Structural adjustment: source of structural adversity. Socio-economic stress, health and child nutritional status in Zimbabwe

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Introduction

Much of the empirical research presented in this thesis was undertaken with the aim of documenting the changes that occurred in health and health services during the implementation of structural adjustment programmes in Zimbabwe. This chapter therefore starts with a description of the rationale and the characteristics of structural adjustment. It is followed by a review of the literature on the social implications of adjustment and a reflection on the methodological constraints in measuring the effects of adjustment. The next section then provides a description of the setting in Zimbabwe, in which the research was undertaken. Thereafter, we present the hypothesis that is central to the current thesis, followed by the conceptual framework that has guided the research. The chapter continues with a description of the research design and the methods used and a special note on the longitudinal dimension of the household study, on which part of the empirical work is based. We conclude the chapter with a brief expose of the limitations of our study.

Structural adjustment

The end of the 1970s and the early 1980s was a difficult period for many developing countries. They experienced high inflation, slow economic growth, stagnating exports and mounting debt problems. The problems were triggered off by the international oil crises of the 1970s. When the first oil crisis hit in 1974, many countries successfully turned to the international capital market for loans to cover their budget deficits. Interest rates were relatively low and there was little inclination to consider adjustment of national economies to the changing international environment.
By the end of the 1970s, when the world was confronted with a second major rise in oil prices, the international climate was even less favourable. Tight monetary and fiscal policy in industrialised countries led to rising interest rates, the US dollar exchange rate was high and developing countries faced falling commodity prices for their goods at a time when import prices were soaring. A debt crisis ensued in most of Latin America, Asia and Africa. Once popular development strategies, such as import substitution, were no longer effective, growth stagnated or turned negative and previous policies were considered no longer sustainable. Countries were faced with a pressure to adjust to the new situation (Dixon et al., 1995; van der Gaag and Barham, 1998).

The term *adjustment* refers to a range of macro-economic and structural measures that were promoted, in the first instance by the Bretton Woods institutions – the World Bank\(^1\) and the International Monetary Fund – to restore internal and external balances and increase the role of market forces in the economy. This was to be achieved through a variety of measures such as privatisation of state-owned enterprises, liberalisation of the trade regime, removal of the control on prices, wages and the exchange rate, and the allocation of credit. Government expenditures were to be reduced, by curtailing public sector employment amongst others. The purpose was to achieve an environment for sustainable economic growth through stable macro-economic conditions. In addition, it was considered important to create incentives for resource allocation, ensure adequate levels of savings and encourage efficient institutions to turn savings into productive physical and human capital (van der Gaag and Barham, 1998).

Some analysts distinguish between *macro-economic adjustment* and *structural adjustment*, where the latter term specifically refers to the measures aimed at increasing economic efficiency by emphasising a market-oriented economic system (for example Costello et al., 1994). Others however, especially in the more popular literature and press reports, use the term *structural adjustment* and *structural adjustment programmes (SAPs)* in a generic sense, referring to *all* adjustment measures – both macro-economic and the typical structural adjustment. In this thesis we will use the term structural adjustment in the wider sense.

While a small number of countries embarked on adjustment programmes without outside help,\(^2\) most relied on financing from the World Bank and the International Monetary Fund (IMF). During the 1990s, there was a significant growth in structural adjustment lending from other international banks, such as the African Development Bank, the Asian Development Bank and the Inter-American Development Bank, and from international and bilateral donors such as the EU, the USA and Japan (van der Gaag and Barham, 1998).

In Sub-Saharan Africa structural adjustment was implemented in only a handful of countries during the late 1970s, but by the end of the 1980s most countries were formally involved. Burkina Faso and Zimbabwe were exceptions. These countries had introduced

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\(^1\) The World Bank comprises the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA).

\(^2\) For example Taiwan, Singapore, Hong Kong and Malaysia.
some adjustment-type measures, but without explicitly using the term adjustment and without substantial financial support from the World Bank\(^3\) or the IMF. Even in more affluent countries such as Botswana, Namibia and South Africa, which did not have formal adjustment programmes either, economic and social policies were influenced by the international tendency to liberalise domestic markets and restrict state influence (Olukoshi, 1996).

**Box 1.1:** IMF and World Bank support for adjustment

IMF support for adjustment takes three main forms:

- **Stand-by arrangements (SBAs)** are traditional forms of IMF programmes, providing support for programmes of macro-economic adjustment, usually lasting between one and two years.
- **Extended arrangements** (through Extended Fund Facilities, EFFs) are three-year programmes for countries seen as having a strong commitment to adjustment; they include structural, as well as macro-economic measures. Like SBAs, EFFs are supported by loans at commercial interest rates.
- **The Structural Adjustment Facility (SAF) and Enhanced Structural Adjustment Facility (ESAF)** are available only to low-income countries. They offer loans at concessional interest rates in support of three-year programmes of macro-economic and structural adjustment. The Policy Framework Papers which form the basis of SAFs and ESAFs are approved by the IMF as well as by the World Bank.

