also, have to be implementing a policy-reform program supported by the IMF and World Bank and an agreement has to be reached on a PFP.

AFCs are made on IDA terms (50 year maturity, including 10 year grace period, subject to an annual .75% service charge and .50% commitment charge). The purpose is to finance quick-disbursing lending operations in support of structural and sectoral adjustment, as well as economic rehabilitation programs. Most AFCs cofinanced with IDA. All operations administered by the Bank staff and subject to the approval of IDAs Executive Director.

3.4.2.4 Project Lending

Finances provided for project loans make-up the majority of financial assistance to Sub Saharan Africa. Virtually all project lending to Africa comes from the IDA. The Bank, generally, finances the foreign exchange costs of projects only [however, in higher income and mid-income countries it may, exceptionally finance a portion (say 35 per cent) of total costs]. In lower income countries, the Bank will frequently finance a portion of local costs. In the poorest countries the Bank finances up to 95% of project costs). A typical IDA cycle for a project goes through six stages; identification, preparation, appraisal, negotiation and approval, supervision and *ex post* evaluation (Selim 1983). The entire time span of a project cycle lasts

approximately eleven years. *Ex post*, the overall aim of project lending is to increase the productivity of a large number of people below the poverty line while attaining a 'good' economic rate of return on the initial investment. The benefits of project lending are not meant to be transitory, but are designed to incorporate simple technical and production techniques that are easily understood by the recipients and affordable to operate once the initial funding has expired.

According to Mosley et al (1991, 46), ideally, *ex ante*, project appraisal should be used to rank projects according to their calculated social rate of return, and all those projects should be undertaken whose rate of return exceeds the marginal social cost of funds; or, if the funds are constrained, projects should be undertaken in rank order until the investment budget is exhausted. However, in practice, the Bank does set its own sectoral allocation of investment funds, and within sectors set a minimum rate of return which each project undertaken has to satisfy.

World Bank project lending has been heavily criticized in the past by Hayter (1971), Hayter and Watson (1985), Goldsmith (1985), George (1991 and 1992), Bello (1994), Hancock (1989), and Bello, Kinley and Elinson (1982). The most trenchant criticism has been levied at World Bank participation in projects relating to dams and flood management outside of Africa (The Independent 1992, The Financial Times 1992, The Observer 1992). The Ecologist (1992, 218-220) have roundly criticized World Bank involvement in the Sardar Sarovar project in Western India for the lack of attention paid to the environmental impact and the resettlement of indigenous people. In addition, Custers (1992, 241-47) believes that the World Bank's Flood Action Plan in Bangladesh does not adequately address the displacement of the rural landless in that country. Most of the criticism directed at project lending in Africa is directed to bilateral donors who concentrate on tied aid, large and expensive projects utilizing inappropriate technologies.

Lee (1985) critiques development projects, in general, for a lack of attention to the strains that they may place on existing water and sanitation facilities, the possible increase in the transmission of disease and the additional burdens placed on housing

and medical facilities. For instance, dangerous insects may be (re)introduced to a project area by "tagging" along with aid workers (Lee 1985, 73). In addition, the mosquito population often increases during the clearing stages of a project. Schistosomiasis might also increase as the snail vector favours slow to still water behind hydroelectric and irrigation projects (Lee 1985, 75). Weil et al's (1990) review of the literature on the impact of agricultural policies, points out that irrigation schemes are associated with the spread of more than 30 diseases. The most important of which are vector-borne diseases such as schistosomiasis, malaria, onchocerciasis and Japanese encephalitis. The changes in the environment, that occur with the introduction of irrigation projects, such as an increase in surface water, a rise in the water table, a change in the rate that the water flows and urban development are all associated with a possible increase in vector breeding (Weil et al 1990, 40).

The use of pesticides, fertilizers, herbicides and fungicides, which may be encouraged as part of project loans, have been traced to certain health problems. Weil et al (1990, 44-45), based on previously reported evidence, state that the use of pesticides can lead to direct poisoning, a loss of fish stocks and pesticide build-up in the food chain. A rough estimate of the problem indicates that pesticide poisoning is not a small problem: the number of acute cases of poisoning has been estimated at over one million with a mortality rate of 0.4 to 2 per cent (Weil et al 1990, 44).

However, in practice, project lending is difficult to evaluate (Cassen 1986). It is easy to say a project is successful in its physical output (number of schools built, number of enrolments, number of health clinics, etc.), but much more difficult to estimate the rate of return. This is particularly true of education, where it is generally accepted that (primary) education has a high rate of return, but the specific rate of return remains hard to quantify because investment in education takes a relatively long time to raise productivity. More problems arise to the extent that it is difficult to gauge whether or not projects have been sustained in the long-term; due to poor follow-up and the reluctance of project administrators and authors of reports to admit to poor performance (Cassen 1986, 105-107). Although the evidence is mixed, on the

whole, project lending seen as successful. Projects that aim to assist the poor directly, have been found to have rates of return equal or better than other non-poverty based lending (Cassen, 1986).

There is also a problem of fungability where there exists the possibility that a government in receipt of finance for a particular project is seen as benefiting, inadvertently, because the finance for that particular project would have been provided for anyway. The downside is that an undisclosed project may be financed instead — a project the donor may not necessarily approve of (Mosley 1991, 29).

3.5 Conditionality

In order to ensure that funds borrowed¹⁰ under the above arrangements are repaid, and that the countries undertake reforms consistent with the wishes of Bank and IMF staff (and by implication their major shareholders) the recipient countries are required to make a commitment in writing to these two institutions. In the case of structural adjustment loans a Letter of Development Policy is executed setting out the objectives, measures and timetable of reforms and disbursement of finance.

This is similar to what occurs when a borrowing country applies to the IMF for Funds. Under stand-by agreements borrowers are expected to adhere to a mutually agreed upon performance criteria. If a country fails to meet some or all of the criteria then further purchases are prohibited until the IMF and the member government reach an understanding. Under the Structural Adjustment Facility and Enhanced Structural adjustment facility member countries are required to adhere to policy framework papers.

Before proceeding to a discussion on conditionality that is applicable to both institutions it is useful to draw a distinction between the two. In the case of the IMF conditionality focuses on the demand side (Sarkar 1991). That is, the Fund is most likely to require cuts in government spending, currency devaluation, the raising of interest rates and trade liberalization. The IMF is also an institution that encourages

'cross conditionality' (Sarkar 1991), where approval of an IMF package opens up additional lending from the Bank and other agencies.

The Bank, on the other hand, tends to concentrate its conditions on the supply side (Sarkar 1991). It focuses its activities on a country's investment programme, system of incentives, pricing, and financial and trade liberalization. Mosley, Harrigan and Toye (1991, 43) state that a particular SAL can have over 100 different policy conditions. The enormous amount of conditions are seen as leading to administrative overload and confusion in the minds of recipient governments. Loxley (1986, 100) believes that neither Fund conditionality nor Bank conditionality should be viewed as dominant — they are complements that serve to consolidate the position of both institutions.

It is obvious then that use of loans from the Bank and the IMF does not constitute a simple lending arrangement. Resources provided by the two institutions are only dispersed provided certain economic reforms are undertaken. This is called conditionality and it is the most contentious issue surrounding the IMF and the World Bank.

The idea that the use of resources from the Bretton Woods Institutions is conditional on policy reform has been the subject of a heated debate for several decades. At an extreme level, the Fund and the Bank are viewed as pawns of the industrialized countries. Hayter (1971 and 1981), Hayter and Watson (1985), Harris (1986), Bernstein (1991), Dowden (1993), George (1991 and 1992), George and Sabelli (1994) and Bello (1994) all share the view that the interests of developing countries are subordinated to that of developed countries. Harris (1986, 86-88) faults the IMF for its promotion of a world system of multilateral trade and payments based on market forces rather than on state regulation. He believes that African countries are being cajoled into a system that they do not believe in (Harris 1986, 88):

The IMF's objective, reflected in the conditions imposed on borrowers and requiring them to 'liberalise' is not so much to return those countries to a normal relationship with the international economy, is not in fact to correct 'distortion' from the norm or, in the wider view to maintain a free market international system. It is, instead, to construct such a system.

Bello (1994) offers one of the most radical attacks on the Bank and the Fund. His contention is that the two institutions are ideological crusaders that seek to force a Reaganomic-Thatcherite economic system on the rest of the world. He states that (p. 67):

... judged by [structural adjustment's] underlying strategic goals a shoring up of the interests of the North and resubordinating the South within a Northern dominated international economic system, structural adjustment has undoubtedly been a tremendous success.

George and Sabelli (1994) echo the view that instead of pulling the strings of their own economic policy African governments have become the puppets of the Bank and the Fund. Their conception is that the Bretton Woods institutions are supranational crusaders that impose their ideology without any concern for dissenting opinions. To quote their cumbersome analogy (p. 5):

this supranational [the Bank], non-democratic institution functions very much like the Church, in fact the medieval Church. It has a doctrine, a rigidly structured hierarchy preaching and imposing this doctrine and a quasi-religious mode of self-justification.

Hayter and Watson (1985, 244), in a slightly less dramatic voice, support this notion:

[adjustment programs] end up as austerity programs whose major emphasis is, always, on squeezing the poor: through cuts in public expenditure, increases in the prices of basic goods and wage cuts. The prospect that they will lead to a resumption of growth in the Third World and the ability to service and repay existing debts, let alone reduce the incidence of poverty is minimal.

However, adherence to this view is by no means universal. The conservative critique proffers that Bank and Fund activities promote Socialism and their lending operations serve only to undermine capitalistic development. Helleiner (1990, 10) states that the conservative political forces are characterized by an "insensitive and intolerant ideology of individualism and the 'magic of the market place' [which] generated new cynicism about governments, indifference to poverty, suspicion of international co-operation and myopia about global and national prospects". An extreme example of the above argument can be found in the pages of the decidedly conservative journal *American Opinion*. Here, the IMF is viewed as an agent promoting a socialist super state (Allen 1979, 12). John Maynard Keynes, perhaps the most influential

participant at the Bretton Woods Conference, is in Allen's (1979, 13) opinion, "an aggressive homosexual, that had been the darling of the British Fabian Society, a gang of Socialist conspirators." Allen (1979, 13) does not pull any punches on Harry White when he states that "there is no doubt that [he] was a Soviet agent." Allen (1979, 101) commenting on the International development Association says:

soft loans are those that no one in his right mind would make — something akin to lending your new Cadillac to Leon Spinks or asking Roman Polanski to look after your daughter while you take a vacation.

The general notion is that funds provided by these institutions "may actually reach the poor, contribute to their empowerment, and possibly even result in changes of regimes away from capitalism" (Ayers 1983, 12).

However, both critiques of the Bank and the Fund are fundamentally weak. The use of information to advance arguments is selective and alternative frameworks are not provided (Nowzad 1981, 9). The radical conservative critique has virtually no foundation in fact and its demagogic voice is reminiscent of McCarthyism. There is little evidence to support claims of utilising conditionality as a tool for Third World exploitation. In addition the role of corrupt recipient governments is often played down. However, in recent years there has been a recognition of this problem, albeit stated in such a way as to inflame passions more than present a cogent argument. Hancock (1989), a journalist and a staunch critic, offers:

for such people [adjustment money] has probably never been easier to obtain than it is today, with no complicated projects to administer and no messy accounts to keep, the venal, the cruel and the ugly are all laughing literally all the way to the bank. For them structural adjustment is like a dream come true. No sacrifices are demanded of them personally. All they have to do — amazing but true— is *screw the poor*, and they already have plenty of practice at that.

A more centrist and relevant critique of the Bank and Fund conditionality concentrates on the following areas: the system favours the interest of developed countries and allows them through majority voting power to obtain considerable concessions from African governments, the approach of the institutions is paternalistic or grandmotherly, the package of reforms is uniform, conditionality is only applied to the poorest countries, the conditions are too tight, surplus countries are

not required to adjust along with deficit countries and distributional consequences are not adequately addressed and often ignored.

Some analysts of the IMF and the World Bank claim that from the inception of these institutions there has been a bias in favour of developed countries. Nowzad (1981, 2) claims that this line of reasoning is flawed because it ignores the fact that of the 45 countries represented at the International and Monetary Conference (1944), 28 countries were developing and only nine of these countries were what are now considered to be industrialized. However, at the drafting conference in Atlantic City, New Jersey, that preceded the formal conference, only five developing countries were present; Chile, China, Cuba, Mexico and India (not yet independent) (Garritsen de Vries 1986, 9). Thus active participation by developing countries was minimal and for African governments non-existent.

The Permanent Peoples' Tribunal (1990) extends this notion that there is bias in favour of developed countries to the conclusion that the use of conditionality by the Bank and the Fund is illegal. This body (the Permanent Peoples' Tribunal 1990, 337) has reached the conclusion that Fund conditionality violates the principle of equal sovereignty and a State's right to "choose fully its political, social, economic and cultural system" as enshrined in international law by Resolution 2625 of the United Nation's General Assembly. Furthermore, the Tribunal, quite idealistically and unrealistically, believes that the Bank and the Fund have failed to promote a high standard of living, full employment, and conditions of economic and social progress and development as they are bound to do under the UN charter.

Another criticism of the two institutions is that voting power favours the rich Northern states and this allows them to exert pressure on the South through conditionality (Nowzad 1981, 3). Part I members (all Western oriented industrialized countries) control 61.5 per cent of the total votes in the IDA. The United States is the largest shareholder and its voting power was 21 per cent of IBRD and 31 per cent in the IDA for 1981 (currently the figure is 17.2 and 16.1 per cent). Through this power and the fact that by convention the presidency of the Bank always goes to an

American the Bank takes on a strong pro-American, pro-Western stance. Although decisions are reached by consensus in the Bank, Williams (1994,107) reports that the largest shareholders are capable of exerting subtle influence by signalling disapproval or preventing certain issues from reaching the Board. For example, the United States is reported as having been able to halt loans to Chile, Vietnam and Afghanistan (Payer 1982: 43). In addition the Gonzalez Amendment (1972) prevents the US executive directors from voting for loans to any country that has nationalized or restricted the use of property held by Americans (Payer 1982, 14). Much the same can be said of the IMF. As previously noted the five largest members control nearly 40 per cent of the votes in the Fund. Although most of the decisions are reached by consensus special provision has been made for special majorities of 70 to 85 per cent in some instances which, in effect, provides the US and the European Union (EU) effective veto power. The veto power is also available to all LDCs if they were able to bloc together but this has not occurred. Yet, it should be noted that US influence can work both ways. Parfitt (1990, 35) relates that the US pressured the IMF to reduce conditionalities to Zaire after president Mobutu broke with the IMF in 1986. Similarly, US intervention was obvious in obtaining unconditional finance for the Sudan under Nimeiri (ODI 1992, 3). In more recent years due to criticism developing countries have been instrumental in establishing operating guidelines, the general direction of the two institutions.

On the question of whether the IMF is being grandmotherly depends on how the word is defined. For some the word might imply a degree of overindulgence if this is the case then the Fund clearly is not grandmotherly. If it is defined in the sense that the Fund offers guidance and technical assistance to member countries then it does exist. However, this is not the same as suggesting that the Fund has absolute control over the members' economy. Member countries, as it is shown later, do have an active dialogue with Fund staff. Moreover, member countries are able to influence overall policy. In the case of the Fund the establishment of the Extended Fund Facility followed claims by developing countries that short-term finances based on a

shock treatment were not enough given the poor conditions of the countries (Dell 1981, 26). In addition, following the assertion by developing countries that their economic problems were being determined exogenously the Fund established the Oil Facility (Dell 1981, 26). However, the use of PFPs has been criticized because African member governments feel that they are being "confronted by a Washington Monolith (ODI 1993, 2). Yet, the biannual review missions to countries allows the Fund the ability to modify conditions in light of new data. Helleiner (1990, 151) complains that Bank and Fund missions to developing countries suffer from a lack of knowledge of local circumstances and "professional rigidity". Mamdani's (1991) study of Uganda and Wuyt's (1991) exposition on Mozambique, represents the critique that the IMF's approach to countries fails to take into account the unique situation that each African country faces.

As to whether the reforms and conditions are standardized across countries is not as contentious as it seems. Some uniformity is expected provided that the problems that face borrowing countries are similar. Given that problem countries have in common large public sector deficits and a lack of willingness to adjust exchange rates and producer prices the solutions offered are likely to concentrate on cutting government expenditure and on devaluing the currency. However, even within this framework the reform measures are country specific (Osunsade and Gleason 1992, 9). For instance, a cutback government expenditure may be mandated by the Fund and Bank, but it is left to the country to decide whether or not to do this in military, investment or social areas (Nowzad 1981, 12).

The criticism that conditionality is only applied to developing countries is partially untrue. For the World Bank it is axiomatic that resources and conditionality is extended to developing countries as it has no remit to lend to developed countries. However, for the IMF the situation is different. For example, in 1967 the United Kingdom approached the IMF for \$1.4 billion in finances. The Fund withheld the resources until the pound was devalued. In 1976, problems with the payments situation resurfaced and financing was only made available once agreement with the

IMF was made on fiscal measures (Finch 1989, 10-11). However, it should be noted that the scale is quite different. In the UK advances to the IMF were viewed as a "straightforward financing need" (Finch 1989, 11), however, in African countries the perception is that financial sovereignty is being usurped.

The critique that adjustment is asymmetrical, where surplus countries are not required to adjust while deficit countries must undergo reform has some merit (Havnevik 1987 and Wohlmuth 1984). Although the Fund is obligated to encourage countries with undervalued exchange rates to revalue and encourage the elimination of import/export subsidies it is not obvious that it has been successful in this area. There is little effective pressure on developed countries that have surpluses on their current accounts to reduce their surpluses by increasing their imports of goods from Sub Saharan Africa. Related to this is the lack of progress in multi-lateral trade negotiations. The European Union's Common Agriculture Policy (CAP) and the policies of other major industrial nations, notably the United States and Japan, serve to limit access to lucrative markets in developed countries. Tariffs that are charged at a higher rate on processed goods than on commodities (Woodward 1992, 157) serve to discourage industrialisation in developing countries. The Multi-Fibre Arrangement also hurts developing countries by placing quotas on textiles and textile products (Woodward 1992, 157). However, it should be noted that former colonies in Africa, the Caribbean and the Pacific (so called APC countries) receive preferential treatment under the Lomé Convention. Similarly the United States operates the Caribbean Basin Initiative. In addition, during the oil shocks the Fund was instrumental in getting the Organization of Petroleum Exporting Countries (OPEC) to recycle surplus funds (Mikesell 1983, 60 and Garritsen de Vries 1986). Yet, this should not necessarily be viewed as advantageous to African oil importers because monies borrowed from this surplus pool would later have to be paid back — thus contributing to the debt crisis in the region.

The largest criticism directed at the Fund and the Bank related to conditionality is that in the pursuit of major economic reforms these institutions

IMF was made on fiscal measures (Finch 1989, 10-11). However, it should be noted that the scale is quite different. In the UK advances to the IMF were viewed as a "straightforward financing need" (Finch 1989, 11), however, in African countries the perception is that financial sovereignty is being usurped.

The critique that adjustment is asymmetrical, where surplus countries are not required to adjust while deficit countries must undergo reform has some merit (Havnevik 1987 and Wohlmuth 1984). Although the Fund is obligated to encourage countries with undervalued exchange rates to revalue and encourage the elimination of import/export subsidies it is not obvious that it has been successful in this area. There is little effective pressure on developed countries that have surpluses on their current accounts to reduce their surpluses by increasing their imports of goods from Sub Saharan Africa. Related to this is the lack of progress in multi-lateral trade negotiations. The European Union's Common Agriculture Policy (CAP) and the policies of other major industrial nations, notably the United States and Japan, serve to limit access to lucrative markets in developed countries. Tariffs that are charged at a higher rate on processed goods than on commodities (Woodward 1992, 157) serve to discourage industrialisation in developing countries. The Multi-Fibre Arrangement also hurts developing countries by placing quotas on textiles and textile products (Woodward 1992, 157). However, it should be noted that former colonies in Africa, the Caribbean and the Pacific (so called APC countries) receive preferential treatment under the Lomé Convention. Similarly the United States operates the Caribbean Basin Initiative. In addition, during the oil shocks the Fund was instrumental in getting the Organization of Petroleum Exporting Countries (OPEC) to recycle surplus funds (Mikesell 1983, 60 and Garritsen de Vries 1986). Yet, this should not necessarily be viewed as advantageous to African oil importers because monies borrowed from this surplus pool would later have to be paid back — thus contributing to the debt crisis in the region.

The largest criticism directed at the Fund and the Bank related to conditionality is that in the pursuit of major economic reforms these institutions

ignore the distributional impact of stabilisation and adjustment. As this thesis deals directly with this question more fully in later chapters, the discussion here will be limited. Both institutions, in a broad sense, take a growth oriented approach to structural adjustment. Woodward (1992) critiques this approach because it does not deal directly with the distribution of income. The criticism concentrates on the fact that even if national income increases in the long run, and this is by no means a certainty, an increase in income may benefit those who were previously better-off. As Woodward (1992, 73) puts it "if future growth benefits the rich more than the poor, the growth rate of welfare will be lower than the growth rate of income."

In defence of the Bank and Fund, the Bank has a long history of *concern* with poverty alleviation. From time-to-time the importance of this has ebbed and flowed but it has always been a central concern of the Bank. For example the Bank has established a unit to monitor the social costs of adjustment in some African countries, has provided specially designed interventions in the Central African Republic, Congo, Gabon, Gambia, Madagascar, and established pilot projects in Ghana (Program of Action to Mitigate the Social Costs of Adjustment, Guinea (Social Economic Development Support Project) and Guinea-Bissau (Social and Infrastructure Relief Project) (Kakwani, Makonnen and van der Gaag 1990, 53).

The Fund, by virtue of its Articles, on the other hand, has been less concerned with the distributional aspects of its reforms. However, as previously shown in this chapter increasing *awareness* has been placed on this matter in recent years (Osunsade and Gleason 1992, 9). Nonetheless, the framework for monitoring the impact of adjustment and stabilisation has been criticized by Bank employees for its weak analytic underpinnings and *ad hoc* nature (Kakwani, Makonnen and van der Gaag 1990, 48).

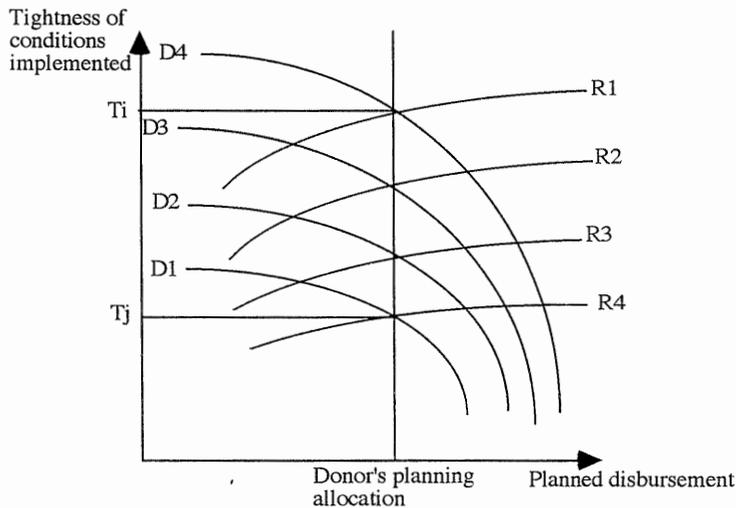
However, complaints expressed by academics, journalists and aid workers in developing and developed countries do not form the only relevant point of view concerning conditionality. Since the criticisms levied against the Fund and Bank are complete, the perspective of the IMF and the World Bank will be examined. The

World Bank and the IMF see conditionality in a different sense. From their perspective some form of lender control is desirable in order to ensure repayment under conditions where loans are not collateralized. Since finance provided by the IMF is of a revolving nature, a guarantee to make repurchases is necessary in order to ensure its continual operations. For the World Bank repayment is required to prevent the Bank from eating into its callable capital with the possibility of jeopardizing its excellent credit rating.

Moreover, from a banking point of view there is still a problem. Although monies lent by the Bank under structural adjustment arrangements require a government guarantee of repayment, there is no legal mechanism for the Bank to recover arrears if a borrower country should fail to make its payment instalments (Mosley, Harrigan and Toye 1991, 66). The moral hazard in this situation is that African governments may borrow or purchase from the Bank and the Fund without any serious effort to undertake reform programmes. What is available to the Bank and the Fund is a carrot and stick approach. That is, they can either continue, or refuse to provide finance to borrowers, and failing that, the IMF may, additionally, refuse to provide finance to countries with questionable economic policies. If a country fails to obtain the IMF's "seal of approval" then finance from other multilateral and bilateral private and public sources may dry up.

Thus, the Bank and the Fund have three powerful weapons at their disposal to ensure repayment *and* compliance with policy reform. They can provide funds in instalments (known as tranching), and withhold later instalments until they are satisfied that reforms have been undertaken. Second, since 1985, Mosley, Harrigan and Toye (1991) report that front loading of conditions is becoming more common place for Bank loans. That is, it requires that key conditions are implemented before disbursing finance. Finally, the IMF can refuse to allow purchases of Fund resources thus scaring away other lenders. Thus, it would seem that there is some merit in the argument that the Fund and the Bank have enormous scope and leverage to ensure compliance with their economic reforms. However, this is not the case.

Mosley (1987) and Mosley, Harrigan and Toye (1991) view conditionality as a bargaining process. Governments attempt to minimize the number of conditions attached to loans while maximizing the amount of finance they receive. The World Bank, on the other hand, attempts to counteract this by tranching loans. Thus, the donor attempts to maximize conditionality. Given these conditions attached to loans may be less strict than they might seem. Mosley, Harrigan and Toye (1991, 74) illustrate the above concept in terms of a utility function.



Note: Subscripts 1 to 4 on R and D curves represent increasing levels of recipient and donor utility respectively

Thus the government wishes to minimize conditions attached to loans in order to avoid domestic political strife while maximizing the inflow of funds. In contrast, the Bank attempts to maximize conditionality. Assuming that the Bank only has a fixed amount available to lend to anyone country then all possible outcomes will lie between T_i and T_j .

Therefore, conditionality is not so much the usurpation of African government's financial sovereignty as much as a process of compromise and trade-offs. This is not to say that the actors are completely honest in their dealings with each other. There are obvious advantages for governments to renege on their agreements with the Fund and the Bank. Moreover, Bank and Fund staff may incorrectly assess the degree of conditionality required due to a lack of information, poor planning or an overzealous willingness to secure reform. For instance, the onerousness of the conditions can, and are, often avoided due to the length of time it takes the Bank to determine if they have been implemented (Mosley 1987, 31). However, this is less of a problem for the IMF which sets easily monitored and unambiguous performance indicators. In addition there is pressure to meet lending targets by Bank and Fund staff. Killick (1993, 326) believes that conditionality, under such pressure is a paper tiger; the two institutions lend money to ensure that the repayment of past loans and credits are made. The provision of future finance is also ensured by the commitment of country missions to make sure that their programmes work. This leads to "evergreening", the provision of future finance without the plausible threat of conditionality (Killick 1993, 326). Furthermore, there appears to be no direct relationship between slippage on reform and the tightness of conditions on following loans (Mosley 1987, 31). Therefore, conditionality once accepted, is not necessarily to be considered undesirable. It is the degree of conditionality that is disputed. The contentiousness of the issue is aggravated to the extent that the Fund, acting as a lender of last resort, exercises control not only over its own funds but resources provided by other agencies.

The early history of SAL and SECAL conditionality shows that loan conditions are usually implemented fully. The World Bank (1988a, 7-8) study of 15 countries that received adjustment lending from 1980-87 finds that 60 per cent of those countries fully implemented and 84 per cent of the same countries made substantial progress in adhering to loan conditions. However, the implementation of conditions in the areas of trade policies, fiscal policies, industrial and agricultural

policies were below 60 per cent (but still greater than 50 per cent). For the countries in Sub Saharan Africa (Ghana, Côte d'Ivoire, Ghana, Kenya, Malawi and Zambia) the full implementation of Bank conditionality dropped to 52.4 per cent. However, the percentage making substantial progress in implementing conditions rose dramatically to 84.6 per cent.

3.6 The Record

The record through the 1980s of African countries attempting to adjust to the internally created and externally generated shocks has been poor. Table 3.4 gives an indication as to the extent of the continuing problem.

Table 3.4. Macroeconomic indicators in SubSaharan Africa* (annual percentage change)

	1965-1980	1980-1986
GDP	5.6	0.0
Agriculture	1.6	-1.2
Industry	9.4	-1.5
(Manufacturing)	(8.5)	(0.3)
Services	7.5	0.1
Government consumption	8.1	-1.0
Private consumption	4.9	0.7
Gross domestic investment	8.8	-9.3
Exports	6.6	-2.1
Imports	19.5	-7.7

Source: cited in Ghai and Hewitt de Alcantara (1991: 17). Originally from World Development Report 1988.

* Not including Nigeria.

The above table while useful in giving an overview of the problem also suffers from vagueness. Thus, a more comprehensive effort must be made to assess the impact that structural adjustment programmes and stabilisation policies have had on African economies. However, any effort made to assess the impact that Bank and Fund programmes have on macroeconomic variables is likely to face serious methodological problems. The problems stem from the fact that it is nearly impossible to distinguish the effect that Bank and Fund programmes have on African countries from other factors. One approach examines the change that has occurred

after Bank and Fund programmes have been implemented. This is flawed in that it presupposes that pre-existing policies would have continued indefinitely and governments would not have made the necessary corrections later on. A second approach compares countries that have received financing from the institutions with a control group of countries that have not received assistance. A major weakness with this approach is that any difference in economic performance is attributed to the Bank's or the Fund's intervention.

However, this said, some lessons have been learned about the effectiveness of Bank and IMF policy based lending. A United Nation's (1992, 43) publication reports that the early experience of the IMF in Africa was not effective in achieving the desired reforms. Of 22 countries in Sub Saharan Africa only 20 per cent obtained the targeted level of growth, only 30 per cent were capable of decreasing the gap in the balance of payments to the targeted level, and only one half of the countries were successful in reducing inflation to the agreed level (UN 1992, 43-44). Killick (ODI 1992 and Killick, Malik and Manuel 1991, 28-33) argues that Fund programmes, overall, are successful in securing improvements in the balance of payments, not only through curbing imports but in promoting exports. However, they are relatively unsuccessful in promoting growth, curbing inflation, or in attracting additional inflows of capital. Loxley (1986, 96) shares this view that IMF programmes have not noticeably restored growth in low income countries. Moreover, service payments on past IMF credits exceeded the value of new lending from 1986-1991 in the region. In this sense, the Fund can be viewed as increasing the financial problems of African countries rather than reducing them (ODI 1992, 4).

Colcolough and Green (1988) find that stabilisation programmes have been successful where net resource flows have increased (as in Ghana and Malawi) but have been unsuccessful when there has been no increase (as in Sierra Leone, Togo, Zambia and Madagascar).

Khan's (1990, 220) empirical analysis of the effect of Fund programmes from 1973-1988 on 69 developing countries finds that there is an improvement in the

balance of payments (the current account deficit was reduced), inflation rate decreased (but not statistically significant) and that the growth rate declined in the program year but that this diminished in further years. However, as Khan (1990, 222) concedes his study has an important drawback in that the degree of implementation of policies was not taken into account.

Helleiner (1986, 47) finds that short-term demand-oriented programmes have been successful in solving balance of payments difficulties only when the problems have been short-term in nature. Where problems are longer-term and originate externally demand-side approaches have not been successful. Even when long term policy lending is used through EFFs or SALs the results are "mixed at best" (Helleiner 1986, 48). The lack of success, is partly related to cancellations of EFF arrangements for non-compliance with conditions, and to a lesser extent, cancellation of SALs. Killick, Malik and Manuel (1991, 22) find that between 1980-1990, for all recipient countries, 48 per cent of stand-bys, 86 per cent of EFFs and 16 per cent of SAFs were uncompleted. For Africa, out of 106 programmes 48 per cent were uncompleted (Killick, Malik and Manuel 1991, 23).

The Bank's first major analysis of adjustment lending found that the average performance of countries that received SAL or SECALs was better than countries that did not receive adjustment lending (World Bank 1988a). The before-after analysis found that 30 adjustment lending countries, from 1980-86, performed "mostly better" than non-adjustment lending countries in the area of growth, external balance, internal balance and external debt. However, the modest improvements did not apply to Sub Saharan Africa where investment ratios declined, thus jeopardizing the prospects for future growth, and budget deficits were higher. Indeed, Sub Saharan Africa saw annual GDP growth decline from 2.7 per cent in the before period to 1.8 per cent in the after period.

Mosley, Harrigan and Toye's (1991) regression based analysis of the effectiveness of SALs finds only a weak, but positive effect on GDP and export growth and a negative effect on investment. The analysis of IMF stand-by credits

revealed a neutral effect on real GDP growth and investment and a positive impact on real export growth. Utilizing the with-without evaluation methodology the same authors find that for structural adjustment loans, in all regions, in the period 1980-87, the effect on GDP growth was weak and negative, on real export growth positive and on investment negative (Mosley, Harrigan and Toye 1991, 203-206). Greenway and Morrissey (1993, 251) state that the best results were obtained from countries that started out in a better economic condition and those that did worse were countries with high slippage rates.

The World Bank and UNDP (1989) has found that structural adjustment programmes have had beneficial effects on growth of GDP and export volumes when compared to non-reforming countries. Parfitt (1990) following the criticism of the United Nations Economic Commission for Africa (UNECA) states that this study has several flaws. First, by measuring GDP over a longer period (1980-87) and utilising weighted averages the Bank's "strong reformers" had declines in GDP of -0.53 per cent, while "weak performers" attained growth of two per cent, and non-adjusters a growth of 3.5 per cent. Second, some francophone countries were classified as strong reformers even though they had not been required to devalue their currencies. Third, countries that did not suffer strong shocks but were high reformers did best.

Summers and Pritchett (1993, 384), World Bank employees, advise against making any sweeping statements about the effectiveness of adjustment lending. They believe that adjustment can and has worked in several countries. To wit, those countries which received at least two structural adjustment loans or three SECALs (so called intensive adjusters) by 1990 and implemented them by the middle of 1986 benefited from higher export and savings shares, faster growth and lower fiscal deficits when compared with other countries and when compared to previous performance. Summers and Pritchett (1993, 385) further qualify their statement by pointing out that adjustment tends to lead to higher growth rates in middle income countries than in low income countries.

Doorodian's (1993) analysis of 27 developing countries that received IMF resources between 1977 and 1983, of which Cameroon, Ghana, Kenya, Malawi, Senegal, Zaire and Zambia were the only African countries studied, found that the current account balance improved significantly. In line with Khan's (1990) study the improvement in the inflation rate was only moderate and it was not definite if the adoption of an IMF programme was responsible for any reduction in inflation (Doorodian 1993, 860). In addition the effect on the overall level of economic activity was only minimal.

A recent study by the World Bank (World Bank 1994 and Jones and Kiguel 1994) finds that countries that improved their macroeconomic policies the most between 1981-86 and 1987-91 experienced a two per cent increase in growth of GDP per capita. In addition, export and industrial growth rates improved by eight per cent and six per cent respectively for countries that saw large improvements in macroeconomic policies. Countries that failed to improve their economic policies suffered a two per cent decline in GDP. More specifically, an in-depth analysis was performed on seven countries; Burundi, Côte d'Ivoire, Ghana, Kenya, Nigeria, Senegal and Tanzania, and all of them except the Côte d'Ivoire, which has exchange rate problems stemming from membership in the CFA, experienced an average growth rate of 4.5 per cent post 1986 as compared to one per cent from 1981-86 (Husain 1994, 6). Of the seven countries only one, Tanzania, failed to show a rise in per capita food production. In all seven countries average food imports either declined or remained the same (Husain 1994: 6). In addition, the export sector showed a strong recovery as well as a diversification of the export base (in Ghana and Tanzania). However, the study notes that African countries still have a long way to go before a "sound" macroeconomic environment is achieved.

On the whole the impact of adjustment and stabilisation packages on macroeconomic reforms remains debatable and subject to continued controversy. The results in the case of the Fund suggests that "the evidence is mixed, does not provide exclusive support to any single school of thought, and that it is easy to exaggerate the

amount of impact which IMF programmes have, for good or ill" (Killick, Malik and Manuel 1991, 35). Similarly, the evidence of Bank effectiveness is subject to criticism and it is not yet clear, in a definitive sense, that SAL lending has been successful.

For both the IMF and the Bank programmes that have been created with the active involvement of the recipient government have fared better. Governments that 'own' their programmes have, generally, had a greater degree of programme success (ODI 1992: 3). Those that feel that programmes were forced upon them in a crisis situation or were not adequately consulted during the design stage were likely to suffer from a lack of political support and, consequently, a will to follow through with reforms. This, then, places the country that has experienced a failed programme in a precarious position.

In Africa reform programmes can be biased towards only a minority of the politically influential population. Groups that typically oppose reforms in Africa, as has occurred in the Côte d'Ivoire, are student groups and civil servants (UN 1992, 45). Other groups are unable to wield political influence. Smallholder farmers, the majority of all Africans, are a disperse group and rarely organize effectively. Small organized competitive businesses, who would be the chief beneficiaries of reforms are small and not politically influential. Adjustment and stabilisation packages, then, will not always be successful in achieving the reforms considered desirable by the Bank and the Fund.

Adjustment and stabilisation packages must be 'sold' to the populations of Sub Saharan Africa. In part the success of this selling action depends on the degree of adjustment required and on the ability of national governments to mobilize popular support or control social dissent. Woodward (1992, 68) sums up the problem:

Many countries are forced to undertake macroeconomic adjustment at such a pace that it impinges on the political constraints affecting its implementation; imposes unduly high social costs; and seriously undermines its on effectiveness. Where this results in the adjustment process failing or being abandoned, this means that still further adjustment needs to be undertaken later, to overcome the counterproductive effects of the previous over-rapid adjustment, in addition to the original need for adjustment. The problem is

compounded to the extent that foreign lenders and investors react to the apparent failure of adjustment by reducing the availability of foreign exchange.

This idea is represented below,

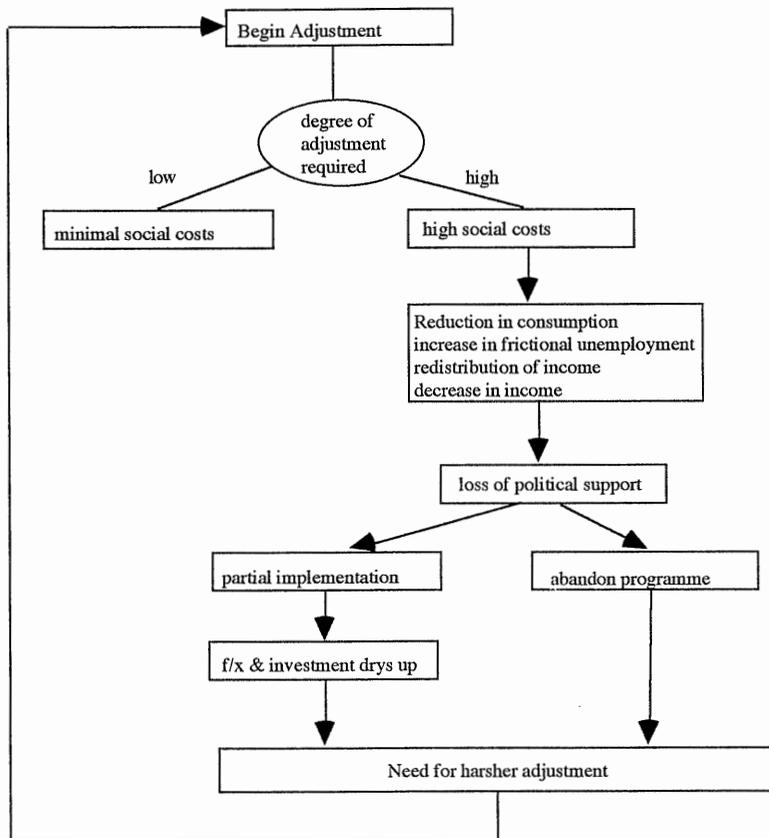


Figure 3.2. Support for Adjustment Measures

Thus if conditionality is not properly planned and does not take into account the reluctance of governments to accept short-term financing and their limited ability to implement substantial reforms the effectiveness of policy based lending may be imperfect or fail. The problem is aggravated to the extent that resistance to reforms by leaders and bureaucrats is mirrored in the population at large. Such adjustment fatigue (Nelson 1989) limits the political sustainability of programmes. This creates

problems for all parties. The IMF is prevented from attaching as many conditions as it might like. For the poor in Africa their interests may not be directly addressed because there is severe pressure to prevent additional conditions related to child welfare and poverty from being attached to loans (Helleiner 1991, 1828).

3.7 Conclusion

This chapter has reviewed the policies of the Bank and the Fund from several different perspectives. It has been demonstrated that both institutions follow a liberal economic ideology in providing finance to African countries, and that this is most prominent in the case of the IMF. The facilities provided for finance, in the case of the Bank, have changed in light of this. The Bank now devotes considerable resources to so called policy based lending in an effort to get African countries to adhere the liberal economic international system. The IMF continues to provide finance consistent with its Articles of Agreement in an effort to promote the expansion of international trade and to shorten the duration and degree of disequilibrium in the balance of payments of its members. The IMF has been shown to be an adaptable institution and has made some reforms to its lending operations. The ideologies of the two institutions by the late 1980s and early 1990s began to merge into a common "Washington Consensus" that urged African countries to liberalize the domestic market, foreign investment and trade and to undertake relative price corrections and policies to support a balanced budget (UN 1992a and 1992).

Notwithstanding the reforms, criticism continues to be directed at both Bretton Woods institutions. Conditionality remains an important concern of many African governments. Although some of the criticisms can be discounted others remain persistent. The reluctance of the Bank, and more importantly, the Fund to encourage surplus countries to adjust opens the institutions to charges that all the costs of adjustment must be borne by African countries while benefits accrue to developed countries as well as African states.

The effectiveness of structural adjustment programmes and stabilisation packages to improve macroeconomic performance still remains subject to debate. Some improvements are noted in some areas while the impact in others remains neutral or negative. Moreover, incomplete implementation and slippage on reforms continues to be a major problem with adjustment. A definitive programme for economic success continues to remain elusive.

The impact of adjustment on the social sector and on individuals well-being remains, relatively, under-researched. Following chapters explore some of the difficulties involved in establishing a link between macroeconomic reforms and changes in an individuals health status.

Chapter 4

The Intersectoral Linkages of World Bank and IMF Programme Lending

4.1 Introduction

As has been demonstrated in the previous two chapters, economic crises in Sub Saharan Africa has led to widespread and often pervasive intervention by the World Bank and the IMF into the affairs of African countries. This intervention has taken two main forms: adjustment and stabilisation programmes. Recent evidence suggests that, overall, in all developing countries, these reform programmes are beginning to work, at least in improving the current account and exports. However, the evidence has been relatively scarce as to the social impact of economic reforms.

This chapter looks at the initial linkage between macroeconomic reform and the effect that it may have on labour and product markets (where changes in relative prices of farm commodities is of primary concern) and on government investment and promotion of social infrastructure. Particular attention is paid to the agricultural arena as this constitutes the most important sector in Africa. A poverty typology is developed in order to show how different groups of people are impacted by reform measures. In addition, this chapter is broken down into four main headings; budget and public expenditure, the exchange rate, trade and fiscal policies, as these areas are subject to substantial reform under policy based lending arrangements. The possible impact of reforms are discussed under each heading, as well as the shortcomings involved in trying to draw any definitive conclusions as to the effect of reform measures.

4.2 Poverty Typology

In order to examine the impact of multilateral programme lending on health status the necessary linkages must first be established. These linkages, for the purpose of these thesis, and in order to ease analysis, are broken down into two stages. The first stage, dealt with in this chapter, concerns the link from macroeconomic reform to labour and product markets and to social infrastructure, or in World Bank parlance; macro-meso analysis (Demery, Ferroni and Grootaert 1993, 1-14). The second stage, which is reviewed in chapter seven, is mainly concerned with the impact on households.

Since changes in household welfare is central to this thesis it is useful to move away from an aggregative analysis to one that focuses on the different groups in society. That is, it is assumed that any changes in welfare will not be evenly distributed, but will affect different groups unequally. In essence, some people may benefit from reform while others will suffer. Furthermore, that any changes may be temporary in nature, existing in the short-run only, or may be long-term.

Therefore, it becomes clear that the construction of a typology is necessary in order to disaggregate the impact. Commander (1989), Streeten (1989), Johnson (1989) and Duncan and Howell (1992) advise that the agricultural sector should take prominence in analysis due to its large size (Green 1989), both in employment and export earnings, and in the concentration of Bank and Fund lending in this area. Demery and Grootaert (1993), Demery and Addison (1987), Woodward (1992a) and Eicher (1992) provide a basic framework for the agricultural or rural sector. In Africa it is conventional to break the rural sector into five groups: farmers, pastoralists (or herders), landless labourers, non-agricultural workers, and, although strictly not rural, fishermen/women.

Farmers can be broken down into three main subgroupings. First, there are farmers that own their own land, employ unskilled labour, utilise machinery and carry out production on a large scale; perhaps on a plantation, estate or commercial farm. The produce of large farms is mainly for export. Second are middle size farms that

produce for export and/or the domestic market with the help of hired labour, machinery or livestock. Third, there are small farmers. Smallholder farmers, and in particular women, are the major producers of food crops in Africa (Duncan and Howell 1992, ix). They are generally resource poor and work the land without aid of advanced machinery. They produce for the domestic market and in order to satisfy their own families consumption needs and for the export market. For example, Duncan and Howell (1992, 7) estimate that in Ghana, Kenya, Madagascar and Malawi smallholders play a dominate role in the production of export crops. Such smallholders are likely to sell some family labour to larger farms and/or engage in non-farm activities in an effort to secure a minimum standard of living. Taken as a whole agricultural activities employ between 70 and 80 per cent of the total labour force in African countries (Bagachwa and Stewart 1992, 147).

Pastoralists obtain most of their income from herding activities and are resource poor in that they often do not own any land. Pastoralists may supplement their income from non-farm trading activities. The lifestyle is nomadic and their standard of living is subject to fluctuations based on rainfall. Landless labourers and non-agricultural workers are another category of resource poor individuals in rural areas. Landless labourers hire their labour to larger farmers that produce either for the export or domestic market and their ability to find work may be subject to seasonal shifts. Non-agricultural workers in rural areas are primarily engaged in market-based activities. Non agricultural work can consist of mining, manufacturing, construction or service related activities. Much of the work carried out in non agricultural activities is of a part-time or seasonal nature (Bagachwa and Stewart 1992, 147). In Africa, the non-agricultural sector provides primary employment for between six and 26 per cent of the total rural labour force (Bagachwa and Stewart 1992, 147). Fishery activities, obviously, are based around coastal areas, and are generally small scale with the household composing the main labourers. Fish produce may be carried into rural areas either by household members and by market traders.

Tables 4.1 and 4.2 below provide estimates of the sources of and types of income for rural smallholders in Sub Saharan Africa.

Table 4.1. Source of Income of Rural Smallholders: Select Regions/Countries in Sub Saharan Africa (per cent)

Type of income	Forest: Côte d'Ivoire	Savannah: Côte d'Ivoire	Coast:	Plateau: Madagascar	South: Malawi	South:	Tanzania
Agricultural income	76	81	42	39	48	51	73
Non-agricultural earned income ^a	21	17	55	58	49	13	25
Non-earned income ^b	3	2	3	3	3	36	2

Source: Sahn and Sarris (1991) based on various studies therein

Notes: ^a includes wages, salaries and own account earnings

^b includes income from transfers and remittances

Table 4.2. Source of Agricultural Income of Rural Smallholders: Select Regions/Countries in Sub Saharan Africa (per cent)

Source of agricultural income	Forest: Côte d'Ivoire	Savannah: Côte d'Ivoire	Coast:	Plateau: Madagascar	South: Malawi	South:	Tanzania
Traded food ^a	14	32	23	30	36	53	35
Non-traded food ^b	41	46	46	69	58	24	61
export crops ^c	45	22	31	1	6	23	4

Source: Sahn and Sarris (1991) based on various studies therein

Notes: ^a rice, maize, millet, groundnuts and others

^b millet, cassava, sweet potato, yams and other

^c cocoa, tobacco, cotton, coffee, cola nuts, rubber, sugar and other

A similar framework for urban areas is also useful in analysis. The urban sector can be broken down into formal and informal areas. The formal sector consists of individuals involved in private employment or with the government. Formal manufacturing is concentrated in a small number of urban areas in most African countries. For example, in the late 1970s, 42.6 per cent of total formal manufacturing employment in Kenya was located in Nairobi, a city with only 5.3 per cent of the total population (Bagachwa and Stewart 1992, 147). In Ghana, 54 per cent of total industrial employment was in the capital Accra in 1977 (Bagachwa and Stewart 1992, 147). Similarly, in Tanzania, 50.3 per cent of total large scale manufacturing

employment and 53 per cent of small scale manufacturing employment was located in Dar es Salaam (Bagachwa and Stewart 1992, 147).

Unfortunately the composition of the informal sector is less clear. Heller (1988) states that the informal sector is comprised of individuals engaged in small scale subcontracting such as the production of intermediate goods for the formal sector. Small scale manufacturing is also included in informal sector activities. The main activity would be the production of consumer goods for the domestic market which are purchased by low- and middle-income households in the formal and informal sector. Activities in retail trade, small-scale transport, and personal services, such as repairs, tailoring and the like would also be included.

Giri (1990, 11-113) offers a more fluid definition of informal sector enterprises. He characterises informal sector activities under several headings. The most significant ones are provided. First, they are extremely heterogeneous ranging from illegal activities such as prostitution and trade in drugs to the provision of wood to household and craft activities. Low capital intensity and lack of access to modern forms of credit is another salient feature. Other hallmarks include simple production techniques, access to limited markets (based upon a direct relationship with customers) and low productivity. However, the most striking feature of the informal sector is its large size. Table 4.1 gives a breakdown for selected Sub Saharan African cities:

Table 4.3. Percentage of Labour Force Engaged in Informal Sector Activities, Selected Cities in Sub Saharan Africa

City	Percentage of labour force in informal sector
Abidjan	30
Lagos	>50
Accra	80
Ouagadougou	73
Dakar	>50

Source Giri (1990, 113)

The relation of integration of the informal sector to the formal sector determines how quickly the effects of crisis are transmitted to the informal sector (Heller, 1988). That

is, if the informal sector is relatively autonomous, with weak linkages to the formal sector, the effects of adjustment and stabilisation are unlikely to be transmitted quickly. Giri (1990, 113) believes that the informal sector is relatively dependent on the formal sector, however there exists some informal sector activities that are separate from the formal sector. Moreover, Heller et al (1988) warn that "the presence of an informal sector may obscure the channels through which policies influenced the poor and thus must raise questions about the validity of inferences based only on official statistics."

4.3. Theory of Adjustment and Stabilisation

4.3.1 Introduction

As chapter two indicated Sub Saharan African countries during the 1970s and 80s faced an external environment that was inimicable to the promotion of sustainable growth in the countries' economies. These problems were compounded to the extent that governments were unstable and often acted in the best interests of a minority of its citizens. Furthermore, where governments were relatively stable domestic mismanagement of the micro and macro economy was undertaken by a poorly trained bureaucracy.

Given this, and the pressing need for external finance, the IMF and the World Bank undertook to initiate or promote reforms in African states. Chapter three indicated that reform measures concentrated in several areas. In the case of the Bank reforms focused on increasing the efficiency of resource use, balance of payments difficulties of a long run nature, the promotion of infrastructure development and increased access to social services in order to encourage high rates of economic growth. Subsequently, the Bank focused on trade, tax, public sector, financial sector and institutional reform. The IMF, in contrast, dealt with short term macroeconomic disequilibrium and problems with the balance of payments. The Fund expanded its role in developing countries from one that merely provided short term finance to troubled economies to one that encouraged expenditure switching programmes.

While such a distinction in the roles of the two institutions proved useful in analysis in chapter three, the distinction in this chapter is blurred. The reason for this is that co-operation between the two institutions has led to cross-conditionality of objectives. Moreover, the construction of adjustment facilities within the Fund has further confused the distinction between the two institutions.

Underlying both institutions is the ideological notion that open economies, which most Sub Saharan countries are, must adapt to the world economic system. To do this they must become more flexible and outward oriented. Implicit here is a rejection of the closed economy; with its incentives for production to occur for the home market, the promotion of import substitution schemes and food self-sufficiency (Killick 1993, 86). Instead, the closed economy would be replaced with one where producers would be able to effortlessly switch between the production of goods for export and goods for the domestic market, and demand would shift readily between imports and home goods. Under such a flexible system the exchange rate would, ultimately, be encouraged to move freely.

Thus, the IMF and the Bank, have encouraged policies that would lead to more flexibility. Amongst these are exchange rate policies; fiscal policies that concentrate on taxation and tariffs and on food subsidies, social services and infrastructure; and price and wage controls.

4.3.2 The Exchange Rate

Amongst policy instruments used by the two institutions, and here primarily the IMF, the exchange rate is the most likely to affect adjustment of African countries (Killick 1993, 139). However, before proceeding to a full discussion of the exchange rate two observations are worth making. First, any changes in a countries exchange rate points to the fact that the IMF has moved away from its traditional role of financing a balance of payments deficit. It is therefore noticeable that the Fund views the shocks that affect African countries as not temporary in nature, but having longer run consequences. Second, to ease analysis, for most of this chapter, goods will be

broken down into two categories: tradables and nontradables. Tradables are goods that are either imported or exported only. Nontradables are goods that do not trade and are produced solely for the domestic market. The definition employed here has an important implication: goods, in real life, do not fit neatly into two classifications of freely tradable and nontradable.¹¹ There is a spectrum of tradability and as Killick (1993, 139) warns, changes in the exchange rate "will clearly affect the prices of almost everything in varying degrees; and thus can be expected to have rather complex effects..."

However, the distinction having been made, the purpose of a change in the exchange rate is to encourage expenditure switching. In the context of adjustment in African countries this has, invariably, meant a real devaluation of the currency which will act as a signal for resource allocation. A devaluation is considered appropriate when the current account deficit becomes unsustainable. That is, the current account deficit cannot be financed by borrowing or drawing down reserves. The World Bank takes a long term view of the benefits of a devaluation. The Berg Report (World Bank 1981b, 30) states that "policy changes to restructure incentives might not always have an immediate and direct impact on economic performance, but the cumulative long-term effects will be critical to Africa's effort to raise agricultural and export growth rates." The effect of a real devaluation, in the orthodox view, is that prices of tradable and nontradable goods will change. Tradable goods will see an increase in their prices following a devaluation. The reverse occurs, in relative terms, for nontradable goods (Commander 1989, xii). Thus a real devaluation will lead to a reduction in domestic demand for imports and exports, thus allowing more goods to be exported and creating an incentive for producers to switch to the production of tradables, while domestic demand shifts to non tradables. This switching helps cure some of the problems associated with an overvalued exchange rate.

4.3.2.1 Overvaluation

According to Killick (1993), Dornbusch (1988) and Pfefferman (1985) an overvaluation causes several problems. First, it discourages export industries by

decreasing profitability of production for world markets and reduces external competitiveness if goods are homogeneous and there are many producers waiting to steal market share. Second, the production of importables is discouraged because the local currency costs of imports is artificially cheap. Although this problem can be partially offset by protectionist measures geared at protecting domestic industries these measures have a tendency to lead to inefficiency in those industries (Pfefferman 1985, 18). Because domestic inputs cost more than competing imported inputs, domestic producers have an incentive to substitute imported inputs for domestic ones. This can mean, in Africa, that imported fertilisers are substituted for domestic labour (Dornbusch 1988, 81).

Third, as an overvaluation acts as an implicit tax on exports, exporters who receive foreign exchange are forced to surrender it for an artificially low amount of domestic currency (Gersovitz and Paxson 1990, 42). Thus, a devaluation may lead to an increased willingness to produce for the export sector. Gersovitz and Paxson (1990,42) note, though, this effect will be less important to countries that tie their currency to the French Franc via the FCFA, than in countries that do not.

Fourth, the distribution of income, at least in African countries, will be skewed to urban groups because an overvalued exchange rate will favour nontraded activities instead of rural producers of tradables. This is due to the fact that an appreciation of the real exchange rate affects factor markets. It encourages capital and labour to move out of tradables and into nontradables because to relative prices of nontradables has increased. In this sense an overvalued exchange rate leads to cutbacks in employment in the traded sector. This feeds through to the nontraded sector in so far as individuals employed in the traded sector have lower incomes and consequently less money to spend on nontraded goods. Through the multiplier effect this can lead to cuts in production and employment in the nontraded sector.

Fifth, an overvalued exchange rate, if it lasts over one year, and in the absence of effective controls, may encourage capital flight, as wealthy individuals and companies may desire to purchase relatively large amounts of foreign exchange

before a (predicted) devaluation. This capital flight encourages disinvestment in industry. In addition, speculation over a possible devaluation can lead companies to purchase more, cheap, imports and withholding exports that would following a devaluation fetch higher prices. If the overvaluation is viewed as short-term in nature then the pressure on the current account may be offset by compensating capital inflows. In the medium to long term this may increase the debt service burden for a particular African country (Pfefferman 1985, 18).

Therefore, there are several, quite serious issues associated with an overvalued exchange rate. The obvious prescription is a devaluation. A change in the exchange rate offers a couple of advantages over other policy tools such as the administration of commercial policies. First, changes in the exchange rate are simple to administer and do not require large bureaucracies to run (Krugman 1988, 72). Second, a devaluation provides a decentralised incentive to producers. The chief disadvantage is that governments find it an unpopular measure to implement.

4.3.2.2 The Impact of a Devaluation

In order for a devaluation to be successful in inducing expenditure-switching it must lead to a depreciation of the real exchange rate and not just the nominal exchange rate. The aim of a devaluation is to reverse the damage done by having an overvalued exchange rate by encouraging domestic consumers to switch their demand from foreign produced goods to ones that are produced domestically and to get foreigners to purchase exports. Thus if a real exchange rate rises, indicating a devaluation or depreciation, imports become more expensive, which in turn leads to a reduction in demand, and encourages producers to produce more import substitutes and goods for the domestic market because they are relatively cheaper. Thus an increase in the price of tradables causes domestic demand to switch from traded goods to home goods. The production of exports increases because they have become more profitable.

Thus a real devaluation sends powerful signals to both producers and consumers. However, the benefits of a devaluation should not be overstated as there

are several adverse effects associated with it. First, and most importantly, a devaluation tends to be inflationary (Krugman 1988, Helmers 1988, Fischer 1988, Singh 1986 and Bond 1980) and possibly stagflationary (Killick 1993). For countries in Sub Saharan Africa imports are likely to be important in providing raw materials, inputs for industry and finished consumer goods. Since a devaluation will normally raise the local currency costs of imports and hence the domestic prices of these goods the costs to producers using imports and the prices paid by consumers who purchase imported goods increases.

Another one of the main criticisms of devaluation is that increases in export revenues are used primarily to service external debt. Stein (1992), a critic of the World Bank and IMF adjustment model, states that devaluation (and tightening of credit) can greatly increase the cost of obtaining foreign and domestic funds for the purposes of investment. In fact a devaluation could lead to a worsening of the budget deficit when a large portion of government expenditure is devoted to foreign debt obligations. In essence, it "raises the cost of government foreign exchange expenditure in domestic currency terms" (Woodward 1992a, 45).

Sarkar (1991), points out another failing of utilising devaluation as a policy tool. Based on evidence from 29 Highly Indebted Countries, he shows that there is no statistically significant relationship between the percentage rates of real devaluation and the percentage change in export volumes. Furthermore, that there is no guarantee that increased production of tradables can be sold because of protectionism in industrial countries and the fact that the world market for agricultural raw materials and minerals is determined by buyers demand. The problem is made worse to the extent that a devaluation in one developing country often leads to a spiral of competitive devaluation among other developing countries producing the same type of products (Sarkar 1991, 2309). This is the "fallacy of composition" argument. The idea behind this is that the effect of one country's devaluation should not be seen in isolation of other adjusting countries, and that the aggregate effect of several devaluations may be different (and less desirable) than the effect of a single

devaluation. Since the Bank and the Fund lean heavily towards the promotion of exports in Africa as a way of improving the current account, the net effect of encouraging exports from many countries may serve only to increase supplies and decrease the prices paid for the exports. Indeed, the fallacy of composition problem can be extended to adjustment programmes overall. For instance, there may be two adjusting countries A and B. Country B may not be able to import A's goods due to its adjustment programme. This occurred in the case of Mali, a land-locked country with a limited ability to compete on world markets, which was restricted from increasing its exports of livestock to neighbouring countries due to their adjustment programmes and lack of foreign exchange (Woodward 1992a 63).

But to counter Sarkar's (1991) belief that contemporaneous devaluations worsen the terms of trade of Sub Saharan African countries, DeRosa and Greene (1991) state that this is not necessarily the case. Only where the combined share of African exports is high in relation to world supply, and the share of a particular commodity is high in the devaluing countries' total exports are the effects expected to be negative, and then only in the short-run. Their study suggests that, "overall contemporaneous devaluations have raised total export earnings from individual crops in Sub-Saharan Africa" (DeRosa and Greene 1991, 33). The World Bank (1981b)¹² in one of the earliest reports that brought attention to the crisis in Sub Saharan Africa and the need for adjustment suggests that "[mainly agricultural] exports can be diversified and Africa's share of world trade in most commodities could be increased with relatively small effects on prices." In so far as this is a carefully worded statement it is true.

However, looking at two commodities, coffee and cocoa, that are important in generating income in Sub Saharan Africa, an increase in the volume of exports will lead to a decline in the world price of these commodities. Godfrey (1985, 170) states that a one per cent increase in Sub Saharan Africa's exports of coffee would lead to a 1.14 fall in the world price. For cocoa a one per cent increase in exports would lead to a 2.17 per cent fall in the world price. This is potentially a big problem due to the

fact that investors and producers will have an incentive to increase production of products that require little investment and only a small amount of foreign exchange, and where output is likely to increase quickly (Woodward 1992, 67). Basically the incentive is to increase the volume of primary products. However, this view is slightly flawed insofar as the increased production of agricultural products takes time (at least a year) and for some crops considerably more time. Killick (1993, 306) reviewing evidence from Africa finds that this argument only holds for cocoa, where returns are likely to be negative. However, even in countries that produce cocoa (of which Sub-Saharan Africa accounts for greater than 50 per cent of the world exports), such as Ghana and the Côte d'Ivoire, devaluation is likely to have a positive long-run impact as earnings from other exported commodities would increase (DeRosa and Greene 1991, 33).

A further problem relating to improvements in a country's trade balance can be viewed in terms of how much exports are encouraged and imports discouraged by a change in price. The Marshall-Lerner condition states that the elasticity of supply of exports and the elasticity of demand for imports must sum to unity. Taylor (1983) offers evidence that in developing countries the elasticity of supply of exports and elasticity of demand for imports are too low to satisfy the Marshall-Lerner condition. For example, Chhibber (1985) reports that in developing countries the aggregate supply elasticity of agriculture with respect to prices lies in the range of 0.3 to 0.9. However, for the poorest developing countries with minimal infrastructure the range is from 0.2 to 0.5. This means that if real farm prices increased 10 per cent output would only increase by 2 to 5 per cent. Beynon (1989) reports that aggregate agricultural supply response in the short run of approximately 0.2, and long run elasticities of 0.4. Bond's (1983) study of nine Sub Saharan African countries estimated the aggregate elasticity of supply of between 0.05 and 0.22 in the short run and 0.07 to 0.34 in the long run. If this is occurring a devaluation may lead to a worsening of the balance of payments position. Moreover, note should be made of the possibility that a J-curve effect may be operating; where devaluation in the long

run may be successful, but in the short term the balance of trade would worsen before it improved. If either is occurring then the implications of improving the standard of living, in the short run at least, is poor.

4.3.2.3 The Structuralist Factor

Also, in the area of expenditure-switching policies, there is also reason to believe that there are some effects which might offset the possibility of a positive outcome. Structuralist factors, here, prevent supply from responding to increased price incentives. The World Bank (Demery and Addison and World Bank 1981b) tends to play down the structuralist perspective in the role of increasing supply. Structuralists (Taylor 1983 and 1988) believe that technological backwardness and the "structure of institutions and the behaviour of members make some patterns of resource allocation and evolution substantially more likely than others" That is, markets will not necessarily be price clearing as under neo-classical economics. Instead non-economic or non-maximising behaviour may occur by individuals or institutions that are recognised to have political and social characteristics as well as economic ones. For example, in Sub-Saharan Africa, Smith (1989, 28-29) believes that many of the measures may not have the desired beneficial effect even in the long-run. He says that due to the fact that markets are extremely fragmented and a large percentage of goods are not traded price reforms will not work because they assume resources and commodities are traded in markets that are integrated and competitive. There is also the notion of the 'food security syndrome', where farmers give priority to foods that will ensure self-sufficiency. Due to this action on the behalf of farmers, they become less likely to switch from non-tradables to tradables. The effect of this is to dampen the positive effect that changes in prices are supposed to bring about under a devaluation. That is, due to the 'food security syndrome' production decisions taken by farmers will not be very responsive to changes in price and the improvement in net foreign exchange earning, consequently will be lower than predicted. Finally, many

African governments lack the proper administrative and well-trained bureaucracy that is necessary to effectively intervene in the price mechanism.

Smith (1989, 26) also states that the full effect of devaluation may not be passed back to the producer because the producer may have unequal bargaining power *vis-a-vis* purchasers. Related to this is, if the product market is monopsonistic, traders may not pass price increases on to the farm gate (World Bank 1990, 5) thus reducing the incentives for farmers to make the switch to tradables. That is if commodity marketing boards act as intermediaries between producers and foreign importers, and they only pass on a small portion of the price gain to producers then the full benefit of a devaluation will not be enjoyed by the producers. Furthermore, changes in supply may be hindered by non-price factors such as a lack of investment (or disinvestment) in transport and communication, lack of credit (United Nations 1992, 44), lack of irrigated water and poor research and extension services (Chhibber 1988, 44). The incentive to produce is further diluted to the extent that the availability of consumer goods is limited and the proceeds of marketed surplus cannot be spent (Beynon 1989, 329) in the satisfaction of householder demands. Structuralist factors in the area of technological backwardness and capital constraints also tend to limit increased production in the face of favourable price changes. Agriculture, in Africa, as shown previously shown in chapter two, is not highly advanced and fertiliser consumption, mechanisation and irrigation lag well behind other regions (Beynon 1989). The quantity of credit available to African farmers is limited in rural areas and, at times, non-existent for smallholders (Beynon 1989). Kamarck (1988, 215) believes that the lack of individual ownership of land and clouded title claims hinders the expansion of agricultural export.

