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Malawi: Economic Growth, Public Sector Reform and Poverty

Dick Durevall

Sida
SWEDISH INTERNATIONAL DEVELOPMENT
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This country economic report on Malawi is part of a series of annual studies, which are undertaken by the departments of economics of three Swedish universities in collaboration with the regional departments of Sida, under an agreement with the Division for Policy and Socio-Economic Analysis. The purpose of these studies is to improve Sida's economic analysis and knowledge of the programme countries for Swedish development cooperation in order to enhance the effectiveness of programme as well as project support.

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1. INTRODUCTION

Malawi is one of the poorest countries in the world. This is amply illustrated by the facts that per-capita GDP was US$163 in 1999, close to 70 percent of the population lives below the poverty line, and the expected lifetime at birth is 43 years. Consequently, under any circumstances it will take a long time before most Malawians can benefit from an acceptable standard of living. On the other hand, the marginal benefits of improved living standards are likely to be very large, putting rapid growth and poverty reduction in Malawi foremost on the agenda.

To increase economic growth, Malawi has been implementing economic reform programmes with the support of the World Bank and IMF since the beginning of the 1980s with varying success. However, it was first after the change to democracy in 1994 that the reform process took off: large steps were taken in market liberalisation and a growth-oriented strategy with an emphasis on poverty reduction was adopted. At the same time foreign assistance expanded significantly, amounting to 25 percent of GDP in 1999, which is about US$41 per capita (World Development Indicators 2001).

Ultimately it is the job of the government to formulate and implement policies that create economic growth, irrespective of the forces that shaped the current economic situation. This is not an easy task in a country like Malawi that has a narrow tax base and a serious shortage of human capital. Since it also is landlocked, large expenditures on maintenance and investments in transport infrastructure are indispensable. Hence, in a disadvantaged country such as Malawi it is more important than in privileged ones with fewer growth constraints that government chooses adequate policies and that the public sector implements these efficiently (Goldsmith 2000).

The purpose of this report is to give an overview of some of the issues that are at the core of Malawi's economic development process. In the first part the forces driving economic growth in the long run are looked at. These are capital accumulation, labour supply and productivity growth. An attempt is also made to relate the evolution of these three variables to economic policy and external events. Since the public sector influences economic growth in a number of ways, the second part of the report deals with the public sector reform process, which aims at increasing public sector efficiency.

Although high economic growth is the most fundamental factor behind improved living standards in the long run, the distribution of income and measures to improve the lot for the poor can alleviate poverty considerably. The final part of the report thus presents data on past and current income distributions, measures of poverty, and the characteristics of the poor. Moreover, an attempt is made to describe how poverty has changed during the 1990s by using various indicators.

The outline of the report is as follows. In Section 2 a brief review of the history of the Malawi economy is given. Section 3 first provides a description of the process of economic growth in since Independence and the evolution of its immediate determinants, capital, labour, and total factor productivity growth. Then various factors that are likely to have influenced these determinants of economic growth are discussed. Section 4 looks at several aspects related to public sector efficiency

and public sector reform, and Section 5 deals with income distribution and poverty. Finally, Section 6 summarises the report and gives some concluding remarks.

2. HISTORICAL BACKGROUND

When describing the economic history of Malawi it is useful to divide it up into three periods. The first period, 1964 – 1979, was characterised by macroeconomic stability and fairly high GDP growth, on average 5.9 percent per year. The high growth rates were partly due to export-oriented policies that aimed at generating agricultural exports. Although successful in generating growth, this policy did not create a general expansion in the Malawi economy because it favoured estate agriculture over smallholder agriculture. One consequence was that a large part of the population was left out of the development process (Pryor 1990, pp. 124-25). In spite of being relatively pro-market and non-interventionist, at least in comparison with many other African states, there was a rapid growth in government's direct participation in the modern sector during this period. For example, the public sector and parastatals accounted for about two thirds of all investments in the country during the 1970s. However, in contrast with most other countries in the region, the growth of the public sector did not lead to increases in expenditures on welfare: as a share of GDP, yearly expenditures on health and education were 5.9 percent over 1964 – 1969 and only 5.2 percent during 1977 – 1979 (Pryor 1990, p. 173, Table 8-1).

In the late 1970s and early 1980s a series of external shocks hit Malawi's economy, initialising the second period, 1980 – 1994. The shocks included a fall in export prices and a rise in import prices, such as the oil price, a dramatic increase in transport costs for foreign trade due to the war in Mozambique, and drought. As a result, foreign reserves dwindled, many tobacco estates and parastals suffered heavy losses, and investments dropped. On top of this, Malawi had to host more than 750 000 Mozambican refugees from the mid-1980s. As shown by Table 2.1, annual GDP growth was only 2.4 percent for the period 1981 – 1987. Moreover, the budget deficit went up to 15 percent in 1980, and averaged 11.2 percent during 1981 – 1987.

The crisis led to the adoption of Malawi's first of a series of IMF and World Bank supported structural adjustment programs. Initially the focus of the programs was on achieving macroeconomic stability and structural reforms were not emphasised. Yet, it appears that the programs had little impact on macroeconomic stability during the 1980s, and market interventions actually increased. One outcome of this was the rapid expansion of the role of the public sector.

In the early 1990s Malawi was hit by two severe droughts and a deterioration of the terms of trade. Moreover, due to donor concerns about overspending, lack of human rights and poor governance in relation to the elections 1994, balance of payments support was suspended. All this resulted in a severe crisis: GDP dropped by about 10 percent in 1994 and inflation rose to over 80 percent in 1995. Hence over the period 1992 – 1995 annual GDP growth declined to 0.0 percent, the budget deficit as a share of GDP increased to 16.2 percent, and inflation averaged 36.2 percent (see Table 2.1).

The third period, 1995 up to today, was initiated by the change in power in 1994 when a democratic government for the first time in history was elected in Malawi. The new government embarked on a structural adjustment program in 1995 with the support of the World Bank and IMF, and several donors. It consisted of macroeconomic stabilisation, which primarily aimed at improving the fiscal position and reducing inflation, and structural reforms. In contrast to earlier adjustment programs, the structural reforms were much more far ranging, including private sector reform with privatisation, deregulation, regulatory reform and agricultural liberalisation, external sector reform, and public sector reform. Although fraught with problems, the implementation of the structural adjustment was fairly satisfactory and GDP growth rose to 5.5 percent over the period 1996 to 1999. Partly because of this, the government was re-elected in 1999. However, recently economic growth has slowed down: it was 2.1 percent in 2000 and 1.8 percent in 2001 (RMB 2001).

Table 2.1 Economic Indicators

	1981-87	1988-91	1992-95	1996-99
GDP growth (in %)	2.4	4.3	0.0	5.5
Government Revenues (% of GDP)	20.3	20.6	17.6	17.0
Government Expenditures (% of GDP)	31.5	27.5	33.8	24.4
Overall deficit excluding grants (% of GDP)	11.2	6.8	16.2	8.5
Annual Inflation (in %)	12.7	15.3	36.2	26.0

Source: Malawi Government and World Bank (2000).

Since the elections the government has continued with the reform program in close cooperation with multilateral and bilateral donors. In 2000 it prepared an Interim Poverty Reduction Strategy Paper, which is considered to form a sound basis for concessional lending (Malawi Government 2000). As a result, new three-year agreements were agreed upon with the IMF and World Bank, and in December 2000 Malawi reached the decision point for the Enhanced Heavily Indebted Poor Countries (HIPC) Initiative. The HIPC Initiative, which amounts to a grant of US$1000 million in nominal terms (US$643 million in net present value terms), implies a substantial reduction in the value of Malawi's foreign debt: on average it will save about US$45 million per year in debt service payments during the next 20 years (IMF and World Bank 2000).

3. ECONOMIC GROWTH

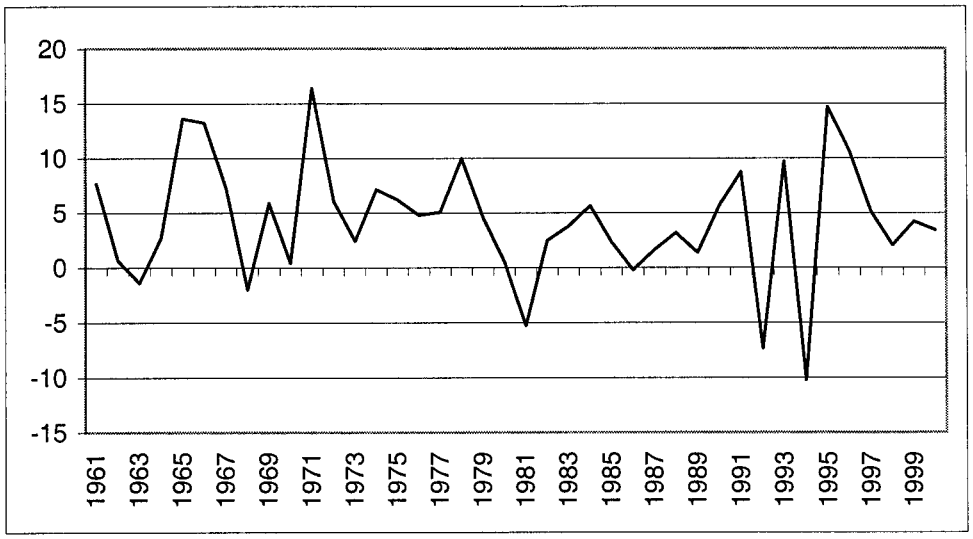
One way of looking at growth is to use a production function, which shows how changes in production result from changes in inputs of factors of production and productivity. This is the approach used in the following section, focusing on the three major determinants of economic growth, capital formation, labour supply and productivity growth. An understanding of their roles in the growth process is essential when discussing the future development of Malawi. Yet, capital

formation, labour supply and productivity growth are, after all, only the proximate determinants of growth, which in turn are affected by a number of factors. Some of these are discussed in the last part of this section.

3.1 Capital, Labour and Productivity

To give a detailed picture of the evolution of economic growth in Malawi, Figure 3.1 shows the yearly percentage growth rate of real GDP over the period 1961 – 2000. The most prominent characteristic of Malawi's growth performance is probably its high variability. During some years the growth rate was well above 10 percent (1965-1966, 1972, 1996) and during several years it was negative, hitting –10 in 1994. Nonetheless, the different periods described in Section 2 are clearly discernable in spite of the high volatility; high average growth, 1961-1979, low growth 1980- 1994, and high growth 1995-2000. This sub-section tries to see to what extent these periods, and the change from one to another, can be explained with the help of our production function.

Figure 3.1 GDP growth rates, 1961-1998.



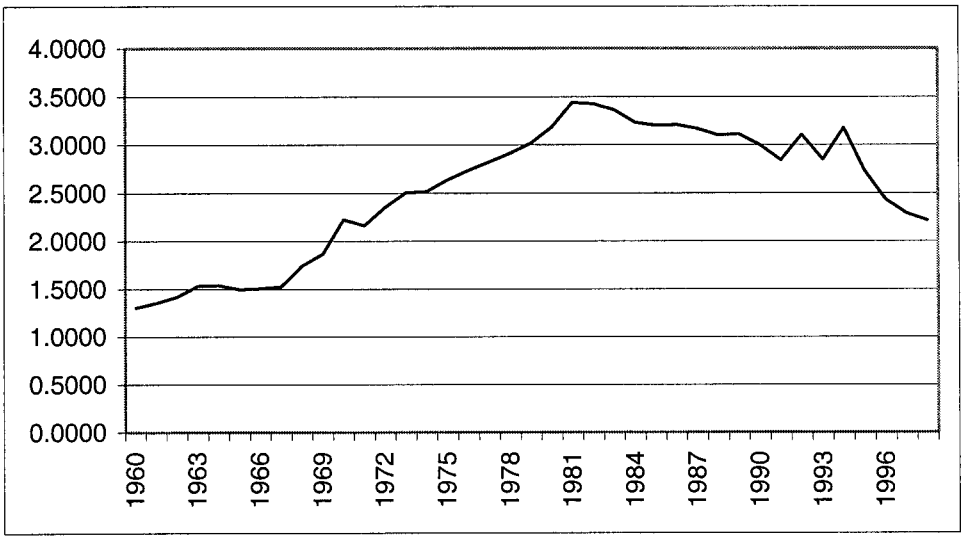
Sources: World Development Indicators 2000, and Nehru and Dhareshwar (1993).

The series for capital, labour and total factor productivity are shown in Figures 3.2 to 3.5. Capital, which traditionally is viewed as the most important determinant of economic growth, is depicted in Figure 3.2 in the form of the capital-output ratio (the capital stock divided by GDP). Changes in the ratio seem to correspond quite well to the two first growth-rate episodes in the Malawi economy. During the period up to 1980, the capital-output ratio increased from 1.3 to roughly 3.5, then during the following 10 years it declined to about 3 where it stayed to mid-1990s. During the period after 1994 there was another decline in the ratio, and by 1998 it was getting close to 2. Since both the first and last period was characterized by high growth, changes in capital accumulation cannot be the only factor explaining the evolution of GDP.

In Figure 3.3 labour productivity (GDP divided by the labour force) is shown for the period 1960-1998. It rose over the period 1960 – 1980, along with the increase in the capital-output ratio. During the 1980s and the first half of the 1990s, labour productivity was stagnant apart from the years 1992 and 1994 when GDP growth turned negative. After the change of government in 1994, labour productivity increased and reached its highest level ever for the period we have data.

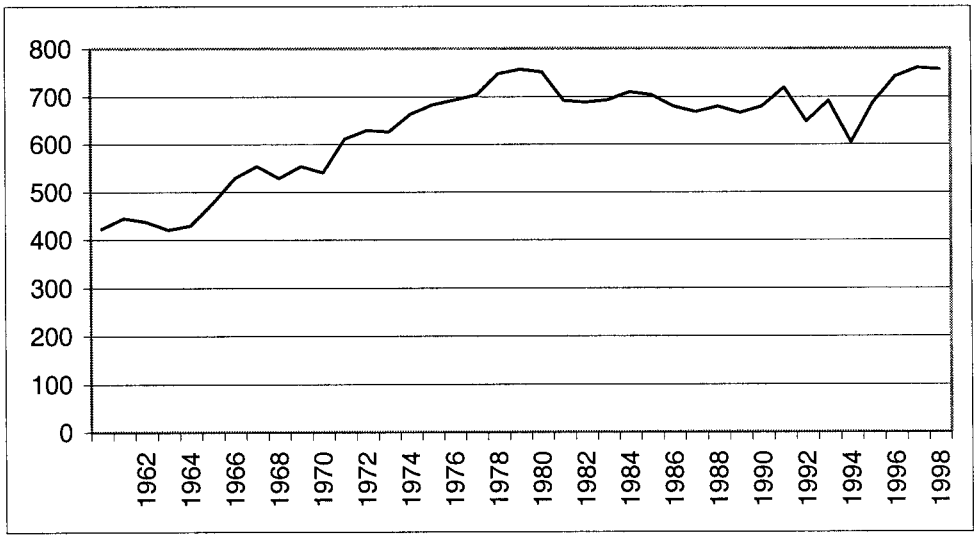
To illustrate one of the forces behind these changes, the capital-labour ratio is plotted in Figure 3.4. Its movement more or less mimics the one for labour productivity up to the mid-1990s, but then it continues to decline while productivity increases. Thus, up to the mid-1990s everything is consistent with the idea that when each employee has more equipment to work with, output per worker increases and vice versa. However, for the latter half of the 1990s there is evidence of change in this pattern since the capital-labour ratio declines while labour productivity increases. It is noteworthy that this period corresponds to one with very rapid progress in the liberalisation of international and domestic trade.

Figure 3.2 Capital – output ratio.



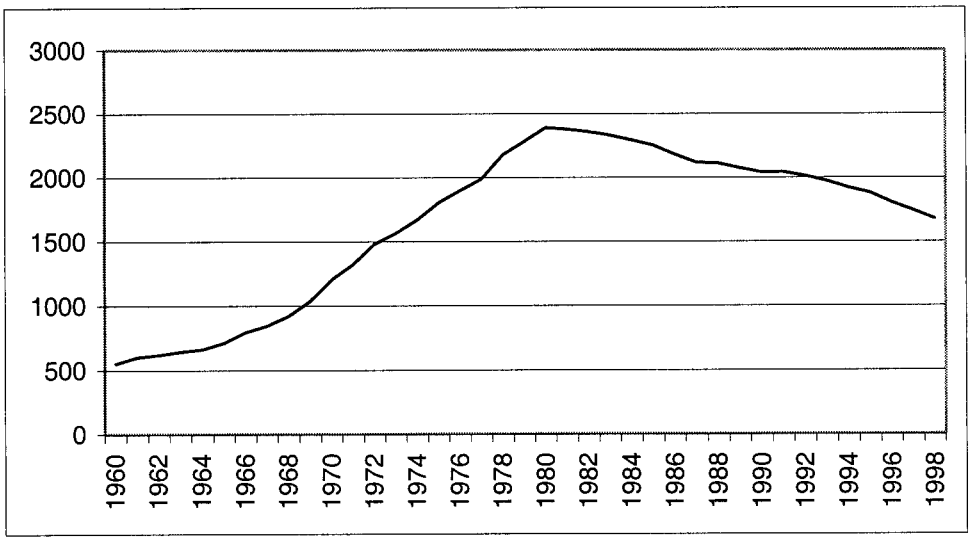
Sources: World Development Indicators 2000, Nehru and Dhareshwar (1993) and own calculations.