The World Bank’s adjustment lending also takes three forms:

- **Structural adjustment loans (SALs)** support programmes of structural adjustment affecting the whole economy.
- **Sectoral adjustment loans (SecALs)** support adjustment within a particular sector of the economy, such as steel, energy, health or exports. They also include trade policy loans, whose main objective is generally the reduction of barriers to imports.
- **Hybrid loans** are a combination of SecALs and traditional project loans. Part of the proceeds of the loan is directed towards a particular investment in the sector concerned (or its overall investment programme); the remainder takes the form of free foreign exchange in support of adjustment. World Bank loans are at commercial interest rates. Low-income countries generally receive credits at concessional interest rates.

(Source: Costello et al., 1994)

The importance of adjustment lending for the World Bank is illustrated by the fact that in 1992 SALs and SecALs accounted for 27% of all loan operations by the institution. In the early 1980s this was only around 10%, rising to 21% in the second half of the 1980s. After the peak in 1992, it decreased to 16% in 1995 (van der Gaag and Barham, 1998).

Few subjects have been more closely studied and fiercely debated in post-colonial Africa than structural adjustment. This is partly so because many felt structural adjustment came to the continent as an external imposition, backed by conditionality of development aid by donor agencies (Duncan, 1995; Mkandawire, 2000). More

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3 Although the IMF granted Zimbabwe a credit in 1983 in return for a number of adjustment measures, it later suspended the credit (see below).
importantly, there has been strong controversy about the appropriateness of the adjustment measures and their effects, especially the effects on the poorest segments of the population. Hardly any aspect of life was left untouched by structural adjustment, as the programmes affected every economic and social sector, every group in society, and the entire framework for politics and governance in a way no other economic policy package has done before.

This thesis does not deal with the roots of the African crisis, neither with an economic analysis of the appropriateness of the structural adjustment measures that have been taken. It takes the case of one country, Zimbabwe, and investigates the implications of structural adjustment and other external influences for the health sector and for health and the general welfare of the poorest groups in society. The social implications of structural adjustment, which have been widely studied and commented upon, will be reviewed in the next section.

The social implications of structural adjustment

_Historians will record the 1980s as an extraordinary and largely perverse era in economic relations between North and South. International financial collapse was averted, but the price was high and mainly paid by the poorer nations (Cornia et al., 1987)._

This is a quote from _Adjustment with a human face_, the first major publication that voiced concern about the negative social implications of adjustment. It comprised an empirical analysis of ten case reports, which has had a great impact on subsequent research and interventions to protect the poor.

The report concluded that structural adjustment policies had failed in Africa and stressed the need for alternative, more sustainable development strategies, especially in the areas of agriculture, exports and human development. Apart from increasing social service expenditure, the report also pleaded for reforms of social services, enhanced efficiency and distribution, greater administrative decentralisation and community participation. In order to revitalise the role of the state in human resource development in Africa, the report recommended restructuring public expenditure in favour of basic social services. This could be done by shifting spending from hospitals to _primary health care_ and by the decentralisation of authority in the delivery of health care and education. The flow of resources to the social sector would need to be greatly increased, for example by changing priorities in government allocations and foreign aid, and by mobilising additional resources from households and local communities. With regard to the practice of charging user fees for health, education and other social programmes, the report asserted that budgetary benefits for the state had been limited, while the demand for

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services had declined, with people using preventive services less and households having more difficulties in meeting basic needs.

While many have commended the authors for their thorough analysis of a highly relevant theme, the report also drew criticism. Berg and Hunter (1992), for example, argued that it had made a selective choice of examples and that the conclusions could not be generalised. Van der Gaag and Barham (1998) acknowledged that the Adjustments with a human face report is very critical indeed of the early adjustment policies but asserted that it does not claim that adjustment policies are the main cause of human difficulties and social set-back. Instead, they alleged, the report demonstrates that the primary cause of the downward economic pressures on the human situation in most of the countries affected is the overall economic situation, globally and nationally, not adjustment policies as such.

Several other studies have tried to critically assess the social effects of adjustment. The study Adjustment lending revisited (Corbo et al., 1992), for example, which was published by the World Bank, concluded that living conditions, even in the short term, did not appear to be systematically related to adjustment lending and, in countries that adjusted rapidly, most indicators continued to improve in the long term.

Costello et al. (1994) arrived at a very different conclusion in a review entitled Human face or human facade?, which unfortunately had a limited distribution and has therefore not been quoted much in the literature. They critically reviewed the empirical evidence that resulted from various studies on the effects of adjustment on the health of mothers and young children. In spite of various methodological and data problems in many studies, the authors convincingly concluded that structural adjustment programmes had exerted serious negative effects on welfare. Their review did not support the proposition that adjustment policies promote sustainable economic growth in poor countries and thus will eventually offset the social costs of adjustment. They therefore contended that, rather than attempting to alleviate the adverse impact of adjustment on the poor, the approach to adjustment needed to be reconsidered.

