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AGRICULTURE AND THE POLICY ENVIRONMENT: ZAMBIA AND ZIMBABWE

Political Dreams and Policy Nightmares

by

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RÉSUMÉ

Cette étude examine les effets des différentes politiques mises en oeuvre après l'indépendance ainsi que les performances de l'agriculture et de l'ensemble de l'économie en Zambie et au Zimbabwe. Elle souligne l'interaction entre les réformes macro-économiques et agricoles ainsi que la nécessité d'une coordination étroite entre macro et micro réformes car ces dernières ont une grande importance pour les résultats sectoriels. L'étude identifie plusieurs types de réformes et envisage leur rythme d'application sur le plan national et agricole. Une telle politique de réforme permettrait d'améliorer considérablement les rendements des secteurs agricoles en Zambie et au Zimbabwe en renforçant la sécurité alimentaire, l'emploi et la croissance économique.

SUMMARY

The paper examines the effect of differing policies in the post-independence period on the agricultural and overall economic performance of Zambia and Zimbabwe. It focuses on the interaction between macroeconomic and agricultural policy reforms. It shows that macro and micro reforms need to be closely linked and that both are critical to sectoral performance. The paper identifies a number of reform options and examines their sequencing at the national and agricultural level. Such reform will greatly improve the performance of the Zambian and Zimbabwean agricultural sectors, enhancing food security, employment and economic growth.

PREFACE

In developing countries, structural adjustment and trade liberalisation are matters of immediate and deep concern. Research carried out within the OECD Development Centre's programme on Developing Country Agriculture and International Economic Trends aims to provide fresh perspectives which may facilitate the reform process.

The Centre's research on agriculture incorporates several components: a conceptual component to provide analytical guidance for the broader issues; a global general equilibrium model to analyse the overall trends and policy consequences; country case studies to look at the reform options and their implications for individual representative countries; and a component to analyse the links between economic reform and technological change in agriculture. This paper is an element in the third component: it provides analytical insights into the interactions between macroeconomic and trade policies and agricultural development in Zambia and Zimbabwe.

The comparative analysis of Zambia and Zimbabwe is one of three such paired studies undertaken for the Development Centre in sub-Saharan Africa. This study, together with one of Tanzania and Kenya and another of Ghana and Cote d'Ivoire, aims to provide fresh insights into the relationship between agriculture and the policy environment by examining the implications of diverging policies on countries which broadly share a common agro-climatic and regional legacy. The studies focus on the implications of different policy options, focusing on the interaction of macro and micro reforms, and the implications for economic growth, incomes and agricultural production.

This study highlights the usefulness of the comparative approach to the understanding of the implications of policies adopted by the southern African neighbours. Despite significant differences, Zambia and Zimbabwe faced broadly similar economic obstacles at the time of independence. The subsequent divergence in their economic performance, and, not least that of the agricultural sector, is traced to different policy environments and the links between macro and micro reforms.

Analysis of agricultural sector policies have until recently excluded, or at best marginalised, the broader macro-policy environment. This has resulted in a failure to recognise the economy-wide significance of these policies and their effect on the agricultural sector, which in Africa remains the primary source of employment and incomes. This study, by focusing on the interactions between the macro-policy environment and agricultural sector policies, highlights the significance of the two-way linkages. It shows that agricultural development in Zambia and Zimbabwe has been frustrated by failures in the broader policy environment and, similarly, the macroeconomic and policy environment has been undermined by a failure in agriculture-specific policies. It concludes with recommendations that are designed to enhance the complementarity of economy-wide and sectoral policies.

The study is to be recommended not only for its originality and academic excellence, but also for its sustained focus on issues of direct policy concern. We trust that it will prove of direct relevance and add depth to the ongoing reform process in sub-Saharan Africa.

Louis Emmerij
President of the OECD Development Centre
July 1992

I. INTRODUCTION

Zambia and Zimbabwe are neighbouring southern African countries with a similar colonial history (being respectively Northern Rhodesia and Southern Rhodesia). At independence they inherited economies which reflected many of the characteristics of ex-colonial regimes: inadequate or highly unbalanced physical infrastructure, poorly developed health and educational facilities, and a very skewed distribution of income. But there are also significant differences: Zambia obtained independence in 1964, but Zimbabwe did not obtain independence until 1980 — nearly two decades later. Secondly, partly as a consequence of policies pursued by Zimbabwe during the UDI (Unilateral Declaration of Independence)[1] period, the Zimbabwe economy at independence had a more developed manufacturing and commercial agricultural sector and was more highly regulated.

This report focuses on the impact of sectoral and macroeconomic policies on the agricultural sectors of the two countries, which in terms of structure and policies are quite similar. In both countries agriculture accounts for only 13-18 per cent of GDP, but employs over 70 per cent of the labour force. Maize is the principal food crop and tobacco the major export crop, but agricultural exports are much more important in Zimbabwe than in Zambia. In Zambia tobacco and cotton lint are the principal agricultural exports and account for less than 1 per cent of total merchandise exports. Copper remains the principal export and accounts for about 85 per cent of the total. Zimbabwe, by contrast, exports in most years maize, tea, coffee, sugar, cotton and tobacco. On average these exports account for nearly 40 per cent of total merchandise exports, with tobacco accounting for roughly half of the contribution of agriculture.

Zambia, unlike Zimbabwe, still has available considerable unutilised arable land; only about 2.5 million hectares of the potential arable land of some 42 million hectares is currently being used.

In both countries the agricultural structure inherited at independence was highly dualistic. Settler farmers dominated most marketed crops and there was little development of small-scale production for the market. This structure, along with the controlled policy environment in place at independence, has played a crucial role in moulding post-independence agricultural sector policies.

The economic performance of both Zambia and Zimbabwe has deteriorated in the post-independence period, although both had a period of relatively strong growth in the first few years of independence. It was recognised (perhaps belatedly in both cases) that inappropriate policies contributed to the poor performance and as a result, both countries have undertaken comprehensive policy reforms. In the case of Zambia, a concerted and serious macroeconomic reform process began in 1983 and by 1990 had gone through three separate stages. With the change in government in 1991 yet a fourth stage has begun. The reform process is now complicated by Zambia's

enormous debt burden. Its foreign debt in 1990 stood at more than US $7 billion, or $850 per capita and its arrears to the IMF, the World Bank and other donors amounted to $2 billion. By contrast, Zimbabwe's long-term external debt in 1990 totalled $2.6 billion.

Zimbabwe's reform experience is much briefer, beginning essentially with the Economic Structural Adjustment Programme launched in late 1990. It is less severely constrained by either external debt or domestic financial imbalances.

This report focuses on the relationship between agricultural performance and macroeconomic and sectoral policies, and in particular, on the effectiveness of policy reforms. It compares and contrasts both the motivations for reform and the elements of the reform packages. It also explores the thesis that the colonial heritage contributed to political "dreams" at independence which in turn contributed to policy nightmares which in turn led to attempts at policy reform. The first section briefly reviews the structure, policies and performance of the two economies, and in particular, of the agricultural sectors. Next, the impact of these policies on agriculture is analysed. This is followed by an assessment of the motivation and experience of policy reforms to date and the likely impact of current reform efforts on the agricultural sector.

II. SOCIAL, POLITICAL AND ECONOMIC ENVIRONMENT

Neither Zambia nor Zimbabwe's economic performance has been very satisfactory, although there have been notable achievements in each country in terms of the provision of basic social services. Table 1 provides basic social (upper half) and economic (lower half) indicators for each country. The contrast between the social and economic performance is striking. Decreases in infant mortality, and increases in education and access to physicians between 1965, 1980 and 1989 are most impressive. In Zambia, whereas at independence only 53 per cent of children were receiving primary education, by 1989 this had increased to 97 per cent. There have been, however, substantial declines in the quality of education, particularly in recent years. For Zimbabwe, the increase in access to secondary education increased from 8 per cent at independence in 1980 to 51 per cent in 1990.

These achievements resulted from sizeable increases in government expenditure on both consumption and investment immediately after independence. The increased expenditure on health and education was certainly justified on political and social grounds, given the inadequate provision of social services to the majority of the population during the colonial period. But this, along with growing consumer food subsidies (e.g. maize meal) and ill-advised government investment in manufacturing and mining, came at a substantial cost in economic growth. Investment and GDP declined throughout the post-independence period in both countries, and in the case of Zambia, the decline in GDP per capita was severe. In 1980 both countries had GDP per capita of around $700. By 1990 this had declined by more than one-third in the case of Zambia, falling to $450, and fell by 7 per cent in Zimbabwe to $660. Public and publicly-guaranteed debt has skyrocketed since 1970 in both countries: it increased by nearly 7 times in Zambia, and 11 times in Zimbabwe, between 1970 and 1989.

The tradeoff between equity and socio-political goals on the one hand, and economic growth and financial viability on the other, only peripherally entered into political debates — either because it was not understood or because recognition of this hard reality did not fit in with the post-independence political dream that "we can have it all". As we shall see, dreams persist, and even in the policy reform period, there is little support for the position that economic growth may be the best social programme and that government spending should be tilted toward investment in the future rather than provision of goods and services now.