It is useful to make a distinction in agricultural crops. Annual crops, such as cotton and rice, can be put into or out of production relatively quickly. The acreage planted for tree crops, such as coffee, cocoa, palm oil rubber and tea, takes time to increase which translates into output changing in the medium or long term. For industry, a devaluation can cause problems as well. Following a devaluation the cost

of obtaining foreign and domestic funds for investment increases greatly (Stein 1992, 88). The supply response by manufacturers depends on this and the degree that imported inputs are used in the production process. Switching from imported inputs to domestic ones may take months or years to occur (Johnson 1987, 25) so any benefits may only be observed in the long run.

4.3.2.4 Other Problems with a Devaluation

Bassett (1988) also attacks the World Bank position that the movement to export crop production will not hurt food security. He says that, in the World Bank's view, there are three areas where food crops and export crops are complements of each other. First, food crops that are rotated with cash crops benefit from the fertiliser used for cash crops. Second, technology introduced in cash cropping schemes can be used to improve food crop production. Third, institutional arrangements such as agricultural extension and marketing services used for cash crops can be used to improve food crops.

Basset's (1988, 50-54) limited study on the Côte d'Ivoire destroys some of these assumptions. First, farmers do not always alternate food and cash crops. In Côte d'Ivoire only 25 per cent of the cases (out of 38 households in one village) did food crops alter with cash crops. Moreover, the use of fertilisers should not be viewed as a benefit as fertilisers applied to savannah soils may lead to increased acidification (p.51). Second, the introduction of mechanised production was limited to only one per cent of cotton growers and maintenance costs of tractors is likely to curtail the long-term sustainability of the programme (p. 52). Third, marketing arrangements introduced into the Côte d'Ivoire have not benefited locally grown food crops: 60 per cent of total caloric value of food comes from imported rice.

Inflation may also occur because as exports grow this leads to increased demand and a shift from foreign goods to home goods produced by domestic residents. This can translate into a push against limited supply and prices of domestic goods increasing (Krugman 1988, 69). In addition, as previously noted prices of

imported inputs and consumer goods will increase which will likely fuel inflation. The possibility of high inflation following a devaluation becomes more pronounced to the extent that organised labour take defensive action through wage indexing in order to protect their standard of living. Since wages in the formal sector are likely to be indexed they too increase, which feeds through to domestic prices (assuming producers follow cost-plus pricing rules), and in turn leads to further wage increases. To borrow the Latin American terminology, the wage earning sector can be broken down into two components: wage-fix and wage -flex (Demery and Addison 1987a, 1493). The wage-flex sector, which corresponds loosely to the urban informal sector, clears through a fall in real earnings. The wage-fix sector, or the urban public and private sectors, adjust by cutting employment rather than real wages. Thus, the urban informal sectors share of total unemployment will tend to increase faster than total unemployment (Cornia, Jolly and Stewart 1987). However, Behrman (1988, 113) notes that pressure on wages may not be that significant in Sub Saharan Africa where wage indexing and unionisation is not as prominent as it is in Latin America. Addison and Demery (1994, 186) report that the wage rigidities in Africa emanate from government intervention in labour markets; either through minimum wage laws or the setting of public sector wages. Killick (1981, 216) notes that the increase in inflation need not be severe, but can be gradual depending on if the devaluation is large and discontinuous or if the devaluation occurs in steps.

Godfrey (1985, 176) states that the benefits of devaluation were more than negated by domestic price inflation in Kenya in the period 1980-82. This is attributed to the fact that producers were able to pass on price increases in the prices of imported inputs to consumers quickly (Godfrey 1985, 177), rather than due to increases in the money wage. However, in any case, in Africa this may not be a serious problem as organised labour makes up a relatively small percentage of the workforce. Moreover, it is possible to remove imported goods from the wage index or to suspend the index altogether during a devaluation (Fischer 1988, 119). In addition as the prices of some goods increase this may lead to higher inflation, at least in the short run. From an

orthodox view, this does not really matter as price increases should be matched with decreases in prices assuming that the money supply remains unchanged. However, if the velocity of circulation increases with inflation then there will be a problem (Woodward 1992a, 47). If imports decline as a result of a devaluation this may effect the amount of money collected in taxes if import tariffs make up a large portion of government revenue.

The conventional wisdom, while explaining that exports will eventually expand and imports will decline, thus leading to increases in income and an improved balance of payments position, does not offer any steadfast rules as to how long this may take. If capacity is fully utilised the response may be slow. Moreover, if increases in exports are expected to come from the mining and agricultural sectors, ore extraction and the cultivation of some crops (those with long gestation periods) in particular, take a long time (Behrman and Deolalikar 1990, 334). Thus, slowing down the positive effects of a devaluation from reaching producers.

However, a devaluation need not, necessarily, be inflationary. A real depreciation means that local importers have to sacrifice more local currency in order to obtain a given quantity of imports. This increase in the amount of local currency that is given up in order to purchase foreign exchange will decrease the money supply and, subsequently, reduce inflationary pressures (Killick 1981, 217). In fact a devaluation may be recessionary. The price increase that follows a devaluation may reduce purchasing power and increase the costs to domestic industry (Killick 1993, 158). There are two force at work; inflationary and recessionary. The net result may be higher inflation with lower economic growth (Killick 1993 158). Yet lower economic growth is not a definite outcome: there will be a net injection into the economy so long as the increase in tradables is larger than the decrease in nontradables (Killick 1993, 159).

To measure the impact on prices, incomes and product markets the orthodox view is maintained; that is, a devaluation leads to an increase in the price of tradables. According to Winters (1991, 291) a devaluation can have three effects on income.

Firstly, there is the idle resource effect, where devaluation will lead to a price effect that will stimulate the production of importables and exportables. If there are spare resources expansion in production will not be at the expense of nontradable goods and incomes may increase directly. Secondly, there is the terms of trade effect where given production, a deterioration in the terms of trade leads to a decline in income. Finally there is the real resources effect. If the exchange rate was previously overvalued this may distort production; reducing the output of tradables relative to nontradables. A devaluation is seen as correcting this distortion, and thus a devaluation raises output.

A devaluation, then will represent an income benefit for exporters, farmers, processors and manufactures producing for export. The effect of a devaluation will make the price of non-tradables fall, in relative terms. Thus, the incomes of farmers who grow non-export crops will fall. However, the strength of the effect will be dependent on the labour intensity of production in the tradable and non-tradable sectors, and lags in relocating workers and raw materials (Huang and Nicholas, 1987). If, for example, domestically produced importables or exports are largely produced by the poor, a labour intensive activity in most developing countries, as would be the case for rural agricultural producers of some basic foods, the factor intensity will be beneficial to the poor (Behrman and Deolalikar 1990, 334). Conversely, if tradables are produced in capital intensive industries, then the factor intensity effect will favour the owners of capital in the formal private sector. However, Demery and Addison (1987, 1488) caution that it is possible for production to be labour intensive in the informal sector, *but* capital intensive in the formal sector. The net effect on the production side for rural and urban groups depends on the weight of tradable and nontradable activities in the generation of income and the ratio of tradable and nontradable goods and services in a households consumption basket (Demery, Ferroni and Grootaert 1993, 4) Agricultural growth consisting of expanding non-food cash crops may mean that growth is accompanied by falling food supplies and rising food prices, with implications for household food security (see chapter six).

The effects of a devaluation feed through to the labour market by encouraging individuals to hire their labour in the sector that will generate the most income. Workers cannot remain unemployed for long in Africa due to the absence of a social security network, thus workers are motivated to seek employment in agricultural and informal activities (Horton, Kanbur and Mazumdar 1994, 34). In general, rural households in the region make extensive use of the labour market to increase income by selling what is often their only asset (Duncan and Howell 1992, 10-11). The possible benefit of hiring labour depends on the number of workers seeking employment and the wages offered and demanded (Duncan and Howell 1992, 11). Employment prospects in rural areas are more favourable than in urban areas. The supply of labour grows more slowly in rural areas than in urban centres. In urban areas the supply of labour can grow 5 to 6 per cent a year. A devaluation (and trade liberalisation) favours rural areas through increases in producer prices, while in urban areas the cut in demand slows growth in the formal sector which feeds through to the informal sector as this sector acts as a refuge for displaced workers as most African countries do not offer unemployment benefits (Bourguignon and Morrison 1992, 12). For instance, the supply of labour to the urban formal sector grew by 7.7 per cent annually from 1980-85 in Côte d'Ivoire, while during the same period the demand for labour fell by 20 per cent (Bourguignon and Morrison 1992, 33). This led to a swelling of the informal sector so that unemployment in the formal sector could be mopped up. Bernstein (1991, 23), however, interprets the impact on smallholders differently. He believes that the modernisation of agriculture in Africa may offer few benefits to the rural poor. He believes that reforms will lead to rural producers being crowded out by a new capitalist class with the result that large parts of rural areas will become refuges for subsistence farmers suffering from declining opportunities for petty commodity production and casual wage labour (Bernstein 1991, 22).

Outside of possible income effects, there will be increases in the prices of imports and goods produced for the domestic market will rise in relative terms. The implication on the standard of living depends upon the consumption basket of

individuals and price elasticities of demand. Although this argument is covered fully in chapter six, some important points are worth making here. An increase in staple food prices promises a perverse effect for nutrition. An increase in the price of imported medicines may mean that some groups may have to go without essential treatment. The situation is similar for food; if imported staple foods constitute a large portion of the consumption basket of the poor then the consumption effect will work against the poor (Behrman and Deolalikar 1990, 334). However, it should be noted that the consumption effect needs to be weighed against the factor intensity effect (Behrman and Deolalikar 1990, 334). That is, the positive effects of being involved in a labour intensive activity that benefits from a devaluation may offset any negative effects associated with the consumption effect. Locally produced goods that use imports or import substitutes in their production process will also, likely, see an increase in price if increases in production costs are passed onto consumers (Woodward 1992a, 46).

In the urban formal and informal sector, Braverman and Kanbur (1987) state that the conventional role of agricultural pricing has a clear urban bias;

[it] is essentially a method of taxing the rural sector in order to finance the (internationally non-traded) activities of the urban sector, and is a method of keeping down the price of agricultural goods to urban consumers.

Governments in Africa appear to display a special concern for the standard of living for those in the urban sector. Reforms proposed by the IMF and the World Bank can effectively reverse this bias if implemented carefully.

Gunatilleke (1991, 350-352), who describes the situation in Sri Lanka, but offers general comments applicable to all developing countries, believes that certain macroeconomic reforms that aim to increase agricultural incomes may lead to an increase in the cost of urban wage goods and adversely affect those with unstable and low incomes in the urban sector. In nominal terms the average income of the urban sector will be higher than in other sector. However, members of the typical urban

household will not be able to spend time growing produce for their own consumption and is, therefore, reliant on the market to provide essential foods.

However, Braverman and Kanbur (1987) point out that the effects of reform programs may not hit the urban sector as much as some people think. They believe that a "political economy" effect exists such that attempts to redress (say through cost of living adjustments) the adverse effects on the standard of living of those who lose from agricultural price reform; "essentially the problem may be characterised as being one of too many claims on too few resources. The political system adjudicates these claims, and as things stand the winner in most developing countries seems to be the urban sector" (Braverman and Kanbur 1987, 1183). For example the World Bank (1990a) found that the government in Cameroon showed an unwillingness to cutback on public sector employment during a period of adjustment. From 1985-87 the share of salaries in total recurrent health spending rose to 99 per cent (World Bank 1990a, 117).

In addition, the inflationary consequences of devaluation may mean that any real increases in producer prices may be eroded over time (Smith 1989, 26). Moreover, Smith (1989, 26) views the timing of devaluation as having an important effect on the benefits that tradable agricultural producers receive. He says that "if the devaluation occurs after harvest has been sold, and the prices of purchased food and agriculture inputs increase immediately, low-income farmers without reserves or access to credit may have to reduce their purchases of them." Moreover, if devaluation leads to lower urban wages then the demand for food products may fall. However, it is important to note that "changes in agricultural performance and hence overall economic performance are influenced as much, or more, by the weather and by changing international terms of trade as by deliberate policy changes" (Smith 1989).

The impact of a devaluation on government revenues and expenditures depends on the circumstances of each country. Where government revenues are based on international trade the impact of a devaluation will be such as to increase revenues.

If government revenues are based to a large extent on income taxes the initial effect may be to reduce revenues. As no African country relies exclusively on one type of tax regime the impact will be complex and dependent on the net effect of simultaneous increases and decreases in government revenue.

On the expenditure side the effect of a devaluation, again, will be dependent on how the government spends its revenues. Assuming that revenues remain unchanged during a period of adjustment then the impact will likely be negative. For example, if the government is a large consumer of imports then the effect of a devaluation will be negative in so far as import prices have increased. In addition, the government might decide, under political pressure from organised labour and national elites that face the possibility of a decline in real income, to shore-up salaries in the public sector. Moreover, if a particular African country has a large external public debt a devaluation will serve to raise the local costs of servicing that debt (Killick 1993, 161).

Since inflation is possibly an unwanted by-product of the devaluation then other tools must be used in order to counter the adverse effects. This takes the form of expenditure reducing and commercial policies carried out by the government.

4.3.3 Budget and Public Expenditure Reform

Given that a devaluation is likely to be inflationary the Bank and the Fund encourages member governments in Africa as part of structural adjustment programmes to undertake expenditure reducing policies. The aim of expenditure reducing policies is to reduce domestic expenditures on consumption goods and investment so that exports minus imports can rise while leaving GDP unchanged (Helmert 1988, 65). The government does this in three different ways (Krugman 1988, 65). First, it may reduce its own expenditure by cutting government programmes and/or reducing public investment. Second, it can reduce private consumption by raising taxes or cutting subsidies. Third, it may reduce private borrowing by limiting credit creation by the banking system.

4.3.3.1 *Cutbacks in Government Programmes*

Macroeconomic reform programs sponsored by the International Monetary Fund and the World Bank have both an immediate and direct impact on government employees by altering the level of employment in the public sector. This may lead to declines in income overall if wages are frozen and prohibited from adjusting to inflationary pressures generated by expenditure switching reforms. Individuals in the urban formal sector that are made redundant will suffer most, if they are unable to find replacement employment quickly. Indirectly, reforms aimed at curbing public expenditure, by reducing the government payroll, can be passed on to other parts of the formal sector, because demand for their goods and services will be diminished. Activities in the informal sector will also be adversely affected in as much as former government workers, and recently redundant formal sector workers, consumed their goods and services. If public enterprise are privatised then financial resources may be diverted from the government in an effort to cover redundancy payments (Woodward 1992, 54).

Thus, those most likely to be harmed are higher income urban groups. There is no direct implication for poverty groups in the rural sector or in the urban informal sector in the *long-run*. Evidence from Africa suggests that the poorest individuals derive little income from public employment and are therefore not affected by government cutbacks (Demery, Ferroni and Grootaert 1993, 3). However, if urban-rural remittances are significant then there may be some adverse effects (Heller 1988). In the short run, lower employment in the formal sector raises the supply of labour to the informal sector, thereby reducing the real earnings of the poor engaged in the informal sector.

According to Stein (1992) cutbacks that occur on infrastructure development and maintenance will inhibit export-oriented activities. Manufacturing and agricultural activities that are carried out far from urban centres or ports, may be indirectly penalised due to increased costs of transport. If public expenditure translates into cuts in the social sector numerous effects are expected, and they will be

discussed in chapter six. Figure 4.1 below provides a framework for analysing the above linkages.

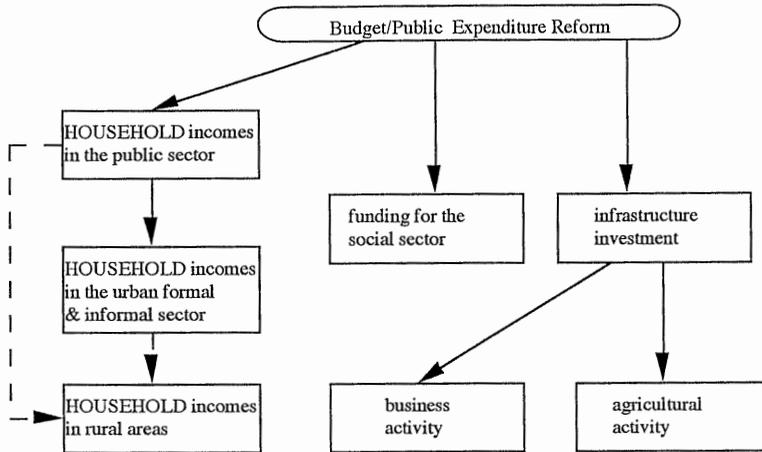


Figure 4.1. Budget and Public Expenditure reform linkage

The impact on the rural agricultural sector in Africa may also be negative. First, a contraction in the domestic credit available to borrowers may limit the seasonal and long-term finance available for agricultural production and marketing (Smith 1989, 25). Second, the reduction in spending on infrastructure can negatively affect production and marketing (Smith 1989, 25). Third, attempts at cost-sharing with the private sector by the government may lead to a reduction in the cash available for food and agricultural input purchases which may adversely affect agricultural production in the short-and long-run (Smith 1989, 25).

4.3.3.2 Reductions in Private Consumption

Revenue measures such as increases in taxation on income, profits, and property will effect well off groups only, as taxation in Sub Saharan Africa is confined mainly to civil servants and employees of large, private, modern companies.¹³ Because income taxes are narrowly based, revenue derived from this source does not provide the government with much flexibility (Gersovitz and Paxson 1990, 42) In as much as

governments rely on taxes on goods and services, increases in value added taxes, or sales taxes, will hit the poorest groups the hardest as these taxes are regressive. If important items, such as food, medicines, and household fuel, in the consumption basket of the poor are VAT-exempt then the impact will likely be negligible. During periods of macroeconomic reforms the government would be incapable of increasing income taxes, say, to fund severance payments or otherwise maintain the standard of living of government employees, because the tax increases will fall mainly on the government employees. Figure 4.2 below outlines these linkages.

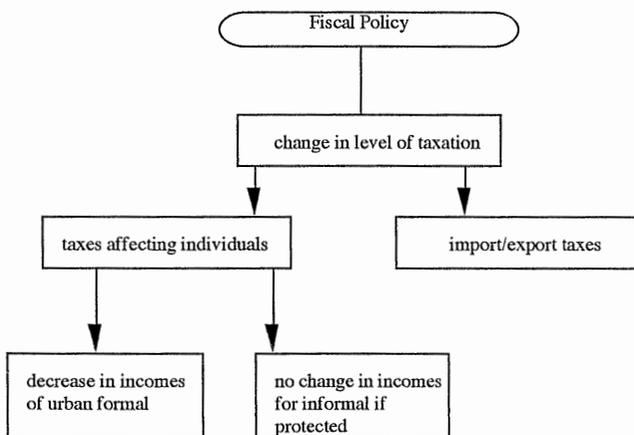


Figure 4.2. Fiscal Policy linkage

Taxes that are applied to exports, will allow increases to occur in the government coffers, only if exports increase as a result of devaluation. Gersovitz and Paxson (1990, 42), also state that a decrease in export prices will lead to a fall in government revenues that is more than proportional to the decrease in export earnings. This is due to the fact that state marketing boards attempt to keep the prices that they pay to producers relatively constant in real terms, so that they must bear the brunt of any of the fall in real export prices. Additionally, marketing boards must continue to meet marketing costs, costs that are independent of the price of a particular commodity.

Overall contractionary fiscal and monetary policies will restrain demand in the short-run and will lead to a decrease in the real purchasing power of the economy, leading to a decrease in demand for labour and a reduction in output, which will probably mean a decline in the real incomes of the poor (Behrman and Deolalikar 1990, 335). However, the duration of any negative effects will be dependent on how long it takes supply to shift, and whether or not the government is willing and able to protect certain members of the population from the adverse effects (Behrman and Deolalikar 1990, 335).

The lifting of subsidies can have a severe effect on poor groups depending on how subsidies are removed. If they are removed in their entirety, it is expected that the all groups would be made worse off. If the removed subsidies are done carefully, then the effects would be limited to certain groups. In addition, when subsidies are removed prices of previously subsidised goods rise thus adding to inflation that perhaps began under expenditure switching policies. More specifically, the lifting of general food and subsidies related to health care would harm the poor the most. The lifting of subsidies on energy and transport would most likely hit urban groups the most, and among them the more well off. However, the lifting of transport subsidies would also hurt the poor if it was used to travel to and from market or in order to seek medical care. Even the removal of energy subsidies could have a perverse effect on the poor if, for instance, the subsidy was on kerosene.

Behrman (1988, 115) notes that the removal of price controls will lead to supply expansion, a reduction in government expenditure and discourage demand. Obviously, a contraction in demand may have serious consequences, however the removal of price controls may in some respects be advantageous. In many countries where price controls have operated parallel markets have cropped up. Given the existence of parallel markets, that charged above the official price, the removal of controls or an increase in price ceilings only serves to reduce the incomes, legal or not, or parallel marketers and monitoring organisations (Behrman 1988, 117).

Chapter six will show that the removal of subsidies requires those affected to make up for the loss by either seeking additional work, depleting savings or going without. To the extent that individuals are able to cope with this, depends mainly on their pre-removal income. Thus, the well-off are expected to suffer little hardship, and the rural and urban poor to suffer the most. The targeting of individuals, will be shown later, may offset for any cutbacks, but this is not necessarily the case.

Overall, The chief problem with expenditure reducing policies is that by reducing the domestic demand for goods produced by consumption and investment industries unemployment and excess capacity may occur. The net result may be that the balance of payments improves but that growth may suffer. The problem is compounded, at least in the short run, to the extent that export industries take time to expand and may not increase at all if wages and prices are inflexible (Helmers 1988, 17). Obviously, this is a complicated situation. As Krugman (1988, 70-71) suggests, governments should use "expenditure switching policies to reduce imports and increase exports by the desired amounts and use expenditure reducing policies to cut domestic demand by just enough to keep overall domestic demand from exceeding excess capacity." However, Killick (1193, 168) cautions that it is "difficult to get the policy mix right and more evidence is needed before making a final judgement."

4.3.4 Trade policies

Trade policies promoted by the IMF and the World Bank concentrate on liberalisation. Liberalisation often refers to the removal of price controls. If price controls are in effect transactions are often shifted to parallel markets (due to corruption, etc.) where poor consumers cannot get official market prices. As official market prices are likely to be lower than those in the free market, poor consumers will benefit if liberalisation serves to shift prices back, and urban groups who had access to official prices will lose. Undifferentiated liberalisation, which is an important component of structural adjustment, tends to have a negative effect on industrial activity, "since the previously highly protected industry cannot compete with

international competition [companies]." (Stewart, Lall and Wangwe 1992, 26). Although some of the negative effects can be offset by a devaluation, overall the tendency is to deindustrialisation (Stewart, Lall and Wangwe 1992, 26), thus harming the prospects for long-term economic development.

Financial sector liberalisation is supposed to have the effect of encouraging domestic savings. However, it is uncertain if on the balance this will occur (cited in Helleiner 1992). However, as Helleiner (1992, 75) points out, if the increase in the interest rate is

undertaken crudely in the midst of a macroeconomic crisis and widespread insolvency, such 'reforms' may well drive more institutions, notably financial ones, into insolvency, breed increased concentration of private financial power (and frequent malpractice), and increase in macroeconomic problems.

For example, in Ghana, Tanzania, and Malawi increases in the nominal interest rates led "to the virtual disappearance of borrowers for a time and continuing severe impediments to the effective functioning of the productive system (Helleiner 1992, 75).

Liberalisation of trade is not necessarily to be viewed as beneficial from a governmental perspective. The reason for this is that commercial policies, designed to control imports and promote exports are used by governments instead of a devaluation or in conjunction with a devaluation, and these policies are more acceptable to the population. Commercial policies usually take three main forms: export subsidies, exchange controls and import quotas.

Export subsidies are payments to exporters which encourage the selective production of exports. It is advantageous to the extent that it may encourage the production of tradables, but it obviously raises the home price of export goods. Exchange controls mandate that foreign exchange earnings be turned over to the Central Bank, which, in turn, restricts the availability of foreign exchange. Import quotas are a restriction on the quantity of particular goods or classes of goods that can be imported. The result, similar to a devaluation, is that imports are reduced. The

difference is that consumption goods may not suffer large price increases because the brunt of commercial policies will fall on goods of a less sensitive nature (Krugman 1988, 72). However, DeRosa (1991, 43) believes that restrictions on imports acts as a tax on exports;

when a country restricts its imports, the import-competing sector increases its use of domestic resources in order to expand output to meet a larger share of local demand for traded goods. This causes the costs of domestic resources to rise, making exports based on those resources less competitive and, as a consequence, results in the appreciation of the real exchange rate of the country. The subsequent decline in exports often will match the protection-induced fall in imports, with the result that there is no improvement in the external balance to the extent that the stance of macroeconomic policies remain the same.

When trade is liberalised the opposite occurs. "Lowering tariff and other barriers to imports reduces the implicit taxation of exports by reducing the extent of import substitution in the local economy, thereby lowering the cost of domestic resources and causing the real exchange rate to fall" (DeRosa 1991, 43). Focusing on the agricultural sector, Stein (1992) notes the elasticity problem of agriculture; where there is a possibility of declining revenues due to an increase in supply. A decline in revenue would lead to lower foreign exchange earnings. During the 1980s, as has been shown, the prices of non-food exports have not been favourable in Africa. Figure 4.3 outlines these linkages.

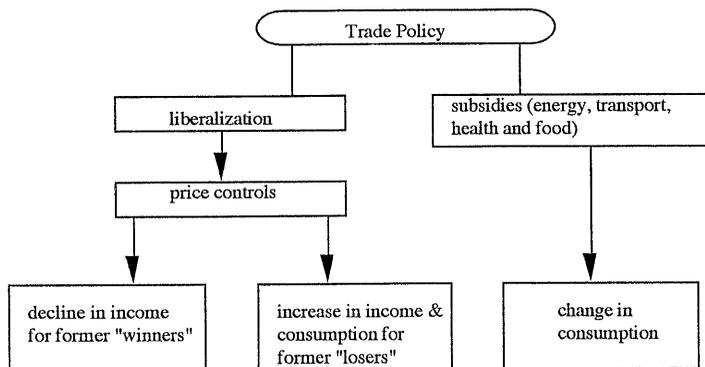


Figure 4.3. Trade Policies linkage

Another main component of liberalisation is privatisation. The objective of which is to improve management through the removal of x-inefficiency, and to increase allocate efficiency thereby halting the losses that so often characterise state-owned enterprises and thus create a burden on the budget (De Mel 1988, 69). The spread of ownership and worker participation — leading to a property-owning democracy can be seen as another advantage (De Mel 1988, 69). The benefits of privatisation are longer term because they are based on efficiency arguments. The short-run impact, on the contrary, is ominous as laid-off workers in the formal sector will see real declines in income and their consumption.

If trade liberalisation is viewed on its own, the benefits in the long run could be substantial. The initial costs of trade liberalisation would be borne by managers, workers, owners and investors in the formal private sector as protection is removed (Bruno 1988, 230 and Bourguignon and Morrison 1992). In the long run the effect of liberalisation would likely be beneficial as goods would become cheaper (Bruno 1988, 230). However, trade reform may conflict with other World Bank and IMF programmes. For instance, trade liberalisation may conflict with fiscal policies. Under adjustment a government may be encouraged to increase its tax revenues, however trade liberalisation could reduce tariffs, in which case government revenues may fall (Woodward 1992, 54). Bruno (1988, 230) notes that liberalisation will be beneficial and less costly when factor mobility between sectors is high and external assistance is available. Whether the effect occurs sooner rather than later depends on the sequencing of reforms. For instance, import quotas, which amount to a quantitative restriction, may be replaced with tariffs in which government revenues will increase in the short run (Woodward 1992, 54). Liberalising trade may also have important implications for a country's current account. If liberalisation makes imports easier to obtain through the elimination or reduction of import quotas and tariffs then the trade balance could actually worsen.

4.4 Conclusion

This chapter has highlighted the main linkages between macroeconomic reforms and changes in product markets, prices and incomes. This chapter has indicated that such changes are highly complex. Reform in one area, for instance the exchange rate, may encourage export expansion but it is not sufficient in itself to ensure overall success. Other policies must be introduced to aid the restructuring of African economies. It is this fact that adjustment programmes are multifaceted that leads to one major difficulty: reform in one area can often hinder reform in another area, and the 'benefits' of one reform may be negated by policy changes in another area. For instance, the benefits of a devaluation in encouraging expenditure switching, and the subsequent shift to the production of tradables may create employment opportunities in rural areas, but this effect may be offset by a time lag inherent in switching, poor weather patterns and soil conditions and cutbacks in public investment in infrastructure. Moreover, an increase in inflation may hit producers in so far as the price of their inputs rise.

In another area, trade liberalisation may conflict with fiscal policy. Government revenues that are collected from trade may decline following economic reform thus limiting the ability of the central government to provide investment in physical and social infrastructure and to protect the real wages of government employees. However, trade liberalisation need not be in conflict with all the objectives of adjustment. Trade liberalisation may lead to a decrease in the price of importables, thus negating the (expected) effect of a rise in the domestic currency price of imports following a devaluation. Import prices may fall due to a reduction in custom duties or excise taxes on imports, or through the suspension of monopoly rights to import, or any combination of these. However, note again must be made that certain liberalisation policies may serve to increase the price of imports during a depreciation. The lifting of price controls and the elimination or reduction of subsidies on imported goods are two examples.

A more serious criticism relates to the ideology that motivates structural adjustment and stabilisation policies. The Bank and the Fund have both been shown to favour free competition trace the roots of the crisis in Sub Saharan Africa to policies that distort the agricultural sector. However, switching from nontradables to tradables and increasing producer prices of tradables may not produce the desired effect. This is because the crisis in agriculture has its foundation in non-price or structuralist factors which leads to low aggregate supply elasticities.

Another potential problem arises in the adjustment process and this relates to the costs associated with economic reform. Frictional costs exist where employment, consumption and output contract in the short run while resources are being reallocated between sectors. Distributional costs exist to the extent that various sectors utilise various factor proportions in the production of different goods and services. Thus, expanding sectors, such as that of tradable goods benefit to the extent that it is relatively labour intensive and incomes will improve following the increase in the price of exportables. However, distributional costs will likely exist in the urban formal sector in so far as government employment is reduced. Whether these distributional costs will be frictional in nature as well, or more permanent depends on the ability of urban workers to find employment in other sectors.

Thus, the adjustment process is intricate and complicated and subject to potentially high social costs. Chapter three demonstrated that the success of reform programmes in meeting economic targets is by no means assured in African countries. The following chapters review whether or not the frictional and distributional costs have carried over into the health sector.

Chapter 5

Health Care Delivery, Health Conditions and Health Status in Sub Saharan Africa

5.1 Introduction

The health situation in Sub Saharan Africa is the worst of any other region. On almost every indicator relating to health status Africa performs poorly. James Grant, the former Executive Director of UNICEF, has used the analogy of plane crashes to describe the situation in Sub Saharan Africa. He has said that the number of Nigerian children who die each day from six communicable diseases — polio, diarrhoea, tetanus, meningitis, diphtheria and whooping cough is equivalent to five jumbo jets crashing into the country's airspace killing all 2000 passengers (Lancet 1989, 774).

The examination of any health care system and health status of any region, and in particular Africa, is of great importance. Health care, when viewed as a consumption good enters directly into individual's utility function. People purchase health care so that they may enjoy life or obtain satisfaction from the consumption of nutrients. Health care looked at as an investment good also enters into a person's utility function. The purchase of health care by an individual may permit productivity

to increase. If this occurs there is room for improvement in an individual's income and potentially health status. Second, an improvement in health conditions may allow for individuals to exploit agricultural areas that were previously off limits due to the prevalence of disease. Third, improvements in health status lead to increased school enrolment rates and a better capacity to learn. Finally, in the long run, an improvement of health allows for faster national economic growth.

This chapter examines the health situation of this poor and laggard region. The chapter starts with a review of the various definitions of health. The concept of basic needs is introduced at this point and is used as a foundation for further discussion towards the end of the chapter. Next, the scale of the health problem is reviewed and comparisons are made on the differences in health status between regions and countries in Sub Saharan Africa. Third, the major health and nutritional problems affecting the region are then examined. Fourth, health care provision and delivery in the Sub Saharan countries is inspected and the debate between traditional versus modern health care and primary versus selective health care paradigms are critically assessed. This chapter continues with a discussion of the government's role in financing the health sector and surveys alternative methods of paying for health care. The conclusion looks at the evidence on access, availability and utilisation.

However, before proceeding to the discussion the familiar warning must be noted. Statistics relating to the health sector in Africa are notoriously unreliable. Differences in data are often striking; World Bank and WHO figures are frequently revised and their research data often conflict with other reliable sources such as the Institute for Resource Development. The figures provided in this chapter have to be accepted to suffer from a degree of inaccuracy. The base upon which many of the measures used, particularly in relation to population figures, are of suspicious character (Baylies 1986, 85). Figures relating to the prevalence of disease may also be unrepresentative because they are dependent on the correct diagnosis of illness and on the number of people who seek treatment where statistics are recorded (Baylies 1986, 85). Furthermore, data on births and deaths often go unrecorded or are

registered without sufficient detail (Phillips 1990), and birthweights are often recorded falsely due to inaccurate weighing (Cameron 1991, 219).

5.2 Defining Health

Various definitions exist for what constitutes health. There is a tendency when examining the question of health status to confuse the terms health with health status or health state. Of primary concern is health status; for most of this thesis health is not considered. The reason for this rests in viewing health as an end state. Health refers to a *condition*. Health cannot be purchased but health care can. This may lead to healthiness or it may lead to no change or even ill health. Thus it is more appropriate to consider the end state in terms of changes in health status. An ideal health status, defined in a limited sense, simply means the absence of disease. This implies that if there are diseases afflicting individuals or the population of Africa they can either be averted or cured using medical or traditional health interventions. The intervention, assuming that it is successful, will restore the individual or groups of people back to the state when the disease was not prevalent or prevent them, in the first place, from coming into contact with the disease. This definition of health status is a technical one: people are assumed to have obtained the highest level of health status possible if they do not suffer from disease. If they have contracted an illness then they have a lower level of health status.

This definition is unsatisfactory for several reasons. First, it does not consider the health problems that may arise from poor nutrition. The absence of a sufficient amount of nutrients lead, often, to the same problems that occur when someone suffers from a poor health status. For instance, malnutrition or undernutrition may impair the productivity of adult workers and reduce a mother's ability to adequately care for her children thus jeopardising their health status. Second, the first definition of health status does not consider the physical surroundings of individuals. It excludes, for example, considerations of housing and environment. If the physical structure is sufficient enough to prevent illnesses then it is considered adequate. However, much of the housing in Africa, while adequate in such a respect, would fail

in other areas. Overcrowding, while not necessarily a cause of disease, or noise pollution would substantially affect individuals adversely.

This points to the fact that health status need not be concerned solely with a physical condition but also with the social and mental conditions of individuals. This definition has some usefulness in that it points to the fact that ill health may not be caused directly by biological factors but may lie in other areas. For example, ill health may be caused by lack of food or purchasing power to secure sufficient nutrients. This may, in turn, be caused by civil strife, poor distribution, corrupt officials, or poorly constructed agricultural policies and reforms. However, a definition of health that is so broad in its scope is rather unwieldy in practical terms. Implicit in such a definition is the notion that the quality of life of individuals is high; that they have shelter that is sufficient to protect them from illness as well as provide for other activities, that the water is always clean, that waste is safely and regularly removed, that the work effort expended by individuals is not too strenuous and too boring, that there is sufficient time to partake in leisure activities and that disease and malnutrition do not visit a family. Although desirable as a goal it is highly unlikely that many people in Africa, or for that matter in developed countries, experience such an exalted state or will in the foreseeable future.

Thus given that the two definitions of health status are inadequate. A third is offered and one that is considered in this thesis. Health status relates to basic needs (Gish 1983). Although basic needs is a nebulous concept (Hettne 1990, 168-72), in one interpretation the main element is to ensure minimum requirements that are above the subsistence or survival level but somewhat below complete contentment. Implicit is that poor individuals will obtain a guarantee of a certain level of, at least conceptually, undefined, services until their incomes can be raised to a level where they are able to meet their own human needs without intervention. This suggest that an improvement in health status does not require a massive improvement in physical, social and mental well-being nor does it require the simple absence of infirmity. It requires that interventions are carried out on several levels; that preventative and

curative care are sufficient given financial constraints, that housing, sanitation and water quality are good (but not perfect) and that the food available is sufficient to meet dietary requirements even if they fail to meet requirements of taste. This definition of health, then, does not require a maximising solution as in the WHO version, or for that matter a minimising one, but a satisficing solution.

A second important point that the basic needs approach raises is that the clinical manifestation of disease and malnutrition is of secondary concern. Central to the problem of health care is not the incidence of infection, disease, malnutrition or undernutrition but how these manifestations were caused. It is by looking at the causal links that possible solutions can be offered. At the most basic level the causes of poor health status are biological. As will be shown in a following section biological causes interact synergistically to make the outcome worse than if one (for instance, infection) worked alone to cause an incidence of poor health. However, it is important to ask if there are other factors that affect the biological incidence.

The answer to this question is positive. Most obviously, the availability of food, and more important food of high nutrient content, affects nutritional status. Health status, similarly, is affected by the availability of health facilities. However, availability, alone is not enough to ensure a healthy population. The resources available to families is of utmost concern. For instance, income, availability of shelter, and access to safe water and sanitation will all have important influences on health.

Related to this is how food and health care is distributed within the household. Thus, the household becomes an important focus for analysis; not only is there the possibility for the normal transmission of disease, but there is the possibility that there exists factors at the household level which may affect the incidence of malnutrition and infection. There may be, for example, a household health care pattern that is culturally specific and that has implications for health status. For example, where males are the decision makers and control the household budget, they may be able to deprive women, who are often regarded as the best providers of health care, the means

to obtain food or health care. In addition, households may be poorly educated and thus unable to effectively provide health care within the family. For instance, weaning may be stopped early and water may be withheld from children with diarrhoea.

Notwithstanding the importance of the household in the production of health care for the family, there is a need to take a macroscopic view of health care. Here health status is seen as a result of the direct interaction of households and communities to the national governments and an indirect relationship with the entire international setting — whether it be with the large international financial institutions (private, bilateral or multilateral), international trading regimes (the GATT, the EU, the Commonwealth, the CFA zone, etc.) or in the broad context of North-South economic relations (New International Economic Order).

Therefore, there are three spheres that must be considered when analysing health and health care; the biological, household resources and production, and the overall socio-economic context. To only concentrate on the biological causes of poor health, a recommendation for improving health would be based on direct health interventions— such as vaccination programmes, Oral Rehydration Therapy (ORT) and hospital care. If the view is widened to include activities at the household level, account must be taken of the biological causes as well as the problems of accessibility and the production of health care. If we choose to view health and health care macroscopically then the above is taken into account as well as how national and international relations can affect an individual's health status. The first sphere is considered in the following sections, the second in chapter six, the third sphere will be considered in the conclusion.

5.3 Inter-regional and Inter-country Comparisons

5.3.1 Basic Social Indicators

As a starting point Africa does poorly when compared to other regions on basic social indicators. Gross National Product per capita of \$340 in 1990, a broad measure of welfare, was the second lowest of any other region. South Asia has the lowest

average at \$333 per capita GNP. However, Latin America and the Caribbean, another so-called developing region, did substantially better. That region enjoyed GNP per capita of \$2810 in 1990, over six times higher than Africa's. Moreover, growth in GNP per capita during the 1980s in Africa has been negative. The average annual growth rate in GNP per capita from 1980 to 1992 in Sub Saharan Africa was -0.8 per cent. This poor performance was exceeded only by the Middle East and North Africa which saw GNP per capita decline at an average annual 2.3 per cent. Indeed, while world GNP per capita was expanding at 1.2 per cent Africa's was declining (World Bank 1994, 163).

Adult illiteracy, in Africa is amongst the highest of all regions. Sixty two per cent of adult females and 50 per cent of adult males are illiterate. In East Asia and the Pacific only 34 per cent and 24 per cent of adult females and males respectively are illiterate, while in Europe the relevant figures are only 22 and 15 per cent. Therefore, education in Africa is amongst the poorest of all regions. The provision of education for males is inadequate and only 50 per cent are literate. Gender bias is evident in education in so far as there is a substantial difference in illiteracy. Recent World Bank (1994, 216-18) evidence reveals that enrolment rates are the lowest of any region. The percentage of school age children enrolled in primary education is only 66 per cent in Sub Saharan Africa. In South Asia, the percentage of school age children enrolled in primary education is 89 per cent. Moreover, the primary/pupil teacher ratio is amongst the highest of any other region indicating that educational instruction may be of *relatively* poor quality. There is one teacher for every 41 primary school students in Africa, whereas the ratio in Latin America is one teacher for every 26 primary school pupils. Enrolment in secondary and tertiary education in Africa is also the lowest of any region and is below 20 per cent for the relevant age groups.

On basic health indicators, discussed more fully later, Africa falls far behind other regions. Life expectancy at birth is the lowest of any other developing region.

The infant mortality rate in Latin America and the Caribbean is approximately half that of Africa. Table 5.1 outlines the inter-regional differences in social indicators.

Table 5.1. Selected Inter-Regional Social Indicators

Region	GNP per capita (1990)	Adult illiteracy (percent 1990)		Life Expectancy at birth (1990)	Infant mortality rate (per 1000 live births) (1990)
		Female	Male		
Sub-Saharan Africa	340	62	50	51	107
East Asia and Pacific	600	34	24	68	34
South Asia	333	67	53	58	93
Europe	2,400	22	15	70	30
Middle East and North Africa	1,790	60	47	61	79
Latin America and Caribbean	2,180	18	16	68	48

Source: World Bank (1992) *World Development Report*.

Note: all numbers are weighted averages

5.3.2 Health Care Delivery Indicators

The poor performance of Africa on aggregate measures of health, are due to a variety of factors. Most obviously, from a Western point of view, the region is underserved by medical personnel. For instance, in 1984 the population per nursing person, which includes graduate, practical, assistant and auxiliary nurses, as well as paraprofessionals such as health workers and traditional birth attendants, was only 2,180 as compared to 1,010 in Latin America and the Caribbean region. In Europe, the population per nursing person was nearly five times lower than that found in Africa (World Bank 1992).

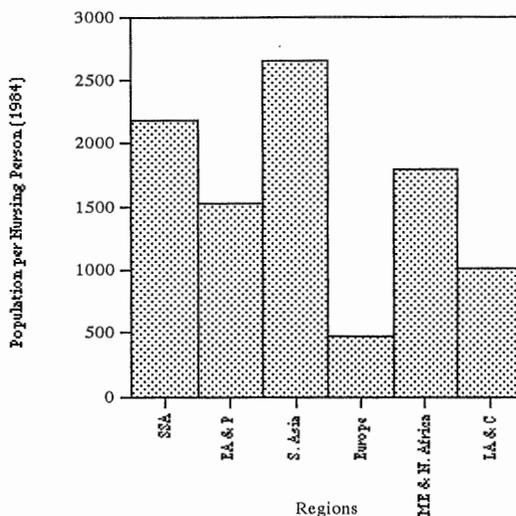


Figure 5.1. Population per Nursing Person (1984)

Source: based on data from World bank (1992)

However, note also should be made of the differences within Africa. Tanzania and Ethiopia have population per nursing person in excess of 5,000, well above the number for the worst performing region South Asia. However, Zambia, Zimbabwe and Botswana have one nursing person for every 1,000 population or under. This puts these countries on par with Latin America.

Population per physician is also substantially higher than in other regions. While Europe enjoys one physician for every 420 members of the population, Africa must make do with one physician per 23,540 individuals in the population. The next highest region is East Asia and the Pacific with one physician for every 6,170 members of the population. This means that the second poorest performing region still has nearly four times as many physicians per population as Africa.

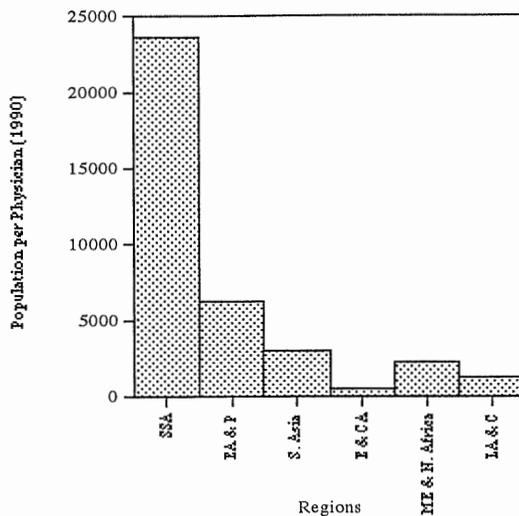


Figure 5.2. Population per physician

Source: based on data from World Bank (1993)

Yet, again, the use of aggregate measures tends to obscure the true reality. Relatively well-off countries enjoy lower ratios. For instance the population per physician in Botswana is 5,150 and in Zimbabwe 7,180. In general, poorer countries or countries subject to internal turmoil have higher ratios. For example, Ethiopia and Chad had population per physician figures of 32,650 and 30,030, respectively in 1990. However, Madagascar deviates from this with a ratio of one physician for every 8,130 members of the population.

5.3.3 Health Condition Indicators

The supply of clean, potable drinking water is important in determining the healthiness and survival of individuals. It is used not only to sustain life directly but it is use indirectly has consequences for health status. Water is used for general hygiene, for food preparation and production. Assuming that it is not contaminated at the source, or contaminated within the household as part of storing process, water will

play a key role in determining the healthiness of individuals. Approximately 55 per cent of the population in Sub Saharan Africa lacks access to safe water (World Bank 1993, 91). The range of population with access to drinking water in Africa varies from a low of 18 per cent in Ethiopia, 11 per cent in Mali, 21 per cent in Madagascar, 22 per cent in Mozambique to 70 per cent in Togo, 69 per cent in Côte d'Ivoire, 90 per cent in Botswana and 95 per cent in Mauritius (World Bank 1994a, 146-147).

In every African country where data is available, with the exception of Chad, Burkina Faso, Central African Republic and Côte d'Ivoire, the percentage of the urban population with access to safe drinking water exceeds the rural populations access, and in some instances by striking amounts. For example in Ethiopia the percentage of rural dwellers with access to drinking water is only 11 per cent, while the urban population enjoys access of 70 per cent, in Somalia the figures are 50 per cent and 29 per cent for urban and rural areas respectively, in Zimbabwe the difference is not so great where 95 per cent of urban dwellers and 80 per cent of rural dwellers have access to drinking water, however in the Congo the disparity is large; 92 per cent of urban residents and only two per cent of rural residents have access to drinking water (World Bank 1994a, 146-147).

Inadequate water supply or contaminated water are responsible for several of the diseases common to Africa. First, lack of water leads to poor hygiene and explains why diseases transmitted by faeces are prevalent in the region. Trachoma, intestinal worms, and skin and eye infections have all been traced to inadequate water supply (World Bank 1993, 91). Drinking water from unprotected sources is also a major cause of water borne diseases such as typhoid, cholera, amoebic and bacillary dysentery and infective hepatitis (Yimam 1990, 145). Improvements in water supply and hydrological schemes through irrigation programmes can translate into a higher nutritional status if more agricultural land is created. However, these same schemes may lead to quite serious side-effects. Increased incidences of malaria and schistosomiasis are associated with irrigation and hydrological projects (Phillips 1990, 15).

Sanitation facilities also play a key role in preventing illnesses. The lack of sufficient sanitation facilities can lead to diarrhoea and intestinal worms. The lack of facilities also allow vector breeding to occur where sewerage is dumped. The picture for access to sanitation facilities in Africa is also bleak. Approximately 62 per cent of the African population lacks access to sanitation services. For example, in Mozambique only 21 per cent of the total population has access to sanitation services, in Ethiopia the figure is 17 per cent and in Burkina Faso the figure is a paltry 7 per cent. However, in Tanzania the per cent of the total population with access to sanitation rises to 77 per cent and in Botswana the comparable figure is 88 per cent (World Bank 1994a). As one would expect the inter country differences favour urban areas. In Africa, where data is available, sanitation services favour urban areas in all but two cases: Uganda and Côte d'Ivoire. For instance, 97 per cent of the urban population has access to sanitation in Ethiopia while only seven per cent of the rural population has access. In Burkina Faso and Niger 81 per cent and 71 per cent of the urban population respectively have access to such services while only 10 per cent of rural Burkina Faso and only 4 per cent of Nigeriens have access to sanitation (World Bank 1994a, 146-47).

5.3.4 Health Status Indicators

A comparison of Africa to other regions reveals that Africa lags behind other regions in food supply per capita. In the early 1960s Asia had the lowest supply of food per capita; a position it held until the early 1980s. However, by 1988, due to rapid population expansion and poor harvests, Africa was only able to secure 2,348 calories per person per day, the lowest of any other region (FAO 1992). In addition, although food supply was expanding from 1960-1990, the increase was only an anaemic eight per cent, from 2,155 to 2,348. Also, compared to other regions, the percentage of calories available to the consumer has recently fallen far behind that available to consumers in developed countries. For the period 1988-90 the United States' food supply consisted of 3,642 calories per person per day. In Europe the comparable

figure was 3,452. This translates to mean that Africa's food supply is 64 per cent of the United States' and 68 per cent of Europes'. Although part of this reflects the gluttonous nature of western consumption the figures do not fail to conceal the overall disparity. Table 5.2 sets out the quantity of food available in each region.

Table 5.2. Regional Comparison of Food Supply: Calories Per Caput per Day

Region/Country	1961-63	1969-73	1979-1981	1988-90
Africa	2155	2211	2315	2348
S. America	2391	2518	2657	2624
Europe	3088	3239	3371	3452
Asia	1888	2086	2302	2494
USA	3067	3250	3353	3642

Source: FAO Production Yearbook 1991 (Tables 105 and 106)

Note: Data in table includes North Africa. The Table reflects quantities of food reaching the consumer but not necessarily the amount of food actually consumed (due to storage problems and loss during cooking and preparation) amount consumed may be less than the table indicates.

Kamarck (1988, 201) estimates that, excluding times of famine, when the figure is considerably higher, the number of people in Sub Saharan Africa who suffer from inadequate nutrition, of at least 90 per cent of the FAO/WHO requirement, is 150 million. However, since the figures in table 5.2 are aggregate they fail to reveal food supply differences within countries and between countries in Africa. Côte d'Ivoire, for instance, has a substantially higher food supply than other Sub Saharan countries. The amount of calories available per day per person in that country is 2,844. This puts the Côte d'Ivoire ahead of Asia and South America in food supply. However, other countries within the region fare far worse. Burkina Faso and Mali are able to secure only 1,815 and 1,898 calories per caput per day. The Comoros, the worst performing country in the region, can only obtain 1,783 calories per person per day. For the three countries this means that there food supply situation is below that of Africa's in the 1960s and on par with Asia's situation during the same time period.

UNICEF (Carlson and Wardlaw 1990, 20) provide estimates, based on data from various years in the 1980s, on the regional prevalence of malnutrition in children under five. The per cent of underweight children, as determined by weight for age, is the highest in South Asia at 45.2 per cent and is much lower in Africa at 26.6 per cent. Stunting, as measured by height for age, is also highest in Asia (but not South Asia) at

46.2 per cent. However, wasting, as measured by weight for height is 10.2 per cent in Africa and only 1.3 per cent in the Americas. Figure 5.3 shows the inter-regional disparities in malnutrition.

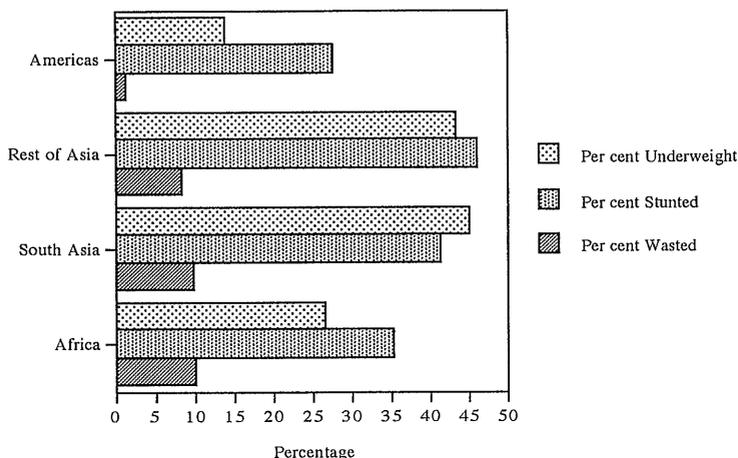


Figure 5.3. Regional Prevalence of Malnutrition in Children under Five

Source: Carlson and Wardlaw (1990, 20)

Note: Malnutrition is the per cent below minus two standard deviations of the reference median

Output measures, such as infant mortality rate, life expectancy at birth and child mortality rate also show Africa to have fallen behind other regions even though some progress has been made in recent decades. The infant mortality rate in Sub Saharan Africa in 1992 was still the highest of any other region. It was more than twice that of Latin America and more than three times that of Europe and Central Asia. Compared to the rate in South Asia more than one extra infant in one hundred can be expected to die before age one in Africa. However, it should be noted that some countries in Africa do particularly poorly on this indicator which serves to distort the overall picture. Mozambique, Guinea-Bissau, Malawi and Mali are all outliers with rates exceeding 140 per 1000 live births.

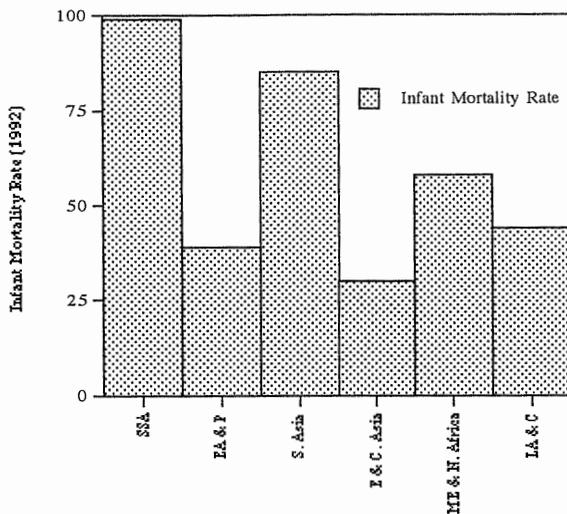


Figure 5.4. Comparison of Infant Mortality Rates 1992

Source: based on data from World Bank (1994a)

Notes: SSA is Sub Saharan Africa; EA & P is East Asia and Pacific; E is Europe; ME is Middle East; LA & C is Latin America and Caribbean. Infant Mortality Rate is per 1000 live births.

An examination of life expectancy at birth reveals that Africa, while making recent improvements still falls behind other regions. In 1960 life expectancy was 43 years by 1990 this had risen to 52 years. This is still the lowest of any other region. The population in Latin America and the Caribbean has a substantially higher life expectancy at birth at 70 years. Also, life expectancy in developed market based countries (76 years) exceeds that of Africa by an astounding 24 years. The rate of improvement in life expectancy has also been slower than in other developing regions. Although the improvements in life expectancy in developed countries was relatively slow from 1960-90, reflecting the problems associated with further improvement once the demographic transition has been made, in other countries the improvements have been notable. For the period 1960-90 Africa added only nine

years to life expectancy at birth while Latin America and the Caribbean added 16 years and the Middle East 17 years. Indeed in 1960, Latin America's life expectancy was higher than it is today in Africa. Figure 5.5 below compares the progress that has been made in recent decades.

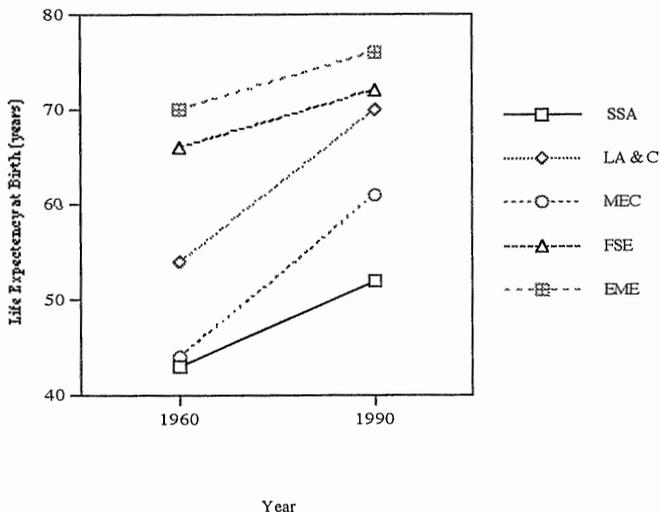


Figure 5.5. Comparison of Life Expectancy at Birth (years)

Source: based on data from World Bank (1993)

Notes: SSA is Sub Saharan Africa; LA & C is Latin America and the Caribbean; MEC is Middle Eastern Crescent; FSE is Former Socialist Economies of Europe; EME is Established Market Economies;

Improvements have also been made in Africa in decreasing the number of deaths of children. In 1960 the child mortality rate stood at 251 per 1000 live births. By 1975 this had fallen by 39 to 212 and by 1990 further progress was made and the rate currently stands at 175 per 1000 live births. However, similar to the progress made in life expectancy, the advances were not as strong as those made in other developing regions. Latin America and the Caribbean saw their child mortality rate fall by 101

points for the period 1960-1990. In the Middle East the child mortality rate was similar to that of Sub Saharan Africa's in 1960, however the Middle East saw its rate fall by 131 while Africa saw its rate decline by only 66 in the same period. In absolute terms, the child mortality rate is excessively high and exceeds the rate found in established market economies (11 per 1000 live births in 1990) by nearly 16 times. Figure 5.5 contrasts the improvements in child mortality rates for the last three decades.

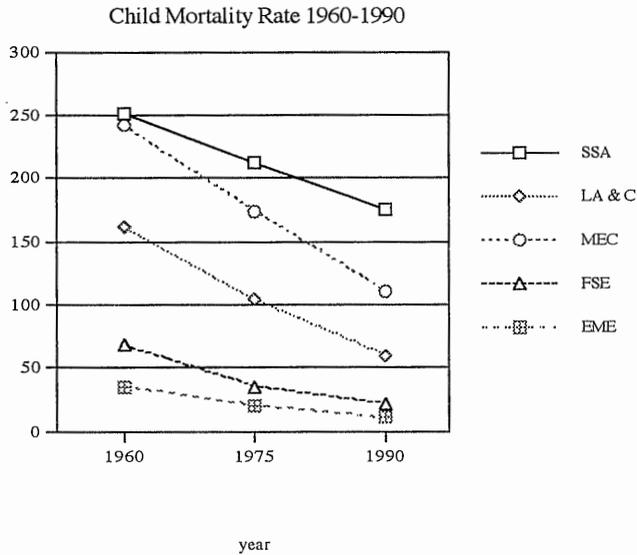


Figure 5.6. Comparison of Child Mortality Rates (per 1000 live births)

Source: based on data from World Bank (1993)

However, although some progress, as measured by aggregate statistics, has been made in increasing the health status of individuals in Africa, there is a tendency to view overall increases as effecting all individuals equally. While such aggregate increases are important, attention in recent years attention has focused on how increases and decreases in health status are distributed throughout the population. Using the

typology presented in chapter 4 changes in health status need to be considered based on the dichotomies of rural and urban areas. Table 5.3, for example, shows the differences in health status between rural and urban areas for three African countries.

Table 5.3. Rural and Urban Poverty in the 1980s.

Country	Rural population as % of total	Rural poor as % of total	Infant mortality (per thousand live births)		Access to safe water (percentage of population)	
			Rural	Urban	Rural	Urban
Côte d'Ivoire	57	86	121	70	10	30
Ghana	65	80	87	67	39	93
Kenya	80	96	59	57	21	61

Source: World Bank (1990a, 31).

Note: Actual year that data is obtained is not specified in the source publication

It is clear from the above that efforts to decrease the urban bias in health care is still persisting. In addition, the use of basic indicators do not show if increases were reached by the use of the most efficient solution (Malek et al 1993). Moreover, measures that show increases in health, based on mortality data, tell us little about possible increases or decreases in morbidity (disease prevalence). So that it becomes possible to have an overall positive picture, while ignoring the fact, for instance, that some people may be chronically undernourished or subject to recurring illnesses. As Myrdal (1968, 1555) pointed out over two decades ago,

[the data] tell us next to nothing about many other important health deficiencies: physical infirmities like blindness, incipient illnesses, and, more generally, physical and mental weaknesses caused by malnutrition, intestinal worms, and other infestations and diseases that are usually not fatal in themselves. It is [therefore] conceivable that a large part of the population may be diseased, or at least lacking in normal vigour, all or most of the time, even though rates of mortality are decreasing and life expectancy is increasing. It is even conceivable that people live longer to suffer debilitating conditions of ill health to a greater extent than before.

5.4 Nutrition Problems in Africa

Taking the problem of malnutrition first, in a very basic sense, is viewed as both a cause and an effect of underdevelopment (Berg 1987, 2). A cause in the sense that a poorly fed population makes for a human capital base that is viewed as inadequate as

a supply of labour to the business and agricultural sectors. An effect in that an economically backward country is unable to produce and distribute the quantities of food necessary to meet daily caloric requirements. Malnutrition is a broad concept. It encompasses many areas. Malnutrition narrowly defined is a "chronic state of under-nutrition or malnourishment caused by a deficient intake of calories and/or protein relative to body requirements" (Bryceson 1989, 425) or more broadly as: "a state in which the physical function of an individual is impaired to the point where she or he can no longer maintain adequate performance in such process as growth, pregnancy, lactation, physical work, or resisting and recovery from disease (Pacey and Payne 1988, 25). It can be further broken down into undernutrition and malnourishment. For children undernutrition is defined as between 80 to 100 per cent of weight-for-age, malnourishment 80 per cent weight for age. In a broad sense malnutrition includes the notion of seasonal (temporary) declines in nutritional status due to limited periods of harvest and the ability to store agricultural products. The percentage of children in Africa affected by stunting, or low height for a given age, is approximately 40 per cent (World Bank 1993, Table A6). The percentage of wasting, or low weight for a given height, is approximately 10 per cent in Africa. Approximately 25 per cent of children under five suffer from PEM, 60 per cent suffer from nutritional anaemia (UNICEF 1990, 175). Approximately 63 per cent of pregnant women suffer from nutritional anemia (UNICEF 1990, 195).

Nutritional problems in Sub Saharan Africa arise for a number of reasons. Food surpluses on the national level are not sufficient to ensure food security at the household level (see Christensen and Stack 1992 on Zimbabwe). The individual resource endowments place an upper limit on the availability of food. Economic and climatic changes can also influence food availability and prices. Dietary practices where some foods may be preferred to others is also an important factor. The knowledge of householders on how to choose a nutritious diet and the use of breastfeeding are important factors in securing an adequate level of nutrition. For instance, as has been previously pointed out, World Bank and Fund programmes aim

to encourage the agricultural sector to move away from subsistence production to (partial) food commodization; where agricultural goods are produced to be sold in the market. The impact on individuals in Sub Saharan Africa depends on the extent that this type of reform is carried out. Lack of income by householders is also an important component in the obtainment of food. Well-off individuals as one would expect, suffer little from malnutrition, while the burden is carried by lower income groups.

The main nutritional problems facing Sub-Saharan African countries are :

- (1) protein-energy malnutrition (PEM) which leads to reduced activity, weight loss, stunting and even starvation during acute instances. The main types are marasmus, characterised by muscle wasting, loss of subcutaneous fat, loose skin, eye lesions and skin rashes; marasmic-kwashiorkor and kwashiorkor — a type of protein deficiency where the hair reddens and straightens, the body swells and the skin develops rashes.;
- (2) iron-deficiency anaemia which leads to sluggishness, impaired resistance to infection, and reduced work and cognitive performance;
- (3) Iodine-deficiency disorders which can lead to reduced growth and reduced intellectual and neurological capacity. Takes the form of endemic goitre and cretinism; and
- (4) vitamin A deficiency (Xerophthalmia) which can lead to blindness.
- (5) Pellagra due to lack of Niacin (vitamin B group)

(Cornia 1990, 166)

Interventions aimed directly at PEM take several forms. Food supplementation for pregnant women would prove to be an effective means at combating malnutrition. However, problems might arise in reaching the target population and preventing leakages and the overall cost of such a scheme (Jamison 1993). Clinical interventions at the district level that provided treatment and education for mothers would relieve the symptoms of PEM but would do little to address the overall cause of malnutrition, and in any case may not be cost-effective as figures are not available (Jamison 1993, 26). Food aid would be another way of alleviating the symptoms, but in many cases is only a stop-gap measure.

Iron deficiency the most common form of micronutrient deficiency reduces both productivity and the ability to learn. Iodine deficiency has been traced to cause retardation, delayed development, stunting and speech and hearing disorders. Micronutrient deficiencies in the population would normally, where financially feasible, be addressed by oral iron supplementation of pregnant women and six month doses of children between the ages of zero to five years (Jamison 1993). Severely anaemic patients could be cured by blood transfusion but the high cost would limit this intervention.

The impact of poor nutrition on health status is larger than it may seem. While it is clear that severe malnutrition will lead to a compromised health status or to death, mild and moderate PEM and micronutrient disorders have been demonstrated to raise the risk of death (Pelletier 1991 cited in World Bank 1993, 77). This is related to the synergistic relationship between malnutrition and infection (section 5.6, this chapter). Children who are malnourished die of six main diseases: measles, diarrhoeal and respiratory diseases, tuberculosis, pertussis and malaria.