Since the review by Costello and his colleagues, more scientific work has been published, much of which claims that there were serious negative social effects of adjustment, especially in the early phases of adjustment programmes. In a more recent literature review, Breman and Shelton (2001) identified 76 different scientific publications on the relationship between structural adjustment and health, covering various countries and regions worldwide. Most of the studies looked at the relationship between reduced government spending on health as an element of structural adjustment and health outcomes such as child mortality, maternal mortality or malnutrition. Out of the 76 articles, 28 presented empirical evidence, based on statistics from governments or international organisations (20 studies) or on data collected by researchers themselves.

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2. Some of these will be discussed in the next section.
4. Other studies included 14 case studies and another 14 cross-country studies.
through household surveys and/or focus group discussions (8 studies). The reviewers found an almost equal distribution of studies that presented predominantly negative evidence (35% of the studies), predominantly positive evidence (35%) or both positive and negative evidence (32%). However, in the studies conducted in Africa (15 out of the 28 studies), the negative outcomes prevailed (53%), suggesting that structural adjustment in most cases had had adverse effects on health outcomes in this continent.

At the World Summit for Social Development, held in Copenhagen in March 1995, the issues of poverty, unemployment and social disintegration were discussed by close to 100 heads of state from all over the world. The summit endorsed the 20/20 Initiative which had been proposed by several UN agencies and which called for earmarking of 20 percent of national budgets and 20 percent of international aid to priority social needs. Some people have argued that the declaration to target the causes of poverty did not focus on the structural and institutional causes of poverty, and that the summit should have distanced itself from the ruling orthodoxy of structural adjustment that the World Bank, the IMF and donor institutions had imposed on poor countries for over 15 years. The view that these policies had become “too painful to bear” and that the health gains, especially in maternal and child health, of the 1960s and 1970s had been lost, were openly expressed in editorials and commentaries in leading medical journals. Meanwhile, international organisations and movements – for example OXFAM, WEMOS, Save the Children Fund UK, the Development GAP and the International People’s Health Council – called for a reversal of adjustment programmes or at least more emphasis on measures to protect the poor from the adverse effects of these programmes.

In contrast, much of the work carried out or sponsored by the World Bank claims that the negative effects were only temporary or that they were felt so strongly because of a partial implementation of the adjustment packages due to government’s half-hearted commitment to adjustment (Lipton and van der Gaag, 1993; Sahn, 1994; Jayarajah et al., 1996).

The apparent divergence in thinking and the bifurcation of scholars and policy makers into two camps – proponents and opponents of adjustment – have their roots in methodological problems in assessing the effects of adjustment.

Methodological constraints in assessing the effects of adjustment

The main methodological difficulty in measuring the social effects of adjustment is the attribution of any causal relationship. While many people have claimed that such a causal

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10 One of these studies was an earlier publication of our own work in Zimbabwe (Bijlmakers et al., 1996).
11 One study (4th) presented neither positive nor negative evidence.
13 ‘SAP does not fill the gap’ (WEMOS, 1991); ‘The other side of the story’ (Hammond and McGowan, 1992); the OXFAM poverty report (1995).
relationship exists, several analysts—especially those who advocate World Bank policies—have rightly pointed at the apparent similarity between the initial effects of adjustment measures and the continuous eroding effects of unsustainable economic policies. This makes it hard to identify the impact of adjustment policies on social development, because it is often not clear what would have happened if countries had continued their existing policies without adjustment.

The early studies, which observed that in the initial phase of adjustment countries suffered from increased poverty and deterioration of social services, made little or no reference to the policies that had created the large numbers of poor people in the first place. Subsequent studies were more careful and tried to compare the situation during adjustment with the counterfactual: what the situation would have looked like if a country had continued its pre-adjustment policies (for instance, Diop et al., 1991, and Corbo et al., 1992). Van der Gaag and Barham (1998) have argued that the adjustment measures are often erroneously identified as the cause of stagnation in social development, rather than the inevitable result of unsustainable policies.

Costello et al. (1994), however, noted that a critical shortcoming in the various World Bank studies of the health effects of structural adjustment was the narrow focus on health outcome indicators. If the linkages between economic policies and the health status of individuals were simple and direct, this would not be a problem, they argued. But in reality the links are not only highly complex and indirect, they are also subject to variable and potentially long time lags. This has been re-emphasised more recently by Peabody (2000).

Costello and his colleagues developed various models intended to demonstrate the connections between economic policies and household welfare, with particular emphasis on health outcomes. They concluded that the fact that the connection from economic policy to health outcome is indirect does not mean that it is weak. There is a large number of links in each of the causal chains, and each link is potentially very strong, suggesting a substantial impact of economic policy on health. In their review of a large number of studies, the authors investigated the empirical evidence of two types of linkages: (a) linkages between economic process indicators—for example, prices, incomes, government expenditure on health—and health outcomes; and (b) linkages between adjustment and economic process indicators.