III. EQUITY AND GROWTH TRADEOFFS WITHIN AGRICULTURE

This section briefly summarises the policy environment and performance of the agricultural sectors in each country. In so doing it also focuses on the equity and growth tradeoffs which mirror on a micro scale the same tradeoffs that exist on the national scale.

Zambia

At independence, the government's equity goal under its Humanist philosophy clearly required it to increase African participation in market-oriented agriculture and make such opportunities available throughout the country. At the same time, there was a concern with increasing food production to ensure self-sufficiency for a rapidly growing population. This concern was largely politically motivated: to maintain the provision of cheap food for the growing, politically powerful urban population and to decrease past dependence upon non-Zambian farmers and imports from the White-ruled south [Kean and Wood, 1992].

The resulting policies led to increased state intervention and budgetary requirements. Measures introduced included expansion of the agricultural extension service and the network of crop-marketing depots to cover the whole country, the introduction of uniform crop prices, and provision of tractor ploughing services, credit and fertilizer. Most of these services were provided at highly subsidised rates.

From 1964 to 1982 the government tried to achieve its food production goal by encouraging a variety of production forms. These included socialist forms such as co-operatives, state farms, and parastatal enterprises, all of which were strongly supported by the more ideologically motivated members of the party and government. At the same time, capitalist forms of production, such as large-scale commercial farmers and individual small-scale producers with customary tenure or in settlement schemes, were supported primarily by producer and input price policies and through services provided by various government departments and parastatal companies. These individual farmers continue to play a dominant role in agriculture.

While most policies sought to increase crop production *per se*, many of the measures introduced were specifically targeted to encourage the progression of subsistence farmers towards market-oriented production and to spread market agriculture into areas where subsistence farming dominated before independence. In 1964 the Agricultural Rural Marketing Board began expanding the network of agricultural depots outside Central, Eastern, and Southern provinces, establishing depots in "non-viable" areas, i.e. where the value of agricultural produce was insufficient to cover marketing costs without unduly depressing producer prices [Ocran 1971, quoted in Dodge 1977, p. 82]. These depots were later taken over by the National Agricultural Marketing Board (NAMBOARD), which was originally responsible for running depots only in the more accessible and market-oriented parts of the country. Specific, largely donor-financed projects were also set up in a number of rural areas to help farmers commercialise their agriculture. A high priority was moreover placed on broadening access to credit and mechanisation.

Pricing policy was also amended to enhance social and equity objectives with the introduction of uniform pricing in the 1974-75 crop season. This ensured that farmers received the same price for their produce whatever their location relative to the market, and required the state to meet the transport costs to market which, in the case of non-line-of-rail, surplus-producing provinces, had previously been passed on to the farmers [Dodge, 1977].

Fertilizer subsidies, which increased considerably in the 1960s and early 1970s, while primarily encouraging maize production, also had equity implications by reducing the disadvantages of maize farmers in some remote locations as well as high rainfall areas where particularly heavy fertilizer inputs are needed because of the soil acidity [Wood, 1990].

These measures were partially successful in meeting their equity objectives. There has been increased participation of rural households in production for the market. Between 1969 and 1980 small and medium-scale farmers grew from 23 to 36 per cent of the rural population, while subsistence households declined from 75 to 62 per cent. The large-scale commercial farming sector declined slightly in importance, from 1.7 per cent of farming population to 1.2 per cent [Wood, 1990, pp. 34-35].

The greater participation of formerly subsistence farmers in market-oriented agriculture was not spread evenly throughout the country. It occurred primarily in the already more agriculturally advanced Central, Eastern and Southern provinces (the CES region), where the per cent of subsistence producers declined from 52 per cent in 1969 to 35 per cent of the rural population in 1980. In the remaining provinces the decline was only from 95 to 91 per cent [Wood, 1990, p. 35].

On the other hand, mirroring the macro situation, achievement of social or equity goals within agriculture has not been matched by economic performance. Overall, marketed crop production in Zambia in the 25-year post-independence period has increased at an average annual rate of 2.5 per cent, considerably below the population growth rate of 3.7 per cent. As Table 2 shows, there has also been a downward trend in marketed production throughout this period. In the 1970s the growth rate of marketed crop production was an impressive 9.9 per cent. It then fell to an average annual rate of growth of 2.1 per cent in the 1980s, and, while recovering in the early 1980s, in the past five years has actually declined on average by 4.1 per cent per annum. As Table 3 shows, maize accounts for over 60 per cent of marketed production and thus the overall trend largely mirrors the performance of maize. In the 1980s there has in fact been an upward trend for wheat, cotton, soyabeans and burley tobacco. Production of Virginia tobacco, groundnuts and sunflower, on the other hand, has remained static or has declined.

Zimbabwe

At independence, agricultural sector policy in Zimbabwe also focused on equity goals: to achieve a more equitable distribution of land and a broader participation in marketed production.

In Zimbabwe the largely European commercial farming sector is much larger than in Zambia, in terms of both numbers and land. In 1980 there were over 6 000 large-scale farmers who controlled 40 per cent of the total land area, located mainly in the areas of highest agricultural potential. As of 1988, roughly 4 700 farms in the large-scale commercial sector (LSCS) still controlled 29 per cent of the nation's land area, primarily in the areas of highest agricultural potential. More than one million families remain in overcrowded communal areas on 42 per cent of the land area, primarily in areas of poor agricultural potential [World Bank, 1991a, Volume 1, p. 4].

Until 1990, the government's hands were tied with respect to land redistribution since under the terms of the Lancaster Agreement, land could only be acquired on a willing-buyer, willing-seller basis for the first ten years of independence. As a result, there is now tremendous political pressure for land redistribution, because of the political expectations created during the war of Independence and kept alive during the first decade of independence, and because of the conditions in many communal areas which are characterised by low productivity of farmers, natural resource degradation due to overcrowding, and weak agricultural service [World Bank, 1991a].

The debate on the Land Reform Bill ended in March 1992 and it will now become law. It will require that commercial farmers on some 5 million hectares of land sell their land to government at what is considered a "fair" price (determined by government evaluators). The State will then settle on it rural households who may not have the necessary complementary resources for its productive use. This highlights the "unrecognised" tradeoff between equity and efficiency which appears to have characterised so many government policies in both Zambia and Zimbabwe. The fact that by so doing an historical wrong may be acknowledged, clearly adds to the reluctance to recognise and assess this tradeoff[2]. A recent World Bank report states the hard reality that "a population of 9 million growing at 3 per cent per year, results in a net increase of 270 000 per year. This far exceeds the absorptive capacity of the resettlement programme and would require far greater land resources than are available in the LSCS. In this context, it must be acknowledged that it is no longer possible to honour every citizen's claim to land rights" [World Bank, 1991a, Volume 1, p. 6].

There is evidence that the government is facing this hard reality and is acting on the need to achieve equity with a minimum sacrifice in efficiency. The government has announced that those to be resettled in future are to be chosen on the basis of ability and knowledge to farm. This can be contrasted with the first phase of resettlement whose main aim was to ensure that all the people displaced during the war were resettled. The future thrust of the government's resettlement programme is well illustrated by a joint Zimbabwe Tobacco Association (ZTA)/Government of Zimbabwe scheme which is currently training would-be farmers at the Trewlawney Training Centre on all aspects related to flue-cured tobacco production. The trainees have done exceptionally well in their first year of operation.

The success of such schemes indicates that if resettlement programmes are well planned and the farmers well trained, there need not be much sacrifice in efficiency. Unfortunately, given the severe manpower and budgetary constraints, replication of these schemes will only be possible on a very limited scale.

The government's post-independence emphasis on the smallholder sector has done much to redress the imbalance in access to agricultural support services such as research, extension, credit and marketing on the part of the smallholder farmers. This in turn has improved their ability to respond to price incentives [Stanning, 1987].

In addition to assisting small-scale farmers to improve their economic circumstances, a number of other important considerations guide Zimbabwe's current agricultural policy. It is considered essential to achieve food security through adequate local production wherever possible, to maximise employment in agriculture, to improve the incomes of the rural population and to exploit whatever possibilities exist to profitably produce for the export market.

A number of policies are employed to attain these objectives, the most important being the provision of guaranteed producer prices for a wide range of agricultural commodities. As is the case in Zambia, fixed and more recently floor producer prices for all major crops (except tobacco and horticultural commodities) are set by government annually, using a multitude of at least partially conflicting criteria: commercial production costs, stock levels, export opportunities, consumer prices, farmer viability and rural development. The prices are uniform for all depots throughout the country and do not vary seasonally.

Again, as in Zambia, agricultural marketing has been dominated by parastatals. In Zimbabwe there are four major agricultural parastatals: the Grain Marketing Board (GMB), the Cotton Marketing Board (CMB), the Dairy Marketing Board (DMB) and the Cold Storage Commission (CSC). In communal areas the law allows for free trade, but restrictions in the geographic movement of controlled products[3] and the marketing parastatal's mandate to purchase crops at uniform government-set prices, has squeezed out private trade to the extent that the parastatals enjoy a near monopoly trading position in these areas. The GMB handles five controlled crops and six regulated crops[4]. The controlled products are white maize, soyabeans, wheat, sunflower seed and coffee; the regulated ones are red sorghum, white sorghum, pearl millet, groundnuts, edible beans and rice.