5.5 Health Problems in Africa

Similar problems are evident in the realm of health. Poor access to health facilities, understaffing, and a persistent urban-bias in the distribution of services is evident in almost all African countries. Additionally, the exodus and migration of experienced health workers (mainly physicians) has worsened already poor circumstances. Over reliance on imported pharmaceuticals also places the health care system in a precarious state. The fact that the health problems of Africans, in some cases, are resistant to treatments only serves to exacerbate the problems confronting Africa. To wit, the main health problems that face African countries today are (Cornia 1990 and Yimam 1990, 140):

- (1) birth related problems, such as tetanus neonatorum, trauma and asphyxia;
- (2) faecally transmitted water-borne diseases, such as diarrhoea, typhoid, dysentery and cholera;

- (3) infectious diseases; such as type A ones — measles, meningitis, whooping cough, diphtheria, TBC and poliomyelitis that are preventable through the use of vaccines, and type B ones, such as hepatitis, that is not vaccine preventable;
- (4) infections of the respiratory tract such as pneumonia, pharyngitis and otitis;
- (5) vector-borne diseases such as malaria, onchocerciasis, trypanosomiasis and yellow fever; and
- (6) preventable contact diseases, such as gonorrhoea, syphilis and AIDS

The solution to each health problem must address each type illness based on its cause and the factors that promote the spread of it. For instance, water-borne diseases are best handled by improving sanitation and sewerage facilities. Air-borne diseases, such as tuberculosis, pneumonia, diphtheria, bronchitis and influenza are best addressed using curative care and preventative measures. Sexually transmitted diseases require curative care and preventative care through education in order to slow down the spread. The best solution to many of the health problems in Africa takes the form of assaulting diseases on many levels. The use of interventions will be in part determined by their costs and effectiveness (Jamison 1993).

For instance, on the preventative level, the control of diarrhoeal diseases requires that sanitation and water supply infrastructure be upgraded. In addition, public health campaigns and education aimed at promoting good weaning practices and breastfeeding would be required. In addition, the use of effective vaccines against cholera and measles would offer benefits (Jamison 1993 17). Breastfeeding interventions offer several benefits, not isolated to protection against diarrhoea. Improvement in child growth, protection against childhood diseases, postponement of pregnancy and cognitive benefits for the infant are all postulated to provide secondary benefits (Jamison 1993). On the curative side the use of the use of oral rehydration salts or antibiotics would be required. For vector-borne diseases, such as malaria, the primary intervention would require chemical control by spraying insecticide in order to kill adult mosquitoes and controlling the vector by draining wet lands. The use of antimalarials would offer some benefits assuming that they were used correctly and drug resistance was not a major problem.

The control of poliomyelitis would best be assured by mass immunisation of children under one year of age with the polio vaccine given in conjunction with the diphtheria, pertussis and tetanus DPT immunisation (Jamison 1993, 18). However, not all diseases require this straightforward approach. The control of HIV infection and other sexually transmitted diseases requires action on several fronts. First, to prevent spread blood screening would be necessary albeit potentially not cost-effective. Second, activities aimed at encouraging behavioural change, such as education aimed at sexual abstinence, monogamy or the use of contraception, would be warranted. However, this would have to address two problems: cultural distaste for the use of condoms and the lack of information on high risk groups (Jamison 1993, 21). At the clinical level treatment of sexually transmitted diseases with antibiotics would be required and the treatment of AIDS at the clinic or district hospital may provide some benefits. In the long run, income generating schemes for women would offer benefits in so far as women move out of prostitution as a trade.

Although advances in Africa have been notable in the previous three decades, the health situation is under constant attack. The presence of drug resistant diseases and the prevalence of HIV/AIDS promise to place further strains on an already overburdened health care delivery system. The prevalence of HIV in Sub Saharan Africa is the highest of any other region. As of 1990, it is estimated that 5.8 million Africans had contracted HIV of which 300,000 died AIDS-related deaths (World Bank 1993, 33). In 1990, 1.1 million new infections of HIV were recorded in Africa — 64 per cent of world total new HIV infections. The prevalence of HIV is projected to be 12 million by the year 2000. As there is currently no cure for this disease, and the production of a vaccine considered to be years away, the impact on the health and economic situation is likely to be substantial in coming decades. By the year 2000 projections indicate that one million more Africans will die each year of AIDS-related disorders.

The evolution of drug resistant diseases also poses problems for Africa. Drug resistant bacteria has been noted in the treatment of diarrhoeas, pneumonias,

tuberculosis and malaria. Not only have older antibiotics lost their effectiveness but newer remedies are also proving less useful. Chloroquine-resistant malaria has been observed for several years and recently widespread resistance to multiple treatment regimes has been noted. The control of malaria is further compounded by the reduced effectiveness of vector control due to insecticide resistance by mosquitoes. The WHO and the World Bank (World Bank 1993, 34) project that if malaria becomes resistant to all known drugs then the number of death attributable to malaria could jump from 1.5 million to 2.3 million by the year 2000.

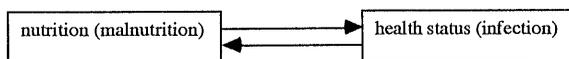
5.6 The Relationship Between Malnutrition and Infection

While the above analysis divides health and nutrition into two distinct areas, increases and decreases in health and nutrition status should not be seen in isolation of each other. For instance, as shown above, protein-energy malnutrition is one of the main problems facing individuals in Africa. However, whether or not someone suffers from this form of malnutrition is not based solely on the amount and quality of food consumed. It is determined by two factors: food intake (including breast feeding) *and* infections (Chen, Huq and D'Souza 1981, 58). The Kasongo Project Team (1981) provide evidence, for instance, that measles plays an instrumental role in causing malnutrition. Infections are critically important to nutritional status because infections cause a loss of appetite, gastrointestinal malabsorption of ingested nutrients, and metabolic wastage of available nutrients in the body (Chen, Huq and D'Souza 1981, 58-59). Infections, in turn, are basically determined by two factors: host susceptibility and exposure to disease transmission. The ability of the host to defend himself against infection is known to be at least in part determined by nutritional status. Exposure to the disease is believed to be affected by the quality of the physical (water, sanitation, and housing) and personal (child care and hygiene) environment.

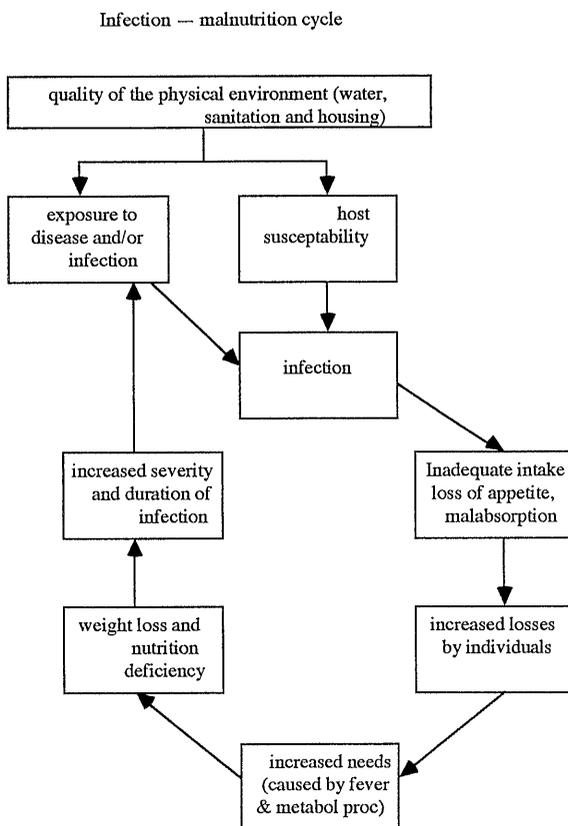
Malnutrition and infections are thus believed to be synergistic; "a bi-directional causal relationship is postulated in which malnutrition and infection each predisposes and exacerbates the other, resulting in an effect that is more deleterious

than either alone" (Chen, Huq and D'Souza 1981, 59). In other words a feedback mechanism operates where one factor reinforces another (Pacey and Payne 1985, 111)

Figure 5.1.1 sets out this relationship.



Synergistic relationship. Bi-directional causal relationship. Each predisposes and exacerbates the other



Wilson, et al (1986) cited in Philips, D. (1990) with additions

Figure 5.6. Relationship between infection and malnutrition

Thus, malnutrition increases the likelihood of catching a disease. This is especially true for diarrhoea in children who are wasted (< 80 per cent weight/height), but perhaps not in underweight children (< 75 per cent weight/age) and stunted children (< 90 per cent height for age) (Tomkins, 1981, 860-861). In all cases studied in Nigeria, of wasting, stunting and underweight children the duration of diarrhoea increased with malnutrition (Tomkins 1981, 861). In turn diseases, such as diarrhoeal diseases and intestinal parasites, can lead to increased losses of vital nutrients, thus leading to greater nutritional requirements (Oftedal and Levinson 1977, 388). The problem of malnutrition can be further compounded by lack of clean water and poor sanitation. This leaves individuals in a possible situation where, even if food is readily available, they may not be able to utilise it effectively due to the presence of disease (Oftedal and Levinson 1977, 388). Grosse (1980) views the synergism between malnutrition and infection not in terms of a cycle but as malnutrition-diarrhoea-respiratory infection triad. Under this system malnutrition is the preconditioning factor which may lead to lower respiratory tract infection or diarrhoea. The two illnesses act together to exacerbate the condition which will ultimately lead to death through dehydration or pneumonia.

However, it should be noted that the relationship between malnutrition and infection has not been settled. It is unclear, for instance if malnutrition precedes or is a result of severe PEM (Lancet 1983a, 661). It is believed by some (see Mann 1980) that a person who is in a malnourished state may obtain some protection from pathogens because organisms may be deprived of nutrients essential to their proliferation. Reporting the results of other studies Mann (1980, 1238-39) claims that the incidence of malarial infection increased *after* a Sahaelian famine when people were able to obtain nutrients again, and, in Ethiopia, poorly nourished hospital patients had *less* than the expected amount of bacterial infection.

5.7 Health Care Delivery

5.7.1 Introduction

Health care delivery in Africa has a mixed history. During the colonial era the health system was oriented towards urban areas to provide service for relatively well off natives and colonial administrators. The services provided were, given the technological constraints, oriented towards medical interventions and hospitalisation (see Nsekela and Nhonoli 1976 on Tanzania). The poorest individuals relied on traditional methods of healing and, where available, medical treatment provided by missionaries. Once the European colonies had obtained their independence control of the health care sector was transferred to the national governments. However, these governments were unable to immediately eliminate the poor distribution of resources due to poor organisation, incorrect priorities, lack of funds, political pressure and bad advice. The chief criticisms levied at the African health care system is that it is biased to urban areas, has a curative rather than a preventative orientation, and favours relatively well-off members of the population.

It has been commonplace to describe the formal health care delivery system in Africa, as in most other developing countries, as being dominated by hospitals that are located in urban areas. Although comparison of health care expenditures devoted to hospitals in developing countries suffer from a lack of data, problems in the age of the data when available, and what constitutes hospital care versus non-hospital care, Mills (1990, 110) estimates that hospitals in developing countries receive approximately 30 to 50 per cent of public and private total health care expenditure. Unfortunately, data for Sub Saharan Africa is hard to come by, and recent estimates suggest that the figures for the region may be slightly lower. For instance, Malawian hospitals absorb 28.1 per cent and hospitals in Swaziland consume 23.7 per cent of total health sector expenditure (Mills 1990, 111).

The governments portion of total health care expenditures devoted to hospitals, however, is higher. For developing countries (not including Latin America)

the range has been calculated between 50 and 60 per cent. Data analysed in the early 1980s for the Sub Saharan countries suggest that government current health expenditures devoted to hospitals is close to this estimate (Hecht and Musgrove 1993, 7). For example the figure for Botswana is 42 per cent, in Malawi 57.6 per cent, in Swaziland 57.4 per cent, 64 per cent in Tanzania and 69.0 per cent in Zimbabwe (Mills 1990, 111). Dor and van der Gaag (1993, 194) report that in the Côte d'Ivoire urban areas benefit the most of the health service regions. Urban areas receive 89 per cent of the recurrent health budget, but service only 50 per cent of the population. Moreover, 36 per cent of Ivorian doctors work in two University hospitals and 70 per cent of nurses work in urban facilities.

Thus, the available evidence suggests that hospitals eclipse other health facilities in the ability to attract funding. On the face, this would be viewed as a universally bad way to promote health care delivery given the dominance of rural populations in Africa. However, in the extreme, this would only be the case if all the expenditures were concentrated in central hospitals offering a full range of speciality care. Again, the picture is somewhat mixed. For example, Tanzania distributes 70 per cent of the money to the district level and only 23 per cent at the central level (Mills 1990, 113). On the other hand, based on figures analysed in the early 1980s, Malawi and Zimbabwe show that 54 and 60 per cent of hospital funds, respectively, go to the central hospital. However, some caution is needed in this area. The 1980s has seen a concerted effort to devolve health care expenditures away from central hospitals to district level ones. Jamison (1993a, 5), for instance, notes that Zimbabwe has halted new investment in central hospitals and is now concentrating on district level infrastructure and health centres. Lowenson, Sanders and Davies (1991, 1084) relay that Zimbabwe made a substantial commitment to expanding rural health care after independence; a total of 274 new rural health centres were built by 1987. In Tanzania, the movement to a rural health care strategy was earlier. Gish (1975, 53) reports that from 1961-1971 government hospital beds increased by 50 per cent while the number of rural health centres expanded by 300 per cent.

Moreover, it is important to keep in mind that though there is an urban bias in hospital facilities this does not mean that for specific diseases, and in some cases, perhaps for nutrition, that urban inhabitants are healthier. For instance, tuberculosis rates in the Côte d'Ivoire are higher in urban areas than rural ones (Phillips 1990, 131) and the incidence of AIDs in most urban areas in Africa is likely to be higher than in rural areas. Mosley (1989, 273) notes that in the case of Kenya, Nairobi, despite being better served by medical facilities, has a higher child mortality rate than surrounding rural areas. He believes that this is due to the fact that the environmental conditions in the capital are much poorer than in rural areas.

Due to the presence of some bias in the health care delivery system in Africa efforts were undertaken within Africa and with the advice of outside experts to reform the health sector. The first changes showed up in national development plans and were later emphasised by all African countries as part of a strategy of primary health care. The goal was to make health care more accessible to the entire population. This would be done by encouraging the participation of subprofessionals, such as village health workers and traditional healers, the community, and professional doctors and nurses in an effort to provide adequate health care to everyone who desired it. The approach taken was integrative: preventative care was promoted alongside curative care, sanitation and sewerage improvements were required and improvements in nutrition, education and social advances were encouraged.

However, this approach was viewed by many as unviable given financial constraints, a lack of skilled manpower in government bureaucracies and poor coordination. This led to a watering down of the PHC approach and an attempt was made to replace it with one concentrating on selective health interventions. This approach was criticised, in the main, for taking health care and separating it from the wider area of development and concentrating on medical interventions to the detriment of preventative care. A compromise between the two approaches began to emerge in the 1980s which promoted some aspects of preventative care and targeted the most vulnerable groups. Its advantage was that it was not over optimistic in its

goals as the PHC approach and was not as narrowly focused as selective health care was seen to be.

5.7.2 Traditional versus Modern

The modern health care delivery system in Africa has its basis in an organisational hierarchy. This hierarchy is normally thought of in terms of a pyramid. The facilities and personnel are funded mainly by the national government through the Ministry of Health and, to a lesser degree, by bilateral and multilateral donor agencies in developed countries or by missionaries. The facility hierarchy has at its apex a small number of relatively large urban- (capital-) based hospitals. These hospitals usually offer curative care along western lines and specialised operations, and act as a referral magnet for lower level facilities. Below the specialised hospitals lie general hospitals that offer a range of non-specialised curative services at the district level. Below the district hospitals there is a tier of smaller, mainly rural health centres and health posts that provide a range of non-technical curative health care and offer preventative services. The health centres are often staffed by qualified physicians and nurses, whereas posts are manned by volunteers and semi-qualified health workers. Below this tier lies health care interventions that occur at the household level. Although this technically falls out of a Ministry of Health dominated pyramidal hierarchy it is included as much of the health care interventions in Africa initially occur in the home. Referrals in this standardised framework, occur up the health care hierarchy depending on the nature of an individual's illness. However, in practice, the referral system frequently breaks down and by-passing facilities is common in all African countries. Figure 5.7 provides a schematic representation of the modern health care hierarchy which lists the facilities, personnel, administration and the size of the population served (Phillips 1990):

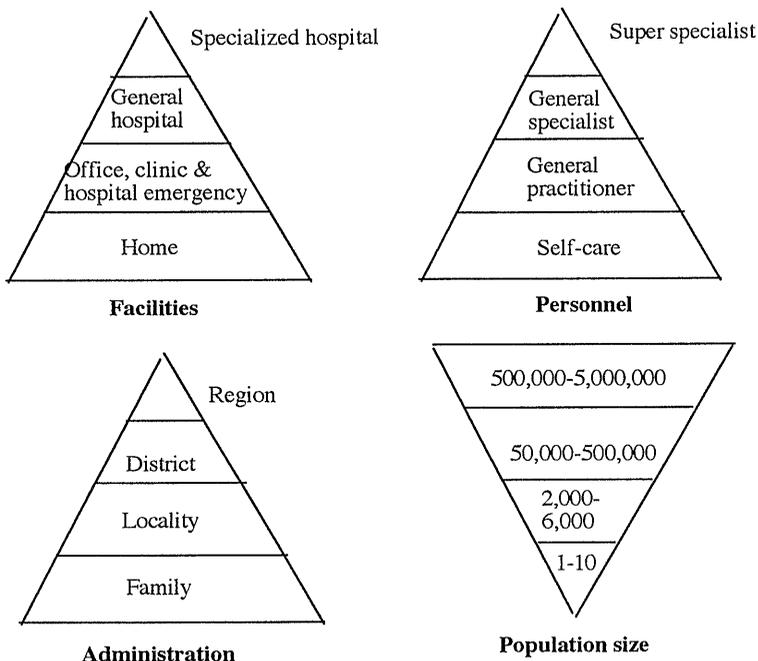


Figure 5.7. Modern Health Care Hierarchy

Modern facilities provided by religious groups, charitable organisations or international aid agencies exist parallel to the national hierarchical structure or, are sometimes, formally integrated with it (Phillips 1990, 64-66). The facilities provided by these groups range from (popular) hospital based services to rural health centres. The use of fees to cover their costs is sometimes used, particularly in the case of mission hospitals. The facilities provided by external agencies often fill an important gap in national health care systems. Médecins Sans Frontières, Save the Children, UNICEF and United Nation's High Commission for Refugees (UNHCR) all provide emergency health care facilities and coordination in order to provide relief during times of famine or civil strife. Outside of emergency assistance modern facilities have been established by donor agencies that provide health care on a permanent basis. For instance, Phillips (1990, 66) reports that missionary societies provide

nearly all the rural health care in Zambia and approximately 75 per cent of rural health services in Zaire.

Modern facilities are also provided by the private sector. Health care delivery by private providers tends to have a strong curative orientation. In addition it is not integrated in the Ministry of Health system and its activities remain uncoordinated with the Ministry's health care objectives.

Parallel to the modern health care system in Africa is a traditional sector that concentrates on rural areas. The traditional medical system acts to counterbalance the urban orientation of modern facilities and provides some health care where otherwise there would be none in severely resource constrained economies. It is difficult to assess how much use of traditional medicine is made by individuals due to the limited number of studies and under-reporting of use by patients (Csete 1993, 1290). Phillips (1990, 73) provides an estimate for the prevalence of basic health care of this type in Africa of the magnitude of 80-90 per cent of the rural population. Traditional or indigenous medicine has a long history in Africa and its practitioners are the main providers of basic health care in Africa after household level treatment (Phillips 1990, 75; Ndeti 1976 and Kiteme 1976). For example, Phillip's (1990, 75) research has revealed that the ratio of traditional medical practitioners to population is often lower than other medical personnel ratios. In Swaziland the traditional medical provider to population ratio is 1:120 as compared to the Sub Saharan average of one physician for 23,540 members of the population in 1990, and one nursing person for every 3,460 members of the population in 1970. In Malawi, the traditional medical provider to population ratio is 1:1,600 compared to the doctor to population ratio of 1:45,740 in 1990. In Nigeria approximately 70 per cent of the population consult traditional healers (Phillips 1990, 83). In Africa it is estimated that nearly three quarters of health care takes place at the household or individual level (Leslie, Lycette and Buvinic 1988, 307).

The therapeutic options offered by traditional medical practitioners are wide ranging. At the level of lowest medical efficacy are fortune-tellers, astrologers and

hypnotists. Above such dubious practices would lie herbalists, healers and witch doctors who utilise mainly locally grown medicinal plants that are either historically believed to have medical value or proven by science to be useful in some treatment regimes. For example, in Rwanda traditional medicine is consulted most frequently when the cause of illness is believed to come from "poisoning"; or when food is tampered with (Csete 1993, 1286). At the pinnacle of traditional medicine, at least from a western point of view, are traditional birth attendants (TBAs). They are almost invariably females who have become skilled in childbirth through self-training or by tutoring with other TBAs. Their knowledge relates to both childbirth and information concerning prenatal health. They are viewed as more sophisticated health workers in so far as they have been integrated into the formal health care delivery system in many African countries, whereas other traditional healers lie on the periphery of the formal health care sector.

The coexistence of the traditional medical sector alongside the modern health care sector has been termed medical pluralism. This name is fair in so far as it suggests that there are two systems running parallel to each other. It is misleading to the extent that it implies that access to both systems is equal. Health care delivery in Africa, as in other parts of the developing world, is usually viewed in terms of a dichotomy of urban-modern facilities versus rural-traditional health care. This distinction is useful in gaining a picture of the overall health care delivery system, but it is inadequate in describing the picture of individual countries. Some countries such as Tanzania and Lesotho (due to geographic size) are better able to provide a mix of traditional and modern facilities to their populations.

5.7.3 Three Systems: Primary, Medical and Selective

In response to the inequality apparent in the delivery of health care considerable attention was devoted, and continues to be paid, to developing an alternative health care delivery system appropriate to African countries. The hierarchical system, replete with bias, was, and is, seen as failing to provide adequate health care to the

majority of Africans. Gish (1983, 1962) relates this 'new' health care delivery system to the basic needs approach. The basic needs approach stresses access to consumer goods, employment and social services by the entire population of developing countries. Within the health sector, a strategy based on a mix of promotive, preventative and curative care aimed at addressing community health problems through education, medical intervention and local participation, was viewed as ensuring that basic needs would be satisfied — at least as far as health status improvements were concerned (Gish 1983, 1962).

Commonly, the alleviation of poor health and nutritional states in Africa is done through the use of a strategy based on primary health care (PHC). According to the World Health Organisation (WHO)¹⁴, primary health care is defined as (quoted in Mahler 1981, 7):

essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

and as (Lee 1983, 93-94),

Education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunisation against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs.

According to United Nation's specialised agencies (WHO, IBRD and UNICEF) and numerous authors [such as MacDonald (1993); Phillips (1990); Yimam (1990); Leslie, Lycette and Buvinic (1988); Gwatkin, Wilcox and Wray (1980);

Djukanovic and Mach (1975); Nangawe et al (1987) on Tanzania; Orubuloye and Oyeneye (1982) on Tanzania and Nigeria; Matomora (1989) on Tanzania; Gish (1983) on Ethiopia, Mozambique and Tanzania; Nsekela and Nhonoli (1976) on Tanzania; Gish (1975) on Tanzania] the successful implementation of the PHC strategy is dependent on the active participation of the community, the use of paramedical personnel using simple technologies to promote healthiness and cure minor diseases and injuries, intersectoral collaboration, and the incorporation of indigenous health systems alongside the modern sector. Community participation, with its roots in the International Labour Office's approach to basic needs (MacDonald 1993, 88) views the community as the principal actor in ensuring their own health care through local control over the contents and implementation of a PHC programme (Mosley 1989, 262). Thus, para medical personnel and low-cadre health workers (normally termed community health workers) become the main agents of change (as is the case with Ethiopian village health workers; Lancet 1992a, 661). The approach requires active grassroot participation, not simply the community taking orders for the centre and then implementing them within the community.

Intersectoral collaboration is viewed as a means of ensuring that health is viewed in its wider context. That is, poor health is not merely the result of an absence of a medical intervention, but is based on problems originating outside of the health sector. Under this guise health status is effected by changes in agricultural production, education, housing, water supply and sanitation disposal. This means that a multidisciplinary approach to health is required in order to ensure the well being of a population. The incorporation of native health systems recognises problems with health care delivery in developing countries. The first is that resources are scarce and it is best to incorporate inexpensive systems of curing into the PHC strategy due to their cost savings. Second, the use of traditional methods of healing recognises the broader cultural context of health, and the reluctance of some members of society to utilise a modern health system that they are unfamiliar with or that costs too much.

However, this picture of comprehensive health care is idealistic. It has yet to be successfully implemented in any country on the scope imagined. There are several reasons for this. First, although there are several anecdotal examples of participation (Lancet 1992b, 967), active community participation in PHC has been limited due to the lack of democratic and autonomous communities in rural areas. As W. Henry Mosley (1989, 263) observes, "the principal difficulty lies in the highly centralised control that is exercised by the bureaucracies of national governments, thus the path of least resistance is chosen, and existing community systems are swallowed up under the new programme." Countries, like Tanzania, that have used ideology as a basis to motivate socio-economic change have been able to secure active and maximum community participation in health programmes. Gish (1983) believes that the socialist orientation of Tanzania, Ethiopia and Mozambique and their commitment to the New International Economic Order have fostered an environment that promotes a successful switch over to PHC. In Nigeria, although PHC is promoted at the grassroots level, active and widespread community participation has been limited due to a lack of ideological commitment by the government (Orubuloye and Oyenyé 1982, 685-86).

Bureaucratic barriers are also important in explaining the collapse of intersectoral collaboration. Each ministry sees itself as semi autonomous from other ministries and actions by one ministry often go unreported to others. The general lack of resources necessary to foster successful collaboration is also a significant factor (Mosley 1989, 264). Chen (1986) has warned, for instance, that primary health care may fail where bureaucracy is more concerned with procedure than performance. Indeed, the replication of successful pilot PHC projects may be put into jeopardy when "applied to bureaucratically dense, professionally dominated, poorly responsive systems" (Chen 1986, 1264).

The attempt by the WHO and UNICEF to keep health care culturally relevant has met with mixed results. Although there are notable examples where PHC has successfully adopted some aspects of traditional medicine (for instance China), on the

whole the record has been rather poor — with the preference for modern western medicine. However, this is not to say that native medicine has been wiped out, far from it, in most countries it still exists, the difference being that it runs side by side with other health programs, rather than enjoying the benefits that would arise from incorporating it within an overall health strategy.

Additionally, the strategy put forward by the WHO and UNICEF as part of its global strategy of "Health for All by the Year 2000" has come under criticism for its unrealism (Prescott and De Ferranti 1985, 1238) and its "muddled thinking on fundamental issues" (the Lancet 1983). The PHC strategy has also been estimated to be extremely costly to implement. The original estimate for extending PHC to developing countries on a permanent basis was an additional \$40-\$80 billion (Phillips 1990, 156). The cost to the poorest countries was estimated between \$20 and \$33 billion. This compares to total annual health care expenditure of around \$12 billion in 1990 for all of Sub Saharan Africa, and total development assistance for health to Africa in 1990 of \$1.2 billion (World Bank 1993). Given that aid flows have recently stagnated, a lack of willingness by most donors to reach UN aid as a percentage of GNP targets, and a lack of domestic financial resources it is highly unlikely that PHC will be constructed as originally envisaged. However, Wang'ombe's (1984) study of a PHC scheme in Western Kenya has noted that there may be a sufficiently positive rate of return on establishing and coordinating primary health services alongside community health worker schemes. Gwatkin, Wilcox and Wray (1980) also believe that PHC programmes can have substantial benefits. Their review of previous research reveals that in small populations infant and child mortality can be reduced by between 33 and 50 per cent over one to five years at a cost of less than two per cent per capita income.

On a more practical level, PHC may never achieve full implementation due to political resistance by beneficiaries of the current urban-based system. Moreover, administrative and managerial problems are likely to arise at the lower levels of health care delivery (Orobuloeye and Oyenyé 1982 and Phillips 1990, 156). Orobuloeye and

Oyenye (1982) note that constraints in the delivery of PHC in Nigeria have existed in the structure of government with the national implementing agency having little control over finances. In addition, commitment to the PHC scheme varies from state to state, with some states providing free care for basic services and others charging for such services.

Due to the incredibly broad scope of the WHO message attention has turned to the use of selective cost effective approaches (Nations et al 1984, 1612) and selective primary health care (Walsh and Warren 1979, 145). The selective primary health care (SPHC) approach concentrates on targeting and addressing specific health problems. The main strength lies in the fact that it views the health care system in Africa as constrained in terms of finance, managerial expertise and an absence of a political commitment to change by national elites. Its focus is on conditions that can be cured or averted at the least cost. The SPHC approach attempts to prioritise diseases based on the cost of effective control and based on prevalence and mortality and morbidity indicators. Diarrhoeal diseases, measles, malaria, whooping cough, schistosomiasis and neonatal tetanus receive a high priority (Walsh and Warren 1979). Hookworm receives a medium priority due to its low mortality and difficulty in controlling. The alleviation of malnutrition also receives a medium priority even though it has a high prevalence and high morbidity, its control is viewed as excessively complex (Walsh and Warren 1979). Amoebiasis, Giardiasis, Filariasis and Dengue receive a low priority due to the difficulty inherent in controlling these conditions (Walsh and Warren 1979).

Phillips (1990) points out several serious flaws in the selective approach to primary health care (SPHC). First, concentrating on specific and selective interventions runs the risk of diverting attention away from basic underlying health needs relating to health conditions in favour of a vertical health care delivery system. Second, the SPHC approach limits the degree of community involvement with the choice of interventions are chosen by outside experts and ministry of health officials with little knowledge of local conditions or community needs (Wolffers 1991, 739).

Third, there is a feeling by some experts that the use of medical inputs has only an indirect relationship on health outputs. That is, social and environmental improvements may do more to improve health status than purely technical solutions. Moreover, such improvements offer the advantage in that the effects are not isolated to a specific disease but may spillover into other improvements in health. For example, as previously shown, nutritional improvements can prevent the incidence of tuberculosis and diarrhoea, and improvements in water supply and sanitation have far reaching effects.

The United Nation's Childrens Fund promotion of the GOBI (Growth charts, Oral rehydration therapy, Breastfeeding and Immunisations, and in its expanded form GOBI-FFF; Food supplements, Female schooling and Family planning) method of selective health interventions has been praised on one hand because of its complementarity with PHC and also roundly criticised because it is dependence on foreign inputs which cannot be replaced locally and the technology used (immunisations) is imposed on the population concerned (Seaman and Poore 1987, 1334). The GOBI approach appears to fall in between the PHC approach and selective health interventions. It has been viewed as a complement to PHC in that it is operational until the full PHC strategy can be implemented (Wisner 1988, 120). However, the criticisms of GOBI-FFF follow those of the selective approach. That is GOBI-FFF fails to address the underlying causes of poor health in developing countries; low incomes, lack of services and poor environments. As Wisner (1988, 146) states:

Since GOBI as it now stands does nothing by way of encouraging social transformations that would work toward the eradication of poverty, and since it actually seems to block transformative participation and the strong version of PHC, it can really be seen as nothing more than a handy way of mopping up the excess mortality created by economic adjustment.

The Economist (1986, 98) reports that lack of co-ordination is another important drawback of selective primary health care. Leslie, Lycette and Buvinic (1988, 311) while generally praising the GOBI approach, warn that the time costs may be high. For instance, an immunisation may only take seconds to administer, but the time spent

travelling to and from the health centre and queuing may be great. Randall, Wisner and Bossert (1989, 406) believe that the selective nature of GOBI, which focuses on breastfeeding ignores the roles of women in urban areas and women in the rural workforce. Raikes (1989, 448) mimics this notion as he believes that maternal and child health (MCH) over concentrates on women's reproductive role while ignoring their wider health needs.

Moreover, the impact of the selective approach on child and infant mortality may have been overestimated (De L. Costello 1988, 186 and Lancet 1990, 1310.). The Kasongo Project Team (1981) found that survival for unvaccinated patients was similar, in the long run, to patients that received a measles vaccine, in Kasongo, Zaire. Although their study did provide important information on the cost-benefit of a measles vaccination program — the authors of the report believed that it would be "useful to think twice" before allocating scarce resources in view of the operational difficulties and the high costs of the program — it also demonstrated the potential for limited "success" of selective primary health care (the Kasongo Project Team 1981, 767).

As one of the "pillars" of PHC is intersectoral collaboration the selective approach has been criticised for its over emphasis on technical interventions (MacDonald 1993, 78). Due to the concentration on one intervention at a time, the selective approach fails to include linkages to other sectors that may offer, perhaps larger, improvements in health. Additionally, selective PHC does not include the very people that it is meant to help in the decision making process, and thus becomes a mere extension of low-cost existing medical services (Macdonald 1993, 78).

Phillips (1990, 163) believes that the most compelling criticism directed a SPHC relates to its Western orientation and its over use of technocratic solutions. The SPHC approach is criticised by him due to its failure to include the community and their local initiatives. This idea has been extended to include the broader Marxist framework of continued exploitation and control of the South by the North. This criticism, is to an extent unfounded. First, the current "medical" model is as much an

outgrowth of the thinking of elites and trained practitioners in developing countries as it is an imposed ideal from the North. Second, the primary health care approach was not developed exclusively in developing countries. Although there is an admirable history of "primary health care" in national development plans (Orubuloye and Oyeye 1982, 675) that pre dated Alma-Ata, several UN organisations, allegedly dominated by the interests of developed countries, and many bilateral agencies, kick-started the PHC approach. In this sense, developed countries cannot truly be viewed as attempting to control developing countries in so far as the approach effectively encourages mass participation in developing countries. Third, the SPHC approach can be viewed as part of the PHC system. Interventions that appear on the SPHC list would undoubtedly make up part of the PHC system.

Rifkin and Walt's (1988) critique of the Walsh and Warren approach is especially telling. Rifkin and Walt accuse Warren's attempt to return to the 'old' definition of health "as the absence of disease" as fundamentally flawed because it ignores the real reasons why health improves (p. 744):

Medical advances, technology and research are necessary but not sufficient factors. They can and do become irrelevant when they do not respond to the socio-economic/political conditions in a given country. Improvements in health depend on understanding the entire environment and on encouraging all living in that environment to take decisions to change it for the better.

In essence the criticisms directed to the PHC strategy focused, in the first instance, on the definition that is used in defining health. The much repeated phrase that health is a state of "complete physical, mental and social well being, and not merely the absence of disease or infirmity", while offering the World community and national governments a comprehensive definition that deals with not only problems of health but also with development, also, at the same time, offers an enormously difficult challenge to national governments and populations in the developing world. The challenge is that with their scarce resources and with technical and financial assistance from developed countries that they not only tackle problems of health but that they also attempt to correct every social and economic problem within their

boundaries, regardless of whether the causes of these problems are generated externally or institutionalised. In this sense, the primary health care strategy is not really about health at all, but about underdevelopment.

However, this is not necessarily a problem, for surely health and development are intertwined, and improvements in one are likely to lead to increases in the other, as are declines likely to feedback through the system. The problem occurs in its ambition. It lacks in any reasonable acceptance of the present situation; current constraints on development caused by extremely complicated economic arrangements between Southern and Northern states that cannot for a moment be expected to be changed in the near future. Thus the strategy of primary health care is reduced to a trap with a key. A key in the sense that the problem is correctly identified with a reasonable solution, a trap because the solution cannot be implemented without the co-operation of actors in the developed countries.

Thus, the health system in developing countries, and in particular sub-Saharan Africa, have failed to implement the PHC strategy as originally envisaged by the WHO and UNICEF, while at the same time, failing to find a more viable alternative to the resource saving (but perhaps not health improving) strategy put forward by the proponents of selective primary health care. The health care strategy followed by sub-Saharan countries, thus, becomes hard to quantify. Some countries are further along in implementing the original PHC strategy with its emphasis on community participation, Tanzania was a notable example with its Ujjama programme (Orubuloye and Oyenyé 1982, 683-85), and others still rely on centralised decision making. While at the same time, some countries have found themselves the recipients of selective health interventions, while pursuing the overall objectives of PHC. As Mosley (1989, 264) says, without attention to social relevance, intersectoral co-operation and community participation; "PHC essentially becomes a top-down strategy to reach the community with some simple but theoretically effective preventive and curative technologies using various types of village level workers."

Due to the criticisms directed at selective primary health care and the failure of many African governments to successfully implement the full PHC package, a more realistic approach to African health systems is currently being undertaken. Although explicit reference to basic needs is not always made, the current "consensus" has much in common with that approach to development thinking. It was pointed out earlier that the basic needs approach is difficult to quantify, and it is likely that it means, or is defined differently by different groups of people (Hettne 1990, 168-172).

As a starting point, it is useful to think of the basic needs approach to health care as lying somewhere between the extremes of PHC and a system of health care that focuses on urban, curative-based care. The basic needs approach is conceptually closest to the GOBI-FFF plan proposed by UNICEF. The World Bank (1994a) provides an "Agenda for Action" that developing countries should follow if they wish to improve their health systems. This agenda falls short of promoting the full PHC package as originally envisioned, but instead offers a list of areas that should be focused on by member governments. This list provides the foundation of basic needs as it relates to health care.

The Bank (World Bank 1994a) has identified several areas that are of varying degrees of priority for Africa. The expansion of female education and the provision of finance to ensure the delivery of public health packages are given a high priority. Of moderate concern are the pursuit of economic growth packages that benefit the poor, the political and economic empowerment of women and a decrease in spending on tertiary care and a concomitant increase in finance for clinical services for the impoverished (World Bank 1994a, 157). Thus, the Bank's "Agenda of Action", shies away from embracing fully PHC while also keeping well away from clinical services that serve only urban groups.

Similar to the Bank's recent approach to African health care systems the World Health Organization (Türmen 1995, 13) and Young (1995) also recommend a basic package of health care delivery for African governments to follow. Young (1995) believes that infants and children should be at the forefront of health care reform. Her

analysis of the health care problem notes that basic needs can be satisfied by providing "adequate" shelter, health care, nutrition and education. Under her proposal it would be unnecessary, in order to satisfy basic needs, to provide for a large number of clinical services to infants and children. Instead her priority areas are the provision of basic foods, immunisation, safe shelter and appropriate education. Table 5.4 below outlines the areas she has identified as being of critical concern and the best solution to the basic needs problem.

Table 5.4. Basic Needs and Required Inputs

Age	Basic Needs	Inputs
Birth - 1 year	Protection from physical danger	Safe shelter
	Adequate nutrition	Food and micronutrients
	Adequate health care	Basic health care (Immunisations, ORT, hygiene)
	Attachment with an adult	
	Motor and sensory stimulation	Age appropriate development curriculum
	Appropriate language stimulation	
1 - 3 years	Support in acquiring motor, language and thinking skills	Safe shelter, food and micronutrients, basic health care (in addition to the above deworming)
	Develop independence	
	Learn self-control	Age appropriate development curriculum
	Play	
3 - 6 years	Opportunity to develop fine motor skills	Safe shelter, food and micronutrients, basic health care
	Expand language skills	
	Learn cooperation, helping and sharing	
	Experiment with prewriting and prereading skills	Age appropriate development curriculum

Young (1995)

Türmen (1995) complements Young's approach, through the exposition of the WHO's Mother—Baby Package. The key elements of this programme are that equity in access to care should be provided at the lowest level of the health care system, and that health care resources should be redistributed to the periphery and interventions and reforms should, as under the PHC system, occur with the involvement of the community. The essential components, which have much in common with MCH programmes are (Türmen 1995, 13):

- (1) family planning to prevent unwanted pregnancies,
- (2) community based pre-natal care for early detection and treatment of complications,
- (3) community-based care for normal deliveries and newborn care,
- (4) access to essential obstetric care for high risk pregnancies and maternal and newborn complications

Thus, it has become clear that many academic researchers, experts and other parties are currently steering away from, at one extreme a full PHC package and at the other extreme a system based purely on clinical services. Instead, certain priority areas have been identified and the attention paid to these areas should allow for the basic needs of Africans to be fulfilled.

In essence there is not one model that has been adopted across Africa, but a multiplicity of models, some leaning more towards comprehensive health care and others closer to selective primary health care, and with the majority using elements of consistent with basic needs. Elements of community participation are encouraged by all major international agencies and are evident in most African countries, but the degree of implementation varies. The same also holds true for intersectoral co-operation.

5.8 Health Care Financing

During the 1980s, in many African countries, the role of national governments in the financing of health care came under pressure. This was caused by a combination of

factors. First, many Ministries of Health were allocated a smaller percentage of total government revenues to cover their existing operations. The problem was compounded to the extent that even where there were increases in total revenue going to the health budget these increases were being diluted by the growth in population (Vogel 1991, 167 and McPake 1993, 1397) and the appearance of new infectious diseases such as HIV (McPake 1993, 1397). For example, Vogel (1993, 168) reports that PPPR adjusted per capita government health expenditures, following an increase from 1975-80, declined 12.4 per cent in Sub Saharan Africa. Finally, following the recommendation the World Bank (1987) and WHO and UNICEF, as part of the Bamako Initiative, countries were encouraged to move away from a system of free health care provision to a system where at least a portion of the recurrent costs and/or drug supplies could be recovered.

Since the governments in Africa were faced with a problem of underfunding in the health budget alternatives were proposed and examined. Shepard and Benjamin (1988, 402) state that these alternatives were (1) lower existing services to a level which they could be sustainably financed with the possibility of more equitable distribution of services, (2) provide services more efficiently, thus cutting back on the need for increases in health care expenditure, and (3) raise revenues to finance existing services with the potential to redistribute revenues to the most important services. The first option is viewed as difficult to achieve because at a time of economic crisis politicians would be reluctant to (further) reduce services in the face of opposition from the population. Only the second and third options are seen as viable. In the macro realm only the increase in revenues is viewed as obtainable.

Any increase in funding to the health sector has to come from one or a combination of the following areas: (1) missions (Shepard, Carrin and Nyandagazi 1993, 141), (2) grants and/or loans from multilateral or bilateral agencies, (3) additional tax revenues or (4) private payment (Shepard and Benjamin 1988, 404). The first two suffer from a practical limit to the amount of money they may yield to the total health sector budget. For instance, grants and loans are often tied to specific

projects. Moreover there is a political boundary to the amount of money that may be raised through additional taxation without encouraging tax evasion, political upheaval and discouraging production (Shepard and Benjamin 1988, 404).

Consequently attention was placed on making consumers pay a portion of health care costs. The advantage of mandating private payment for health care was that it would, as a demand side measure, decrease the frivolous use of services (i.e. decrease moral hazard with user fees), potentially increase equity (in so far as the urban-rural bias was decreased or eliminated with the additional revenues), increase quality and allow for the recurrent costs to be recovered. However, there are also several disadvantages to the promotion of private payment of health care. First, charges may lead to a reduction in utilisation and may be regressive in as much as the effect is most evident in low income groups. Second an increase in moral hazard and adverse selection could be an unwanted outcome with the promotion of insurance schemes. Third the overall household budget could be put into jeopardy. Finally, the fees raised would not be enough to sustain high quality services.

Vogel (1991, 172) notes that health care financing in Sub Saharan Africa takes many different forms. Provision of health care is characterised by a multiplicity of providers with traditional healers existing alongside doctors, nurses, health workers, paramedical staff and drug sellers. Moreover, the private sector exists along side government and mission run facilities.

Where health care has a monetary cost there are a variety of pricing practices. These may include user charges, where payment is made when treatment is received, prepayment schemes, health insurance schemes or national health cards, where payment is made in advance of treatment (Ahrin 1993), and charges only for drugs (McPake, Hanson and Mills, 1993). The pricing practice can vary within a country and may be dependent on the service consulted. For instance, most community financing schemes allow exemptions for the very poor and physically and mentally handicapped individuals (McPake, Hanson and Mills 1993, 1388). Furthermore, as in the case of Kenya, charges may be levied at community pharmacies but not at

government facilities, or there may be separate fees for consultation and drugs as occurs in Burundi (McPake, Hanson and Mills 1993, 1388). The evidence concerning the effects that community financing has on utilisation is presented in the next section and in chapter six.

5.9 Availability, Access and Utilisation

Availability of, access to, and utilisation of health facilities can be effected by adjustment programmes. Availability of services applies to the supply side; the provision of services by the state, missions, non-governmental organisations and the private sector. Availability of services implies that income, prices and opportunity costs will play an important role in utilisation. Even if health services exist they may not be utilised because of the low incomes of households, high prices or high opportunity costs. Access refers to any physical impediments to getting to a health facility. If the facility is too far away or the infrastructure poorly maintained access to health facilities may severely limited. On the demand side, utilisation of health facilities is concerned with the extent that health facilities are actually used.

The most obvious factor influencing utilisation of health care facilities is the price of health services and the distance to health facilities. Akin et al's (1986) study of the Bicol region of the Philippines found that prices were not an important factor in determining demand. Nearly half of their sample used private or traditional fee-for-service medicine even though free services provided by the public system were as or more accessible. Akin et al's (1985) larger analysis also reached similar conclusions using data from Mexican and Malaysian patients. They suggest that the provision of free medical care will not "necessarily improve health conditions, it only makes medical care cheaper." (Akin et al 1985, 176). This is the concept of distance decay; where the rate of utilisation (interaction) tends to vary inversely with distance (Stock 1983, 563). The price of health care is related to the distance that must be travelled in order to seek health care. Where no fees are charged for services, utilisation of services would be quite high, barring any problems of access. However, the cost of

consumption is not the only cost associated with seeking health care. The time it takes to travel to a health facility is also an important cost, as measured not only by the actual costs associated with such travel (such as bus fare) but the opportunity cost.

Gertler and van der Gaag (1190, 88) provide travel time elasticities for adults in rural Côte d'Ivoire, where the monetary costs for medical care is zero:

Table 5.5. Arc Travel Time Elasticities for Adults in Rural Côte d'Ivoire

Hours of Travel Time	Income Quartile			
	1	2	3	4
Clinic				
0-1	-0.35	-0.32	-0.28	-0.14
1-2	-1.61	-0.57	-0.50	-0.24
1-3	-0.85	-0.83	-0.72	-0.33
3-4	-1.10	-1.09	-0.95	-0.42
Hospital				
0-1	-0.25	-0.23	-0.21	-0.11
1-2	-0.44	-0.42	-0.37	-0.99
2-3	-0.65	-0.62	-0.55	-0.27
3-4	-0.85	-0.84	-0.74	-0.34
Mean Income ^a	33.28	64.44	99.52	222.8

Source: Gertler and van der Gaag 1990: 88

^a in thousands of Ivorian CFAFs

The table demonstrates that the poorer the individual is the more sensitive he is to the opportunity cost of time. Indeed, children's utilisation in the same study were revealed to be more sensitive to time than adult's utilisation (Gertler and van der Gaag 1990, 88). The implication is that time, while creating a barrier to health care utilisation is important, its role is more significant for poorer individuals than richer ones (Gertler and van der Gaag 1990, 89). Csete (1193, 1289) study of Rwandan households in the Giciye Commune also notes that distance may be an important factor. Her research demonstrated that distance, as measured by altitude affected utilisation: mothers who lived at higher altitudes were less likely to seek treatment than those that lived at lower altitudes. However, Akin et als (1985 and 1986) analysis of the Bicol region of the Philippines did not find distance to be an important factor in deterring utilisation. They suggest that these unusual findings may be due to the fact that the region is relatively well served by roads and transport, thus cutting down on time costs. However, this is a rather poor explanation as the values for travel

time were high; 1.25 hours to a traditional healer and approximately four hours to a private or public facility (Akin et al 1985, 171-172). UNICEF's (1989) review of the situation in Kenya found that distance from immunisation facilities was less important in affecting utilisation. However, they noted that for households that faced distances greater than 15 km utilisation dropped substantially.¹⁵

Okafor (1983, 592) in a case study of Afenmai in the Bendel State, Nigeria, showed that waged labourers, such as civil servants and teachers used hospitals more often (over half visited more than three times in the specified time period) than non-waged labourers, such as farmers, traders and craftsmen (where over half only visited a hospital once). A possible explanation of this behaviour is that waged labourers were able to secure paid time off from work whereas non-waged labourers could not (p. 592). Here, it is believed that farmers and the like are reluctant to take time off of work as it will mean a reduction in their income. Okafor (1983, 593) believes that age plays an important role, with those aged between 21 and 50 the least likely to visit hospitals because they are active in the labour force. Although it should be noted that this may simply be due to the fact that these individuals are healthier than under 20s and over 50s.

If this is the case then there is no such thing as "free" health care. Indeed as Abel-Smith and Rawal (1992) point out:

It is often tacitly assumed that the only costs of using health care are any charges which may be levied by providers. But an important additional cost is time away from other activities, which can be very important not only for those who lose cash earnings when away from work, but also for subsistence farmers and, not least, mothers taken away from household duties. A further cost is that of travel for some patients.

In other words, when medical care is free or subsidised, as it is in many developing countries, time becomes a mechanism to control demand. If the opportunity cost of time is high, then there will be a reduction in demand for activities that are time intensive; when monetary prices are zero, time prices ration the market and replace monetary prices in determining the choice of medical provider (Gertler

and van der Gaag 1990, 20). From a pricing point of view it would be expected that if fees for health services are free or subsidised demand will become relatively more sensitive to changes in time prices. Thus, the demand for free health care is more sensitive to changes in time prices than services which require out-of-pocket payments (Acton 1975, 598)¹⁶.

The cost of treatment therefore is likely to vary depending on an individual's location relative to a health facility and his economic position. Table 5.5 outlines the costs of treatment for various sectors:

Table 5.6. Cost of treatment in various sectors

Area and Sector	Total Cost of Treatment
Rural	Cost of treatment [†] + travel cost + opportunity cost (income from, say, working in fields that is foregone)
Urban formal	Cost of treatment + travel costs + opportunity cost (e.g. cost of child minding)
Urban informal	Cost of treatment + travel cost + opportunity cost (income from trading foregone)

[†] Cost of treatment includes visitation and cost of pharmaceuticals

If the cost of treatment is based on travel and opportunity costs as well, then it is expected that an economically rational individual will visit the health facility closest to him, provided that the route itself is open (i.e. that a road to proximate health facility is not washed out). As most health facilities are concentrated in urban areas it is likely that communities in rural areas will face the greatest time costs. To take but one example, in Abidjan, the capital of Côte d'Ivoire, approximately 60 per cent of all doctors are based there (Gertler and van der Gaag 1990, 29). However, cost of treatment is not the only factor influencing utilisation. There also exists an income effect which influences utilisation.

If income increases it is expected that demand for health care will also increase. For instance, in Kenya increases in income led to increases in visits to mission clinics and government hospitals (that is income elasticities are highest for

these two types of hospitals)¹⁷ (Mwabu 1989, 389). However, it is important to note that this income effect may offset the effect of time; "an increase in earnings per hour produces an income effect, which acts to increase demand. It also raises the opportunity cost of time, which reduces the demand for time intensive activities" (Acton 1975, 599 and Mwabu 1989, 391). The net effect on the demand for health care will be based on "the time intensity of the price of medical services relative to the time intensity of the price of all other goods and services" (Acton 1975, 599).

Mwabu (1989, 391) notes that the time costs of treatment vary from season to season. In the wet season when there is most likely to be a high opportunity cost of time, due to the amount of agricultural work that must be accomplished, "the disutility of time cost of medical treatment increases far above its level in the dry season" — about four times its level in the dry season (pp 389-391). Thus during the wet season individuals are less likely to seek treatment, especially if the illness is not perceived as severe (p 391). However, Stock's (1983, 567) analysis of essentially the same problem in a different area of Nigeria did not find any significant seasonal variations in the distance travelled.

However, fees for treatment, distance and changes in income do not explain health care utilisation on their own. There are several non-monetary factors to consider when talking about health care utilisation. Egunjobi (1983) has identified other factors: quality of services [and Stock (1983), Vogel (1988), McPake, Hanson and Mills (1993) and Livack and Bodart (1993)], religion (and Stock 1983) relative living in a hospital town, and connections with medical staff. Mwabu (1989) believes that environmental factors, severity of illness, experience with a health facility, age, education and sex also play important roles.

Based on interviews with patients in four hospitals in the Oyo Health Zone in Nigeria, Egunjobi (1983, 586) believes that the quality of service offered is important in determining utilisation (second only to nearness of facility). Hospitals that are perceived as providing the highest quality of service are viewed by individuals as an important factor in visiting. Indeed, Stock (1983) confirmed that there exists a

positive relationship between the position that a health facility has in the service hierarchy and the mean length of journey for treatment. That is, patients are willing to travel furthest for hospital treatment and the least for a visit to a government dispensary. In his study area in Nigeria the predominately rural, and agricultural population experienced per capita utilisation declines of 25 per cent/km for local government dispensaries, 20 per cent/km for hospitals and rural health centre outpatients and 9 per cent/km for inpatients at hospitals.

Vogel's (1988) comprehensive study of cost recovery in West Africa found that quality of care was important in decisions relating to willingness to pay for health care. His case study of Senegal noted that if poor quality care was coupled with a positive price for treatment then individuals may bypass public facilities in favour of traditional healers. In Mali, Vogel (1988, 81) found that willingness to pay was based on the quality of medical care: "if people perceive that they are not 'treated like dogs' they will willingly come and pay." Overall, Vogel's (1988) research revealed that improving quality of care was important in encouraging utilisation and should go hand-in-hand with a movement to cost recovery in the health sector.

Litvack and Bodart's (1993) pre-test post-test controlled experiment in five public health facilities in the Adamaoua province of Cameroon found that when user fees were increased without quality improvements utilisation at health facilities dropped. However, when fees were introduced with a concomitant increase in quality, utilisation jumped. Moreover, the effective price of treatment fell even though user charges increased. This is due to the fact that high quality care was available locally whereas prior to the improvements high quality care entailed travel and time costs (Litvack and Bodart 1993, 379). However, the studies applicability may be limited. First, the measurement period of the study was only five months, thus it is unclear what the longer term consequences will be. Second, the study does not consider if the extra health care costs are being met out of the food budget — with implications for nutrition status.

Religion, as a factor explaining utilisation, in this case, is only relevant for mission hospitals and the Christians that patronise them (Egunjobi 1983, 587). The reason for this is hypothesised to be "pride of ownership" that goes with being part of a religious organisation and the influence of church leaders. In Stock's study of a predominately Muslim society, spatial mobility of females was found to be restricted due to cultural guidelines where women needed to obtain the permission of their husbands in order to travel and were prohibited from travelling by bicycle, motorcycle, horse or donkey (p.566).

The fact that a relative lives in a hospital town is an unexpected factor, but can be explained by the fact that relatives often accompany patients, so that they can check on their progress and provide meals, and having free accommodation can greatly reduce costs associated with an illness (Egunjobi 1983, 586). Connections with hospital staff was seen as important to a few people (1.2 per cent) because it gave them the chance to obtain preferential treatment.

Comparing the use of modern clinics with traditional ones Mwabu (1989, 389) found that as the severity of illness increased modern clinic were preferred to traditional treatments. If the visit to a modern facility for treatment was seen as unsuccessful then the attractiveness of modern clinics fell (p. 389). Moreover, that contrary to normal beliefs, older the preference for modern clinics to traditional ones increases with age (p.389). Also, compared to males, females preferred modern over traditional clinics (p. 390).

Stock (1983) believes that it is not merely the severity of the illness that helps explain the choice of modern treatment over traditional, but the type of illness. For instance fractures are viewed as being appropriately treated by traditional methods based on the fact that distance is an insignificant determinant of the utilisation of Western style health facilities for this type of injury (p. 567). Along the same lines, skin rashes were much more likely to be treated locally (p. 567). For diseases such as Tuberculosis, which are viewed by the inhabitants as a disease of European origin and thus not amenable to traditional therapies, distance had no impact on utilisation rates,

and everyone within the catchment area (30 km) sought treatment at the hospital (p. 568).

The effect of education on the use of traditional medicine is a little more cloudy. Okafor's (1983) study finds that the better educated people tend not to be favourably disposed towards traditional medicine, whereas between 65 and 70 per cent of the less literate and illiterate household in his study had a positive attitude towards 'native medicine' (p. 594). However, the finding deserves a caveat. The greater use of modern facilities by the educated may be a function of nearness to hospitals as the educated are more likely to be in paid employment in large settlements, whereas illiterates are most likely to be in rural areas far from hospitals (p. 594). Additionally, the propensity to lie by respondents cannot be discounted as some individuals may want to appear to be modern, and their 'dislike' of traditional medicine may be superficial (p.594).

5.10 Summary

This chapter has examined several issues relating to the health sector in Africa. First, it is obvious that the health situation differs markedly from that of developed countries, and in many respects lags behind other developing regions. The health problems that face Africa today are much the same as those that faced the continent decades ago. While other regions have made the epidemiological transition, characterised by noncommunicable diseases and injuries overtaking common infections as leading causes of death, many parts of Africa remain confronted with a health situation that has failed to change for the better. Indeed by any objective standard, poverty, and poor health status, remains a persistent problem. Although improvements have been made in infant and child mortality rates, these improvements must be viewed against faster improvements in other regions.

Moreover, such improvements need to be viewed against the backdrop of a major effort by national governments and multilateral and bilateral aid agencies to improve the welfare of Africans. This has in recent years taken the form of a heated

debate as to the 'correct' or 'best' health care delivery system for the continent. On one side are proponents of a health care delivery system that seeks to equate improvements in health status to overall improvements in welfare. That is the goal of a health care delivery system should improve mental and social conditions as well as health status. Given that the goal is a sweeping one the primary health care solution offered requires action on many fronts: promotion of food supply and nutrition, the provision of sanitation facilities and clean water, education leading to health promoting activities, immunisation programmes, an appropriate mix of preventative and curative services and the provision of essential drugs. All of this to be accomplished with the full and active participation of the community with the help, advice, collaboration and guidance of ministries of health and aid agencies.

Unfortunately such a health care delivery approach, while admirable, could not be accomplished due to a lack of finance and administrative expertise at the national and local levels. Therefore, proponents of a second system, selective primary health care, suggested that the targeting of specific diseases would offer large benefits with the possibility of lowering overall costs. However, such a system was criticised for its narrow focus and its lack of attention to other development problems that influenced health conditions, health care delivery and health status.

Given that on one hand the problem was correctly identified by the adherents of PHC approach, and the solution, at least as far as there was a realistic view of the financing of health care, was offered by the proponents of selective primary health care, attention turned to alternative sources of health care financing. The use of some cost recovery in order to ensure that basic needs are met is currently receiving a lot of attention. Initially it was thought that utilisation of health care would not drop if user charges were introduced. However, as the 1980s wore on it was becoming increasingly evident that this only applied to the richest Africans. Moreover, two other important factors became evident. First, quality is an important component in health care delivery. Second, the price of health care is only one factor that affects

utilisation. Utilisation is also sensitive to travel and opportunity costs, the religion of users, assistance by family members and education.

Chapter 6

The Household and Health

6.1 Introduction

Adjustment programmes influence health conditions and health status by altering the wages and profitability of urban and farm households and businesses, the prices that they pay for consumption goods and by altering the ability of African governments to finance health facilities. This chapter begins with a conceptual framework outlining the health production function of an individual and the utility function of households. Reference to this framework is extended throughout this chapter. For instance, there will be a discussion of how changes in prices (or expenditure) and incomes affect household delivery of health care and thus the household's health status. Since considerable public resources are devoted to programmes that improve health status, a review of the role that changes in government expenditures or changes in the price of health care will have on health status will be provided. This chapter will also investigate how households cope with these changes, and whether or not there exist any offsetting mechanisms in non-financial areas that might mitigate against any adverse effects following these macroeconomic changes.

However, before proceeding further it is useful to make reference to the framework established in chapter four. Given that the effects of International Monetary Fund and World Bank policies surrounding programme lending depend on the pre-change level of income, the composition of a given individuals consumption

basket, whether or not a person is employed in the formal or informal sector, or lives and works in an urban or a rural area, it useful to disaggregate the analysis to a sectoral level in order to gauge the distributional impact. For instance, the following questions are considered; do cutbacks in subsidies hurt the rural poor the most? Are these people able to compensate for this loss through increased employment opportunities in tradable agriculture? Or do they find that any possibility for income gains are quickly dissipated through an increase in the price of basic foodstuffs?

6.2 Economics and Household Health

Eelee, Hay and Hoddinot (1993) and Behrman (1988: 117) state that there are two interrelated issues that must be addressed when analysing the main determinants of health for household members in African countries and how adjustment measures may affect their health status. The first issue relates to the modelling of household behaviour and the second issue involves the development of a reduced-form demand equation for health. As a starting point, a health production function is developed to determine the factors that influence an individual's health status. Some of these factors are fairly obvious. For instance, health status will be affected by the amount and quality of nutrients consumed (N^i), preventative and curative health care consumed (Y^i), health conditions surrounding an individual, such as sanitation facilities, water quality and adequate housing (G). The amount of time an individual has to spend in health related activities such as food preparation (T^i) and the possible ill health effects that result from working (e^i) are also significant factors determining health status. Regional attributes, which consist of temperature, altitude, humidity and propensity to parasitic infection also affect health status (λ). Finally, the innate healthiness of an individual (μ) based on genetic endowment affects health status (Korjenek 1992). This health production function, then can be expressed as (Eele, Hay and Hoddinot 1993:155):

$$H^i = H^i(N^i, Y^i, G, T^i, e^i, \mu^i, \lambda) \quad i=1, \dots, T \quad (1)$$

This health production function shows that health status is affected by the consumption of food, health care, health conditions surrounding the household and factors beyond an individual's control.

Assuming that households aim to maximise utility, an assumption dropped later in this chapter, the health production function (H^i) enters into a utility function. This utility function takes the form of (Eele, Hay and Hoddinot 1993: 155):

$$U = U(H^i, L^i, C^i, Z^i, e^i) \quad i=1, \dots, T \quad (2)$$

Where a household consisting of T number of individuals derives satisfaction from health and food consumption (C^i), which are separated because foods may be consumed for reasons of taste and ritual as well as nutritional value. This function also includes the leisure of individual household members (L^i), the consumption of non-food goods (Z^i) by household members and their work effort (e^i).

In any individual household the total time available to the household member (Ω^i) must be allocated in one of three ways. It must be divided between wage labour (J^i), to household activities (T^i) or to leisure (L^i). In farm households labour can be further divided into activities of crop production and processing (F^i). This exposition gives a time budget:

$$\Omega^i = F^i + T^i + J^i + L^i \quad (3)$$

As health status affects the productivity of labour and if labour markets reward individuals who are in good health, or healthier than other individuals, then the wage of an individual, i , is a function of his health. In addition, the wage is also a function of energy expended in working (work effort) in the individual's occupation (e^i), and the personal characteristics (d^i) of the person, such as level of education. This relationship is:

$$W^i = W^i(H^i, e^i, d^i) \quad (4)$$

In agricultural households, health status also directly influences agricultural productivity. Farm output (Q) is also a function of on-farm household labour (F),

hired agricultural labour (F^h), a vector of agricultural inputs (X), land under cultivation (A), a vector of capital inputs (K) and the personal characteristics of household members (u). Thus the farm production function is:

$$Q = Q(F, F^h, X, A, K, H, y, u) \quad (5)$$

Households then seek to maximise the household utility function (2) subject to the health production function (1), a time constraint that lays down the amount of time that an individual can allocate between work leisure and household activities (3), the wage function (4), the farm production function (5) and an income constraint that prevents the household from spending no more on goods and on health inputs than what they earn in the labour market and in own-farm production (Eele, Hay and Hoddinot 1993: 142):

$$\sum_{i=1}^T W^i \Omega^i + V + \Pi = \sum_{k=1}^K P_k \left(\sum_{i=1}^T C_k^i \right) + P_Z \sum_{i=1}^T Z^i + P_Y \sum_{i=1}^T Y^i + \sum_{i=1}^T W^i (L^i + T^i) \quad (6)$$

and where farm profit is:

$$\Pi = P_Q Q - P_X X - \sum_{i=1}^T W^i F^i - W^h F^h$$

In the above equation V is non-labour and non-farm income, W^h the wage paid to hired labour, P_Z the price paid for non-food consumption goods (Z), P_Q the price paid for the farm output (Q), P_X the price of inputs for farm material and P_K the price of food K .

The idea that households seek to maximise utility leads to a reduced-form demand equation (Eele, Hay and Hoddinot 1993,141). This reduced-form demand equation states that the household's demand for health depends on, or is a function of, all the exogenous variables: the prices of all food goods (P_1 through P_K), the wages of T individuals in the household (W^1 through W^T), the prices of non food goods (P_Z), the price of health care (P_Y), the price of obtaining public resources that improve health conditions (P_G), the innate healthiness of each of the T members of the household (μ^1 through μ^T), the health environment (λ), the price of the output

produced by household members (P_Q), the prices of the inputs used in producing the output (P_X), the wage paid to hired labour (W^h), the personal characteristics of each of the T members of the household (d^1 through d^T) such as gender, for farm households the quantity of land available for cultivation (A), productive capital (K), and any unobserved characteristics of the land and the cultivator that affects productivity (u). The reduced-form demand equation is (Eele, Hay and Hoddinot 1993, 143):

$$H^i = D^{H^i}(P_V, \dots, P_K, W^1, \dots, W^T, P_Z, P_G, P_Y, \mu^1, \dots, \mu^T, \lambda, P_Q, P_X, W^h, d^1, \dots, d^T, A, K, u)$$

The economic view of the household, then, sees household members as trying to maximize their satisfaction or utility. Satisfaction is maximized when the highest level of well-being is obtained — that is, when the highest level of income, wealth, health and, as non-measurable variables, love and happiness is achieved. In order to obtain the highest level of satisfaction households must make decisions about the allocation of resources. The resources available to the family consist of two types; human and financial. Human resources are dependent on the skills of individual members, the time available to them and the level of energy required. Financial resources (or non-labour income) comprise liquid assets, savings and other assets that can be sold for money. In theory at least, resources are distributed in such a way as to ensure that they are used in activities where they are most productive (Bryant 1990, 5).

Although there is no archetypal household, household members are seen as pursuing the objective of satisfaction maximization in two ways (Bryant 1990, 2). First, they sell or rent household resources (such as labour) in an effort to gain income which can be used to purchase goods and services used to improve their level of satisfaction (Bryant 1990, 2). Second, the household can use resources within the household in an effort to produce goods and services that contribute to well being (Bryant 1990, 2). For instance, the household can produce its own food, clothing, and

improve the general level of living by making improvements to the home or carrying out simple health interventions. This suggests that the household must make some tradeoffs in order to obtain the highest level of satisfaction. They must decide how much time to devote to market activities, which earn income, and how much time should be spent in household work, where the goods and services produced are consumed, and how much time should be left to pursue leisure activities.