In examining how strong the links are, the authors found substantial evidence for strong effects of economic process variables on health related variables (the first of the above two types of linkages). Examples include the links between income and nutritional intakes, and the extent and nature of environmental risk factors, such as inadequate water supply and sanitation, poor housing conditions and overcrowding, occupational health risks and road traffic accidents. In some areas, however, there was no consensus on the

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14 An overall model centres on the economic influences on the health status of an individual: another model shows the possible effects of economic policies on households and how they respond to adverse economic conditions; subsequent models show how the elements of the overall model may be affected by adjustment or other economic policies; and finally, the authors present a model of the long-term and possible inter-generational linkages affecting health.
links. Several reasons are given for this lack of consensus: the pattern of results was highly complex and heavily dependent on local circumstances, making generalisations difficult (for example the links between food prices and nutrition); existing studies had found conflicting evidence (for example the effects of women's employment on child nutrition); and there were doubts about the methodology used in the studies that had been conducted (for example the price responsiveness of the demand for health services). The authors further found an alarmingly wide variety of areas in which too little empirical analysis had been conducted to draw firm conclusions on the basis of the existing literature. These included amongst others: intra-household distribution of resources; the effect of changes in non-food prices on nutrition; fluctuations of nutritional intakes over time and their effects; and the supply and effectiveness of health services. Overall, the authors argued that there was enough evidence on some elements of the model to suggest that economic policies have a significant effect on health. The absence of generally accepted quantification of most of the links, however, made an overall assessment on the basis of the existing literature impossible.

The review of empirical evidence for linkages between adjustment and economic indicators (the second of the above two types of linkages) showed that very few studies had been conducted and that the analytical approaches adopted restricted the value of the results. Most studies had focussed on broad aggregate indicators of health related variables, such as poverty, nutritional intakes, government expenditure on health and education, and school enrolment. Despite methodological shortcomings the available evidence suggested that adjustment had exerted a significant negative impact on all these measurements. Costello and his colleagues made the point that most of the studies originated in the World Bank and appeared in World Bank publications, and that in almost all cases, the conclusion drawn by these studies was that adjustment had had no significant negative impact on the variables under consideration. They therefore alleged that this pattern of “consistent ignoring negative results” raised “serious doubts about the objectivity of the World Bank in its analysis of the effects of adjustment, at least in its major publications” (Costello et al., 1994; p. 56). The above cited literature review paper by Breman and Shelton (2001) refutes these claims, showing that a large proportion of studies had been conducted by university academics from developed countries as well as from developing countries and half of the studies done by World Bank or IMF employees found both positive and negative health outcomes of structural adjustment.

Many of the proponents of adjustment seem to implicitly regard cross-country studies based on country case studies as the only valid approach to assessing the impact of adjustment. However, as pointed out again by Costello and his colleagues, the conclusions of country case studies cannot be generally compared across countries. Existing cross-country studies, produced almost exclusively by the World Bank itself, are more positive about the health and welfare effects of structural adjustment than other studies. The majority of them concluded that adjustment has had at most a limited negative impact. And if a negative impact was found, it is generally assumed to be transitional, being more than offset by fast long-term growth. The weakness of this
The authors consider this assumption not valid and label the methodology used “simplistic in the extreme”, failing to take account either of the problems which are widely recognised in the context of the economic effects of adjustment, or of other considerations more specific to health. These and other shortcomings have two effects: firstly they result in the short-term effects of economic changes being seriously understated, erroneously leading to the conclusion that adjustment has a relatively limited short-term effect. Secondly, they mean that potentially serious long-term effects are entirely ignored.

Costello et al. (ibid), along with several other analysts - both proponents and opponents of adjustment - have emphasised the need for a more rigorous appraisal of the social effects of adjustment, and especially more in-depth research at the household level so as to better understand the dynamics of people’s coping behaviour with adverse economic circumstances and their impact on health and well-being. The empirical research presented in this thesis tries to accommodate this emphatic call.

Description of the study setting

The present thesis focuses on Zimbabwe, a country which became independent in 1980 – much later than most other countries in Africa – and which used to have one of the most powerful and diversified economies in Africa. Zimbabwe’s new socialist government inherited an economy, though, that was highly skewed in favour of the white minority, which made up less than one percent of the population. The vast majority of blacks were subsistence farmers, residing in crowded communal lands – the reserves during the pre-independence apartheid regime – that are generally located in areas of poor rainfall. Chapter 2 will elaborate on the country’s historical and socio-geographic background.

The new government had the support and goodwill of the international community, which was illustrated at the international donor conference ZIMCORD, held in 1980 in the capital city Harare. With the financial aid that was pledged, the government hoped to implement a reform programme, Growth with Equity, which envisaged an annual growth rate of eight percent in GDP and a three percent annual increase in employment. Despite the handicap of a worldwide downturn in commodity prices and several years of poor rains in the early 1980s the optimism for Zimbabwe’s economic future remained.

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Significant improvements were made in the health and education sectors, especially in rural areas. Employment growth did take place, although it was in the public sector, predominantly in the civil service. The average annual rate of growth was nearly three percent, broadly in line with population growth. But when the world economy recovered, most of the Sub-Saharan African economies, including that of Zimbabwe, did not. Meanwhile, Zimbabwe benefited from South Africa’s international pariah status during the latter country’s apartheid era. Diplomatic missions and international agencies set up regional headquarters in Zimbabwe, where they enjoyed the country’s good infrastructure and temperate climate.