With the introduction of the Economic Structural Adjustment Programme (ESAP, discussed below) in late 1990, the government has moved very cautiously towards more private participation in the marketing of agricultural commodities. Beginning 1 April, 1992, maize grain can now be purchased and/or sold freely within the commercial and communal areas in Natural Regions IV and V. These are perennial food deficit areas. This leaves the GMB with a monopoly in the purchase of maize in the commercial areas of the surplus producing regions, Natural Regions I, II and III.

The government also administers prices for major agricultural inputs such as seed and fertilizer. Other inputs such as stockfeeds have now been decontrolled with more anticipated to be decontrolled as ESAP gathers momentum. The prices of controlled inputs are set by the Ministry of Industry and Commerce on the basis of industry cost submissions and agricultural development objectives. Unlike Zambia, there have not been any direct fertilizer subsidies to farmers in the post-independence period except through crop packs which were distributed in the 1980/81 season. In

fact, agricultural producers may be taxed by these pricing policies, since local inputs and fertilizer at times exceed import parity prices. According to the World Bank's 1987 Industrial Sector Memorandum [World Bank, 1987], the local fertilizer prices are about 20 per cent higher than the import parity price, implying that producers are taxed by that much. The overvalued exchange rate has however limited the extent of the implicit taxation.

Critical constraining factors for agricultural production in the communal farming areas are inadequate funds to buy modern production inputs and the lack of institutional credit. As is the case in Zambia, parastatals tasked with providing credit to smallholders are constrained by poor loan recovery rates and inadequate financial support from government. Administrative costs are necessarily high in serving widely dispersed producers separated by poor or non-existent roads.

Despite some of the problems highlighted above, there has been increased participation since independence by the smallholders in marketed production. As has been the case in Zambia however, this increase has not been evenly distributed regionally. Although great strides have been made since independence to expand market outlets for smallholders' surplus production, the income gains have been concentrated among relatively well endowed households in high potential areas [Jayne, 1991]. Food security research has shown that even in normal years, about 40 per cent of rural households do not produce enough food to last them throughout the season [Rukuni and Wyckoff, 1991].

Trends in marketed production in Zimbabwe are summarised in Table 3 for the period 1966-1990. As is the case with Zambia, growth in marketed production has been well below the population growth rate from the mid-1960s to 1990. Moreover, mirroring the Zambian performance, growth in the 1970s of nearly all crops (the exception being cotton) was higher than in the 1980s and higher in the first half of the decade than in the second half (exceptions being wheat, edible oilseeds and flue-cured tobacco). In both Zambia and Zimbabwe during the 1985-1990 period, crop production declined at an average rate of around 4 per cent.

Tobacco and maize account for 40 per cent and 28 per cent of marketed production respectively, and thus the overall trend largely mirrors the performance of these two crops. This contrasts with the situation in Zambia, where maize accounts for over two-thirds of the total marketed production and tobacco less than 10 per cent. Cotton's share since independence has been about 20 per cent, thus placing it third on the list of major crops. The share of non-food crops has consistently remained around 60 per cent, with food crops contributing the remaining 40 per cent.

Table 4 presents the constant dollar value of annual marketed production for each of the major crops. It is clear that there are large year-to-year fluctuations in maize and sorghum, primarily due to variations in the amount and seasonal pattern of rainfall. Only wheat and tobacco (commercial sector crops) show fairly steady growth.

Zimbabwe has been a net maize exporter throughout the period, with the exception of two post-independence seasons when the country has had to import (1983/1984 and 1991/1992). This is in spite of four years of drought encountered in the 1980s, and the current very severe drought. Zimbabwe is self-sufficient in beef, dairy and poultry, but imports all its rice requirements, 20 per cent of its wheat, and faces periodic shortages in the supply of oilseed requirements. In both Zambia and Zimbabwe, increases in marketed production have not been able to keep up with population growth in the post-independence period.

IV. THE MACRO-POLICY ENVIRONMENT

Many analyses of agricultural sector policies exclude, or only peripherally refer to the broader macro-policy environment. This not only causes the impact of these policies on the agricultural sector to be omitted, but also inhibits an analysis of the important interactions between the two. This section sets out the macro-policy environments of Zambia and Zimbabwe in the post-independence periods, and documents key changes in policies and policy direction during the post-independence period. The impact which these and sector-specific policies have had on the agricultural sector is then analysed in subsequent sections.

Zambia

Zambia achieved independence in October 1964, and in the next few years benefited from high copper prices which financed a post-independence spending boom (including the expansion of free social services) and culminating in the nationalisation of the copper mines in 1969. As over one-third of the population was already concentrated in major urban centres, it is not surprising that the development strategy focused increasingly on forms of urban development. An ambitious industrialisation programme was undertaken and there was considerable investment in urban housing, medical and educational services [Kydd, 1989].

The public sector was assigned a leading role in development. Government expenditure expanded rapidly during the late 1960s and reached 41 per cent of GDP by 1970. Disillusionment with foreign private investment led to widespread nationalisations. Many foreign companies operating in Zambia were subsidiaries of multinationals also operating in Ian Smith's Rhodesia. During the 1970s the number of parastatals expanded rapidly, from 14 to 147, reflecting the government's decision to press ahead with development in the face of a chronic shortage of local private entrepreneurs. At the end of the 1970s, parastatal output accounted for 30 per cent of GDP, 60 per cent of investment, and 37 per cent of formal sector jobs [Gulhati, 1989].

In 1975 the copper price collapsed, and Zambia's terms of trade index fell by 49 per cent in a single year. For the rest of the 1970s, prices remained around this new low level and then in 1980 began to slide again. Although there were a few short-lived recoveries, copper prices continued to fall, reaching an all-time low in real terms in early 1987.

While the purchasing power of copper exported dropped sharply, Zambia attempted to maintain import levels for consumption and production by borrowing abroad. This borrowing helped finance balance-of-payments deficits which mounted steadily, and by 1980-82 the current account deficit was almost 20 per cent of GDP. Foreign exchange reserves were drawn down and the government borrowed heavily from abroad to meet cash needs for what was perceived to be a temporary cash-flow

problem. In spite of the curtailment of imports through quantitative restrictions, external liabilities were so high that Zambia went into arrears. At the end of 1982 Zambia's external liabilities totalled almost $4.5 billion, $1 billion of which was overdue payments.

Although some of the problems faced by Zambia were clearly caused by external factors beyond the control of the government, inappropriate policies also contributed to the economic problems. The policy framework was characterised by a tightly administered system of price and interest rate controls. An artificially high exchange rate was supported by a system of import restrictions, foreign exchange controls and external borrowing. The combination of the high exchange rate and existing import policies encouraged the use of imported capital, raw materials, and other inputs, while discouraging use of local inputs. The tax incentives and negative interest rates also encouraged the intensive use of capital. The result was the development of high capital and import-intensive production structures which operated without the economic discipline of the private sector.

The adjustment to lower foreign exchange earnings was made more difficult by the lack of a diversified economic base to generate additional exports, and a dependence on imports in the structure of production. Subsidies on consumer staples, such as maize meal, distorted consumption patterns and turned domestic terms of trade against the agricultural sector, discouraging investment in agriculture for the domestic market.

The economy became increasingly dominated by government-run and government-owned enterprise, as administrative controls increased and the government purchased private companies. All of the major mining interests and most of the industrial base came under government management. Because of controlled pricing and management difficulties, a number of parastatals had to rely on budget subsidies to cover operating losses. This added to the problem of recurrent budgetary deficits which resulted from continued growth of the public sector and government expenditure, at a time when the government's revenue was shrinking.

Phase I: Moderate Reforms, 1983-1985

By the end of 1982 the country was in the midst of a financial and economic crisis and was forced to agree to a series of adjustments and reforms which were supported by stand-by agreements with the IMF. The main features of the programmes were the reduction of the current account deficit and external payments arrears, the decontrol of domestic prices, an increase in prices as a means of reducing budgetary subsidies on basic foodstuffs and fertilizer, upward adjustment of agricultural prices, relaxed interest-rate ceilings, a 20 per cent devaluation, and the introduction of a flexible exchange-rate policy. Targets related to public finance included reductions in government expenditure (particularly subsidies) and the imposition of new taxes. There was to be no general wage increase and no net increase in employment.

Phase II: Radical Reforms, 1985-1987

In spite of these policy adjustments starting in 1982, the economic slide continued, although there is some evidence that the rate of decline moderated somewhat. In the face of acute external payment problems and a liquidity crisis, in October 1985 the government announced a number of radical changes in economic policy.

The changes included market determination of the exchange rate for the *kwacha* through weekly auctions, liberalisation of the trade and payments system, control of the interest rates through a daily auction of Treasury Bills, and supporting fiscal and monetary policies. Prices were deregulated for all crops and commodities except maize, maize meal and fertilizer. The impact on agriculture was however limited and distorted, primarily because it excluded maize, which dominates agricultural production. Moreover, the government could and did control the price of import substitutes, namely wheat and oilseeds, through trade policy.

In November 1986 the complete price decontrol was announced for maize used to produce breakfast meal. Prices were re-regulated, however, a few days after protest riots swept the Copperbelt in December 1986. In January 1987 the foreign exchange auction was suspended and the *kwacha* was revalued at a rate almost 87 per cent higher than the rate prevailing immediately prior to the suspension. Under donor pressures the auction was re-started in March 1987 and continued until May 1987 when it was again suspended and the government announced withdrawal from the IMF restructuring programme.

