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## ***A REVIEW OF ZIMBABWE'S AGRICULTURAL ECONOMIC POLICIES: 1980 -2000***

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## ABBREVIATIONS AND ACRONYMS

ACP	African, Caribbean and Pacific
AFC	Agricultural Finance Corporation
AGRITEX	Agricultural, Technical and Extension Service
AMA	Agricultural Marketing Authority
CA	communal areas
CGE	competitive general equilibrium
CMB	Cotton Marketing Board
COMESA	Common Market for Eastern and Southern Africa
CPA	Cotonou Partnership Agreement
CSC	Cold Storage Commission
CSO	Central Statistical Office
DMB	Dairy Marketing Board
DFID	Department for International Development
EEC	European Economic Community
EPA	Economic Partnership Agreement
ESAP	Economic Structural Adjustment Program
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FPL	Food Poverty Line
GDP	Gross Domestic Product
GMB	Grain Marketing Board
GoZ	Government of Zimbabwe
ICES	Income, Consumption and Expenditure Survey
ICRISAT	International Centre for Research in the Semi-Arid Tropics
ITDG	Intermediate Technology Development Group
LDC	less developed country
LSC	large-scale commercial
NGO	non-governmental organisation
NR I, II, III, IV, V	Natural Regions
PAAP	Poverty Alleviation Action Plan
PASS	Poverty Assessment Sample Survey
RA	resettlement area
SADC	Southern Africa Development C
SAM	social accounting matrix
SDF	Social Development Fund
SSC	small-scale commercial
TPL	Total Poverty line
UNDP	United Nations Development Programme
WB	World Bank
WTO	World Trade Organization
ZANU (PF)	Zimbabwe African National Union (Patriotic Front) – ruling party
ZIMACE	Zimbabwe Agricultural Commodity Exchange

## EXECUTIVE SUMMARY

This paper has been produced as part of the DFID-funded project “Institutions and Economic Policies for Pro Poor Agricultural Growth”, which aims (inter alia) to:

- enhance and promote understanding of the role of and interaction between institutional, micro-economic, macro-economic, and international factors in determining the scope for pro-poor agricultural growth, comparing labour and land scarce areas;
- identify appropriate policy initiatives to promote pro-poor agricultural growth.

The project is working in India, Malawi and Zimbabwe.

This paper aims to

- give an overview of the developments in the agricultural sector since independence in Zimbabwe and of the nature of poverty within the country;
- highlight policies within the sector that have had or could have the greatest impact on poverty reduction.

Because of the difficulty of analysing and using current experience to predict future paths and policies for Zimbabwe, most of the analysis in the paper terminates around 1999.

The paper notes the importance of agriculture to the Zimbabwean economy, but argues that the agricultural sector has not yet made a significant or lasting contribution to poverty reduction within the country since independence.

### Overview of Poverty in Zimbabwe

Poverty in Zimbabwe is primarily a rural phenomenon, although urban poverty has risen alarmingly in the 1990s. In rural areas, poverty is inextricably linked to the highly skewed distribution of land, with the majority of rural residents consigned by colonial governments to live in areas of low agricultural potential. From there, they were expected to provide a source of cheap labour for white-owned mines, industries and the commercial farms that occupied the main areas of high potential agricultural land.

The percentage of the population classed as poor has shown an increase in the post-independence period and particularly in the 1990s. Two major surveys (ICES and PASS) conducted in 1995 showed the proportion of the population classed as “poor” to be in excess of 60%. However, the absolute figures for those in poverty are crucially dependent on the poverty line chosen. Using the poverty line adopted by the International Development Targets, i.e. the number of people with incomes under US\$1 per day, (DFID 1999) estimate that there are around five million poor people in Zimbabwe (i.e. around 40% of the total population). They note that the high level of inequality in Zimbabwe produces much higher poverty figures than might be expected given average income levels for the country as a whole.

Poverty is most highly concentrated in the so-called communal and resettlement areas, and the incidence of poverty also increases as one moves into the lower potential agro-ecological zones (natural regions IV and V, according to the local classification<sup>1</sup>). More rural people live in natural region IV than in any other natural region, so consequently the largest number of rural poor is found in this region.

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<sup>1</sup> Land in Zimbabwe has been classified into five natural regions based on rainfall and type of agriculture. Communal farmers are not well represented in the higher potential regions that are dominated by commercial agriculture.

Poor households tend to be characterised by the following features: large household size, high dependency ratios, older or very young household heads, small land holding, and low levels of education. The activities the household engages in are also important. Poor households tend to be food crop farmers, migrant workers in communal areas or workers on commercial farms. Households with diversified income sources (especially having one or more members in wage employment) tend to experience less poverty and to be less vulnerable. Inequality is high even within the communal areas themselves. Livestock holdings are a key indicator of wealth (and a critical production asset) amongst smallholder households.