Figure 3.3 Labour productivity.



Source: see Fig 3.2.

Figure 3.4 Capital – labour ratios.



Source: see Fig 3.2.

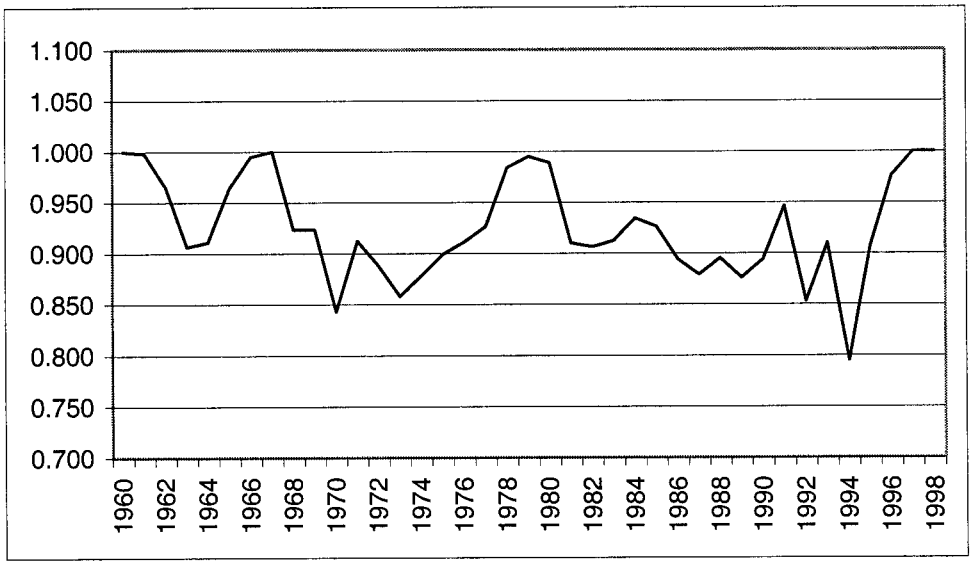
Total factor productivity (TFP) is graphed in Figure 3.5. It measures output in relation to a weighted average of the inputs capital and labour.[1] Note that its level is not defined and that maximum values are set to unity for convenience. TFP should be viewed as a general measure of efficiency, including social and political factors as well as changes in the technology used. Moreover, in the short run TFP is affected by transitory changes in aggregate demand and supply.

[1] Total factor productivity was calculated with Data Envelope Analysis using an updated version of the database compiled by Nehru and Dhareshwar (1993).

The most notable thing about Malawi's TFP is that there has been no growth over the last 40 years; in fact, it was at the same level in 1998 as in 1960. Moreover, there was no growth in TFP during the years of rapid capital accumulation, that is, TFP was not higher in 1979 than in the beginning of the 1960s. We can thus conclude that from a long run perspective, changes in GDP growth and labour productivity have mainly been due to changes in the capital labour ratio. This implies that economic growth has mainly been driven by investments, a feature of the Malawi economy also noted by World Bank (1997). Since differences in TFP growth is considered to be the most important reason for why some countries are rich and others are poor, this is one important explanation for the lacklustre performance of the Malawi economy (Prescott 1997).

However, Figure 3.5 also shows that TFP increased after 1994. This explains the change in the pattern noted above. The rise in TFP, and the fact that TFP reached its highest level since 1967 during 1997 and 1998, indicates that policies during this period had a positive effect on the economy. Hence, they seem to have created a structural change. It should be noted though that during the period 1995 – 1998 the capital stock actually shrank because investments were not large enough to make up for the depreciation (see Figure 3.6). Such a development is hardly sustainable because capital accumulation is likely to be a prerequisite for TFP growth in the long run. Hence, it is safe to predict that without higher investments Malawi will not be able to maintain an average growth rate of about 5 percent, as it did during latter half of the 1990s, and as envisaged for the future in some policy documents (see IMF and World Bank 2000).

Figure 3.5 Total factor productivity growth.



Sources: See Figure 3.2.

3.2 Determinants of Capital Accumulation and Labour Supply

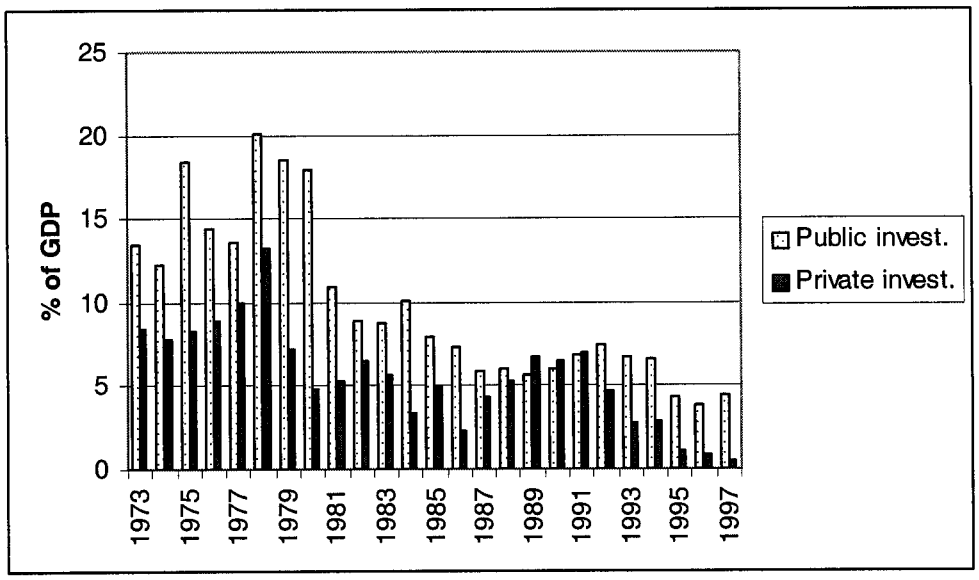
The next step is to look closer at potential determinants of capital accumulation, labour supply and TFP. First we review the evolution and composition of capital formation since the 1960s and evaluate the importance of different forces driving investments. Then we look at the development of the labour force. Since the efficiency of the labour force is related to its knowledge, there a sub-section

documenting changes in human capital. The determinants of TFP growth are discussed in Section 3.3.

3.2.1 Capital Accumulation

Since the government has played an important role in the Malawi economy, it is of interest to distinguish between public and private sector investments. Consistent data are available for the period 1973 to 1997, and they are shown in Figure 3.6. Public sector investment was clearly large compared to private sector investment during most of the period. However, there are some interesting changes in the pattern: up until the late 1980s the public sector invests roughly twice as much as the private sector, then private sector investments increase and actually dominate the public sector during 1989 – 1991. After 1994 there is another change, investments drop in both sectors but in the private one they decline to as little as less than one percent of GDP.

Figure 3.6 Private and public sector investments in percent of GDP.



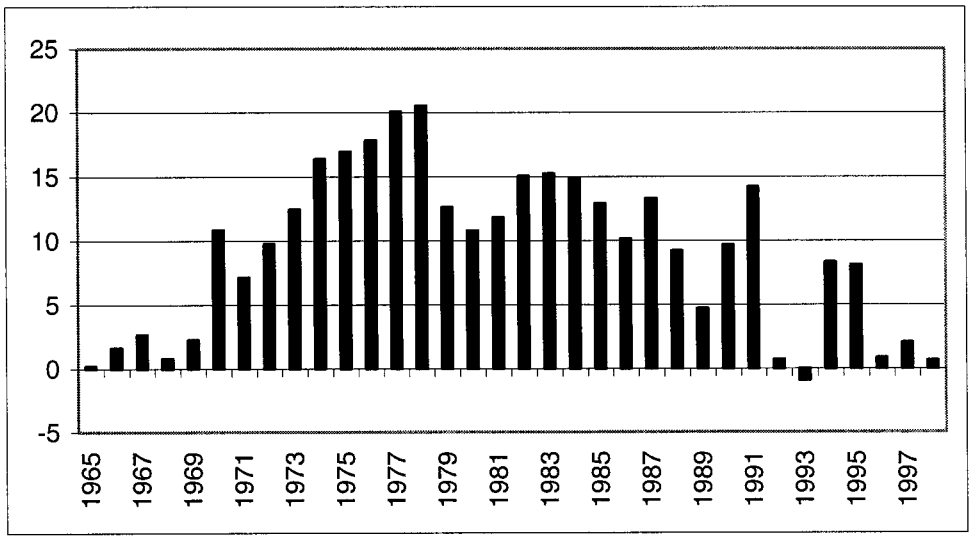
Note: The calculations were based on gross domestic fixed investment and GDP in 1995 constant local currency. Source: World Development Indicators 2000.

In theories of economic growth, the savings ratio (domestic savings as a share of GDP) is usually considered to be a major determinant of capital accumulation, and in practice there is often a high correlation between investments and savings. Of course, in an open economy there exists the possibility of borrowing in the international capital market, or there might be capital inflows or transfers from abroad. Hence, in a country like Malawi foreign aid can be expected to also influence investments.

The savings ratio is depicted in Figure 3.7 for the period 1965 to 1998. In general, the ratio has been low all the time, peaking at about 20 percent at the end of the 1970s. Overall savings seem to have evolved more or less in accordance with

investments; they were high in the 1970s, declined in the 1980s, and dropped to close to zero during 1996 to 1998. Hence, changes in domestic savings are likely to have contributed to the variations observed in capital formation. It is most likely that high budget deficits during the 1980s and 1990s (see Table 2.1) explain some of the decline in the savings ratio.

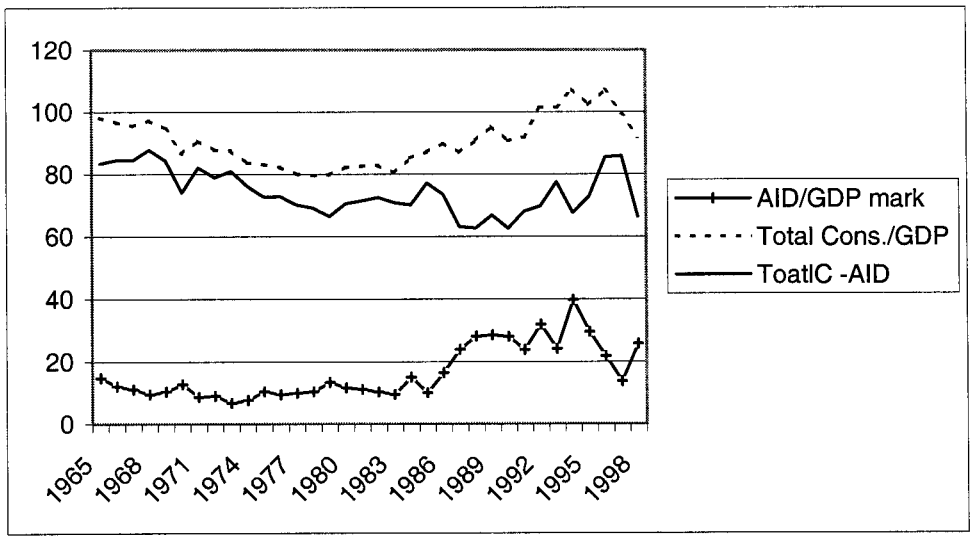
Figure 3.7 Gross domestic savings as a share of GDP (in %).



Source: World Development Indicators 2000.

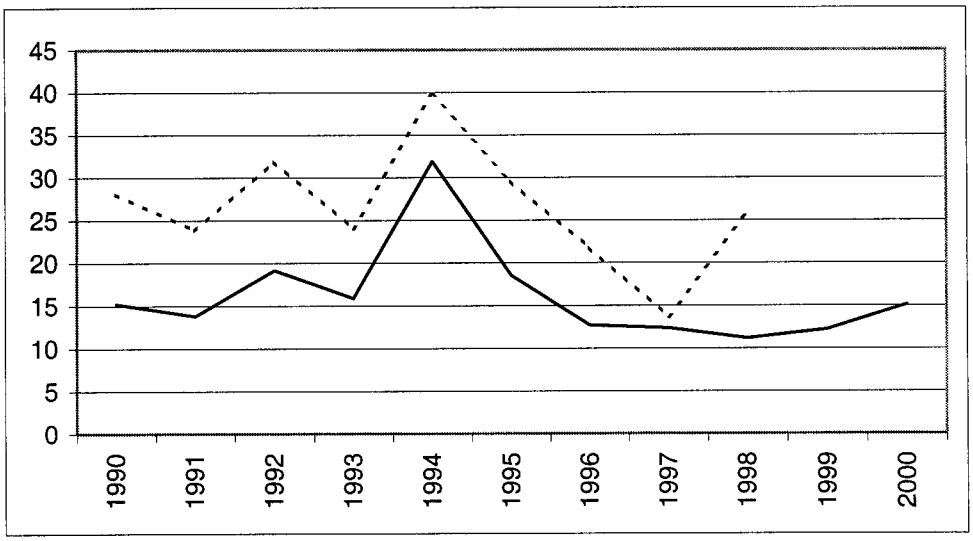
One of the purposes of foreign aid is to reduce, or do away with, the so called savings gap by providing finance for investments. Whether foreign aid actually fulfils this role or not depends on how consumption responds: it is quite possible for consumption to increase by as much as the resource transfers, annulling its impact on investments. Figure 3.8 shows consumption, foreign aid, and consumption minus foreign aid, in percent of GDP for the period 1970 - 1998. Up until around 1987 there is little variability in foreign aid, and it is hard to detect any relation to consumption. Then foreign aid as a share of GDP increases from about 10 percent to close to 30 percent within a couple of years. Simultaneously consumption rises by somewhat more than 10 percentage points, and consumption minus aid drops by 7 to 8 percentage points. Hence, initially a significant share of the inflow of aid seems to have gone to investments. However, during the 1990s most of the foreign aid appears to have been used for consumption, as indicated Figure 3.8. Moreover, it seems clear that public consumption accounts for a large part of the co-variation between aid and consumption, as illustrated by Figure 3.9. IMF (2001a), who carried out a more detailed analysis of the impact of foreign aid in Malawi during the 1990s, reached a similar conclusion.

Figure 3.8 Consumption (---), foreign aid (+-+-+) and consumption minus foreign aid (——), in percent of GDP.



Source: World Development Indicators 2000.

Figure 3.9 Government consumption in percent of GDP (——), and foreign aid in percent of GDP (----).



Source: World Development Indicators 2000.

We can thus conclude that most of the foreign aid was not used for enhancing productive capacity in the form of investments during the 1990s. IMF (2001a) argues that the reason for this is that high inflows of aid seem to reduce the urgency of policy reforms by relaxing budget constraints, while cuts in aid speed up the reform process. It should be noted however that part of the aid was aimed for consumption, notably during the drought years 1992 and 1994, and public consumption includes expenditures that can be beneficial for growth, such as those on education and health. Moreover, the results are highly tentative and a more detailed study is needed to verify the conclusions.

Debt forgiveness is a form of foreign aid in the sense that it reduces current and future interest rate payments. The enhancement of the HIPC (Heavily Indebted

Poor Countries) Initiative, which made Malawi eligible for debt relief, can thus have an impact on capital formation. The reduction in debt service is estimated to US$45 million per year, or about 2.7 percent of GDP, though during 2001 debt relief will be US$31 million (IMF 2001b; IMF and World Bank 2000). If the projections that form the basis for HIPC turn out to be correct, or if the amount of debt relief is adjusted when the actual outcomes of GDP growth, export growth, etc, deviate from the projected values, Malawi has moved away from a situation of unsustainable indebtedness: without HIPC the projected total debt service of the existing debt, as a ratio to exports, would have been 17.6 percent per year over 2001 – 2009, while it expected to be 8.0 percent under the enhanced HIPC.

It is possible that HIPC will affect investments by making more resources available for investors. Moreover, studies of other Sub-Saharan countries have shown that the size of the foreign debt can affect the willingness to invest directly, possibly because of expectations of lower future taxation (Jenkins 1998). Hence, one result of HIPC could be that capital accumulation increases during the next five to ten years.

There are also several other, more direct, reasons for the low investment rate. Investments partly depend on access to credit and the rate of interest. In Malawi, two banks dominate the financial sector: together they hold nearly 90 percent of all deposits. These banks are known to restrict their lending to a small number of companies, and mainly invest in the Treasury Bills market. Moreover, a lot of their lending is done to companies that are owners of the banks. Not surprisingly, many firms seem to be rationed in the credit market. Table 3.1 reports the domestic credit extended to the private sector for the 1980s, and the first and second half of the 1990s. There is no evidence that financial sector liberalisation, implemented during the 1990s, has spurred the supply of credit.

During the period 1995-2000 the real value of credit dropped to one half of its value in the 1980s and the first half of the 1990s. The low rate of investment in this period is a reflection of this decline. An interesting question is thus why there was such a sharp drop in credit during a period when business opportunities should have increased due to trade liberalisation. One explanation can be found in the development of interest rates, also reported in Table 3.1. The average nominal commercial bank lending rate rose to over 40 percent and the average real lending rate increased from –5 percent to 12 percent. As a result, demand for credit is likely to have declined. At the same time the average deposit rates rose from –13 to –7, which hardly was sufficient to stimulate savings.