Phase III: Policy Reversal, 1987-1989

In place of the IMF programme, the government introduced its own New Economic Recovery Programme in May 1987 whose theme was "growth from own resources". Its main elements were as follows: (1) a limit on debt servicing to 10 per cent of net export earnings, (2) reduction of inflation by stabilizing the exchange rate and fixing interest rates, (3) re-introduction of price controls on some 23 commodities, (4) replacing the foreign exchange auction by administrative allocation, and (5) reduction of the rate of increase of money supply from 60 per cent in 1987 to about 40 per cent in 1988 [Shawa, 1991].

During 1988 inflation rose in fact to 64 per cent, primarily due to excessive monetary expansion stemming from the budget deficit, strong credit expansion to the agricultural sector, and the improvement in international reserves. The country continued to experience a chronic shortage of foreign exchange, which deprived the economy of essential inputs and basic consumption goods, and constrained the servicing of foreign debt which in turn stifled access to new external credits.

Phase IV: Policy Turnaround, 1989-1991

These developments led to the introduction, in late 1988 and early 1989, of a number of remedial measures that resembled those introduced during the Phase I moderate reform period. These included devaluing the *kwacha* by 25 per cent in

November 1988 and pegging it to the SDR, raising the minimum reserve requirements, reducing the budgetary cost of maize subsidised by increasing maize meal prices in January 1989, and introducing a maize meal coupon scheme.

This change in policy direction was formalized in the Policy Framework Paper (PFP) of August 1989 and revised in February 1991. Its immediate policy goal was to bring down inflation and create a stable economic climate for growth and diversification. This was to be achieved by eliminating market distortions and shifting resources to labour-intensive activities including smallholder agriculture and small-scale industry.

Phase V: The New Government's Programme: The Circle Closes?

The PFP was soon overtaken by a major political event: Kenneth Kaunda, President since independence in 1964, and his UNIP party's loss of the election held in October 1991, and the coming to power of Frederick Chiluba and his Movement for Multi-Party Democracy (MMD) party. A 1991-94 reform programme has been drawn up with the help of, and closely supervised by, the IMF. The programme aims at reducing government spending by ending heavy maize-meal subsidies and balancing the budget in two years, reducing the huge civil service, encouraging non-traditional exports, and promoting the role of the private sector in running the economy. The government plans to privatise most state-run enterprises, including its majority share in Zambia Consolidated Copper Mines, the country's major foreign exchange earner.

Measures taken so far include removing the subsidy on fertilizer and breakfast meal, reducing the subsidy on roller meal, raising interest rates and fuel prices, and devaluing the *kwacha*. These have sharply increased the cost of living.

There are many parallels between the latest reform programme and its many predecessors, also drawn up with IMF assistance; if there is a major difference, it will have to rest with the government's willingness and political capacity to see it through to conclusion.

Zimbabwe

As noted above, at independence in 1980 the Mugabe government inherited a highly centralised, heavily regulated economic structure with widespread state ownership and parastatals. Government borrowed abroad to invest in post-war reconstruction, expanded the civil service to cater with the new demands of government intervention, imposed a high minimum wage, and offered high nominal farm prices to improve agricultural incomes and production [Takavarasha and Pamacheche, 1991].

As happened in Zambia however, this post-independence boom was followed by an increasingly disappointing macroeconomic performance. Average GDP growth during 1980-90 only matched the population growth rate of 3.4 per cent. The economy showed increasing imbalances — both externally and domestically. The central government's fiscal deficit was in excess of 10 per cent of GDP for much of the 1980s, and this led to central government debt exceeding 70 per cent of GDP by

1988. Total budget expenditure rose from 33 per cent of GDP in 1980/81 to 48 per cent of GDP by 1990/91, with most of the increase attributable to wages and salaries, interest payments and subsidies.

Exports increased by 4.3 per cent annually in real terms between 1980 and 1990. In spite of this, total imports were virtually stagnant as the government restricted foreign-exchange allocations to make room for debt service payments that rose from 4 per cent of export earnings in 1980 to a peak of 37 per cent in 1987.

The main reason for the modest economic performance has been low levels of investment in the productive sectors of the economy. Investment has been barely adequate to maintain the capital stock, let alone increase it and raise total productivity. Private sector investment as a share of GDP has fallen from 12 per cent in 1985 to a low of 8 per cent in 1987, before recovering slightly to 10 per cent in 1989. This low level of investment is the result of three major factors: (a) risks associated with unsustainable fiscal deficits and the possibility of a deterioration of macroeconomic stability; (b) limited access to imported investment and intermediate goods and high non-financial costs associated with importing through the foreign-exchange allocation system; and (c) the relatively high cost of doing business in a highly regulated business environment involving price controls, labour market restrictions, and investment sanctioning [World Bank, 1991a, Volume II, p. 5].

As in the case of Zambia, the disappointing economic performance can in part be attributable to a number of factors beyond the government's control, including shortages of skilled manpower, the cost of maintaining a military presence in Mozambique, security problems associated with harassment by South Africa, and periodic droughts, particularly those during 1982-84 and at present. The economic policies pursued since Independence have also contributed to the poor performance. Exchange rate policy led to a severe shortage of foreign exchange, which combined with the method of foreign exchange rationing inherited from the previous regime, led to widespread shortages of imported capital inputs. This in turn contributed to a vicious circle of foreign-exchange shortages leading to low growth in exporting industries and an inability to raise foreign currency earnings to meet the demands of domestic industry [World Bank, 1991a, Volume II, p. 6].

The Economic Structural Adjustment Programme (ESAP)

Growing recognition of the negative effects of existing economic policies was one of several influences culminating in the 1987 government decision to liberalise the economy. The shift in policies had been apparent in a number of announcements since 1988, including the establishment of a one-stop investment agency and a willingness to enter into a multilateral investment guarantee agreement. Formal recognition of the need for a change of policy direction was first signalled in the July 1990 budget speech. A second major policy pronouncement was made in October 1990, followed shortly by the announcement that an Economic Structural Adjustment Programme (ESAP) would be drawn up with assistance of the World Bank and the IMF. This was published in January 1991 and subsequently presented to the Consultative Group Meeting in Paris in April 1991 [Takavarasha and Pamacheche, 1991].

The programme phased over five years, 1990-1995, is a transition from pervasive direct controls to market forces. Its central components are: (a) fiscal deficit reduction coupled with prudent monetary policy, (b) trade liberalisation, (c) domestic deregulation, and (d) measures to alleviate the impact of reforms on vulnerable groups. The programme is a blend of structural reforms and macroeconomic stabilization measures designed to address the key policy constraints that hampered Zimbabwe's development in the 1980s [World Bank, 1991b].

Implementation only began in late 1990 but has included relatively aggressive exchange-rate management, a reduction in the fiscal deficit, new investment guidelines, more flexibility in price and wage setting, a foreign exchange retention system, and the modest expansion of OGIL (Open General Import Licence) provisions. There was a 12 per cent real depreciation of the Zimbabwe dollar during 1990 following an 8 per cent real depreciation during 1989.

V. IMPACT OF MICRO- AND MACRO-POLICIES ON AGRICULTURE

A. Crop-Pricing and Marketing Policy

The micro-policy that has the greatest short-run impact on the farmers is crop pricing and marketing policy. It will be recalled that throughout the 1966-1990 period both governments set either fixed or floor prices for major crops. Since government parastatals had monopolies on the marketing of these crops, these government-controlled prices were the prices faced by the majority of agricultural producers who produced a surplus[5].

Table 5 presents indices of crop producer prices deflated by the consumer price index for all crops as well as separately for maize, cotton and tobacco. This ratio of the producer price to the consumer price index (CPI) also approximates the barter terms of trade of agricultural producers: what they received for their production versus what they paid for inputs and consumer goods.

It is clear that crop-pricing policy has not favoured the farmer in Zambia. The real (deflated) prices the farmer received for his crops were lower in the 1970s than in the late 1960s. The terms of trade then improved in the early 80s and again in 1986-1987 (the 1982-1987 reform period) before declining sharply in the 1988-1990 period (the NERP). The terms of trade for tobacco did not follow the decline for maize and cotton, undoubtedly because the tobacco price is based on export parity and does not face pressures to be kept low to provide cheap food and inputs for local use.

Crop-pricing policy has on average been more favourable to Zimbabwean farmers. The barter terms of trade remained fairly constant prior to independence in 1980, and immediately after independence improved considerably. With the exception of 1987, they have remained above the 1980 level. There is however a considerable difference in the impact of pricing policy between different crop producers. When one removes the effect of tobacco, the barter terms of trade show in fact a declining trend. For both maize and cotton, the two crops of most significance for smallholders, the producer price declined in real terms by 15 to 20 per cent in the 1985-1990 period, compared to the previous five years. The real price of flue-cured tobacco, grown almost solely by commercial farmers has, by contrast, more than doubled since 1980.

Nominal Rates of Protection (NRP)

The incentive effect of crop-pricing policy can also be measured by comparing the government-set price with the price that it is estimated would have occurred in a more liberalised policy environment. Since the major crops are all tradables, either exportables or importables, these later prices are the border prices — export parity in the case of exportables and import parity in the case of importables.