6.3 Time Allocation

The diagrams below show the budget line that faces the household and the equilibrium allocation of time among market work, household work and leisure activities (Bryant 1990, 131):

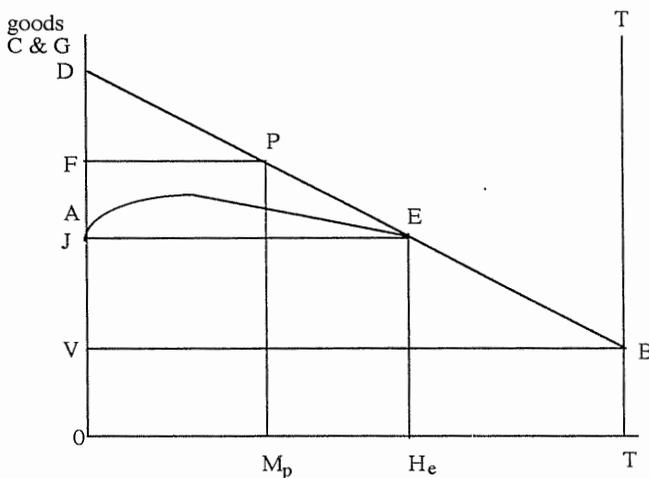


Figure 6.1. Time Allocation and the Household Budget Line (DEBT)

In the figure above the household production function¹⁸, for a one individual family, is represented by the line AB. Reading from right to left, the horizontal axis denotes the number of hours (T) during a time period (say a week) that is spent in household work (H_e) and, on the vertical axis, the amount of household goods produced with that labour, in this case VJ goods¹⁹. The line DE represents the market portion of the total household budget line²⁰, any point along this line, in this case P, depicts the total

quantity of market and household goods purchased if the individual works $T H_e$ hours per week in the household and $H_e M_p$ hours per week in the market. So at point P, JF represents the total amount of market goods which can be purchased with earnings from $H_e M_p$ hours of market work.

The line DEBT, then allows us to see the amount of goods produced within the household and the amount purchased from non-labour income and market income. When speaking of agricultural producers in Sub Saharan Africa points to the right of E on the line EB indicate subsistence production, where agricultural goods are produced for home consumption. Points to the left of E on the line DE represent food commoditization; where agricultural goods are produced and sold to the market. The line DEBT suggests that so long as the marginal product of labour is greater than the real wage rate household work will be carried out. Time is initially, more productively, spent in household work; as the hours worked increase the extra time is spent more productively in market work. In order to find equilibrium in the model the household preference map is introduced. Figure 6.2 shows this:

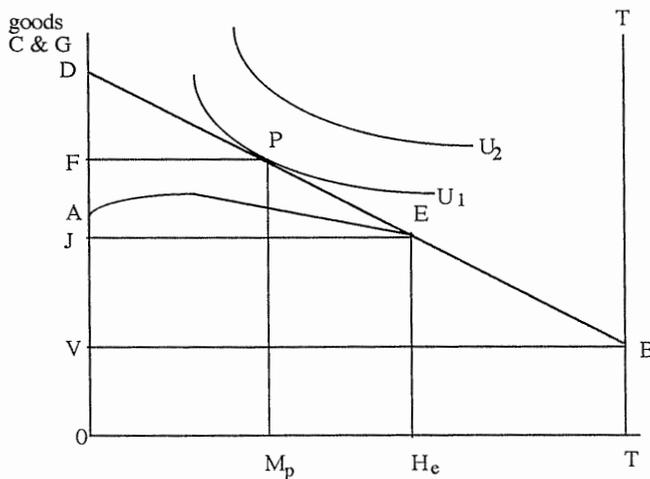


Figure 6.2. Equilibrium allocation of time among household work, market work and leisure, and equilibrium of total consumption of goods

The family maximizes satisfaction²¹ at point P. A total of OF goods are consumed by the household: OV goods are purchased by non-labour income, VJ goods are produced in the home and JF goods are purchased with earnings from working in the market. The total amount of goods consumed, OF, is determined by the amount of time spent in a variety of activities. In the diagram TH_e hours per week are spent in household production, H_eL_p hours per week are spent in market work and OL_p hours per week are spent in leisure (non-productive) pursuits.

Although the diagrams are simplified by assuming that the household or family is a single individual, figure 6.2.1 can show the time allocation of either the husband or wife if both are employed. If both members are employed the non-labour income (OV) is the income of the spouse not analysed (Bryant 1990, 131-134).

However, these activities are constrained by scientific, legal and socio-cultural factors (Bryant 1990, 8). Taking the economic or resource constraint first, neither do individuals have an infinite amount of skills at their disposal nor do they have limitless income and assets. Second, “[productive] processes must obey the laws of biology, chemistry or physics” (Bryant 1990, 9). To illustrate, the quality of food obtained by a household is dependent on the process of preparation. The process has to conform to certain natural laws, where, for instance, nutrients may be lost in heating or boiling certain foods. Third, legal requirements (such as a ban on prostitution or illicit drug production), where enforced, may prevent the household from engaging in certain activities. Finally, socio-cultural activities act as a break on satisfaction seeking in that individuals must adhere to certain cultural norms. For instance, women may be prevented from engaging in certain productive pursuits due to religious doctrines.

As we saw when examining health care utilisation, time, as expressed as opportunity cost, acted as a break for the demand for health care consumption. At the household level time also acts as a constraint. Time involves certain trade-offs. Time spent working in fields, trading in the market or in other income generating activities means that time may have to be sacrificed in the production of health care; whether it

be in food preparation, allocation, the collection of water, attendance at a health clinic for illness or information. In addition pressure on time can lead to increased physical stress which can lower resistance to disease or reduce the time available to household members to seek medical treatment.

Bério's (1984) analysis of time allocation and activity patterns in Côte d'Ivoire and the Central African Republic demonstrates that the role of women in household and agricultural work is of primary importance.

Table 6.1. Time Allocation for Men and Women 15-59 Years in Rural Areas of Côte d'Ivoire (1979)

Activity	Males	Females
Food Related Work	3h 35 min	3h 17 min
Domestic Work	40 min	3h 45 min
Domestic Activities	39 min	2h 46 min
Cooking Meals	1 min	1h 50 min
Total Work Burden	4h 15 min	7h 2 min
Rest/Leisure	6h 58 min	5h 28 min

Source: Bério (1984, Table 8; p. 61)

Bério's study reveals that it is women who spend most of their time in domestic activities and food related work and suffer from a lack of leisure time. For instance, females do nearly all of the wood collection and water fetching, and devote a much larger percentage of their time in food transformation than men (p. 62). Men spend more time hunting, clearing trees and land, while other agricultural activities are split evenly. This confirms the results of previous research which revealed that men were mainly responsible for land clearing, turning of soil, trimming tree crops and hunting while women concentrated their labour effort on feeding and caring for children, carrying water and food and processing crops (Wkwi 1987, 312).

Bério's (1984, 54) review of a previous study done in the Central African Republic reveals a similar pattern. Domestic activities are overwhelmingly in the area of women's responsibility. Women in the Madomale village spend 12.2 per cent of their time in domestic activities, while men only spend 1.1 per cent of their time in similar activities. However, the main difference between the two studies is that

women spend more time in all working activities than men. For example, women spend 13.5 per cent of their time in agricultural activities while men only devote 9.8 per cent of their time in agriculture (Bério 1984, 54). Men, however, spend more time in non-work activities and in rest and sleep than women. Men spend 55 per cent of their total time in rest and sleep compared to 46 per cent for women (Bério 1984, 54).

Women in Sub Saharan Africa, in particular, face a situation where they continually make tradeoffs to fulfil various roles. Popkin and Doan (1990, 683) believe that women must fulfil three main types of roles; economic, biological and social. The biological role of women is related to pregnancy, lactation, nurturing of dependent children and the maintenance and improvement of their own health status. The economic role of women, as has been shown, is based on the dichotomy of household work versus market production. The cultural role of women is broken down into three areas (Popkin and Doan 1990, 683) The 'wife' role which may include deference to her husband, sacrifice and obedience. The 'daughter-in-law' role where women have to obey the edicts of their husband's mothers, and the 'mother' role where women are responsible for children's well-being and socialisation. Table 6.2 below outlines some of the possible tradeoffs that occur for mature women:

Table 6.2. Role conflicts in Women's Lives Affecting Health and Nutrition

Role	Biological	Economic	Cultural
Biological	Close spacing of births leads to less time available to breastfeed earlier siblings		Culture may demand many children or female circumcision
Economic	Physical labour vs. time resting during pregnancy, decrease in time spent in breastfeeding, close spacing of births	Household production vs. market (income) work	
Cultural		Income generation vs. 'wife' and 'mother' activities 'Self' vs. 'mother' and 'wife'. Demands of mother and wife roles leads to less time available to pursue own economic activities	'Daughter-in-law' role vs. 'mother'. Time spent following mother-in law's orders leads to decrease in time spent in mothering role. 'Mother' and 'wife' roles in conflict with family planning services.

Source: Adapted from McGuire and Popkin (1989) cited in Popkin and Doan (1990) with additions.

Thus, not only do women face absolute limits to their activities they also face conflict between the roles that they have to carry out. That is, individuals face a definite resource constraint in that the level of income and assets available will always have an upper limit, and they face conflict over the best way to achieve this level given the differing roles that they play. Given this, the level of income available to households becomes of paramount concern. Any alterations in the income obtained by households, following World Bank and IMF programmes, will have important consequences for the family.

Wandel, Holmbe-Ottesen and Manu's (1992) research reaffirms the notion that women's allocation of time plays an important role in health and nutrition care. Their study carried out in the Rukwa region, Tanzania, an area that consistently produces a surplus of maize, posits that during the seasons (mainly pre-harvest) when women are active in agriculture household food intake may suffer. The main findings of their research reveals that increased work in fields leads to less time spent in meal preparation and distribution, personal care and leisure (p. 6). During the harvest period, children often helped out in household chores, but men were not reliable helpers. In addition, their research noted (Wandel, Holmbe-Ottesen and Manu 1992, 14) that energy intake was highest when mothers had a sufficient amount of time available to devote to household work, and during the harvest energy intake declined even though food availability was at its highest.

Chambers (1982) mirrors the view that seasons matter in time allocation and food intake. In his article he suggests that the onset of the wet season means that women may take less responsibility for child welfare in anticipation of hard work in agriculture. Chambers (1982, 221) believes that, in rural areas, during the wet season labour time has to be reallocated with several implications for health status. First, easy to prepare meals may be served with low nutritional value in order to save time. Second, sanitary conditions may decline in so far as household activities are neglected in favour of agricultural activities. Third, access and use of health facilities may

decline due to washed out roads and the interruption of drug supplies. However, it should be noted that the adverse impact of seasonality on nutrient intake may be limited in subsistence households. Babu, Thirumaran and Mohanam (1993, 1317) provide evidence from South India that market-oriented agricultural households tend to increase their marketed output when yields are poor thus leaving less for home consumption. Subsistence households, that grow food for their own consumption do not suffer this problem.

6.4 Income Effects

In order to analyse the effects that changes in incomes have on the level of satisfaction constrained indifference analysis will be used,²² which is represented by the diagram below:

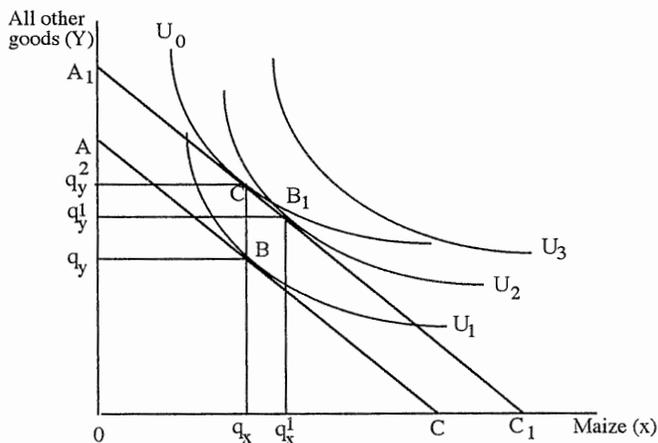


Figure 6.3. Maximization of satisfaction

The above diagram shows that satisfaction is maximized at point B ; at the point of tangency between the budget line (AC) and the highest attainable indifference curve. Here q_x quantity of maize is consumed and q_y quantity of all other goods is

consumed. Since the household has no incentive to change its purchase pattern it is at equilibrium at point B.

If income increases (assuming preferences and prices are held constant) then the budget line will shift to the right of AC to A_1C_1 .²³ When this occurs the household's consumption opportunities will increase; it will be able to purchase more maize (here assumed to have properties beneficial to health status) and 'other goods'. The new equilibrium will be at B_1 , with q_x^1 and q_y^1 goods consumed. This then, is a positive income effect, where, for normal goods, an increase in income leads to an increase in maize demanded or where a decrease in income leads to a decrease in demand. If demand for a good were to decline with an increase in income then it is an inferior good.

A decrease in income, as has been shown, can occur as a result of adjustment programmes. Thus one may infer from the above that decreases in consumption can be quite responsive to decreases in income. Cornia (1987, 34) notes that "the decline in household incomes and/or government expenditures experienced in the 1980s by 70 per cent of the developing countries in Latin America, Africa, and the Middle East have led to widespread and sharp reversal in the trend toward the improvement in standards of child health and nutrition." Pinstrup-Andersen and Caicedo (1978) believe that low incomes are probably the most important factor in determining malnutrition. As low income group spend a large percentage of their income (budget) on food²⁴ [estimated between 60 and 80 per cent; Pinstrup-Andersen (1985, 70); Senauer (1990, 409); Gertler and van der Gaag (1990, 11) derive similar estimates for Côte d'Ivoire, although it is noted that the percentage changes from region to region, World Bank (1993, 256) estimates range from 36 to 64 per cent] increases in aggregate income may be spent in areas that improve health status. As a very broad statement this is true. The World Bank (1993, 39) state that " a higher a country's average income per capita, the more likely its people are to live long and healthy lives." However this may not be the case. As Pinstrup-Andersen and Caciendo (1978, 414) admit, the effects of improvements in nutrition following an increase in

income depend on the validity of elasticities estimates, the intra-family distribution of food (and nutrients in particular), the ability of the household to obtain access to food and the utilisation of food by the individual household (Pinstrup-Andersen 1981, 5), if increases in income are met with increases in supply (Pinstrup-Andersen 1985), and the distribution of income (World Bank 1993, 40).

As noted in chapter four, World Bank and IMF programme lending often recommends that agriculture is commercialized. The commercialization of agriculture has important implications for income generating activities by farm households. That is subsistence or near subsistence agriculture is replaced with cash cropping schemes oriented to the export market. When a food system is commoditized three main nutritional consequences may occur. First, the production of agricultural goods for market sale as opposed to home consumption, may favour large landowners who have access to finance. Commodization usually requires investment in capital equipment, fertilisers, pesticides and seeds. Smallholders may be unable to switch to commercial crop production due to the lack of access to credit markets. This may lead to the marginalization of peasant farmers. Second, the production of cash crops may decrease local food availability. If the cash crops are exported away from the producing region then supply in the local area will decline leading to an increase in local food prices. Third, implicit in the notion of commodization is the idea that money income gained will be sufficient to purchase the amount of food that was previously produced under a subsistence system.

However, this may not be the case. Dewey's (1989, 418) study of commodization in Latin America and the Caribbean has revealed that commercial agriculture may provide less cash income than "the monetary value of food crops initially grown in the subsistence system." Indeed even if the monetary value of food crops for home consumption equals the cash received for the sell of crops an equivalent diet may not be guaranteed. This is due to the fact that earnings from cash cropping may be lumpy. That is, the income received from the sell of cash crops may only be received once or twice a year after the harvests. If the household is unable to

budget carefully then it may suffer a food deficit the nearer it gets to the next harvest. Moreover, money earned may not be used to purchase an equivalent diet but may be used to purchase different foods of a lower nutrient quality, fertilisers or other consumption goods (Dewey 1989, 419).

However, in the African context, the detrimental effects of switching production to export crops may be limited. Bryceson (1989, 428) notes that African food systems have a low level of commodization in rural areas, and even in urban centres, commodization has not taken complete hold. Indeed since land is relatively plentiful in Africa decommodification can just as easily occur and households may move to self-sufficiency (Bryceson 1989, 430). Households may take a risk averting strategy and keep some of their land in subsistence production to minimize the risk of variability in prices and output (Bryceson 1989, 430 and Dewey 1989)

It is a tenet of World Bank thinking that an increase in cash cropping will lead to increases in income for those participating in the scheme and that these increases will lead to improvements in health status. Von Braun (1988) report that in the Gambia participation in irrigated rice schemes have led to increases in household income for participating households and that this has translated into greater food consumption and an improvement in nutritional status of women. Huss-Ashmore and Curry's (1989) research on the impact of commercial maize production in Swaziland generally confirms von Braun's findings. Their two-stage stratified random sample of 120 households found that the nutritional status of children as measured by height for age and weight for age, was marginally better for commercial farmers than subsistence farmers (Huss-Ashmore and Curry 1989, 204). Women who produced maize for commercial purposes were found to have a slightly higher nutritional status (as measured by arm circumference and arm muscle area). However, it should be noted that the level of rainfall was determined to be an important factor in ensuring a relatively high nutritional status for children.

Sahn's (1990) study of export crop production in Côte d'Ivoire found that the use of land for export crop production did not affect the long-term nutritional status of

children. His research also discovered that raising household income would raise the nutritional status of children and the diversification of cropping or shifting land to export production was an effective way of raising rural incomes (Sahn 1990, 1646). However, his research did note that households that had equivalent levels of income, those that had larger areas under cultivation, suffered from a low nutritional status. It was hypothesised that this was due to the fact that women had less time for child care and household activities which would benefit health status. Kennedy and Cogill's (1988) research on sugarcane production in southwestern Kenya found that the incomes in households that raised sugar cane were approximately 25 per cent higher, but that there was no difference in nutrition between 'sugarcane households' and other households. The author's note, however, that if sugar prices were not supported by the government then it is likely that any income benefit would have evaporated.

Kurth (1989) also finds that an increase in income will not necessarily lead to a positive change in nutritional status. Her research revealed that although households that participated in cash cropping schemes had much higher incomes (175 per cent) than non-cash cropping households there was no difference in nutritional status. She speculates that this may be due to the fact that men are controlling the household resources. DeWalt's (1993) topical review of recent evidence suggests that commercialization of agriculture may have negative impacts on nutrition status. She cites (Niemeijer et al) evidence from Kenya that the commercialization of rice production has led to a decline in the nutritional status of households which do not have access to other resources. She noted that this was most likely due to the fact that households that participated in the rice scheme had a much lower percentage of their land in subsistence production (20 per cent) than non-participants (66 per cent).

6.4.1 Income Elasticity

The calculation of the income elasticity of demand is used to ascertain the effect changes in income on demand; in other words it measures the responsiveness of quantity demanded to changes in income (holding preferences and prices constant).

For normal goods the income elasticity will take a positive value. If the quantity demanded increases more than in proportion to the income increase then the value will be greater than one (income elastic). If the quantity demanded increases less than in proportion to the increase in income then the value will be greater than zero but less than one (income inelastic). For inferior goods the income elasticity of demand will take a negative value; quantity demanded decreases as income increases. Calorie-income elasticity derived from food expenditure surveys throughout developing countries have been reported in the range of 0.4 to 0.8 (Bouis, Haddad and Kennedy 1992, 350-51). For instance, Medani (1985, 686) reports that the income elasticity of demand for food is 0.681 in the Sudan. A sample of income elasticities for different income classes for calorie and protein is found below:

Table 6.3. Income Elasticity of Calorie Intake by Income Strata

	Strata					Average
	I	II	III	IV	V	
Calories	0.69	0.69	0.60	0.35	0.23	0.51
Protein	0.92	0.90	0.73	0.50	0.35	0.65

Source: Pinstrup- Andersen and Caicedo (1978).

Notes: Data if from Cali, Colombia. Stratum I is the poorest, stratum V the richest.

However, more recent estimates have put calorie-income elasticities lower than 0.4 with many below 0.2 (Bouis, Haddad and Kennedy 1992, 351). The United Nations Economic Commission for Africa (UNECA 1983, 61), for instance, also, uses a relatively conservative elasticity; 0.16 for cereals. Data provided below gives an indication of calorie income elasticity for Kenya:

Table 6.4. Calorie Income Elasticities for Kenya

Calorie dependent variable	OLS	2SLS
family calories*	0.20 (0.032)	0.19 (0.094)
total calories**	0.23 (0.032)	0.24 (0.093)
total calories‡	0.37 (0.031)	0.40 (0.093)

Source: Bouis, Haddad and Kennedy (1992)

Notes: Standard errors for elasticity estimates in parenthesis

* data from a 24-hour recall of meals prepared

** data from a 24-hour recall of meals prepared (less waste)

‡ data from a food expenditure survey

Thus, counterintuitively perhaps, increases in income may not lead to significant increases in food consumption, and, more importantly, in nutrient intake. Ravallion (1990, 489) believes that *nutritional* levels may be relatively unresponsive to changes in income in developing countries. Here, elasticities would be expected to be "a good deal less" than the income elasticities of demand for basic foods (Ravallion 1990, 489). Ravallion (1990, 509), based on household level data for the province of East Java, Indonesia, believes that income may be overrated in determining adequate nutrition. He shows that income elasticities of calorie intake are fairly low. Although several models are provided, his "preferred" one gives an elasticity of about .15 at mean points, which can be read as a ten per cent increase in income will only result in a 1.5 per cent gain in energy intake (Ravallion 1990, 509).

The Ravallion study supports the work of an earlier study by Wolfe and Behrman (1983). In their study of Managuan women aged 15-45 they found that income is not a critical determinant of nutrition in all developing countries. Again the income elasticities were quite small, suggesting that income increments would not have much effect on nutrition (p. 543). However, it should be noted that the Managuan sample had a per capita income (\$840 in 1978) above much of other developing countries, and thus it is unclear how transferable this study is to Sub Saharan Africa where per capita incomes are much lower. However, Behrman and Deolalikar's (1987) study in India confirms the general trend. They found that nutrient elasticities with respect to income or expenditure were fairly low. They concluded (p. 505):

for communities like the one under study, increases in income in the present context will *not* result in substantial improvements in nutrient intakes. Food expenditure will increase substantially more or less proportionally to income — [i.e. food expenditure elasticities are close to one] — but the marginal increments in food expenditure will not be devoted primarily to obtaining more nutrients.

Thus a situation can exist where programmes such as adjustment policies in the long run that are designed to raise incomes do not necessarily lead to increased

nutritional and health status. For instance, looking at some West African countries, there is variation between measures of nutritional status and health status and GNP per capita (table 6.5).

Table 6.5. Differences in Health and Nutrition Status Related to GNP Per Capita

Country	GNP per capita US dollars	Daily calorie supply per capita (1989)	Infant mortality	
			rate per 1000 live births (1990)	Life expectancy at birth (years)
Burkina Faso	330	2,288	134	48
Mauritania	500	2,685	121	47
Senegal	710	2,369	81	47
Guinea	440	2,132	138	43
Sierra Leone	240	1,799	147	42
Cote d'Ivoire	750	2,577	95	55
Ghana	390	2,248	85	55
Togo	410	2,214	88	54
Benin	360	2,305	113	50
Nigeria	290	2,312	98	52

Source World Bank (1992); *World Development Report*.

Cote d'Ivoire and Senegal, which have the highest GNP per capita, do not, in all cases, have the highest life expectancy at birth. Ghana has a higher life expectancy at birth than does Senegal, and ties Cote d'Ivoire. Burkina Faso, Togo, Benin and Nigeria, also, have higher life expectancy figures than Senegal. Moreover, although Senegal has the lowest infant mortality rate, Ghana and Togo still have lower rates than Cote d'Ivoire. In terms of nutrition, Mauritania, a low income country using the World Bank classification, rates higher than Cote d'Ivoire and Senegal, both middle income countries, on daily calorie supply per capita.

6.4.2 Change in the Wage Rate

Another way to view the problem of changes in income is through looking at changes in the wage rate. A change in the wage rate, obviously, affects the resources available to the household. This is shown in the figure below:

effect. Health status may be effected in a positive way as increases in income (especially women's) may be spent on improving household health status or in initiatives to improve the community's health. As has been shown an increase in income shifts the budget constraint to the right which opens up more consumption opportunities. However the increase in income does not have to be spent on goods that improve health and nutrition status it can be spent on other goods. In figure 6.3., if preferences change, point C represents a situation where an increase in income does not lead to increased consumption of maize, but of all other goods. Thus, increases in income can be spent on improving health conditions, on immunisations, and increases in income can also lead to reduced activity levels (Kennedy et al 1992), or it can be spent on beer, entertainment or other goods that do not improve an individual's human capital.

Thus who spends it is important. Popkin and Doan (1990, 692) postulate that a good-for time substitution can occur when additional income from maternal work is used to buy goods. Further, how this income is spent is important. If the income is handed over to her husband child health may improve little. If the increase in income is used to purchase high quality goods, and here high quality good are considered to be goods of high nutrient quality or health care, then health status is expected to improve. It can be seen that the benefits of additional good depend on its nature. The purchase of oral rehydration salts would certainly be a better purchase than purchasing some over the counter remedy, similarly, the purchase of bottled milk or pre-prepared formula would not be preferred to breastfeeding. If the increase in a woman's income, only goes to offset a loss of income from the husband, the there will be no improvement in health and nutrition (Popkin and Doan 1990, 695).

The source of income gain, if any, is also important. If an increase in income requires an increase in work effort, then energy requirements would have to be adjusted upwards (Ravallion 1990, 497). If the work required to secure additional income is less strenuous then the nutrient requirements may be able to be revised downward; as may occur in the urban formal sector (Ravallion 1990, 497).

There is also a need to ask in what ways an individual's income generating activities help improve health care, and in what ways it can lead to a decrease in health and nutrition status. More specifically, an increase in male unemployment rate can lead to an increase in female labour force participation (Bério 1984, 66). If females are more active in employment, this can lead to less attention being paid to health education, breast feeding, and can lead to, in the extreme, child abandonment. Although, waged employment allows women to earn income that can be spent on health care or in obtaining nutrients, but it also leads to a decrease in time available for household activities that can increase health status. If this is the case, then the ability of women find a quality substitute for her maternal role while working will be important (Popkin and Doan 1990, 697).

Data collected from six diverse countries in Kennedy et al (1992) suggests that household participation in cash cropping schemes has no negative impact on child health or nutritional status. Income from cash crop production did not significantly reduce morbidity in any of the study countries (except Guatemala). Additionally, there were no apparent negative effects of cash crop production on child feeding practices. Basically, the authors suggest that the counterintuitive argument is correct — that increases in income from the participation in cash cropping schemes have not been found to improve pre-schooler health directly. This is due, in part, to the fact that increases in income are spent on non-food items. Whether or not increases in income, that were, for instance, spent on female education, has a long-term positive influence on health is unclear from the study (Kennedy 1992).

In addition, as has previously been alluded to, a situation may exist where an increase in an individual's level of income is used for increased expenditure on food but may not lead to an increase in nutritional status, if the effected individual uses the increase in income to purchase a more expensive type of, say, rice with little or no gain in nutrient content. Tastes play an important role in food consumption. Shah (1983, 144) believes that since diets for low-income consumers are monotonous, an expansion in income will only release pent-up demand for a variety of foods. In

essence, even low income levels consumers exhibit a preference for high cost foods (Shah 1983, 122). From a nutritional perspective, Senauer (1990, 409) confirms this non-optimal behaviour when he states that "even people at low-income levels want to increase the variety and quality of their diets an not just maximize nutrient content." For instance, since cereals (like rice, maize, millet and sorghum) are staple foods that have been consumed for a long time, consumption is unlikely to increase dramatically with changes in income (UNECA 1983, 61 and Lipton 1983).

However, even if it can reasonably be concluded that increases in income only lead to slight increases in demand for nutrients this does not mean that health status will, overall, suffer. The reason for this is that health status of household members is not solely determined by nutrient intake, but by a variety of other factors, such as: freshness and cleanliness of foods, storage of foods (to prevent rotting and spoiling), how the foods are prepared, availability of potable water and sewerage systems, and education. In addition, increases income may be spent on health services.

Thus, nutritional status may improve with an increase in income even when income is only having a small effect on nutrient intake at the household level (Schiff and Valdés 1990, 1319), This depends if increases in income are spent on other items which affect health status (Schiff and Valdés 1990, 1320). If this is the case, the World Bank's view that macroeconomic changes that will eventually lead to increases in income may have little impact in slowing or eliminating the number of mal- or undernourished people.

However, the effect of changes in income needs to be disaggregated. The notion is that a decrease in income following an increase in the unemployment rate for adolescent and adult males has a greater effect on health status, because this group is likely to be the breadwinners for the family. With a decrease in real income, the number of hours worked must increase in order to purchase the same amount of food. Pinstrup-Andersen (1988, 38) says, based on the analysis of a few countries (Costa Rica is the only one specified) that reduction in food expenditures are inversely correlated with income level and that the highest income levels have not suffered any

significant reduction in consumption. Furthermore, given the low levels of energy and nutrient intakes by the poor prior to periods of World Bank and IMF adjustment, the observed reductions have almost certainly had negative nutritional consequences.

A decrease in household income can come from a reduction in public sector employment. As noted previously the effects are likely to be limited to urban areas in the formal sector. If this occurs the loss of income can be countered through redundancy payments, liquidating savings or the possibility of obtaining a new job. However, the potential for receiving redundancy payments would seem to be limited due to the pressure to decrease government expenditure. However, the picture is not entirely bleak; a decrease in employment in the government service sector can lead to an efficiency gain if the productivity of remaining workers increase. As Woodward (1992 a, 132) puts it:

if the labour force is reduced by ten per cent, and the service provided is reduced by only five per cent, this represents an increase in efficiency, in that each worker is producing more...

However, there is a catch,

the users of the service are still worse off, as they are receiving five per cent less services than before

6.4.3. Changes in Other Income Sources

As has been shown increases in income do not guarantee a positive change in health status. The question now needs to be asked whether or not declines in income lead to a decline in health status. If the household is able to increase the number of hours worked then the original income level may be retained. If the number of hours worked cannot increase then food purchasing power will decrease, resulting in either an absolute decrease in consumption or substitution for cheaper foods. Households can temporarily maintain previous levels of income by reducing their savings rates, by liquidating their assets ²⁵, by expanding the family labour supply ²⁶, running into debt, increasing the flow of income transfers ²⁷, and migration of some family members.^{28 29} Pryer (1987, 140) also says that households can also attempt to

maximize the diversity of the employment profile, by begging or accepting gifts in order to maintain nutritional levels. The effects of such changes is shown in the diagram below:

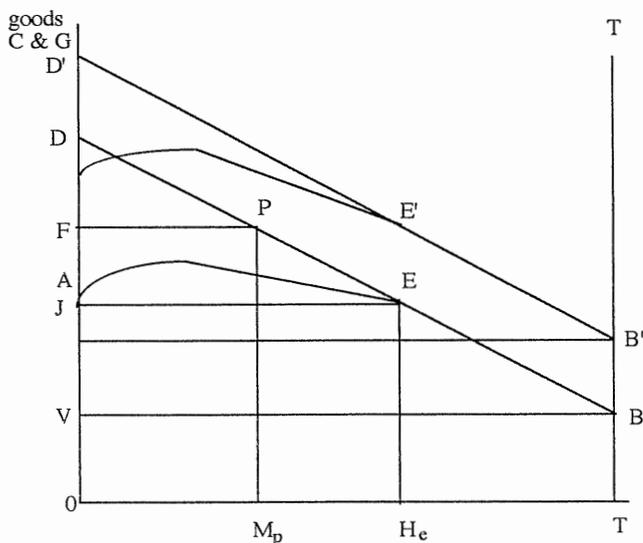


Figure 6.5. Increase in Non-Labour Income

Figure 6.5 shows that as non-labour income increases, through the addition of income by borrowing, expanding the family supply of labour, increasing income transfers and begging, the total household budget line will shift upwards to D'E'B'T, allowing for more resources to become available to the family. However, under conditions attached to World Bank and IMF loans, this could shift back to the original position, with no net resource gain to the family. If in-kind incomes, where wages are paid in part in food and housing, are a significant source of income for some poor households nutritional status will be protected during a period of rapidly increasing prices (Pinstrup-Andersen 1987, 76) or a decline in income.

Adjustment and stabilisation measures can also effect household savings. The type of assets a household has available to save can influence well-being. If the household has saved some of its wealth as financial asset then controlling the inflation rate will have a beneficial effect. If, however, the household's savings consists of real assets (such as grain and livestock) then the effect is less clear. This is more like the case in Sub Saharan Africa where (poor) people have more real assets than financial ones. If the real asset is a nontradable good, following a devaluation, its price will fall in relative terms. If the real asset is a tradable good its price will increase, and thus the household's savings. Thus for the household a change in the price of the real asset must be viewed relative to the change in the prices of other goods and services the household purchases (Woodward 1992a, 159).

Such survival strategies are believed to be commonplace in developing countries. To take one example, in Malawi, farmers with poor resources and limited access to cultivatable land often work on a temporary basis for farmers with larger landholdings (Millard, Ferguson and Khalia 1990). This practice, called *ganyu*, is meant to ensure that households obtain the income necessary to ensure their survival. However as Millard, Ferguson and Khalia (1990, 303) point out, as a means of ensuring food security this strategy may be flawed. This is due to the fact that the temporary work is done during the peak of the agricultural cycle, thus depriving temporary workers of the time necessary to work their own fields, with the implication that this can lead to a food deficit cycle (Millard, Ferguson and Khalia 1990, 303).

In addition, if a large number of households seek to increase their income through working in another area of the economy then the increase in the labour supply may result in depressing the wage level in the market (Woodward 1992a, 41). Thus, survival strategies may have only limited use. To take another example, if a household decides to liquidate its savings then this is at best only a short-term solution as most households in Sub Saharan Africa are likely to have only a low level of

savings, if any at all. In addition, the opportunity to borrow money, particularly in rural areas, is extremely limited.

6.5 Price Effects

However, changes in incomes is not the only variable which effects demand. Changes in prices also influence demand. Food prices for poor consumers play an important role in determining their health status. Poor consumers, as a whole, spend a large proportion of their budget on food items, thus any changes in prices is likely to effect their purchasing power (Pinstrup-Andersen 1985, 69). Changes in availability and price of items such as wheat, flour, sugar and milk powder, resulting from decisions affecting imports tend to transmit adverse effects to the poor urban household. However, if prices for foodstuffs do increase, the option exists for those affected to substitute cheaper food with the same caloric content for more expensive food. However, this option is not open to the severely disadvantaged. The ability to adapt to changes in nutritional intake is also an important means of coping with declines in food consumption. This relationship, between prices and quantity demanded, which is almost always negative, is shown in the diagram below:

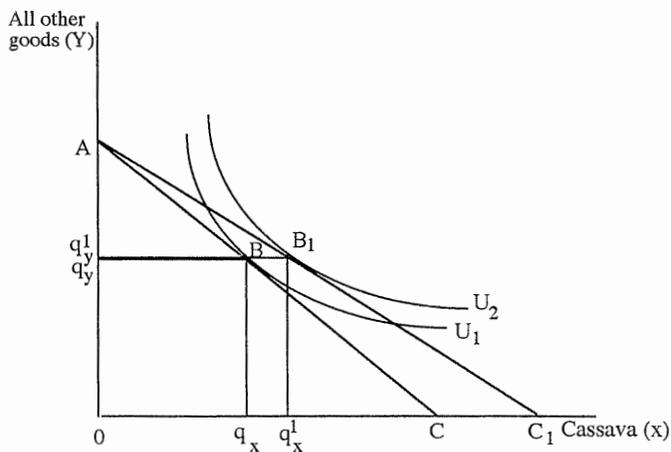


Figure 6.6. The Effect of a Change in Price on Quantity Demanded

Following a decline in the price of cassava equilibrium is now at point B_1 with q_x^1 and q_y^1 consumed. Since the price of cassava has fallen this will lead to a lower relative price of cassava compared to all 'other goods' and an increase in the demand for cassava. This is a substitution effect and this is an important way for poor households to mitigate against the adverse influences of adjustment measures. Assuming that the price of cassava has fallen, and holding satisfaction constant, the household has an incentive to substitute the cheaper cassava for some of the now relatively more expensive all 'other goods' Furthermore, the more and higher quality substitutes that there are for cassava the easier it will be for the household to substitute other goods for maize if p_x increases (in reality an unlikely situation). As the price of imported cereals, such as maize and rice, will increase following a devaluation the household will have an incentive to substitute cheaper cassava for maize (Woodward 1992a, 33). The substitution effect may lead to an increase or a decrease in household nutrition depending on what goods are substituted. If an inferior staple (such as maize and cassava) is substituted for a preferred staple due to a price increase then in the long run nutritional status will decline. Interestingly, in the short run the calorie content of an individuals diet may increase leading to an improvement in nutritional status as measured against a weight -for-height standard (Senauer 1990, 416).

There also exist cross price effects, which is the effect of a change in the price of another good on the demand for a good. The value varies between negative infinity to infinity. For complementary goods a price increase in the complement leads to a decrease in the quantity of the good being studied (a negative value). A price increase for a substitute leads to an increase in the quantity demanded of the good studied (a positive value).

Adjustment measures increase the relative prices of tradable goods due to a devaluation. As the price of imports increase this can adversely effect producers who use imports in their production process. If the price of imports increase then it is likely that the price of the good produced will also increase. In addition, if the

imported in its final form, as pharmaceuticals often are, then the price increase will hit the consumer directly. Where adjustment programs require the lifting of subsidies prices for the previously subsidised good will rise. In addition, as seen in the previous chapter, adjustment programs may implicitly or explicitly call for cost recovery in the social sector; thus user charges may be introduced for health services which is essentially a price increase to the consumer.

However, an increase in the price of food or health care need not spell disaster for farm households in Sub-Saharan Africa. Although it can reasonably be expected that non-farm households will suffer from an increase in the prices of foodstuffs, farm households may on the whole benefit. If a farm household produces some (or all goods) for sale, then an increase in the price of certain goods will lead to an increase in farm profits and household income. If this is the case then the "profit effect" may offset the negative effect associated with an increase in the prices of certain goods and nutritional status may increase (Senauer 1990, 411). Thus, for some groups an increase in the price of certain foods may actually lead to an increase in nutritional status.

It was demonstrated in chapter four that inflation in African economies could be an unwanted by-product of adjustment policies. However, this is unlikely to be disastrous for most Africans. In the non-monetized sector of the economy inflation will not occur. In a pure subsistence economy all goods and services are home produced and consumed by the household. There is no concern about price because prices do not exist. The same is true of households that barter goods and services. Although in a barter economy there is, in a sense, a price in so far as there is a rate of exchange between one good and another, there can be no general increase in prices because even if one or more of one good has to be exchanged for another, this implies that the "price" of one good has risen, but the "price" of the other good has declined. Thus, people in the monetized sector (the urban formal) will be adversely affected by inflation, and people co-existing in the monetized and non-monetized sectors will be influenced based upon the degree of their participation in those sectors.

However, assuming that households do face a price increase for food or health care, McPake, Hanson and Mills (1993, 1390) research into health care financing in Kenya, Nigeria, Guinea and Burundi found that when households were faced with the urgent need for health care two coping mechanisms were deployed by households. The most common was cash from friends and relatives. Households were also found to sell assets in order to obtain health care. Twenty per cent of Guinean households and 18 per cent of Burundian households sold produce to purchase health care. In Uganda 15 per cent, and in Burundi 22 per cent of households sold some of their belongings in order to obtain health care (McPake, Hanson and Mills 1993, 1390). However, the study does not offer a definitive answer to the coping question because it relies on a rapid assessment approach using a mix of quantitative and qualitative data. Moreover, the authors admit that there may have been some confusion over the interpretation of the questions by the respondents (McPake, Hanson and Mills 1993, 1390).

Research conducted by Environment and Development in the Third World (ENDA) in the economically and socially diverse regions of Diombel, Kaolack and Tambacounda in Senegal, found that nearly three quarters of households surveyed had difficulties in purchasing essential drugs from income alone (Essential Drugs Monitor 1991). Even amongst relatively privileged households, such as civil servants, over 50 per cent said that they had difficulty in purchasing drugs from their income alone. The ENDA research revealed that when incomes were insufficient, households attempted to tap other sources for money (Essential Drugs Monitor 1991). Forty five per cent of cases immediately made recourse to other sources; 62 per cent of the households asked their parents first, 13 per cent asked neighbours for help initially and eight per cent asked for assistance from friends.

Of those households that did not seek immediate assistance 16.5 per cent waited before buying the necessary drugs or purchased the prescribed drugs in lower quantities. Nearly 13 per cent used vouchers, asked the prescriber for assistance or resorted to alternative treatments. Eleven per cent had to make use of credit markets

to obtain money, and 13 per cent of these people said that they had to sell off assets or reduce expenditure in order to obtain the necessary finance (Essential Drugs Monitor 1991).

Where parallel markets exist together with official markets a liberalisation of prices following IMF intervention can serve to shift prices back to a normal level. Since official markets, where prices are cheaper, may only benefit certain consumers, a shift back to free market prices removes the "subsidy" that poor people pay to keep the official market running for other consumers. Even where a devaluation leads to an increase in the official price of tradable goods, "its impact on actual prices paid by the poor may be small or even negative" (Heller et al 1988, 19).

6.5.1 Measures of Price Elasticity

The own price effect measures the change in demand for a good in response to changes in the good's own price (income, other prices and preferences held constant). The value of the price elasticity of demand is from zero to infinity. The more responsive quantity demanded is to a change in price the higher the elasticity of demand. If quantity demanded changes by a smaller percentage than does price then demand is price inelastic (with a value between zero but less than one). If quantity demanded changes by a larger percentage than does price then demand is price elastic (with a value greater than one but less than infinity). Food, taken as a whole has an inelastic demand, although a particular food may have an elastic demand due to the existence of close substitutes. For example, Medani (1985, 686) reports that the price elasticity of food in the Sudan is 0.32. This suggests that increasing the price of food will cause a smaller than proportionate decrease in food consumption. Similarly, health care, taken in its entirety has an inelastic demand.

Gertler and van der Gaag (1990, 85-89) estimate arc price elasticities of the demand for hospital and clinical care by income groups for rural areas in Côte d'Ivoire. Table 6.6 below reproduces these results:

Table 6.6. Arc Price Elasticities for Adults in Rural Côte d'Ivoire

Fee (in CFAFs)	Income Quartile			
	1	2	3	4
<i>Clinic</i>				
0-5	-0.61	-0.58	-0.53	-0.38
50-100	-1.61	-1.03	-0.91	-0.56
100-150	-1.83	-1.71	-1.57	-0.93
<i>Hospital</i>				
0-50	-0.47	-0.44	-0.41	-0.29
50-100	-0.86	-0.81	-0.76	-0.51
100-150	-1.34	-1.27	-1.18	-0.71
<i>Mean Income</i>	33.28	64.44	99.52	222.87

Source: Gertler and van der Gaag 1990

Notes: mean income in thousands of Ivorian CFAFs per month

The results of the study of price elasticities of medical care in Côte d'Ivoire indicate that price elasticity of demand for medical care falls with income in every instance. This suggests that poor individuals will be affected more by increases in user charges more than the rich. Gertler and van der Gaag (1990, 87) also state that children's demand for clinic and hospital care also follows the same pattern but is more elastic than adult's demand.

Sauerborn, Nougara and Latimer's (1994) study of demand for health care in Burkina Faso confirms Gertler and van der Gaag's (1990) findings. Sauerborn, Nougara and Latimer (1994) found that the demand for outpatient care was inelastic (arc price elasticity of -0.79) or that health care utilisation would drop by 7.9 per cent with a ten per cent increase in price. The fourth income quartile (richest) had an inelastic demand of -0.12, but the first quartile (the poorest) had an elastic demand of -1.44. By age groups the authors found that the arc price elasticity of demand for outpatient care was only -0.27 for individuals over 15 years of age, but was highly elastic at -3.64 for infants under one year of age (Sauerborn, Nougara and Latimer 1994, 189).

However, Shepard and Benjamin's (1988) study of 100 randomly selected Rwandan households found that the price elasticity of demand for government health facilities was only -0.25. Thus a doubling of fees in their study would reduce utilisation from 53 to 50 per cent. Of the lowest income households in their survey

more than 80 per cent would be willing to pay higher fees assuming drug availability improved. However, this theoretical evidence should be weighted against the fact that approximately one third of the poorest Rwandan households had problems with paying medical fees.

An "income" effect also exists, because not only does a change in price make the good whose price has changed more or less expensive in relation to other goods, it also changes the alternatives open to the household. It can increase choice with a price decrease or limit choice with a price increase. Also "the more responsive to income is the demand for a good the larger the 'income' effect of any price change and the larger the total price effect" (Bryant 1990, 60). Moreover "the more X is demanded prior to the change in its price, the larger the change in "income" caused by any price change and the larger the own price effect" (Bryant 1990, 67). Pinstrup-Andersen and Uy [(unpublished document) cited in Pinstrup-Andersen 1985, 71] state that in Fanyua and Gasau, Nigeria a 10 per cent increase in the price of food will lead to a 7.7 and 9.0 per cent decrease, respectively, in the real income of the lowest income decile. The highest income decile, however, only suffers a 6.5 and 5.7 per cent decrease, respectively, in real income under the same conditions (Pinstrup-Andersen and Yu cited in Pinstrup-Andersen 1985, 71).

In so far as adjustment and stabilisation policies actually control inflation through money and credit policies all groups will see a benefit. The poorest groups, assuming that they are in the monetized sector, which to begin with, have never had the means at their disposal to protect their incomes and assets from inflation will benefit once inflation is reduced (Heller 1988, 15). They will also indirectly benefit as money stored abroad (due to high inflation leading to capital flight) will come back to the home country. However, it should be kept in mind that a devaluation can accelerate inflation in the short-run. If this is the case, the situation would initially make household welfare worse-off. Rural households that produce their own food or are paid in food would not lose unless climatic conditions forced them to seek recourse to food markets undergoing rapid inflation (World Bank 1990, 53).

Budgetary and public expenditure reform initiated by the Fund and the Bank have a direct impact on the well-being of individuals through changes in funding to the social sector. Cutbacks in services that are not offset by targeted interventions will have a negative impact on all but the wealthiest groups. Figure 6.7 shows the basic linkage.

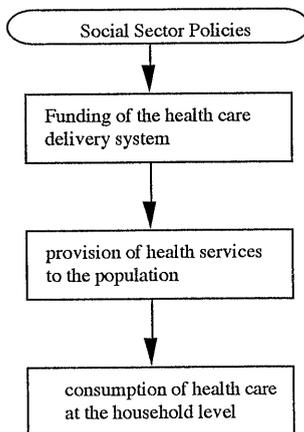


Figure 6.7. Funding of the Social Sector.

Cutbacks that directly effect health status would be in health service provision; where health facilities are closed due to required reductions in government spending, new medical equipment is not ordered and pharmaceuticals are no longer purchased due to an increase in import costs following a devaluation. Decreases in the provision of clean water and sanitation facilities would also be negatively effected. Since access is important in determining utilisation, there is often a reduction in such services causing a deterioration in health status insofar as roads are no longer maintained or services cease altogether (Woodward 1992a, 37). Cutbacks in expenditure on transport would also influence access to services, inasmuch as roads are no longer maintained and transportation is no longer available.

However, the impact on different groups depends on who benefited prior to the adjustment imposed change. As health facilities are overwhelmingly centred in

urban areas cutbacks are likely to affect the urban poor the most. For evidence of cutbacks in services see Hicks and Kubish, Heller and Woodward (p. 207-214).

First, the introduction of fees or price increases for essential drugs, due to increase in import prices following devaluation, will have a direct effect on health status. Second, cutbacks in health service expenditure will have an immediate impact on individuals by limiting access to health facilities if user charges are introduced. The effects of such cutbacks can be transmitted directly to child health status, if the mother was deprived of essential medical services while pregnant, or if newborn children, who are often in a precarious state anyway, are denied access to essential facilities. Cutbacks in educational expenditures that feed into health education will have a delayed impact on health and nutritional status by depriving adult family members of the knowledge required to raise healthy and active children. If an individual is subject to both severance from public sector employment and cutbacks in social services the effect is expected to be greater.

Pinstrup-Andersen (1988, 42) says that large cuts in health expenditures, in line with macroeconomic adjustment measures, will seriously affect the poor unless; the cuts occur mainly in the services used by the better-off population groups, or are accompanied by improvements in programme targeting or efficiency. McPake's (1993) review of recent evidence has concluded that the introduction of user charges can lead to a reduction in utilisation. Moreover, that eventhough elasticity calculations differ from author to author it is " apparent that utilisation is likely to decrease most amongst the poorest income groups" (McPake 1993, 1402) and that user fees will raise revenues only if the cost of collection and administration is not high. She warns (McPake 1993, 1404) that:

unreserved faith in charges as a panacea in all contexts is clearly misguided but it is difficult to see an alternative for those countries whose health systems are most degraded, for which there is no prospect for improved public funding and which the majority who gain still suffer from 'diseases of poverty' and must be regarded as poor by any objective standard.

The effect of fees and user charges on government provided health services will depend on the distribution of consumption across income groups. The overall effect

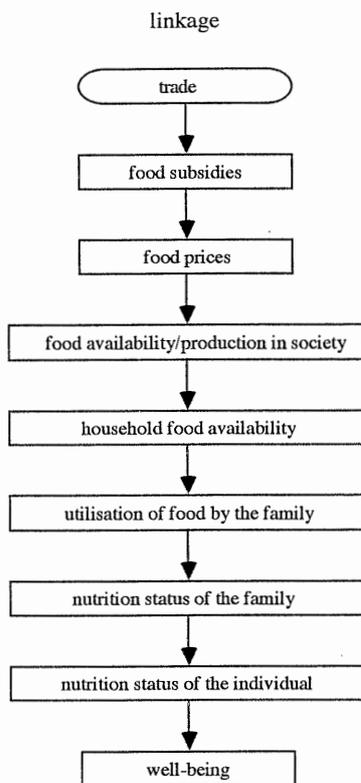
of user fees depends on the elasticity of demand for medical care and how the funds generated will be used (Glewwe and de Tray, 1991) A reasonable assumption here is that the poor have higher elasticities of demand than the non poor, the implication is that if fees are raised at communal health facilities the poor are more likely to stop seeking medical care than the rich. This would serve only to make a health system that already suffers from problems of access even worse. According to Pinstrup-Andersen (1987, 72) if we accept that the price elasticity of demand for health care is low then the introduction of fees for health care services is “ likely to diminish the use of such services relatively little, but instead to increase total expenditures on health care.” This, he continues will reduce the household money available for other goods and services, such as food.

Therefore, introducing user fees to prevent frivolous use of health services is not necessary as, if even a patient lived near a health facility, time spent waiting would seem to be sufficient to deter any frivolous use. Indeed the 'free' services in Tanzania are placing an unaffordable burden on the poor already. Thus, following the author's conclusions, it becomes evident that any recourse made to user charges would only serve to increase the burden on the poor. It should be noted, however, that the effect of the introduction of user charges will most likely be limited to urban groups as rural groups seldom visit doctors anyway (Glewwe and de Tray 1988, 28 on the Cote d'Ivoire).

6.5.2 Subsidies and Nutrition Status

A reduction or an elimination of food subsidies which may follow IMF and World Bank intervention into the macroeconomy results in a sharp increase in the prices of (basic) foods available. If this is coupled with declining real incomes due to other reforms, then the possibility of switching to cheaper foods of the same caloric content, is eliminated as an option. If this is the case, the expected result would be an increase in (the first instance) of wasting and stunting in children, mal- or under-nutrition in women (possibly due to gender bias at household level in distribution of food), and

mal-nutrition in men. In general terms, the linkage from changes in trade policy to nutrition can be seen below (Figure 6.8).



Source: adapted from Pacey and Payne (1985, 21)

Figure 6.8. Trade Policy — Food Subsidy — Health Status Link

Pinstrup-Andersen (1987, 77) says that explicit subsidies, which are usually financed by the government, may contribute to excess government spending. Explicit subsidies, he believes, contribute to inflation, with the net effect of increasing rather than decreasing prices. Thus, the removal of subsidies may shift prices back to a more 'normal' level.

However, as Pinstrup-Andersen (1988, 41) notes, even if the amount devoted to a subsidy program is cut, the impact on food consumption may not be negatively effected. A decline in prices for certain foods due to a devaluation can offset a reduction in subsidies. In addition, a careful targeting of subsidies can offset possible negative impacts. Thus, there are several factors which can serve to offset the possibility of a decline in health status (Figure 6.9).

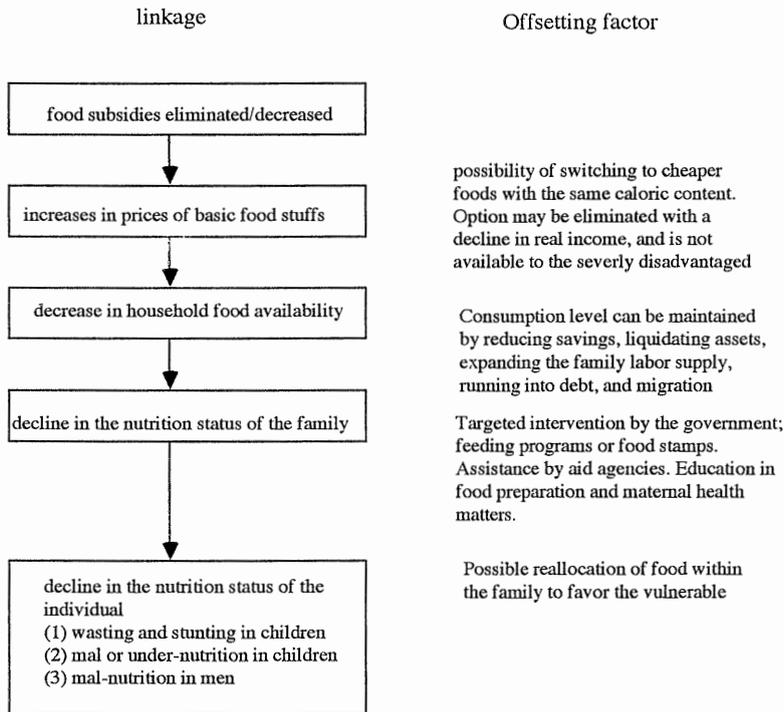


Figure 6.9. Offsetting Factors.

Furthermore, the decline in real income as a result of general price increases are expected to be more pronounced for the urban poor household because they lack an ability to become self-sufficient in food. Vulnerable groups, such as pregnant and

lactating mothers and young children, in both the urban and rural informal sectors, can avoid reductions in consumption if they are provided with direct feeding.

In the area of fertiliser subsidies, where they are removed, and combined with devaluation, look for a greatly diminished difference between input and output price (see Stein and Nafziger, 1991 on Tanzanian situation). A reduction in fertiliser subsidies may benefit the poor, because under fertiliser subsidies the poor lose when fertilisers are substituted for labour, thus reducing the income of the landless (Huanh and Nichols 1987). However, Milard, Ferguson and Khalia (1990, 304), in the case of Malawi, conjecture that when the fertiliser subsidy there was removed (and prices rose) as part of a World bank policy less fertiliser was bought and less hybrid maize was planted due to the high price elasticity of demand for fertiliser and credit for purchases was not readily available.

Kydd and Spooner (1990, 76) state that the removal of a pan-territorial pricing scheme for certain agricultural outputs, a form of transport subsidy, as part of a World Bank agricultural liberalisation programme, may "in the short term, prove to be disastrous" on locationally disadvantaged areas. For instance in Tanzania, Zambia and Malawi incomes of farmers and household nutritional status was raised through the increased production of staple food following the transport scheme. As one of the rationales for the scheme was that farmers would receive attractive prices for their goods, the removal of the transport subsidy led to a cutback in production and in distribution to remote areas, thus affecting health and nutrition status in the producing area as well as in food deficit areas where the surplus food was exported.

The targeting of individuals who are exposed to the difficulties arising from reform of public expenditure may help to mitigate against these adverse effects, but only if the targeting is done effectively and efficiently, and only if the proposed recipients know that it exists and have reasonable access to it. Due to widespread poverty in Sub Saharan Africa targeting is not as easy as it would seem. The potential targeted population is liable to be large (or perhaps even greater than under previous programmes) and thereby serve to counteract the effects of cuts in public expenditure.

Due to this there may be resistance by the World Bank and the IMF, and national government policy makers, to widespread targeting necessary to deal with the social costs of this type of adjustment. However, there can be a net benefit, if pre-program public spending favoured one group over another, cutbacks may only have their main effect on the previously advantaged group. Indeed, ignoring distributional effects, the efficiency of pre-program spending may have been low, and post-program spending may be more efficient. The upside is reforms in this area may serve to increase the rate of growth of the economy, and in the long run (if then) increase the health and nutrition status of all parts of the population.

Yet, it should be noted that adjustment programmes promoted by the Bank and the Fund do not always result in the elimination of subsidies beneficial to the poor. Bourguignon and Morrison (1992, 42) report that in Côte d'Ivoire charges were increased on bus, rail, air fares and water and electricity rate and subsidies on rice and public housing for formal public sector employees were reduced. Thus, the removal of housing and airfare subsidies would only hurt the relatively well-off, whereas the reduction in subsidies on water (and to an extent electricity) would hurt the poor more as the proportion of the budget devoted to these expenditures is higher for the poor than the rich (Bourguignon and Morrison 1992, 42).

However, changes in incomes and prices are not the only factors affecting demand. Secondary factors also work to alter demand by affecting preferences. In the household this is dependent on family size and composition (Bryant 1990, 73-74). Changes in size (with the addition of members through birth, marriage or adoption or the subtraction of members through divorce and death) and changes in composition (through family members ageing) influence demand. For example, a family with a new baby may be willing to forego consumption of some 'old' goods in order to consume 'new goods' such as child care, bottled milk, weaning foods, etc.

6.6 Intra-Household Allocation

So far the discussion has been mainly confined to viewing the household a closed system. More importantly the household has been viewed as an unit that makes

decisions in order to maximize its *collective* welfare. However, this approach is far too limited. Decision-making within the household, in practice, would not fit into this model. In common with the structuralist critique examined in chapter four, non-maximizing decisions may be taken by the household. This leads to the notion that households that are comparable in income levels may deploy their resources differently (Lipton 1983, 5). Woodward (1992a, 48) and Duncan (1990) identify several problems with viewing the household as a single unit that maximizes total welfare:

(1) The model assumes preferences are the same for all household members or that a 'dictator' makes decisions about allocation.

(2) Maximization of welfare may be inhibited by traditional and religious values.

(3) Decision-making in the household depends on the relative bargaining strength and individual objectives of its members. To wit, the bargaining strength of males may be greater than females and children. This process varies not only from country to country, region to region, but even between households.

(4) Decision-making is of a personal nature and the processes involved are not explicitly understood by those involved.

(5) Non-household members (such as the community) may exert influence on decision-making.

and, (6) Except for the most physically exhausting work there is no a priori reason to assume that the marginal utility of women's market work is less than that of men.³⁰ Yet, men are often viewed as undertaking market work and women as engaged in household production. Thus, the explanation for women engaging in household work and men in market work most likely has its roots, as shown, in social and cultural areas.

In addition, what happens within the household is of importance. How individual households budget and distribute money and goods will have a significant impact on health status.

There are three main models for analysing the intra-household distribution of food. They are functional (physiological), cultural and resource-control (Wheeler and

Abdullah 1988 cited in Wheeler 1991, 70). The functional model views the household as a unit whose primary function is survival. To this end food allocation is determined by the ability of members to produce goods (whether through income generation or other activity), and in times of shortage food is allocated to the family members that are most productive (Wheeler 1991, 70). This model would predict that adult men and women would be allocated first, followed by older adults and children.

The cultural classification sees allocation (as well as production and preparation) as rooted in "the structure and relations of that society" (Wheeler 1991, 71). Here, the status of an individual is reflected in the amount and type of food he eats. In patriarchal societies, the cultural model predicts that men and boys are allocated first, followed by women and female children (Wheeler 1991, 71).

The resource control model is based on the power relations within the family. Food allocation reflects the hierarchy of the household, "but the focus is not so much on how food follows status, as on who controls the food resources and/or the food budget" (Wheeler 1991, 71). Under this model the person with the highest earnings or highest productive capacity would control food allocation as long as money earned is not turned over to another person (as may be the case with women giving their earnings over to men) (Wheeler 1991, 71)

6.6.1 Autonomy, Control and Budget Allocation

Of primary concern at the household level for health care is who controls the household budget and how decisions are reached. As pointed out previously there are several ways of looking at the household. Households that appear to be similar in number and composition may have different structures governing their economic resources; "they may organise their work and apportion costs and benefits quite differently" (Wilk 1989, 25). Wilk (1989) summarising various anthropological studies provides several different views of households:

- (1) The "Anglo-American" household where income and labour from household members is given over to a general fund. The general fund is

used to pay for household necessities while the residual is spent or invested according to the edicts of the household head or 'family financial officer'.

(2) "Several Fund" or "non-pooling" households (Fapohunda 1988 cited in Engle 1993). Several different funds exist, once one fund is satisfied another fund is established and so on. This model of the household assumes that the allocation of funds is, in part, predetermined. Thus, for example, a household has a fund to cover subsistence, once this fund is satisfied a fund may be established with the money left over to cover ceremonial expenses. Once all obligations (funds) are fulfilled any money left over may be spent with discretion.

However, it should be noted that the existence of different funds does not imply rights to the fund. Households may pool resources or women may donate all earnings to the common pool while men are allowed to withhold some of their money (Wilk 1989, 34).

(3) "Duolocal households" In parts of Africa marriage is duolocal; a married man stays in his father's house with his brothers, the wife stays in her mother's house (Hagan 1983, 192-93). Furthermore, for instance, in Winneba, Ghana (a coastal fishing village), at early ages children stay at the mother's house where they receive care. Between eight and ten years old male children move to their father's house but the mother continues to provide food and clothing (Hagan 1983, 193). Whatever the circumstances are the women cook food for the men and bring it to them. What is left is apportioned to women and children (either separated in portions or, communally, from a large pan).

Economic relationships are viewed as a series of exchanges. In the Ghanaian fishing village "women control the husband's purse strings", the role of women is to prepare and market the fish caught by men (Hagan 1983, 195). The monetary arrangements are that women hand over the money gained from marketing the fish to the husband, who gives her a commission on the fish sold plus enough money (in theory) to cover expenses incurred in the upkeep of children.

Often in Africa household decisions regarding cash expenditures are made by males, but decisions about health treatment are often made by women (Csete 1993, 1285).

Thus, the ability of women to exercise some autonomy is important. Engle (1993, 1303) hypothesises that women's control of income may be more important than that of men for three reasons. First that as women earn more income they gain more status in the household and this translates into greater decision making concerning health care. Second, psychological theory predicts "that mothers will be more attentive and responsive to their children's needs than will fathers" (p.1303). Third, that some studies have revealed a propensity amongst men to spend their money on personal consumption goods rather than on interventions that benefit the family. Yet, this need not be viewed as a universally bad. Raikes (1989, 453) points out that the issue is not as clear cut as far as beer consumption goes. Beer brewing offers some health advantages for those that drink it and eat the pre-fermented porridge. Moreover, it provides a source of income to women who brew it as an informal activity in urban areas. However, it can also be a source of health problems as it is associated with verbal and physical abuse of women (Raikes 1989, 453).

Independence for women is obtained in one of three ways; either by cultural acceptance of autonomy within a monogamous marriage, or by setting up a female headed household, or through union in a polygamous marriage. Steady's (1987) study of polygamy in a Sierra Leone fishing village suggests that polygamy often leads to independence and autonomy for women. Women, for instance, take responsibility for household activities, fish processing and marketing. The income that they earn from these activities allow them some financial freedom. However, it should be noted that the freedom may be limited to the first or "senior" wife who has the most autonomy, highest status and authority and who exercises control over the junior wives (Steady 1987, 219). Burnham's (1987) research confirms that autonomy can be obtained through polygamy. His study cites earlier research (Robertson 1976) on the Ga women of Accra where separate budgets for men and women are the norm and a great deal of secrecy surrounds financial matters.

However, in East and Southern Africa where male controlled budgets are the norm even in polygynous marriages due to a strong sense of patriarchy (Orobuloye et

al 1991, 191), the separation of budgets is not possible. However, in parts of West Africa, separation of budgets is possible. This separation occurs as an outgrowth of the practice of polygynous marriages (Orubuloye et al 1991, 190). Under this system the central budgetary unit becomes the mother and children, however parents under this system do not feel an equal obligation to each child; women are more likely to care for their own children rather than children from other marriages or fostered children.

In Orubuloye et al's (1991) study of Ekiti women in polygynous marriages in Ondo, Nigeria it was found that women enjoyed separate incomes (mainly from trading) and control over its expenditure. As would be expected women contributed the greatest fraction of expenditure to child maintenance (clothing and food, but not education). Therefore a child's health status is related to the income directly available to his mother. However, men made contributed substantially to their wife's (food) maintenance (69 per cent of women contributed less than half to meeting their own food requirements) (p. 201).

If a child in the family became sick the decision to seek treatment for children was usually (62 per cent) made by the person who paid for the treatment. An unexpected finding of Orubuloye et al's research was that fathers met the cost of treatment 53 per cent of the time, and mothers only 29 per cent (with the balance coming from relatives or older siblings). However, mothers tended to pay for lower cost treatments (under 15 Naira) and fathers paid for higher cost treatments.³¹ When wives sought treatment for an illness husbands paid for treatment in 45 per cent of the cases and women paid for their own treatment in only 29 per cent.

Overall the research indicated that treatment depends on the ability to pay (Orubuloye 1991, 207). In West Africa this creates a thorny situation. Due to the separate budget, and the inability of mothers to pay for expensive treatment may lead to delays in seeking treatment. As Orubuloye et al state (p. 207):

In this Ekiti village, and doubtless in West Africa as a whole, she cannot rush a sick child to the hospital in the knowledge that she has a unified family budget behind her over which she has some rights and which she will meet the

costs. Inevitably, this means delays in treatment and discussions — even haggling — over whether treatment and the consequent expenditure is necessary.