The incidence and impact of AIDS have escalated dramatically in Zimbabwe in the 1990s. (WHO 2000) estimate that, at the end of 1999, around 1.4 million adults (i.e. 25% of the population aged 15-49) were HIV-positive, along with 56,000 children. Information on HIV/AIDS incidence in rural areas is, however, extremely patchy, as most monitoring is conducted in hospital and clinics that, even if they outside the main cities, are still located in towns. Outside Harare, Chitungwiza and Bulawayo, the proportion of attendees at antenatal clinics who tested positive for HIV infection rose from 12% in 1990 to 37% in 1995. There is, however, considerable variability between sites. Economically, rural households in which a member(s) contracts AIDS suffer both from loss of labour and also from reduced cash availability due to increased medical expenditures.

## **General Background to the Agricultural Sector**

Agriculture is a vital sector of the Zimbabwean economy providing employment and livelihoods for 70% of the population. Depending on weather conditions, the sector also contributes between 40% and 50% of total export revenues. Agricultural performance varies dramatically year-to-year depending on the rainfall and these vagaries impact more powerfully on the lower potential areas (and consequently more on communal farmers than on commercial ones). Since 1980 the general trend in production in both the commercial and the communal areas has been upwards, with strong early gains following the end of the liberation war. However, since 1985-6 agricultural production growth has not kept pace with population growth in the communal and resettlement areas. This provides an important part of the explanation for the disappointing story on poverty alleviation.

## **Land Distribution and Policy**

Land distribution has long been a thorny issue. The imbalance in the distribution of land at independence has its roots in the appropriation of African land by settlers. The immediate priority at independence was land distribution to address the inequalities of the colonial era. The first phase of land redistribution up to 1985 went very slowly with conventional wisdom placing the blame on the willing buyer-willing seller provision of the Lancaster House constitutional agreement and the financial constraints on the Zimbabwean government in purchasing land and providing investment for the resettlement areas. However, it can be argued that the pace could have been quicker with changes to the Town and Country Planning Act to allow sub-division of farms and the introduction of a Land Tax to encourage sales. Budgetary expenditure for the land reform programme was also cut even before 1985. This suggests that the political will may not have matched the rhetoric for land redistribution.

After 1985 compulsory acquisition of land was allowed but there was not a great increase in the rate of redistribution. By the end of the 1980s less than 20% of the land controlled by commercial interests at independence had been redistributed to small-scale producers.

At the same time, initial assessments of the land resettlement programme showed disappointing performance by newly resettled households, who often lacked basic complementary assets to farm

their land. These assessments also highlighted the need to adequately service resettlement areas both in terms of infrastructure and of services such as extension advice and credit provision. However, assessments of the same schemes in the 1990s have shown that, with time, the resettled households have been able to enhance their asset base (especially livestock and ploughing equipment) through reinvestment of profits and to become stronger, independent producers. Nevertheless, it is still far from clear that the existing, extensive approach to resettlement represents efficient land use.

After 1992 land redistribution was again signaled as a major government priority but, as before, few resources were provided to achieve the aim. However, as 1980s advances in service provision to communal areas were rolled back for lack of funding and public discontent with the government's structural adjustment programme (ESAP) increased, the government returned to the land redistribution issue to maintain political support in the rural areas for the 1995 elections and beyond.

There is considerable potential for land redistribution, especially given a relaxation in the nature and structure of the resettlement areas. (World Bank 1995) advocated a relaxation in the subdivision controls in commercial farming areas, together with a land tax that would promote market-based land redistribution. The resulting mixing of commercial and smallholder agriculture could have paved the way for out-grower arrangements, allowing smallholders to access technical assistance and high value markets. Whether the current land resettlement programme will allow any core commercial estates to remain so that this scenario can develop in future is uncertain.

Meanwhile, the best use of confiscated commercial land in natural regions IV and V is unclear. The costs of settling families with small herds on individual farms are very high and the economic returns and environmental effects are probably both negative. One option is that land on some large estates is simply reabsorbed into neighboring communal areas, to increase the grazing area available for local livestock.

The importance of irrigation is well recognized and numerous (small) schemes have been developed within the smallholder sector. However, these still represent less than 0.1% of total communal area and resettlement land. Potential for further irrigation exists and studies conclude that smallholder irrigation in Zimbabwe can be financially and economically viable. This, however, requires farmer participation in scheme planning and management, cultivation of high value crops, and the existence of supporting infrastructure especially roads to allow links to markets.