The comparison of the producer price to the border price is referred to in the economic literature as the nominal rate of protection, and these are shown for three principal crops for each country in Table 6.

For Zambia it is clear that for all three crops — maize, cotton and tobacco — direct price intervention, i.e. crop pricing policy, has in recent years provided negative incentives to crop producers. The price set by government was substantially below that which they would have received in a less controlled policy environment, although again there are important differences between crops.

In the case of tobacco, producers did in fact receive "protection" or implicit subsidies in the early 1970s, and again in the early 1980s, but since 1985 they have received the export-parity price and thus the NRP is zero.

Zambian cotton producers were taxed throughout the 1966-1990 period, with the exception of one year, 1980, when the producer price was above the border price equivalent. It is based on export parity for lint and import parity for oil and cake. The NRP averages were -24.8 per cent for the 1966-1990 period, -24.9 per cent during the 1980s, and -37.3 per cent over the 1985-90 period.

For maize our calculations show that producers were also taxed in nearly every year in the 1966-1990 period, and that this taxation had an upward trend as well. The average NRP is -27.5 per cent during 1966-1990, -31.6 per cent for 1980-1990, and -40.6 per cent for 1985-1990.

The NRP for maize varies regionally of course, in spite of the uniform producer price, and our calculations are based on the assumption that the farmer either produces his maize near Lusaka, or transports it there at his cost. For a farmer in a distant maize surplus area, the NRP would be lower (less negative, since we would subtract the cost of transporting the maize from his farm into a net deficit area), and for a distant farmer in a deficit area it would be higher (more negative) since we would add the transport cost savings of not having to transport maize into the deficit area as a result of his production.

Uniform pricing not only resulted in the income effect of price policy differing considerably by region — being positive in non-line-of-rail surplus areas and negative in non-line-of-rail deficit areas — it also resulted in a substantial increase in transport costs. Price policy intervention has provided a strong relative incentive to production in surplus areas and a relative negative incentive to producers in deficit areas. This has led to costly increases in inter-provincial transport costs, met by increasingly large government subsidies to the government-appointed marketing agents, NAMBOARD and more recently the co-operatives.

Unfortunately this efficiency cost of uniform pricing has not been even partially offset by a contribution to equity: uniform pricing has depressed the price received by the poorest segment of the population, i.e. farmers in distant (non-border) deficit areas, and has inflated the price received by better-off (and more politically vocal) farmers in surplus regions, particularly the Eastern province.

The nominal rates of disprotection (taxation) are considerably lower for Zimbabwe than for Zambia. Table 6 shows that the NRP for maize, in all but two years based on export parity, has in fact been positive, averaging 11.4 per cent during 1980-1990 and 12.2 per cent during 1985-1990. The NRP for cotton has however been negative through the 1966-1990 period, averaging -9.0 per cent, but has improved somewhat during 1985-1990 when it averaged -6.7 per cent.

Data to compute NRPs for tobacco are not available prior to independence. During the UDI period however the Smith government played a leading role in ensuring the survival of the tobacco industry which was threatened by international sanctions. The amount of subsidy in the form of price support to the tobacco producers reportedly ranged from a high figure of $20.0 million in 1973 to a low of $3.3 million in 1976 [MLARR, unpublished data]. With the advent of the Muzorewa government in 1979, the free auction system that operated prior to UDI was reinstated and price support for tobacco production ended. Since independence, tobacco farmers have not been affected by pricing policy, since its price is based on net realisations from international auctions.

B. **Exchange-Rate Policy**

The nominal rates of protection measure the "direct" effects of pricing policy. There is also an important "indirect" effect that is often overlooked. This is the effect of trade and exchange rate policy. If the exchange rate is "controlled", it does not reflect the rate that would occur in a more liberalised policy environment. The rate that would occur, should the exchange rate be set by market forces, is called the equilibrium exchange rate. For Zambia, the equilibrium rate has been estimated by adjusting the nominal rate for changes in the terms of trade and purchasing power[6]. For Zimbabwe it is based on a comparison of the prices of tradables and nontradables, and since 1987 on purchasing-power parity. The comparison of the actual exchange rate and the equilibrium exchange rates presented in Table 7 show that both countries have maintained an increasingly overvalued exchange rate. For Zambia this overvaluation is assumed to have been eliminated during the brief auction period (October 1985-early 1987) and then became sharply overvalued during the NERP period. The recent 30 per cent devaluation of the *kwacha* in February 1992, under the new government, has once again lessened the extent of overvaluation.

For Zimbabwe, it is estimated that the dollar has been overvalued by between 50 and 80 per cent since 1981. With the 34 per cent depreciation during the first nine months of 1991 under ESAP, the extent of overvaluation has decreased and at year-end 1991 was around 25 per cent.

Maintaining an overvalued exchange rate implicitly taxes the producers of tradables, including of course crop producers, since most agricultural crops are either exportables or importables[7]. Producers of exportables, namely tobacco and cotton lint, are taxed since they receive less in domestic currency for their exports than they would receive under a more realistic exchange rate. Producers of importables must compete with "cheap" imports, although to the extent that there are controls on trade, exchange-rate policy provides less of a disincentive to producers of import-substituting crops.

The disincentive effects on agricultural producers of exchange-rate policy have been quantified in Table 8 which presents NRPs based on border-equivalent prices calculated using the equilibrium exchange rate rather than the market rate. These exchange-rate adjusted NRPs incorporate both the "direct" and "indirect" effect of policy on crop production and are shown in Table 8[8].

When one incorporates the effects of exchange-rate policy, producers of all three crops, maize, cotton, and tobacco, were implicitly taxed throughout the 1966-1990 period. This taxation was higher in Zambia, and improved considerably during the end of the 1982-87 reform period when foreign exchange was auctioned. For maize producers this implicit taxation averaged 44 per cent in Zambia and 22 per cent in Zimbabwe during the 1966-1990 period, but was considerably higher in Zambia in the 1980s, 68 per cent, compared to 17 per cent in Zimbabwe. The rate of taxation increased in the 1980s in Zambia, but decreased slightly in Zimbabwe.

For cotton, the implicit taxation has been fairly similar to that for maize, averaging 48 per cent in Zambia and 27 per cent in Zimbabwe during 1966-1990. In the 1985-1990 period it was over 60 per cent in Zambia and over 40 per cent in Zimbabwe.

Whereas the unadjusted NRP for flue-cured tobacco was 0 for Zimbabwe and only 2 per cent for Zambia during 1966-1990, once one incorporates the effects of the overvalued exchange rate this implicit taxation rises considerably. It averaged 22 per cent for Zambia and 20 per cent for Zimbabwe during 1966-90, and increased to over 40 per cent for Zambia and over 30 per cent for Zimbabwe in the 1980s.

It thus appears that the crop producers in both Zambia and Zimbabwe have been adversely affected by crop pricing and marketing policy to date, although Zimbabwean farmers on average have been implicitly taxed somewhat less than those in Zambia. Also, Zambian farmers fared somewhat better during the 1982-87 reform period, but with its failure, were again subject to heavy rates of implicit taxation through both crop-pricing and exchange-rate policy.

C. **Fiscal Policy**

The sections above focused on "implicit" taxation of the agricultural sector by pricing and exchange-rate policy. It is also necessary to look at the impact of actual expenditure and subsidies on the agricultural sector and the extent to which they may have offset the disincentives provided by the implicit taxation. The impact on agriculture of reductions in agricultural parastatal deficits and maize and fertilizer subsidies contained in current reform programmes will also be examined.

Table 9 shows the amount of the government budget allocated to the agricultural sector, and indicates that the share of agriculture in total government expenditure has been consistently low in both Zambia and Zimbabwe. In spite of the fact that agriculture provides the livelihood for over 70 per cent of the population and accounts for 13-18 per cent of GDP, its budgetary allocation has averaged a mere 6-9 per cent. Moreover, the average allocation in the 1980s is below the average allocation in the 1970s for both countries.

Zambia: Multitude of Maize Subsidies

It is also important to note that, especially in the case of Zambia, the budgetary allocation to agriculture includes sizeable maize subsidies that in fact have not benefited agricultural producers. In most years the bulk of the maize subsidy went to NAMBOARD and/or the co-operative unions who were charged with purchasing the crop from the farmers. The subsidy covered the gap between the price at which they purchased maize from the farmers and their marketing costs, on the one hand, and the price at which they were allowed to sell the maize to millers, on the other.

This gap was large for three main reasons: (1) uniform pricing resulted in large internal transport costs; (2) delays in government payments to both NAMBOARD and the co-operatives resulting in high overdraft costs and impeding their efficiency of operations; and (3) the retail price of maize meal was kept low to make it affordable to urban consumers. Producers did not benefit since the uniform producer price was below import or export parity throughout this period.

Between January 1989 and December 1991 the government administered a maize-meal coupon programme that provided a means of subsidising the cost of maize meal for urban and peri-urban households with annual incomes of less than K 20 500. It provided benefits to families who are located mainly in Lusaka and the Copperbelt and also in outlying urban and peri-urban areas. Each family member was considered to require 14 kg of meal per month and in 1990 received coupons valued at K 21, which effectively reduced the cost of 14 kg roller meal from K 47.60 per bag to K 26.60 per bag. The coupons could be used for the purchase of either breakfast meal or roller meal.