It was the tight monetary policy, implemented in 1995 after inflation had risen to over 80 percent, which drove up the nominal interest rates. Then, as inflation declined to less than 10 percent in 1997 real interest rates rose further. During 1998 inflation increased again, reaching 45 percent in 1999, requiring a continuation of the tight monetary stance. It is thus safe to conclude that high inflation episodes have contributed to the decline in investments through higher interest rates.

These explanations for the reduction in the supply of credit are to a large extent supported by the results of a recent econometric study on the financial sector in

Malawi (see Mlachila and Chirwa 2002). It found that the spread between the lending and the deposit rate, which rose sharply after the deregulation of the financial market, was due to monopoly power of the banks, high reserve requirements and high central bank discount rate (tight monetary policy) and high inflation.

Table 3.1 Commercial Banks' claims on private sector and, nominal and real interest rates

	1981-1990	1991-1995	1995-2000
Claims on private sector (in million constant 1995MK)	2368	2118	1271
Lending rate	19.50	29.97	43.59
Real lending rate	3.19	-5.46	12.23
Real deposit rate	-4.40	-12.82	-6.95

Notes: All the data where taken from the IFS database of the IMF. The real interest rates where calculated as the nominal rates minus inflation.

3.2.2 Labour Supply

Labour plays a central role to in the process of economic growth, and there are several issues worth looking at. First, the growth rate of the labour force and changes the age distribution of the population affect the per capita income growth rates. Second, HIV/AIDS is common in Malawi, and there is no evidence of a decline in the number of people infected. Third, in the discussion above labour was treated as a homogenous entity and the effect of its knowledge and level of education, i.e., human capital, were not explicitly considered. Yet, changes in human capital affect the efficiency of labour and thus economic growth.

Table 3.2 report various measures describing the dynamics of population growth. As in most other developing countries, Malawi's population has grown rapidly during the last decades, from 4 million in 1965 to 10.6 million in 1999. The rapid population growth can be explained by Malawi's entrance into the second phase of the demographic transition, during which death rates decline and birth rates continue to be high.[2] This is also the most important cause for the increases that have taken place in labour supply; the labour force expanded from 2 million in 1965 to 5 million in 1998. Another consequence of the demographic transition is that the number of children grows faster than the number of adults. This is reflected in an increasing dependency ratio, defined here as the population under age 15 and above 64 in relation to the working age population, those between 15 and 64. The dependency ratio in Malawi increased from 0.93 in 1965 to 0.99 in 1990, indicating that there was almost one dependent for every person at working age. This certainly affected per-capita income growth negatively. However, since 1990 the dependency ratio has declined steadily and it was 0.95 in 1998, indicating that Malawi might be entering the third phase of the demographic transition where birth rates decrease: there is already a noticeable decline in the

[2] Most textbooks in development economics describe the theory of demographic transition in detail. See for instance Todaro (2000).

total fertility rate, that is the number of children a women on average is expected to have during her lifetime. A continuation of this process would contribute positively to per capita income growth as the large cohorts of children grow up and enhance the relative size of the labour force. However, recent projections indicate that the dependency ratio will stay close to unity during the next 25 years (NSO 2002). The reason for this is probably that mortality due to AIDS is much higher among adults than children.

Table 3.2 Labour force, Population and

Year	1965	1970	1975	1980	1985	1990	1992	1995	1997	1998	1999
Population (thousand)	3 975	4 518	5 244	6 183	7 188	8 507	8 986	9 757	10 276	10 533	10 640
Labour force (thousand)	2 106	2 349	2 674	3 091	3 594	4 168	4 403	4 683	4 932	5 056	
Birth rate per 1000 pop		55,68		54,98		50,88	50,2		47,6		
Death rate per 1000 pop		24,3		22,56		21,54	22,1		23,2		
Total fertility rate		7,32		7,6		7,0	6,73		6,43		
Age dependency ratio	0.93	0.96	0.98	0.99	0.98	0.99	0.98	0.97	0.96	0.95	

Notes: Total fertility is the number of births per woman. The dependency ratio is defined as the population below 15 and above 64 in relation to the working age population. The sources are African Development Indicators 2000 of the World Bank and the IFS database.

By looking at developed and some newly industrialising countries one can understand the importance of population dynamics for the dependency ratio. Table 3.3 reports the values for Korea, Malaysia and Sweden. In Korea the ratio was 0.85 in 1960, and then dropped almost continuously to 0.40 in 1998. Bloom and Williamson (1998) argue that this decline explains about four percentage points of Korea's growth rate, and subsequently called it a 'demographic gift'. Malaysia, which entered the third phase of the demographic transition later than Korea, had a dependency ratio similar to Malawi in the 1960s, i.e., 0.95. It then declined to 0.63 in 1998. Sweden, on the other hand, entered the third phase of the demographic transition in the 1930s. In the 1960s there were two people in the working force for every dependent, and since then the ratio has increased somewhat due the growth in the number of elderly people.

Table 3.3 Dependency ratios in some countries, 1960 -1998

	1960	1970	1980	1990	1995	1998
Sweden	0.51	0.53	0.56	0.55	0.57	0.56
Malaysia	0.95	0.92	0.75	0.67	0.66	0.63
Korea, Rep.	0.83	0.83	0.61	0.45	0.41	0.40

Note: The data are from the World Bank Development Indicator 2000. The dependency ratio is defined as the population below 15 and above 64 in relation to the working age population.

It is well known that Malawi is one of the countries with the highest incidence of the HIV and AIDS pandemic, a fact that is affecting the labour force negatively. The number of people infected is estimated to about 800 000 out of

10.6 million, and out of the adult population (15 to 49 years) roughly 16 percent are HIV positive or have AIDS (UNAIDS 2000). One consequence of this is a reduction in the growth rate of the supply of skilled and unskilled workers.[3] If the impact of HIV/AIDS was distributed evenly through the population, or disproportionately hit those that are out of the labour force, then the result could be a rise in income per capita for those who survive. However, HIV/AIDS mainly affects adults, and skilled workers seem to be at least as likely to get infected as unskilled workers. For instance, a recent World Bank study estimated that 25 to 50 percent of all teachers in Malawi might die by 2005 (World Bank 2000a). Although HIV/AIDS probably is more common among teachers than among many other professionals, the study indicates that a sharp decline in the number of skilled workers is to be expected, and that will certainly inhibit per capita income growth.

Another effect of HIV/AIDS is that the remaining workers are likely to be less productive: They are more prone to absenteeism because of their own bad health, disease in the family, or because they have to attend funerals. In addition, savings will decrease, which can affect capital accumulation negatively. Furthermore, it is easy to realise that if the Malawian authorities or individuals start buying antiretroviral drugs on a large scale, savings will have to decrease even if prices are far below the ones charged in the developed world. Currently the lowest price for one year's treatment is about US$200, which is more than Malawi's current GDP per person.

It should be noted that the ultimate impact of HIV/AIDS on income per capita is hard to predict. The forecasts made on population growth vary considerably (see IMF 2001a, Table 8, and NSO 2002). Moreover, the behaviour of the people is not remaining unchanged: one could for instance expect that well-educated people adjust their behaviour faster than others, and this will alter the impact on growth per capita. It is also noteworthy that total factor productivity reached its highest level since the 1960s during a period when HIV and AIDS were widespread, in the end of the 1990s. Finally, one of the worst hit countries, Uganda, had impressive growth rates during the 1990s in the midst of the pandemic.

There is no doubt that human capital plays a major role in the process of economic growth, and that it is a scarce resource in Malawi. However, it is not easy to measure the level of human capital in a society, or to track down how it has evolved over time. The most common approach is to use education as a proxy. However, it is not sufficient to look at school enrolment since it is the stock of knowledge that is of interest. Recently a great effort has been put into the construction of new data sets that show the level of education in the working age population, and some of these data for Malawi are reported in Table 3.4 for the period 1960 –2000. The measures of educational attainments show the average years of schooling, the percentage of the adults who have no formal education at all, and those that have attended primary, secondary or tertiary education.

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[3] The spread of HIV and AIDS will of course have many other effects. See IMF (2001a) and references therein.

Since the 1960s the average years of schooling has increased from 1.7 to 2.6 for those aged 25 and over, and from 1.9 to 3.2 for those aged 15 and over. During the same period the percentage without schooling for the two groups declined from 67 to 54 and 64 to 41, respectively. Moreover, the data for the highest level attained show similar improvements. Thus, there has been educational progress, which should be reflected in an increasing stock of human capital. However, in comparison with most other countries the improvement is not very good. In the advanced countries covered by the database, average years of schooling for those over 24 increased from 7 in 1960 to close to 10 in 2000; in the developing countries they grew on average from 1.8 to 4.9 years, and in Sub-Saharan Africa they rose from 1.4 to 3.8 years. Hence, Malawi appears to be lagging behind most other countries.

Table 3.4 Trends in Educational Attainment

	1960	1965	1970	1975	1980	1985	1990	1995	2000
	Average Years of Schooling								
Aged 25 and over	1.70	1.66	1.60	2.22	2.41	2.60	2.58	2.60	2.58
Aged 15 and over	1.91	2.01	1.90	2.54	2.68	2.84	2.71	2.70	3.20
	No Schooling (in percent)								
Aged 25 and over	67.1	67.5	68.0	55.4	56.9	55.0	54.6	53.5	53.6
Aged 15 and over	63.6	61.2	62.5	49.9	51.8	49.5	50.4	50.7	40.7
	Highest Level Attained, Aged 25 and Over (in percent)								
Primary Total	32.5	32.1	31.5	42.0	40.4	39.8	40.5	41.8	41.9
Secondary Total	0.4	0.4	0.5	2.5	2.4	4.8	4.5	4.2	4.0
Post-Secondary Total	0.0	0.0	0.0	0.2	0.3	0.4	0.4	0.5	0.6

Notes: The source is the database compiled by Barro and Lee (2000). The Highest Level Attained shows some schooling at the indicated level. The values for 2000 are projected.

A closer look at first two columns of Table 3.4 reveals that there was educational progress during the 1960s and the 1970s, a slowdown during the 1980s, and that there even was some regress between 1985 and 1995. Then, after the change of government in 1994 the number of children attending primary school expanded rapidly as fees were abolished and more public resources were shifted to the educational sector. This is showing up in the data for 2000, particularly for the category aged 15 and over: the average years of formal education rose by half a year and the percentage with no schooling dropped by 10 percentage points. There is thus evidence that Malawi is on the right track, although the rapid expansion has led to quality problems because of lack of qualified teachers, schoolbooks, etc (Malawi Government and World Bank 2000).

3.3 Determinants of Total Factor Productivity Growth

When applied to a country, it is fairly easy to list a number of factors that potentially can influence TFP. In fact, every measure that makes the economy function better is likely to affect TFP, not just technological progress. For instance, trade liberalisation is expected to show up in a higher TFP level, or possibly higher TFP growth. Moreover, factors that influence TFP often affect many other variables also, such as the willingness to invest or the supply of

labour. Hence, it is hard to analyse the determinants of TFP growth in isolation, and to evaluate their relative importance. In this section we look briefly at several variables that are likely to be relevant for TFP growth, keeping in mind that they might be important for economic growth through various other channels as well. Public sector reform, which also is relevant for TFP growth, is discussed in detail in Section 4.

3.3.1 Structural Change in Production

One factor that makes TFP grow is changes in the economic structure. Both the level of productivity and the growth rate are usually higher in industry than agriculture. A shift away from agriculture is therefore likely to raise TFP, and economic growth. In Malawi, lack of structural change could thus explain its low TFP growth rate. Table 3.5 shows the percentage distribution of agriculture, industry, and services in GDP for the period 1967 – 1998. It is striking that the distribution was the same in 1995 – 1998 as in 1967 – 1969; agriculture accounted for 44 percent, industry for 18 percent and services for 38 percent of GDP. Nevertheless, from the mid-1960s up to 1994 there was structural change as agriculture declined by more than 10 percentage points and services rose by almost as much. However, this process was reversed within a few years in the late 1990s. Intensified structural adjustment is probably the reason for the reversal: deregulation of the smallholder sector expanded agriculture, public sector reform reduced services, and trade reform decreased the role of industry.

In contrast to what one would have expected, in the 1990s there is thus an increase in TFP during a period when there is a shift away from industry towards agriculture. Hence, it is likely that removal of controls is the explanation for the increased efficiency of the Malawian economy, although more data is needed before we can draw such a conclusion with any certainty.

Table 3.5 Sectoral Composition of GDP 1967 to 1998 (in %)

	1967-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-98
Value added, agriculture	44.6	42.4	39.5	37.2	35.9	33.3	43.6
Value added, industry.	17.6	18.3	19.1	19.0	18.6	20.1	17.8
Value added, services.	37.8	39.3	41.4	43.8	45.5	46.5	38.6
Summa (GDP at factor cost)	100	100	100	100	100	100	100

Source: World Bank Development Indicators 2000.

3.3.2 Trade Liberalisation

Malawi had a fairly export oriented economy during the 1960s and most of the 1970s in the sense that policies favoured agricultural exports from the estate farms. As the economic crisis unfolded at the end of the 1970s, polices changed and during most of the 1980s Malawi's trade and exchange rate regime became restrictive and complex.[4] Importers had to apply for import licences and foreign

[4] IMF (2001a) provides a detailed summary of Malawi's trade liberalization measures since the 1980s.

exchange allocations, and there was a lot of discretion and lengthy delays in handling the applications. Import tariffs were in general very high but unevenly distributed. There were also bans on exports of a large number of goods, and many others were subject to licensing. Moreover, there were specific duties on exports of some goods such as tobacco.

The process of trade liberalisation started in 1988 when exchange controls were relaxed somewhat and the maximum import tariff was reduced from 70 percent to 45 percent. In 1991- 1993 there was another round of liberalisation with a reduction in the coverage of non-tariff import controls and streamlining of import taxes. During the period 1994 to 1999 the process went quicker and all import and export licensing requirements were abolished except for certain goods related to health, security or environment, and the maximum tariff was reduced to 25 percent. Currently Malawi has one of the most open regimes in Africa: in IMF's Trade Restrictiveness Rating Malawi gets 3.0 on scale going from 1 (completely open) to 10, while the averages for COMESA and SADC are 5.9 and 5.4, respectively (IMF 2001a).

There exist some studies that explicitly try to analyse the relation between trade policy and TFP growth, but there is no consensus. Edwards (1998) and Miller and Upadhyay (2000) found that trade liberalisation has a strong positive effect on TFP, while Rodrik (1995) and Rodriguez and Rodrik (2000) take a more sceptical view claiming that that the empirical evidence is weak. Bjurek and Durevall (2000) failed to find support for a positive relationship in an analysis of the manufacturing sector in Zimbabwe that sidesteps several weaknesses of most other studies.

When comparing the three historical periods in Malawi, there appears to be a positive relation between trade openness and TFP. However, it is not at all clear there is causal relation: in the 1980s it seems likely that negative external shocks led to both more restrictive trade policies and lower TFP. Moreover, other factors could be responsible for the increase in TFP during the latter part of the 1990s.

3.3.3 Structural Reforms and Agriculture

A possible explanation for the increase in TFP during the latter half of the 1990s is structural reform in the agricultural sector. By 1996 marketing liberalisation of smallholder crops and inputs were completed, and prices of all crops except maize were market determined (see Chirwa 1998 for details). This implied that policies favouring the estates were terminated and smallholders moved quickly into cash crop production, in particular burley tobacco. As a result there was a rapid expansion and diversification in smallholder production (World Bank 1997). Since smallholder agriculture dominates the agricultural sector, and agriculture makes up more than 40 percent of GDP, this could very well be the primary cause of the increase in TFP.

Although market liberalisation led to an impressive expansion of smallholder production and to increased importance of agriculture in the Malawi economy, as

shown by Table 3.5, growth in agricultural production in general was not as impressive. The reason is that smallholder production partly grew at the expense of the large estate farms. Table 3.6 shows that since the beginning of the 1990s the contribution of the estate sector in value added in agriculture has dropped from about 30 percent to less than 20 percent. Several factors explain the poor performance of the estate farms, varying from reductions in labour supply as earnings increased in smallholder agriculture, to theft of tobacco plants since they are easy to sell in a deregulated environment, and declining tobacco prices.

Table 3.6 Relative Contributions to Agricultural Production of Smallholders and Estates 1990-1999 (in %)

	1990-92	1993-95	1996	1997	1998	1999
Smallholders	68.9	72.0	78.5	75.7	81.5	84.0
Estates	31.1	28.0	21.5	23.8	19.0	16.9
Sum	100	100	100	100	100	100

Source: Monthly Statistical Bulletin, National Statistical Office

One consequence of the preferential treatment of estate farms in the past is that they cover much of the fertile agricultural land. Considering their poor performance and the lack of land among the smallholders[5], there is a case for land redistribution. Changes in land ownership in favour of smallholders would lead to more intensive use of scarce land, as well as a reduction in poverty (IMF 2001b). The government is in the process of formulating a new land policy that will include redistribution of land and resettlement (MLHPPS 2000).

Another problem that is hampering growth in the agricultural sector, and the economy as a whole, is the lack of a basic land law. Recently this has resulted in an increased number of land tenure encroachments, and consequently, a high degree of tenure insecurity (MLHPPS 2000). In fact, most land in Malawi is held under customary tenure without any documentary evidence. According to the proposal for a new land policy, all landowners will have their holdings registered during the next 20 years.