When Zimbabwe experienced budgetary problems in 1983, the Zimbabwe government obtained an 18-month standby credit from the IMF. In return, Zimbabwe is said to have agreed to devaluation, restoration of its trade balance and cuts in development programmes and subsidies (Gibbon, 1994). The IMF later suspended the credit, possibly as a result of the Zimbabwean government’s failure to meet credit targets, leaving a residue of ill feeling. Zimbabwe subsequently avoided dealing with the IMF for the next eight years. The World Bank’s first non-project involvement in Zimbabwe dates from the mid-1980s, when it financed the first of the country’s export revolving funds (ibid.).

From around 1986-87 onwards Zimbabwe came under mounting pressure by the World Bank, which argued that the government had failed to properly exploit the economic advantages it had inherited. Zimbabwe started a structural adjustment programme in 1991, under the name Economic Structural Adjustment Programme, popularly known as ESAP.16 As most other developing countries in Africa and elsewhere had started such programmes much earlier, Zimbabwe can be labelled a late adjuster. It therefore had the advantage that experiences gained elsewhere—both negative and positive—could be taken into account in designing its own programme. The negative effects of structural adjustment, especially short-term effects on the poorest segments of the population and how to minimise them, had by then attracted much attention.

Unfortunately Zimbabwe was hit by a severe drought in 1991-92 right at the beginning of the ESAP period. Earlier droughts during the 1980s were less severe, but this one turned out to be the worst in living memory. Another drought hit the country in 1994-95. Although less severe, it came at a time when the country felt the ‘pinch’ of structural adjustment and still had not overcome the effects of the 1991-92 drought.

In 1996, a second structural adjustment programme was launched, under the name Zimbabwe Programme for Economic and Social Transformation (ZIMPREST), covering the period 1996-2000.

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16 While several adjustment-like measures had been taken during the 1980s, the first comprehensive document (Framework for Economic Reform, 1991–95; GoZ, 1991) was published in January 1991. The first consultative group meeting was held in March 1991. At this meeting donor agencies reacted positively to the proposed structural adjustment programme and pledged financial support. It was not until the end of December 1991 that the World Bank formally approved its own loan (SAL I, worth USD 175 million) and not until March 1992 that the first portion of this loan was disbursed. An agreement with the IMF for a first loan followed later.
In the meantime, HIV/AIDS had become a serious health problem. HIV/AIDS was first notified in 1985, but it was not until around 1989 that the seriousness of the epidemic was fully acknowledged. Government, non-governmental organisations, schools, churches, academics, trade unions and private companies started unfolding a large diversity of prevention and control activities. Nonetheless, Zimbabwe has developed one of the highest HIV infection rates in the world. HIV/AIDS has been exerting an increasingly profound effect on morbidity, mortality and well being in general in all layers of the society as well as on the country’s demographic profile, economic performance and social organisation.

Thus, three major adverse shocks – structural adjustment, drought and the HIV/AIDS epidemic – exerted their influence on the people of Zimbabwe. Each of these had fundamentally different characteristics, followed its own trajectory and required specific measures to address the negative consequences. This thesis describes and analyses the characteristics, trajectories and effects of these three shocks on the health sector and the welfare of Zimbabwean households, in particular from a health perspective. It further analyses to what extent appropriate action was undertaken and which factors have promoted and hampered decision-making.

A more detailed description of the background against which the research has taken place is presented in Chapter 2, which gives a historical and socio-geographic profile of Zimbabwe, and Chapter 3, which provides a profile of the health sector and its performance prior to and during the structural adjustment period. The next two sections contain the objectives and the conceptual framework that have guided the study. They are followed by an elaboration of the research design and the methods that were used.

**Hypothesis**

This thesis focuses on health and nutritional status as outcome indicators of the combined effects of adjustment and macro-economic changes, health sector performance and intra-household welfare.

In view of the methodological difficulty to disentangle the effects of unsustainable economic policies prior to adjustment and that of adjustment measures, and because of the fact that other factors, especially drought and HIV/AIDS, have also had an influence on household welfare and people’s health, it is clear that the attribution problem cannot be resolved.

This thesis therefore tests the hypothesis that structural adjustment in Zimbabwe and the accompanying measures to cushion the possible negative short-term effects of adjustment, drought and HIV/AIDS on vulnerable groups – or the absence of such measures – have failed to avert a further aggravation of the scope and intensity of poverty.
Central questions are:

a. Have the socio-economic position and general welfare of the poorest layers of society been protected? Can any changes in welfare be attributed to specific policy measures or to a lack of adequate policy measures during the period of structural adjustment?

b. Has the government been able to ensure adequate health service delivery during the adjustment period?

c. Are there any changes in people’s health status? Can they be attributed to specific adverse conditions or policy measures?

d. Where did it go wrong? What would have been a more appropriate response?

The next section provides the conceptual framework used to test the above hypothesis and answer the listed questions.