This programme epitomised the well documented post-independence policy trend of urban consumers benefiting from government policies at the expense of the rural, agricultural community. Although it is recognised that rural residents comprise the poorest segment of the population, they were excluded from the coupon programme. The rationale given is that they can produce their own maize. The counter-argument is that not all of them can, and the current drought certainly confirms this assertion. More importantly, even if they could, why should they not benefit from what is clearly a government consumption "hand-out". It may be that a maize meal coupon is not the most appropriate form of rural hand-out, but certainly a substitute (such as cash-equivalent, or protein-equivalent) could have been found if there had been the political motivation to look for it. This was an important factor in giving MMD seats in rural areas [McKenzie, personal comm.].

Table 10 provides a breakdown of the major components of the Zambian maize subsidy between 1980 and 1990 and also compares it to the total government budget and the budget deficit. Between 1980 and 1990 the burden of direct maize subsidies on the government's budget varied from year to year. In the early part of the 1980s, maize subsidies represented around 5 to 10 per cent of the total budget. By the latter part of the 1980s this had increased to about 16 per cent of the total

budget. In 1989 the deficit reached an all-time high at more than 35 per cent of the total budget, with maize-related subsidies accounting for about 40 per cent of this. Increased borrowing and the expansion of the money supply in order to cover this deficit contributed to the growing rate of inflation.

Moreover, not all of the public support for the maize subsector comes in the form of direct financial subsidies that appear in the budget. There are two other important categories of support: (1) government guarantees for loans for various parts of the system, some of which are clearly bankrupt; and (2) donor funding, which could be used elsewhere, that is used to support the maize subsector [McKenzie and Chenowith].

A 1990 government study of the maize subsector summarises this maize policy nightmare as follows:

> The structure of the maize subsidies during the 1980s reflects the government's attempts to deal with a sector which has become increasingly difficult to manage. Not only were institutional changes frequent, changes in subsidy policies took place almost every year. As real income of the Zambian population declined, the government felt increasingly pressured to maintain (or increase) maize-related subsidies.
>
> However, because direct maize subsidise are so large (and also so important to consumers) their removal presents a special challenge. Unless marketing expenses can be reduced substantially, subsidy removal can only imply increased consumer prices for mealie-meal, and/or reduced producer prices for maize. Neither of these outcomes is very desirable in view of the food security and producer income objectives [ROZ, 1990, p. 15].

By 1990 it was becoming very clear to the Kaunda government that the efficiency/equity tradeoff was becoming exceedingly tricky and costly. The population was also recognising that the government could not "give it all". By 1990 maize meal was no longer available at the government-subsidised prices: budgetary constraints reached their limits with the sharp upturn in inflation in the late 1980s and there was simply inadequate finance from domestic sources or donors to finance the increasing budgetary gap caused by maize pricing and marketing policies. It is reasonable to conclude that this in fact significantly contributed to Kaunda's resounding election defeat in October 1991. However, it is not clear what people expected from the MMD. Some MMD members actually promised to reduce prices, and as a result Chiluba is politically constrained in his efforts finally to put an end to politically inspired but financially unfeasible dreams — of which public provision of cheap mealie-meal is one.

Zimbabwe: Multitude of Parastatal Deficits

While agricultural parastatal deficits have been in existence since the formation of the marketing boards in the colonial period, they became much more pronounced

after independence in 1980. In most cases these deficits have come about because of government's desire to keep farmers on the land, as well as ensuring the urban populace cheap food. Table 11 provides a breakdown of the four major agricultural parastatal deficits: the Cold Storage Commission (CSC), the Dairy Marketing Board (DMB), the Cotton Marketing Board (CMB) and the Grain Marketing Board (GMB). It shows that during the 1985-1990 period, maize accounted for 16.3 per cent of the total. From the earlier analysis of adjusted NRPs, it is clear that for most of the crops, the producer has been taxed. Thus these marketing board deficits are attributable to consumer subsidies, a mandate to provide uneconomic services to smallholders nationwide, as well as operational inefficiencies.

As Table 8 showed, during the period 1980-1990, the adjusted NRP calculations for maize indicate that the maize producers were taxed on average by 17 per cent. Of the eleven years since independence, maize producers have only been subsidised in three. What this clearly illustrates is that the maize subsidy has most often benefited the consumer — not the producer. Similarly, as reflected by the NRP calculations on cotton, most of the subsidy to the CMB is attributable to either subsidies to the local textile industry or inefficiencies within the institutions. The prices of lint to local spinners prior to 1984 approximated export parity, at the official exchange rate. Thereafter the price remained static even though world prices increased. This is reflected in the change in the financial situation of the CMB. Although it had surpluses prior to 1985, it recorded sizeable deficits during the 1986 to 1990 period. As a result of ESAP, since 1990 the CMB has increased prices to local spinners to more closely approximate export parity. The trading account returned to a surplus position in the 1990/91 and 1991/92 marketing years.

With the advent of ESAP, all of these agricultural parastatals are now required to reduce their deficits with the aim of eliminating them by 1995. What is likely to remain after this period is a series of carefully targeted subsidies aimed at the vulnerable groups of society. While the CMB is already in a surplus situation, and the DMB has dramatically reduced its losses, the CSC and GMB are encountering difficulties in planned deficit reduction, primarily as a result of the current drought.

D. **Agricultural Support Services**

The budgetary constraints of the parastatals have also had an impact on the provision of agricultural support services to smallholders. Sectoral policies have however also constrained their effectiveness, as the following discussion of policies in Zambia and Zimbabwe show.

Zambia

Agricultural Research

Agricultural research in Zambia has a number of weaknesses, in addition to being underfunded. First, as in the case of Zimbabwe prior to independence, it has focused on technologies suitable for adoption by large and medium-scale farmers. These have been transplanted to smallholder agriculture without proper adaptive research to address the actual constraints and needs of smallholder farmers. The result has been sub-optimal utilisation of these technologies in smallholder agriculture. Secondly, the Zambian research system has viewed technology purely from a supply point of view, ignoring the demand dimension to technological change. At a minimum, favourable market conditions which permit farmers to internalise the gains of the innovative activity or commodity are required. This prerequisite has not been met in Zambian agriculture primarily as a result of the pervasive market distortions (e.g. price controls and currency overvaluation). Under these circumstances, the supply of inappropriate technology may have compounded the impact of price disincentives on the adoption behaviour of farmers, particularly of the risk-averse smallholder farmers. This reportedly has been the case for non-food commodities as well as food crops which are grown in marginal or less favourable areas [World Bank, 1991d].

Extension Services

The quality of the extension service is of course dependent on agricultural research, and the deficiencies in adaptive research suggest that the extension messages to smallholder farmers have been equally deficient and less relevant to their constraints and needs. Extension message for maize production, for example, has not addressed the binding labour constraint in smallholder agriculture. Due to the lack of adaptive research in acid-tolerant technologies, there are almost no extension messages for ameliorating soil acidity or for restoring soil fertility other than those advocating the use of commercial fertilizers [World Bank, 1991d].

Even had the message been appropriate, its dissemination would however have been, and would have remained limited to at best 25 per cent of the smallholder and emergent farming households — most of the relatively disadvantaged farmers. In the past fifteen years budgetary cutbacks have not only hampered any expansion in the agricultural extension programme, but have also left the service with too many personnel and too few resources. The programme has reportedly become "demobilised and deskbound" and its present coverage of about 25 per cent is "purely theoretical" [World Bank, 1991d, p. 74].

Agricultural Credit

For Zambia's large-scale commercial farmers, the required amount of credit generally has been available from commercial banks and government lending institutions. Credit is a constraint, however, for smallholder farmers who wish to make the transition from subsistence to surplus producers. They are unable to obtain credit from the private sector, and the government institutions and co-operatives with mandates to provide seasonal credit to smallholders are essentially bankrupt.

Since the majority of farmers are largely subsistence producers for whom there are no attractive technological packages, effective demand for credit for capital investment has been lacking. There was however a need for NAMBOARD and more recently the Provincial Co-operative Unions (PCUs) to acquire bridging funds to finance their purchases of produce and inputs. This has been a problem, resulting largely from the government's pricing policy, which weakened both NAMBOARD and the PCU's financial condition to the extent that it made them uncreditworthy in the eyes of commercial banks. Consequently they were made heavily dependent on the government to provide such funds or to guarantee loans from commercial banks. Given the increasingly constrained budgetary finances of the government, such funds and guarantees have been forthcoming only after increasingly costly delays [Jansen, 1988].

The situation is at present close to collapse, threatening to severely curtail the production of maize. There is now a chain of unpaid debt for maize production and marketing which has embroiled the entire agricultural credit system, as well as input suppliers. The entire credit, input supply and maize marketing system is funded by the government. It includes three financial institutions, the seed and fertilizer suppliers, and the marketing institutions. A government and two non-government commercial banks are also now linked into the debt chain as a result of the government's "request" that they fund the marketing institutions' purchase of the maize crop. The massive debt which involves the small-scale farmer and the maize production and marketing system is of such a magnitude that the resource base of the central bank (Bank of Zambia) has been eroded [ROZ, 1991].