Land redistribution and title registration of customary land is likely to set off processes that could contribute to a rapid expansion in agriculture. Smallholders would be more willing to invest, and their chances of obtaining credit by using land as a collateral would improve. Moreover, a vibrant land market might emerge in the smallholder sector, generating a higher concentration in land ownership. All this would probably result in higher output per hectare because of use of more fertilisers, better seeds, etc, increasing TFP. However, there is need for caution. One outcome could be a worsened income distribution in the rural areas as poor farmers sell their land and become landless. Unless new jobs are created for the landless, such a development could lead to conflicts and social unrest.

[5] The size of most landholdings is less than one hectare. See NEC (2000b) Table 5.1 for details.

3.3.5 Environmental Problems

A threat to agricultural production and productivity is soil erosion, which is a serious problem in Malawi. Soil erosion is common because a large part of Malawi is densely populated; for example, it is only one tenth of the size of Mozambique but has the same population. This leads to deforestation since wood is the main source of energy, currently making up about 90 percent of the energy requirement of households and industry (Economic Report 2000). Moreover, small farms, in combination with small yields, forces people to clear marginal land for cultivation. Some replanting is taking place but it is not sufficient and the process of environmental degradation is accelerating (World Bank 2000a). When considering the expected growth rate of the Malawi population - projections indicate that it will increase from today's 10 million to about 20 million in 2025 - it is obvious that soil erosion will be high on the agenda (NSO 2002).

Water scarcity is not a big problem in Malawi. There are some dry areas, but they do not host many people: in contrast to Zimbabwe, for example, the rural population was not forced to move to these areas during the colonial period. This means that with well-functioning wells, water supply should be adequate in most areas. Currently a number of NGOs, and the World Bank supported Malawi Social Action Fund, are involved in boring wells. However, there are two major problems with providing wells, maintenance and repair, and replacement of pumps when they are worn out. It is noteworthy that the former problem has been reduced significantly by the use of water pumps produced in Malawi. This means that spare parts are cheap and easy to obtain. However, replacing old pumps is expensive, and in general the local communities will not be able to afford it. In principle the Ministry of Water Development is the owner of the pumps and should take responsibility for investing in new pumps, but it is not clear it will have enough capacity to do it.

Another environmental issue is Lake Malawi, which generates income through fishing and tourism. Currently there are two threats. First, there is over-fishing because of high demand, which is showing up in small fish being caught. Since Lake Malawi is the main supplier of the fish Chambo, consumed by many Malawians, this is a serious threat to the sustainability of the fishing industry and national food supply. Recently the control of the fishing has been taken over by the local communities in some areas, and hopefully they have an incentive to look after the fish stock. The second threat is pollution in certain parts of the lake, a consequence of the large number of people living around it. According to some people the situation is so serious that swimming near many beaches should be avoided because of the risk of getting infections. Since Lake Malawi is the country's biggest tourist attraction, pollution can cause significant damage to the nascent tourist industry.

3.3.6 Transport Costs

Some of the variations in TFP could be due to varying transport costs but it is difficult to get time series data to see how they have evolved. Nevertheless, transports costs are high both for Malawi's international trade and within the country. One reason is that Malawi is a landlocked country that must ship its merchandise either through Beira or Nacala in Mozambique, Durban in South

Africa or Dar es Salaam in Tanzania. The nearest ports are the ones in Mozambique, situated at a distance of 640 km and 815 km by rail, respectively. Before the war broke out in Mozambique, most of Malawi's imports and exports passed through Beira and Nacala at a reasonable cost. Unfortunately, the return of peace has not restored the old situation, and the ports of Durban, 2600 – 3806 km away, and Dar es Salaam, 3030 km by road, handle most of Malawi's overseas trade.

The importance of transport costs for Malawi's competitiveness in international markets and for domestic costs of imports is large. One example is fertiliser, a vital input in food production: transport costs accounted for as much as 47 percent of its retail price in 1996 (World Bank 1997). On average, total freight costs of imports to Malawi were estimated to 39.4 percent of the value of imports during 1998. This should be contrasted with other landlocked countries such as Zambia, 16.4 percent, Zimbabwe, 12.9 percent, and Uganda 9.8 percent (Review of Maritime Transport 2000).

The road system in Malawi is quite good, but in spite of this domestic transport costs are also high within the country. One reason is that the maintenance of the road system deteriorated during the 1990s. However, with the recent formation of the Road Fund, financed by a fuel levy, and the commercially oriented National Roads Authority that administers the maintenance, road repair has increased significantly. Hence, there has been a noticeable improvement in the conditions of the roads since 2000. Deferring road repair, as Malawi has done in the past, is not an economically sound strategy: in Africa almost US$4 are saved from future costs for every dollar spent on timely road maintenance (World Bank 1997).

Another reason for high transport costs could be lack of competition in the truck transportation industry. Malawi has no effective anti-monopoly regime and there exists anecdotal evidence of monopolistic behaviour. In combination with an inefficient railway system this could attribute significantly to the high transport costs. Competition from the railway is however increasing. Since 1999 Malawi Railways is operated by a joint venture between a Mozambican and a US company, and recently it has become more efficient and increased its market share (Economic Report 2000).

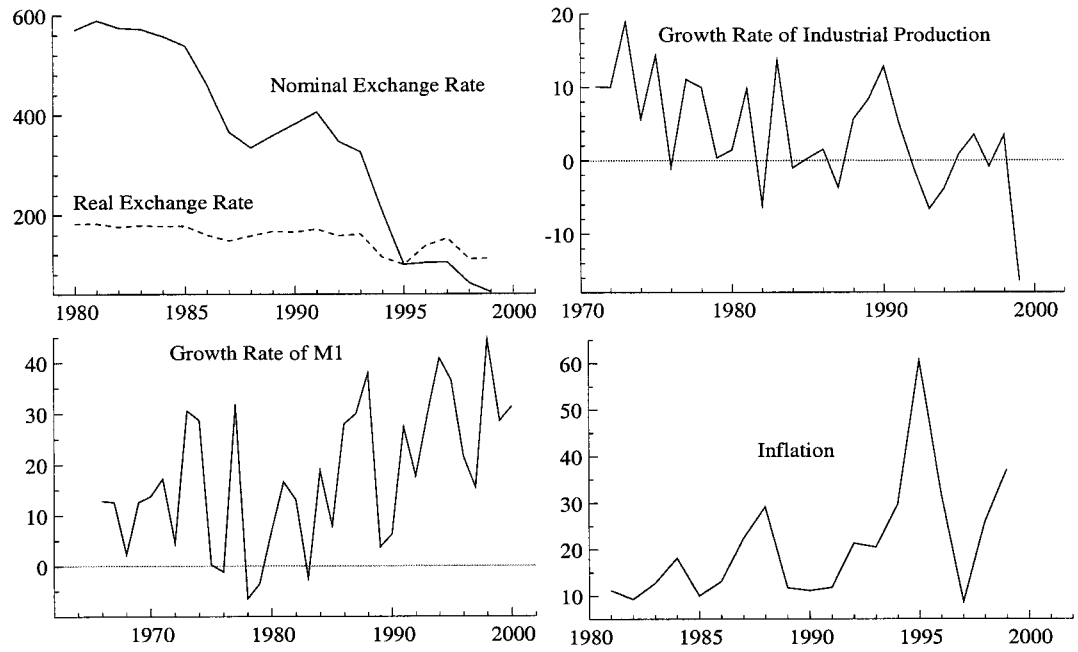
3.3.7 Macroeconomic stability

During the last decades the importance of macroeconomic stability for economic development has been widely recognised, as several studies have shown that low and stable inflation, sustainable budget deficits, etc, are associated with high GDP growth (see Rodriguéz and Rodrik 2000). One channel through which macroeconomic stability affects economic growth is via TFP. For example, in Miller and Upadhyay (2000) the level of inflation was found to have a strong negative effect on TFP growth in a large sample of developing and developed countries. Another channel is via investments: instability is likely to reduce capital formation in the private sector. Macroeconomic stability can also directly play an important role in poverty reduction, at least in the short to medium term. This is well illustrated by Devereux (1999) who describes how fluctuations in the Malawi

Kwacha during the 1990s on certain occasions led to massive escalations in living costs.[6]

To give a general picture of the macroeconomic performance of Malawi, Figure 3.10 shows indexes of real and nominal effective exchange rates (1995=100), the growth rates of money supply (M1) and industrial production, and inflation. The upper left panel tells us that in spite of a decline in the index of the nominal effective exchange rate from 600 in 1980 to 36 in 2000, mainly due to numerous devaluations, the real exchange rate was relatively stable. This implies that inflation must have been much higher in Malawi than in its trading partners. As depicted in the lower right panel, in Malawi inflation has been at a two-digit level almost every year since 1980. Moreover, it has fluctuated a great deal, particularly during the latter half of the 1990s. Since the authorities have not maintained a stable nominal exchange rate, money supply can potentially play a central role in the dynamics of the economy. The lower left panel thus shows the growth rate of M1; it fluctuates wildly over the years, making it hard to believe that the Reserve Bank actually exercised control over the money supply. In the upper right panel we have graphed the growth rate of industrial production. It also fluctuates a lot; probably partly because of external shocks, such as variations in rainfall that affect agriculture and the supply of inputs, but also because of shocks related to economic policy.

Figure 3.10, Indexes of nominal effective exchange rates (1995 =100), growth rates in industrial production and money supply, and inflation.



Source: The IFS database.

[6] The decline in the value of the Kwacha during the 1990s was partly due to trade liberalization but inadequate macroeconomic policy in combination with external shocks accounted for most of the fluctuations.

Why has the Malawian economy experienced so much macroeconomic instability? One reason is external chocks, such as drought, the Asian crisis, currency crises in major trading partners (South Africa and Zimbabwe), and fluctuations in terms of trade such as the recent oil price increase and drop in tobacco prices. Moreover, unexpected delays and postponements of disbursements of foreign assistance, particularly budget support, have on occasions during the 1990s affected government revenue and contributed to increases in money supply growth and higher-than-planned budget deficits. However, there is reason to believe that much of the instability has been due to inconsistent domestic policies and the way the authorities have handled external chocks.

Fiscal policies are usually blamed for being a major cause of domestically generated macroeconomic instability (See DANIDA 2000; IMF 1999; Malawi Government and World Bank 2000). This is not surprising since, as reported in Table 1, budget deficits have been high even after considering grants. The high fiscal deficits have led to high demand, which probably explain a significant part of the high inflation and the frequent adjustments in the exchange rates that are bound to follow. To improve control over the public finances, a cash budget system that ties public expenditure to revenue was introduced in 1995. Initially it helped to gain control over expenditures, but the cash budget has not solved to the problem of overspending. The reason is that the current lack of fiscal discipline is due to fundamental problems of accountability and control within the public sector, an issue that is dealt with in Section 4.3.

Monetary policy also appears to have contributed to large fluctuations in inflation and the exchange rate, although it should be remembered that the room to manoeuvre for the Reserve Bank has been limited by lax fiscal policy. For instance, it is difficult to control the growth of the monetary base, one of the current goals of the Reserve Bank, when there are large budget deficits. Nevertheless, there are occasions where the monetary authorities probably could have done better. During the 1990s, the value of the Kwacha was maintained fixed for too long in some cases, making major devaluations necessary. Instead they could have allowed the exchange rate to adjust smoothly, thereby avoiding the sharp price increases. After large devaluations in Malawi, many prices seem to be raised by far more than the nominal decline in the value of the currency. For example, following the devaluation of 62 percent the in 1998 maize prices increased by 96 percent, baking flour by 122 percent, and tickets for local bus transport in Zomba rose by 100 percent (Devereaux 1999). These price increases were probably due to a combination of two factors, lack of competition in the production of goods and services and expectations of accommodating monetary policy. The latter can be described as a belief that the Reserve Bank would not fight the inflationary impact of the devaluation by raising interest rates, etc. The upper left panel in Figure 3.10 provides some support for this belief: the effects of the devaluations on the real exchange rate were rapidly wipe out by price increases.

Since the beginning of 2000 the Reserve Bank has reduced its foreign exchange

market interventions substantially, and market forces currently determine the value of the Kwacha. The short run goal is now to achieve specific targets for the growth rate of the monetary base, and the medium run goal is to control growth in the money stock (M2) to eventually maintain inflation at a low (single digit) level (IMF 2001b). However, these goals of the monetary policy will not be reached unless measures are taken that improve the finances of the government.

How is macroeconomic stability and TFP growth in Malawi related? This question is not easy to answer with the information we have. In some cases both TFP and macroeconomic variables are buffeted by the same shocks, such as drought, making it appear that one causes another. Moreover, there can be high TFP growth and high macroeconomic instability at the same time, as evident from the latter half of the 1990s. However, in this case the relationship is obscured because TFP growth appears to be due to other factors, such as market liberalisation. Nevertheless, there is ample empirical evidence that macroeconomic stability in general is correlated with high GDP growth, and that by itself merits an effort to improve macroeconomic environment in Malawi over the next five to ten years.

3.3.8 Terms of Trade

Several studies have found that terms of trade (tot) have a strong influence on economic growth in general, and it is reasonable to believe that this partly is due to its effect on TFP.[7] As a poor country heavily dependent on exports of raw materials, such as tobacco, Malawi is exposed to large fluctuations in its tot, i.e. the price of exports relative to the price of imports. Figure 3.11 depicts tot and TFP over the periods 1960-1999 and 1960-1998, respectively. Note that the variables have been mean and variance adjusted to highlight their co-variation. During the 1960s and 1970s tot and TFP seemed to be unrelated, or possibly negatively correlated. However, the decline in TFP during the 1980s and the beginning of 1990s coincided with decreasing tot. On the other hand, the increase in TFP after 1995 occurred without a similar improvement in tot. Hence, overall the two variables do not appear to be closely related.

The other channel through which tot could affect economic growth is via capital accumulation. When tot increases, investments in export production become more profitable while the relative price of imported capital goods decreases. Since imported capital goods make out a large share of investments in Malawi, this effect can be expected to be particularly strong. Figure 3.12 shows that this is indeed the case: the growth rate of the capital stock tracks tot quite closely over the 30 years that we have data.

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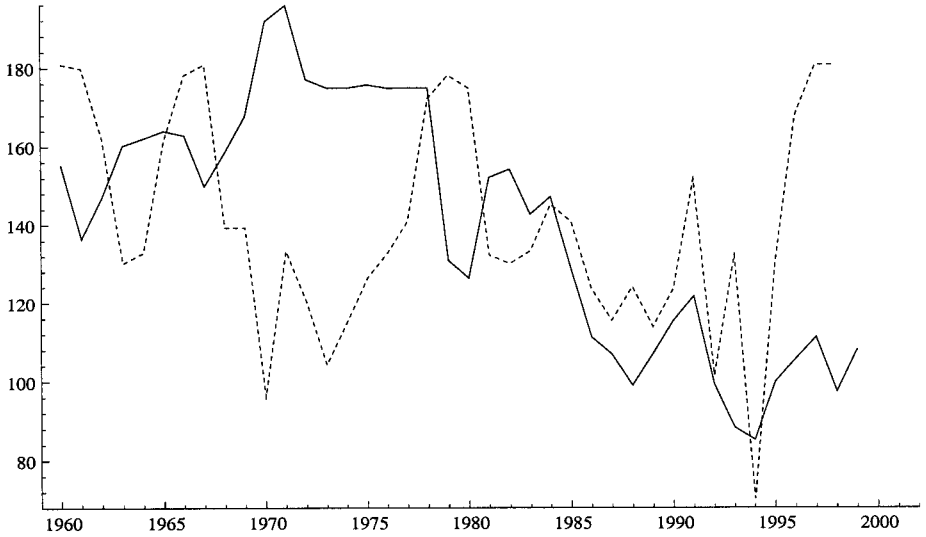
[7] For cases where tot affects economic growth, see Calvo and Mendoza (1998) and references therein. It is noteworthy that Miller and Upadhyay (2000) failed to find a direct effect from tot on TFP growth in a study including developed and developing countries.

Figure 3.11 Terms of trade (—) and total factor productivity (-----).



Sources: See Figures 3.1 and 3.2.

Figure 3.12 Terms of trade (—) and growth in capital stock (-----) (mean and variance adjusted).

Sources: See Figures 3.1 and 3.2.

4. THE PUBLIC SECTOR IN MALAWI

Recently the importance of good governance has come into the forefront of the discussions of economic development. This is particularly the case for Sub-Saharan Africa, where one of the conclusions in the literature is that bad governance is a major cause behind the relatively low rates of economic growth in the region (Collier and Gunning 1999; Englebert 2000). In fact, it is easy to see that most of the growth determinants discussed in previous sections can be

influenced by both the choice of policy and how it is implemented. Thus, it is not surprising that the Government of Malawi has made several attempts to improve governance by designing and adopting reform programmes that aim at increasing public sector efficiency (Msosa 1998; Mugore 1998; Lungo and Mugore 1999). The purpose of this section is to describe and analyse some of these attempts by looking at the development of the public sector in terms of employment and salaries, accountability, and reform efforts, with an emphasis is on recent reforms.

4.1 Public Sector Reform: A Brief History

Since Independence various commissions and reviews have come up with suggestions on how to reform the public sector. The first public sector reform was focused on the costs of running the post-colonial public service. The Skinner Commission drew it up in 1964 and recommended new salary scales and job grades for public servants. It argued that it would be too expensive to retain the high standards of pay and generous conditions when local people took over the jobs from the expatriates (Msosa 1998). Government implemented these recommendations and salary scales were compressed significantly.