Conceptual framework

The original conceptual framework, developed in 1991, which formed the basis for the empirical research presented in this thesis, took into account that it would be difficult to isolate changes in society and attribute causality to the effects of the economic structural adjustment programme in Zimbabwe.\(^1\) The focus of the research was not directed precisely to measuring the impact of adjustment, but, more feasibly, to monitoring the extent and nature of change in the health sector and in household welfare during the adjustment period. We made a distinction between reform measures originating inside the health sector and those originating outside the health sector. Furthermore, we distinguished between two different types of indicators of change: those relating to process (for example prices, employment, utilisation of health services) and those relating to outcome (mortality, morbidity and nutritional status). We further realised that it was easier to attribute causality to changes in process indicators than to changes in outcome indicators, which are more susceptible to factors other than economic reforms.

Figure 1.1 provides the updated conceptual framework that forms the basic premise of this thesis. It is a pragmatic framework, presenting a selection of determinants of health and illustrating that the relationship between macro-economic change – including structural adjustment – and health is not perceived as a single cause-effect relationship, and not as a direct relationship either. Apart from economic adjustment and macro-economic change there are other important environmental determinants that influence health. In our case of Zimbabwe, we consider in particular the changes in health policy – which are associated with structural adjustment – epidemics and changes in disease profiles, including the spread of HIV/AIDS, and changes in the physical environment, particularly drought.

\(^1\) The conceptual framework was first described by Sanders (1992) and later elaborated upon by Chinemana and Sanders (1993) and in various research reports by Bijlmakers, Bassett and Sanders (1995, 1996, 1998). These reports were published by the Scandinavian Institute of African Studies.
The relationship between macro-economic change and health is indirect in that it takes shape through a series of intermediate factors – process factors in the conceptual framework – of which some are situated at the individual and household level and others at the level of state and society organised services and support systems. At the individual and household level this thesis takes an interest in the resources available for food security and for preventing and treating illness. At the level of state and society organised services and support systems, the interest is in availability, accessibility and quality of health services. The relationship between the two levels is the domain of household’s ability and willingness to use the available services, and this influences people’s health seeking behaviour, which are the output factors in the conceptual framework. Health seeking behaviour can take the form of either self-care (home care), use of traditional medicine or spiritual care, use of public health services or use of private health services. This behaviour is an important, though not the sole determinant of nutritional status, morbidity and mortality, which are considered the ultimate outcomes of a chain of interrelated factors.

Figure 1.1: Conceptual framework

Health determinants: Structural adjustment and macro-economic changes, Health policy changes, HIV/AIDS and other epidemics, Drought and other changes in the physical environment

Process: Health service level: Availability of services, Accessibility, Quality of services, Household level: Resources for food security, Resources to prevent and treat illness

Output (health seeking behaviour): Use of public health services, Use of private health services, Use of traditional spiritual care, Self-care / home care

Health outcome: Nutritional status, Morbidity, Mortality

This thesis will analyse the changes in the health sector that have taken place during the 1990s from a historical perspective, and try to relate them to macro-economic policies, HIV/AIDS and drought. Since the way macro-economic policies influence household welfare and health (seeking) behaviour is poorly understood, an important
emphasis of this thesis is on changes in household welfare that are a result of changes in macro-economic policies or other influences, such as HIV/AIDS and drought.

With regard to outcome, we look at countrywide morbidity and mortality indicators on the one hand and indicators of child nutritional status in selected geographical areas on the other hand, and try to demonstrate the relationship between changes in the main determinants – the macro-economic situation, health policy, HIV/AIDS and drought – and changes in child nutritional status, morbidity and mortality. Child nutritional status is considered an ideal outcome indicator since it is sensitive to changes in dietary intake and illness, which in turn are influenced by household food security, maternal and child care and the adequacy of health services and a healthy environment (UNICEF, 1990). The Sub-Committee on Nutrition of the UN Administrative Committee for Co-ordination (ACC/SCN, 1992) even suggested that monitoring nutritional status, especially that of vulnerable groups, is one of the best methods of assessing how people are affected by structural adjustment policies.

![Timeline with key events in Zimbabwe](image)

The key events in Zimbabwe during the two decades period since independence in 1980 and that are relevant to our study are depicted in Figure 1.2. The subsequent chapters will try to relate and possibly attribute specific changes in the observed process, output and outcome indicators to these events.

**Research design and methods**

A large part of the empirical research that forms the basis of this thesis consists of a longitudinal study of two groups of households in Zimbabwe, one in an urban, the other in a rural area. The households were followed from the early phase of structural adjustment (from 1993 onwards) over a period of six years. It was a deliberate choice to select an urban as well as a rural area because of expected rural-urban differences in the
way economic stress and other adverse conditions affect the process indicators of interest at the household and health service level, and consequently the output and outcome indicators. Chapter 4 describes the two study sites—the urban and the rural area—and the populations residing in those areas, and justifies their choice. It also describes the manner in which samples of households were taken in the two areas.

The households were visited annually for interviews, which covered a wide range of topics, including household composition, house tenure and migration, educational background of the household members, employment and income, household expenditure, agricultural activities, household food security, savings and assets and indebtedness. In the conceptual framework these topics all fall under the process factors at the household level. Furthermore, information on illness episodes among household members and treatment seeking was collected, as well as on the health status of the under-five year old children. These data relate to output and outcome.