Csete's (1993) research in the Rwandan highlands reveals that income *per se* may not be the deciding factor. Her study revealed that the presence of a non-farm male income earner was not associated with health seeking behaviour. However, the control of existing income by women was associated with better health patterns in women. Lado (1992), in an interesting article, introduces the notion that women's work is "unremunerated, underestimated, undercounted, uncredited, and undervalued" It is undervalued because women's work is critically important to the health of the family, and in particular, the health of children. Trenchard (1987, 168) and Lado (1992, 800) suggests that there are two main reasons why women's income is more significant than men's for household nutritional requirements. First, that women are traditionally responsible for their children's food, and it is common practice men and women keep their incomes separate. Second, that men's earnings from cash crops can be irregular.

Lado (1992) notes that women make up about 80 per cent of the agricultural labour in most rural areas in Africa (when including subsistence food production). Women decide how much money can be spent on food, the type, they prepare the food and apportion it. She states that "children's health and exposure are determined by the home environment, which is mainly the women's responsibility." Local culture, traditions, values and beliefs interact to determine to what extent a woman is allowed or expected to withdraw from her work and also whether she is able to eat more food, for instance, while in pregnancy or lactating (p. 801). The agricultural work cycle may prevent adequate nutrition and health care of the family in general and children in particular.

Kennedy and Peters (1992),³² in an important study of Malawi and Kenya, also found that gender plays a crucial role in nutritional and health status. They found that female-headed households, in these countries, allocate a higher proportion of their

expenditures to food than male-headed households. They also noted that differences in expenditure patterns between households seem more a function of the interaction of income and gender, rather than strictly one or the other. Further, that in terms of non-food purchases, male-headed households spent a greater proportion of their incomes on productive inputs, such as fertilisers. Moreover, as might be expected given differences in income levels, average caloric intake is higher for male-headed households than for the aggregate of female-headed households, *however*, gender also plays an important role. Data from their paper demonstrates that in spite of lower incomes and lower caloric intake at the household level, pre-school children from female-headed households do at least as well as, or significantly better than, children from male headed households, according to the longer term measures of nutritional status — height-for-age and weight-for-age. That is, lower level of malnutrition in female-headed households.

Moreover, that children in de facto households receive a higher proportion of total household calories than children in other household groups. Their findings suggest that as household incomes increase, there is not a direct one-to-one effect on the caloric adequacy of pre-schooler diets (due in part, to the types of extra calories acquired, namely meat and other expensive foods that often do not increase pre-schooler caloric intake). Additionally, another explanation for the negative relationship between household income and the proportion of calories going to children may be that at higher levels of income, money is spent on more expensive calories rather than on more calories *per se*.

In terms of the impact on child health and nutrition, the fact that a woman heads the household may be less important than the relationship between the household head and the children in the household. Kennedy and Peters (1992) suggest three major items for consideration: the female gender of the head compensates for the difference in income *at low levels of income*; as incomes increase, regardless of the household head's gender, pre-school children seem to benefit proportionately less than one would expect from these changes; and that

targeting of interventions should concentrate on promoting nurturing behaviours or that exploit incentives for household investment in children.

The role of women as household providers of health and nutrition care is crucial in ensuring the family's health. As Pearson (1987) points out, in the case of Nepal, women's "invisible expertise and role as caretakers of health and gatekeepers to health care are crucial", especially where health services are unable to meet the expectations of the population. Johnson and Rogers' (1993) multivariate regression analysis of household food consumption in the Dominican Republic revealed that even though female-headed households had significantly lower incomes and lower availability of calories than male-headed households, the children from female-headed households has a significantly higher nutritional status than children from male-headed households. Interestingly their study did not find that maternal education was a strong influence. However, it should be noted that these results are not generally applicable to Sub Saharan Africa as the data comes from a small, urban Caribbean island.

Gender bias in nutrition status has often been noted in India (Babu, Thirumaran and Mohanam 1993 and Wadley 1993). Chen Huq and D'Souza (1981) postulate that there is a son preference in prenatal care: intra-family food distribution, feeding practices, and utilisation of health services are some of the behavioural mechanisms by which sex-biased attitudes may lead to higher mortality for females during childhood and adolescence. Evidence from a study conducted in Bangladesh supports this idea. Duncan's (1990) study utilising data from Brazil shows that bias need not only emanate from males. His study revealed that mother's income had a significant effect on her daughter's weight for height which was about five times greater than the (significant) effect on her son's weight (p.657). Engle's (1993, 1310) study of the effect of mother's income on children's nutritional status in Guatemala supports the hypothesis that mother's income is an important factor in determining the well being of children. His research found that the per cent of family

income earned by the mother was significantly associated with height for age, weight for age and weight for height.

Okeke and Nnanyelugo (1989) in their examination of the intrafamily distribution of food and nutrients in the Anambra State, Nigeria also observed preferential treatment of young male children relative to their female counterparts and males served in preference to other household adults. However, even though males tend to benefit in this society, Okeke and Nnanyelugo's (1989) research revealed that males still suffered from negative nutrient balances. This suggests that the distribution of household nutrients is not the determining factor, but that overall food supply may be inadequate. However, a weakness of this study is that it only examines food intake and not differences in nutritional status, and it does not report on the incomes of farmers in the sample.

However, the idea that there is universal sex bias in the allocation of food does not hold up to closer scrutiny. Harriss and Watson (1987) state that overall the evidence is variable and it is currently impossible to reach a definitive conclusion. For instance, in India there is a spatial variation in sex ratio — in the north and the west mainly masculine ratios, in the south and the east there are feminine ratios. Sahn (1990, 1647) in a study of the Cote d'Ivoire confirms that there is no discrimination against female children. Svedberg (1990, 482) analysis of 50 populations in Sub-Saharan Africa confirms that "females, whatever their age, are not at a disadvantage *vis-a-vis* males in anthropometric status." Lipton's (1983, 59) review of evidence made a similar conclusion that there appeared to be not discrimination in food distribution in Africa.

However, so far we have mainly talked about rural areas. The question naturally arises as to whether or not the situation is the same for urban areas. The answer is neither black or white. In Mosley's (1989) study, Nairobi had a child mortality rate higher (nearly 35 per cent greater) than the surrounding rural area. Given that Nairobi has the largest number of doctors and "best" medical facilities in the country, this is somewhat surprising. However, Mosley postulates that due to

squatting and poor environmental conditions in the city there is higher child mortality (p. 272-273). This, then, reinforces the conclusion of the above studies that child mortality is mainly determined by the social and economic circumstances of the family — in particular maternal education.

Collier et al (1994) report that gender may play a crucial role in labour allocation during periods of adjustment in Africa. The reason for this has its roots in that skill acquisition by females is lower than that of males (see 5.3.1 this thesis). Differences in education have implications for labour allocation to wage employment. Although this is most prominent in francophone countries, rather than anglophone countries, Collier et al (1994, 279) state that females who are educated less are less likely to work for wages. Moreover, women face absolute discrimination; in Tanzania where males and females had obtained an equal level of education, men had a 75 per cent chance of finding wage employment but women only had half that chance (Collier et al 1994, 285). The lack of opportunity to find wage employment is compounded by the fact that women face asymmetric rights and obligations: they face the demands of reproduction, child care and domestic work alongside the demands of agricultural work.

The process of imitation also explain females limited access to wage earning or income generating employment. Given that males follow male role models and females female role models, access to wage employment may be limited across generations and hinder the adoption of expenditure switching policies. Collier et al (1994, 293) state that recent evidence suggests that for every two households that switch to tree crop production (coffee, tea, cocoa) as part of an adjustment policy another household will follow suit. However, since tree crop production is mainly a male pursuit to begin with (Collier et al 1994, 293) female-headed households have a lower propensity to take-up income generating tree crop production. The expenditure switching by women is further compounded to the extent that income earned has to be transferred to men and women have less access to rural credit markets.

Thus gender plays an important role in labour allocation and the constraints that women may face may slow or otherwise hinder a successful adjustment. Furthermore, it may limit their ability to increase their income during times of economic change. However, it should be noted that it is likely that men will be hurt most by the initial adjustment programme. This is due to the fact that men are far more likely to be in the manufacturing and public sectors; sectors that suffer first round employment cut-backs during adjustment. Since women are in the wage-flex part of the economy (informal and agricultural sectors) their initial employment prospects are not likely to suffer as much as men during the first stages of adjustment.

6.6.2 Maternal Education

The level of education obtained by women is viewed as a "powerful engine of demographic change" (Schultz 1993) and the catalyst for successful change (Leslie, Lycotte and Buvinic (1988, 313). The reason for this is that it can lead to declines in fertility and child mortality. Wolfe and Behrman (1983, 539) on their study of Nicaragua show that women's education has a positive effect on nutritional status. They found that at the sample means an additional year of woman's education is associated with a 0.7 per cent increase in calories, a 1.4 per cent increase in protein, a 0.6 per cent increase in iron and a 2.7 per cent increase in vitamin A. "This was interpreted to mean that more educated women are more efficient in household production of nutrition" (Wolfe and Behrman 1983, 539). Furthermore, that the returns to women's education may cross generations. Their study found that (p.544):

The significant coefficient estimates of the mother's education suggests a striking intergenerational effect of women's education on the nutritional practices of their daughters, which supplements the direct influence of daughters' formal education on the nutrition of their own households.

With reference to health care, for both males and females in a rural area of Nigeria, people with secondary or post secondary education were more likely to use

hospitals (as measured by the number of visits) than those with little or no education (Okafor 1983, 593). The plausible explanation is that illiterate or poorly educated people are less likely to be aware of diseases and thus seek treatment at later stages. Orububuloye et al (1991, 206) obtained similar findings.

Mosley's (1989) study of Kenya confirms the relationship between declines in child mortality and increases in maternal education. Between 1969-1979, 78 per cent of the change in child mortality was accounted for by the education variable alone (p. 268). However, the incidence of poverty was also important; "increasing poverty has a greater impact on mortality levels for children of women with the least education, and this effect declines with increasing education" (p. 268). To take another example, even after correcting for intercountry differences in GNP, a ten per cent increase in female primary enrolment can be expected to reduce infant mortality by 4.1 deaths per 1,000 live births (Hill and King 1993, 20).

According to Cleland and van Ginneken (1989, 90), in a review of the literature on maternal education and child mortality state, "that a substantial portion of the maternal education effect on survivorship is independent of income and material resources and the effect transcends access to modern health services." They observe a "truly astonishing" relationship between child survival and formal schooling of the mother even after taking account of economic factors; 1-3 years of maternal schooling is associated with a fall of twenty per cent in childhood risks of death, with successive increases in education further large increases are recorded (p.93). They believe that maternal education can improve health of children in the following ways (p. 92):

[Through a] greater protection against infection, primarily by means of improved hygiene; reduced susceptibility to infection, primarily through nutrition and immunization; enhanced recovery from infection, brought on by more effective and external health care; and reduced risks of accidents, through supervision.

Cleland (1990, 402), in summary states that the most significant aspects of the maternal education-child mortality link are:

- (1) There is no threshold: "from the very start of primary education, each additional year's retention within the formal school system is associated with a fall of 3-5 % (net of economic factors) in childhood mortality. Furthermore, it seems to be schooling in general, rather than literacy that is most important;
- (2) the association is observed in all developing regions;
- (3) the link is stronger in childhood (ages 1-5) than in infancy;
- (4) only about half of the association can be accounted for by material advantages associated with education;
- (5) reproductive risk factors play a minor, intermediate role;
- (6) equity in treatment between daughters and sons is no part of the explanation; and
- (7) the association between maternal education and child deaths is slightly greater than that for paternal education and child mortality.

The notion of maternal education playing a crucial in child survival is best summed, in Mosley's (1989) words, as one of social synergy. In order to understand how health improves, it is necessary to look beyond the biological causes of disease and the modern treatments offered to cure them to the social causes of disease and how certain variables affect health status (Mosley 1989, 277-285). Thus the importance of education becomes apparent. Education works to alter fertility rates, it allows changes in food production and the level of nutrients consumed, and it permits people to change the possibility of environmental contamination — whether it be from unsafe water, poor sanitary conditions or vector transmission.

6.7. Adaptation

Korjenek (1992) points out that there are three broad categories; genetic, metabolic-biological, and socio-behavioural, that enable an individual to adapt energy output to changes in nutritional intake. Genetic adaptability theory suggests that in the long run people can adapt genetically to low energy intake environments so as to be small but healthy. Metabolic-biological changes are another way of adapting. The Basal Metabolic Rate (BMR) is the largest component of total human energy needs. It is hypothesised that an autoregulatory mechanism exists in the body to adjust the

efficiency of metabolism to reductions in food intake. The evidence as to the degree of decline in the BMR with undernutrition is mixed. Suffice it to say that metabolic rates cannot adjust completely and promptly. Behavioural adaptations, consisting of voluntary physical reductions in activity (to zero theoretically) creates a state so the body consumes little more energy than the BMR.

However, such adaptations have their limits, and food security may be best achieved by the use of long-run solutions. Helleiner (1992, 62) says that in order for food security to be achieved in Sub Saharan Africa at the household level, there is a need to concentrate on long run solutions:

The long-run objective is to move beyond the issues surrounding the efficacy of alternative (*ex post*) famine relief mechanisms, and even beyond early warning devices to improve *ex ante* response to potential problems. The object is to generate sustainable and stable (more drought and pest resistant) food production and distribution systems and income distribution (*cum* entitlements) sufficient to *prevent* famines in advance.

6.8 Conclusion

The effect of adjustment measures on household health status depends on an extremely complicated web of price and income changes. For instance, households in the worst case, may face a situation of declining incomes and rising prices. In the best case households may receive an increase in income as well as a decline in price. However, no actual household is likely to experience these extremes, more likely, households because of different sources of income and because of different consumption baskets will fall somewhere between. Structural adjustment programs change the overall income in a country as well as the distribution of income within a country (chapter four). As the distribution of income is hypothesised to change some groups may be made better-off while others may be made worse-off. The effect of changes in income is partially affected by the initial level of income of households. Those who have high levels of income can decrease their consumption of luxuries and concentrate on obtaining essential goods. Individuals that spend most of their budget on essential goods and services to begin with may have little scope to decrease

expenditures in the face of adjustment measures. The effects of changes in incomes is likely to occur as follows:

(1) Those engaged in tradable activities will benefit from a devaluation as this will lead to an increase in real prices for these products (Woodward 1992a, 28). If the price increases then incomes of producers will increase. Individuals (the rural landless) employed by producers of tradable may see an increase in income if the producer passes on increased profits in the form of wage increases. The increase can then be spent on health improving interventions.

(2) Those producers (rural smallholders, medium and large landowners) engaged in non-tradable activities will see a relative decline in the price of goods produced with a commensurate fall in income. However, as smallholders frequently are net purchasers of food, and food is a major component of their consumption basket (Duncan and Howell 1992, 9) they benefit from a relative price decline. If producers of non-tradable receive the new price signal and they are able (due to favourable climatic and soil conditions) to switch production to tradable activities then they will enjoy the benefits of structural adjustment; albeit after a time-lag. However, if farmers are risk averse they may move back to subsistence production rather than face the uncertainty of market opportunities (World Bank 1990, 57). In addition if the market is monopsonistic price increases may not be passed on producers (World Bank 1990, 5).

Whether or not the producer is engaged in tradable or non tradable activities is not necessarily of primary concern. Duncan and Howell (1992, 7) warn that "it will not always flow that an increase or a decrease in producer prices will engender a concomitant change in price" because household food security may take precedence over profit maximization by risk adverse individuals.

(3) In the urban formal sector cutbacks in public sector employment will lead to a decline in incomes for those participating in government employment. If the income of formal sector workers declines then this has implications for those engaged in informal activities. The implications are twofold. First, reduced incomes of formal sector workers means less money to be spend purchasing goods produced by the informal sector.

Second, given that there are likely to be only a limited number of jobs available in the formal sector, laid off formal sector employees will have to find jobs in the informal sector. Thus, the supply of labour to the informal sector will increase thus decreasing the real wage rate in the informal sector. In addition as incomes decline in the formal and informal sectors demand for goods produced by the agriculture, formal and informal sectors will decline leading to a decline in incomes of these producers. It is reasonable to expect that as household incomes fall, in sectors where formal and informal sector compete directly with each other there may be price-induced substitution of formal by informal sector goods. Basically, there will be a switch in consumption to low income goods produced in the informal sector. Also, there is a need to keep in mind that if urban-rural remittances are high then wage restraint in the urban sector can have adverse implications for groups in rural areas (Heller et al 1988,9).

At the core of IMF and World Bank programmes is that poverty can best be alleviated by increasing the incomes of the poorest members of society. For instance, the World Bank's *World Development Report* (1980, 59) states that:

There is now a wide measure of agreement on several broad propositions...malnutrition is largely a reflection of poverty: people do not have enough income for food...the most effective long-term policies are those that raise the incomes of the poor...

However, this chapter has shown that this is a dubious conclusion to reach. First, it appears that calorie-income elasticities are lower than previously thought (lower than 0.4 rather than greater) indicating that raising incomes may do little to improve nutritional status. On the other hand declines in one may not be associated with large changes in nutrition status.

If it can be reasonably be believed that raising incomes does not have a major impact on nutrition levels due the elasticity estimates and the influence of consumer tastes, then World Bank and IMF programmes should be reoriented towards (Shah 1983, 146) encouraging scientists to improve absorption and sensory quality (acceptability and palatability) of low cost foods. If sensory quality cannot be improved then the costs of preferred foods should be driven down by pushing the

“green revolution” towards preferred foods (Shah 1983, 146) and education should be provided about the relative nutritional merits of consuming different types of foods (Behrman and Deolalikar 1987, 505).

Although it is possible to overstress that income is not a determining factor. In fact, income, along with other changes following macroeconomic reforms will affect health status. If this is the case the households must make recourse to survival strategies. As Pinstrup-Andersen (1987, 80) points out that the coping ability of households are the most important factors to consider when designing or evaluating macroeconomic policies that effect nutrition. Survival strategies in the face of adjustment are likely to benefit those who are initially better off than the poor. The poor only have limited access to survival strategies to begin with. If survival strategies fail to arrest the decline in health status then there is a need for outside intervention. Access to religious, social or economic solidarity networks may help the poor through difficult times. In the 1970s this intervention took the form of promoting food security. However, this strategy on the whole, has failed.

The reason for this is based on the notion that the achievement of food security is not only about incomes, it is, in fact much more multifaceted. During the 1970s there was the belief that food security could be achieved at the household level once food self-sufficiency or surpluses was reached at the national level (Ali and Pitkin 1991, 3). However, this has not transpired and the causes of food insecurity are seen as rooted in many different areas. Poor facilities for on-farm storage in rural areas, losses resulting from insects, rodents, rain and spoilage, poor rural infrastructure, high cost transport, poorly maintained vehicles, the lack of an efficient market caused by bureaucratic control, inequitable distribution of land resources, low labour productivity, low intensity of agriculture due to limited use of agricultural inputs (such as fertilisers), and lack of credit all work together to prevent food security from being achieved (Ali and Pitkin 1991, 3-6).

Christensen and Stack's (1992) study of Zimbabwe has revealed that food insecurity is most likely to exist in rural areas amongst landless farmworkers, the

unemployed and in some parts of urban areas. Households that have diversified incomes, from, say, wages, outside remittances, livestock or self employment are more likely to be able to obtain food security at the household level. The short-term consequences of adjustment measures on household food security would be to worsen the initial condition. In the long-run, structural adjustment may improve household food security in so far as economic growth translates into higher incomes among the poor and production is increased. However, this will only occur so long as barriers to access are removed.

Changes in the prices of health improving goods and other goods following adjustment are likely to play an important role in determining the health status of individuals. This chapter has highlighted these many effects:

(1) General price increase may have little impact on the rural poor in so far as they exist only partially in the monetized sector to begin with. The urban poor fare worse to the extent that they must purchase food in urban markets.

(2) Any increases in prices will not spell disaster for those effected due to the fact that substitution of cheaper food of an equal calorie/nutrient content is possible.

(3) Increasing fees for health care is likely to be more important for the rural poor rather than urban residents. First, the rural poor in the agricultural sector are likely to face higher time and opportunity costs to begin with. Second rural areas are likely to contain poorer consumers who will decrease utilisation by more than the rich. In addition, the provision of health services to rural areas is still inadequate when compared to urban areas.

(4) If the urban formal and to a lesser extent informal workers consumption basket has a large component of tradable goods then, following a devaluation the prices of the goods will increase with adverse implications for household welfare. If households are able to substitute imported goods for other cheaper goods then the crisis in consumption will be avoided.

This chapter has focused attention to the household level as the most important unit in the production of health care. Recent evidence suggests that household level activities are critically important in determining health status of individual members. Gender and maternal education appear to play a more important role in determining health status than increasing the incomes of poor people. This is related to the fact that households in Sub-Saharan Africa, when faced with adverse conditions are able to invoke survival mechanisms to help them retain their level of health. At this level, the household acts as an intermediate agent, protecting members from changes in their level of well-being following macroeconomic reforms.

As has been seen from the section on maternal education the health benefits that accrue from additional years of female education are considerable. In addition education can lead to further opportunities in wage employment for women. Thus, a policy that aims at increasing female education, or reducing the gender gap, between male and female primary and secondary enrolment rates is of utmost importance. Increased female enrolment in primary and secondary schools is associated with longer life expectancy, lower infant and maternal mortality and lower fertility rates. Indeed the benefits of female education are not limited to the realm of health. The benefits of maternal education, and in fact all education, lead to increased family income, higher GNP per capita, increased productivity and improved social status (Hill and King 1993, 13-34).

However, increasing female enrolment rates may not be that easy to achieve. As this chapter has shown increased female schooling entails opportunity costs; costs in household work left undone, childcare that is neglected, and the loss opportunity to undergo informal training activities; financial costs (tuition, uniforms, textbooks and travel); and psychic costs where culture and traditions prevent women from going to school and increasing their level of education (Hill and King 1993, 27).

Svedberg (1190) says that since women account for more than 50 per cent of the agriculture labour input into food production in Sub-Saharan Africa they currently

occupy a favourable and autonomous position. However, if macroeconomic programs lead to the intensification (through the use of ploughs, machinery and the increased use of pesticides and fertilisers) of the agriculture sector the situation of women could change. Men could take on a more significant role in agricultural production and women would be forced to assume more marginal roles (Svedberg 1990, 482). If this were to occur then it is feared that "in the wake of such development, the nutrition and health status of women vis-a-vis men will deteriorate", perhaps to the level found in South Asia. In addition the autonomous role that some women enjoy may not lead to an improvement in health status. First, households in Sub Saharan Africa tend to be large requiring an enormous amount of economic activity in order to keep the family clothed, fed and in good health. Second, taxes raised in the agriculture sector often are not reinvested in rural services, but appropriated to urban areas (Steady 1987, 226).

Chapter 7

Evidence of the Impact of Adjustment on Health Care Development

7.1 Introduction

This chapter provides a critical review of the existing evidence on the impact of adjustment measures on health care delivery, health conditions and health status in Sub Saharan Africa. This first section is devoted to examining the studies that have sought to trace the linkages from macroeconomic reforms sponsored by the Fund and the Bank to the household level. The next section reviews the case studies that have been conducted in an effort to assess the negative impact of adjustment on health care development. The third section provides evidence from Bank and Fund studies to indicate that the adverse implications of adjustment measures may be rather limited.

The second part of this thesis is devoted to an analysis of the impact of adjustment on the health sector in Sub Saharan Africa from 1980 to 1992. The analysis breaks with earlier approaches and examines each area relating to health individually. In addition, instead of concentrating on one type of analysis, as is common with most other studies, this chapter uses the "before-after" and "with without" approaches. Moreover, instead of conducting a "with without" analysis that amalgamates all developing countries this study breaks down countries into matches — control and non-control countries. This chapter concludes with a summary of the major findings and the implications for health care development in Sub Saharan Africa.

7.2 Evidence of the Impact

The World Bank [Zucherman (1989), World Bank (1990) and Serageldin (1990)], the IMF [Heller et al (1988), Demery and Addison (1987) and Enweze (1990)] and a number of researchers [Pinstrup-Anderson (1981, 1987, 1987a, 1988), Behrman (1988), Woodward (1992, 1992a) and Cornia, Jolly and Stewart (1987)] have provided the basic framework for analysing the impact of adjustment on social welfare and health care development. They are broadly similar to the approach taken by this thesis, but they differ in several important respects. For instance, Zucherman (1989) and Heller et al (1988) rely on a few case studies from an economically, socially and politically diverse set of developing countries to make generalisations about the adjustment impact in all developing countries. Or in the case of Serageldin (1990) and Enweze (1990) no evidence is provided to make generalisations. Second implications for household welfare are glossed over in Zucherman (1989) or treated superficially as in Heller et al (1988). In addition, all studies, while recognising that the role of women in health care development is important, do not thoroughly investigate or provide evidence as to why this may be. Moreover, many of the studies tend to underplay the health sector in favour of examining the entire social sector. Although Behrman (1988) and Pinstrup Anderson (1981, 1987, 1987a and 1988) correct for this, Pinstrup-Anderson's studies focus on nutritional consequences to the detriment of health status effects.

Several attempts based on case studies have been made to link policy based lending to changes in health conditions, health care delivery and health status. Some of the approaches [Sanders and Davies (1988), Anyiman (1989), Glewwe and de Tray (1989), Kanji, Kanji and Manji (1991), Mwega and Kanbubo (1993), Elliott (1993), Kane (1993), Mwanawina (1993), Popoola (1993), Chipeta (1993), Ndongko (1993) and Lututal, Kintamba and Mvudi (1993)] which have sought to do this provide much useful information and a background to the problems, however they fail to construct the relevant linkages from macroeconomic reforms to household or regional changes in welfare. The strengths of these studies lie in the fact that they provide a snapshot

of the health system in a country during an adjustment period. However, they fail to compare their results with countries that did not undertake programme loans but faced similar economic conditions. In addition, many of the studies only concentrate on how the health care delivery system changed as a result of adjustment and ignore the importance of health status changes.

For instance, Mwega and Kabubo's (1993) study of Kenya found that the health care delivery system expanded during that country's adjustment in 1982, 1986 and 1988. The number of doctors increased steadily from 1980 to 1990, the number of pharmacists leapt from 113 to 443 from 1983 to 1990 and the number of enrolled nurses increased from 8,722 in 1980 to 17,734 in 1990. Moreover, the number of health institutions increased from 1,544 to 2,133 in 1989. However, the number of hospital beds and cots per 1,000 population declined from 174 in 1980 to 136 in 1989. Mwega and Kabubo's (1993, 39) conclusion based on this limited research, the fact that health care delivery was generally expanding, and without reference to health status changes, finds that "structural adjustment measures in the health sector have adversely affected the poor."

Sowa's (1993) research into the Ghanaian health care delivery system also suffers from serious defects. Again, the links between adjustment and the health sector are not drawn up. In addition, changes in health status are not reported, instead Sowa (1993, 19) uses attendances at outpatient clinics as a proxy for health status changes. Implicit in his analysis is that since outpatient attendances declined from 10.7 million in 1976 to 4.8 million in 1987, an adjustment period, then health status must have changed as well. However, as this chapter will show later, this is not the case.

Elliott's (1993) case study of Sierra Leone and Kane's (1993) exposition on Senegal can be similarly criticised for their selective approach to examining the health crisis in Africa. For instance, Elliott (1993) notes that following the implementation of an IMF package in 1986 health expenditures as a percentage of total expenditures tripled, however by 1988-89 they had fallen back to their original level. Although,

this is of no doubt of great importance as far as health care delivery goes, no effort was expended in trying to explain why this occurred or, even, whose fault it was. Kane's (1993) analysis suffers from a similar problem. His research revealed that health status and immunisation coverage improved during a period of adjustment, but he finds it difficult to attribute this increase to anybody. Since, Senegal's adherence to IMF policy was weak it is hard to attribute the improvements to the Fund.

However, not all author's believe the Bank and the Fund to be solely responsible for the decline in the living standards of Africans. For instance, Mwanawina (1993) places the blame for the deterioration of living standards at the Zambian President's door. He states (Mwanawina 1993, 73) that "the health sector [has been] adversely affected by the government's excesses and economic mismanagement." Due to government inaction drugs and vital medical equipment were in short supply and doctors and nurses left due to poor conditions of service. It is Mwanawina's (1993) view that since the government deprioritized the health sector, when funding declined by 55 per cent, health status has also declined.

Popoola (1993) mirrors this view. His study of Nigeria found that the government failed to provide enough finance to the health sector. For instance, in 1982 only \$0.42 was spent per capita on health. Yet, a World Bank study conducted by Glewwe and de Tray (1989) on adjustment in the Côte d'Ivoire found that under-financing of the health sector may not be that important a factor in determining the health status as the majority of the poor do not consult formal health practitioners. However, in contrast to Mwanawina (1993) he feels that the government should bare only part of the blame for the precipitous decline in living standards. In contrast to the previous authors, Popoola (1993) has made an effort to trace the linkages from macroeconomic changes to welfare declines. For instance, following the implementation of structural adjustment in the early 1980s the price of rice jumped. A bag of rice sold for N500 to N800; more than a month's salary for the average worker or four to five times the minimum wage. However, having noted this fact he does not successfully relate it to health status changes, but he does provide the fact

that anecdotal evidence suggests that kwashiorkor has increased during adjustment (Popoola 1993: 96). His conclusion based on this rather thin evidence, and the fact that deaths from cholera increased from 1984 to 1988, states that (Popoola 1993: 96), "while the slogan 'Health for All by the Year 2000' has been widely publicised, popular ingenuity has produced the more accurate parody, 'Hell for All by the Year 2000'."

Where Popoola (1993) fails to provide evidence of health status changes, Lututala, Kintambu and Mvudi (1993, 35) note that adjustment may have led to health status changes in Zaire. They note that the percentage of people suffering from parasitic and infectious diseases rose from 24 per cent in 1981 to 50 per cent in 1984 to 69 per cent in 1987 at the general hospital, Mama Yemo. Moreover, at the Kalembelembe Paediatric Hospital in Kinsasha mortality from malnutrition was increasing. During a period of structural adjustment rates for malnutrition increased from 9.6 per cent to 44 per cent in 1986. Although, the evidence only comes from two limited sources, this can, in part, be forgiven as data is difficult to obtain.

Anyinam's (1989) case study of Ghana offers one of the most comprehensive treatments of the impact of adjustment on health care development. However, his study also has several weaknesses. The study is generally strong on relating macroeconomic reforms to health changes, however the research is weak in that it over relies somewhat on leaps of logic. He notes that as part of the economic recovery programme (ERP) implemented in 1983 price subsidies were phased out on most public services including health. Moreover, from 1983 onwards user fees were introduced for all public health facilities. From this information, he states " hospital attendances declined considerably in many areas when the new fees were introduced. Children with malnutrition who had been in regular treatment stopped attending clinics because the mothers complained that they could not afford the new fees." While this may be true, no evidence is was provided to back up this claim. His analysis which also concentrates on health care delivery changes also note that although some of the IMF money has been used to improve the health sector, poor

conditions of service have resulted in the continued loss of medical staff from the health sector. Overall, his study concludes that although the ERP has been successful in getting the Ghanaian economy to turn around, it has done so at the "expense of people's welfare, standard of living, and quality of health."

Sanders and Davies (1988) review of the effect of stabilisation policies on the health sector in Zimbabwe is to be praised on one hand for its even handedness and attention to macroeconomic-microeconomic linkages but lamented for the (expected) lack of actual evidence. Their research pointed out that the IMF's 1982 stand-by agreement with Zimbabwe led to the removal of food subsidies, a wage freeze and a restriction in growth in government expenditures. For instance, for 1982-83 the price of maize meal increased by 100 per cent, the price of beef went up by between 69 and 95 per cent and milk shot up by 50 per cent. The implications of this was that incomes in formal activities declined due to the wage freeze and the incomes of informal workers would decline because subsidies were removed. However, such negative income changes did not translate into health status changes. Although, the data was scarce, the author's noted that the infant mortality rate continued to decline (Sanders and Davies 1988, 729). However, they also noted that "it is arguable that the recession slowed the rate of reduction in child mortality (and some areas of morbidity) because of constraints in health sector interventions" (Sanders and Davies 1988: 730). The authors posit that declines in incomes and increases in prices did not lead to changes in health status for several reasons. First, during the adjustment period immunisation coverage continued to expand. Second, knowledge of ORT treatment was good. Third, the health sector continued its reorientation towards the PHC model with an increasing emphasis on preventative medicine. Finally, outside aid programmes and drought relief programmes helped to dampen any possible negative outcome.

In contrast to the case study approach several author's have sought to provide a broad picture of the possible effects of economic adjustment of health status, health care delivery and health conditions in Africa. However, these studies are not without

problems. For instance, Taylor (1988) almost seems to think that the question is unanswerable. Taylor (1988, 35) believes that economic recession and the slowdown in growth in developing countries will have a severe effect on health and nutrition, but it is difficult to quantify. He states:

What exactly do growth rate projections to the 1990s based on debatable hypotheses about global macroeconomic developments and widely imprecise statistical estimates of the relevant parameters have to do with health and nutrition of children and adults in the Third World? The answer, no doubt is a great deal, but it is difficult to add much to that.

However, other authors are not as pessimistic when it comes to finding an answer to this question. However, these studies still suffer from a variety of shortcomings. Cornia, Jolly and Stewart (1987), employed by UNICEF, were one of the first groups to provide an account of the effect that multilateral agencies have on social sectors in developing countries. Their research generally paints a bleak picture of the impact of adjustment measures on health status. Although their study tends to place economic recession and adjustment measures in one group, their review indicated that child welfare declined in eight countries in Latin America, 16 in Sub Saharan Africa, three in North Africa and the Middle East and four in South East Asia during adjusting periods. Furthermore, their study which focused on the effect of IMF adjustment programmes from 1980-85 noted that the adoption of economic reforms was the main element in the deterioration in living standards. Cornia, Jolly and Stewart (1987, 288) believe that this deterioration was caused by three main factors. First, the short time horizon of programmes and the deflationary character of Fund programmes led to lower levels of employment and declines in real incomes. Second, devaluation of national currencies and the liberalisation of prices had direct negative effects on nutrition through increases in food prices and decreases in subsidies. Third, cuts in social expenditures led to cutbacks in services that are of critical importance to the well being of individuals.

However, the evidence from Africa used to support this claim does not hold up to close scrutiny. This UNICEF study contained three case studies from Africa. The

case study on Botswana for the period of 1980 to 1984 found that per capita food availability increased, immunisation rates rose and health facility use increased. In addition, the infant mortality rate decreased. However, child malnutrition increased 25 per cent in 1982 and 31 per cent in 1984. The Ghana case study revealed a bleaker situation. For the period 1979 to 1985 calorie adequacy declined to 68 per cent in the 1980s. In addition, attendances at health facilities fell by eleven per cent a year and infant mortality rates increased from 86.0 to 107.0 in the 1980s. The study of Zimbabwe, however, showed that there was basically no change in child malnutrition and the infant mortality rate and health services generally expanded with an emphasis on preventative care.

Given this, Cornia, Jolly and Stewart (1987, 290) recommended that adjustment measure be reformed to take into account, explicitly, the impact on the poorest members of society. This approach, which they termed adjustment with a human face had six main elements. First, adjustment measures should concentrate on being expansionary rather than contractionary. Thus, they recommended that finance should be provided over the medium and long term and aimed at increasing output and employment. Second, policy instruments should be chosen carefully and those that restructure resource and incentives in favour of the poor should be given priority. Third, macroeconomic reforms should focus on the sectoral level. Amongst the different sectors, small farmers and urban informal workers should be given priority due to the fact that the potential for raising incomes for the largest number of the poor was greatest. Fourth, equity and efficiency in the social sectors should be encouraged so that services could be reoriented out of high cost interventions in over-served urban areas to lower cost interventions in rural areas. Fifth, adjustment programmes should integrate compensatory measures in their design. Such measures would concentrate on public works employment schemes and nutrition interventions targeted at the most vulnerable in society. Finally, adjustment programmes should include monitoring of changes in health and nutrition status during times of economic transformation.

However, this influential study does suffer from several flaws. First, as Cornia (1987, 21) admits the evidence is incomplete and should be treated with caution: "[the] available information often covers different periods and makes use of different concepts, or is derived from limited samples. From a rigorous statistical point of view this information remains fragmentary and scattered." Second, the study concentrates on IMF programmes and has little to say, directly, about the role of the World Bank in adjustment. Third, the lags involved in adjustment financing are not adequately considered. While it is certainly logical that adjustment will negatively affect some individuals' health status it seems somewhat implausible that such changes would show up so quickly. For instance, the Ghana case study shows that health and nutrition status were adversely affected in the early 1980s, however the first IMF stand-by to the country was not until August 1983. In addition, there seems to be some exclusivity evident in the picking of indicators. No mention, for instance, is made of improvements in some health status indicators. Although, the author's recognise that Ghana's economy did require outside intervention (Cornia, Jolly and Stewart 1987, 289) their overall conclusion could do more to emphasise the fact that poor economic policies are as much to blame, if not more, than IMF programmes. This fact is reinforced to the extent that the evidence from the Zimbabwe case study paints a mixed picture, and the evidence from Botswana, a country that has never received any adjustment financing, indicated an improving situation.

Behrman (1988) is also quite critical of the UNICEF approach. Behrman (1988, 105) believes that the impact of adjustment measures, as shown previously in this thesis, depends on changes "in composition at various levels, including the nature of income and asset distributions, the breakdown of government expenditures and relative prices," and the decisions made by households. He directly criticises the UNICEF studies for failing to formally develop the links between adjustment and the health status of children. However, Behrman (1988, 131) hedges when he says:

[UNICEF] provides a useful catalogue of trends, but relatively little information on changes due to economic recession and economic adjustment programmes. Given the project focus on finding possible negative and

recessionary and economic adjustment impact on children the authors appear to have pressed hard to find examples of deterioration in children's conditions. But they provide relatively little direct evidence of such deteriorations.

He concludes (p. 132):

I do not see these studies as having demonstrated that economic adjustment policies have had deleterious effects on health and nutrition in developing countries or that health and nutrition would have been substantially better without the economic adjustment policies or with different economic adjustment policies.

Behrman and Deolalikar (1990) press home this point. The author's re-examine Boyd's (1988) case study on Jamaica which was part of UNICEF's adjustment with a human face exercise. Boyd (1988, 137-141) found that the unemployment rate rose, informal labour participation increased, food expenditures fell, expenditures on the social sectors declined and nutrition status declined during Jamaica's adjustment from 1984 to 1985. However, Behrman and Deolalikar (1990, 346) found that the unemployment rate actually peaked in 1982 the declined in 1984-85. Moreover, the unemployment rates for women, which is of primary concern when examining the health and nutrition of children, showed no deviation from the unemployment trends prior to the adjustment. Behrman and Deolalikar (1990, 346) also note that there was not a large movement into the informal sector. Their analysis suggests that the base year, 1983, that Boyd (1988) uses to judge changes in informal sector participation is wrong. Their study notes that Boyd's base year was an anomaly and that increases in informalization of employment from 1983 should be seen in the context of informal participation rates that were equally high prior to 1983 as after.

Behrman and Deolalikar (1990, 347) also observe that there was not a major deterioration in food and nutrient intake amongst the poor as real food expenditures actually increased from 1984-85. The author's note that although government expenditures on social services declined in real terms during 1984-85, this does not necessarily mean that health status is adversely affected. For instance, it is plausible

that rationalisation of existing health services, efficiency gains and the use of private health facilities may have offset the reductions in government funding to the health sector..

Heller et al (1988) also note that the impact of adjustment programmes on the poor may be limited. Their rather brief study of Ghana noted that the ERP had positive implications for the rural poor, in so far as exchange rate policies increased the price of tradables, but may have hurt incomes of the urban poor. However, the urban poor would have benefited from a tripling of minimum wages during the adjustment period. However, this study is weak in that it assumes that an overvalued exchange rate hurt the poor. This assumption, however, is only true if the rural poor were prevented from engaging in other employment activities or were unable to evoke survival mechanisms. Heller et al (1988) also indicate that the situation in Kenya under adjustment was similar. Kenya's 18 month stand-by (1983-84) was hypothesised to hurt the urban poor more than the rural poor. Cutbacks in health services and real wage declines were focused on urban areas. The rural landless were largely protected from adjustment due to the fact that they could fall back on subsistence production.

Woodward (1992) directly criticises the Bank-Fund model based on orthodox neo-classical economics. Woodward (1992, 11) says that "[in the model] there is a risk of circularity in using the theoretical model on which the current approach to adjustment is based to 'prove' that it works, or that its social impact is limited." Furthermore, Woodward (1992a, 19) states that the approach used by the World Bank and the Fund which focuses on static situations rather than the dynamics of adjusting to macroeconomic disequilibrium fails in providing information as to whether or not individuals can actually obtain a higher standard of living. Woodward (1992) goes further and states that the counterfactual approach is too limited in its scope. Adjusting countries should not only be compared with non-adjusting countries, but that adjustment should be seen in a wider context (p. 16):

because adjustment programmes are being pursued at the same time by a large number of countries, and have a profound effect on their economic performance, the overall adjustment process has a significant impact on the world economy as a whole; and this in turn has important repercussions for adjusting and non-adjusting countries alike.

The Director General of Save the Children Fund has similar reservations about the Bank-Fund approach. He states (Woodward 1992, x):

a close reading of this carefully argued case does give us cause for real concern that current approaches to 'structural adjustment' are inadequate, and may be fundamentally flawed at both the conceptual and practical level.

However, Woodward's (1992 and 1992a) approach is not without its flaws. Overall the evidence to support his view that the health status of individuals has been made worse off by adjustment and stabilisation measures is rather scant. For example, Woodward (1992a) believes that adjustment can lead to an increase in dependency on external aid agencies for funding assistance in the area of vertical health care delivery. The result he believes (p. 70) would result "in a duplication of efforts and resources (transport systems, communication, administration, etc.), unnecessarily increasing the cost of a given level services; and the introduction of new vertical services may seriously undermine existing integrated services." While this may be true, and the logic certainly is sound, no evidence is used to back up this claim.³³

In the worse cases the relationship between structural adjustment and health is dealt with superficially; declines in health status that occur during periods of macroeconomic restructurings are simply attributed to the World Bank and the International Monetary Fund. For instance, Kanji, Kanji and Manji (1991), adapting data from the Commonwealth Secretariat, provide information for several countries that have received Bank or Fund programs (Tables 7.1 and 7.2);

Table 7.1. Sub-Saharan African Countries with Fund/Bank Programs, Which Have Experienced Increasing Rates of Infant Mortality, 1980-85

	Infant mortality rate			% change 1980-85
	1965	1980	1985	
Ethiopia	165	146	168	+15.1
Mali	200	154	174	+26.5
Madagascar	n/a	71	109	+53.5
Uganda	121	97	108	+11.3
Tanzania	138	103	110	+6.8
Somalia	165	146	152	+4.1
Kenya	112	87	91	+4.6

Source: Kanji, Kanji And Manji (1991)

Table 7.2. Increasing Childhood Mortality Rates in the Above Countries. 1980-85

	Childhood mortality rates			% change 1980-1985
	1965	1980	1985	
Ethiopia	37	32	38	+18.8
Mali	47	34	43	+26.5
Madagascar	18	11	21	+90.0
Uganda	26	18	21	+16.7
Tanzania	29	19	22	+15.8
Somalia	37	32	33	+3.1
Kenya	25	15	16	+6.7

Source: Kanji, Kanji and Manji (1991)

Based on the above tables, it would appear, on the surface at least, that the macroeconomic reforms promoted by the IMF and the World Bank are, in some form, affecting health status. But, a closer inspection reveals some interesting information. For instance, of the above countries during the period specified, Ethiopia received only one stand-by and had no World Bank credits and Uganda only received credits under the second reconstruction program. In addition, during the time period considered Ethiopia was suffering from widespread famine. However, and of more interesting, is the selection of countries. By choosing different countries, the *opposite* conclusion is reached. Table 7.3 outlines the increases in health and nutritional status that occurred during periods of macroeconomic reforms in Africa.

Table 7.3. Countries in Sub Saharan Africa that have experienced increases in health and nutrition status during periods of structural adjustment and stabilisation

Country	Infant mortality rate (per 1,000 live births)		Life expectancy at birth (years)		Daily calorie supply (per capita)	
	1980	1990	1980	1990	1977	1989
Côte d'Ivoire	127	95	47	55	2,517	2,577
Ghana	103	85	49	55	1,983	2,248
Malawi	172	149	44	46	2,066	2,139
Senegal	147	81	43	47	2,261	2,369
Togo	109	88	47	57	2,069	2,214
Mozambique	115	137	47	47	1,096	1,680

Source: World Bank (1992), and World Bank (1982)

In these countries the infant mortality rate is decreasing and life expectancy at birth and daily calorie supply is increasing, all during a period of macroeconomic reform.

The World Bank [Kakwani, Makonnen and van der Gaag (1990), Diop, Hill and Serageldin (1991) and Maasland and van der Gaag (1992)] which uses the same approach as Kanji, Kanji and Manji (1991) but back up their claim with more evidence, reaches the conclusion that adjustment measures have not, on the whole, hurt the health sector. Diop, Hill and Serageldin (1991) aggregate study of ten countries that used data from the Demographic Health Surveys (DHS) project found that the child mortality rate did not increase in adjusting countries. In the short run, countries that did not undergo adjustment did no better than adjusting countries in decreasing the child mortality rate. However, their study noted that adjustment policies were associated with increases in child mortality rates amongst the urban poor.

Diop, Hill and Serageldin (1991, 46) study of the Côte d'Ivoire generally supports the conclusion reached in the aggregate study. For instance, the stabilisation policies were associated with declines in the incomes of urban residents, but incomes of rural residents were relatively well protected because the structural adjustment programme tended to protect agricultural incomes. They noted that the declines in urban incomes, and cutbacks in subsidies, were associated with decreases in child health in urban areas. However, their research revealed that this impact was concentrated not on the urban poor but amongst the urban middle class. The

deterioration in child health in the postneonatal period disproportionately affected families in the top 40 per cent of the urban income distribution (Diop, Hill and Serageldin 1991, 46). Unfortunately, neither the aggregate "with- without" study nor the individual country study examined whether health care delivery or health conditions changed during adjustment periods. Moreover, other health status indicators are ignored in the analysis in favour of using the child mortality rate from the DHS. Use of this indicator while useful, is somewhat limited, and the use of a child mortality rate, which is usually reported to be higher, published by the Bank, WHO or UNICEF, perhaps, would have proven to be of more interest. In addition, a "before-after" simulation would have aided in proving or disproving the author's case. Moreover, this study, only examines the short term and part of the medium term impact of adjustment measures on health care development.

Kakwani, Makonnen and van der Gaag (1990) and Maasland and van der Gaag (1992) attempt to correct for the flaws of the earlier Bank study. Kakwani, Makonnen and van der Gaag's (1990) examination of the impact of adjustment on health care delivery, as measured by immunisation coverage, net enrolment ratios in primary education and government expenditures to the social sector, and health status, as measured by infant and child mortality, undernutrition and per capita protein intake, found that there was no discernible difference between adjusting and non-adjusting countries, except in the area of social sector expenditures. Real per capita expenditures fell in most of the countries and the fall was greatest in those countries that undertook the most adjustment loans (Kakwani, Makonnen and van der Gaag 1990: 47). Their study concluded (p.47) that "regardless of the adjustment status, developing countries achieved progress in social indicators during the eighties. However, progress was slowest in countries that already had the worst social indicators."

Maasland and van der Gaag (1992) reach a similar conclusion. They note that living conditions in the short run are not related to adjustment lending in all developing countries. They found that there continued to be declines in infant and

child mortality rates, immunisation coverage increased, and nutrition indicators slowed improvements in most countries (but not in Sub Saharan Africa). However, the author's not that the study did not find any evidence that adjustment measures accelerated progress in social indicators.

7.3 An Analysis of the Impact of Programme Lending on Health Care Development

7.3.1 Introduction

The second part of this chapter aims to correct several deficiencies evident in the previous studies. They are:

(1) Most of the studies amalgamate many of the adjusters in developing countries and compare them to a group of non adjusters in developing countries. The problem with this approach is that it tends to obscure the progress or decline made on indicators in Africa. Such an analysis may skew the actual picture for Africa as relatively well performing adjusters in non-African countries will bring up the average performance of all developing countries. Maasland and van der Gaag (1992, 60) realise this problem in their conclusion. They believe that the results that they obtained were affected by the country groupings that they used.

Thus, the analysis in the following section concentrates only on the performance of African countries. Moreover, the analysis does not break down all African countries into two groups of adjusters and non-adjusters. Instead it uses Harrigan and Mosley's (1991: 83-120) approach of breaking the countries down into control countries and non-control countries. Each adjusting African country, where possible, will be matched with a non-adjusting African country. The criteria of matching will be based on similarity in levels of GNP per capita (1981), average annual GDP growth rates in the pre adjusting period (1970-81) and the distribution of Gross Domestic Product to Agriculture (1981). In addition, following Maasland and van der Gaag (1992), the following analysis will break the groups into early intensive adjustment lending (EIAL) countries and other adjustment lending countries in order to determine if intensive adjusters do better or worse than other adjusters.

It is important to note that because of the way that this analysis is done randomisation as an option is eliminated. It would be impossible to pool countries **identical in every respect** and from this randomly select countries and place them into two separate groups: a group that received the adjustment intervention and a group that did not. The problem here is twofold. First, the list of possible countries could be expanded but then the level of similarity between them decreases. Second, by focusing on Africa only, the list of possibilities becomes smaller (even if the similarity between countries increases), but the number of possible controls decreases as most African countries have undertaken adjustment programmes.

Given that randomisation is improbable it is impossible to rule out bias in this study. It is also important to realise the possibility that observed changes in health status are the byproduct of one or several confounders. However, given the broad similarities between the country groupings and the pervasive influence of Bank and Fund lending in the economic environment of adjusting countries (as shown in chapter three) it is not unreasonable to assume that the main source of health status and health care delivery changes has been these two institutions. It is in part, because of confounding and bias that chapter eight provides a stand-alone case study.

That caveat made, Table 7.4 below lists the control and non-control countries and the economic criteria that applies to them³⁴:

Table 7.4. Control and Non-control Countries

Controls (number in parenthesis indicates year country ceases to be a control)	Distribution of GDP to Agriculture (1981); percent of total GDP	GNP per capita 1981 dollars	Average Annual Growth Rate GDP (percent) 1970-81
Pure Controls			
Angola			
Botswana	6	960	8.4
Liberia	36	520	1.3
Other Controls			
Benin (1989)	55	320	..
Burkina Faso (1991)	41	240	3.6
Burundi (1986)	56	230	3.2
Cameroon (1988)	27	880	6.3
Chad (1987)	..	110	..
Comoros (1991)			
Congo (1986)	9	1,100	5.1
Ethiopia (1991)*	65	140	2.2
Lesotho (1988)	..	540	8.4
Mozambique (1986)	..	..	..
Rwanda (1991)	46	250	5.3
Nigeria (1987)	23	870	4.5

**Non-control
(adjusters)**

CAR (EIAL)	37	320	1.6
Côte d'Ivoire (EIAL)	27	1,200	6.2
Equatorial Guinea			
Gabon			
Gambia			
Ghana (EIAL)	60	400	-0.2
Guinea	37	300	3.0
Guinea-Bissau			
Kenya (EIAL)	32	420	5.8
Madagascar (EIAL)	35	330	0.3
Malawi (EIAL)	43	200	5.6
Mali	42	190	4.6
Mauritania	28	460	1.7
Mauritius			
Niger	30	330	3.1
Senegal (EIAL)	22	430	2.0
Sierra Leone	31	320	1.9
Somalia (IMF adj.)	..	280	3.9
Sudan (EIAL)	38	380	4.1
Uganda (EIAL)	75	220	-1.6
Togo (EIAL)	24	380	3.2
Zaire	32	210	-0.2
Zambia	18	600	0.4
Zimbabwe	18	870	1.8

Source: World Bank (1983) except for Botswana data which is from World Bank (1986) and refers to the year 1984 and the period 1965-85.

* note that Ethiopia received a stand by from the IMF in 1981, however since its next loan was not until 1992 it is included as an "other control".

EIAL: Two SALs or SBs, SAFs, ESAFs or any combination or any other adjustment operation prior to 1985.

(2) This study includes both loans made by the International Monetary Fund and the World Bank in its analysis. None of the previous studies have done this. This is an important shortcoming for two reasons. First, by not including IMF lending in the analysis of adjustment impacts, countries that are listed as other adjustment lending countries may be falsely identified. That is other adjusters, as identified by Maasland and van der Gaag (1992), may in fact be adjusters or intensive adjusters in so far as they entered into SAF and ESAF arrangements with the Fund prior to World Bank lending. Second, the use of Fund lending in the analysis makes explicit the role of welfare changes that occur with a change in the exchange rate.

(3) This study undertakes a "before-after" approach as well as the traditional "with with-out" analysis. This is done by comparing the situation in control countries immediately prior to adjustment to a period after adjustment started. More importantly, the following analysis notes the trends apparent in the pre-

adjusting period in control countries and examines how far the control countries have deviated from their expected performance.

(4) The conclusion to this thesis covers the "actual v. target" approach to determine if the Bank and the Fund have made sufficient progress, through adjustment programmes, in increasing social welfare in African countries.

(5) This study does not limit itself to examining the short-run impact of adjustment lending as Maasland and van der Gaag (1992) do, but examines the possible medium and long term impact of adjustment lending on health care development.

The following country groupings have been deemed appropriate for the analysis in this chapter. As controls; Burkina Faso, Ethiopia, Botswana, Cameroon, Lesotho, and Rwanda. As non-controls or adjusters: Niger, Guinea, Uganda, Zambia, Zaire, Kenya, Malawi, Mali and Sudan. Ghana, and her control pairing, Liberia and Benin, are examined in chapter eight. The remaining countries were excluded because of lack of data, as in the case of Angola, Cameroon and Mozambique for controls and Equatorial Guinea, Gabon, Gambia and Guinea-Bissau for adjusters. This left the Central African Republic, Madagascar, Mauritania, Mauritius, Senegal, Sierra Leone, Somalia and Togo. These countries were excluded because they were difficult to match based on the established criteria. The controls and non-controls were matched as follows:

(1) Overall match: Niger and Guinea (adjusters), Burkina Faso (control). Matched because of similarity in all three areas. The average annual growth rate in GDP (1970-81) for Burkina Faso was 3.6 per cent, for Guinea 3.0 per cent, for Niger 3.1 per cent. GNP per capita in 1981 in Burkina Faso stood at \$240, in Guinea \$300 and in Niger \$330. The per cent of agriculture in GDP

in 1981 stood at 41 per cent in Burkina Faso, in Guinea 37 per cent and in Niger 30 per cent.

(2) Agricultural match: Uganda (early intensive adjuster) and Ethiopia (control). Matched according to distribution of agriculture to GDP. In the case of Uganda this stood at 75 per cent of GDP in 1981. For Ethiopia the comparable figure was 65 per cent.

(3) Non-agricultural match: Zambia and Zaire (adjusters) and Botswana (pure control). All three countries have relatively high levels of industry and services in GDP. The share of agriculture in GDP in 1981 was only six per cent in Botswana, 32 per cent in Zaire and 18 per cent in Zambia.

(4) Growth rate match: Kenya and Malawi (early intensive adjusters) and Cameroon and Lesotho (controls until 1988). The average annual growth rate of GDP from 1970-81 was 5.8 per cent in Kenya, 5.6 per cent in Malawi, 6.3 per cent in Cameroon and 8.4 per cent in Lesotho.

(5) 50-50 GNP match: Mali (adjuster), Sudan (early intensive adjuster) and Rwanda (control). Matched because distribution of agriculture to and industry/services approximately equally split. In the case of Mali 42 per cent of total GDP was agriculture; the balance was made up of industry and services. In Sudan approximately 40 per cent of total GDP was agriculture and in Rwanda 46 per cent of GDP was to agriculture.

The indicators used in the following analysis are government support for the health sector, immunisation coverage, population per physician, access to safe water, access to sanitation, provision of nutrition, life expectancy at birth, infant mortality and under five mortality rate, and primary, secondary and female school enrolment rates. The rationale for using these indicators are that they relate to the priority areas examined as part of the basic needs approach in chapter five.

More specifically, government support for the health sector is used to determine if the countries in question are reorientating their expenditure pattern away from non-priority areas (such as military expenditure) to the health sector. The use of

expenditure to the health sector as a percent of total government expenditure will not capture if a country is building more district hospitals and health posts as is consistent with a PHC or basic needs strategy. One way to correct for this would be to obtain the relevant data from various sources. However, this data is not routinely collected, and time series information that is comparable is not available. Mills (1990, 108) has also recognised the dearth of data available to determine the share of hospitals in health sector resource use.

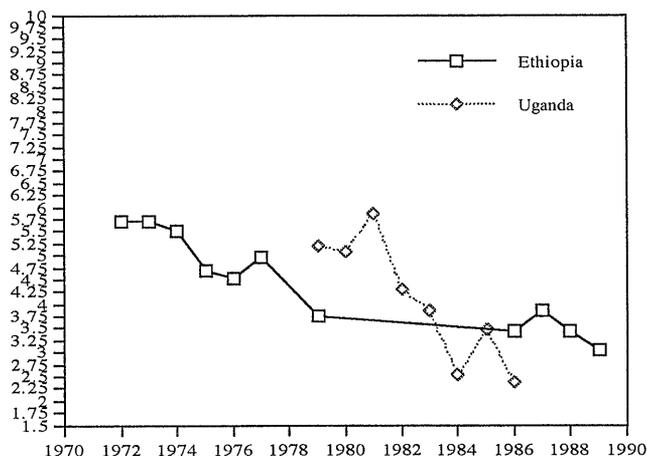
Immunisation coverage is used as an indicator because it is consistent with GOBI-FFF approach, PHC and basic needs. Population per physician is used as an indicator because it will show if more resources are being directed into the health system at a time of increasing population pressure. Population per nursing person would have been a valuable indicator to use as it would have captured paramedical personnel such as birth attendants. However, unfortunately, data of this nature is not available (World Development Reports, various).

Access to safe water and sanitation are used because they are important inputs. The provision of safe water has been identified by nearly all national governments and aid agencies as an area of high priority. In addition, the provision of hand dug or hand pump wells is consistent with basic needs. Primary, secondary and information on female enrolment rates, is used as most researchers agree that education has a powerful influence on health status changes. Information regarding female educational obtainment is viewed separately as it has been identified by the Bank (1994a), in *Investing in Health*, and others, as a high priority area. It too is consistent with the basic needs approach.

The nutrition index, child and infant mortality rates and life expectancy at birth are used to determine how health and nutrition status has changed following macroeconomic reforms.

7.3.2 Government Support for the Health Sector

Both the adjuster, Uganda, and Ethiopia, the control, did worse in the per cent of total government expenditure to the health sector in the adjusting period than prior to it. The mean expenditure from 1972 to 1979 for Ethiopia was 4.98 per cent. From 1986 to 1989 this fell to 3.44 per cent. In Uganda, the mean expenditure was 5.14 per cent from 1979-80, after which the mean expenditure fell to 3.73 per cent. The with without comparison reveals that the control did better during the adjusting period than the non-control. As of 1986 the percentage of total government support to the health sector was a meagre 2.39 per cent in Uganda, while Ethiopia's was slightly better at 3.45 per cent.

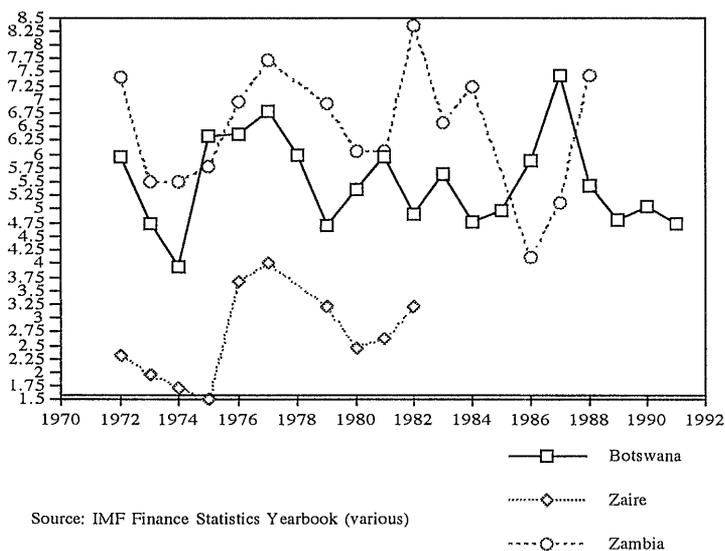


Source: IMF Government Finance Statistics Yearbook (various)

Figure 7.1 Agricultural Match — Government Support for the Health Sector (expenditure to the health sector as a percentage of total government expenditure)

An examination of the non-agricultural match shows fairly wide variations from year to year, yet it appears that the non-adjuster has done better; both in terms of before after and with without. Since, data is lacking for Zaire, the analysis concentrates on Botswana (control) and Zambia. Zambia's mean percentage was 6.48 from 1972 to

1980. This rose to a mean of 7.27 per cent from 1981-87. Botswana, however, showed a slight decline; from a mean of 5.57 from 1972-80 to a mean of 5.41 from 1981-91. Another way of looking at the data shows that Zambia ended 1988 with 7.43 per cent of the government's expenditure going to the health sector, whereas Botswana's support was at 5.45 per cent. However, given the fluctuations in the Zambian data, and lack of data past 1988, it is not clear whether Zambia has consistently been able to outperform Botswana during the adjustment period.



Source: IMF Finance Statistics Yearbook (various)

Figure 7.2 Non-Agricultural Match — Government Support for the Health Sector (expenditure to the health sector as a percentage of total government expenditure)

The growth rate match reveals that there is a split in the performance of adjusters and the controls. In the case of the EIAL Kenya, during the adjustment period the percentage of government expenditure to the health sector declined steadily. It began 1981 at 7.81 per cent, by 1991 this had fallen to over two percentage points to 5.41 per cent. In contrast, Malawi, the other EIAL country, begins 1981 at 5.16 per cent and this increases to 7.26 per cent by 1988 (the latest year when data is available).

The before-after analysis for the control, Lesotho, shows a better picture than both adjusters. In 1982, in Lesotho, government support for the health sector stood at 6.15 per cent of total government expenditure, by 1991 this had increased dramatically to 11.46 per cent. However, in mean terms, Lesotho's performance prior to and during the adjustment period was less dramatic: from 1972 -1974 the mean was 7.02 per cent, this compares to a mean from 1982-1991 of 8.08 per cent. In Cameroon the other control, support for the health sector also declined from a mean of 4.76 per cent 1976 to 1980 to a mean of 3.94 per cent from 1981-89. In addition in absolute terms Cameroon's performance is lower than that of both adjusters.

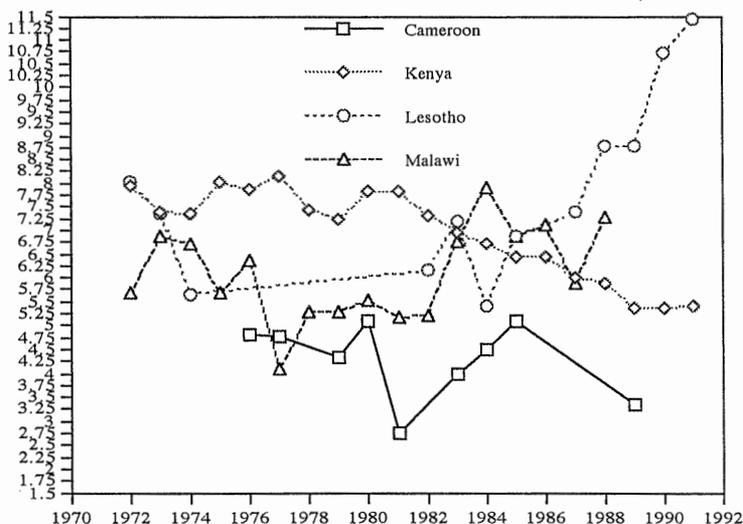


Figure 7.3 Growth-Rate Match — Government Support for the Health Sector (expenditure to the health sector as a percentage of total government expenditure)

7.3.3 Health Care Delivery

The World Health Assembly in 1977 adopted a goal of providing full immunisation coverage for all the world's infants by 1990 (UNICEF 1986, 1). Increased immunisation was also adopted by many developing nations as a means of achieving

the World Health Organization's goal of 'Health for All' by the year 2000, and as a critical component of any primary health care strategy. Increased immunisation coverage was estimated to cost approximately \$5 for full immunisation against the six most common childhood diseases (UNICEF 1986, 101). Coverage would be expanded in two main ways. First, the use of existing services would be increased by informing households and community organisations about the benefits obtainable from a full course of prevention. Second, where distance was a deterrent to increasing demand services would be moved closer to households.

Immunisation was targeted at the following six diseases: measles, pertussis (whooping cough), tetanus, poliomyelitis and tuberculosis. Measles was targeted because without immunisation it was estimated that 100 per cent of children between the ages of six and 3 years old would contract the disease in developing countries (UNICEF 1986, 102). Measles is viewed as an important disease to eradicate as serious complications may result in 30 per cent of the cases. These complications could lead to pneumonia, blindness, deafness, malnutrition and diarrhoea. Whooping cough, an infection of the respiratory tract, that is very contagious in early stages, was targeted because it can lead to serious cases of pneumonia. Tetanus vaccination was targeted for increase in coverage due to the particular danger it poses during the neonatal period. Unsanitary treatment immediately following birth could lead to an infant contracting the tetanus bacillus which could lead to potentially fatal respiratory problems. Polio, which can lead to paralysis, and sometimes death, was also targeted. As coverage was quite high in many areas the drive was towards eradication. Tuberculosis immunisation was also targeted at children as it has been estimated to cause 30,000 deaths annually in developing countries (UNICEF 1986, 103). Immunisation of infants was encouraged as the efficacy of the vaccine in adults remains an unresolved issue. Finally increased immunisation coverage against diphtheria, an infection of the throat (and sometimes the heart and the brain) was encouraged. Table 7.5 through 7.9 give an indication of the success that governments, multilateral and bilateral agencies have had in promoting increased

immunisation coverage in Africa during the 1980s. The tables breakdown information on immunisation in the control — adjuster matches.