A weakness of the Skinner Commission was its failure to address the restructuring of the public service that had to manage the accumulated development needs after Independence in education, agriculture, health, etc. The Economic Commission for Africa was therefore commissioned to review this issue. Its report, published in 1966, recommended several measures aimed at enhancing the efficiency of the public sector and pointed out the need for effective leadership and an institutional arrangement for implementing the reforms. Even so, few recommendations were implemented and the reform is considered a failure (Msosa 1998).

The next major reform initiative was suggested by the Herbecq Commission in 1985, which was appointed during Malawi's first structural adjustment program. It was primarily concerned with staff structure, career development and job grading. As in the case of Economic Commission for Africa, the recommendations were not fully implemented. Thus, even though strict controls on employment growth had been suggested, the number of civil servants continued to grow rapidly during the 1980s (see Sub-section 4.2).

Most of the reform measures implemented in relation to structural adjustment programs, in particular during the 1980s, belong to what is commonly called the first-generation reforms, which primarily aimed at reducing public expenditures. Although necessary for macroeconomic stability, these measures had negative effects on the functioning of the public sector. One reason was that expenditures were cut across the board without systematically addressing the fundamental reasons for the dysfunctional state, such as leadership, accountability, and human capacity deficits (Lienert and Modi 1997; Schacter 2000). Hence, during the 1990s the Malawian government initiated a long array of reviews and programs that aimed at thoroughly reforming the public sector. Among these initiatives are Public Sector Management Review, Civil Service Pay and Employment Study, the Civil Service Action Plan, Poverty Alleviation Program, functional reviews of the ministries, decentralization and formation of local government policy reform, Medium Term Expenditure Framework, and Sector Investment Programmes. Most of these belong to the joint Malawi Government and World Bank Public

Sector Reform Program initiated after the elections in 1994. In general, implementation have encountered serious difficulties and thus advanced slowly. Nevertheless, in most cases the reforms programs are being implemented and Government seems determined to push them through (Malawi Government 2000; Malawi Government and World Bank 2000; MFEP 2000; World Bank 2000a).

4.2 Employment and Salaries

An interesting question is how fast the civil service has grown in terms of number of employees and how big it is today. Unfortunately, there does not seem to exist good time series data on employment in the civil service.[8] Nevertheless, Msosa (1998) provides some information. In the beginning of the 1960s the civil service (defined as public sector minus police, parastatals and local government) had about 10 700 employees. After Independence in 1964 employment expanded rapidly, as in most African countries, mainly to cater for the need for increased service delivery. The growth rate is estimated to have been 13 percent per year on average between 1964 and 1985, and by 1987 the number of employees had risen to 50 000. During the 1990s the expansion continued: the number of civil servants rose to 65 000 in 1991 and then reached 127 000 in the beginning of 1998 (Economic Report 1998). According to the most recent figure available there were about 130 000 civil servants in 2001 (The Nation 2001, 1 March). In spite of these numbers, the government appears to have established some control over the growth of its labour force. Since 1995 about 20 000 temporary employees have been retrenched and a number of ghost workers have been eliminated as part of the civil service reforms (Malawi Government 2000).

Are there too many civil servants in Malawi? When compared with a population of close to 10,6 m it does not appear to be the case; only about 1.2 percent of the population are civil servants. Although this is a bit high in a Sub-Saharan context, it is very low compared to developed countries (Lienert and Modi 1997). Moreover, considering that almost half of all of the employees are in the Ministry of Education, less than 70 000 are left to run the administration of the country, public hospitals, etc. Furthermore, there are currently serious shortages of personal in some of the most vital sectors, such as education and health (Malawi Government and World Bank 2000). Thus, there does not seem to be any reason for reducing the size of the civil service when only looking at the number of employees.

Employment in the civil service is however large in some respects. The civil sector employs about 20 percent of the formal sector labour force. And, according to data from 1989, one in every three persons is employed in the civil service if we exclude the agricultural and estate sectors. Moreover, about half of all professionals and more than two thirds of sub-professionals were at that time working for Government (World Bank 1994) Hence, the civil service is bound to play an important role in the formal labour market, which has implications for labour demand and wages in both the private and public sectors. Little is however known about the dynamics of the Malawi labour market.

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[8] See World Bank (1994) for more details on the difficulty of determining the size of the civil service.

Government can only expect high input from civil servants if it is able to remunerate them adequately and balance expenditure between wage costs and operation and maintenance. The question about the optimal size of the labour force is therefore related to wages and salaries. It is thus of interest to look at real and relative wages within the civil service, and between the civil service and private sector. Some relevant issues are how real wages have developed, in light of the rapid growth in employment, if there has been wage compression, and how civil service sector wages compare with those in the private sector.

Salaries and wages for a selection of jobs within the civil service for December 2000 are reported in Table 4.1. It shows minimum salaries and wages within each grade: the maximum level for a particular grade is slightly below the minimum in the grade above it. Although there is progression in the system and higher grades seem to correspond to more responsibility, the very low levels indicate a serious deficiency. Top jobs pay between US$2000 and US$3000 per year, a clerical officer with Diploma gets US$500 and the top grade for subordinate staff pays a bit more than US$300. It is clear that actual incomes, at least for those with top jobs, must be considerably higher than their annual salaries.

Another aspect of the salary system is the behaviour of real wages: large changes are bound to affect incentive and work morale. Since the beginning of the 1980s, salaries and wages have in most cases declined by more than 60 percent. This is illustrated by Figure 4.1, which depicts this development for some of the grades. Between 1982 and 2000 S1 declined by 63 percent, S2 by 74 percent, and S8 by 82 percent (see Table 4.1 for definitions of grades). Middle-range grades have behaved similarly, E0/T0 dropped by 56 percent. For some of the lower grades the decline has been somewhat less dramatic, i.e., 25 to 30 percent, but there are other low grades that have dropped by more then 50 percent. It is interesting to note that these declines continued in beginning of the 1990s even though militancy increased among civil servants, resulting in several strikes (Ademolekun and Mvula 1999).

An interesting feature of the salary scales is the distribution of nominal changes over time. There are two striking aspects of the changes in the salary structure. First, form 1980 up until 1997 the nominal increases were periodic and unevenly distributed (not reported, see Durevall 2001). These abrupt and uneven adjustments in the salary scales indicate a lack of continuity in public sector pay policy. The authorities seem to have preferred to wait with adjustments until there was a substantial amount of discontent among groups of civil servants, and then grant large increases. Since the adjustments resulted in large changes in relative salaries and distortions of the pay structure, they most likely affected work effort negatively by creating discontent and, on occasion, pushing civil servants to go on strike. It is interesting to note this policy changed in 1997 and since then all increases have been equally distributed across the grades, giving the impression the authorities are satisfied with the salary distribution.

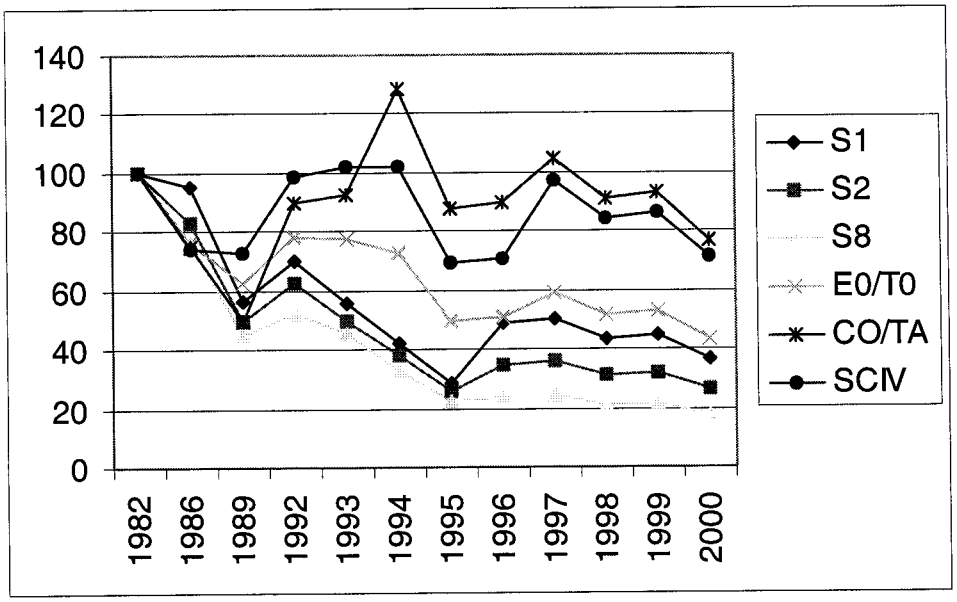
Table 4.1 Salaries and Wages for Select Grades (in MK and US$)

Salary Grades	Representative/Generic Job Titles	Annual Salaries (Dec. 2000)	
Super scale, Administrative roles		MK	$US
S1	SPC, Chief Justice	239483	2994
S2C	Deputy SPC	178397	2230
S2A	Attorney General	160785	2010
S2	Principal Secretary	153034	1913
S3	Senior DPSs, Ambassador	128010	1600
S4	DPS's	118467	1481
S5	Chief, Under Secretaries	108325	1354
S6	Senior Assistant Secretary	84018	1050
S7	Principal Admin. Officer	76029	950
S8	Senior Admin. Officer	68159	852
Super-scale, Professional			
P1	Chief Specialist	239483	2994
P2	Controller, Commissioner	153034	1913
P3	Principal Specialist	128010	1600
P4	Senior Specialist	118467	1481
P5	Chief Officer	108325	1354
P6	Assistant Chief Officer	84018	1050
P7	Principal Officer, (Medical Doctor)	76029	950
P8	Senior Officer, (Senior Accountant)	68159	852
Administrative and Professional			
A0/P0	Prof. / Admin. Officer, (1st degree holder)	49969	625
CE0/CT0	Chief Exec. / Tech Officer (Accountant)	56962	712
SE0/ST0	Senior Exec. / Tech Officer	51921	649
E0/T0	Clerical Officers (Diploma holder)	39907	499
SC0/STA	Clerical officer	35464	443
CO/TA	Clerical / Technical Assistants (O-level)	20023	250
Subordinate Staff			
SCI	Messenger	24387	305
SCII	Messenger	19366	242
SCIII	Messenger	15541	194
SCIV	Messenger	12970	162

Note: The salaries are minimum salaries within each grade as of December 2000. The exchange rate used was MK80 per US$. Sources are World Bank (1994) and Department of Human Resource Management and Development, Lilongwe.

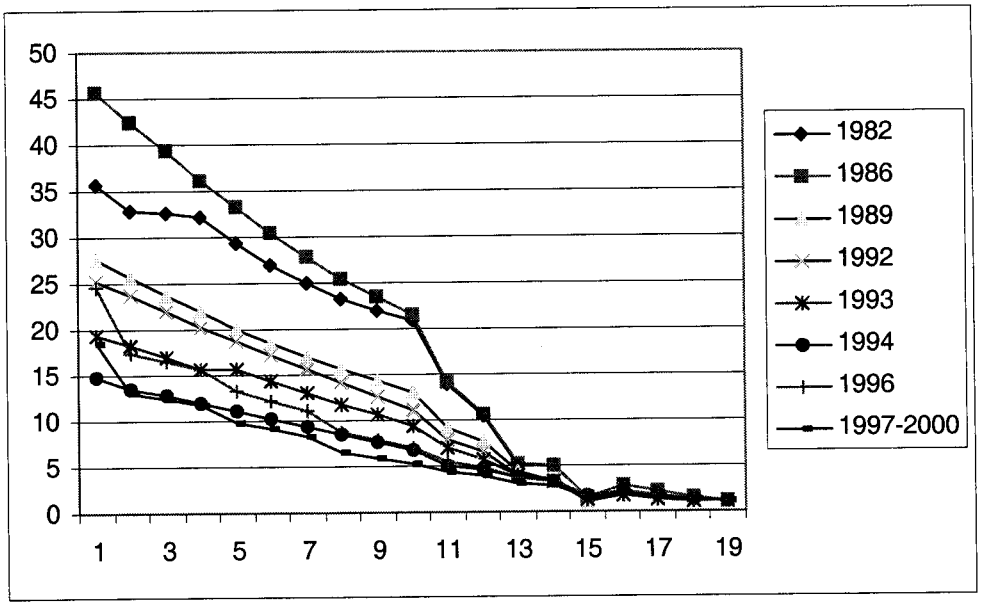
Second, the Herbecq Commission noted that there had been a progressive compression of the salary structured since the 1960s. It started at Independence when the process of Africanisation of the civil service led to a replacement of the Europeans, and as proposed by the Skinner Commission, lower salaries for the newly employed Malawians. Since the reduction in salary levels affected those in the top grades most, there was a narrowing down of wage differentials, which at the time probably was justified on efficiency grounds. However, the salary compression seems to have continued since then, although with some interruptions. This is illustrated by Figure 4.2, which shows the compression factors for major salary grades. They run from the highest (S1) to the lowest (SCIV) for a selection of years between 1982 and 2000. The compression factors were calculated as ratios between each grade and the lowest grade, SCIV, and a straight line at unity would indicate the same pay for everybody.

Figure 4.1. The Evolution of Real Salaries and Wages for some Grades 1982-2000.



Source: World Bank (1994) and Department of Human Resource Management and Development.

Figure 4.2 Compression factors for major salary grades for some years over the period 1982-2000.



Note: The compression factors were calculated as ratios between each grade and the lowest grade, SCIV.

In the beginning of the 1980s the top jobs were paying 35 to 45 times more than the lowest paid messenger. Over time the ratios for the same grades have been reduced to 12 to 18 times. The compression has been even more severe for the middle-range grades, where some have dropped from more than 20 to about 5.

Salary compression has been a widespread phenomenon in African public services, and the common view seems to be that any salary compression is bad

(see Liernert and Modi 1997; World Bank 1994). Yet, one cannot determine whether salary compression has gone too far or not just by looking at numbers: it depends on the impact of the salary structure on work effort, etc. There are also other factors that should be considered when studying salary compression. For instance, it is common to use different monetary and non-monetary employment benefits, and they can have a substantial effect on income differentials. Moreover, a relevant reference point would be salary and wage differentials in the private sector, but there is at the time of writing no adequate up-to-date information for Malawi.[9]

It is difficult to accurately calculate the monetary value of all actual incomes for civil servants in Malawi. First, official non-monetary employment benefits have to be converted into money, which of course can be done but not very exactly. For instance, a significant number of civil servants enjoyed the benefit of subsidised housing, paying less than 10 percent of the market rent during the 1980s and part of the 1990s. Later the housing subsidy was converted to a housing allowance equal to 15 percent of the basic salary for many of the employees. Second, all other sources of 'income' available, ranging from fairly innocent use of public property to outright corruption and fraud, have to be evaluated. In civil services where real salaries have declined considerably, the use of these is probably intensified and more or less generally accepted. Hence although not legally considered as benefits, they are in practice. One example is the common habit of compensating employees by allowing them to travel so they can earn money by saving part of their per diem. Another example is sending employees on training; for instance, close to a tenth of all donor expenditures in the health sector went to training, and there is widespread agreement that the purpose is to provide extra income (Malawi Government and World Bank 2000). Other examples are selling stolen public property, such as medicine or schoolbooks, or simply pocketing money earned from otherwise legal sales of public property.

At the time of writing a civil sector salary and wages survey is being finalised and it will provide estimates on the monetary value of legal benefits. Currently, the only systematic information available is from the World Bank (1994) study. It found, surprisingly, that non-monetary employment benefits significantly raised the degree of wage compression. It is quite possible that this effect of non-monetary benefits has been unintentional because of the difficulty in evaluating their real impact on income. This is exemplified by the access to government housing that had a particularly large impact on income for some civil servants: for junior officials with subsidised housing the total value of non-monetary benefits amounted to over 350 percent of the total monetary pay in 1993 (World Bank 1994). To obtain a transparent and effective pay structure, it is necessary to monetize most of the benefits, which currently is being done by the government in Malawi as part of the civil service reform. It should be noted, though, that some employment benefits are needed, such as pensions or health insurances, and constitute important components of the incentive structure.

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[9] At the time of writing Government of Malawi was carrying out private sector salary reviews. The information available is reported in the paragraps on private and public sector salaries below.

A crucial question is how civil service sector salaries and wages compare to those in the private sector since the effectiveness of civil service pay levels is to a large extent dependent on pay levels in other sectors. Comparing wage levels in the private and public sector is tricky, however. First, the pay level often varies from one employer to another for the same job within the private sector. It is thus possible to find employers in manufacturing paying much less than civil service minimum salaries and others that pay up to 30 percent more than the top salary for the same sort of staff (World Bank 1994). Second, the comparisons should be made between the same kind of jobs occupied by employees with similar training and experience. Finally, in addition to salaries, monetary and non-monetary employment benefits should be compared, and these can be difficult to evaluate. Nonetheless, attempts have been made to compare different sector and some tentative results are available.

Price Waterhouse (1993) carried out a study on remuneration in various sectors for a number of jobs. One of the main findings was that all private sector jobs had higher basic salaries than the corresponding ones in the civil service. In a more recent, but less comprehensive, survey an attempt was made to estimate the value of the benefits in money terms (World Bank 1994). When monetized benefits were added to the basic salaries, the result was a reduction to a 60 percent difference in pay for professionals, and a reversal in favour of those civil servants in middle and junior grades that had subsidized housing.