In addition to interviews, anthropometric measurements—height and weight measurements—were taken at baseline in 1993 from all children between one and five years of age that were living in the households enrolled in the study. In subsequent years, children who had turned six or older continued to be measured, while new children in the observed households who had reached the age of one year were added to the study. The series of anthropometric measurements allowed an assessment of changes in child nutritional status, which is one of the outcome factors in the conceptual framework. These changes can possibly be related to changes in process indicators, especially at the household level, and changes in the main determinants in the conceptual framework (macro-economic change, health policy changes, HIV/AIDS and drought; see figure 1.1). Chapter 7 provides further details on the methods used for taking anthropometric measurements and describes the samples obtained.

All household visits in each of the five survey rounds were conducted during the winter period: May-June in the urban area and June-July and the beginning of August in the rural area. For households that are engaged in agricultural activities to cater for their food and income requirements this is a relatively good season. With harvesting of maize and other crops taking place in April-May, after the rainy season, the study period was thus one in which the households had more food and cash money available than in other periods of the year. It could therefore be expected that acute malnutrition was relatively less prevalent than in other seasons of the year (for instance in January-March), also because the incidence of malaria is relatively low in the dry season. In order to prevent any influence of a possible seasonal bias on the results, the household visits took place as much as possible in the same order in each of the five survey rounds. Only in 1996, about a quarter of the households in the rural area were visited in September-October.18

18 These were follow-up visits that were required after failure to conduct interviews at the first attempt (in July). Due to time constraints on the researcher's side these visits could not be completed in July-August. The effect of this, if any at all, on nutritional status would probably be negative, since food availability may be slightly more depressed, though not as much as one would expect during the rainy season (December-March).
In addition to the household study, original data were gathered from health institutions on service utilisation in the two study areas for an analysis of possible trends over time. Chapter 5 describes the methodology that was used and the results obtained. It makes an effort to link the observed trends in health service utilisation to changes in process factors at the health service level (accessibility and quality) and to changes in the main determinants of the conceptual framework, especially changes in health policy.

The collection of original data at the household and health institutions level was supplemented with focus group discussions and key informant interviews. The focus group discussions were held with nurses and community members in the two study areas and concentrated on perceived changes in professionalism and quality of care (see Chapter 5). In the conceptual framework these topics are covered by process factors at the health service level.

The key informant interviews served to complement information and seek explanations for observed trends. They were held at various moments with health policy makers in the Ministry of Health and Child Welfare and health administrators in the two study areas. We conducted the last series of interviews during a visit to Zimbabwe in April 2000. Where information from key informants is presented in this thesis we have indicated that this was collected through personal communication.

Secondary sources that we used comprise journal articles, research reports, policy documents and a number of grey documents, obtained from government departments and donor agencies. Chapters 2 and 3, which provide a profile of Zimbabwe and background information about the health sector and its performance, are almost exclusively based on these secondary sources.

**Special note on the longitudinal dimension of the household study**

Inspired by research methods used in epidemiology and social sciences, the study into changes in the social and economic situation at the household level in Zimbabwe was designed as a *longitudinal* study, involving at least two survey rounds in the same population of households at different points in time. During the design phase of the study (in early 1993) it was not yet known whether it would be possible to follow-up households more than twice. In reality, we were able to follow-up more than two-thirds of the original group of households enrolled in the study in 1993 for a period of six years, through five rounds of interviews (see Chapters 4 and 6). It is appropriate to provide some comments here on the study design, since the type of analysis presented in later chapters of this thesis differs from the analysis used in earlier publications related to the same study.

We will refer to the group of households enrolled in the longitudinal study in 1993 as a *cohort*. Defined in the most general terms, a cohort is a group of people who have one or more characteristics in common. For example, a birth cohort is a group of people who were born in the same year or period. Epidemiologic research uses the term cohort study to distinguish this type of observational study design from cross-sectional studies and
case-control studies (Kleinbaum et al., 1982). While the objectives of a cohort study may be descriptive or etiologic, the unit of analysis is usually the individual. The longitudinal study in Zimbabwe uses two different units of analysis: households and individual children. The term cohort applies to both, though there is some difference between the two, which has implications for the type of analysis.

Social sciences use the term cohort study as well, mainly to indicate _ex post facto_ surveys, which compare two or more groups with a common characteristic from the past. In epidemiology such a survey would be called a retrospective cohort study, as opposed to a prospective cohort study in which the cohort is divided into two groups (usually a group of people exposed to a possible risk factor for a certain disease and another group of unexposed people) based on information _at the time the study begins_, rather than from the past (Kelsey et al., 1986). The longitudinal study in Zimbabwe can be considered a prospective cohort study, which is sometimes also referred to as a follow-up study.

A prospective cohort study may involve either a _fixed cohort_ or a _dynamic population_ (Kleinbaum et al., 1982). A fixed cohort is a group of subjects identified at a certain point in time and followed for a given period (for instance for the detection of new cases of disease). The cohort is ‘fixed’ in the sense that no entries are permitted into the study after the onset of follow-up, though subsequent losses may occur as a result of non-participation, migration, death or other forms of attrition. Generally, the average age of a fixed cohort increases as the duration of follow-up increases. A dynamic population may gain and lose subjects over the course of the follow-up period. If the size and the age distribution of a dynamic population remain constant during the follow-up period, the average age will remain the same as the follow-up period increases.