A recent government report on the credit system effectively summarises this policy nightmare:

> During the 1989/90 crop season a number of things happened that caused the collapse of the credit system. A widespread drought resulted in a poor maize crop which caused defaults on many farm loans; the fertilizer distribution system changed hands in an uncoordinated fashion which disrupted supplies to farmers and adversely affected the financial performance of the agencies involved; cooperative losses on maize and fertilizer marketing coupled with huge outstanding debts restricted their ability to pay farmers for maize and suppliers for inputs; many farmers were then not paid on time for the maize they sold to the Unions and, as a consequence, were not able to repay their loans on schedule; inflation eroded the value of those loan funds which were recovered from farmers while government budget allotments set a year earlier were far less than needed to make up the huge shortfall which emerged; finally, this lack of funds for farmer credit resulted in government directives to make inputs available to farmers through the Unions without any firm arrangements for payment; this latter action embroiled the seed and fertilizer suppliers in the farm credit disaster [ROZ, 1991, p. 2].

This saga clearly illustrates the interlinkages between sectoral policies (crop pricing, marketing and credit) and macroeconomic policies (exchange rate, fiscal and monetary). Unfortunately in this case, rather than having a positive impact by alleviating constraints on agricultural performance, they had a domino effect which came close to not only causing a complete standstill of the maize subsector, but also threatened the financial viability and creditworthiness of the central government.

Zimbabwe

Agricultural Extension

After independence, notable strides were made in the provision of agricultural extension to small-scale farmers. Government extension services, provided by Agritex, were re-directed to the small-scale sector. This left the large-scale sector to be serviced by the private sector, with Agritex only offering extension services to this sector on request.

Prior to independence, average expenditure on extension services as a percentage of agricultural expenditure was about 9.5 per cent; this can be compared with an average expenditure of 16.8 per cent for the three years after independence. Unfortunately, since 1984 expenditure on extension services has declined and in recent years has averaged only 8.8 per cent [Rukovo, Takavarasha, Thiele and Wiebelt, 1991]. This decline reflects the cost to the farmer of the increasing financial burden of the parastatal deficits.

Agricultural Research

For more than 50 years, Zimbabwe's agricultural research has aimed at developing high-yielding varieties. Public research is complemented by private research efforts, largely geared to the needs of the commercial sector. Although organisationally and financially independent, they work closely with state-financed institutions. Prior to independence, research efforts tended to concentrate on individual components of crop production, i.e. plant breeding, plant nutrition, cropping techniques and plant protection, but with hardly any emphasis on farming systems research. While the small-scale farmer benefited from some of these research efforts, the main target group was the large scale commercial farmers.

With the advent of independence, there was a shift in the focus of government research to the small-scale sector, although with a decline in the total allocation to research from 10.8 per cent prior to independence to on average 7.9 per cent of agricultural expenditure in the 1980s [Rukovo, *et al.*, 1991]. As a result, most of the activities, in particular the on-farm research, has suffered seriously because of shortages of funds. The private sector research institutes have grown and maintained support for the large-scale commercial farmers.

Agricultural Credit

The commercial banks and the government-owned Agricultural Finance Corporation (AFC) are the major sources of financing for the agricultural sector. Since 1979 the AFC directed its efforts to the communal areas, while the commercial sector remains well catered for by both institutions.

Generally the lending policies of these institutions, which consider collateral security a major criterion for credit eligibility, have tended to disadvantage the majority of the communal as well as resettlement farmers as they have no title to land. In an effort to get around this problem, the AFC modified its requirements to specify that the communal or resettlement farmer be a full-time farmer and have access to land. Despite these modifications, the provision of credit to the smallholder sector is still deficient. In 1990/91 about 35 000 small-scale farmers received credit from the AFC. This compares with the communal population of about 1 million farm families, about 54 000 resettlement farmers and 8 000 small-scale commercial farmers. Moreover, there has been a decline in the number of smallholders receiving credit; in 1985/86 100 000 small scale farmers received loans from the AFC. This decline is primarily the result of the following two factors:

(1) After independence undue political pressure was put on the AFC to give credit assistance to a large number of small-scale farmers, regardless of their farming ability or creditworthiness.

(2) Several years of drought in the 1980s has meant that in some of the years, the AFC was forced to give further assistance before the farmers could repay the loans. The repayment burden could have become too much for a number of farmers — and as a result a lot of them dropped out. The AFC therefore started screening to ensure it assisted people who could pay.

The AFC is now changing its lending strategy in both the communal and resettlement areas from individual lendings to a group approach. A number of such schemes are now operational and showing signs of success. However, as is the case in Zambia, the introduction of market liberalisation (and consequent demise of the stop order option), unaccompanied by increased access to land titles to serve as collateral, will result in continued problems of loan recovery and impede the provision of agricultural credit on a viable basis.

These brief discussions indicate that even if under ESAP, and the current reform efforts in Zambia, the disincentives and funding shortfalls resulting from macroeconomic as well as sectoral policies were significantly diminished, and even if crop pricing and marketing were liberalised, this would not be sufficient for improved agricultural sector performance, particularly by smallholders. These measures would have to be accompanied by land tenure reforms as well as by expanded research, extension and credit services — properly focused, targeted and funded.

VI. THE REFORM PROCESS: PITFALLS AND POTENTIAL

Zambia has had a long and tortuous reform effort, which at least under the Kaunda regime was not successful. Zimbabwe has only recently embarked on a comprehensive reform effort, but already there are indications that for it as well, successful implementation is far from certain. In this section an attempt is made to assess the key elements of the reform process in Zambia that led to difficulties in successful implementation. The extent to which these pitfalls have been or can be avoided in Zimbabwe and under the Chiluba regime in Zambia are then addressed. Finally, an assessment is made of the outlook for successful reform efforts in both countries and the impact that they are likely to have on the agricultural sectors.

Pitfall One: Inappropriate Motivation for Reform

Zambia's reform efforts under the Kaunda regime have been summed up as "too little, too late". Each reform undertaken since 1983 was insufficient to turn the economy around, yet the partial implementation continued, even though the spiral moved ever downward. The answer to the question of why Zambia failed to follow through on reform is tied largely to motivation. The primary concern of Kaunda and members of the central committee of the UNIP party was to stay in power and to retain the support of the constituency of interest groups built up by post-independence policy. Although some Zambia government officials supported reform sincerely, and even lobbied to extend it, they did not have the political strength to influence government policy design and implementation. Hence the impetus for reform came primarily from external sources, notably Zambia's creditors and donors. Zambian policy makers accepted successive reform proposals to maintain the minimum flow of external assistance required to keep the economy from grinding to a complete halt, but resisted following through on thorough-going change out of concern for their own positions. For its part, the government defended itself — and further impaired the reform process — by blaming the need for reform on external sources: the IMF, the World Bank, bilateral donors, South Africa, the world copper price, even the weather. Notably absent from the list was an admission that domestic policy had been poorly designed and implemented [Jansen, 1991b].

It has thus been argued that any reform effort under the Kaunda regime was doomed to failure because the domestic prerequisites for successful reform were lacking. That is, the proper clientèle of reform — the producers of Zambia's unprotected tradable goods, the most important of which are agricultural crops — were too impoverished, unorganised and powerless to form a constituency with the clout of the one that benefited from the government's subsidy, expenditure and protection policies. This meant that reform efforts would remain motivated primarily by external pressure, with weak local support, and that the government would implement changes reluctantly and only in part.

This argument, first made in 1987, prior to the collapse of the reform effort, appears to have been verified by the history of reform efforts under the Kaunda regime [Jansen, 1987]. The question to be addressed now is what is the motivation for reform under the Chiluba regime? It appears that there is a genuine desire to

implement policy reforms, and already many bold steps have been taken. But there is a real danger that the hardships required, because of the dire financial straits of the country, may result in a premature end to the regime. This danger will be minimised if care is taken to allocate the extremely limited resources in such a way that long-run development is maximised and short-run hardships minimised[9].

It appears that one of the first lessons to be learned from the Zambian experience is that motivation for the reforms must genuinely come from the regime in power, not simply be imposed by outside donors. On the surface it would appear that Zimbabwe has taken note of this requirement. In presenting the ESAP programme, Senior Finance Minister Bernard Chidzero also stresses that it is not yet another generic structural adjustment programme forced on yet another African government by the IMF and World Bank. However, it remains to be seen whether the Mugabe government will continue to identify with the programme — and to implement it — as popular discontent, intensified by drought-related shortages, increases.

Pitfall Two: Political Dreams

Reform hurts. This reality is understandably avoided by elected governments worldwide who wish to remain in power and therefore ensure their constituencies that "you can have it all". It was this political dream of both the Zambian and Zimbabwean governments at independence, understandable as it may be given the colonial heritage, that contributed to the lack of fiscal discipline and unsustainable allocation of resources to consumption rather than to productive investment. The result was policy nightmares, i.e. the death and rebirth of inefficient and bankrupt marketing and credit parastatals, and the proliferation of complex parastatal and consumer subsidy programmes. These included, in the case of Zambia, reform packages that were doomed to failure because the political commitment to implement them when difficult tradeoffs needed to be made was lacking. The reinstatement of the maize subsidy and termination of the foreign exchange auction are two important instances of this in the case of Zambia. The required tradeoffs between consumption and investment, between producers and consumers, must be made explicitly and explained clearly to the electorate and the elected.