During the period 1993 to 1999 private sector salaries and wages seem to have grown much faster that the ones in the public sector. According to Malawi Government and World Bank (2000), real civil service salaries at the higher level dropped by 40 to 50 percent while equivalent private sector salaries increased by a factor of six. There is also evidence that the lower grades are lagging behind. A small survey carried out in December 1999 showed that a civil service extension worker earned US$41 per month after tax, including benefits, while extension workers employed by NGOs were paid about US$120 (Moll 2000). Moreover, preliminary results from the ongoing job grading and salary review of the Civil Service also indicate that civil service salaries are low. Table 4.2 reports incomes (salaries and monetary benefits) for extension workers (grade CO/TA) and for some jobs in the private sector judged to demand similar qualifications. The income of the civil servant is between 25 and 40 percent of the private sector salaries.

Another indication of discrepancies in salaries is the lack of personal in the health sector. By 1999 as many as 50 percent of the employees in Ministry of Health and Population are believed to have left, and vacancies at managerial and technical levels are between 42 and 84 percent. It is mostly doctors, nurses and other clinical staff that have resigned. One of the reasons for the low salaries is the large size of the health sector in terms of employees, making across the board increases costly (Malawi Government and World Bank 2000).

Table 4.2 Comparisons of Monthly Salaries in Public and Private Sector

	MK	US$
Extension Workers (CO/TA)	1 558	45
Private sector equivalents:		
Rank 8 = Supervisor (foreman, primary school teacher)	6 567	188
Rank 9 = Supervisor (assistant foreman, clerical officer, senior typist)	3 912	112

Note: The data are from Table 7b in Moll (2000). The private sector data was collected by the Bryher Partnership 1999 as part of the Job Evaluation and Salary Restructuring Project. The final report is still not official. The exchange rate is US$35/MK.

As mentioned above a job restructuring exercise is under way in Malawi and new employment contracts have been introduced recently. Some institutions, such as the Anti Corruption Bureau (ACB) and Malawi Revenue Authority, now use employment contracts that relate pay to either individual performance or outcomes. A more wide-ranging reform was introduced during 2000 when senior civil servants - Deputy Secretary and above - were given the option to switch to performance-based contracts. The contracts are for three years and pay about 500 percent more than the normal ones. It is believed that the high salaries will attract very qualified people from the private sector.

4.3 Public Sector Reform Initiatives

This sub-section looks at some aspects of the reform process in detail. First it tells the story of the Civil Service Action Plan (CSAP) and then it describes two reforms included in the CSAP, the functional reviews of the ministries and the Medium Term Expenditure Framework (MTEF). The purpose is to give a picture of how far the reform process has advanced and to describe factors determining the outcomes of the reforms. Along the way some of the major institutional features of Malawi's civil service are highlighted.

The CSAP was launched in 1996. It was a comprehensive plan that would serve as guide to Government and donors when reforming the civil service sector. The CSAP document contained details on the reforms to be implemented, a timetable with deadlines, and an allocation of responsibilities for the different reforms: there were close to 40 actions listed and many more key activities. The aim of CSAP was to improve the efficiency and effectiveness of the civil service by measures that would lead to restructuring and retrenchment, improvements in human resource management, better financial resource management, and a culture of change management within the public sector.[10]

Out of the actions listed, Government has carried out a Census of the Civil Service Sector, strategic and functional reviews of Ministries, contracted out functions such as cleaning and security, finished a job evaluation and personnel audit, and retrenched about 20 000 temporary employees (Malawi Government 2000). However, the majority of the reforms have only been partially

[10] In this sub-section all the facts related to the CSAP are taken from Lungu and Mugore (1999) unless other references are made.

implemented or not at all. One example of the former is the reform of the budgeting process through the implementation of the MTEF, which is described below, and an example of the latter is the restructuring of Civil Service salaries, which had not been implemented by the end of 2001.

Although several reforms in CSAP have been implemented, the aim of the program was not achieved, and the whole project went to sleep after a couple of years. There are several reasons for this. First, CSAP was formulated in a hurry under pressure from donors and politicians: the donors wanted to have a reform program to support, and the Government needed the funding connected to it. As a result, the program was designed by a small number of civil servants and there was no time for consultations with the Cabinet, within the Civil Service, or with other stakeholders. One consequence of this was that the members of the Cabinet Committee on Public and Civil Service Reform, which was formed to take on the responsibility as the principal, did not become owners of the program. Second, one was that the civil servants did not feel any ownership because they had not taken part in its formulation. Moreover, the emphasis of CSAP was more on reducing the number of employees and ministries, finding activities that were duplicated, and outsourcing and privatisation, than institution building and general capacitating of the public service. Hence, most civil servants did not feel they had much to gain from the reforms, and subsequently made little or no effort to implement them. Finally, since civil society had not been involved there was no external pressure to get the reforms implemented.

Since there was nobody heading the whole reform process, line ministries tended to act on their own, requesting donor support for projects that seemed relevant to them. The reform process thus became uncoordinated. In combination with the lack of information on its progress, this made it impossible for anyone to grasp how the reforms were developing. Consequently, even if the Cabinet Committee on Public and Civil Service Reform had made an effort to guide and support the reforms, it would not have been able to do so. Over time civil servants who had no interest in seeing it implemented shelved CSAP, and, it was even forgotten by some of the donors involved in its creation.

One of the major components of CASP that actually has been carried out is the program of functional reviews of the ministries. The purpose of the reviews was to address a number of weaknesses in the civil service, revealed by a Public Expenditure Review in 1990 (Msosa, 1998). To appreciate how deep and far-ranging reforms that were expected to result from the reviews, it is useful to list what they were supposed to do,

- Defining mission statements
- Streamlining organizational structures
- Clarifying accountability and responsibilities at all levels,
- Streamlining and redefining procedures
- Determining appropriate staff numbers
- Identifying functions and services to be rendered through contracting out arrangements
- Eliminating overlap and duplication of functions between ministries
- Abolition of superfluous functions

In the beginning the reviews were done more or less according to plan. However, as time passed by they got slower and slower, and instead of finishing in the beginning of 1998, as planned, they were completed in 2001. Limited resources, abrupt removal of consultants, and circulation of personal within the civil service explain why the reviews took much longer than planned.

Initially the reviews appeared to have an impact on the civil service sector. The number of ministries was reduced from 26 to 19 and several functions were identified as appropriate for contracting out. Yet, even though no hard evidence exists on the overall outcome of this phase of the functional review program, there is doubt it had the intended effects.[11] First, the closure of ministries does not appear to have led to a reduction in civil servants since people and functions were moved to other ministries. This happened because of the piecemeal character of the reform process. Second, the contracting out encountered several difficulties. To start with, the contracting out unit was not ready for operation in time. Then there were problems with the capacity in the private sector. One example is hospital laundry services: either they had to be done in each hospital or at a central laundry. However, doing the washing in each hospital was not economical, and no firm had the equipment to transport the laundry across the country. Moreover, since the government's reputation for prompt payment is not very good, many companies were reluctant to put in a tender when invited, and banks were not willing to finance firms who were awarded contracts. Hence, the substantial decrease in the number of civil service employees due to contracting out, as predicted by Msosa (1998), has not yet taken place. Nevertheless, there is an ongoing process of contracting out and some functions, such as cleaning and security, have been taken over by the private sector (Malawi Government 2000).

The lack of a systemic approach to public sector reform also resulted in large inefficiencies. For example, in CASP there was a job evaluation and a restructuring of civil service salaries planned to be ready in 1997, but likely to be completed after 2001. In spite of this, the functional reviews have had to come up with recommendations on issues like accountability and responsibilities at all levels, streamlining and redefining procedures, and the appropriate staff numbers, without considering these exercises. Moreover, the reviews did not take account of the consequences of the decentralization policy included in CSAP: thus the Ministry of Education Science and Technology was reviewed without considering that the responsibility for schools would be transferred to the local governments. Furthermore, one of the objectives of the MTEF was also to review and change the objectives and functions of the ministries, but attempts to merge it with the functional reviews failed because of lack of donor coordination.

After the completion of functional reviews, the Cabinet Committee on Public and Civil Service Reform is supposed to approve their recommendations. This step has also proceeded slowly, partly for political reasons such as the elections in 1999. Nevertheless, all ministries have now been reviewed and the

[11] In conversation with Mr Robert Leverington, Dfid, and Mr Paul Lungo, Change Mangement Advisory Unit, OPC.

recommendations are currently being implemented according to government officials (The Nation 2001, 1 March).

Another key reform in the CSAP was the MTEF. The aim of MTEF was to improve the whole budgeting process of the public sector in Malawi, entailing a shift from incremental budgeting to a clear prioritisation of expenditure over four-year budget cycles. Implementation of the MTEF has been one of the most important entries in the conditionality lists of many of the donors. Moreover, the MTEF is of interest because the difficulties of implementing it have partly been due to the way the civil service currently functions, and partly due to weaknesses in the reform program itself.

Originally two problems motivated the implementation the MTEF. First, there was no link between government policy and planning, and the recurrent budget, which was generally prepared on an incremental basis. Second, budgets were prepared for a single year, and the development and recurrent budgets were completely separate. This resulted in a strong upward bias in the development budget while there were shortfalls in the recurrent expenditures needed to maintain the development projects. Under the MTEF, the recurrent and development budgets would be integrated, and the budget process would change from being an inventory of inputs that were adjusted on an incremental basis, to an approach that focuses on outputs, the costing of priority activities, and three-year projections of available resources (MFEP 2000).

Although everybody did not realize it to start with, the MTEF is a specific way of conducting the budget process and it thus touches on all the components of the public expenditure management cycle: it includes a budget preparation based on policy goals, presentation, implementation, monitoring of actual expenditures, evaluation and auditing, and a review process feeding back into the budget preparation (Malawi Government and World Bank 2000). Proper implementation of the MTEF would therefore address many of the weaknesses in Malawi's public sector.

The first step in preparing a budget is determining priorities. Over all, government does this. However, each ministry has to decide how to spend its resources to achieve the stated policy goals. In the past, and to some extent currently, the existing allocation of resources between functions was not altered between each year's budget: there were across-the-board increments. Hence, although government policy aimed at poverty reduction, allocations to schools, for instance, could continue to be highly skewed and mainly benefit middle and upper classes.

Once the budget is formed, there is the job of implementing it. This is dependent on the system of accountability in the public sector. Before democracy in 1994, civil servants and politicians appear to have been accountable to the president: even though there was not a good system of financial control, by and large resources were used as specified in the budget (MFEP 2000). The accountability originated in a very strict disciplinary regime and the ease by which it could be used. Suspicion of fraud or corruption was often sufficient for sending civil servants to jail for several years. It is important to remember that the

accountability was towards the president, not citizens or parliament, and the president was not accountable to anyone.

During the old regime the spending ministries and departments handled the financial management process, and in general they followed formal rules and implemented the approved budgets. When Malawi entered the process of democratisation in 1994, the President, his Cabinet and the civil servants became accountable to voters and parliament. However, the mechanism that enforced accountability disappeared with the old regime, and it has neither been replaced by a new control and penalty system nor incentives for good performance.

The lack of accountability also affects the use of resources within the Ministries and Departments. For instance, even though a cash-budget system has been in place since 1994 there has been a build-up of arrears. This could occur because private firms are willing to supply goods on credit, hoping to get paid eventually, and many senior officers do not hesitate to break the rules to temporarily increase their resource envelope. Moreover, ministries and departments sometimes simply postpone paying for utilities, and use the money for other things, such as travel.

To illustrate how the lack of accountability and financial control can affect the budget process, the approved and revised estimates for the Ministry of Agriculture and Irrigation for the budget year 1998/9 are reported in Table 4.3. Total expenditure was in line with approved expenditure, but divergence between the allocation of resources in the original budget and the actual use of the money is stunning: administration was supposed get 38 percent of total expenditure but received 78 percent, agricultural extension got 4 percent instead of 23 percent, irrigation got 2 percent instead of 4 percent, and so on. Although divergences are usually not this large, they indicate that fundamental problems remain within the public sector. To this it should be added that little is known how the money was actually spent since Government does not monitor outputs or services systematically (MFEP 2000).

Table 4.3 Approved and Revised Estimates for the Ministry of Agriculture and Irrigation, 1998/9 (in % of total expenditure)

	Approved Expenditure (in %)	Actual Expenditure (in %)
Administration	38	78
Extension	23	4
Irrigation	4	2
Research	11	5
Crop production	4	2
Animal and vet.	15	7
Land	5	2

Source: MFEP (2000) Appendix D.

The reform of the budget process turned out to be much more difficult to carry out than planned. In practice, the MTEF entailed drastic changes in organizational structure, workings of the ministries and behaviour of civil servants. Consequently, a recent evaluation concluded that in 1999, that is, after five years

of reform, the budget process was far away from a well-functioning MTEF (MFEP 2000). There had been a change in the allocation of resources towards prioritised sectors, such as health and education, but this was due to decisions at the Cabinet level and did not result from consideration of costs and benefits of different expenditure programs. Hence, it was still the case that many sector policies remained under-funded, or could not be implemented because of limited capacity. Furthermore, the recurrent and development budgets had not been integrated, there were large and persistent differences between the expenditures in the budget and actual expenditures, only single-year budget were prepared, and there were significant off-budget expenditures.

5. INCOME DISTRIBUTION AND POVERTY

Although Malawi needs high economic growth during many years to obtain enough resources to eradicate poverty, adequate policies can in the meantime have a substantial impact on the standard of living of the poor. To be effective such policies must be based on relevant information about the poor. This section provides the most recent estimates of the income distribution, level of poverty and characteristics of the poor. Moreover, since there have been large structural changes in the Malawi economy during the 1990s, due to market liberalisation and other reforms, an attempt is made to evaluate how income distribution and poverty have evolved over time.

5.1 Income Distribution

Malawi is often claimed to have one of the most unequal income distributions in the world, almost at the level of Brazil, and the highest in Africa (see Bloch and Chilowa 1999; IMF 1999; UNDP 1999). This has not always been the case, however. Table 5.1 reports the Gini-coefficients[12] that are available for Malawi over the period 1969 to 1998. Although most of them should be considered as rough estimates, they indicate that inequality rose continuously during the regime of Banda. At the end of the 1960s the Gini-coefficient was below 0.50, during the 1970s it passed 0.50, and in 1993 it reached 0.62. This increase in inequality can probably be explained by the development strategy used by the government, which emphasised export-led growth in estate farming, while smallholders were restricted to produce for subsistence, the local market, or provide a pool of cheap labour for the estate farms (see World Bank 1997; UNDP 1999).

Table 5.1 Gini-coefficients, 1969 – 1998

Year	1969	1969	1977	1983	1985	1993	1998
Gini-coefficients	0.45	0.47	0.52	0.57	0.60	0.62	0.40

Notes: The Gini-coefficients for all periods except 1998 were taken from the Deininger and Squire (1996) data set. Note that the information is from different studies and Deininger and Squire only consider the coefficient for 1993 as being obtained from a study of acceptable quality. The Gini-coefficient for 1998 is from the 1997-98 Malawi Integrated Household Survey carried out by the National Statistical Office (see NEC 2000a).

[12] The Gini-coefficient measures the deviation from equality in income or expenditure. The values range from zero when there is complete equality to unity when there is maximum of inequality.

Table 5.1 also reports about an astonishing change in the Gini-coefficient in the end of the 1990s; it dropped to 0.40 in 1998. This number comes from the 1997/1998 Integrated Household Survey, which covered a large sample and probably is more reliable than the surveys that produced the other Gini-coefficients (NEC 2000a). Hence, if taken at face value there appears to have been a dramatic improvement in income distribution since the change to a democratic government in 1994. However, one should be careful when comparing measures of equality from surveys using different methodologies. A well-known problem is that it makes a difference whether income data or expenditure data were used. In our case, all Gini-coefficients reported up to 1985 were derived from incomes, but the last two were based on expenditures (see World Bank 1996; Deininger and Squire 1996; NEC 2000a). This means that the fact that expenditure data was used in the 1997/1998 Integrated Household Survey cannot explain the decline in the Gini-coefficient during the 1990s. Moreover, the decline is 22 percentage points, which is so large that one is inclined to believe income disparity actually has decreased. A possible explanation for the improvement is that Gini-coefficients are quite insensitive to changes in the tails of the distribution. Thus it is possible that a compression of incomes in the middle of the distribution created most of the decrease. This could explain why there seems to be little informal evidence that the low value of the Gini-coefficient is due to improved incomes for the poor (see Devereaux 1999; UNDP 1999, and Section 5.2 below).

To put the inequality in Malawi in an international perspective, Table 5.2 reports Gini-coefficients for a sample of representative African countries, and a country known to have an equal income distribution, Sweden. It appears that both the trend towards more inequality that Malawi experienced from the 1960 up to the mid 1990s, as well as its level of inequality at the beginning of the 1990s were atypical; no country seems to have had a deteriorating income equality over the period 1960 – 1995, and only in few cases are the Gini-coefficients above 0.6. Although the data used here are shaky, this provides some support to the belief that the increase in inequality in Malawi was due to policy. The Gini-coefficient of 0.40, obtained in 1998 is low in an African context, although not exceptional; Tanzania has had a similar level of inequality since the end of the 1960s. Yet, when compared to Sweden, which has a Gini-coefficient near 0.30, it is not low.