Table 7.5 Adjuster — Control DPT Immunisation 1980-92

	1980-82	1986-87	Difference	1981	1990-92	Difference
Burkina Faso	2.0	32.0	+30.0	2.0	39.0	+37.0
Niger	6.0	5.0	-1.0	6.0	21.0	+15.0
Guinea	17.3	35.0	+17.7	..	52.0	?
Uganda	9.0	30.0	+21.0	9.0	72.0	+61.0
Ethiopia	3.0	11.5	+8.5	6.0	13.0	+7.0
Zaire	18.0	35.0	+17.0	18.0	32.0	+14.0
Zambia	70.5*	66.0	-4.5	44.0	57.0	+13.0
Botswana	70.0	64.5	-5.5	64.0	82.0	+18.0
Kenya	70.0	72.0	+2.0	..	85.0	?
Malawi	58.0	74.0	+16.0	66.0	86.0	+20.0
Cameroon	5.0	34.0*	+29.0	5.0	37.0	+32.0
Lesotho	56.0	55.0*	-1.0	56.0	58.0	+2
Mali	..	4.5	?	..	34.0	?
Sudan	..	..	?	1.0	67.0	+66.0
Rwanda	17.0	78.0	+61.0	17.0	85.0	+68.0

Source: WHO (1992) and UNICEF (1994, 1992)

Note: * for the period 1983-85.

Table 7.6 Adjuster — Control TB/BCG Immunisation

	1980-82	1986-87	Difference	1981	1990-92	Difference
Burkina Faso	16.0	52.0	+36.0	16.0	66.0	+50.0
Niger	28.0	..	?	28.0	40.0	+12.0
Guinea	..	5.0	?	4.0	65.0	+61.0
Uganda	18.0	62.5	+44.5	18.0	98.0	+80.0
Ethiopia	5.5	20.5	+15	10.0	21.0	+11.0
Zaire	34.0	54.5	+20.5	34.0	65.0	+31.0
Zambia	..	..	?	72.0	83.0	+11.0
Botswana	76.0	64.5	-11.5	80.0	71.0	-9.0
Kenya	..	80.0	?	..	93.0	?
Malawi	92.7	95.0	+2.3	86.0	99.0	+13.0
Cameroon	8.0	..	?	8.0	52.0	+44.0
Lesotho	81.0	..	?	81.0	59.0	-22.0
Mali	19.0	18.0	-1.0	19.0	70.0	+51.0
Sudan	..	..	?	3.0	75.0	+72.0
Rwanda	51.0	87.5	+36.5	51.0	94.0	+43.0

Source: WHO (1992) and UNICEF (1994, 1992)

Table 7.7 Adjuster — Control Polio Immunisation

	1980-82	1986-87	Difference	1981	1990-92	Difference
Burkina Faso	2.0	25.0	+23.0	2.0	39.0	+37.0
Niger	6.0	..	?	6.0	21.0	+15.0
Guinea	..	1.0	?	..	52.0	?
Uganda	8.0	30.5	+22.5	8.0	72.0	+64.0
Ethiopia	3.0	11.5	+8.5	7.0	13.0	+6.0
Zaire	18.0	35.5	+17.5	18.0	31.0	+13.0
Zambia	..	..	?	77.0	59.0	-18.0
Botswana	71.0	59.0	-12.0	71.0	82.0	+11.0
Kenya	..	72.0	?	..	85.0	?
Malawi	40.7	67.0	+26.3	68.0	84.0	+16.0
Cameroon	5.0	..	?	5.0	37.0	+32.0
Lesotho	54.0	..	?	54.0	58.0	+4.0
Mali	..	4.5	?	..	34.0	?
Sudan	..	..	?	1.0	67.0	+66.0
Rwanda	15.0	79.0	+64.0	15.0	85.0	+70.0

Source: WHO (1992) and UNICEF (1994, 1992)

Table 7.8 Adjuster — Control Measles Immunisation

	1980-82	1986-87	Difference	1981	1990-92	Difference
Burkina Faso	23.0	52.0	+29.0	23.0	41.0	+18.0
Niger	19.0	..	?	19.0	28.0	+9.0
Guinea	..	9.0	?	15.0	50.0	+35.0
Uganda	22.0	40.0	+18.0	22.0	70.0	+48.0
Ethiopia	5.0	11.5	+6.5	7.0	10.0	+3.0
Zaire	24.0	40.0	+16.0	23.0	31.0	+8.0
Zambia	..	..	?	21.0	56.0	+35.0
Botswana	67.7	62.0	-5.7	68.0	65.0	-3.0
Kenya	..	65.0	?	..	81.0	?
Malawi	59.0	73.0	+14.0	64.0	82.0	+17.0
Cameroon	16.0	..	?	16.0	37.0	+21.0
Lesotho	49.0	..	?	49.0	80.0	+31.0
Mali	..	6.5	?	..	41.0	?
Sudan	..	..	?	1	66.0	+65.0
Rwanda	42.0	68.5	+26.5	42	81.0	+39.0

Source: WHO (1992) and UNICEF (1994, 1992)

Table 7.9 Adjuster — Control Pregnant Women Tetanus Immunisation

	1981	1990-92	Difference
Burkina Faso	11.0	26.0	+15.0
Niger	3.0	45.0	+42.0
Guinea	5.0	70.0	+65.0
Uganda	20.0	16.0	-4
Ethiopia	..	7.0	?
Zaire	..	29.0	?
Zambia	..	20.0	?
Botswana	32.0	46.0	+44.0
Kenya	..	37.0	?
Malawi	..	66.0	?
Cameroon	..	7.0	?
Lesotho	..	40.0	?
Mali	1.0	8.0	+7.0
Sudan	1.0	14.0	+13.0
Rwanda	5.0	88.0	+83.0

Source: UNICEF (1994, 1992)

A comparison of adjusters with controls reveals a mixed picture for increased immunisation coverage. An examination of all of the matches reveals that there is no reason to believe that non-adjusters do better at expanding immunisation coverage or in absolute terms. In only one pairing, Uganda (EIAL) and Ethiopia, does the adjuster clearly do better than the control at improving vaccination coverage. In this case, DPT coverage is much higher in Uganda, in terms of absolute level and in increase in coverage, than in Ethiopia. The same is true of TB immunisation; the percentage of infants immunised rose 80 per cent from 1981-1992 to 98 per cent in Uganda, whereas in Ethiopia coverage expanded only by 11 per cent to a total of 21 per cent of infants immunised during the same time period. Immunisation of infants against polio and measles was also better in Uganda than in Ethiopia. Both started from relatively low bases, however by 1992 Uganda was able to cover approximately 70 per cent of infants against polio and measles while Ethiopia could only immunise approximately 10 per cent of the infants against the same two diseases. The growth rate match, Kenya-Malawi — Cameroon-Lesotho also indicates that perhaps adjusters do better than non-adjusters. However, this is not as clear cut as in the Uganda-Ethiopian pairing. In terms of absolute performance the adjusters do better than the non-adjusters. For instance, DPT immunisation in Kenya and Malawi for 1992 stood

at 85 per cent, while in the non adjusters the absolute level was lower; 37 per cent in Cameroon and 58 per cent in Lesotho. The same is true for TB and polio immunisation. By 1992 coverage was over 90 per cent for TB and over 80 per cent in polio for the adjusters, while coverage was under 60 per cent for the controls or the same diseases. For the other diseases, immunisation coverage in absolute terms is mixed, as is the improvement during the adjustment time frame.

The rest of the matches indicate that, in general, progress has been made in all countries, but the performance on different types of vaccinations varies. For instance, in the overall match, the control (Burkina Faso) does better in expanding DPT and polio coverage, whereas, Guinea does better at expanding coverage in TB, measles and tetanus in pregnant women. Niger, also does better than the control in increased immunisation of pregnant women for tetanus. The non-agricultural match indicates that the control (Botswana) does better in absolute terms than the adjusters. However, this reflects the fact that Botswana started the adjustment period with a higher base; indicating that the infrastructure framework for immunisation was already in place by 1980. In general terms, coverage expanded in all three countries (or declined slightly in the case of Botswana) for all diseases. On the whole the increase in immunisation tends to favour the adjusters, but the pattern is not without exceptions, and again this partly reflects the fact that Botswana started from a higher base. The 50-50 match, shows that the control does better in TB and measles in absolute terms but the adjusters do better in increasing immunisation coverage. Information on tetanus immunisation indicates that the non-adjuster does better than the adjuster in increasing coverage and in absolute terms. For polio and DPT the adjusters and the control do as well in expanding coverage, however in absolute terms the performance of the control is better.

As another measure of health care delivery, population per physician or nursing person can be examined in order to determine if World Bank and Fund programme lending adversely affects inputs into the health production function. Population per physician numbers will give a reasonable indication of how the formal,

urban based medical system has changed throughout the 1980s in Africa. An examination of the number of nursing personnel will give an indication of how health care delivery has changed in terms of primary health care. Also, it should give an indication of how service to rural areas has changed.

Due to limitations in the data, analysis on population per nursing personnel cannot be carried out, and an examination of population per physician can only be carried out on two matches. The control in the non-agricultural pairing does much better than the adjuster in improving health care delivery as measured by population per physician. Botswana records a 30 per cent improvement in the ratio from 1980-90, whereas Zambia records a decline. However, the decline is rather small with Zambia ending the period close to the same level as it started. For the 50-50 match, the reverse is true; the adjuster does better than the control. Rwanda experienced a substantial worsening of its population per physician ratio from 31,340 to 72,990 from 1980-90. Mali, the adjuster, experienced an overall improvement following a decline in the ratio from 1980-84.

Table 7.10 Adjuster — Control Population per Physician

	1980	1984	1990	1980-84 per cent change	1980-90 per cent change
Zambia	7,670	11,290	7,150	-67.0	-7.0
Botswana	7,380	6,900	5,150	+7.0	+30.0
Mali	22,130	25,390	19,450	-13.0	+12.0
Rwanda	31,340	34,680	72,990	-10.0	-57.0

Source: World Bank (World Development Reports, various)

7.3.4 Health Conditions

Chapter five demonstrated that the provision of clean drinking water and sanitation facilities is an important component in ensuring the well being of individuals. Chapter six showed that the health environment surrounding individuals was an important part of an individuals' or households health production function. Given that clean water is necessary for basic hygiene, food preparation and that water from unprotected sources can cause typhoid, cholera, dysentery and hepatitis, this section of this chapter will show how health conditions have altered during the economic

upheaval in the 1980s. Moreover, since the provision of sewerage facilities is also a key component in preventing illness, access to sanitation facilities will be examined. Tables 7.11 and 7.12 compare the performance of adjusters with non-adjusters in terms of rural and urban access to safe water and sanitation facilities.

Table 7.11 Adjuster — Control Access to Safe Water

	Urban				per cent change 1980-90	Rural				per cent change 1980-90
	1980	1985	1988	1990		1980	1985	1988	1990	
Burkina Faso	27	43	44	44	+17	31	69	72	70	+39
Niger	41	35	100	98	+57	32	49	52	45	+13
Guinea	69	62	55	100	+31	2	15	24	37	+35
Uganda	45	45	45	60	+15	8	12	12	30	+22
Ethiopia	16*	..	70	70	+54	69*	..	11	11	-58
Malawi	77	66	66	66	-11	15	49	49	49	+34
Lesotho	37	..	59	59	+22	11	40	45	45	+34
Mali	37	48	100	41	+4	0	17	36	4	+4
Sudan	100*	90	90	90	-10	31	20	20	20	-11
Rwanda	48	79	46	84	+36	55	48	64	67	+12

Source: World Bank (1994 a), figure for 1985 from World Resource Institute (1990); figure for 1988 from World Resource Institute (1992)

Note: from World Resource Institute (1990)

Access to safe drinking water refers to water that is provided by standpost or connections to a dwelling. Table 7.11 indicates that, in general, non-adjusters have done better in providing access to safe water. Ethiopia, made better progress in expanding access to drinking water in urban areas than Uganda did throughout her adjustment period. Access increased by 54 per cent in Ethiopia as opposed to 15 per cent in Uganda. However, this has come at the expense of providing access in rural areas. Here, Uganda, even during her adjustment was able to make substantial progress while Ethiopia suffered from a major decrease in access to safe water in rural areas. In the 50-50 match countries, the non-adjuster, Rwanda, does better than the adjusting countries. Rwanda increased access to potable water in both rural and urban areas, from 1980-1990, exceeding that found in Mali and the Sudan. Moreover, by 1990, Rwanda had, in absolute terms, the highest access figure for access to safe drinking water in rural areas, and only trailed Sudan by six per cent in access to urban

areas. Mali, which looked set to provide universal access to safe drinking water in urban areas in 1988 experienced a fall in access by over 50 per cent.

A similar situation is evident in the growth rate match. The non-adjuster, Lesotho, does substantially better in improving access to safe water in urban areas than does the adjuster Malawi. Access in Lesotho improved by 22 per cent from 1980-1990, whereas Malawi experienced an 11 per cent decline. Access was similar, and unchanging, for rural areas during the later part of the 1980s in both countries. The overall match reveals that access to safe water was good in all countries, but the balance shifts slightly in favour of the adjusters. In urban areas access improved 57 and 31 per cent for Niger and Guinea from 1980-1990, while in Burkina Faso the improvement was only 17 per cent. However, the slight improvement in urban areas of Burkina Faso, implies that the government was concentrating on increasing access to rural areas. This is borne out in the figures; access improved 39 per cent in rural areas in Burkina Faso, while only improving by 13 per cent in Niger.

Table 7.12 Adjuster — Control Access to Sanitation

	Urban				per cent change 1980- 90 or 1980-88	Rural				per cent change 1980-90
	1980	1985	1988	1990		1980	1985	1988	1990	
Burkina Faso	38	38	35	35	-3	5	5	5	5	0
Niger	36	..	39	71	+35	3	..	3	4	+1
Guinea	5	..	65	..	+60	..	..	..	..	..
Mali	79	10	94	81	+2	0	..	5	10	+10
Sudan	63	40	40	40	-23	0	5	5	5	+5
Rwanda	60	77	45	88	+28	50	55	62	17	-33

Source: World Bank (1994 a), figure for 1985 from World Resource Institute (1990); figure for 1988 from World Resource Institute (1992)

Access to sanitation facilities refers to sewer connections, communal toilets, pit privies or pour-flush latrines. For access to these facilities, adjusters, on the whole, do better. The improvement in access to sanitation facilities in Niger and Guinea exceed that of the non-adjuster Burkina Faso. To wit, Niger improved access by 35 per cent from 1980-90 and Guinea improved access by 60 per cent from 1980-88. At the same time, access in Burkina Faso declined by three per cent in urban areas. During the

time period 1980-1990 access in rural areas remained unchanged. The 50-50 match reveals that access to sanitation facilities in rural areas improved in the adjusters, while access declined in the control. Access improved in Mali by ten per cent from 1980-90 and remained unchanged in Sudan, but declined by 33 per cent in Rwanda. However, this decline in Rwanda was partially offset by a gain in access of 28 per cent in urban areas. from 1980-90. This is in contrast to a 23 per cent decline in Sudan and a two per cent increase in Mali.

7.3.5 Nutrition

Longitudinal data on nutrition status changes is impossible to obtain. Data on nutrition status, as measured with reference to some standard of height-for-age, weight-for-height, weight-for-age, or percentage of underweight babies is not collected on a routine basis. This is due to the fact that surveys regarding health and nutrition status are not regularly conducted; over a decade can go by without information being collected. Occasionally, academic researchers, UNICEF, or FAO take nutrition surveys in certain regions of a particular country. Rarely ever are the findings of the original survey followed up with additional studies.

Given that there is a lack of time series data on nutrition status, use is made of information provided by the Food and Agricultural Organization (Food Production Yearbooks, various). In the first instance information on average per capita calorie intake is collected. This refers to the total supply of calories available for human consumption divided by the population. Food supply includes food imports but excludes exports, animal feeds, seeds and food wasted in processing and storage and lost in transport. Thus, for any time period it is possible to obtain a reasonable estimate of the daily availability of calories per person in a country. This then can be related to the minimum daily requirement for a country. Such data is available from the World Resources Institute (1987). Once this information is collected it is possible to construct an index of nutrition which relates the actual average per capita calorie intake to the minimum requirement for any given country. This is calculated as:

$$N = \frac{C - M}{M} \times 100$$

where N= Nutrition, C= average per capita calorie intake, M=minimum daily requirement.

There are several problems associated with using this technique to measure nutrition. First, if the population estimate is wrong the average per capita intake figure will be incorrect, thus giving an erroneous value for nutrition. Moreover, per capita supply of calories is an average; it does not indicate what is actually consumed by individuals nor does it allow for variation in consumption by individuals. Third, the minimum daily requirement does not give information on differences that may exist in the diet of different population groups in different ecological or geographic areas of the country.

Nonetheless, such information should provide an indication of the general level of nutrition in a country. Moreover, it should be useful in showing how the nutrition situation in a country changes from period to period, and how countries compare in their nutrition situation. Maasland and van der Gaag (1992, 57) report that in OECD countries the nutrition index will take a value between 15 and 40. Within this range undernutrition is not considered to be a problem. However, if the nutrition index falls below -15 then acute undernutrition is said to exist (Maasland and van der Gaag 1992, 57).

Table 7.13 shows that the nutrition situation in the Sub Saharan countries studied remained, at best, in a precarious state throughout the 1980s. An examination of the average for 1979-90 shows no clear difference in the performance of adjusters and non-adjusters. For instance, Burkina Faso, the non-adjuster in the overall match scored -14 for the period, while Guinea, an adjuster scored -12. In the 50-50 match, the performance of all three countries were similar for the period 1979-90; Rwanda scored -15, Mali scored -13 and Sudan had -10. Of the growth rate match and non-agricultural match the controls appear to do slightly better. Zambia, had an average

score of -10 for the period 1979-90, while the non-adjuster Botswana scored -5. However as compared to the adjuster, Zaire, Botswana's performance is marginally worse. The same holds true for the growth rate match. Kenya does worse than the controls, Cameroon and Lesotho, but Malawi, the other adjuster does better than Cameroon, but worse than Lesotho. Overall the best performers in nutrition were: Niger (adjuster), Botswana (control) and Lesotho (control).

Table 7.13 Adjuster — Control Nutrition Situation

	1979-81	1981-83	1984-86	1986-88	1988-90	Average 1979-90
Burkina Faso	-23	-10	-14	-16	-6	-14
Niger	-5	+1	0	-1	-4	-2
Guinea	-2	-20	-22	-13	-3	-12
Uganda	-9	0	-5	-13	-7	-7
Ethiopia						
Zaire	-4	-3	-3	-6	-4	-4
Zambia	-5	-13	-8	-12	-13	-10
Botswana	-7	-7	-4	-3	-3	-5
Kenya	-7	-13	-8	-13	-11	-10
Malawi	-2	+4	+2	-11	-12	-4
Cameroon	+1	-9	-12	-8	-5	-7
Lesotho	+3	+2	+1	0	-6	0
Mali	-19	-20	-14	-10	-4	-13
Sudan	-6	-4	-12	-16	-13	-10
Rwanda	-11	-5	-19	-22	-18	-15

Source: for average per capita intake FAO Production Yearbooks 1993, 1989, 1988, 1986 (FAO 1992, 1990, 1989, 1986); for minimum daily requirement World Resource Institute (1987)

7.3.6 Health Status Indicators

An examination of life expectancy at birth, which indicates the number of years that a new-born infant is expected to live if the prevailing patterns of mortality were to remain the same throughout its life, shows that in virtually every case the control countries did better than the adjusters. Life expectancy at birth declined by seven years in Uganda from 1980-90. Zambia suffered a two year decline, while Zaire only improved by two years from 1980-90. In contrast Botswana, which started from a higher base improved by nine years. In the overall match Burkina Faso improved life expectancy at birth by ten years from 1980-90 while the adjusters, Malawi and Guinea saw a decline of five and one years respectively. In all three matches life expectancy at birth was higher for the non-adjusters than the adjusters as of 1990. In the growth

rate match, the increase in life expectancy was also higher in the non-adjusters than in the adjusters. Cameroon and Lesotho saw life expectancy increase by ten and five years from 1980-90 while the adjusters increased by less than 5 years. However, Kenya did have the highest life expectancy by 1990. Only in the 50-50 match is the situation less clear. From 1980-86 Life expectancy in years increased by approximately the same amount. However due to a decline in 1990 in Rwanda, life expectancy at birth from 1980-90 shows a decline in the control while showing an increase in the adjusters.

Table 7.14 Adjuster — Control Life Expectancy at Birth

	1980	1985	1986	1988	1990	Years gained/lost 1980-86	Years gained/lost 1980-90
Burkina Faso	39	44	47	47	49	+8	+10
Niger	43	45	44	45	45	+1	+2
Guinea	45	37	42	43	44	-3	-1
Uganda	54	49	48	48	47	-6	-7
Ethiopia	40	43	46	47	48	+3	+8
Zaire	47	51	52	48	49	+5	+2
Zambia	49	51	53	53	47	+4	-2
Botswana	..	58*	59	67	67**	+1	+9
Kenya	55	57	57	59	59	+2	+4
Malawi	44	44	45	47	47	+1	+3
Cameroon	47	54	56	56	57	+9	+10
Lesotho	51	53	55	56	56**	+4	+5
Mali	43	45	47	49	48	+4	+5
Sudan	46	48	49	50	57	+3	+11
Rwanda	45	47	48	49	44	+3	-1

Source: World Bank (World Development Reports, various)

Notes: * for 1984; ** for 1989

A regression analysis using a dummy variable is used to determine if there is a structural change in life expectancy at birth during the adjustment period. This is a counterfactual analysis to determine if the adjusting countries experience a structural shift following the introduction of adjustment programmes. The relationship between time is conventionally thought of as non-linear in nature. Thus the following ordinary least squares regression is undertaken using the equation:

$$\log y = \log \alpha + \beta \log t + z$$

Where y is life expectancy at birth, t is time and z the dummy variable. The regression analysis is shown in table 7.15. The R^2 values indicate that the relationship between time and life expectancy at birth is non-linear except in the case of Uganda which has had very little change in life expectancy since the 1960s. T-stats are not reported in this, or following, OLS analyses. Brennan and Croft (1994) warn that tests of significance in this type of analysis are inappropriate. As this is a non-randomised investigation it is determined that the use of the t-stat would be misleading

Table 7.15 Ordinary Least Squares Analysis of Life Expectancy at Birth for Adjusters
Regression Coefficients

	Log Constant	Log Time	Dummy	R^2
Niger 1	3.64	.058		.46
Niger 2	3.61	.090	-.062	.54
Guinea 1	3.64	.037		.14
Guinea 2	3.55	.143	-.203	.74
Uganda 1	3.90	-.004		.00
Uganda 2	3.90	.000	-.012	.00
Zaire 1	3.71	.084		.83
Zaire 2	3.72	.076	.015	.83
Zambia 1	3.74	.081		.67
Zambia 2	3.74	.084	-.005	.67
Kenya 1	3.82	.091		.84
Kenya 2	3.81	.113	-.044	.86
Malawi 1	3.66	.067		.56
Malawi 2	3.62	.137	-.138	.79
Mali 1	3.57	.109		.96
Mali 2	3.36	.120	-.020	.97
Sudan 1	3.74	.063		.57
Sudan 2	3.73	.095	-.064	.63

Improvements in the infant mortality rate tend to favour the controls over the adjusters. Progress on decreasing the number of infant deaths in Sub Saharan Africa has been notable in all the matches reviewed, except for the adjuster in the agricultural match and the adjuster in the 50-50 match. For Uganda the infant mortality rate has actually increased during the 1980s. In the adjuster, Uganda the rate went from 97 infant deaths per 1000 population in 1980 to 117 in 1990. In Ethiopia the rate increased from 146 in 1980 to 155 in 1986 and then fell back to 132 in 1990. In Mali the rate increased by twelve between 1980 to 1990 from 154 to 166. This compares with the performance of the control, Rwanda, where the rate fell from 137 per 1000 to 120 per 1000 in 1990. The other adjuster in the group saw a similar performance. In the growth rate match the performance of adjusters and non-adjusters is similar. In all four countries the infant mortality rate declined by about twenty. In the non-agricultural match the performance of the control is better than that of the adjusters. Botswana's rate declined from 72 deaths per 1000 in 1984 to 38 deaths per 1000 in 1990. This was a faster decline than that of the adjusters who were only able to shave off 18 deaths, in the case of Zaire, and 24 deaths in the case of Zambia from 1980 to 1990. The performance of Botswana is also more noteworthy in that not only was the decline faster, but that the IMR started at a relatively low base to begin with. In the overall match the control also does better than the adjusters. The impressive performance of Burkina Faso which saw the rate decline from 211 in 1980 to 134 in 1990 was much better than Niger whose rate declined by 18, and Guinea's which declined by 27 during the same period. However, it should be noted that the infant mortality rate in 1980 was much higher in Burkina Faso (Upper Volta) in 1980, thus allowing for substantial improvements to occur. However, even if the base year was changed in the Burkina Faso case to 1981 the rate of decrease from 1981 to 1990 would have been much faster than that of the adjusters.

Table 7.16 Adjuster — Control Infant Mortality Rate

	1980	1982	1984	1986	1988	1990	Change in rate 1980-86	Change in rate 1986- 1990	Change in Rate 1980-90
Burkina Faso	211	157	146	140	137	134	-71	-6	-77
Niger	146	132	142	135	133	128	-11	-7	-18
Guinea	165	190	176	148	143	138	-17	-10	-27
Uganda	97	120	110	105	101	117	+8	+12	+20
Ethiopia	146	122	172	155	135	132	+9	-23	-14
Zaire	112	106	103	100	96	94	-12	-6	-18
Zambia	106	105	85	82	78	82	-24	0	-24
Botswana	..	..	72	69	41	38		-31*	-34**
Kenya	87	77	92	74	70	67	-13	-7	-20
Malawi	172	137	158	153	149	149	-19	-4	-23
Cameroon	109	92	92	96	92	88	-13	-8	-21
Lesotho	115	94	107	102	98	93	-13	-9	-22
Mali	154	132	176	144	168	166	-10	+24	+12
Sudan	124	119	113	108	106	102	-16	-6	-22
Rwanda	137	126	128	116	120	120	-21	+4	-17

Source: World Bank (World Development Reports, various)

Note * change in rate 1984 to 1988; ** change in rate 1984 to 1990.

In order to determine if there is any structural change in operation during the adjustment period in adjusting countries, the following regression model is used:³⁵

$$Y = \alpha + \beta t + z$$

Where Y is the infant mortality rate, α the constant, βt the time period and z a dummy variable. The dummy variable takes a value of one beginning in the year that adjustment money was dispersed, otherwise the value is zero. A one year lagged dummy variable is also included. Data was analysed using PC Give. Caution is urged in the interpretation of the results as the degrees of freedom are low (from 15 to 12) and the data used comes from the World Development Reports.³⁶

The regression coefficient time in model one, in all cases except Mali and Guinea, is negative indicating that infant mortality declines over time. The results of model 2 indicate that there is structural change occurring during the adjustment

period. Model three indicates where the dummy variable is lagged by one year, there is also a structural change. The R^2 value differs from country to country. Time regressed on infant mortality rate explains over .50 of the variability in IMR in Niger and Zaire. In Guinea the R^2 is .026, in Zambia .58, in Kenya .24, in Malawi .15. In Mali there appears to be no relationship between time and in the Sudan very little relationship.

Table 7.17 Ordinary Least Squares Analysis of Infant Mortality Rate for Adjusters

Country	Regression Coefficients				R^2
	Constant	Time	Dummy	Lagged Dummy	
Niger 1	167.74	-3.40			.56
Niger 2	168.21	-3.87	4.72		.56
Niger 3	156.28	-2.97		8.53	.76
Guinea 1	160.15	1.43			.026
Guinea 2	159.23	1.04	-27.78		.028
Guinea 3	163.37	3.09		-20.24	.043
Zambia 1	119.38	-3.43			.42
Zambia 2	131.14	-1.76	-27.78		.58
Zambia3	107.77	-1.10		-10.54	.35
Zaire 1	111.83	-1.50			.83
Zaire 2	105.84	-1.84	8.98		.98
Zaire 3	115.57	-1.78		-1.26	.98
Kenya 1	95.21	-1.97			.24
Kenya 2	93.79	-2.23	4.98		.25
Kenya 3	81.58	-1.75		12.64	.18
Mali 1	158.71	.37			.00
Mali 2	158.58	.16	2.34		.00
Mali 3	140.24	1.21		11.26	.40
Malawi 1	160.46	-1.06			.15
Malawi 2	143.85	-1.85	23.98		.47

Table 7.17
(cont)

Malawi 3	174.85	-1.42		11.16	.48
Sudan 1	135.86	-1.66			.06
Sudan 2	146.22	-.48	-22.44		.11
Sudan 3	128.76	-.30		-6.72	.01
Uganda 1	122.97	-1.39			.15
Uganda 2	130.89	.38	-27.72		.42
Uganda 3	110.15	.16		-4.12	.02

UNICEF uses the under five mortality rate (U5MR) as the best indicator of human and economic progress. It also captures basic needs interventions and how they affect health status changes. It is a better than the IMR, as an output indicator, because it captures a wide variety of inputs, such as "the nutritional and health knowledge of mothers, the level of immunisation and ORT use, the availability of maternal and child health services (including prenatal care), food availability in the family, the availability of clean water and sanitation, and the overall safety of the child's environment (UNICEF 1993a, 83). A with without examination of this output measure shows that in three of the cases; the overall, the agricultural and the non-agricultural matches, the adjusters do worse in improving the rate of the decline than their controls. In the 50-50 match the adjusters do better than the control and in the growth rate match the situation is mixed.

The before-after analysis³⁷ reveals that the average annual reduction in the U5MR improved in Niger, Guinea, Kenya, Malawi, Mali and the Sudan during their adjusting periods. In Zaire, progress was still evident in reducing child deaths, however, as compared to the earlier, non-adjusting period, the progress declined from an annual average decrease in the U5MR of 2.0 per cent from 1960 to 1980 to 1.1 per cent 1980 to 1991. In the case of Zambia, the progress made in the pre-adjusting period was reversed in the adjusting period. In 1980 the U5MR stood at 160 by 1991 it had risen to 200 per 1000 live births.

Table 7.18 Adjuster — Control Under Five Mortality Rate

	Average Annual Reduction 1960-80 (per cent)	Average Annual Reduction 1980-91 (per cent)
Burkina Faso	1.8	1.9
Niger	1.1	1.6
Guinea	1.0	1.5
Uganda	0.8	0.0
Ethiopia	0.6	1.9
Zaire	2.0	1.1
Zambia	1.6	-2.0
Botswana	2.2	2.2
Kenya	2.9	3.6
Malawi	1.2	2.2
Cameroon	2.3	2.7
Lesotho	1.2	1.7
Mali	1.3	2.9
Sudan	1.6	2.0
Rwanda	0.8	1.3

7.3.7 Education

Chapter six noted that education has an important influence on health status. Table 7.19 demonstrates that in the performance of the matches is either similar or favours slightly the non-adjusting countries. The percentage change in primary school enrolment was broadly similar in the overall match and in the 50-50 match. In the 50-50 match the control, as of 1990 did better in absolute terms as far as enrolment went; Rwanda had 71 per cent of school aged children enrolled in primary level education, whereas the Sudan had 50 per cent and Mali only 25 per cent. In the overall match, as of 1990, all the countries had enrolment percentages of less than 40 but greater than 30 per cent. In the non-agricultural match the adjusters did worse than the control. Botswana maintained full enrolment throughout the 1980s, whereas Zaire and Zambia saw a 12 and three per cent decline respectively. The same holds true for the growth rate adjuster. Cameroon and Lesotho, the controls, maintained full enrolment during the 1980s, whereas Kenya suffered a five per cent decline (but still 95 per cent enrolment) and Malawi saw enrolment increase by only four per cent. Only one adjusting country did better than a control country. Uganda, in the agricultural match,

saw enrolment increase 21 per cent to 71 per cent from 1980-90, while Ethiopia saw enrolment decline 18 per cent to 25 per cent.

Table 7.19 Adjuster — Control Primary School Enrolment

	1980	1985	1988	1991	Change 1980-88	Change 1980-1991
Burkina Faso	19	32	35	30	+16	+11
Niger	23	28	30	29	+7	+6
Guinea	33	30	30	37	-3	+7
Uganda	50	70†	77	71	+27	+21
Ethiopia	43	36	36	25	-7	-18
Zaire	90	98	76	78**	-14	-12
Zambia	95	103	97	92	+2	-3
Botswana	96*	104	116	119	+4	+4
Kenya	108	94	93	95	-7	-5
Malawi	62	62	72	66	+10	+4
Cameroon	104	107	111	101	0 (full enrolment)	0 (full enrolment)
Lesotho	104	115	112	107	0 (full enrolment)	0 (full enrolment)
Mali	27	23	23	25	-4	-2
Sudan	51	49	49	50	-2	-1
Rwanda	70	64	64	71	-6	+1

Source: World Bank (World Development Reports, various) and UNESCO

Note: *for 1983; ** for 1989; † for 1987. The primary school enrolment rate refers to the percentage of age group enrolled in the first level of education, in most cases, from six to 11 years. Percentages above 100 can occur if some pupils are older or younger than the country's defined standard primary school age. Numbers over 100 are treated as 100.

For secondary school enrolment, the overall match reveals that the control did better in improving enrolment from 1980-1991, but that when compared to percentage enrolled by 1990 all three countries did equally as well. The reverse is true for the agricultural match; Uganda improved faster in secondary school enrolment from 1980-91 than Ethiopia did. However, as in the previous case, both countries ended up with similar levels of school enrolment by 1991. In the non-agricultural match, the per cent change in enrolment from 1980-91 was broadly similar, but the control, Botswana, reflecting its higher base in 1980, ended the period at a higher level. The growth rate match shows that the performance of the two controls and the adjuster Kenya were similar with respect to per cent change for 1980-91 and in levels achieved by 1991. However, comparing the controls to Malawi demonstrate that the adjuster did worse in both areas. The 50-50 match shows that the adjuster Sudan did the same as the control in improving enrolment from 1980-91, but in terms of the level of

the adjusters. In the case of Zaire this is noticeably slow. Compared to Zambia the performance is roughly equal, except in the area of females per 100 males in secondary education where Botswana has full female participation and Zambia only 60 per cent.

In the growth rate match females per 100 males is broadly similar for primary education where all countries have over 80 per cent of females enrolled. In secondary education the performance is mixed, where the adjuster Kenya, and control Lesotho have the highest score. In the 50-50 match, Rwanda outperforms the adjusters in females per 100 males in primary education. This situation is reversed in secondary education where Sudan does better than the adjuster.

Table 7.21 Adjuster — Control Percentage of Cohort Persisting to Grade Four (females)

	1970	1984	1985	1986	Change 1970-86
Burkina Faso	71	84	87	86	+15
Niger	75	76	..	93	+18
Guinea	..	62	71	77	?
Uganda	..	..	..	..	..
Ethiopia	57	45	45	56	-1
Zaire	56	..	54	..	-2
Zambia	93	97	..	..	+4
Botswana	..	95	94	97	?
Kenya	84	75	77	78	-6
Malawi	55	64	67	67	+12
Cameroon	59	58	85	85	+16
Lesotho	87	86	85	87	0
Mali	52	68	68	68	+16
Sudan	..	81	..	..	..
Rwanda	63	82	82	76	+13

Source: World Bank; World Development Reports (various)

Note: Information post 1986 is not available

Table 7.22 Adjuster — Control Females per 100 Males (Primary Education)

	1970	1985	1986	1988	1989	1990	Change 1970-86
Burkina Faso	57	58	59	59	61	62	+5
Niger	53	56	56	56	57	57	+4
Guinea	46	46	44	45	45	46	0
Uganda	65	..	82	82	..	..	..
Ethiopia	46	64	63	64	64	64	+18
Zaire	..	75	75	78	..	..	..
Zambia	80	89	90	90	91	91	+11
Botswana	113	110	108	107	106	107	0
Kenya	71	93	93	94	94	95	+24
Malawi	59	77	78	80	81	81	+22
Cameroon	74	84	84	85	85	85	+11
Lesotho	150	125	125	125	122	121	0
Mali	55	59	59	59	58	58	+3
Sudan	61	68	68	..	..	75	+14
Rwanda	79	96	97	97	99	99	+20

Source: World Bank; World Development Reports (various)

Table 7.23 Adjuster — Control Females per 100 Males (Secondary Education)

	1970	1985	1986	1988	1989	1990	Change 1970-86
Burkina Faso	33	47	47	46	48	50	+17
Niger	35	39	39	42	42	42	+7
Guinea	26	35	33	31	32	31	+5
Uganda	31	..	54	54	..	..	..
Ethiopia	32	64	64	67	67	67	+35
Zaire	..	40	40	..	..	..	..
Zambia	49	58	58	..	59	59	+10
Botswana	88	115	111	103	109	114	+12
Kenya	42	62	62	70	70	78	+26
Malawi	36	48	51	60	54	54	+18
Cameroon	36	59	62	64	68	68	+32
Lesotho	111	150	150	153	147	149	0
Mali	29	42	43	42	48	48	+19
Sudan	40	74	76	..	..	80	+40
Rwanda	44	26	29	35	52	56	+12

Source: World Bank; World Development Reports (various)

7.4 Summary

The above analysis reveals that, in almost every match, there is no difference and consistent pattern between the performance of adjustment and non-adjustment lending countries in terms of changes in health care delivery, health conditions or health status indicators. Virtually every country showed an improvement in immunisation coverage for infants, an expansion in safe water and sanitation and enrolment rates. The nutrition situation, however, remains worrisome, as most countries continue to suffer from widespread undernutrition. More specifically, the analysis, which examines the matches separately can find no reason to believe that adjusters have performed less well than the controls (see tables 7.21 and 7.22). For instance, the before after analysis, for the overall match, Niger, Guinea and Burkina Faso (control), shows that the improvement in immunisation coverage was better in the control than in the adjusters, but that all three countries saw an expansion in coverage throughout the 1990s. Furthermore, the control does much better in decreasing infant deaths from 1980-90 than the adjusters, however even the adjusters make substantial progress in reducing the IMR. In addition, the control also does better in terms of increasing primary and secondary school enrolment than the adjusters, yet here even the adjusters are showing a generally improving situation. On the other hand, improvement in health conditions favours the adjusters, although Burkina Faso also saw improvements everywhere except for urban sanitation. The nutrition situation remain equally precarious in all three countries.

In the agricultural match, the situation is clearer. In almost every instance the adjuster does better than the control. Uganda, throughout the 1980s, saw an often spectacular improvement in immunisation coverage where Ethiopia saw only a slight improvement. In terms of access to safe water in rural and urban areas, both countries experienced broadly similarly rates of improvements, however it would appear that Ethiopia is financing the increase in safe water to urban areas at the expense of rural areas. Primary school enrolment increased in Uganda, but decreased in Ethiopia which indicates that the longer term prospects for improving health status in Ethiopia

may be put into jeopardy. In both countries secondary school enrolment increased at approximately the same rate. Perhaps, of greater concern is the fact that both countries experienced a decline in government support for the health sector throughout the 1980s: this may prove in the future, to limit the progress that both countries were able to make. The one areas where the adjuster does worse is in reducing the infant mortality rate. Uganda's rate actually increased in the late 1980s whereas Ethiopia's fell.

In the non-agricultural match, the performance of Botswana and Zambia are broadly equal, whereas the performance of Botswana is slightly worse than the other adjuster Zaire. However, this is a broad statement to make, and there are enough exceptions to make one leery of committing to a definitive conclusion here. To wit, Botswana does worse in terms of improving TB and Measles immunisation than Zambia, but does better than Zambia on the population per physician ratio and in primary school enrolment. This tends to indicate that Zambia is able to improve health care development by devoting a large share of government expenditures to the health sector while simultaneously neglecting the education sector. In the case of Botswana and Zaire the adjuster shows, for all immunisations, an greater increase in coverage. However, it must be kept in mind that this reflects the fact that Botswana's base in 1980 was much higher than that of Zaire's. The nutrition situation for both countries was at an adequate level (in terms of African standards) throughout the 1980s. However, as in the Zambian case primary school enrolment declined in Zaire. The infant mortality rate declined more in the control than in the adjusters. This is all the more notable as the decrease in the IMR occurred from a low base,

The growth rate match, also demonstrates that there is no clear case where that non adjusters outperform the adjusters. One adjuster and one non-adjuster saw declines in government support for the health sector, whereas the other two countries saw increases. The improvement in immunisation coverage is broadly similar in the adjuster, Malawi and the control Cameroon, and slightly worse in the control Lesotho. In terms of access to safe water, the control Lesotho does slightly better than EIAL

Malawi. Yet given that resources are finite, Malawi has chosen to expand coverage, appropriately in rural areas at the expense of urban areas. In terms of education, the controls show no change in primary school enrolment, while Malawi shows an improvement and Kenya a decline. The nutrition situation was best in Lesotho and Malawi and worst in Kenya and Cameroon. The infant mortality rate declined by approximately the same amount in all four countries.

The 50-50 match, reveals that the control Rwanda has done better than the adjuster Mali in virtually every area. Expansion in immunisation coverage, access to safe drinking water and sanitation, and the improvement in primary and secondary school enrolment, was higher in Rwanda (except for rural sanitation) than in Mali. The infant mortality rate decreased by 17 deaths per 1000 in Rwanda from 1980-90, while it increased by 12 deaths per 1000 in Mali during the same time period. However, in the Sudan the improvement in immunisation coverage was greater than or equal to that of Rwanda. However, Sudan does much worse than Rwanda in expanding access to safe drinking water and in improving primary school enrolment rates.

As part of a basic needs strategy the importance of female education has been emphasised by researchers. Tables 7.21 to 7.23 have demonstrated that even though there has been a growing awareness of the returns that occur with improved schooling, most gains occurred prior to the 1980s. Only Botswana and Lesotho (controls) have obtained full female participation at the primary and secondary levels. In several countries, notably, Niger, Ethiopia, and Mali, female enrolment remains low compared to that of males. In the other countries, substantial investment in education is still needed so as to ensure that in this critical area improvements are made.

Table 7.24. Comprehensive Before - After Analysis

	Gov't	DPT	TB	Polio	Measles	Tetanus	Pop. per Phys	Urban Safe Water	Rural Safe Water	Urban Sanit.	Rural Sanit.	Nutrition	Prim. School	Second. School	LEB	IMR
Niger	++	+	++	..	++++	++	+++	+	-12	+	+	-5	-18
Guinea	..	++	++++	..	+++	+++	..	+++	+++	+++	..	-12	+	-	-1	-27
Burkina Faso	..	+++	++++	+++	++	++++	..	++	+++	-	±	-14	++	+	10	-77
Uganda	-	++++	++++	++++	+++	-	..	++	++	-7	++	+	-7	+20
Ethiopia	-	+	++	+	+	++	--	--	+	8	-14
Zaire	..	++	+++	++	+	-4	--	+	2	-18
Zambia	+	++	++	--	+++	..	-	-10	-	+	-2	-24
Botswana	±	++	-	++	-	+++	++	-5	+	+	9	-34
Kenya	-	-10	-	++	4	-20
Malawi	+	++	++	++	++	-	+++	-4	+	±	3	-23
Cameroon	-	+++	+++	+++	++	+++	..	-7	±	+	10	-21
Lesotho	+	..	-	+	+++	++	+++	0	±	+	5	-22
Mali	++++	+	++	+	+	+	+	-13	-	-	5	+12
Sudan	..	++++	++++	++++	++++	++	..	-	-	-	+	-10	-	+	11	-22
Rwanda	..	++++	+++	++++	+++	++++	---	+++	++	++	-	-15	+	+	-1	-17

Notes: data for nutrition is the actual score 1979-90; numbers for IMR are the change in the rate from 1980-90; data for life expectancy at birth (LEB) is the number of years lost or gained. +, -, or ± for per cent of government expenditure to the health sector indicates only if there was an improvement (+), decline (-) or no change (±).

.. data is not available

++++ excellent; greater than 50 per cent improvement

+++ good performance; improvement greater than or equal to 30 per cent but less than 50 per cent.

++ satisfactory performance; improvement greater than 10 per cent but less than 30 per cent.

+ acceptable performance; improvement greater than zero but less than or equal to ten.

- inadequate performance; decline of between less than ten and zero

-- poor performance; decline of between greater than ten and less than 40.

--- very poor performance; decline greater than 40 per cent.

Table 7.25. Comprehensive With - Without Analysis

	Gov't	DPT	TB	Polio	Measles	Tetanus	Pop. per Phys	Urban Safe Water	Rural Safe Water	Urban Sanit.	Rural Sanit.	Nutrition	Prim. School	Second. School	LEB	IMR
Niger	..	2	3	2	3	2	..	1	2	2	0	-12	0	0	+10	-18
Guinea	..	..	1	..	1	1	..	2	0	1	..	-12	0	2	-5	-27
Burkina Faso	..	1	2	1	2	3	..	3	0	3	0	-14	0	0	-1	-77
Uganda	0	1	1	1	1	..	..	2	1	..	..	-7	1	1	-7	+20
Ethiopia	0	2	2	2	2	..	..	1	2	..	..	..	2	2	+8	-14
Zaire	..	0	1	0	2	..	..	..	..	..	..	-4	3	0	+2	-18
Zambia	0	0	2	2	1	..	2	..	..	..	..	-10	2	0	+2	-24
Botswana	0	0	3	0	3	..	1	..	..	..	..	-5	1	0	+9	-34
Kenya	4	..	..	..	..	..	..	..	..	..	..	-10	3	0	+4	-20
Malawi	2	2	2	2	3	..	..	2	0	..	..	-4	2	2	+3	-23
Cameroon	3	1	1	1	2	..	..	..	..	..	..	-7	1	0	+10	-21
Lesotho	1	..	3	3	1	..	..	1	0	..	..	0	1	0	+5	-22
Mali	..	..	2	2	..	3	..	2	2	2	1	-13	0	2	+5	+12
Sudan	..	0	1	0	1	2	1	3	3	3	2	-10	0	0	-11	-22
Rwanda	..	0	3	0	2	1	2	1	1	1	3	-15	0	0	-1	-17

Notes: data for nutrition is the actual score 1979-90; numbers for IMR are the change in the rate 1980-90; data for life expectancy at birth (LEB) is the number of years lost or gained.

Numbers represent rankings. The best performer receives a one, the next best a two and the worst a three. A rank of zero indicates that the performance was within five per cent of each other. If a country receives a zero, the next country match receives a two, except in the case of government expenditure to the health sector (gov't), where a zero indicates that it is not clear which country is doing better.

Thus, much of the analysis in this chapter, reveals that programme lending sponsored by the Bank and the Fund cannot be determined to adversely impact health care development in Sub Saharan African countries. However, this must be weighed against the fact that the OLS analysis indicates that there does appear to be a structural change occurring on the infant mortality rate when the adjustment money is dispersed. The implications of this are discussed in the conclusion. The next chapter of this thesis, in an effort to obtain clearer results, reviews the case of Ghana and her structural adjustment programme.

Chapter 8

Adjustment in Ghana: The Impact on the Health Sector

8.1 Introduction

Since 1983 Ghana has undertaken major structural economic reforms in the areas of fiscal and monetary policy, the financial system, international trade policies and industrial and agricultural programmes. These reforms have been directed and encouraged by the International Monetary Fund, the World Bank and other multilateral and bilateral agencies. The improvement in economic policies has been noticeable, so much so that Ghana is held up as an example for other countries to follow. This chapter begins with a profile of the economic and political situation that occurred in the 1960s, 1970s and early 1980s in Ghana. The second part of this chapter provides a brief description of Ghana today. Geographic, demographic and economic characteristics are highlighted. The third section of this chapter traces the economic policies, successes and mistakes that were made from Nkrumah's presidency to that of Flight Lieutenant Jerry Rawlings. The third section of this chapter discusses the elements that were evident in the first and succeeding adjustment programmes. Particular attention is paid to the controversial "transition period" (1983 to 1986/87) where indicators are hypothesised to alter significantly. In addition, this chapter provides a case study of the impact of structural adjustment and stabilisation on health care development in this west African country. The discussion then moves on to show how health care delivery indicators changed following a period of economic restructuring. Next, health conditions and health status indicators are reviewed. This chapter utilises the same indicators as the previous chapter in an

effort to show if basic needs are being satisfied. The analysis used in all three cases is based on the before-after, with-without, and actual versus target approaches. The conclusion to this chapter offers a considered explanation, as well as cautionary notes, on health care development in one African country.

8.2 Background to Ghana

Formerly known as the Gold Coast, the Republic of Ghana is located in western Africa. It shares borders with three CFA countries: Burkina Faso to the North, Togo to the East, the Côte d'Ivoire to the West and to the South lies the Gulf of Guinea. The land area is approximately 239,000 square kilometres and contains an estimated population of 15.3 million. Ghana, typical of many African nations is not heavily urbanised. Urban population is 33 per cent of total population. The main urban areas are Accra, the capital, with nearly one million residents, Kumasi with 300,000 inhabitants, and Tamale, Tema and Takoradi. However, the average annual growth rate of population exceeded that found in the 1970s: population from 1980-91 expanded by 4.1 per cent per year; although this annual growth rate remains below the average of for all Sub Saharan Africa of 5.8 per cent. The population age structure is consistent with that found in many other African countries: nearly 50 per cent (46.8 per cent) of the population is under 15 years of age. There are over one hundred ethnically diverse groups in the country, however most Ghanaians come from one of four major ethnic groups. In descending order of importance they are: the Akan, Moshi-Dagoma, Ewe and Ga. Economic and social divisions based on historic ethnic divisions continue to be important in Ghanaian life. Forty five per cent of the population is Christian most of whom live in the South, whereas 12 per cent of the population that is Muslim live in the North. A small number of Syrian and Lebanese traders live in the Southern cities and have been the target of hostile actions throughout the years. Historically, and to a degree this evident to this day, Southern part of Ghana have benefited from the presence of export crop growing regions and physical and social infrastructure, whereas the North had fared less well.

Ghana is located 400 miles North of the equator. The southern areas of the country benefit from the relatively cool, moist air off of the Atlantic. In the South two wet seasons are evident, April-July and September-November, and the rainfall is highest here with rain occurring in the range of 1,270-2,100 mm. In the North, there is only one wet season from April-September and rainfall averages 1,270 mm. Following the rainy season the North suffers a long dry season that is characterised by the Hartmatan winds blowing off the Sahara desert. Climate and soil conditions determine the type of vegetation prevalent. In the South west part of the country heavy annual rainfall allows for rain forests, evergreen and semi-deciduous trees to grow. The drier Northern two thirds of the country are covered with savannah and scrub.

Ghana is primarily an agricultural and land-based economy. The contribution of agriculture to GDP currently stands at 42.4 per cent (GSS 1993).³⁸ Services which is slightly larger contributes 45.5 per cent to GDP and industry only 14.5 per cent. The percentage of economically active population is approximately 50 per cent. This represents a percentage decline from the early 1980s, but the number of economically active in agriculture has actually increased slightly. The principal food crops are cassava, yams, taro (coca yams) and plantains. The natural resources most commonly found and exploited in the country consist of gold, timber, diamonds and bauxite. The composition of export earnings from these sectors vary from year to year in the early 1980s. Cocoa production generated the greatest share of export earnings, however by 1992 the earnings from the mineral sector eclipsed that of cocoa. The per cent contribution of minerals to export earnings was 39 per cent, whereas cocoa's share fell from 67.2 per cent in 1986 to 30.7 per cent in 1992 (ISSER 1993, 59). Of mineral exports the volume of gold exports has increased steadily throughout the 1980s even as prices have declined. The export of diamonds continues to be an important element in the Ghanaian economy; exports have increased from 305,787 carats in 1985 to 690,409 carats in 1992 (ISSER 1993, 62). Exports of timber have increased, unevenly, from a mid 1980 low of 44.1 million dollars in earnings to 113

million dollars in 1992 (ISSER 1993, 62). Bauxite and manganese are two other important foreign exchange earners.

The most important sector in the economy is cocoa. Cocoa has historically dominated the modern economy. When real prices for the crop increased from 1983 to 1987 output expanded to over 220,000 metric tons, when the real producer price declined, and allowing for a time lag, output declined in 1989. The most recent estimate puts the per cent contribution of cocoa to export earnings at 30 per cent down from 67 per cent in 1986 (ISSER 1993, 59). The state continues to remain active in cocoa, as of 1983, the Cocoa Marketing Board or Cocobod provided marketing and support services to farmers. As of that date it employed nearly 100,000 persons.

The industrial sector, consisting of manufacturing, mining and quarrying, electricity and water, and construction has recently begun to grow after several years of negative growth rates. Whereas the early 1980s showed a contraction in the industrial sector, after 1984 industry, except for 1986, has expanded. For instance, the growth rate for 1987 was 11.49 per cent, in 1988 7.25 per cent and in 1989 2.63 per cent. Tourism, an increasingly important sector in the economy has expanded throughout the 1980s. Tourist receipts which were below 20 million dollars in the early 80s expanded considerably to 168 million dollars in 1992.

8.3 The Economic Crisis 1960 — 1983

Ghana the first black African country to become independent in 1957, and a leader of African nationalism, held much promise both as an example for other African countries and for improving the welfare of its citizens. Nkrumah, the charismatic leader of the new republic, while instrumental in mobilising initial popular support for his regime, failed to provide the essential framework necessary to ensure continued economic expansion. Green (1988, 8) notes that the Nkrumah period was characterised by state led economic reform aimed at increasing production, infrastructure and improving human capital. Although growth rates were strong in the 1950s and adequate, in that they kept pace with population growth in the early 1960s,

by the mid 1960s it was obvious that serious problems were emerging in the Ghanaian economy. Shortages were evident in both imports and in some home produced goods. It became increasingly difficult to obtain agricultural equipment, pharmaceuticals and some food products (Rimmer 1988, 119). By 1966 Nkrumah was overthrown in a military coup.

The economic malaise that hit Ghana can be traced to two main areas. As is common with other developing countries, the external economic environment and internal mismanagement of the economy are jointly to blame. In the case of Ghana, however, the scale tips, in large measure, away from exogenous shocks and favours internal causes as the appropriate explanatory factor (Rimmer 1988, 120). As Ghana is, and was, primarily an agricultural economy, negative changes in the commodity terms of trade, especially for cocoa, would have a large, negative, external effect on the economy. However, Rimmer (1988, 120) notes that overall the commodity terms of trade were favourable from 1950 onwards. When the commodity terms of trade fell for cocoa, as it did from 1959 to 1966, Ghana was able to increase export volumes so that her capacity to import foreign goods was not placed in jeopardy. After 1966, the commodity terms of trade were more favourable. Except for 1971-72, commodity terms of trade for cocoa increased from 111 in 1960 to 144 in 1979 (using a base year of 1975) (Rimmer 1988, 120). However, it should be noted that after 1979 the commodity terms of trade shrunk further to 97 using the same base year.

Since changes in the commodity terms of trade only offers a weak and inconsistent explanation of Ghana's economic decline other factors must work against her favour. These factors are rooted in the internal political system of the 1960s and 1970s. Nkrumah's desire to modernise the economy and jettison its colonial orientation, was not completed successfully. In line with much of the development thinking of the day, Nkrumah implemented high tariffs which discouraged imports. Imports were further limited by various administrative bodies which sought to control their absolute number and composition (Rimmer 1988, 120). In addition, price controls were put into effect on a variety of goods. Moreover, the state took control

over much of the manufacturing sector and many industries were required to become state corporations. Furthermore, mechanised agriculture was organised as a public enterprise. Foreign enterprises were discouraged from investing in Ghana due to disputes arising over ownership and control and the repatriation of profits. In essence, as Rimmer (1988, 121) puts it, instead of developing countries de-linking themselves from the core controlled by the North, international capitalists de-linked themselves from the periphery. In order to meet payment obligations Ghanaian officials resorted to printing money and heavy borrowing (Rimmer 1988, 120).

Kwame Nkrumah's leadership of the Convention People's Party whose ideology was based on Pan Africanism, anti-imperialism and a loose alliance with the Eastern Bloc, set, with the benefit of hindsight the foundation for future economic failures (Frimpong-Ansah 1991, 91-92). Roe and Schneider (1992, 18-29) identify two main elements that compromised Ghanaian economic growth. First, substantial nationalisation of industry and state involvement in economic activity, which is still evident today in over 230 enterprises, favoured trade with the Eastern bloc, and the preference for Ghanaians in personnel positions in the public sector, led to widespread economic mismanagement. Second, state farming sucked up an enormous amount of expenditures. The result was the swelling of the national bureaucracy. This in turn led to administrative capacity to be spread too thinly. Given that bureaucracy was bloated and of uneven talent corruption became evident in every day activities. Poor supervision led to a large number of projects that were unviable in that they could not yields a sufficient rate of return to ensure that their loans could be serviced (Roe and Schneider 1992, 30). By 1960, national trucking was hampered due to a lack of spare parts and 70 per cent of manufacturing capacity was under utilised (Roe and Schneider 1992, 30). Frimpong-Ansah (1991, 112), former Governor of the Bank of Ghana, adds that dependence on primary export sectors as a source of foreign exchange finance, and the subsequent downgrading of small scale food production, sewed the seeds of future economic problems.

Overall the 20 year period from the 1960s to the early 1980s consisted of a series of poor economic policies coupled with political instability. Amongst the main policy failings were (Killick 1978 and Rimmer 1988):

(1) Administrative capacity was not sufficient to ensure that state enterprises were run efficiently or that price controls and licensing requirements were effectively managed. Poor administration in favour of inappropriate policies became the norm as income gains favoured those that enjoyed access to the political system. Public employment mushroomed 14 per cent per annum from 1975 to 1982.

(2) The drive towards modernisation led to the use of agricultural and industrial techniques that were inappropriate in the Ghanaian context both in terms of ability to implement and in financing their continuation.

(3) Domestic savings was downplayed in favour of increasing export earnings even in the volatile primary commodity market.

(4) Following a necessary devaluation of the cedi in 1971, the exchange rate remained fixed and overvalued until a further (insufficient) devaluation in 1978. Foreign exchange use continued to be licensed. The Busia government was finally overthrown in January 1972 following a ban on Trade Union Congress activities. The National Redemption Council then reversed the Busia devaluation by two thirds and reinstated import controls.

(5) Interest rates, import and retail prices remained controlled throughout the 1970s. The use of price controls led to the emergence of a large parallel market where windfall profits were made by individuals who could purchase goods at official prices and later sell them at market clearing prices. The end result was that illegal trade was favoured by individuals instead of production.

(6) From 1974 onwards, in part in order to finance the growing public sector, deficit financing ballooned. The government continued to spend more than it received in tax revenues, aid and foreign borrowing. The situation was made worse to the extent that the tax base began to crumble. The overvaluation of the cedi discouraged export volumes. Revenues from import duties also declined. Price controls encouraged illegal transactions that could not be taxed. Moreover, such controls led to a decline in sales tax revenue. Later

increases in prices led individuals to turn away from the monetized sector of the economy where taxation is impossible.

(7) From 1975 there were several more changes in government all of which led to discontinuity in economic policy. From 1975-1978 Acheampong led the Supreme Military Council, from July 1978 to June 1979 General Akuffo led the Supreme Military Council II. Jerry Rawlings overthrew Akuffo on July 4, 1979 and had him and Acheampong executed. Following three months of rule he turned power over to the government of Dr. Hilla Linmann of the People's National Party. However, economic distress continued and Rawlings on December 31, 1981 overthrew Linmann, suspended the constitution, dissolved the parliament and outlawed political activity. He then formed the Provisional National Defence Council.

These economic policies, coupled with unstable governments, led to a catastrophic situation in Ghana. As Rimmer (1988: 122) reports the government deficit grew from 0.4 per cent of GDP in 1970 to 14.6 per cent in 1982. This meant that 65 per cent of total government spending went to finance the deficit. Investment rates declined from 14 to 2 per cent, and the domestic savings rate from 12 to 3 per cent of GDP in the same time period. Import volumes were down by 66 per cent and export receipts were off by 50 per cent from 1970 to 1982. Agriculture declined by 0.3 per cent per year from 1970 to 1980. Deindustrialization occurred as manufacturing's share of GDP declined from 20 per cent in 1970 to less than 10 per cent in 1983. Moreover, income per capita had declined by nearly one third, and real wages had collapsed by 80 per cent. All this had the effect of leading to a massive haemorrhage of skilled manpower from the country. Rimmer (1988: 119) estimates that between 50 and 66 per cent of the top professional manpower had departed the country. Those that were not fortunate enough to be able to leave the country were faced with increasing poverty. Dead bodies, unheard of in previous decades, began to show up on the streets. Elsewhere, "Rawlings' necklaces" became evident, as the population suffering from inadequate nutrition, began to exhibit signs of protruding collar bones.

8.4 The IMF and World Bank Adjustment Programme

It was against this backdrop of near total economic collapse that the Rawlings government agreed to undertake a major economic recovery programme. The stabilisation programme that was sponsored by the IMF, with assistance from the Bank, initially sought to reform prices, the public sector and various institutions. The main elements of the Ghanaian adjustment programme were (Ewusi 1987, 17-18):

- (1) Price Reform
 - (a) Exchange rate devaluation and price and trade liberalisation.
 - (b) De-emphasise the role of the state and re-emphasise the market mechanism.
 - (c) Reduce subsidies on food, energy and agricultural inputs.
 - (d) Maintain a positive real interest rate.

- (2) Public sector reform
 - (a) Reduce the government deficit by rationalising employment in the public sector, improve the efficiency of public enterprises and increase revenues by reforming the tax system.
 - (b) Improve public investment by concentrating recurrent expenditure on existing industries that could increase capacity utilisation. Investment in agricultural products to be privatised. Improve the management of the public sector and introduce user charges for some services (water and veterinary).

- (3) Institutional Restructuring
 - (a) Parastatals to be rationalised with manpower reductions in marketing boards. Some functions of parastatals to be privatised. Government institutions to be decentralised.

The Institute of Statistical Social and Economic Research at the University of Ghana (ISSER 1993) provides information on the main economic policy actions and reforms undertaken by the government of Ghana since 1983 to 1991. They are in chronological order:

1983

- (1) Tariff schedules simplified at rates of 0, 25 and 30 per cent. Property taxes, and taxes on non-commercial vehicles introduced, taxes on rental income increased. Improved tax collection carried out.
- (2) Minimum wage raised from 12 to 25 cedis per day.
- (3) Interest rates raised by 3 to 5 per cent.
- (4) Exchange rate devalued by 30 cedis per dollar.
- (5) Controlled prices, including government services, increased substantially to pass on the cost of the devaluation. Price controls eliminated on all but 23 goods.
- (6) Retail prices of beer and cigarettes increased by 75 and 33 per cent respectively.
- (7) Cocoa producer prices raised from 12,000 to 20,000 cedis per ton.

1984

- (1) Personal income tax raised. Tax on cigarettes and beer increase again.
- (2) Public sector wages increased by 40 per cent.
- (3) Interest rate raised by two per cent.
- (4) Exchange rate devalued by 35 cedis per dollar, then to 38.5 cedis per dollar, then in November to 50 cedis per dollar.
- (5) Exporters allowed to retain some foreign exchange for use in purchasing inputs.
- (6) Cocoa producer prices raised to 30,000 cedis per ton.

1985

- (1) Taxes increased on beer, cigarettes, airport services, casinos and gasoline.
- (2) Civil service salaries doubled.
- (3) Interest rates raised two per cent. Deposit interest rates up by one per cent.
- (4) Price of petroleum increased by 20 per cent in real terms.
- (5) Only eight goods to benefit from price controls: soap, matches, textiles, cement, baby food, sugar and imported rice.
- (6) Cocoa prices increased to 56,000 cedis per ton. Cocoa Marketing Board starts to layoff employees. This leads to cuts of 16,000 by December 1985 with a further 10,000 laid off by February 1987.
- (7) Foreign investors guaranteed ability to repatriate capital and profits.

1986

- (1) Minimum wage increased to 90 cedis per day. Wages for civil servants adjusted for inflation.
- (2) Exchange rate devalued to 90 cedis per dollar. Controlled prices adjusted to reflect this.
- (3) Price of coffee crop raised by 50 per cent.
- (4) Foreign exchange auction introduced.

1987

- (1) Corporate tax reduced from 55 to 45 per cent.
- (2) Income tax rates reduced. Tax on cigarettes, beer, liquor and other beverages raised. Sales tax on consumption of electricity abolished.
- (3) Public sector productivity to be raised through the provision of cedi 3,000 million in a Special Efficiency Fund.

1988

- (1) Importers no longer required to obtain import licences to obtain foreign exchange.
- (2) Civil servants granted allowances to close the gap between their wage and wages of other public corporations and private sector employees.
- (3) Projects subject to environmental impact studies before commencing.

1989

- (1) Tax rates lowered to raise the take home pay of workers.
- (2) Basic tax reduced from 25 to 22.5 per cent. This tax subject on beer, cigarettes, liquor and other beverages.
- (3) Banking reform begins
- (4) Export Development and Investment Fund established to help fund industries in difficulty that, however, have the promise for growth. The Export Finance Company Limited Created to expand the export of non-traditional commodities.
- (5) Law passed guaranteeing a minimum wage. Minimum wage of 170 cedis per day raised to 218 cedis per day in 1990.
- (6) Producer price off cocoa increased to 224,400 cedis per ton.

(7) PAMSCAD funding secured and implementation begins.

1990

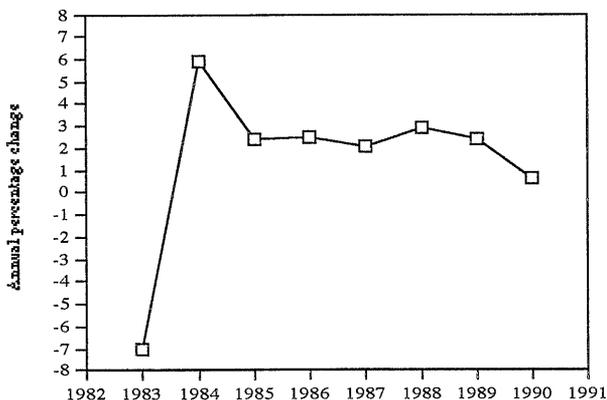
- (1) Sales tax on luxury goods implemented. Range of tax 50 to 500 per cent.
- (2) Bank of Ghana lending rate at 33 per cent. Bank of Ghana given a new supervisory and audit roles, and authority to fine and punish violators.
- (3) Ghana stock exchange established in order to mobilise capital for growth.
- (4) Petroleum prices increased.
- (5) Producer price of coffee increased to 8,100 cedis per 60 kg. bag. Producer price of cotton and tobacco also increased.
- (6) Local industry supported through an assistance programme that aids in access to bank credit.