It is also important to minimise the required tradeoffs by incorporating measures designed to increase efficiency in the reform programmes. As the example of maize policy in Zambia shows, this often requires a co-ordinated phasing out of subsidies, so that the private sector is in a position to provide competition with, or replace, parastatal monopolies. The major inefficiencies in the food system in Zambia provided the opportunity for reducing the social costs of adjustment by taking actions which were effective in raising its efficiency [Kydd, 1989]. Unfortunately, the continuation of maize subsidies complicated the task of marketing system reforms. In the case of Zimbabwe, the targeted reduction in parastatal inefficiencies may be hindered by the lack of effective management.

Pitfall 3: Unrealistic Speed

While it is recognised that reforms cannot happen overnight, it is more difficult for African governments and outside donors and multilateral agencies to agree on what is a realistic speed for reform. In the case of Zambia, in hindsight it appears that the IMF and the World Bank may have insisted upon too fast a rate of change. The goal under the new reform programme, of balancing the budget within two years, also seems unrealistic.

Again, it appears that the Zimbabwean government may have successfully addressed this issue. The ESAP programme calls for phased policy reforms over a five-year period. The current drought, the worst in decades, may require a further slowing down of the programme.

Pitfall 4: Political, Social or Economic Unsustainability

For a reform effort to succeed, it must be sustainable — politically, socially and economically. This is perhaps the most difficult criterion to meet and incorporates all the previously discussed constraints to success. It requires that the reform effort be comprehensive and be sequenced in such a way that no one group is squeezed to such an extent that it is forced to oppose the reforms, and in so doing, provides a constituency that will gradually increase during the fairly extended period of time during which the sacrifices required by the reform effort increase or persist.

Zambia throughout the 1980s failed to come up with a sustainable reform programme that could result in increased rural support. Some aspects of Zambia's adjustment programme in recent years appear to have helped farmers — or at least some groups of farmers — but others made little impact on priority groups because vital blockages had not been removed first. Perhaps a key message to derive from these experiences is the pivotal importance of sequencing.

Devaluation and financial liberalisation can provide important incentives for farmers, if, first of all, provision of inputs and the marketing of outputs are made efficient. Without the latter, only the better-off farmers will benefit, and others will merely see increased interest rates and higher prices for inputs and equipment. Furthermore, devaluation by the mechanism of the auctions, without first building in safeguards to ensure that priority inputs for agriculture were imported, threatened the very sector that devaluation was intended to benefit.

It is clear from Zimbabwe's brief reform experience that decontrol of agricultural inputs, without at the same time decontrolling prices of agricultural outputs, can lead to major problems for producers of controlled crops. This results from the fact that producer prices are announced once a year, while input prices are allowed to increase at will. The effect of this anomaly has been felt very strongly in the dairy and beef sectors, prompting the government to introduce (belatedly) minimum prices, thus deviating from the fixed-pricing system.

Moreover, the partial liberalisation of maize marketing, while in keeping with ESAP, falls short of providing adequate incentives for private sector participation. Private sector traders are constrained by the retention of the GMB monopoly of maize marketing in the commercial surplus-producing areas as well as by continued limited access to foreign exchange for vehicles and spares, and inadequate rural roads and marketing infrastructure.

If Zambia and Zimbabwe are to succeed in their reform efforts in the 1990s they must incorporate appropriate sequencing and continuous monitoring and adjustment of the reform effort. Currently in Zimbabwe it appears that there are problems of sequencing and comprehensiveness. There has been little evidence of measures taken to mitigate the adverse impact on vulnerable groups. Although the government has recognised from the start the need to put in a place a package for this group, it is now two years into ESAP and nothing concrete has materialised. While the drought has clearly exaggerated this impact, it is clear that failure to take timely action may doom the reform effort.

Moreover, as was the case in Zambia, failure to control budgetary expenditures, which was made possible by expansionary monetary policy, led to imbalances in external trade and fuelled inflation. Farmers have been squeezed, particularly dairy and cattle producers, some to the point of destroying their productive assets, because the price of their inputs was decontrolled without a concomitant decontrol of their output prices. This has however now been corrected to some extent, as both milk and beef prices operate on the basis of floor prices, thus giving the marketing boards flexibility to adjust prices with the rising input and marketing costs.

Lastly, but perhaps most importantly, the land acquisition bill shortly to be enacted in Zimbabwe could contribute to economic unsustainability, in the longer term if not in the short term. Until the political dream that every citizen, regardless of ability to use it productively, has a right to land is abandoned by politicians as well as technocrats, the sustainability of the agricultural sector will be seriously impaired.

VII. SUMMARY ASSESSMENT: IMPACT OF POLICY REFORMS ON AGRICULTURE

The current reform efforts in both Zambia and Zimbabwe face formidable obstacles. The heavy weight put on redressing social imbalances, and in directing and controlling, tilted both these economies in a non-sustainable direction from early in the post-independence period, with largely unrecognised deleterious effects on the productive sectors, and particularly the agriculture sectors. But current reform efforts in both countries have the potential to reverse this process and to make possible improvements in standards of living and enhanced agricultural sector performance.

On the macroeconomic side, current ongoing reform efforts in both countries are making positive changes in monetary, fiscal, trade and exchange-rate policies. The real exchange-rate devaluations are enhancing export performance and for agricultural commodities whose prices are not set by government, removing the strong disincentives to production that our analysis has highlighted.

The removal of subsidies and the resulting parastatal deficits will prove difficult, particularly due to the recent severe droughts which require substantial costly imports of grains. As we have shown, the agricultural parastatal deficits are primarily the result of consumption subsidies to largely urban residents and to high operating costs due to uneconomic services to producers in remote areas and to management inefficiencies. Only rarely have they been the result of subsidies to agricultural producers, who for most crops have received prices below their border-price equivalents. To the extent that deficit reductions are not achieved through increases in consumer prices or through increases in efficiency, agricultural producers are likely to be negatively impacted by either decreases in floor prices or curtailment of services, particularly to smallholders. Already increases in consumer prices are becoming more difficult as real incomes are declining with the escalating inflation. This largely constrains parastatal deficit reduction through increases in selling prices as well as impeding the achievement of cost reduction.

In the case of both Zambia and Zimbabwe, macroeconomic reform has resulted in high rates of inflation. The sharp devaluations, while leading to significantly higher import costs, have not been matched as yet by strong growth in production for either the local or export market. While in part due to drought, this development also reflects blockages created by the lack of co-ordinated sectoral policies.

As this paper has tried to show, micro- and macro-policies are both critical to sectoral performance and must be closely linked. In Zambia the failure to eliminate consumer subsidies has blocked numerous attempts to liberalise crop-pricing and marketing policies. Even if crop pricing and marketing is further liberalised, as is called for in both country's ongoing macroeconomic reform programmes, improvements in production, particularly in the small-scale sector, will be limited by shortfalls in the provision of agricultural support services. In both countries the absolute and relative amount of resources devoted to these have been decreasing in real terms. Moreover, current land policy is impeding the development of viable credit provision schemes for smallholders.

Both the Zambian and Zimbabwean agricultural sectors have a great potential for expanding their contribution to food self-sufficiency, net foreign exchange earnings, and employment. The achievement of this potential will be neither easy nor quick. Effectively sequenced implementation of both macro- and micro-policy reforms is the ongoing and extremely challenging task being faced by both the Mugabe and Chiluba governments. While donor support can assist, the primary responsibility and credit will rest with these governments and their people.

NOTES

1. On 11 November 1965 Rhodesia unilaterally declared its independence from Great Britain.

2. In a recent agricultural sector memorandum, the World Bank diplomatically addresses this tradeoff as follows: "Given the amount of uncultivated arable land in Natural Regions I-III and the currently available technology, removing more than 3.5 million hectares from the LSCS would significantly reduce production in that sector. This reduction in total agricultural production is due to the yield gap between farms in the LSCS and resettlement areas. Hence **until** the productivity of the resettlement (or replacement) areas increases, redistribution of land in excess of 3.5 million hectares will not be feasible if current production levels are to be maintained." [World Bank, 1991a, Volume 1, p.6].

3. A product declared to be "controlled" by the Ministry of Lands, Agriculture and Resettlement cannot be marketed in commercial areas through any channel other than the parastatal organisation designated for such purpose. In communal areas, until recently, private trade was limited to movement within a communal area.

4. For a regulated product, free trade is allowed in all areas but the parastatal is obliged to purchase all surpluses offered to it by producers [residual buyer].

5. It must be noted that some producers, particularly in more remote locations, may not actually have received these prices due to weaknesses in implementation.

6. This methodology is explained in detail in Jansen, 1988.

7. This is of course offset to some extent for farmers using imported inputs.

8. The direct and indirect effects of pricing policy on the agricultural sectors of 18 countries, including Zambia, are presented in a recent World Bank study, *The Political Economy of Agricultural Pricing Policy*, edited by Anne Krueger, Maurice Schiff and Alberto Valdes, 5 volumes. The results for Zambia are presented in Volume 3, Africa and the Mediterranean, and present the analysis done by Jansen.

9. The report that 16 per cent of the government budget will be allocated to defence is clearly worrying in this regard.

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