Table 5.2 Gini-coefficients for Selected Years and Countries

Year	1969-70	1975-6	1977-80	1986-7	1992	1993	1996
Kenya	0.48	0.68	0.59		0.54		
Madagascar			0.49			0.43	
Nigeria	0.60			0.37	0.41		
South Africa	0.53	0.49		0.48		0.62	
Tanzania	0.39		0.44			0.38	
Zambia		0.51				0.51	0.52
Sweden		0.33		0.32	0.32		

Notes: The Gini-coefficients were taken from Deininger and Squire (1996). They are all from studies considered to be of acceptable quality.

NEC (2000a) provides regionally disaggregated cross-section information on Gini-coefficients and consumption patterns, reported in Table 5.3. The data is available for four geographical areas, Southern Region, Central Region, Northern Region, and Urban consisting of Blantyre, Lilongwe, Mzuzu and Zomba. Inequality is clearly higher in the urban areas than in the rural areas; the average Gini-coefficients are 0.52 and 0.37, respectively. There is also a marked difference between the regions, with Northern Region having a better income distribution than Central, and Southern Region having the worst one.

The extent of inequality, both nationally and regionally, is also described by the consumption patterns shown in Table 5.3. The poorest 10 percent consume between 1.7 percent (Urban) and 3.1 percent (Northern) of all goods and services while the richest 10 percent consume between 29 percent (Northern) and 43 percent (Urban). Hence, in spite of the large decline in the Gini-coefficient during the 1990s there are clearly still huge income differences.

Table 5.3 Indices of inequality in total daily consumption

	Gini coefficient	Consumption of the poorest 20%	Consumption of the richest 20%	Consumption of the poorest 10%	Consumption of the richest 10%
Malawi	0.401	6.3	46.8	2.5	31.8
Rural	0.374	6.7	44.3	2.6	29.0
Urban	0.520	4.5	58.4	1.7	42.9
Southern Reg.	0.423	5.9	48.7	2.2	34.0
Central Reg.	0.383	6.6	45.4	2.6	30.3
Northern Reg.	0.362	7.4	44.3	3.1	28.8

Source: Table 7 in NEC (2000a).

5.2 Poverty

This sub-section looks at poverty by asking how widespread it is in Malawi and what the characteristics of the poor are. These are important questions because policies that aim at reducing poverty can only be implemented efficiently if they are based on adequate knowledge. To answer these questions we use data collected in the Integrated Household Survey 1997/1998 and information gathered at various demographic and health surveys in Malawi during the 1990s (see NSO 2000).

One of the difficulties in studying poverty is that there is not an objective definition of it. A common approach is to define poverty as a condition in which the basic needs of a person or a household is not met. However, this is a broad definition that has to be narrowed down to be operational. In the Integrated Household Survey, a set of daily basic food and non-food requirements of individuals in the four geographical areas, reported above, were identified as poverty lines. In this way four baskets of consumer goods, valued in Kwacha, were obtained and households consuming less then their respective basket were considered as poor. In addition, the concept ultra-poor was used for those whose

consumption was 60 percent or less of the poverty line. Table 5.4 reports the poverty lines for Malawi and its regions in Kwacha and US$ per day. The poverty line is about three times higher in Urban than in the rural areas. It is also notable that the poverty lines are considerably less than US$1, the one sometimes used by the World Bank when measuring worldwide poverty.

Table 5.4 Poverty and Ultra-Poverty Lines (July 2000)

	Poverty line (in Kwacha)	Poverty line (in US$)	Ultra-poverty line (in Kwacha)	Ultra-poverty line (in US$)
Malawi	19.47	0.35	-	-
Urban	47.18	0.86	28.31	0.51
Southern reg.	14.42	0.26	8.65	0.16
Central reg.	17.22	0.31	10.33	0.19
Northern reg.	20.74	0.38	12.44	0.23

Source: Table 2 in NEC (2000a) and author's calculations. The exchange rate used was MK55 = US$1.00.

Table 5.5 shows that about 60 percent of the population in Malawi can be considered poor and close to 30 percent are ultra-poor. In numbers of people, this corresponds to 6.3 million and 2.8 million, respectively. The vast majority of the poor lives in the rural areas, particularly in Central and Southern Regions. It is also noteworthy that poverty is more widespread in the rural than in the urban areas, and that Southern Region has the highest degree of poverty; closely followed by Central Region, while those living in Northern Region is clearly better off.

It would be interesting to compare the data in Table 5.5 with information on poverty headcounts from earlier surveys to see whether poverty has increased or decreased. This was actually tried by the National Economic Council but the design of the earlier surveys was so different that it turned out to be impossible to draw any conclusions from the exercise (NEC 2000a). Hence, the Integrated Household Survey does not provide information on how poverty has changed during the 1990s. Nevertheless, Section 5.2.1 below reports some indirect evidence on an increase in poverty.

Another interesting exercise is to sum up the difference between the poverty line and the expenditures of the poor. This gives an estimate of the poverty gap, which is the minimum amount of resources needed to do away with poverty. For 1998 this was US$340 million, equivalent of 20 percent of GDP (NEC 2000a). Hence, if we assume a GDP growth of 3 percent per capita and that all the resources generated by economic growth were transferred to the poor, poverty could be erased in 6 to 7 years. In practice economic growth usually favours those that are already well off, and it is difficult to reallocate a lot of resources to the poor without killing the goose that lays the golden eggs. Nonetheless, it does not seem impossible to eliminate most poverty in, let us say, 15 to 20 years if there is rapid growth in GDP per-capita.

Table 5.5 Poverty Headcount

	Poverty headcount (% of pop.)	Number of poor persons	Ultra Poverty headcount (% of pop.)	Number of ultra poor persons
Malawi	59.6	6 309 000	28,7	2 813 000
Rural	60.6	5 660 000	29,3	2 576 000
Urban	50.8	649 000	23,8	238 000
Southern reg.	61.8	3 103 000	31,8	1 478 000
Central reg.	56.6	2 534 000	25,3	1 033 000
Northern reg.	61.5	672 000	28,4	303 000

Source: Tables 4, 5, and 6 in NEC (2000a).

Some of the characteristics of the poor are described in Tables 5.6 to 5.8. Table 5.6, which lists some demographic variables for households, shows that on average there is 1.5 more persons in a poor household than a non-poor one. This difference is the same in rural and urban areas. Although it is not reported here, these 1.5 persons are mainly below 15 years of age, implying that poor households have more children than the non-poor. One result of this is described by the average dependency ratio, i .e. the number of persons below 15 and above 64 divided by the number of people aged between 15 and 64, reported in the third row of the table. It is 1.05 for poor and 0.65 for non-poor households. There is also an interesting difference in age and family structure between rural and urban poor: the sizes of the families are similar but in urban areas the dependency ratio is much lower.

The fifth row in Table 5.6 shows that there also are differences in the gender composition of families: in the rural areas poor households have on average about 10 percent more females than males, while the non-poor have about the same number of both sexes. In the urban areas the sex distribution is fairly even in poor households while there are about 8 percent more men than women in the non-poor ones. Hence, in this aspect the rural/urban contrast is more important than the poor/non-poor contrast. However, in general one can conclude from the information in Table 5.6 that poverty is more common among children than adults, and among women than men.

Table 5.6 Demographic Characteristics of Households

	Malawi		Rural		Urban	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
Average household size	5.0	3.5	5.0	3.4	4.8	3.5
Average dependency ratio*	1.05	0.65	1.08	0.68	0.81	0.45
Sex ratio (number of males per 100 females)	93.3	100.6	92.7	99.5	100.6	107.6

Notes: The dependency ratio is defined as the sum of persons aged below 15 and over 64 divided by the number of people aged 15 to 64. The source is Table 10 in NEC (2000a)

The characteristics of the head of the household are often closely related to its welfare. In Malawi the share of female-headed households is larger among the poor than in the country as a whole. For instance, females head about 25 percent of all households, while they head close to 29 percent of the poor ones in rural areas. Another way to put it is that two-thirds of the individuals in rural female-headed households are poor. However, as noted in NEC (2000a), it is not correct to describe the typical poor household as headed by females; the vast majority are male-headed.

There is a relation between the level of education of the household head, sex and poverty. As reported in Table 5.7, in ultra-poor households there is less school education than in poor ones, and in the non-poor households the level of education is much higher than in the poor ones. Moreover, there is a very strong male-bias among household heads at all levels of education; often the share of men that achieves a degree is twice as high as the one for women.

Table 5.7 Education attainment of household heads by wealth and sex

	Ultra-poor		Poor		Non-poor		All	
Malawi	Male	Female	Male	Female	Male	Female	Male	Female
Attended school	67.9	41.7	72.4	45.9	84.9	55.5	78.0	49.5
Competed Primary Stnd. IV	40.9	16.7	46.1	19.4	62.4	32.3	53.5	24.3
Completed. Primary Stnd. VIII	5.9	0.4	8.7	1.9	23.9	11.8	15.6	5.6
Completed Secondary (MCSE)	1.8	0.1	3.3	0.8	15.3	8.0	8.7	3.5
Completed university	0.1	0.1	0.3	0.1	3.0	1.4	1.5	0.5

Source: Table 15 in NEC (2000a)

Table 5.8 depicts the heavy reliance on agriculture in Malawi and its close relation to poverty status. Over 70 percent of all households own land where agricultural crops are grown. Since poverty is more widespread in the rural areas, a larger share of poor households has cropland than non-poor. As one would expect, poor households have in general less land than the non-poor; on average the number of hectares per capita is 0.16 for the ultra-poor, 0.19 for the poor and 0.28 for the non-poor. Maize is by far the most common crop. In the rural areas it is cultivated by more than 70 percent of both poor and non-poor households. However, there are big differences in production per capita; the non-poor are able to harvest almost twice as much as the poor and the ultra-poor. This is partly explained by the fact that non-poor have higher yields per hectare, that in turn is due to more widespread use more hybrid maize, which gives a higher return and higher yield per hectare than for local maize. The more widespread usage of hybrid maize among the non-poor is probably due the initial costs of adopting it, as well as the fact that most hybrid maize is marketed while local maize is retained for domestic consumption.

Cassava is usually considered the second most important food crop. It is cultivated by about 8 percent of all households, with a somewhat higher share for the non-poor. Other common food crops are rice (mainly along the Lake Malawi), groundnuts and beans. They follow the same pattern as Cassava, being somewhat more often cultivated by the noon-poor than the poor. As with maize, the major difference is in the yields per hectare that are consistently higher for the non-poor than the poor, with the exception of rice (data not reported).

Comparing cash crop cultivation in general shows that there is not a particularly big difference between ultra-poor, poor and non-poor. Though for tobacco, the major cash crop, there is a clear tendency for non-poor to cultivate it. Yet, the regional differences in tobacco production are much larger than those for wealth groups. In Central region between 30 and 40 percent of all households produce tobacco while only 3 percent do it in Southern region (data not reported). In the Central region there is little difference between households in the incidence of tobacco production, but there is a large variation between non-poor and poor in income earned from tobacco sales. This indicates that there are large differences in access to credit for inputs, auction floors, and knowledge about tobacco farming (NEC 2000a).

Table 5.8 Cropland, and Food, Cash Crop and Livestock Production

	Malawi			Rural		
	Ultra-poor	Poor	Non-poor	Ultra-poor	Poor	Non-poor
Have cropland (%)	81.2	81.8	73.5	87.1	88.0	82.5
Mean ha per capita	0.160	0.185	0.282	0.160	0.185	0.283
All food crops, % who cultivate	70.8	71.8	67.1	75.6	77.2	74.9
Maize, % who cultivate	66.8	67.4	64.0	71.3	72.4	71.4
Mean per capita production (kg)	48.5	63.3	115.8	50.8	66.9	128.2
Hybrid maize						
Percent who cultivate	25.1	28.8	34.7	26.3	30.3	37.9
Mean yield (kg/ha).	670	740	890	670	740	890
Local maize						
Percent who cultivate	46.8	45.3	38.7	50.2	49.1	44.2
Mean yield (kg/ha)	490	490	620	490	490	620
Percent who cultivate						
Cassava	5.6	7.5	8.7	6.0	8.0	9.9
Rice	3.5	4.7	5.1	3.7	5.1	5.8
Groundnut	23.6	25.8	24.3	25.5	28.0	27.7
Beans	6.7	8.3	8.8	7.1	8.8	9.9
Any cash crop	22.1	23.9	26.2	23.9	26.1	30.0
Tobacco	13.6	15.2	18.9	14.7	16.6	21.6
Households with livestock income (%)	24.5	24.0	23.5	26.5	26.1	26.8

Source: Table 26, 27 and 28 in NEC (2000)

In Malawi, livestock does not play an important role in agriculture, and in general there is not much variation in the ownership of livestock across wealth groups. In fact, about 25 percent of both ultra-poor and non-poor have livestock. There are some regional variations, however, with the share being one-third in the Central region and 18 percent in the Southern region. The most common livestock is poultry, followed by goats and pigs; very few households own cattle.

5.2.1 Indicators of Welfare and Poverty

Preliminary results from a demographic and health survey covering the whole of Malawi (MDHS) was recently published by the National Statistical Office (NSO 2000). In contrast with the Integrated Household Survey, the MDHS of 2000 is the third survey of its kind; the other two were carried out in 1992 and 1996. This makes it possible to trace changes that have occurred during the 1990s. We can draw some conclusions about trends in poverty, broadly defined, and welfare, though only a limited amount of preliminary results from MDHS 2000 has been made public so far.

Since a larger family often means poorer members, controlling fertility through family planning can be a tool in reducing poverty. In Malawi, fertility has declined since the beginning of the 1990s: the total fertility rate was 6.3 children per women in 2000, compared to 6.7 in 1992. This decline was caused entirely by a reduction in fertility among women aged 30 years and older, indicating that decisions to prevent the family from getting too big are important. The drop in total fertility is also shown in the age-pattern of the mean number of children that women have on average. For those between 45 and 49 years, the mean is 7.0, which is clearly higher than the total fertility rate. One reason for the drop in fertility is increased use of family planning. In 2000 as many as 45 percent of all married women had used some method of contraception, and 26 percent were currently using at least one method; injections being the most common one. In 1992 only 7 percent of the married women used modern contraceptives. In relation to this, there has been a change in the attitude towards having children. The percentage of women, between 15 and 49, that do not whish to have another child has risen from 23 percent to 38 percent during the 1990s.

Reducing child mortality should be high on the political agenda in Malawi. This is evident from Table 5.9, which reports different childhood mortality rates. In the table, death probability rates are reported for five-year periods preceding the surveys such that the second row refers to the period 1996 – 2000, and so on. Table 5.9 thus provides estimates of trends in child mortality for the last 15 years. Currently, out all babies born, 4 percent die within one month (Neonatal mortality), 10 percent within a year (Infant mortality), almost one in ten die between the first and the fifth birthday (Child mortality) and about 19 percent before they turn five (Under-five mortality). These rates imply that most women can expect to loose one or two children before they start school. This is high by any standards, even in a Sub-Saharan context.

There is an unambiguous decline in all death rates over the last 15 years. During that latter half of the 1980s, close to one child out of four died before the age of

five, now this is down to less than one out of five. Since both AIDS and Malaria related deaths have increased significantly over this period, there must have been a considerable improvement in other factors affecting death rates. In an attempt to discover these trends, several variables that influence child mortality and morbidity were evaluated. Among those describing health services during pregnancy, delivery and early childhood, none seems to have improved much: the coverage of tetanus toxic injections, which is given to pregnant women to prevent neonatal tetanus, has declined from 86 to 82 percent; the proportion of women receiving antenatal care from a trained professional is about the same as in the 1992 survey, that is 56 percent; the percentage of the children between 12 - 23 months that was fully vaccinated dropped from 82 to 70 percent (see NSO 2000).

Table 5.9 Early Childhood Mortality Rates (per 1000)

Years preceding the survey	Neonatal mortality	Infant mortality	Child mortality	Under-five mortality
0 – 4	41.8	103.8	94.6	188.6
5 – 9	50.4	122.7	110.5	219.7
10 – 14	51.9	135.5	129.4	247.4

Notes: The death probability rates are reported for five-year periods preceding the surveys such that the second row refers to the period 1996 –2000, and so on. Neonatal mortality refers to death in the first month; infant mortality to death in the first year; child mortality to death between the first and fifth birthdays; and under-five mortality to death before the fifth birthday. The source is Table 9 in NSO (2000)

Another factor that influences mortality rates is the nutritional status of the children. In addition to this, it is an indirect indicator of changes in poverty. Table 5.10 shows two variables related to nutritional status, stunting (height for age) and wasting (weight for height), for children under five. A child that suffers from stunting is likely to be too short for his age because of chronic malnutrition and if he or she is wasted it is a sign of an acute nutritional deficit. The table reports the proportions of the children that are between two and three standard deviations, and below three standard deviations, from the mean of a reference child population data recommended by the WHO.

Table 5.10 shows that chronic malnutrition is a big problem in Malawi; almost half of the children are malnourished, that is, 49 percent are too short for their age, and 24 percent are severely malnourished. Stunting seems to be much more common in rural areas, where a child is twice as likely to be too short than in urban areas. It is also closely related to mother's education, as shown in the table. For mothers without any formal schooling close to 30 percent of the children are severely stunted while only 8 percent of those whose mother has attended secondary school are stunted. Wasting, on the other hand, was not such serious problem at the time of the survey, only 5.5 percent weighted to little for their height. This indicates that in general there was not an acute shortage of food.