8.5 Price and Income Changes

Chapters four and six demonstrated that macroeconomic reforms would lead to changes in prices and incomes. For prices, the main mechanism for changes would be a change in the exchange rate, which would alter relative prices, and possibly, lead to an increase in inflation, and reduction in government support for subsidy schemes or an increase in cost recovery in the social sector. For incomes, increases and decreases in wages would occur if the government sought to expand or cutback public employment and through changes in the real exchange rate which would send signals to producers to switch production to more profitable goods. Furthermore, the argument was advanced that these changes might adversely affect health and nutrition states. For instance if prices for food increased then nutrition status might suffer, if incomes decreased then medical care might become too expensive to afford. In Ghana all of these measures have been undertaken by Ghanaian authorities as part of the World Bank and IMF sponsored adjustment programme.

In the aggregate the impact of the adjustment programme has been to raise real incomes. At the start of the adjustment period (1983) Real GDP declined 4.6 per cent from 1982. However, from 1984 to 1990, the annual percentage change in real GDP was positive: 1984 saw real GDP rocket by 8.6 per cent; 1985, 1986, 1987, 1988 and 1989 saw approximately 5 per cent increases in real GDP per year. However, in 1990

the annual percentage change in real GDP was only 3.3. per cent. In per capita terms, the annual percentage change in real GDP was lower. This, obviously, reflects the fact that population continued to expand at a robust rate. Figure 8.1 below indicates that the improvement in real GDP per capita from the beginning of the adjustment period to 1990.



Source: ISSER (1993: 7 and Kapur et al 1991, 6)

Figure 8.1 Annual Percentage Change in Real GDP per capita (1983-1990)

However, unfortunately, this only gives an extremely rough picture of how incomes have changed during adjustment. For instance, as previously noted, the use of an aggregate measure disguises the distributional impact. This is not an easy problem to correct for. The poverty typology developed in chapter four noted, roughly, that individuals ought to be classed in terms of urban formal, informal and public employees and rural landowners, smallholders and peasants. As far as informal sector information goes, there is no available data regarding the size, on a national basis, or the amount of income labourers earn in Ghana, or for that matter any country in Sub Saharan Africa. In terms of formal sector employment there is also a dearth of data: Horton, Kanbur and Mazumdar (1994, 7) note that governments in Sub Saharan Africa do not conduct regular labour force surveys and data on employment by sector

is sadly lacking. The Government of Ghana (Quarterly Digest of Statistics 1991) shows that real wages have gradually risen in all sector activities throughout the transition period. This increase in wages has helped to offset the erosion in incomes that occurred with uncontrollable inflation in the late 1970s and early 1980s. 1983 is a turning point for real wages (except for construction). At that point, real wages had reached a low; post-1984 reflects the fact that real wages increased until 1986 (the latest year that data is available). As of 1986 real wages had risen above the pre-adjustment level. The real wage index for the public sector indicates that 1983 was also a low point for earnings. After that date real wages in the public sector began to rise. The increase in real wages throughout the transition period is more notable in so far as the increase in wages occurred at the same time that employment in manufacturing was expanding. As of 1981 26,000 people were employed in manufacturing, by 1986 this had risen to 79,000 people (ISSER 1993, 111). However, note should be made that after this date manufacturing employment declined substantially.

Table 8.1 Real Wage Index for the Formal Sector 1980-86

	1980	1981	1982	1983	1984	1985	1986
Services	100	57	49	36	55	70	131
Manufacturing	100	71	64	46	85	92	153
Construction	100	65	54	61	67	188	175
Public	100	61	52	41	58	86	147

Source: Quarterly Digest of Statistics (1991)

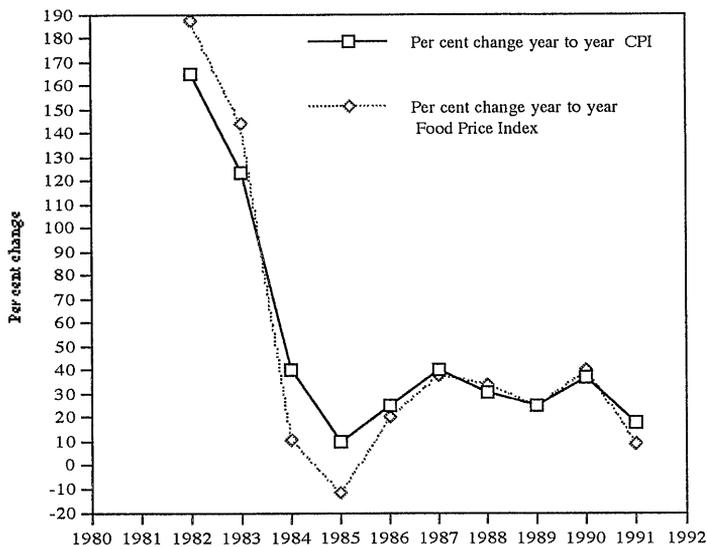
Leechor (1994, 164-65) reports that post 1986 wages in the public sector continued to rise in real terms. Such an increase in real wages in the public sector, however, must be seen in against the retrenchment programme that occurred as part of Ghana's adjustment. From 1987 to 1990 the government sought to redeploy 47,439 civil servants³⁹ (Alderman, Canagarajah and Younger 1993, 2). However, as Alderman, Canagarajah and Younger (1993) point out there is ample reason to believe that this retrenchment of public sector workers did not have negative, long-term, consequences. Their survey of redeployees in Greater Accra, Ashanti and the Central regions who had worked for the education department or a District Assembly found

that most retrenched workers were able to find other forms of employment immediately after severance. Their survey noted, however, that such employment tended to generate less income than prior employment in the government with "a significant proportion probably poor by any standard definition" (Alderman, Canagarajah and Younger (1993, 31). However, this statement is contradicted, at least in part, by the fact that the retrenched workers were able to save 13 per cent of their severance package (Alderman, Canagarajah and Younger 1993, 31).

Given that incomes in the *formal* sector have held up relatively well throughout the transition period, the performance of prices must be examined. However, before proceeding directly to an examination of price changes it is useful to determine how much food is actually purchased in the market by Ghanaians. The Ghana Living Standards Survey (GSS 1989), Boateng et al (1990), Alderman (1990) and Roe and Schneider (1992) provide estimates as to the share of food produced for own consumption and food purchased in the market. As a rough guide the rich use approximately 44 per cent of their total expenditure to purchase food and 22 per cent of their 'expenditure' is used on home produced food. For the poor, 36 per cent of total expenditure is used to secure food, while reliance on home produced food is greater at 33 per cent (Boateng et al 1990).⁴⁰ However GSS data and Alderman (1990) indicates that there is variation by region in the amount of food consumed from home production. The poor in the coastal region are less reliant on home production than the poor in the forest or savannah regions. Those households rely on over 50 per cent of food to come from home production. Moreover, in urban areas, of the coastal region poor households rely little (six per cent) on home production to meet food consumption needs.

Thus, it is clear that any increases in food prices will likely impact urban, relatively well off individuals more than the rural poor because they rely on the market more to meet their food needs. Those households in rural areas that produce most of their own food will be protected from imported inflation following an increase in prices. The evidence (figure 8.2) suggests that urban areas have not had to

fear from rising food prices. Except for the drought year, food price inflation has trailed consumer price inflation.



Source: United Nation's Statistical Yearbook (1993)

Figure 8.2 Percentage Change Year to Year in Consumer Price Index and the Food Price Index

8.6 The Impact of Adjustment on Health Care Delivery, Health Conditions and Health Status⁴¹

8.6.1 Government Support for Health

Expenditures on the health sector have generally improved during the transition period and into the post transition period. The percentage share of GDP to health and percentage share of budget to health declined from 1980-83, from 0.95 and 0.35 per cent and from 6.43 to 4.38 per cent respectively. As of 1984 the per cent share of GDP devoted to health increased from 0.84 to 1.20 in 1987 then fell slightly to 1.40 in 1988. The percentage share of the budget to health increased dramatically to 8.50 per cent, where it remained steady throughout the 1980s except for a slight dip in 1987. In terms of health expenditures per capita the central government's expenditure rose

from \$3 per person in the adjusting period to \$5 per son during the adjustment (WHO 1992, 7).

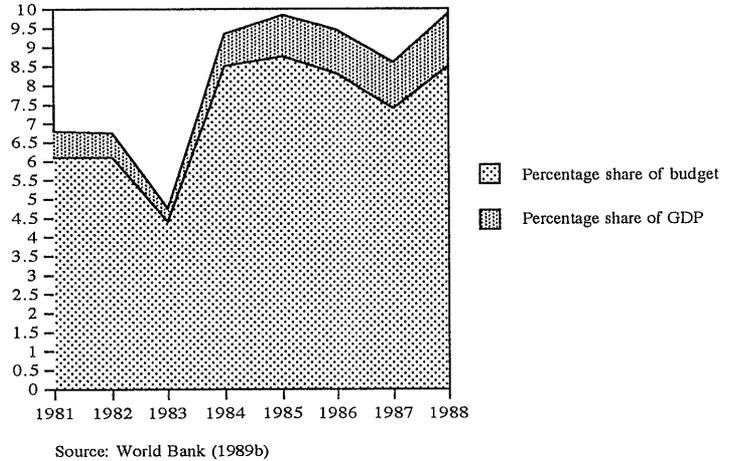


Figure 8.3. Ghana Transition Period — Government Spending to the Health Sector

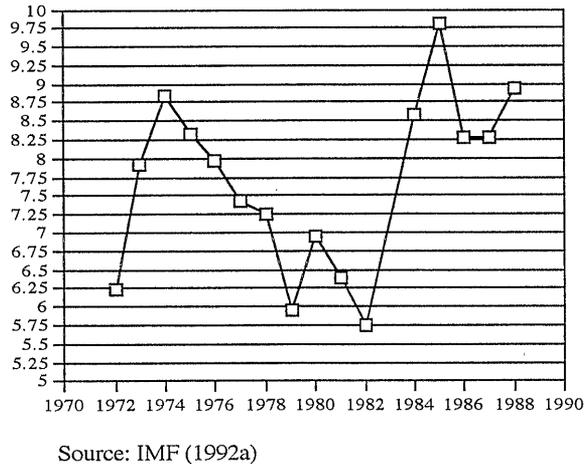


Figure 8.4. Government Expenditure on Health (per cent of total)

The above diagrams give a good indication of how the health sector, strictly speaking, has performed. However, as noted in chapters five and six the obtainment of a high health status is not dependent only on health care interventions. Health conditions can be altered by government interventions in housing and other social services. Furthermore, expenditure on education can lead to increased education of individuals which will also positively influence health status changes. Table 8.2 shows how government expenditure to community and social services, which includes; education, health, social welfare services, housing and community amenities and recreational, cultural and religious services, has changed relative to other categories of expenditure from 1983-1991.

Table 8.2 Composition of Government Expenditure by Function 1983-1991 (per cent)

	1983	1984	1985	1986	1987	1988	1989	1990	1991
General Services	27.1	27.1	29.4	24.4	10.0	21.8	20.6	21.2	21.1
Community and social Services	31.6	36.3	37.7	39.7	43.2	44.7	44.5	46.4	41.7
Economic Services	20.9	18.4	16.6	15.1	18.5	17.2	16.2	14.5	15.6
Other Purposes	17.6	15.3	11.8	17.2	14.9	12.4	14.9	14.4	18.4
Net Lending	2.8	2.9	4.4	3.6	4.5	4.0	3.9	3.6	3.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: ISSER (1993, 28)

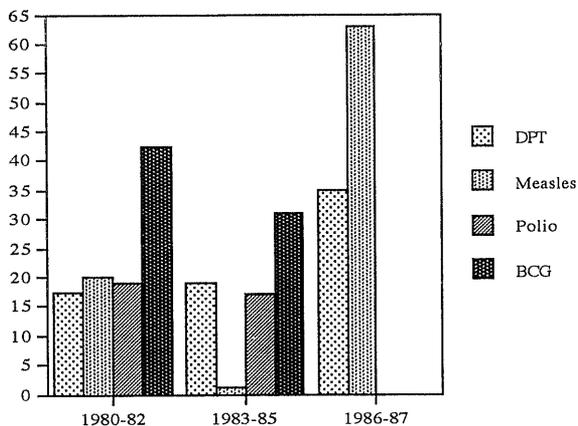
The trend in the broad measure of welfare is one of increasing government involvement in the health sector. The broad measure demonstrates that government expenditure to the social sector increased by ten per cent from 1983 to 1991.

8.6.2 Health Care Delivery Indicators

8.6.2.1 Immunisation Coverage of Infants

Figures 8.5 and 8.6 demonstrate that there is no clear pattern regarding immunisation coverage in Ghana during the transition period. For the period 1983-85 immunisation of infants either decreased or rose marginally; DPT coverage expanded by less than two per cent. Measles, polio and BCG immunisation fell by 19 per cent, two per cent and ten per cent respectively. Towards the end of transition period, the data on immunisation coverage indicates an expansion in the number of infants immunised.

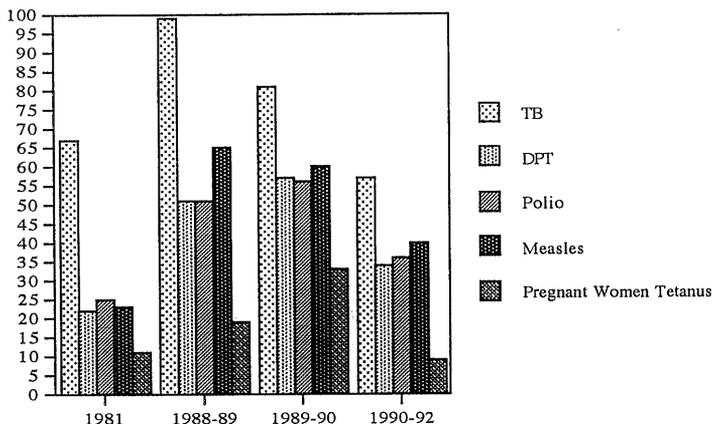
The percentage of infants immunised for DPT increased by 18 per cent to 35 per cent from the 1980-82 base. Measles immunisation rocketed by 43 per cent in 1986-87.



Source: WHO (1992)

Figure 8.5. Ghana Transition Period — Percentage of Infants Immunised

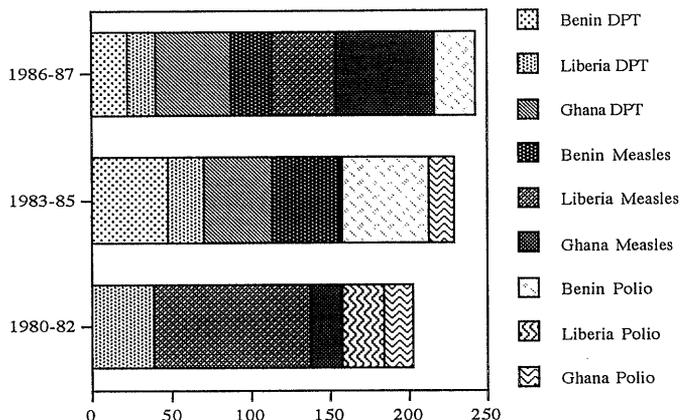
Evidence on the later adjustment period indicates that in general, progress has been made in both absolute terms and relative to the pre-adjusting period. Figure 8.6 indicates that from 1981 to 1988-89 immunisation coverage expanded for TB, DPT, polio, measles and tetanus in pregnant women. TB coverage increased by 32 per cent, DPT by 29 per cent, polio by 26 per cent, measles by 42 per cent and tetanus by eight per cent. However by 1990 coverage began to slip for TB and tetanus. By 1992 coverage had slipped in all immunisation categories from 1988-89; TB was at 57 per cent and tetanus in pregnant women was at nine per cent, both below pre-adjustment period levels. DPT was at 34 per cent, polio at 36 per cent and measles at 40 per cent.



Source: UNICEF (1994, 1992, 1991)

Figure 8.6. Percentage of Ghanaian One-Year-Old Children Fully Immunised 1981-1992

The with without comparison for the transition period reveals that Ghana does better than the controls. Benin and Liberia both demonstrate a downward trend in DPT and measles immunisation in infants. For, instance, from 1980-87, Liberia falls from 39 per cent to 19 per cent in DPT coverage and from 99 per cent to 40 per cent in Measles coverage. Meanwhile, Ghana expands its coverage. During the same time period, Ghana's measles coverage fell from 20 per cent in 1980-82, to one per cent in 1983-85, and rose to 63 per cent in 1986-87. Coverage for DPT rose slightly (by four per cent) from 1983-85 to 1986-87. For Benin, immunisation of infants, for the period 1983-85 to 1986-87, fell from 47.5 to 23.5 per cent for DPT, from 43 to 27 per cent for measles and from 54.5 per cent to 26 per cent for polio. Figure 8.7, sets out this trends in the form of stacked columns.



Source: WHO (1992)

Figure 8.7. Ghana Transition Period— With Without Immunisation

For the later adjustment period Ghana also does better than the Liberia control and roughly matches the performance of the Benin control. From 1981 to 1990-92 the percentage of one-year-old infants covered for DPT and polio in Ghana expanded from 22 to 34 per cent and from 25 to 36 per cent respectively. However, Ghana does poorly on TB immunisation where the percentage of infants immunised fell by ten per cent from 1981 to 1990-92. Moreover, expansion in coverage for Ghana was mixed for polio; coverage was highest in 1990 at 56 per cent, before falling to 36 per cent, whereas in Benin coverage expanded consistently. Benin, during the same time period expanded immunisation by ten per cent for TB, by 31 per cent for DPT and polio. Liberia, in contrast, experiences a decline in immunisation coverage by nine per cent for TB and 11 per cent for DPT, while coverage of polio expanded slightly.

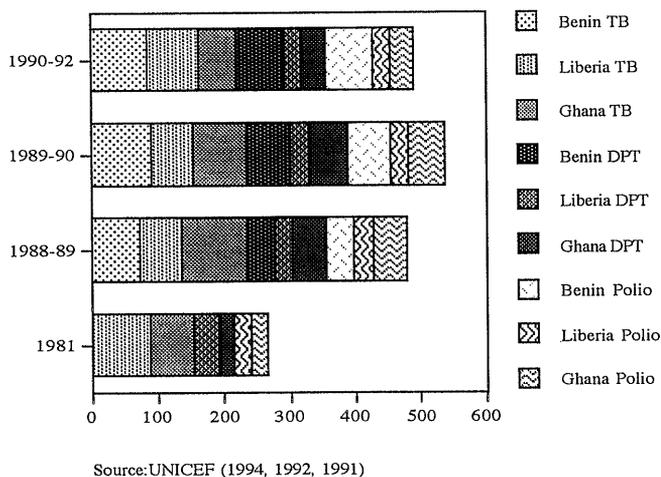
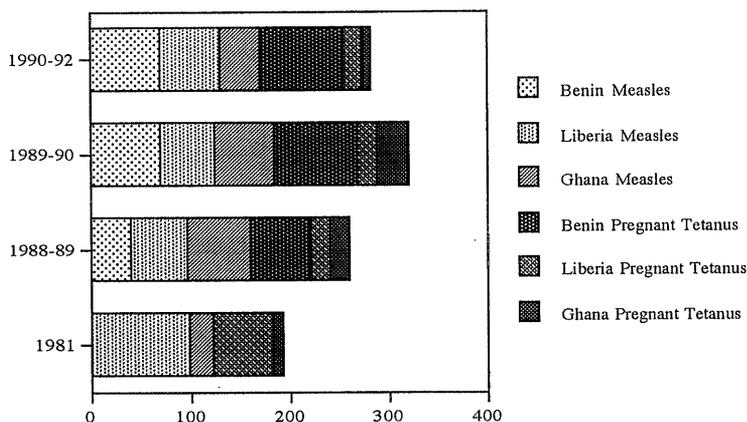


Figure 8.8. With Without Immunisation TB, DPT and Polio 1980-90; Per cent of One-Year-Old Children Fully Immunised

The with without analysis of measles and tetanus in pregnant women is also somewhat mixed. Ghana does better than Liberia in that immunisation expands in Measles in Tetanus in Ghana, whereas in Liberia it is down substantially in both from 1981 to 1990-92. It does worse than Benin in so far as Benin sees an expansion in both tetanus and measles immunisation. From 1988-89 to 1990-92 measles immunisation in Benian infants increases from 41 to 70 per cent while in Ghana it declines by 25 per cent from 65 to 40 per cent. For tetanus immunisation coverage expands from 60 to 83 per cent from 1988-89 to 1990-92 in Benin, while in Ghana the per cent of infants fully immunised declines ten per cent form 19 to 9 per cent. Figure 8.9 shows these trends.



Source: UNICEF (1994, 1992, 1991)

Figure 8.9. With Without Immunisation of Measles and Tetanus in Pregnant Women 1980-90; Per cent of One-Year-Old Children Fully Immunised

8.6.2.2 Supply of Health Care

Access to health facilities and health manpower in Ghana has held up during the transition period. Ghana currently has a three-tiered PHC system. On the first tier are community health workers trained by the Ministry of Health in simple techniques of preventative and promotive health care. On the second level are community health/nurse midwives who supervise tier one workers and provide immunization coverage. On the third tier or district level a district hospital team acts as a referral centre for lower tiers. Ewusi (1989: 32) reports that although there was only a small improvement in the number of hospitals from 1970 to 1987, where the number of government and mission hospitals expanded from 106 to 112, the number of hospital beds expanded considerably in all areas except Accra. In 1970 there were 5,215 hospital beds throughout the country. By 1987 this figure had risen to 18,614. Although there is still a bias towards the capital city, the Volta, Central and Western regions had population hospital bed ratios similar to that of Accra by 1987. The

population hospital bed ratio in Accra, as of 1987 was 1:402, in the Volta region the ratio improved from 1:933 in 1970 to 1:496 in 1987 and in the Western region the ratio improved from 1:799 to 1: 485. Table 8.3 shows the increasing supply of hospital beds and the subsequent reduction in the importance of Accra as a centre of hospital care. In essence, Ghana throughout the adjustment transition has been able to move away from an urban, curative-based system to one that is consistent with PHC and basic needs.

Table 8.3 Regional Distribution of Hospital Beds (Number and Ratio) in Ghana 1970-87

Region	1970		1987	
	Total	Ratio	Total	Ratio
Accra	1761	1:307	3536	1:402
Volta	369	1:933	2423	1:496
Eastern	604	1:1186	2200	1:763
Central	426	1:1451	2303	1:497
Western	548	1:799	1379	1:485
Ashanti	436	1:933	2927	1:714
Brong-Ahafo	76	1:1698	1389	1:849
Northern	346	1:1698	1043	1:1115
Upper East	349	1:262	696	1:1109
Upper West	349	1:262	718	1:612
Total	5215	1:641	18,614	1:656

Source: UNICEF — Ghana (1991) and Ewusi (1987)

However, it should be remembered that an increase in the supply of hospital beds does not necessarily mean that health care is improving. Table 8.3 fails to capture other factors that may influence hospital care. It is possible that drug supplies may have been limited or that equipment was not available or was broken.

Vogel (1988: 130-132) provides Ministry of Health information on drug supplies in Ghana. He notes that the allocation of drug supplies in Ghana has never matched the stated requirements. Prior to the adjustment period the difference between stated requirements and allocations was great. As of 1982, the Government asked the Ministry of Health to provide "realistic" estimates as to the requirements. This the Ministry of Health did and allocations rose to the eve of adjustment. However, by 1984 requirements were estimated at \$76.7 million with only \$23.1

million approved. In 1985, the Ministry of Health requested \$22 million and received 68 per cent of the money or \$15 million. However, by 1987 estimated requirements stood again at \$73 million and the Ministry of Health only received \$13 million. Vogel (1988: 130) notes, however, that the difference should be seen in the context of adjustment measures which have encouraged the private importation of pharmaceuticals. The Special Unnumbered Licences (SULs) have been used by private companies to ensure "reasonable quantities of a wide range of drugs on the Ghanaian market." (Vogel 1988: 130).

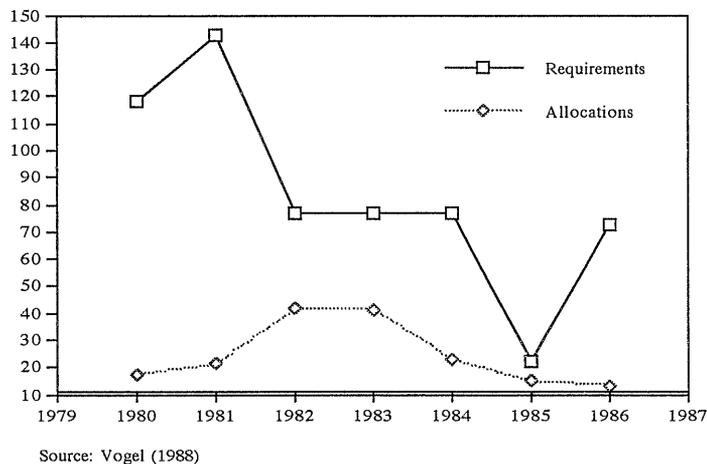


Figure 8.10. Ghana Transition Period — Drug Supplies

Prior to Rawling's first coup d'état the health system in Ghana was in disarray. Hospitals, then, have been described (Anyiman 1989, 543) as "graveyards" because they did not have a sufficient supply of drugs and equipment. Following Rawling's ascension to power the situation began to improve. As part of the ERP \$114 million was initially allocated for the improvement of basic health infrastructure. Most of the money was to go to the lower tiers of the primary health care system. However, most

of this money was not spent on PHC activities: \$69 million went to the procurement of pharmaceuticals, \$19.9 million went to equipment costs and only \$15.5 million went to the rehabilitation of district hospitals and \$7.2 million to the completion of hospitals (Edwusi 1989, 20). However, this must be weighed against the fact that during the 1980s, as part of basic needs/PHC 4,113 TBAs and 2,913 community health workers were trained (see table 8.4),

8.6.2.3 Health Manpower Indicators

The situation of health manpower during the transition period is mixed. On the negative side the number of doctors declined substantially from the immediate pre-adjustment period. On the positive side the number of paramedical personnel rose greatly and the regional distribution of doctors improved for most parts of the country. As of 1980 there were 1,648 registered doctors in the country. However, by 1985, due to the economic crisis in the country, this figure had declined by 51 per cent to 810 doctors. Ewusi (1989: 37) reports, that based on medical school admission data the figure for 1985 should have been 2,177 doctors. However, after 1985 the number of doctors in the country began to improve. In any case the loss in skilled health manpower was at least partially offset by an increase in the number of nurses and midwives. As of 1980 there were 13,232 of this type of personnel, by 1985 the number of nurses and midwives ballooned to 20,200 and by 1988 the figure was 21,300. Improvements in the supply of paramedical staff was matched by improvements in the distribution of doctors. The number of all doctors improved in all regions as of 1986 as measured against 1980 and 1985. Moreover, the doctor population ratio improved in all regions except the Northern and Western as measured against the 1970 ratio. In absolute terms, Accra is still the best doctor-served region. An urban bias is evident as the doctor population ration is only one for 4,244 inhabitants in Greater Accra, where in the Northern region the ratio is 1:56,502 and in the Upper East and West the ratio is 1:57,903. Table 8.4 indicates the improvement in

doctor supply across regions and the continued urban bias in skilled health manpower delivery.

Table 8.4. Numbers of Doctors and Doctor/Population Ratios by Region (1970-86)

Region	1970		1985		1986	
	Number of Doctors	Doc/Pop Ratio	Number of Doctors	Doc/Pop Ratio	Number of Doctors	Doc/Pop Ratio
Greater Accra	147	1:6000	222	1:6400	357	1:4244
Volta	17	1:56000	35	1:34000	45	1:28890
Western	60	1:13000	41	1:27000	65	1:18088
Eastern	28	1:45000	26	1:65000	50	1:35221
Central	23	1:39000	29	1:4000	45	1:26849
Ashanti	78	1:19000	115	1:18000	182	1:12063
Brong-Ahafo	12	1:64000	15	1:79000	40	1:31341
Northern	17	1:43000	18	1:65000	22	1:56502
Upper East	8	1:107000	7	1:63000	14	1:57903
Upper West	8	1:107000	7	1:63000	9	1:57903
Total	390	1:22000	508	1:25000	827	1:15536

Source: UNICEF — Ghana (1991) and Ewusi (1987)

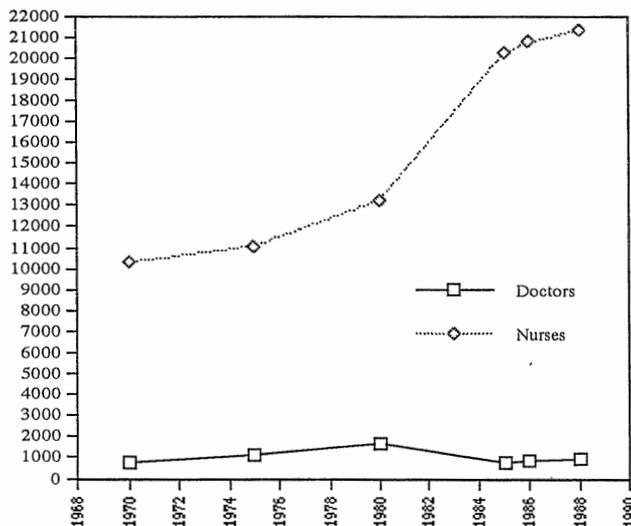
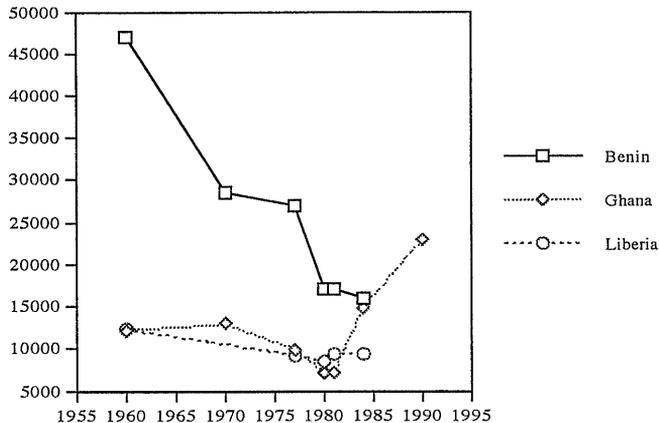


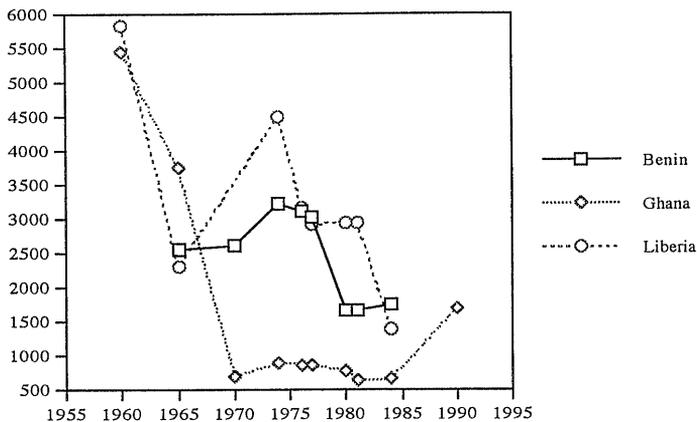
Figure 8.11. Ghana Transition Period — Number of Doctors and Nurses

Due to data limitations, a with without analysis if population and nursing person ratios is only possible to the middle of Ghana's transition period. From 1970 to 1980 there was steady progress in reducing the population per physician ratio in Benin and Ghana. However, Benin was able to make faster progress, albeit starting from a higher base. As of 1970 the ratio in Benin stood at 1:28,570 by 1980 this had fallen to 1:16980, whereas in Ghana the ratio fell from 1:12,910 to 1:7,160. In Liberia the ratio fell at a slower rate from 1:9,260 in 1977 to 1:8,550 in 1980. However, during the transition period, Ghana, as noted, saw a worsening ratio, whereas Benin's ratio continued to decline and Liberia's only increased slightly For the nursing person ratio a similar pattern is evident. Ghana by 1970 had already achieved an enviable ratio of 1:690 which held steady until 1985. Benin and Liberia, which had much worse ratios in 1970, around 1:2600, and following an increase in the ration to 1973, saw the ratio decline precipitously until 1985 1:1370 in the case of Liberia and to 1:1750 for Benin. However, in absolute terms Ghana's performance continued to be much better than her controls.



Source: World Bank, World Development Reports (various)

Figure 8.12. With Without Population per Physician



Source: World Bank, World Development Reports (various)

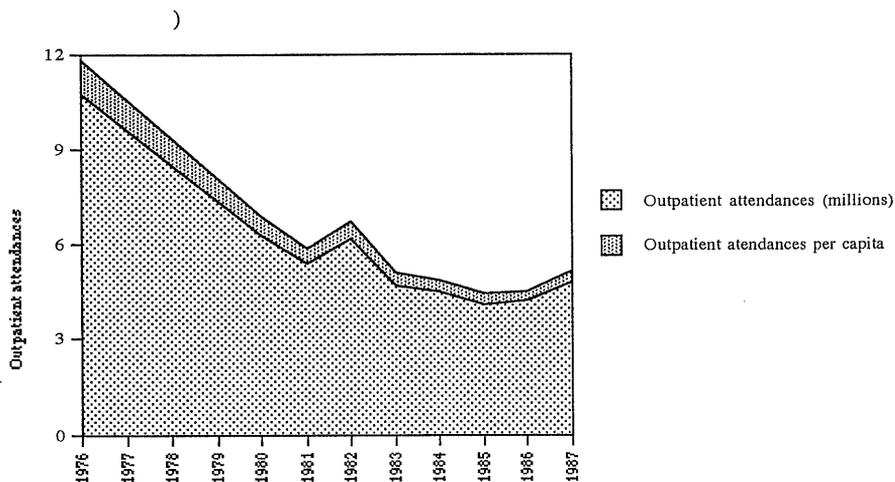
Figure 8.13. With Without Population per Nursing Personnel

8.6.2.4 Outpatient Attendances

Data on outpatient attendances during the transition period comes from the World Bank's country Office in Accra (World Bank 1989b). The data reveals that outpatient attendances began a steady decline from a high of 10.7 million in 1976 to 4.7 million in 1983. During the transition period outpatient attendances remained fairly constant; 4.5 million in 1984, 4.1 million in 1985, 4.2 million in 1986 and 4.8 million in 1987. This would tend to suggest that the structural adjustment programme is having little impact on discouraging outpatient attendances. Moreover, that since user charges were introduced in 1985 after the main decline in attendances, increased price to pay for medical care is not deterring utilisation. Furthermore, it was the Government of Ghana which took the initial step in increasing hospital fees. On 5 July 1985, the fee for a hospital bed for an adult increased from 7.5 to 40 cedis for adults and 5 to 20 cedis for infants and children. It was not until December of 1985 that as part of the Bank's Health and Education Rehabilitation project that the government was required to meet 15 per cent of its recurrent budget from cost recovery efforts. In addition, it

has been reported elsewhere (Toye 1991, 178) that this condition was attached to the credit at the request of the PNDC and that slippage on the condition was high.⁴²

However, there are two points that need to be considered before reaching a firm conclusion. First, while it may be true that adjustment may not have deterred hospital attendance, it certainly has not improved it. Moreover, although outpatient attendance has remained fairly consistent over the transition period in absolute terms, due to population expansion, outpatient attendances per capita have declined. On the eve of adjustment attendances per capita stood at 0.54 by the end of the transition period this had fallen to 0.35. Second, Ewusi (1989, 67) warns that poor maintenance of facilities as well cost recovery in hospitals has deterred utilisation. Evidence from one district hospital, University Hospital at Legon, shows hospital attendances declined 15 per cent from 27,536 in 1986 to 24,368 in 1987 (Ewusi 1989, 67). However, it should be noted that in 1988 there appears to be an improvement in the situation. As of 1988 attendances had risen to 27,812— above the 1986 and 1985 levels.



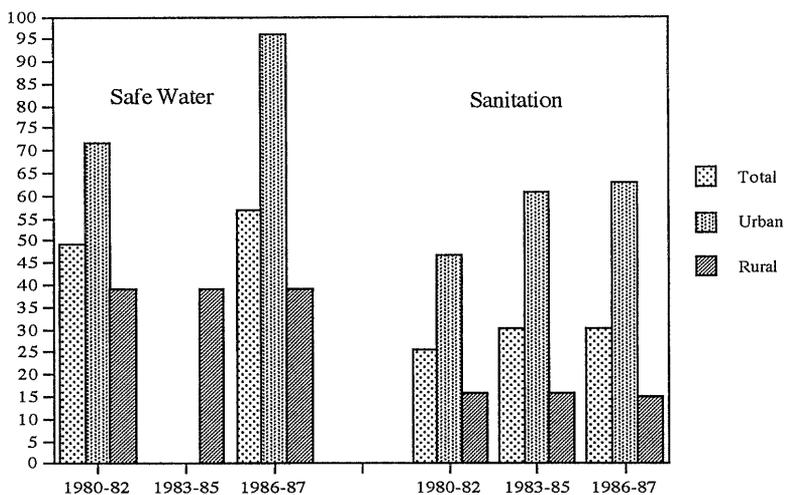
Source: World Bank (1989b)

Figure 8.14. Ghana Transition Period — Outpatient Attendances (1976-87)

Waddington and Enyimayew (1989 and 1990) also note that utilisation has dropped in Ghana following the introduction of user fees. The issue here is not that utilisation has decreased, but that the decline in utilisation is not the direct fault of the Bank or the Fund. Although Waddington and Enyimayew (1989 and 1990) use an "eclectic" approach to determining if utilisation decreases when a price is introduced for health care (the mix data on outpatient attendances, interviews with health staff and focused group discussions) they have reasonably demonstrated that user charges likely led to a decline in utilisation. They have demonstrated (Waddington and Enyimayew 1990) that the decline in rural areas was substantial, and utilisation was not able, by 1988, to recover to the 1984 level. Although urban areas saw a similar decline utilisation there was able to recover to the pre-fee level.

5.6.3 Health Condition Indicators

An analysis of the transition period with regards to health condition indicators reveals that overall access to sanitation and safe water are up. However, the total figure obscures the differences between urban and rural areas. Access to safe water and sanitation remained unchanged in rural areas during the transition period. Only 39 per cent of rural Ghanaians had access to safe water throughout the period. Sanitation coverage also failed to expand and remained static during the transition period. Instead resources went into improving facilities for the urban population. Access to safe water expanded to near universal levels in urban areas; to 95 per cent during the transition. Access to sanitation also improved; at the start of the adjustment access was limited to 47 per cent of the urban population, by 1986-87 access had increased to 63 per cent.



Source: WHO (1992)

Figure 8.15. Ghana Transition Period — Access to Safe Water and Sanitation

The transition period with without analysis reveals a similar picture for the controls; rural access to safe water remained constant while coverage in urban areas improved. Only rural areas in Liberia saw a slight improvement in access to safe water, from 20-25 per cent during Ghana's transition. Rural areas of Benin retained the same level of access throughout the transition. Access to safe water in urban Liberia also improved greatly to 93 per cent at the end of the transition. however, in Benin coverage fell by one per cent from 80 to 79 per cent during the transition.

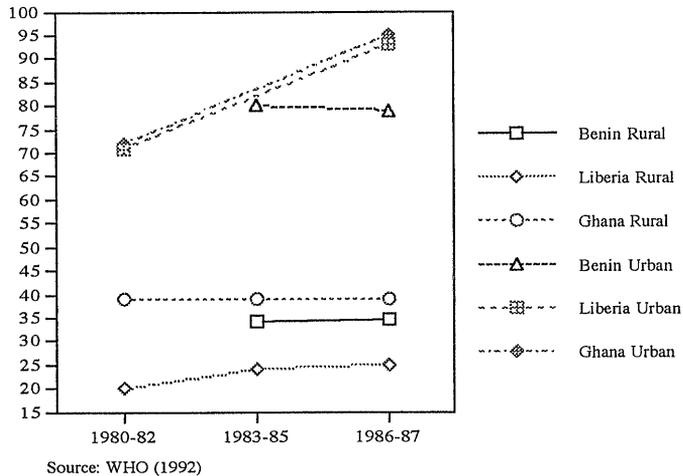
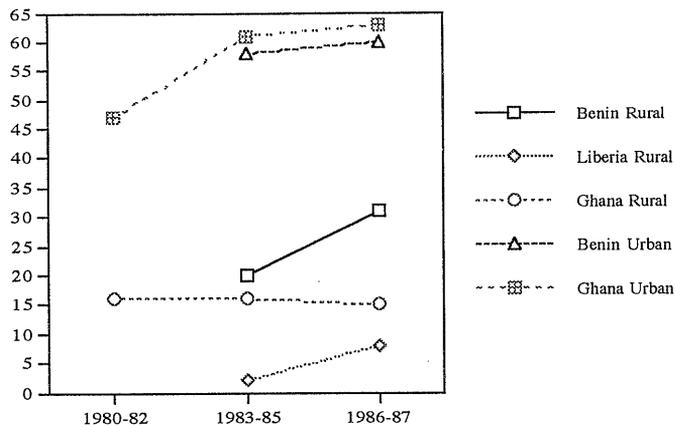


Figure 8.16. Ghana Transition Period — With Without Access to Safe Water

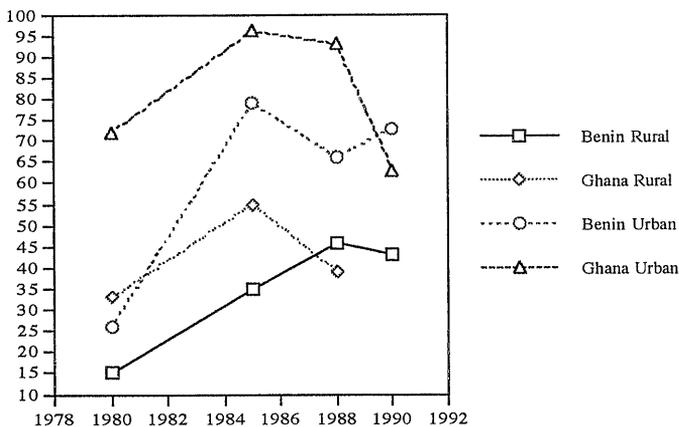
Figure 8.17, also reflects a rural urban differential in the provision of sanitation services to the control groups. The with without analysis reveals that the controls did better at improving sanitation services to rural areas than did Ghana during the adjustment. Access increased 11 per cent in rural Benin and six per cent in rural Liberia, while rural Ghana saw a one per cent decline. Access to sanitation services for urban Liberia is not available, however a comparison of access to sanitation facilities for urban Ghana and Benin reveal a similar pattern. At the start of Ghana's adjustment in 1983 urban access increased by 3 per cent and in urban Benin the increase was on the order of two per cent.



Sources: WHO (1992)

Figure 8.17. Ghana Transition period — With Without Access to Sanitation Services

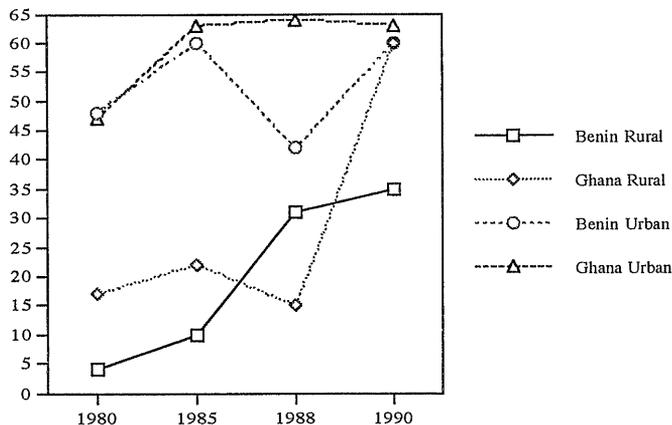
The with without analysis of the post transition period reveals that the Benin control does better than Ghana — data on Liberia is not available. Urban areas in Benin increased access to safe water to 73 per cent by 1990. In Ghana access to safe water falls from pre-adjustment and transition period levels. In 1980 urban access was 72 per cent, by 1985 this had risen to 96 per cent, and by 1990 this had fallen to 63 per cent. Benin also appears to fair better in rural access to safe water. At the cusp of the transition period Benin's rural access was still increasing, to 39 per cent, whereas Ghana's had fallen by 16 per cent from 55 to 39 per cent.



Source: World Bank (1994a); figure for 1985 from World Resources Institute (1990); figure for 1988 from World Resources Institute (1992)

Figure 8.18. With Without Access to Safe Drinking Water 1980-90

Information from the World Bank (1994a) and the World Resources Institute (1990 and 1992) indicates that access to sanitation services is improving in both control and non-control. Again, data on Liberia is not available. In urban areas, both countries began Ghana's adjustment period at the same level and ended in 1990 at nearly equal levels. However, from 1988 to 1990 the rate of increase was virtually non-existent in Ghana, whereas in Benin the increase was from 42 to 60 per cent. In rural areas, the rate of increase in access to sanitation services leapt in Ghana from 1988 to 1990 while making steady progress in Benin. In Ghana access increased 45 per cent from 15 to 60 per cent, while in Benin the increase was lower at four per cent.



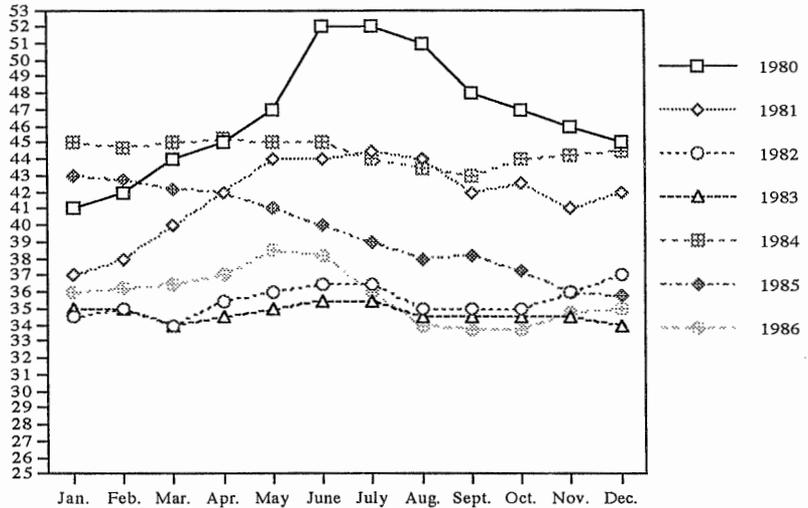
Source: World Bank (1994a); figure for 1985 from World Resources Institute (1990); figure for 1988 from World Resources Institute (1992)

Figure 8.19. With Without Access to Sanitation Services 1980-90

8.6.4 Nutrition Status Indicators

There is a dearth of time series data regarding nutrition status in Ghana. Information is occasionally gathered by the World Bank (GSS 1989), FAO and UNICEF — Ghana (1984 and 1991) on the nutritional status of children in various parts of the country. While important, these sources only provide a static picture of the nutrition status of individuals. Such data while highlighting the severity of the situation in the various regions in Ghana it is useless in ascertaining the impact of adjustment on nutrition status. In order to get a rough idea of the impact of World Bank and IMF programme lending on nutrition status in the country two alternative data sources are used: aggregate food supply figures supplied by FAO (Food Production Yearbooks, various) and estimates of malnutrition provided by the Catholic Relief Services in Ghana. Figure 8.20 shows the percentage of children between ages of 7 and 42

months that are below the third percentile of Harvard weight for age standard during Ghana's transition period. The data generally indicates an improving situation during the transition period. Overall, 1980 was the worst year for malnutrition in Ghana. The next worst year was 1984. Although this is during the transition period it is unlikely that the poor performance on weight-for-age can be attributed to the adjustment programme. 1983 was a critical period in Ghana: during that year prolonged drought and severe bush fires plagued the country (UNICEF — Ghana 1984). In addition in January of that year Nigeria expelled an estimated one million Ghanaians from the country (UNICEF — Accra 1988: 97). This had the effect of greatly reducing the country's food supply while simultaneously increasing its food requirements. By 1984, this showed up as increases in malnutrition in children. Following 1984 the situation generally improved in 1985 and 1986, so that approximately one third of the children in the Catholic Relief Service data were malnourished. However, before reaching a firm conclusion that adjustment measures have been responsible for the 1984 deterioration two points need to be made. First, the Catholic Relief Service data suffers from a selection bias. The data includes only those children that attended health clinics for supplementary feeding. Thus, those children who were unable to get to a clinic or were unaware of the programme are excluded from the analysis. The data, however, does seem to provide a reasonable estimate of malnutrition in so far as the latest year of the Catholic Relief data is consistent with findings from the Ghana Living Standards Survey (GSS 1989).

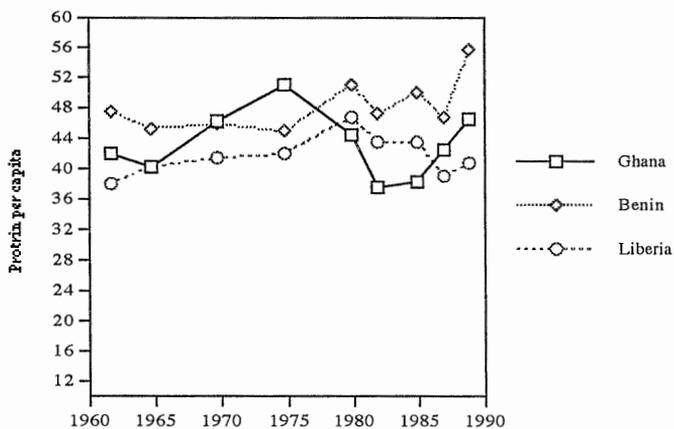


Source: Catholic Relief Services (1987)

Figure 8.20. Percentage of Children Aged 7-42 Months Below the Third Percentile of Harvard Weight/Age Standard Attending Clinics 1980-86

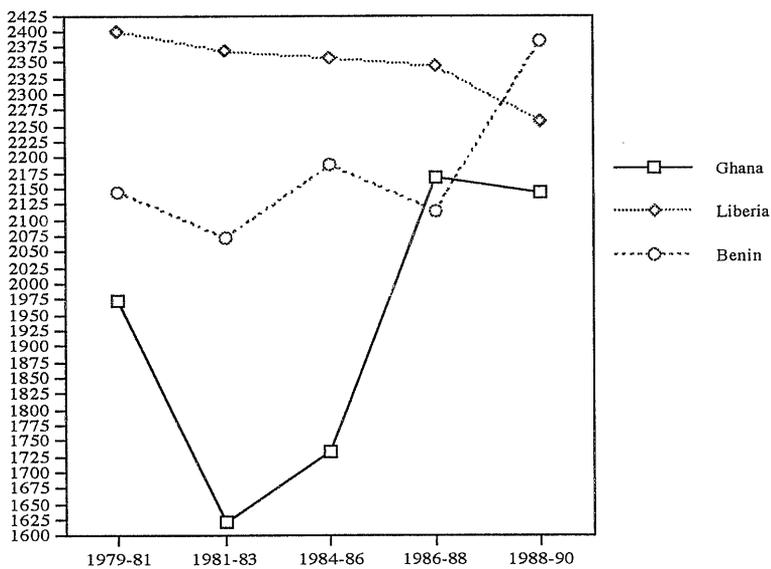
FAO figures also back up the data from the Catholic Relief Services. Figures 8.21 and 8.22 show that 1983 was the worst year for food supply in Ghana. Protein and calories per capita per day were below the level necessary to ensure that an average family would have an adequate diet. Figure 8.22 shows that calories per capita per day plunged from 1,973 calories per person per day prior to the adjustment period to 1,621 calories per person per day at the start of the adjustment period. During the transition period food supply improved markedly to 2,167 calories per person per day. However, compared to the control countries Ghana still remained behind in ensuring an adequate food supply for its citizens. Moreover, as figure 8.23 illustrates Ghana's situation, eventhough it made progress during the transition period, failed to ensure adequate nutrition both during the transition and adjustment periods. Figure 8.23

demonstrates that the nutrition situation remained in critical condition until 1990. Using Maasland and van der Gaag's (1992: 57) criteria of -15 as the point were acute undernutrition becomes widespread, figure 8.23 shows that it was not until the end of the transition period that Ghana was able to obtain a level where undernutrition became the norm as opposed to severe undernutrition. Compared to the control countries, Ghana also does relatively worse. Benin, from 1980 to 1988, has a nutrition rating of approximately -6, indicating that mild undernutrition was, in the aggregate prevalent. After 1988 the Benin score shows that undernutrition ceased to be a major problem. More surprisingly the Liberia control shows that, in the aggregate, during Ghana's adjustment, undernutrition did not become a problem until 1990.



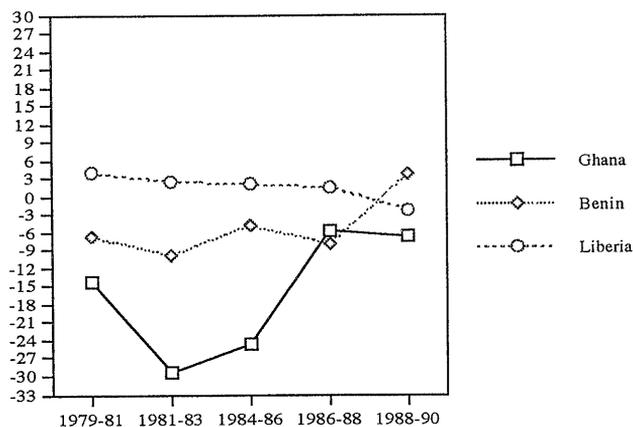
Source: FAO; Food Production Yearbooks (various)

Figure 8.21. With Without Protein per Capita (1960-1990)



Source: FAO; FAO Production Yearbooks (various)

Figure 8.22. With Without Calories per Capita per Day (total number; 1979-1990)



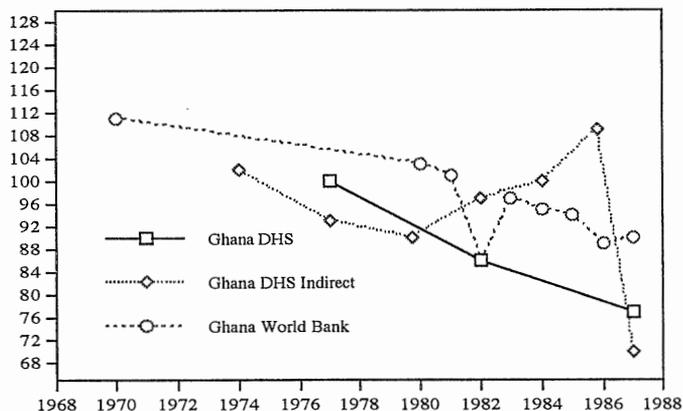
Source: FAO; FAO Production Yearbooks (various) and World Resources Institute (1987) for minimum requirement

Figure 8.23. With Without Comparison of Nutrition Situation

8.6.5 Health Status Indicators

Information obtained from the World Development Reports published by the World Bank indicates that there has been a steady decline, save for one period, in the infant mortality rate. Information contained in the World Development Reports indicates that the infant mortality rate was steadily decreasing to 1982 when the rate fell to 86 infant deaths per 1000. Following that date the IMR increased to 97 per 1000 in 1984 before declining in 1985 and 1986. By 1987 the rate had increased slightly over the previous year. The indirect estimate of infant mortality provided by the United Nations (1992) based on DHS data is generally consistent with this pattern. As of 1974 the IMR stood at 102 per 1000, the rate declined until 1980 at which point it began to rise. In 1982 the rate was 97 per 1000, in 1984 100 per 1000 and in 1985 109 per 1000. These estimates are broadly comparable to that of the World Bank in that they show the rate declining to the early 1980s, and then an uptick in the IMR around 1984. Both sets show improvement in the IMR at the end of the transition period, although in the case of the indirect DHS estimate the rate of decline is much greater.

The direct estimate from the Ghana DHS indicates that there has been no increase in the IMR from 1973 to 1987, and marked progress has been made in reducing infant deaths. Given that the indirect DHS estimate and the World Bank data are similar in pattern, if not in scale, these two sets are considered more reliable. Moreover, the estimates are what would be expected given that 1983 was a drought year in Ghana.

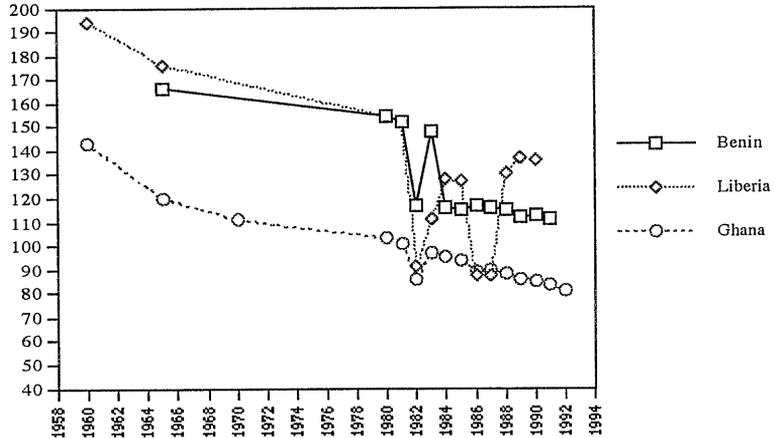


Source: World Bank (World Development Reports, various);
UN (1992) and Ghana Statistical Service and Institute for Resource
Development (1989)

Figure 8.24. Alternative Estimates of the Infant Mortality Rate

As there are no DHS estimates for Benin and Liberia for the 1980s the with-without analysis is based on the World Bank data. That data indicates that in all three countries the infant mortality rate declined until 1982, before increasing in 1983. It is notable that after 1982 Ghana consistently has a lower infant mortality rate than the other two countries. However, throughout the 1980s Benin was able to stabilise its rate at around 115 infant deaths per 1000 population. In the case of Liberia the rate continued to fluctuate considerably. The IMR stood at 111 in 1983 before increasing

to approximately 128 in 1984 and 1985, during 1986 and 1987 the rate fell to 87. However, for 1988-1990, the rate increased substantially to 130, 137 and 136 infant deaths per 1000 population.⁴³



Source: World Bank; World Development Reports (various)

Figure 8.25. With Without Infant Mortality Rate (1960-1992)

Similar to the analysis conducted in chapter seven, a regression is run in order to determine the influence of the adjustment programme on the infant mortality rate. The OLS reveals, as expected, that there is a negative relationship between time and IMR. The R^2 of .38 reflects the low number of observations and a low IMR score in the 1970s.

Table 8.5. Ordinary Least Squares Analysis of IMR

	Regression Coefficients				R^2
	Constant	Time	Dummy	Lagged Dummy	
Model 1	114.54	-2.17			.38
Model 2	116.8	-3.24	12.55		.41
Model 3	107.62	(-2.06)		7.14	.28

The performance of the U5MR in Ghana improved during the adjustment period as compared to the previous period. The reduction in the U5MR continued to make steady progress from 1980 to 1991. From 1960 to 1980 the average annual reduction in the under five mortality rate was 1.5 per cent, from 1980 to 1991 this had increased slightly to a 1.7 per cent average annual reduction. As compared to the controls this performance is acceptable. Liberia actually saw an the U5MR decrease faster during the 1980s than from 1960 to 1980. Benin's rate, on the other hand, continued to decline, but slowed considerably during the 1980s. Table 8.6 outlines these changes.

Table 8.6 With Without/Before After Under Five Mortality Rate

	Average Annual Reduction 1960-80 (per cent)	Average Annual Reduction 1980-91 (per cent)
Ghana	1.5	1.7
Liberia	1.2	1.8
Benin	2.8	1.5

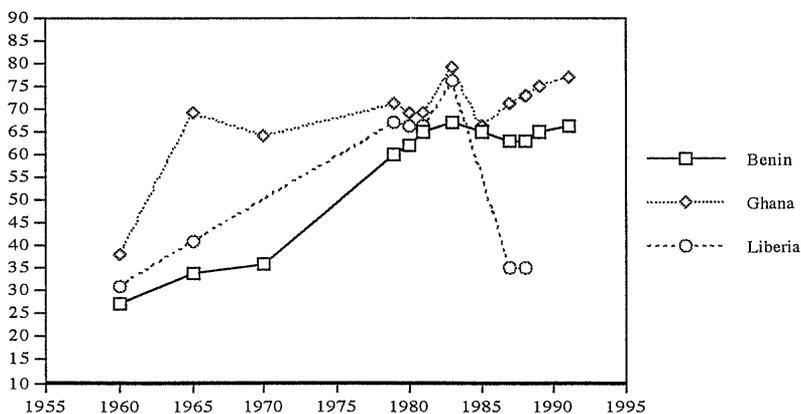
Source: UNICEF (1993a)

8.6 Indicators on Education

A before after analysis of Ghana's performance on providing education to its citizens indicates that progress has been made at the primary level. Prior to the adjustment period, in 1982, primary school enrolment stood at 69 per cent. By 1983 the enrolment of school aged children reached a peak of 79 per cent. By 1984 in the transition period enrolment fell by 13 per cent to 66 per cent. However, after that date enrolment increased steadily to 1991 where the enrolment percentage of 77 was close to the pre-adjustment level. The with without analysis indicates that prior to Ghana's adjustment, in 1980, primary school enrolment was similar for all the countries; Ghana at 69 per cent, Liberia at 66 per cent and Benin at 62 per cent. Benin and Liberia, like Ghana, reached peak levels of 67 and 76 per cent respectively in 1983. After that date Liberia's enrolment declined by a massive amount to 35 per cent while Benin's fell by only two per cent before recovering to 66 per cent in 1991. Overall Ghana's performance was slightly better than Benin's and substantially better than Liberia's.

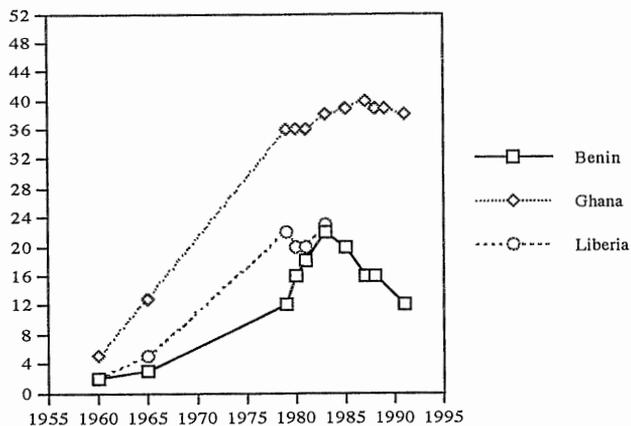
A before after analysis of Ghana's record on secondary level education demonstrates that improvements in enrolment rates have been difficult to maintain. In contrast to primary school enrolment, secondary school enrolment improved over the transition period. From 1980 the percentage of school aged children enrolled in secondary education increased from 36 per cent to a peak of 40 per cent in 1987. In the later adjustment period the enrolment percentage fell marginally to 39 per cent in 1989 and to 38 per cent in 1991. This performance when compared to the Benin control shows that Ghana is doing better on education than non-adjusters. Benin which had a much lower enrolment level than Ghana, reached a peak of 25 per cent in 1985, then fell back to the pre 1980 levels by 1989. Data on Liberia is not available post 1983.

However, worrying signs have shown up in the quality of teaching in Ghana. The primary pupil/teacher ration declined until 1988 when it reached 23 pupils per teacher. However, in the post transition period the ratio increased to 29 pupils per teacher in 1991. The same pattern is evident in Benin. The ratio reached a low in 1988 of 33 students per teacher, then increased slightly to 36 students per teacher in 1991.



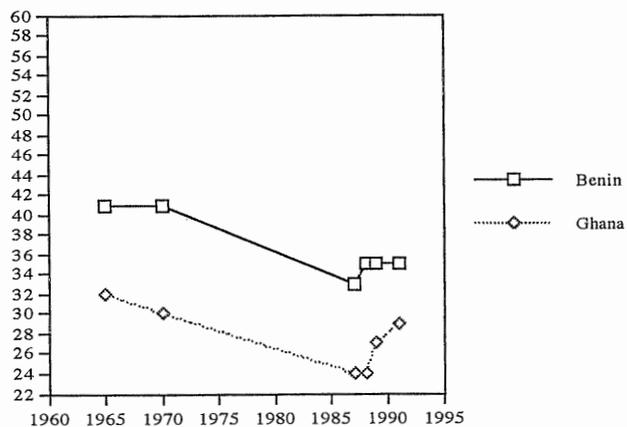
Source: World Bank; World Development Reports (various) and UNESCO

Figure 8.26. With Without Enrolment in Primary Level Education (per cent of school aged children)



Source: World Bank; World Development Reports (various) and UNESCO

Figure 8.27. With Without Enrolment in Secondary Level Education (per cent of children in age group)



Source: World Bank: World Development Reports (various) and UNESCO (various)

Figure 8.28. With Without Primary Pupil/Teacher Ratio (1965-1993)

In chapter five and six the critical role that female education plays in health status changes was discussed. Chapter five indicated that improvements in female education, specifically, made up a portion of the basic needs approach. Given this it is useful to examine the case of adjusting Ghana and compare it to non-adjusting Benin. Tables 8.7 and 8.8 show that the overall and relative performance of Ghana was better than that of her control pairing. In terms of females per 100 males in secondary education Benin's performance dropped as compared to the pre-adjusting period while Ghana's expanded. A comparison of primary education shows relatively equal performance, although Ghana does better overall.