In the longitudinal study in Zimbabwe we used a fixed cohort of households, with no new households entering in the course of the study, except for some ‘splinter’ households that were formed after splitting up of some of the households in the original cohort. Naturally, the cohort became ‘older’ as the study proceeded, with new children born to the cohort households, children entering school, young adults entering the labour market and some people dying. However, the population of children whose nutritional status was followed over time in these households was dynamic rather than fixed, in the sense that newly born children who reached the age of 12 months became eligible for anthropometric measurements.

The initial design at the onset of the Zimbabwe study in 1993, provided for a _panel_ type of research. In a panel study the same individuals are approached two or more times with similar questions (Swanborn, 1981). With data available for each study unit at two

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19 This means that they are concerned with the aetiology of disease (i.e. the study of the causes of disease).

20 Swanborn (1981) gives the example of a study on the influence of fathers’ professions on the school and career path of children. The study population was drawn from a group of 2000 children that had completed a school test 15 years earlier. Within this group, children from the higher and the lower socio-economic class were selected and matched for sex, age and school test performance. In total, 124 pairs were formed whose addresses could be retrieved and each person’s current educational level was established.
points in time, it is possible to calculate the change per individual rather than the net change for the study sample as a whole. If data are available for more than two points in time, the analysis becomes more complicated, calling for a time series analysis that involves different statistical methods. For two reasons, though, it was not appropriate to perform a time series analysis on the data set gathered at the household level in Zimbabwe. The main reason is that households turned out to be very dynamic in terms of composition. Chapter 6 will describe some of the changes that took place within the cohort of households over the six-year study period because of members migrating to other areas or new members joining the cohort households. Also, temporary migration to join other households was very common both among adults and children. This implies that changes in important indicators of households’ socio-economic status, such as employment status, household income and expenditure, are to a large extent subject to change in household composition. It would not be appropriate to calculate the change in each individual household if the households themselves are not comparable between subsequent years. The other reason why a time series analysis was less appropriate is that the interview schedules were not identical in all survey rounds. The schedules were adapted in the course of the study, based on the insights gained in previous survey rounds and on the observed increase in the level of confidence among respondents with the researchers’ intentions. As a result, several questions did not appear in all five survey rounds. Precise questions on the level of income, for example, were only asked from 1995 onwards. In earlier rounds we used proxies.

Previous analyses of the household data set comprised the measurement of the net changes over time for the study sample as a whole, involving all households with completed interviews. With the data set expanding annually after the completion of each new survey round, the analysis was done in an incremental way, with each survey year providing new results obtained from a cohort that was not identical each year, even though it was fixed, because of (unavoidably) incomplete follow-up.

The analysis presented in this thesis, however, involves mainly the households that were interviewed in each of the five survey rounds over the six-year study period. The important advantage is that the cohort remains identical over the years, allowing firmer conclusions about any observed change. The disadvantage is that households followed up incompletely are excluded from the analysis. These households may be different in certain respects from households that remained in complete follow-up. The extent to which this may bias the results will be discussed in Chapter 6. Precise data on the follow-up rates of households will be provided at the beginning of the same chapter.

The anthropometric data set involving child nutritional status did allow a time series analysis, since it was possible to link measurements from each individual child obtained in different years. The results of the analysis of changes in child nutrition status will be presented in Chapter 7, while Chapter 8 will concentrate on the identification of risk factors at the household level for poor nutritional status.
Limitations of the study

It proved difficult to investigate changes in health service utilisation by households and individuals enrolled in the longitudinal study. The interviews that we held did cover recent episodes of illness and an earlier report (Bijlmakers et al., 1998) presented some of the findings on illness patterns and health seeking behaviour in the first three years of the study. The results were not very conclusive, though, because of the relatively small sample of households and the requirement to restrict the recall period. This therefore constitutes a limitation of the study. Related to this, we obtained few empirical data on self-care and the use of traditional or spiritual healers, which is one of the output factors in the conceptual framework.

The selection of two study areas – one urban and one rural – for investigating the implications of structural adjustment at the health facility and the household level in Zimbabwe will be discussed in Chapter 4. We will argue that the urban area (in casu Chitungwiza) is not atypical for other urban centres and that the rural area (in casu Murehwa district) is a relatively well-endowed area compared with other parts of the country. We conducted the household interviews during the winter season (July-August) in which food availability is relatively favourable and in which at the same time there is no excessive demand for extra food, as there is no arduous agricultural labour going on. Socio-economic stress and malnutrition will therefore not be overstated, since other seasons of the year – especially the rainy season (November to March) – might have presented a worse picture of socio-economic stress and malnutrition.

And, finally, the dropout or loss to follow-up of both households and children constitutes a third limitation, as in most studies of a longitudinal nature. The extent to which loss to follow-up may have affected the results will be discussed in Chapters 6 (for households) and 7 (for children).

21 The recall period was limited to four weeks prior to the interview. About a third of the households reported one or more members with an illness episode during this period.