The data in Table 5.10 are from the MDHS 2000 but they are approximately the same as those obtained in the 1992 survey. Hence, there has been no improvement in the nutritional status of the children during the 1990s. One can thus conclude

that changes in food intake cannot explain the decrease in child mortality. Moreover, it is unlikely that poverty has decreased.

Table 5.10 Nutritional Status for Children Under Five Years (in percent)

	Stunting		Wasting	
Area	-3 SD	-2SD	-3SD	-2SD
Urban	13.5	34.2	0.9	4.9
Rural	26.1	51.2	1.3	5.6
Malawi	24.4	49.0	1.2	5.5
Mother's Education				
None	28.5	54.1	1.2	6.6
Primary 1-4	26.8	51.9	1.4	5.2
Primary 5-8	21.1	45.4	1.1	4.7
Secondary +	8.3	27.0	1.1	5.6

Note: Stunting is height for age and wasting is weight for height. SD stands for standard deviation away from the mean the reference population. Children between 2SD and 3SD below mean are considered malnourished and those below 3SD are severely malnourished. The source is Table 10 in NSO (2000).

One positive development of the 1990s is improvements in the percentages of women and men that receive formal education and obtain grades. While as many as 47 percent of all women and 21 percent of all men had never attended school in the beginning of the 1990s, the proportions had declined to 27 and 10 percent by 2000, as reported in Table 5.11. Similar gains in proportions were also achieved in obtaining grades. Evidence of a dramatic increase in school attendance can be deduced from the results of the Integrated Household Survey as well: among those over 24 years of age as many as 48.2 percent of the women and 32.8 percent of the men had never gone to school at the end of the 1990s. The introduction of free primary education in 1994 is probably the main reason for the rise in educational level of the Malawians.

Table 5.11 Education and Gender

Education	Women (%)	Men (%)
No education	27.0	10.4
Primary 1- 4	30.4	29.0
Primary 5 – 8	31.4	40.2
Secondary and higher	11.1	20.4
Total	100	100

Note: The data shows the percent distribution of women aged 15 to 49, and men aged 15 to 54. The source is Table 2 in NSO (2000).

There is a notable difference between women and men in school attendance, and the differences get bigger the higher the level of education: at secondary school there are twice as many boys than girls. Nevertheless, some promising signs can be detected. As Table 5.11 reports, the proportions of girls and boys going to primary school, grades, 1 - 4, are roughly the same, but this was not the case in

1990 (see World Bank 1996, Fig. 2.2). This change could be due to slowly changing attitudes, supported by free primary education, and might lead to reduced gender differences in the future.

6. SUMMARY AND CONCLUDING REMARKS

As one of the poorest countries in the world, Malawi has a long way to go before it can provide an acceptable standard of living for the majority of its citizens. On the other hand, because of widespread poverty the marginal benefits of higher incomes are large. High economic growth and improved income distribution can thus in short time have a strong impact on the welfare of the average Malawian.

The growth performance of Malawi since Independence has not been particularly good. In the year 2000 income per capita was only about 60 percent higher than in 1964, and it was 5 percent less than in 1979. This is a reflection of the fact that during the first 15 years of Independence there was almost continues growth, then there was economic decline during the following 15 years, and somewhat of a revitalisation of the economy after 1995.

One explanation for Malawi's growth pattern is variations in investments. During the high-growth years in the 1960s and 1970s, there was rapid capital formation resulting in a five-times increase in the capital labour ratio, while the investment rate was low and the capital – labour ratio declined during the 1980s and the 1990s. There are several causes behind the changes in Malawi's investment rate, but they are difficult to pinpoint with accuracy. Nevertheless, there is a clear relation between terms of trade and capital formation in Malawi. Lower export prices means lower profitability and higher import prices affect the price of capital goods, which are mainly imported. Moreover, public investments, which make up a large share of total investments, were reduced as the need for fiscal restraint increased. Also, Malawi has been hit by many negative external shocks that have lowered output directly, and affected the willingness to invest, at least in the short run to medium run. Finally, financial liberalisation seems to have limited investment during the latter half of the 1990s: Banks appear to have become more cautious in extending credit while real lending rates and the spread between lending and deposits rates, have risen substantially. One reason for the slow growth in credit to the private sector is a lack of competition among banks in the financial sector. However, macroeconomic instability and insecurity in connection with the general increase in lawlessness since 1995 probably also contributed to the decline in the amount of credit extended.

Foreign aid is, among other things, supposed to reduce or remove excess demand for credit, thereby enhancing investments. During the 1970 and 1980s a significant share of the inflow of aid seems to have gone to investments, but during the 1990s most of it went to consumption, particularly public consumption. A possible explanation for the link to consumption could be that high inflows of aid seems to reduce the urgency of policy reforms by relaxing budget constraints, while cuts in aid speed up the reform process.

In December 2000 Malawi entered the enhanced HIPC (Heavily Indebted Poor Countries) Initiative and over the next twenty years it will receive debt service

relief of about US$1 000 million in current value, and US$643 million in net present value terms. Debt forgiveness can have a similar impact on investments as aid because it reduces current and future interest rate payments. Moreover, it could raise the willingness to invest since firms expect to pay less in tax in the future than what otherwise would have been the case. Hence, one outcome of HIPC could be that capital accumulation increases during the next five to ten years.

The labour force also plays an important role in economic growth. In Malawi, it expanded from 2 million in 1965 to 5 million in 1998. During the same period Malawi's population grew from 4 million to 10.6 million. This rapid population growth is due to a combination of declining death rates and continued high birth rates. However, apart from increasing the labour force, the population dynamics has resulted in the number of children growing faster than the number of adults. This has led to an increase in the dependency ratio, defined as the population under age 15 and over 64 in relation to the working age population: it rose from 0.93 in 1965 to 0.99 in 1990, indicating that there was almost one dependent for every person at working age. Such a development most certainly affected per-capita income growth negatively. Nevertheless, since 1990 the dependency ratio has declined steadily (to 0.95 in 1998), indicating that Malawi is entering a stage where birth rates decrease. This process is expected to slow down, however, and recent projections indicate a minimal decline in the ratio over the next 20 years, while total population is expected to increase to 20 million. Hence, policymakers should make an effort to reduce population growth since this would contribute to increasing income per capita as the large cohorts of children grow up and enhance the relative size of the labour force. It is noteworthy that some countries have dependency ratios that are less than 0.5.

In Malawi the number of people infected with HIV or AIDS is estimated to about 800 000 out of 10.6 million, and out of the adult population (15 to 49 years) roughly 16 percent are HIV positive or have AIDS. One consequence is that Malawi, as mentioned above, is unlikely to experience a further decline in the dependency ratio during the next decade or two. The reason is that mortality due to AIDS is much higher among adults than children. Another consequence is reduced growth rates in the supply of skilled and unskilled workers. If the impact of HIV/AIDS was distributed evenly through the population, or hit those that are out of the labour force disproportionately, then the result could be a rise in income per capita for those who survive. However, HIV/AIDS mainly affects adults, and skilled workers seem to be at least as likely to get infected as unskilled workers. Yet another effect of HIV/AIDS is that remaining workers are likely to be less productive. There are several reasons for this, such as absenteeism, bad health, disease in the family, or because they have to attend funerals. In addition, saving will decrease, which can affect capital accumulation negatively.

The ultimate impact of HIV/AIDS on income per capita is hard to predict. Predictions of future population growths vary considerably, and the behaviour of people is not remaining unchanged. It is also noteworthy that total factor productivity peaked during a period when HIV and AIDS were widespread, that is, in the end of the 1990s. Finally, one of the worst hit countries, Uganda, had impressive growth rates during the 1990s in the midst of the pandemic.

Human capital, that is the knowledge of the workers, is a scarce resource in Malawi. When measured as educational attainments, it grew from 1.7 to 2.6 average years of schooling for those aged 25 and over between 1960 and 2000, indicating an increase in the stock of human capital. However, in comparison with most other countries this is not much. In advanced countries average years of schooling rose from 7 in 1960 to close to 10 in 2000, in the developing countries they grew from 1.8 to 4.9 years, and in Sub-Saharan Africa they went from 1.4 to 3.8 years. Malawi thus appears to be lagging behind most other countries. Nevertheless, there was a trend-break after the change of government in 1994 due to abolishment of fees for primary schools and a shift of public resources to the educational sector: the average years of formal education has since then risen by half a year and the percentage with no schooling has dropped by 10 percentage points. Hence, Malawi is on the right track, although the rapid expansion has led quality problems due to lack of qualified teacher, schoolbooks, etc.

Total factor productivity (TFP) growth, measured as the ratio between the change in output (GDP) to the change in a weighted average of inputs, does not seem to have mattered much for economic growth in Malawi: there is no trend in productivity over the period 1965 – 1998. Since differences in TFP growth is considered to be the most important reason for why some countries are rich and others are poor, this is a major explanation for the current state of the Malawian economy. Fortunately, it looks as if there has been a structural change sometime after 1995 because the high growth rates in late 1990s resulted from high productivity growth, while the investment rate was lower than ever before (about 10 percent of GDP). Thus there is some hope that the reforms implemented by the democratic government have set off a process of increasing productivity. Nevertheless, investments are needed for continued high growth and for improvements in productivity, and in that respect the recent developments are not promising.

A multitude of factors are known to influence the evolution of TFP in a country, making it is hard to determine their relative importance. One factor that can have a large effect is structural change in production. Since productivity growth historically has been higher in manufacturing than agriculture, shifts away from agriculture can cause TFP to grow. In Malawi the share of agriculture in GDP is more or less the same today as at Independence, and that could explain the lack of TFP growth in the long run. Nevertheless, the recent increases in TFP took place while there was a significant shift from industry to agriculture, suggesting an import role for structural adjustment, which includes decontrol of the agricultural sector and trade liberalisation. Another factor that influences TFP is the degree of macroeconomic stability. Most macroeconomic variables, such as prices, money supply and the exchange rate have been very volatile, particularly during the 1990s. External shocks can explain some of this volatility but failure to balance these shocks and inadequate macroeconomic management are behind most of it. During recent years the most fundamental factor appears to be government's inability to control fiscal expenditures. Other factors that affect TFP are transport costs, which are very high in Malawi and in the region, and environmental problems, which are threatening productivity in agriculture and fishing.

The public sector influences investments, TFP growth and labour supply in a number of ways. It is thus not surprising that the Malawi authorities have implemented several reforms that aim at increasing public sector efficiency. Nevertheless, there are no obvious signs that it has become significantly more efficient in general. One problem that has not been solved is the lack of accountability: a key factor in a well functioning organisation. Accountability is a multifaceted concept that is hard to quantify but it is nevertheless believed to be one of the main problems within the public service. This is due to a number of factors: basic salaries are low both in real terms and relative to those in the private; there has been an almost progressive compression of the salary structure since the 1980s; the level of transparency, and the quality of monitoring and evaluation of expenditures made, outputs achieved, and compliance with rules and regulations, are low. Moreover, there is no adequate system for dealing with those who break the rules. Before democracy in 1994, the accountability originated in a very strict disciplinary regime and the ease by which it could be used: suspicion was often enough to send civil servants to jail. However, this mechanism disappeared with the old regime, and it has not been replaced by a new control and penalty system yet. Another related problem that the reforms have not been able to solve is the government's budgeting process. In spite of five years of work to introduce a Medium Term Expenditure Framework there are still discrepancies between policy goals and decisions, formulation of the budget, and its implementation.

In spite of all these problems, it would be going too far to claim that there have not been any improvements at all in the public sector since 1994. A number of changes have taken place including the creation of organisations such as, the Ombudsman, Human Rights Commission, an independent Justice, and the Anti-Corruption Bureau. Moreover, there has been a Census of Civil Service, removal of ghost workers, strategic and functional reviews of all Ministries, contracting out of various functions, such as cleaning and security, privatisation of state-owned firms, and more. In addition, several reforms are advancing and new ones are in the pipeline, and these are likely to bear fruit in the near future. Furthermore, government recently set up a Government /Donor Working Group on Public Sector Management Reform and formed a new unit, the Change Management Advisory Team. These are important steps in bringing the process of public sector reform forward without committing the mistakes of the past again.

Malawi needs high economic growth for an extended period of time to eradicate poverty. Nevertheless, good policies that improve the income distribution can in the meantime have a substantial impact on the welfare the poor. Until recently Malawi had one of the most unequal income distributions in the world. This was due to the development strategy used during the Banda regime: it emphasised export-led growth in estate farming, while smallholders were restricted to produce for subsistence, the local market, or provide a pool of cheap labour for the estate farms. The result was an increase in the Gini-coefficient from about 0.45 at the end of the 1960s to 0.62 in 1993.

According to results from the most recent survey, the 1997/1998 Integrated Household Survey, the Gini-coefficient had dropped to 0.40 in 1998. Taken at face value, there appears to have been a dramatic improvement in income distribution since the change to a democratic government in 1994. There reason

for this improvement is not clear and there seems to be little informal evidence that the decline is due to improved incomes for the poor. It should be noted though that Gini-coefficients are quite insensitive to changes in the tails of the distribution. Thus it is possible that a compression of incomes in the middle of the distribution created the improvement.

Unfortunately there is no hard evidence on how poverty has changed over time since the data in the 1997/1998 Integrated Household Survey do not allow for a comparison with earlier surveys. Nevertheless, currently poverty is widespread in Malawi: about 60 percent of the population can be considered poor and close to 30 percent are classified ultra-poor. In numbers of people, this corresponds to 6.3 million and 2.8 million, respectively. The vast majority of the poor lives in the rural areas, particularly in Central and Southern Regions.

The estimate of the poverty gap, that is the minimum amount of resources needed to do away with poverty, was US$340 million in 1998, equivalent of 20 percent of GDP. Assuming a scenario of 3 percent yearly per capita GDP growth and a transfer all the resources generated by economic growth to the poor, poverty could be erased in 6 to 7 years. In reality economic growth favours those that are already well off, and it is difficult to reallocate a lot of resources to the poor. However, it does not seem impossible to reduce poverty to a low level in 15 to 20 years if there is rapid growth and adequate policies are implemented to redistribute incomes and control population growth.

A characteristic of the poor household is that on average it has 1.5 more persons more than a non-poor household, and these 1.5 persons are mainly below 15 years of age. A consequence of this is that the dependency ratio is 1.05 for poor households and 0.65 for non-poor households. Another characteristic is that given the head of the household is a woman. In this case there is a larger probability it is poor than when the head of the household is a man. Another way to put it is that two-thirds of the individuals in rural female-headed households are poor. However, in spite of this the vast majority of the poor households are male-headed. Yet another characteristic is that poor households have less land than the non-poor; on average the number of hectares per capita is 0.16 for the ultra-poor, 0.19 for the poor and 0.28 for the non-poor. Moreover, there are big differences in production per capita: the non-poor are able to harvest almost twice as much as the poor and the ultra-poor.

Since a larger family often means poorer members, controlling fertility can be a tool in reducing poverty. A recent demographic survey shows that fertility has declined during the 1990s: total fertility rate was 6.3 children per women in 2000, compared to 6.7 in 1992. This decline was caused entirely by a reduction in fertility among women aged 30 and older, indicating that decisions to prevent the family from getting too big are important. One reason for the decline in fertility is increased use of family planning. In 2000 as many as 45 percent of all married women had used some method of contraception, and 26 percent were currently using at least one method; injections being the most common one. In 1992 only 7 percent of married women used modern contraceptives.

Child mortality is an indicator of the level of poverty in a country. In Malawi, out all babies born about 19 percent die before they turn five. Hence, most women can expect to loose one or two children before they reach school age. This is high by any standards, even in a Sub-Saharan context. Nevertheless, estimates of trends in child mortality over the last 15 years show an unambiguous decline. In the 1980s, close to one child out of four died before the age of five, now this is down to less than one out of five. Since both AIDS and Malaria related deaths are likely to have increased significantly over this period, there must have been a considerable improvement in other factors affecting death rates. Yet, none of the variables measured in the surveys indicate better health services during pregnancy, delivery and early childhood. Moreover, there is no evidence of improved nutritional status of the children during the 1990s.

One positive development of the 1990s is improvements in the percentages of women and men that receive formal education and obtain grades. While as many as 47 percent of all women and 21 percent of all men had never attended school in the beginning of the 1990s, the proportions had declined to 27 and 10 percent by 2000. This could be one reason for the drop in child mortality. There is still a big difference between women and men in school attendance, however, and the difference gets bigger the higher the level of education: at secondary school there are twice as many boys than girls. Nevertheless, some promising signs can be detected, the proportions of girls and boys going to primary school are roughly the same, but this was not the case in 1990.

There is no simple solution to the problem of poverty in Malawi. First, there has to be high growth over a decade or two. This can only be achieved if there strong political support for maintaining and implementing growth enhancing policies. Moreover, there is a need for reforms that can stimulate capital accumulation and productivity growth. One example of such a reform is the new national land policy: land redistribution and well-defined property rights might lead to larger and more efficient farms in the smallholder sector that generate surpluses which could be invested. Second, there has to be income redistribution. This is primarily related to government policies and the functioning of the public sector. Hence, although Malawi faces a lot of difficulties, such as declining prices of its major export good, tobacco, the future is to a large extent dependent on the President, his Cabinet and the opposition parties. With good policies in combination with support from the international community, Malawi can make significant advances in reducing poverty during the next decade.

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