Table 8.7 Ghana Adjuster — Control Females per 100 Males (Primary Education)

	1970	1985	1986	1988	1989	1990	Change 1970 - 1990
Benin	45	50	50	51	51	..	?
Ghana	75	78	77	80	81	82	+7

Source: World Bank, World Development Reports (various)

Table 8.8 Ghana Adjuster — Control Females per 100 Males (Secondary Education)

	1970	1985	1986	1988	1989	1990	Change 1970 - 1990
Benin	44	39	41	39	..	37	-7
Ghana	35	62	62	66	65	63	+28

Source: World Bank, World Development Reports (various)

8.7 Commentary

During the transition period concerns were raised that not enough attention was being placed on the vulnerable groups in Ghana. In 1987 a draft of a report outlining guidelines to help alleviate any adverse effects arising from the economic recovery programme was produced by the Ghanaian authorities, UNICEF and World Bank field staff in Accra. The Programme of Actions to Mitigate the Social Costs of Adjustment (PAMSCAD) was aimed at the rural poor and small farmers, the urban poor, retrenched workers, malnourished children and women. Funds amounting to

\$84 million were suggested by donors to protect vulnerable groups from any problems that occurred as a result of the adjustment programme.

The programme had two broad areas of action: employment creation and basic needs. The employment portion of PAMSCAD concentrated on providing food-for-work schemes in the Northern region, public work programmes in urban areas, such as the (re)building of housing, roads and schools, the provision of compensation packages to redeployees and training programmes for laid-off workers. The basic needs part of the programme provided funds for well-digging and sanitation projects, the provision of essential drugs and a supplementary feeding programme for infants.

Several criticisms can be directed at the implementation of PAMSCAD. The main criticism relates to the *ad hoc* nature of the programme. It was not until the eve of ERP II that discussions about the possible consequences of adjustment were held. By this time any frictional costs associated with the transition period would have already been borne by the vulnerable groups. Thus, the employment portion of PAMSCAD would have been little use to displaced workers as they would have already found other sources of work or immigrated out of the target region. Second, interventions in the health sector appear to have been of an add-on nature. The low point for health and nutrition status indicators was 1983 to 1984, thus any programme aimed at addressing a deterioration of living standards should have started at the beginning of ERP I. Third, funding of the programme was delayed until 1989 when only a fraction, \$15 million, of the estimated requirements was dispersed. This sum was wholly inadequate for providing funds to both rural and urban areas and to generate a high level of employment creation and basic needs provision to what amounted to almost all poor groups in the country.

Due to problems in targeting, implementation, lack of financial commitment and coordination amongst various groups the programme has gradually faded away. UNICEF (Gotnick 1994) has reported that from their perspective the programme for all purposes is dead. Cooperation between UNICEF and the Bank over objectives and implementation was never completely ironed-out. Consequently, UNICEF has

focused on devising a system of basic health interventions applicable to the poor in Ghana.

However, it is apparent from the preceding analysis that the adjustment programme in Ghana has not led to a worsening of either health care delivery, health conditions or health status in Ghana. Unfortunately, it is impossible to tell how the effects of adjustment were distributed. However, the available evidence does suggest that rural and urban areas have weathered the adjustment relatively well. It is impossible to tell what the impact on the informal sector of the economy has been. The government's expansion of funding to the health sector, following the beginning of the ERP, has allowed for improvements in health status to occur. The rise in the broader welfare measure also indicates that the provision of services that affect an individual's health environment has also risen. Nutrition status has not suffered as a result of adjustment. The available evidence suggests that food supply has continued to increase despite fears that the real exchange rate devaluation would lead to food crops being replaced with cash crops produced for the export market.

The adjustment programme has also been relatively successful in restraining inflation. The rate of inflation has decreased substantially from the triple digits found in the pre-adjustment time period. Moreover, and contrary to the pattern found in most developing countries, increases in food price inflation, in several instances has trailed consumer price inflation. This has protected urban consumers who purchase most of their food in the market place from the full effects of the adjustment programme. However, this must be compared against the contraction in public sector employment and incomes in urban areas. However as Alderman (1993) has demonstrated there is reason to believe that the decline in income has not been severe and that many of the effected Ghanaians have been able to offset declines in income by finding employment in other areas.

Health care delivery indicators have continued to expand in Ghana during the adjustment period. The picture for immunisation coverage is mixed, but it is generally clear that for most diseases immunisation increased throughout the

transition period and to the early 1990s. The performance of Ghana relative to her controls is also mixed but the picture tends to favour the adjuster. The adjustment period also saw an increase in formal health care delivery. Hospital beds and the number of physicians increased steadily. Moreover, the transition period was characterised by an increase in equity in the provision of services. Informal health care delivery, as measured by population per nursing person, also expanded. The number of nursing Ghana nearly doubled from the 1980 level. Although, outpatient attendances showed a worrying decline from 1982 to 1987, this appears not to have been the result of accepting the conditions of the adjustment programme: outpatient attendances were on a downward trend from the mid 1970s and the implementation of user charges preceding the World Bank programme tat recommended cost recovery.

The Government of Ghana (Republic of Ghana 1992a) remains committed to the tenants of primary health care and basic needs. The government has planned expenditure of 134,000,000 cedis⁴⁴ to primary health care strengthening, 750,000,000 cedis to a Health Stations Rehabilitation and Completion project, 1,120,000,000 cedis to the construction of new health stations, 520,000,000 to teaching hospital rehabilitation, 4,649,000,000 to health support rehabilitation and 580,000,000 to a new regional hospital in the Cape Coast. The Health Stations Rehabilitation project has built 100 new health stations so as to improve the access to health care facilities. This should expand access to 60 per cent in rural areas; up from 45 per cent in 1987. A MCH/Family Planning project which should improve basic needs coverage, has since 1985, improved the supply of contraceptives and medical equipment to health stations. Moreover, the project has provided funding aimed at immunisation and control of diarrhoeal diseases, the promotion of breastfeeding, and the construction of MCH/FP centres and the rehabilitation of old ones.

The provision of safe water and sanitation facilities grew throughout the transition period. However, the bias here is in favour of urban areas. However, although progress was flat in expanding the provision of these facilities in rural areas, coverage did not decline as it did in other African countries. However, the latter

adjustment period indicates that access to safe drinking water was expanding in the control, Benin, while falling in Ghana. Access to sanitation services to rural areas, in the post transition period shows that the rate of increase was higher in Ghana than in Benin.

The Ministry of Finance and Economic Planning (Republic of Ghana 1992) Report of 1992 indicates that the Governemnt of Ghana remains committed to expanding basic needs coverage in this area. As of 1992, two main projects, Rural Water Supply Schemes I and II were underway in order to provide safe drinking water to all Ghanaians, to help in the eradication of Guinea-worm and other water borne diseases and to improve agricultural productivity. Under the Rural Water Supply Scheme I, 6,079 new hand pump wells are planned. As of 1991, 472 new wells were dug by the government, 636 old wells were rehabilitated and 1,249 wells were dug by NGOs. Under scheme II, 602 hand wells (tapped by rope and bucket) were dug by 1992.

In an effort to improve basic housing stock the Ghanaian government has been improving and increasing rural housing. The Approtech housing scheme aims to construct 102 core housing units and the Rural Housing Rehabilitation and Maintenance Programme will provide roofing sheets, cement and nails to rural farmers. However, eventhough Ghana shows a commitment to increasing and improving housing stock the interest of several "non-priority" groups is evident. As part of housing improvement, money has been allocated to the construction and fencing of new stables for a new race course and the rehabilitation of a police station (Republic of Ghana 1992, 99)

The performance of health and nutrition status indicators is a bit more difficult to measure. As time series data on nutrition status is impossible to obtain use was made of a crude proxy. This indicates that nutrition status has tended to suffer most when food supply has declined due to poor weather conditions. As the measure is far from ideal it is difficult to ascertain the impact of the adjustment measures. However, given that food production has increased during adjustment, it is likely that Ghana, at

the least, did not end the 1980s at a state worse than the pre-adjusting period. Indicators on health status are also problematic. The DHS data sets suggest that the infant mortality rate ended the transition period at a better level than the World Bank data would suggest. However, both sets indicate a substantial decline throughout the 1980s.

Chapter 9

Conclusion

This thesis has examined the complex issues surrounding World Bank and International Monetary Fund programme lending to Sub Saharan Africa and the impact that adjustment policies have had on health care development. It has been shown that both institutions exact a powerful influence over African countries. The ability to wield a substantial amount of pressure has arisen for two reasons. First at the founding of the Bank and the IMF at Bretton Woods, New Hampshire the western developed governments sought to bring stability to the post war situation. Initially the support from the IMF was directed towards the developed market economies that needed funds to aid in temporary shortfalls of foreign exchange. Throughout the 1960s and 1970s the Fund continued to provide support mainly to developed countries in the form of stand-by agreements for temporary balance of payments support. The Bank, much like the Fund, initially started out by providing concessional finance to European countries to aid in the post war reconstruction. However, gradually throughout the 1960s and 1970s, with the provision of project loans, the Bank began to expand its activities to the poorest developing countries. It is this expansion of both Fund and Bank involvement that provided the first tentative encouragement for African governments to allow technical experts access to government policy makers.

The second factor relates to the introduction of new policy instruments by both institutions that would prove to give them an unheard of degree of decision making with regards to the way that African economies were managed. Although, in the case of the IMF, the use of stand-by finance had always allowed the Fund some influence

noted that health and nutrition status and educational obtainment could suffer as a direct result of the conditions applied in the macroeconomic arena. More importantly they believed that adjustment programmes would lead to differing degrees of suffering or improvement depending on the occupational, residential, gender and age categories of individuals. In the area of health care development it has been hypothesised that adjustment programmes would affect health and nutrition status through a variety of mechanisms. First, expenditure reducing policies would lead to declines in incomes for public sector employees who were laid off. This decline in income would feed through to declines in health and nutrition status in so far as individuals and households would not be able to afford health care or food. The problem would have a knock on effect in the informal sector when the redundant public sector workers sought to redeploy their labour in informal activities. This would lead the wage in the informal sector to decline as the supply of labour increased. Second, expenditure reducing policies could lead to a reduction in health and nutrition status if funding to the social sector was cutback. This tended to be viewed as a universally bad reform to undertake. However, it has been noted that such cutbacks need not necessarily be associated with declines in health and nutrition status. Such cutbacks could eliminate unnecessary services and serve to encourage the promotion of cheaper, paramedical personnel and non-technical interventions consistent with the primary health care strategy. Third, reduction in government support for a variety of subsidy schemes could adversely impact the poor. Obviously, the elimination of food subsidies was hypothesised to affect nutrition status. The reduction in other subsidies were also believed to affect health status. For instance, reduction in transport subsidies would discourage travel to health facilities. It is here that the linkage between macroeconomic reforms and changes in health status become murky, extremely complicated, and, basically, impossible to measure. To wit, a reduction in kerosene subsidy would require that a greater amount of income be foregone in order to purchase vital fuel. This income, in one possible scenario, would have to come from the household health budget. Or, alternatively, households could

cease to purchase kerosene, in which case health status might suffer as time formerly spent in household production and care of children was substituted for fuel wood gathering activities.

The second area of concern was that welfare would be reduced through expenditure switching policies. The programme based conditions usually required a real devaluation of the exchange rate. This, then, would lead to a shift in the production in tradables and the incomes of those that produced such goods would increase. It was generally believed that urban groups would suffer, but that rural groups, who make up the bulk of the African population, would benefit. However, the evidence in this area is rather mixed with some studies indicating that the participation in cash cropping schemes had a beneficial impact on health status and some researchers showing that impact would be neutral or negative.

Thus it has become clear that even the basic linkages between adjustment programmes and health status are not clear cut. The web of welfare changes is extremely complicated and few generalizable rules about the impact on different groups can be established. The reason for this lies in the fact that although adjustment programmes are standardised to a certain degree, the reforms may be promoted at different strengths. For instance, although cutbacks in the public sector and exchange rate devaluations figure prominently in most African adjustments, one country may only be required to cutback government employment by ten per cent while the other has to do away with 30 per cent. The uniqueness of each country's situation is further established by the fact that slippage on conditions may be quite high. Furthermore, the internal characteristics of each country may determine the ultimate impact of adjustment on householder health status. To wit, in some countries, or even in parts of countries, the autonomy of women may be well established so that children's welfare is protected even in the face of adverse events, while in other countries men may be the main budget holders and decision makers — subsequently, although not necessarily, household health and nutrition status might decline.

A considerable problem with the design of adjustment programmes is that the process by which economic reforms impact the social sector is not known with precision. The reason for this relies on an overuse of economic analysis to ascertain the possible linkages. Although the theoretical construction has merit, economic analysis fails to adequately capture the behaviour of poverty groups. This notion was brought forward in chapter six when the assumption of a maximising household unit was dropped. Clearly, there are cases where household members may unequally bear the costs and benefits of adjustment. The failure to take into account the behaviour of the majority of the poor is evident in Ghana's PAMSCAD. The safety net created by the Bank and UNICEF was mainly too broad in scope and where the programme did focus on it a bias towards relatively well-off, politically connected urban employees was shown. Recent developments in the Ghanaian "national insurance" programme suffers from the same problem. The programme offers the possibility of insuring not poor groups but individuals who have relatively high incomes. The programme concentrates on providing insurance only to civil servant, members of the formal labour force and Cocobod.

Although this does offer some relief to urban consumers some rural cash crop producers in the purchase of health care, attention is consequently diverted away from the majority of the rural poor. Thus, the Bank, in conjunction with national policy makers and other interested parties should focus their attention to rural groups when designing compensatory programmes that mitigate against any costs associated with adjustment programmes. This would differ from the *ad hoc* character of PAMSCAD. Instead, more use should be made of existing systems to identify vulnerable groups. The World Bank's database on living standards in some African countries should be expanded to all adjusting countries, and would serve as a foundation for research in this area. Second, there is a desperate need to expand the collection of regular data on health status, health care delivery and health condition changes. While it is recognised that from a humanitarian point of view if the choice is between spending money on data collection or on health status increasing activities the latter should be

preferred to the former in the short-run. However in the long-run the availability of an improved database will offer the ability to make informed, economic decisions, regarding the best use of scarce resources. The Bank in 1993 promised to become a more open and transparent institution. At that time it was believed that blanket clearance to review Bank reports of projects, economic reviews of the overall economy and specific sectors would become available to interested parties. However, the original proposal has been scaled back to a case by case policy of disclosure. The Bank, correctly, argues that full disclosure would hurt the process of honest policy dialogue with member countries and would undermine the long-term sustainability of projects. Thus, the future of better data is a matter of conjecture. On one hand, the new policy represents an improvement on past methods of disclosure, but it would appear not to go far enough in offering adequate information. It is not hard to envision a scenario where African governments approve the disclosure of information that show improvements, while withholding information that presents a country unfavourably.

Third, the above improvements would be complemented with a people focused analysis of what or groups demand and the problems that they face under conditions of adjustment. The Bank, has already taken tentative steps in this direction. Although the effort is belated, coming over a decade after the first adjustment loan was implemented in Africa, the use of participatory poverty assessments (PPAs) offers some hope of filling the gaps in our knowledge. In this case, cluster samples of poverty groups are interviewed and observed in order to obtain information on what overtly groups believe to be the root causes of their poverty, the factors that are responsible for their continued immiseration, opportunities or obstacles to fuller labour force participation and the quality and provision of social services. The PPAs were created in 1993 and some problems still remain. First, for many of the PPAs rapid survey methods have been used. The strength of this approach is that it allows for a large amount of information to be gathered in a short period of time at a relatively low cost. However, the drawback of

such an approach is that it fails to consider the dynamic nature of adjustment. It is possible, although due to the recent nature of the PPAs this is not proven, that answers given in one time period may not be applicable later on. For instance, a PPA could reveal that access to credit markets is a problem in rural areas. Based upon that evidence it may be determined that some form of formal credit facility be provided to the poor. This might seem like a reasonable solution, however, a second, follow-up, PPA might reveal that informal, community-run credit arrangements to be more advantageous. Thus the PPAs should be designed as a continuing process. This, so far, is not the case. Only eleven PPAs are currently underway or completed in Sub Saharan Africa. None of these PPAs provide provision for further studies. Nonetheless, assuming that PPAs can be strengthened in terms of methodology and in numbers they will provide not only a way of assessing poverty from those affected but will also provide information that can be used in the design of safety nets and improving the welfare of the poor.

Once the general linkages between adjustment and health status changes was established this thesis then examined the actual experience of African countries in the 1980s. Although the analysis represents an improvement in earlier work it has been determined that the problem of bias and confounding could not be eliminated entirely. Clinical control trials require that in order to remove bias in results, the selection of subjects should be random. When talking about human subjects it is relatively easy to select people who are similar in all respects, and then randomly select from that pool. However, when the subjects become countries it becomes impossible to do this, as no two countries are exactly similar; all that can be hoped for is that countries are broadly similar. The interpretation of the results of this thesis are affected by this. Another factor that influences the results of this thesis is confounding. As the analysis was not random, the subjects were not identical, and the intervention was not always the same, the possibility that there is an alternative explanation cannot be entirely ruled out. Yet, as Brennan and Croft (1994, 729) note, this need not mean " that decision making in public health [be] paralyzed as a result.

The design of adjustment programmes should have taken this into account. Although randomisation will never be a realistic possibility, the Bank and the Fund should have been less quick at introducing adjustment programmes on a widespread scale in Africa. If this had been done, it would have allowed for the affects of a particular adjustment programme to be compared to many non-adjusting controls. Although this would not have eliminated bias, it would have provided a clearer understanding of how adjustment works when compared to several alternate scenarios. As poverty reduction and health improvements are major tenants of the World Bank, and with hindsight, the Bank and the Fund should have implemented studies as controlled before-after, interrupted time series or switchback designs in order to determine any health care or poverty affects of adjustment lending.

The future design of adjustment programmes may allow for the problems of bias and confounding to be reduced. The movement away from SAL lending to health sector specific lending opens up the potential of increasing the number of African controls in an area and possibly randomising them. For instance, it will be a far easier task to compare countries that are utilising user fees, insurance schemes or some other World Bank/IMF sponsored intervention to countries that are not reforming. Indeed there is no doubt a great benefit in further breaking down SECAL lending so that interventions are done in parts of a country and evaluated against regions were the reform did not occur before they are extended to the entire country. The recent introduction of disability adjusted life years (DALYs) by the World Bank (World Bank 1994a) may offer the possibilty in the future of capturing changes in morbidity under adjustment programmes.

Given the above caveats regarding the impact of adjustment measure, chapter seven and eight sought to correct for some of the flaws in earlier studies. Chapter seven provided a broad approach to the problem while still eliminating the deficiencies evident in the earlier approaches. As opposed to comparing adjusters and non-adjusters on a global scale, the analysis focused particularly on Africa. Moreover, African countries were matched based on economic criteria prior to the

adjustment period. Although no criteria or set of criteria could hope to capture the similarities evident in the countries, the approach was still an advancement. Furthermore, the analysis updated earlier studies whose periods of analysis extended only to the mid to late 1980s. In addition, the study was more comprehensive. The results of chapter seven's analysis indicated that, on an aggregate level, there was no systematic reason to assume that adjusting countries did better or worse than non-adjusters.

Chapter eight sought to focus the approach even further. Ghana was used as a case study to determine if health care delivery, health conditions and health status was adversely influenced by the country's economic recovery programme. The evidence indicated Ghana, not only did not suffer, but tended to make considerable progress during the transition period and the latter adjustment period. This is attributable to two main factors. First, the government remained committed to programme throughout the period of adjustment. Moreover, it did so while expanding its commitment to the social sector. Second prior to the adjustment was a low point for Ghana. It is almost possible to say that the economy could not have been any worse. Prior to 1983, the country was characterised by a series of coup d'états, triple digit inflation, disinvestment by foreign private enterprises, thousands of ghost workers on the public payroll, the presence of a large parallel market and smuggling and a deteriorating infrastructure. The stability that the PNDC and the discipline of the World Bank and the IMF conditions offered to the economy set the foundation for future economic expansion. Although it is impossible to say what the distributional consequences were and how the informal sector was impacted, the available evidence suggests that both urban and rural groups increased their welfare.

However, even though the adjustment programme did not lead to declines in health care development in Ghana, or show up a systematic pattern in the comprehensive study, this is not to say that the Bank and the Fund have been successful. In common with other approaches to examining the impact of lending on a country's economic performance, it is useful to employ the actual versus target

approach to health care development. As previously noted conditionality is not normally applied to the social sector. Thus, since the Bank and the Fund do not make formal specification of health sector improvements, information about targets is obtained from the World Health Organization (WHO 1993) and UNICEF (1990a). The goals of the Third Development Decade consisted of (UNICEF 1990a):

- (1) The elimination of hunger and malnutrition.
- (2) Immunisation coverage for all by 1990.
- (3) Safe water and sanitation for all by 1990.
- (4) Life expectancy of 60 years or better.
- (5) Infant mortality rate for the poorest countries less than 120 by 1990, and less than 50 by 2000.
- (6) Universal primary school enrolment by 2000.

The goals were later revised to state:

- (7) Between 1990 and 2000 the reduction in IMR in all countries by one third or to between 50 and 70 per 1000 live births, whichever is less.
- (8) Between 1990 and 2000 a reduction in childhood malnutrition by 50 per cent.
- (9) Universal access to safe water and sanitation by the year 2000.
- (10) Maintenance of high levels of vaccination coverage (at least 90 per cent of children under one years of age) against diphtheria, pertussis, tetanus, tuberculosis, measles, polio and tetanus for women of childbearing age.

The above list indicated that the goals to 1990 and the objectives set for 2000 were (are) extremely ambitious. Such targets must be treated with a degree of scepticism. For instance, these goals are formulated at the headquarters of UNICEF in New York and the World Health Organisation in Geneva and probably do not represent the thinking of field staff in African countries. Moreover, given that there are many difficult to predict variables, that may effect health status, health care delivery and health conditions, such as weather patterns, civil wars, external conflicts, mass expulsion of immigrants and large refugee movements, any such list of targets must be treated with caution. However, it must also be remembered that the goals are

formulated by experts in the field of health that, although ensconced in large bureaucracies, are not completely divorced from the everyday realities of health care development in Sub Saharan Africa.

Chapters seven and eight indicated that in terms of the actual versus target approach hunger and undernutrition remained a major problem in all countries, except Lesotho, throughout the 1980s. In Mali the situation remained critical throughout the period. In the realm of immunisation coverage, progress to the specified target has been made. In virtually every instance adjusting countries have expanded immunisation coverage for infants. In some cases the expansion of coverage has been much greater than 50 per cent. However, there is reason to believe that a continuous 90 per cent coverage will not be obtained by the year 2000. First, the data for the 1980s has indicated that coverage varies widely from year to year, so that in one year it is possible to have 70 per cent of infants covered and the next year only 50 per cent. Such fluctuations can have serious implications for health status as the benefits of herd immunity will decline with such year to year negative changes in immunisation coverage. Second, it is highly likely that continued coverage will hit a financial barrier. As the cost of immunising additional infants increases as more infants are immunised, it is unlikely that the continued expansion in coverage can be financed from the coffers of national governments. Given the pressure on national aid budgets, particularly in the United States, it is not likely that increased funds will be released to expand immunisation coverage of infants.

Chapters seven and eight have also indicated that the provision of safe water and sanitation facilities remain well below target levels. Yet, in the aggregate, adjusters have made steady progress. However the total access figures are effected by the large increase in urban areas. Expansion in rural areas has tended to be hindered by the promotion of urban access. The concentration on urban areas is inconsistent with the broader goals of primary health care and ignores the plight of the majority of Africans.

Progress in reducing the infant mortality rate has tended to favour the controls, but this is not to say that there were no advances in adjusters. The rate continued to decline in adjusters. However, by 1990 in only five adjusters was the rate below the 1990 target level. Only Uganda (whose IMR actually increased during adjustment), Zaire, Zambia, Kenya, and Sudan saw their rates fall below 120 per 1000 live births. In the adjusters, Guinea, Malawi, Mali the rate was substantially above the target. to reach the 2000 year target Guinea would have to reduce the rate by 88 deaths per 1000 live births, Malawi by 99 and Mali by 116. The under five mortality rate continues to remain unacceptably high in the region. UNICEF considers a reduction in the under five mortality rate in Africa to 70 per 1000 live births or two thirds the 1990 rate (whichever is less) to be a desirable goal for the year 2000. However, for most adjusters this is clearly an impossible goal. Mali would have to reduce the under five mortality rate by an average of 19 per cent per year to reach the target level. This compares to a past performance of zero average annual reduction in from 1960 to 1992. Guinea and Malawi would have to reduce the rate by an average of 14 to 15 per cent per year to reach the year 2000 level. Sudan, Ghana, Uganda, Zaire and Zambia would have to reduce the rate by between an average of 10 and 13 per cent per annum to reach an acceptable under five mortality rate. Of the adjusters, Kenya, is the only country that may reach the target. There a 4.4 per cent reduction in the rate is required. However, given that the performance from 1980-1992 was an average annual reduction in the rate of 3.5 per cent, and improvements in the rate become more difficult as the rate falls, even Kenya may have problems.

Advances in coming decades in improving health status will likely be hindered by due to a lack of sufficient funding to the social sector. None of the adjusters (except Kenya) will be able to reach the 2000 year target. Although, three of the controls have universal enrolment, enrolment levels remain low in Guinea, Niger, Mali and Sudan. The problem in this area is compounded to in so far as primary pupil teacher ratios have increased. Given the positive and powerful impact that education has on health and nutrition status, the lack of attention to education will hinder the

rate of the improvement that has been evident during the 1980s. Ghana offers an illustrative example. The popular press (Wall Street Journal 1994 and Financial Times 1993) and the World Bank (1994) compare Ghana to Malaysia and Thailand. Both Malaysia and Ghana obtained independence in the same year, were rich in natural resources, infrastructure and foreign reserves. Both countries had per capita incomes of about \$750 in 1957. However, currently per capita income in Malaysia is around \$2,500 a year while in Ghana it is closer to \$400. The reason for the divergence in per capita incomes are many, however it is clear that one factor plays an important role. Progress in education is considered critical in ensuring continued growth. In this area Ghana has failed to mirror the performance of East Asia. Literacy is estimated at about 60 per cent in Ghana, with some estimates of functional Literacy as low as 40 per cent of the population. In Malaysia the literacy rate is closer to 80 per cent. As chapter eight demonstrated the quality of education is foundering in Ghana. Thus, the possibility of achieving East Asian growth rates and improvements in health status seems only a dream for the present time.

Thus, although the Bank and the Fund programmes appear not to have a major impact, either positive or negative, on health care development in Sub Saharan Africa, it also appears that both institutions have failed to fulfil their stated goal to improve living standards, basic needs and welfare in Africa. Perhaps this is excusable in the case of the IMF which has never had a particularly close association with development issues. However, in the case of the Bank, which promotes itself as a successful leader in the field of development, this is not so. The Bank which has a clear mandate to improve health care development has failed to make a noticeable impact on health status, health conditions and health care delivery in adjusting countries in Africa, and has not placed the foundations necessary to ensure continued progress on internationally recognised performance criteria.

Appendix

Declaration of Alma-Ata

I

The conference strongly reaffirms that health, which is a state of complete physical and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector.

II

The existing gross inequality in the health status of the people particularly between developed and developing countries as well as within countries is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.

III

Economic and social development, based on the New International Economic Order, is of basic importance to the fullest attainment of health for all and to the reduction of the gap between the health status of the developing and developed countries. The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace.

IV

The people have right and duty to participate individually and collectively in the planning and implementation of their health care.

V

Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically

productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice.

VI

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the main overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where the people live and work, and constitutes the first element of a continuing health care process.

VII

Primary health care:

1. reflects and evolves from the economic conditions and sociocultural and political characteristics of the country and its communities and is based on the application of the relevant results of social, biomedical and health services research and public health experience;
2. addresses the main health problems in the community, providing promotive, preventative, curative and rehabilitative services accordingly;
3. includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition; an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunisation against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs;
4. involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors;

5. requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care, making fullest use of local, national and other available resources; and to this end develops through appropriate education the ability of communities to participate;
6. should be sustained by integrated, functional and mutually-supportive referral systems, leading to the progressive improvement of comprehensive health care for all, and giving priority to those most in need;
7. relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.

VIII

All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources and to use available external resources rationally.

IX

All countries should cooperate in the spirit of partnership and service to ensure primary health care for all the people since the attainment of health by the people in any one country directly concerns and benefits every other country. In this context the joint WHO/UNICEF report on primary health care constitutes a solid basis for the further development and operation of primary health care throughout the world.

X

An acceptable level of health for all the people of the world by the year 2000 can be attained through a fuller and better use of the world's resources, a considerable part of which is now spent on armaments and military conflicts. A genuine policy of independence, peace, détente and disarmament could and should release additional resources that could well be devoted to peaceful aims and in particular to the acceleration of social and economic development of which primary health care, as an essential part, should be allotted its proper share.

Source: Mahler, Halfan. 1981. The Meaning of "Health for All by the Year 2000". *World Health Forum*. 2 (1): 5-22.

Notes: the declaration above is reproduced in full from the proceedings of the International Conference on Primary Health Care held at Alma-Ata in September 1978.

Table A.1 International Monetary Fund Arrangements in Sub Saharan Africa 1980-Present

Country	Arrangement	Date of Approval (Inception)	Date of Expiration	Amount ^{45, 46}
Angola				
Benin	ESAF	1.25.93	1.24.96	46,950 ⁴⁷
	SAF	6.16.89	6.15.92	21,910
Botswana				
Burkina Faso	ESAF	3.31.93	3.30.96	48,620
	SAF	3.13.91	3.12.94	22,120
Burundi	ESAF	11.13.91	11.12.94	42,700
	SAF	8.8.86	8.7.89	29,890
	(SB)	(8.8.86)	(3.31.88)	(21,000) ⁴⁸
Cameroon	SB	4.11.94	3.31.95	69,740
	SB	12.20.91	9.19.92	28,000
	SB	9.19.88	6.30.90	61,800
Cape Verde				
Central African Republic	SB	3.28.94	3.27.94	16,480
	SB	6.1.87	9.30.88	8,000
	SAF	6.1.87	5.31.90	21,280
	SB	9.23.85	3.22.87	15,000
	SB	7.6.84	7.5.85	15,000
	SB	4.22.83	4.21.84	18,000
	SB	4.10.81	12.31.81	10,400
SB	2.15.80	2.14.81	10,400	
Chad	SB	3.23.94	3.22.95	16,520
	SAF	10.30.87	10.29.90	21,420
Comoros	SAF	6.21.91	6.20.94	3,150
Congo	SB	8.27.90	5.26.92	27,975
	SB	8.29.86	4.28.88	22,400
Cote d'Ivoire	ESAF	3.11.94	3.10.97	333,480
	SB	9.20.91	9.19.92	82,750
	SB	11.20.89	4.19.91	175,800 ⁴⁹
	SB	2.29.88	4.30.89	94,000
	SB	6.23.86	6.22.88	100,000 ⁵⁰
	SB	6.3.85	6.2.86	66,200
	SB	8.3.84	5.2.85	82,750
EFF	2.27.81	2.22.84	484,500	
Djibouti				
Equatorial Guinea	ESAF	2.3.93	2.2.96	12,880
	SAF	12.7.88	12.6.91	12,880 ⁵¹
	SB	6.28.85	6.27.86	9,200
	SB	7.1.80	6.30.81	5,500
Ethiopia	SAF	10.28.92	10.27.95	49,420
	SB	5.8.81	6.30.82	67,500
Gabon	SB	3.30.94	2.26.95	38,600
	SB	9.30.91	3.29.93	28,000
	SB	9.15.89	3.14.91	43,000
	SB	12.22.86	12.31.88	98,685
	EFF	6.27.80	12.31.82	34,000
The Gambia	ESAF	11.23.88	11.22.91	20,520
	SAF	9.17.86	11.23.88	11,970
	SB	9.17.86	10.16.87	5,130
	SB	4.23.84	7.22.85	12,830 ⁵²
	SB	2.22.82	2.21.83	16,900
	SB	11.2.79	11.1.80	1,600

Ghana	ESAF	11.9.88	11.8.91	368,100
	SAF	11.6.87	11.9.88	143,150
	EFF (EA)	11.6.87	11.5.90	245,400 ⁵³
	SB	10.15.86	10.14.87	81,800
	SB	8.27.84	12.31.85	180,000
	SB	8.3.83	8.2.84	238,500
Guinea	ESAF	11.6.91	11.5.94	57,900
	SAF	7.29.87	7.28.90	40,530
	SB	7.29.87	8.28.88	11,600
	SB	2.3.86	3.2.87	33,000
	SB	12.1.82	11.30.83	25,000
Guinea-Bissau	SAF	10.14.87	10.13.90	5,250
Kenya	ESAF	5.15.89	5.14.92	241,400
	SB	2.1.88	7.31.89	85,000
	SAF	2.1.88	1.31.91	99,400
	SB	2.8.85	2.7.86	85,200
	SB	3.21.83	9.20.84	175,950
	SB	1.8.82	1.7.83	151,500
	SB	10.15.80	10.14.82	241,500 ⁵⁴
	SB	8.20.79	8.19.81	122,480 ⁵⁵
Lesotho	ESAF	5.22.91	5.21.94	18,120
	SAF	6.29.88	6.28.91	10,570
Liberia	SB	12.7.84	6.6.86	42,780 ⁵⁶
	SB	9.14.83	9.13.84	55,000
	SB	9.29.82	9.28.83	55,000 ⁵⁷
	SB	8.26.81	9.15.82	55,000
	SB	9.15.80	9.14.92	65,000 ⁵⁸
Madagascar	ESAF	5.15.89	5.14.92	76,900
	SB	9.2.88	7.1.89	13,300
	SAF	8.31.87	8.30.90	46,480
	SB	9.17.86	2.16.88	30,000
	SB	4.23.85	4.22.86	29,500
	SB	4.10.84	3.31.85	33,000
	SB	7.9.82	7.8.83	51,000
	SB	4.13.81	6.26.82	76,700
	SB	6.27.80	6.26.82	65,000 ⁵⁹
Mali	ESAF	8.28.92	8.27.95	60,960 ⁶⁰
	SAF	8.5.88	8.4.91	35,560
	SB	8.5.88	10.4.89	12,700
	SB	11.8.85	3.31.87	22,860
	SB	12.9.83	5.31.85	40,500
	SB	5.21.82	5.20.83	30,380
Malawi	ESAF	7.15.88	7.14.91	55,800
	SB	3.2.88	5.30.89	13,020
	SAF	8.31.87	8.30.90	46,480
	EFF	9.19.83	9.18.86	81,000 ⁶¹
	SB	8.6.82	8.5.83	22,000
	SB	5.9.80	3.31.82	49,880
	SB	10.31.79	12.31.81	26,340 ⁶²
Mauritania	ESAF	12.9.92	12.8.94	3,410
	ESAF	5.24.89	5.23.92	50,850
	SB	5.4.87	5.3.88	10,000
	SAF	9.22.86	9.21.89	23,730
	SB	4.26.86	4.25.87	12,000
	SB	4.12.85	4.25.86	12,000
	SB	6.1.81	3.31.82	25,800
	SB	7.23.80	3.31.82	29,700 ⁶³

Mauritius	SB	4.1.85	8.31.86	49,000
	SB	5.18.83	8.17.84	49,500
	SB	12.21.81	12.20.82	30,000
	SB	9.5.80	9.4.81	35,000
	SB	10.31.79	10.30.81	73,030 ⁶⁴
Mozambique	ESAF	6.1.90	5.31.93	85,400
	SAF	6.8.87	6.7.90	42,700
Namibia				
Niger	SB	3.4.94	3.3.95	18,596
	ESAF	12.12.88	12.11.91	50,550
	SAF	11.17.86	12.12.88	23,590
	SB	12.5.86	12.4.87	10,110
	SB	12.5.85	12.4.86	13,480
	SB	12.5.84	12.4.85	16,000
	SB	10.5.83	12.4.84	18,000
Nigeria	SB	1.9.91	4.8.92	319,000
	SB	2.3.89	4.30.90	475,000
	SB	1.30.87	1.31.88	650,000
Rwanda	SAF	4.30.91	4.29.94	30,660
	SB	10.31.79	10.30.80	5,000
Sao Tome and Principe	SAF	6.2.89	6.1.92	2,800
Senegal	SB	3.2.94	3.1.95	47,560
	ESAF	11.21.88	11.20.90	144,670
	SB	10.26.87	10.25.88	21,275
	SAF	11.10.86	11.21.88	59,570
	SB	11.10.86	11.9.87	34,000 ⁶⁵
	SB	1.16.85	6.15.86	76.60
	SB	9.19.83	9.18.84	63,000
	SB	11.24.82	11.23.83	47,250 ⁶⁶
	SB	9.11.81	9.10.82	63,000
	EFF	8.8.80	8.7.83	184,800 ⁶⁷
Seychelles				
Sierra Leone	ESAF	3.28.94	3.27.97	88,780
	SAF	3.28.94	3.27.95	27,020
	SAF	11.14.86	11.13.89	40,530
	SB	11.14.86	11.13.87	23,160
	SB	2.3.84	2.2.85	50,200
	SB	11.2.79	11.1.80	17,000
	EFF	3.30.81	2.22.84	186,000 ⁶⁸
Somalia	SAF	6.29.87	6.28.90	30,940
	SB	6.29.87	2.28.89	33,150
	SB	2.22.85	9.30.86	22,100
	SB	7.15.82	1.14.84	60,000
	SB	7.15.81	7.14.82	43,130
	SB	2.27.80	2.26.81	11,500
Sudan	SB	6.25.84	6.24.85	90,000
	SB	2.23.83	3.9.84	170,000
	SB	2.22.82	2.21.83	198,000
	ESAF	5.4.79	5.3.82	427,000 ⁶⁹
Swaziland				
Tanzania	ESAF	7.29.91	7.28.94	181,900
	SAF	10.30.87	10.29.90	74,900
	SB	8.28.86	2.27.88	64,200
	SB	9.15.80	9.30.82	179,600

Togo	ESAF	5.31.89	5.30.92	46,080
	SAF	3.16.88	3.15.91	26,880
	SB	3.16.88	4.15.89	13,000
	SB	6.9.86	4.8.88	23,040 ⁷⁰
	SB	5.17.85	5.16.86	15,360
	SB	5.7.84	5.6.85	19,000
	SB	3.4.83	4.3.84	21,370
	SB	2.13.81	2.12.83	47,500
Uganda	ESAF	6.11.79	12.31.80	15,000
	ESAF	4.17.89	4.16.92	179,280
	SAF	6.15.87	4.17.89	69,720
	SB	9.16.83	9.15.84	95,000
	SB	8.11.82	8.10.83	112,500
	SB	6.5.81	6.30.82	112,500
Zaire	SB	1.4.80	12.31.80	12,500
	SB	6.9.89	6.8.90	116,400
	SAF	5.15.87	5.14.90	203,700
	SB	5.15.87	5.14.88	100,000
	SB	5.28.86	3.27.88	214,200 ⁷¹
	SB	4.24.85	4.23.86	162,000
	SB	12.27.83	3.26.85	228,000
	EFF	6.22.81	6.21.84	912,00 ⁷²
Zambia	SB	8.27.79	2.26.81	118,000
	(SB)	(2.21.86)	(2.28.88)	229,800 ⁷³
	SB	4.24.85	4.23.86	162,000
	SB	7.26.84	4.30.86	225,000 ⁷⁴
	EFF	4.18.83	4.17.84	211,500
Zimbabwe	SB	5.8.81	5.7.84	800,000 ⁷⁵
	ESAF	9.11.92	9.10.95	200,600
	EFF	1.24.92	9.11.92 ⁷⁶	343,800
	EFF	9.11.92	9.10.95	114,600
	SB	3.23.83	9.22.84	300,000
SB	4.8.81	4.7.82	37,500	

Note: SB stands for Stand-by Arrangement; EFF stands for Extended Fund Facility; SAF stands for Structural Adjustment Facility and ESAF stands for Enhanced Structural Adjustment Facility.

Source: International Monetary Fund *Annual Reports* 1981-1992.

Table A.2. World Bank Structural Adjustment, Sectoral Adjustment Loans, and Special Facility for Sub-Saharan Africa 1980-present

Country	Fiscal Year	Adjustment Operation ⁷⁷	Total Amount approved ⁷⁸
Angola			
Benin	1991	IDA SAL: SAL II	55.0
	1989	IDA SAL: SAL I	45.0
Botswana			
Burkina Faso	1994	IDA: Economic Recovery Credit	25.0
	1992	IDA SECAL: Agricultural Adjustment	28.0
	1991	IDA SAL: SAL I	80.0
Burundi	1992	IDA SAL: SAL III:	30.0
	1988	IDA SAL: SAL II:	90.0
	1986	IDA SAL: Structural adjustment credit SFC: Structural adjustment credit I (includes 19.3 SJF)	15.0 36.0
Cameroon	1994	IDA: Economic Recovery Credit IDA: Economic Recovery Credit IDA: Structural Adjustment Programme	75.0 51.0 50.0
	1989	IBRD SAL: SAL I	150.0
Cape Verde			
Central African Republic	1991	IDA SAL: SAL III IDA SAL: SAL II	45.0 40.0
	1988	IDA SECAL: Cotton sector adjustment	15.0
	1987	SAL I SFC: Structural adjustment credit	14.0 16.0
Chad	1994	IDA: Economic Recovery Credit	20.0
Comoros	1991	IDA SECAL: Macroeconomic reform and capacity building	8.0
Congo	1994	IDA: Economic Recovery Credit	100.0
	1988		70.0

Cote d'Ivoire	1994	IDA: Human Resources Adjustment Programme	85.0
		IDA: Human Resources Adjustment Programme	100.0
		IDA: Financial Sector Adjustment Programme	100.0
	1992	IBRD SECAL: Financial sector adjustment	150.0
		IBRD SECAL: Human rsres adjustment	125.0
		IBRD SECAL: Regulatory reform	75.0
1990	IBRD SECAL: Water supply and sewerage sector adjustment	80.0	
	IBRD SECAL: Agriculture sector adjustment	150.0	
	IBRD SECAL: Energy sector loan	100.0	
1986	IBRD SAL: SAL III	250.0	
1984	IBRD SAL: SAL II	250.7	
1982	IBRD SAL: SAL	150.0	
Djibouti			
Equatorial Guinea	1986	SFC: Reconstruction Import Credit	4.0
Ethiopia	1994	IDA: Structural Adjustment Credit	0.5
	1993	IDA SAL: Structural Adjustment	250.0
Gabon	1994	IBRD: Economic recovery Loan	30.0
Gambia	1988	IBRD SAL: SAL I	50.0
	1989	IDA SAL: SAL II	23.0
	1987	SAL I SFC: Structural adjustment credit	5.0 11.5

Ghana	1994	IDA: Agricultural Adjustment Credit	5.7
	1993	IDA SAL: Private investment promotion (supplement)	6.5
	1992	IDA SAL: Private investment	6.1
		IDA SECAL: Financial sector adjustment	100.0
		IDA SECAL: Agriculture sector adjustment	80.0
	1991	IDA SAL: SAL II supplement	8.3
		IDA SAL: Private investment promotion	120.0
	1990	IDA SAL: SAL II supplement	5.7
		IDA SECAL: Education sector adjustment II	50.0
	1989	IDA SAL: SAL II	120.0
	1988	IDA SECAL: Financial sector adjustment	100.0
	1987	SAL I	34.0
		Education sector	34.5
		SFC: Structural adjustment credit	81.0
1986	SFC: Road rehabilitation and maintenance credit	14.0	
	SFC: Reconstruction import credit II	41.0	
	SFC: Industrial sector-adjustment credit	25.0	
1985	IDA: Economic recovery program	60.0	
1984	IDA: Export rehabilitation project	76.0 ⁷⁹	
1983	Reconstruction Import Credit	40.0	
Guinea	1993	IDA SAL: Structural Adjustment II (supplement)	0.1
	1990	IDA SECAL: Education sector adjustment	20.0
	1988	IDA SAL: SAL II	65.0
	1986	IDA SAL: Structural adjustment program	25.0
SFC: Structural adjustment credit (includes 42.2 SJF)		59.0	
Guinea-Bissau	1989	IDA SAL: SAL II	23.4
	1987	SAL I	10.0
		SFC: Structural adjustment credit	5.0
	1986	SFC: Reconstruction-import credit	5.0
	1985	IDA: Economic recovery program	10.0

Kenya	1993	IDA SECAL: Education Sector Adjustment (supplement)	52.1
	1992	IDA SECAL: Education Sector Adjustment	100.0
		IDA SECAL: Export Development (supplement)	49.2
	1991	IDA SECAL Agriculture sector adjustment II	100.0
		IDA SECAL: Export development	67.3
		IDA SECAL: Financial sector adjustment supplement	44.0
	1988	IDA SECAL: Industrial sector adjustment	102.0
	1986	SFC: Agriculture sector credit	
1983	IBRD SAL: Second structural adjustment program	60.9	
	IDA SAL: Second structural adjustment program	70.0	
(1980)	(SAL)	(55.0)	
Lesotho			
Liberia			
Madagascar	1993	Public-sector adjustment (supplement)	1.4
	1992	IDA SECAL: Public sector adjustment (supplement)	1.3
	1991	IDA SECAL: Public sector adjustment supplement	1.7
	1990	IDA SECAL: Public sector adjustment supplement	1.2
	1988	IDA SECAL: Public sector adjustment	125.0
	1987	Industry and trade	16.0
		SFC: Industry assistance credit II	66.5
	1986	SFC: Industrial assistance credit SFC: Agriculture-adjustment credit	

Malawi	1994	IDA: Entrepreneurship Development and Drought Recovery Programme Credit	4.3
	1993	IDA SAL: Entrepreneurship development and drought recovery (supplement)	5.9
	1992	IDA SAL: Entrepreneurship development and drought recovery	120.0
		IDA SECAL: Agriculture Sector Adjustment (supplement)	5.2
	1991	IDA SECAL: Industry and trade adjustment supplement	7.2
	1990	IDA SECAL: Industry and trade adjustment supplement	4.7
		IDA SECAL: Agriculture sector adjustment	70.0
	1988	IDA: Industry/trade adjustment	70.0
	1987	SFC: Structural adjustment credit supplement	10.0
	1986	IDA SAL: SAL III	30.0
		SFC: SAL III (includes 39.1 in SJF)	79.0
	1984	IDA: Second structural adjustment credit	55.0
(1980)	(IBRD SAL: SAL)	(45.0)	
Mali	1994	IDA: Economic Recovery Credit	25.0
	1991	IDA SAL: SAL I	70.0
	1988	IDA: Public enterprise adjustment	40.0
Mauritania	1994	IDA: Public Enterprise Sector Adjustment Credit	1.3
	1993	IDA SECAL: Public-enterprise sector adjustment (supplement)	2.2
	1992	IDA SECAL: Public enterprise sector adjustment supplement	2.5
	1991	IDA SECAL: Public enterprise sector adjustment supplement	4.0
	1990	IDA SECAL: Agriculture sector adjustment/irrigation improvement	25.0
		IDA SECAL: Public enterprise sector adjustment	40.0
	1987	Industry Adjustment	25.0
		SAL I	15.0
SFC: Structural adjustment credit		27.5	
1985	IDA: Public enterprise technical assistance rehabilitation project	16.4	
Mauritius	1985	IBRD SAL: Second SAL	40.0
	(1981)	(SAL)	(15.0)
Mozambique	1994	IDA: Second Economic Recovery Programme	200.0
	1992	IDA SAL: Economic recovery	180.0
	1989	IDA SAL: Rehabilitation III	90.0
	1988	IDA: Multisector rehabilitation II	70.0
	1985	IDA: Rehabilitation project	45.0

Namibia			
Niger	1994	IDA: Economic Recovery Credit	25.0
	1987	Public enterprise sector SFC: Public enterprise adjustment	60.0 20.0
	1986	IDA SAL: Structural adjustment program SFC: Structural adjustment credit SFC: Transportation credit	20.0 40.0 38.0
Nigeria	1990	IDA SECAL: University education development	120.0
	1987	Trade policy	452.0
Rwanda			
	1994	IDA: Private Sector Development	12.0
	1991	IDA SAL: SAL I	90.0
	(1986)	(SFC: Highway IV project)	15.0
Sao Tome and Principe			
	1990	IDA SAL Structural adjustment technical assistance	9.8
	1987	IDA SAL: SAL I SFC: Structural adjustment credit	4.0 3.0
	1985	IDA: Economic rehabilitation and modernization project	5.0
Senegal			
	1994	IDA: Economic Recovery Credit IDA: Transport Sector Adjustment Credit	25.0 3.7
	1992	IDA SAL: SAL IV supplement	4.7
	1991	IDA SAL: SAL IV supplement	7.1
	1990	IDA SAL: SAL IV IDA SAL: SAL IV supplement IDA SECAL: Banking/financial sector adjustment	80.0 4.4 45.0
	1989	IDA SAL: SAL III supplement	5.5
	1987	IDA SAL: SAL III SFC: Structural adjustment credit III	45.0 40.0
	1986	IDA SAL: SAL II SFC: Structural adjustment credit (includes 7.0 in SJF)	20.0 51.0
	(1980)	(IBRD/IDA: SAL)	(60.0)
Seychelles			
Sierra Leone			
	1994	IDA: Structural Adjustment Credit IDA: Structural Adjustment Credit	0.2 50.0
	1993	IDA SAL: Reconstruction import (supplement)	0.3
	1992	IDA SAL: Import substitute IDA SAL: Reconstruction Imports (supplement)	43.1 0.3

Somalia	1986	SFC: Agricultural inputs program I	22.0	
		SFC: Agricultural sector adjustment credit	40.0	
Sudan				
Swaziland				
Tanzania	1993	IDA SECAL: Financial -sector adjustment (supplement)	11.3	
	1992	IDA SECAL: Financial sector adjustment	200.0	
		IDA SECAL: Agriculture sector adjustment supplement	11.3	
	1991	IDA SECAL: Agriculture adjustment supplement	16.1	
	1990	IDA SECAL: Industry and trade adjustment supplement	10.3	
		IDA SECAL: Agriculture sector adjustment	200.0	
	1988	IDA: Multisector rehabilitation supplement	30.0	
	1987	Rehabilitation Imports credit	50.0	
		SFC: Multisector rehabilitation credit	46.2	
	Togo	1991	IDA SAL: SAL IV	55.0
IDA SECAL: Population/health adjustment			14.2	
1990		IDA SAL: SAL III supplement	0.2	
1989		IDA SAL: SAL III supplement	0.1	
1988		IDA SAL: SAL III	45.0	
1986		SFC: Structural adjustment credit II	40.0	
1985		IDA: Second structural adjustment project	27.8	
1983		IDA SAL: Structural adjustment program	40.0 ⁸⁰	
Uganda		1994	IDA: Second Structural Adjustment Credit	80.0
			IDA: Financial Sector Adjustment Credit	1.1
	1993	IDA SAL: Structural Adjustment (supplement)	1.4	
		IDA SECAL: Financial sector adjustment	100.0	
	1992	IDA SAL: Economic recovery II (supplement)	1.6	
		IDA SAL: SAL I	125.0	
	1991	IDA SAL: Economic recovery program II supplement	2.0	
		IDA SECAL: Agriculture sector adjustment	100.0	
	1990	IDA SAL: Economic recovery program II	125.0	
		IDA SAL: Economic recovery program II supplement	1.5	
1989	IDA SAL: Economic recovery program supplement	1.7		
	IDA SAL: Economic recovery program supplement	25.0		
1988	IDA: Economic recovery program	65.0		
1982	IDA: Second reconstruction program	70.0		

Zaire	1987	IDA SAL: SAL I SFC: Structural adjustment credit	55.0 94.3	
	1986	SFC: Highway IV project SFC: Industrial sector-adjustment credit	34.0 60.0	
Zambia	1994	IDA: Economic and Social Adjustment Credit IDA: Privatization and Industrial Reform Credit IDA: Second Privatization and Industrial Reform Credit	150.0 16.8 10.0	
	1993	IDA SECAL: Privatization and industrial reform (supplement) IDA SECAL: Privatization and industrial reform II	20.9 100.0	
	1992	IDA SAL: Economic recovery supplement IDA SECAL: Privatization/industrial reform	10.0 200.0	
	1991	IDA SAL: Economic recovery program IDA SAL: Economic recovery program supplement	210.0 27.2	
	1986	IDA SAL: Recovery program SFC: Agriculture rehabilitation credit SFC: Industrial reorientation credit	50.0 14.0 64.0	
	Zimbabwe	1993	IDA SAL: Structural Adjustment II	125.0
		1992	IBRD/IDA SAL: SAL I	175.0

Source: World Bank *Annual Reports* 1993-1982.

Note: SAL stands for Structural Adjustment Loan, SECAL stands for Sector Adjustment Loan and SFC stands for Special Facility Credit.

Notes

¹ The countries of Sub Saharan Africa, broken down by income group, are: Low income (1991 GNP per capita \$635 or less); Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Ethiopia, Equatorial Guinea, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Zaire, Zambia and Zimbabwe. Lower-middle income (\$636-2,555) Angola, Cameroon, Cape Verde, Congo, Côte d'Ivoire, Djibouti, Namibia, Senegal, Swaziland. Upper-middle income (\$2,556-\$7,910) Botswana, Gabon, Mayotte, Reunion, Mauritius and Seychelles. South Africa is technically part of Sub Saharan Africa, but in keeping with convention, is excluded from analysis.

² For Africa as a whole (including North Africa) Griffiths (1994: 215-16) reports that there have been 80 *successful* coups d'état from 1950-1993 and only 50 constitutional changes of government. Out of 57 African states, as of 1993, 27 were led by military rulers.

³ The major wars in the region are: Angola (1975 -), Chad (1978 -), Ethiopia (1961 -1993), Mozambique (1977 -), Somalia (1960 -), Sudan (1956-72 and 1982 -), Uganda (1979 -) (Griffiths 1994: 134) and Rwanda (1994 -)

⁴ Helleiner (1991: 1834): notes that the "1980 Amendment to the U.S. Bretton Woods Agreement Act which required US representatives to the IMF to 'take into account the effect...on jobs, investment, real per capita income, the gap in wealth between rich and poor, and social programmes such as health, housing and education, in order to seek to minimize the adverse impact of those adjustment programmes on basic human needs.'" (section 33)"

⁵ Factors that characterize the countries which approach the fund for assistance are [when compared with non-program countries (Joyce 1991)]: higher rates of domestic credit expansion, larger government sectors, more severe current account deficits, smaller reserve adequacy, and lower income levels.

⁶ The United Nation publication also make a third distinction — that of economic reform. Economic reform includes broader institutional changes as well as changes to capacity and the flexibility of the economy. Here, deregulation, privatising state enterprises, land and tax system reforms are viewed as economic reforms.

⁷ The Systemic Transformation Facility is not mentioned here. Although African countries that had former relations with the CMEA could avail themselves to this facility, it is unlikely that they would since ESAF financing is cheaper (IMFa 1993 135).

⁸ Exception: Due to political pressure from the US a loan of 1.25 billion to Argentina in October 1988 without an IMF stabilisation package in place. Belatedly, the Bank is trying to cancel huge chunks of the loan. Also, exception made in the case of a loan to Honduras.

⁹ Turkey is the only example of a country that reached this 'country ceiling'.

¹⁰ Borrowed, here, takes on a loose meaning. For the use of IMF facilities the term actually refers to purchases of fund resources. For the World Bank, in most cases, it refers to credits granted by the International Development Association.

¹¹ The distinction between what constitutes a tradable and nontradable good is not always clear. Services are viewed as nontradable, but there are examples of grey areas — electricity is often traded between countries and education certainly is (Killick (1993: 11). However, nontradable goods can often be distinguished by some or all of the following characteristics: they are perishable, difficult to transport, the

quality of a good is higher in other countries, trade may be prohibited, and the good may be consumed elsewhere do to national culture and tastes (Woodward 1992 a: 83).

Helmers (1988: 17) points out this problem. He divides industry into four main types; import competing, export, domestic market and home good. Import competing industries produce goods to satisfy the domestic demand for imports. Export industries produce for the export market and to satisfy home demand. Industries that produce for the home market produce goods for the domestic market but may switch to exporting if the exchange rate changes. Industries that produce pure home goods are those that produce goods that are not traded at all — such as construction.

12 To be fair this report a.k.a the Berg Report says that dependence on a select range of primary products will be disadvantageous (p.23).

13 Potential for tax avoidance by richer members of the community (by moving assets abroad, etc).

14 The Declaration of Alma-Ata is reproduced in the appendix.

15 As of 1977 23.5 per cent of Kenyan households lived more than 8 km from a health facility (UNICEF 1989, 85)

16 Note that this is a study based on a survey of users of New York City's free outpatient clinics and municipal departments. The findings are broadly consistent with other findings for developing countries, see for instance Mwabu (1989) — who also considers the problem of seasonality.

17 At the time of the study government hospitals were free in Kenya, however the cost of transportation to them is high (Mwabu 1989: 389) so increases in income were likely spent on transportation.

18 Goods C and G are assumed to be perfect substitutes.

19 (1) The slope of AB represents the marginal product of labour.

(2) VJ goods are produced, not OJ goods because it is assumed here that OV market goods can be purchased with non-labour income. If the household did not have any non-labour income then the household production function would be represented by a line running from point A to point T.

20 The slope of the line DE is w/p or the real wage rate. The line is drawn from E because market production is only undertaken when household work drives the marginal product of labour down to the real wage rate. At point E the slopes of AB and DE are equal; that is $g_n = w/p$

21 Assumption here is that satisfaction is only obtained through goods purchased or produced by labour. Satisfaction is not obtained by the act of working.

22 The normal assumptions are made here. They are:

(1) The family attempts to maximize satisfaction.

(2) It faces market prices for all goods and has limited income to purchase them.

(3) All income is spent on two composite goods; good x (say maize) and all other goods y. In order to represent all the combinations of maize and other goods purchasable by the family (when income is exhausted) use is made of the budget constraint:

$$p_x X + p_y Y = M \quad (6.1)$$

Where p_y is the price at which all other goods may be purchased, p_x is the price at which a unit of maize may be purchased. X represents the quantity of food purchased and y represents the quantity of all other goods purchased. M is the family's income.

Solving for Y, in order to get a geometric representation:

Subtract $p_X X$ from both sides to get;

$$p_Y Y = M - p_X X \quad (6.2)$$

Divide by p_Y to get;

$$Y = (M/p_Y) - (p_X/p_Y)X \quad (6.3)$$

Moreover,

(4) Households have preferences (likes and dislikes) and they are:

- (a) able to rank all possible combination of one good and all other goods, and
- (b) they prefer more to less, and
- (c) households are consistent in their preferences.

(5) These preferences are expressed geometrically in terms of indifference curves, which is the locus of points representing all the combination of goods and services that the household prefers equally well. Based on the principle of "diversity of consumption" indifference curves are shown as convex to the origin. Only interior solutions will be considered, although it is realised that corner solutions are possible with convex indifference curves (and certainly with concave curves).

²³ From (6.3) we have;

$Y = (M/p_Y) - (p_X/p_Y)X$, if income changes we get $Y = (M_2/p_Y) - (p_X/p_Y)X$; that is the intercept has changed, not the slope.

²⁴ Sahn and Sarris (1991) report that of food expenditure most expenditure goes to nontraded food rather than to traded foods. For example, in Tanzania 71 per cent of household expenditure goes on food; of which 23 per cent goes to traded foods (rice, maize and groundnut) and 48 per cent to nontraded foods (cassava and millet).

²⁵ Recourse made only in extreme circumstances.

²⁶ Here, look especially for an increase in informal sector activities. Note also possibility of household members engaging in quasi-legal or completely illicit activities (smuggling, prostitution, and drug trafficking, for instance).

²⁷ Income transfers from extended family members (to meet basic needs requirements), or increased use of the government aid network. For instance food stamps, unemployment compensation or programs to expand subsistence food production (home gardens).

²⁸ Either labour seeking migration, relief seeking migration, or migration of the entire family. Note here, the lumpiness of remittances may be a factor in health status [recipients may spend money on things other than daily requirements of children (Kennedy and Peters: 1992)]. The reasons behind migration are not completely clear. One view has it that "workers vote with their feet" and migratory decisions are reached by an individual alone. Another view, centred on the family, has it that migration occurs to smooth consumption and to achieve stable income levels in order to reduce risk to the family [see (Stark 1991) for a concise explanation of the different theories].

²⁹ Known as survival strategies or buffer mechanisms.

³⁰ In general in the agricultural sector of Sub Saharan Africa men specialise in cash crops and women in food crops (World Bank 1990: 43)

³¹ This analysis did not distinguish between biological, illegitimate, or foster children when treated. It should also be noted that the time of the study was when money was

plentiful. In lean times the results could be different with mothers bearing a greater proportion of treatment costs (p.204).

32 Interestingly, the authors broke-down female household head into two categories: *de jure* and *de facto*. *De facto* female head-headed households are those in which the male is absent for more than 50 per cent of the time.

33 Overall the book is speculative about the social consequences of adjustment and stabilisation measures. For instance, he posits (p. 76-78) that adjustment and stabilisation may lead to a breakdown in extended family structures, the nuclear family and crime may increase. These all have implications for changes in health status, the problem is there is no hard evidence to back up this claim.

34 Namibia, Cape Verde and Seychelles are excluded from the control list due to lack of data.

35 On the assumption that the relationship between time and IMR is non-linear the following OLS regression was run:

$$\log y = \log \alpha + \beta \log t$$

The R² values were as:

<u>Country</u>	<u>R²</u>
Niger	.84
Guinea	.33
Zaire	.67
Kenya	.18
Mali	.05
Malawi	.00
Sudan	.97

36 Data on infant mortality rate for any given country is weak. Data presented is based on a variety of sources. First, data is obtained from demographic surveys or vital-registration based estimates. The following countries had their last survey or data collected in (year in parenthesis): Ghana (1988), Guinea (1954-55), Kenya (1989), Malawi (1982), Mali (1987), Niger (1992), Sudan (1989-90), Uganda (1988-89) and Zimbabwe (1992). Beyond these years estimates of IMR are based on projections or extrapolation techniques. In the case of survey or census data the IMR for intermediate years is interpolated or estimated from base reference statistics. Thus, the data should be thought of as giving an indication of the IMR in a country at a particular time.

37 The analysis of other measures of infant/child mortality is hindered by a lack of data. There is no sufficient time series data to undertake an analysis. UNICEF (State of the World's Children, various) offers data on under five mortality from the early 1980s to 1992, however there is not enough data prior to 1980 to get an accurate picture of the 'before' period. The World Bank (World Development Reports, various) report the child death rates, from ages 1-4, for 1960, 1965 and 1975 through 1985, then the data is discontinued until the 1990 World Development Report when it is replaced by the under five mortality rate. The World Resources Institute (1990, 1992) reports that the under five mortality rate for the periods 1965-70, 1970-75 and 1985-90.

38 Note that the World Bank, World Bank (1993), reports a higher figure of 53 per cent.

39 Leechor (1994, 164) reports that by 1992 the net retrenchment of total public sector workers stood at 55,546.

40 Roe and Schneider (1992) report slightly different numbers. For the very poor 34 per cent of expenditure goes to market food and 34 per cent to home produced food. While for the rich expenditure in the market on food is 50 per cent and expenditure on home produced food is only ten per cent.

41 In order to give as complete a description of the changing nature of health care development in Ghana several different sources of data are used. As with most research the best way to find an answer or a solution is to put together the pieces of the puzzle. Research into African countries is slightly different, in that pieces from different boxes must be used to put together a complete picture. Given this the data in this section comes from six main sources (boxes): The World Development Reports published by the World Bank, the annual reports published by UNICEF, world health statistics published by the World Health Organization, the UNICEF country office in Accra and the FAO country office in Accra. The information obtained from the UNICEF office in Ghana is mainly based on Ministry of Health data.

42 For instance, Vogel (1988, 135) provides data for 1986 and 1987 that shows that the 15 per cent requirement was not met.

43 It is unclear from the World Development Report if these estimates correctly apply to the years in question. The Report indicates that the estimate of the IMR is not for the year indicated (either 1988, 1989, 1990). In this case the estimate should be equal to the estimate of the most recent prior year. However, this is clearly not the case.

44 US \$1 = 392 cedis

45 In thousands of SDRs. Total amount approved. Actual amount disbursed may differ from these figures. Undisbursed SAF amounts may, subsequently, be committed under an ESAF arrangement.

46 Total amount approved. Does not have to equal amount purchased.

47 Amount increased from SDR 46.95 million

48 Amount approved was *not* purchased at expiration or cancellation.

49 Amount decreased from SDR 175.8 million.

50 Cancelled as of February 28, 1988.

51 Three-year commitment has expired, but annual arrangements are in effect until 12.3.92.

52 Arrangement cancelled on April 22, 1985.

53 Mix of resources modified, and arrangement cancelled as of November 9, 1988.

54 Arrangement cancelled on January 7, 1982.

55 Arrangement cancelled on October 14, 1980.

56 Arrangement cancelled December 6, 1985.

57 Arrangement cancelled on September 13, 1983.

58 Arrangement cancelled on August 25, 1981.

59 Arrangement cancelled on April 12, 1981.

60 Amount increased from SDR 60.96 million.

61 Decreased from SDR 100 million. Cancelled as of August 5, 1986.

62 Arrangement cancelled as of May 8, 1980.

63 Arrangement cancelled as of May 31, 1981.

64 Arrangement cancelled as of September 4, 1980.

65 Cancelled as of September 28, 1987.

66 Arrangement cancelled on September 18, 1983.

67 Cancelled as of September 10, 1981 and replaced by a Stand-by Arrangement.

68 Augmented by SDR 22.30 million in June 1981 to a total of SDR 186 million. Cancelled as of April 6, 1982.

69 Augmented by SDR 227 million in November 1980 to a total of SDR 417 million. Cancelled as of February 17, 1982, and replaced with a Stand-by Arrangement.

70 Cancelled as of March 14, 1988.

71 Cancelled as of April 21, 1987.

72 Cancelled as of June 21, 1982.

73 Approved in 1985/86. Cancelled as of May 15, 1987.

⁷⁴Arrangement cancelled as of February 7, 1986.

⁷⁵Cancelled as of July 3, 1982.

⁷⁶Cancelled prior to original expiration date of January 23, 1995.

⁷⁷The 1994 Annual Report does not make explicit the distinction between adjustment operations and project loans. It is assumed that items not listed as projects are in fact adjustment credits or loans.

⁷⁸In millions of US dollars (includes Special Facility for sub-Saharan Africa).

⁷⁹Of this amount, SDR 33.9 m (US \$ 35.4 million) is being provided by the Special Fund administered by the International Development Association.

⁸⁰Of this amount, SDR 12.0 million (US \$13.0 million) is being provided by the Special Fund administered by the International Development Association.

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