## **Output Marketing**

During the 1980s agricultural marketing was dominated by four parastatals, through which the state effectively controlled prices. The aims of controlling producer prices were to improve resource allocation, promote self-sufficiency in food production, reduce price and income instability, and retain expertise and capital within the agricultural sector. Unfortunately, the attempt to achieve these aims did not come cheaply, with the marketing board deficits accounting for up to 5.8% of total government spending in the mid-1980s. These deficits were unsustainable and were a major factor leading to the adoption of ESAP in 1991.

Reform of the marketing boards began in 1990 with the ultimate aim of full commercialisation, and the government also began to withdraw from direct price intervention. However, this withdrawal has never been completed, especially in the maize sector and liberalisation can be seen as only partial.

The establishment of the independent commodity exchange ZIMACE was an important response to the deregulation of agricultural trade. However, the 5-ton minimum transaction meant that



smallholders did not trade through ZIMACE. In July 2001 maize and wheat became controlled products again and ZIMACE could no longer provide an alternative marketing channel to the GMB

### **Agricultural Support Services**

After 1980 there were strong moves to redirect extension services to the smallholder sector, expenditure increased and a greater coverage of communal areas was achieved. The efforts of AGRITEX are considered to be a key factor in the rapid uptake of hybrid maize varieties by smallholders in the early 1980s. Extension services have also been shown to have a positive impact on crop production in resettlement areas. Expenditure on extension services could not be maintained, though, and in the 1990s real government spending on extension has declined considerably. Meanwhile, Agritex has primarily been concerned with production and its marketing section remains small. There is a need to focus production advice on identified market opportunities and develop a more coordinated approach.

At the time of independence agricultural research priorities were also redirected towards the problems of smallholders in drier regions. However, the emphasis placed on research declined in the 1980s and the research system deteriorated. Consequently little progress has been made for the priority group.

There has been little progress in making formal financial services available to the rural poor. There was a rapid expansion of credit provision to smallholders in the early 1980s with the government underwriting the losses of the AFC. However, due to problems with poor management and poor supervision of lending, compounded by poor harvests, serious loan repayment problems occurred. By the early 1990s the AFC had been forced to scale back lending to smallholders. There has been a growth in rural savings clubs and contract farming schemes (albeit not sufficient to compensate for reduced AFC activity) and in recent years the GMB has been advancing credit to smallholders to raise production.

### **Agricultural Inputs**

During the 1980s Zimbabwe's Ministry of Agriculture controlled inputs production and trade through multiple mechanisms. Undoubtedly these controls had some negative impacts, e.g. lack of competition amongst fertiliser suppliers resulted in farmers having limited choice of fertilisers. On the other hand, the 1980s saw significant successes in the area of input provision to smallholder producers. The seed distribution system is a good example with rapid expansion of hybrid maize varieties. The ESAP reforms brought about significant changes in the provision of agricultural inputs. By 1995 all price controls on fertilisers were removed, though they are still managed via import permits. Moreover, liberalised markets are not without their problems: setting up marketing channels in rural areas is expensive and there is a lack of technical knowledge amongst dealers in these areas. The problems are especially acute for crops such as sorghum and millet grown in the drier areas. The impact of ESAP on profitability of fertiliser use has not been as marked as in some other Sub-Saharan countries, for example Ghana. However, there is some evidence that use has declined. This could be explained by the dismantling of the package of measures that supported smallholder maize production in the 1980s, with the decline in the availability of credit being especially important. The situation has not been helped by the major droughts in the 1990s either.

## **Livestock**

The importance of livestock holding to rural households in Zimbabwe is noted, as livestock perform numerous production, consumption and savings functions for smallholders. Investment in livestock is often seen as a pathway out of poverty. Livestock holding in commercial areas has declined since 1980, in contrast to the number of livestock held in communal areas, which has risen more quickly than the corresponding growth in human population. The poverty reducing impact of this depends on the distribution of the increases, which is disputed. Some surveys have indicated that the majority of cattle were found in the lower potential agro-ecological areas. The impact of droughts, though, may have been to shift the balance towards higher potential areas.

Historically the parastatal Cold Storage Commission (CSC) has enjoyed a dominant position in livestock purchase, including from communal producers, although they only account for 5% of CSC supplies. Since the 1980s, CSC has faced competition from private abattoirs, although it retains a monopoly on export of beef to the EU. Nevertheless, imperfect competition amongst buyers within communal areas continues to keep down the prices paid to smallholder producers.

## **Macro-Economic and Trade Policy**

An awareness of macro-economic and trade policy is important in considering agricultural production incentives. The aggregate barter terms of trade for agricultural products within Zimbabwe rose after independence, but this was driven by a doubling in the real price of cured tobacco. Excluding tobacco, the terms of trade for agricultural producers declined. The exchange rate was also overvalued by an estimated 50-80% during the 1980s. Once the overvalued exchange rate is taken into account, the domestic price of all main crops was below what it might have been in the absence of price controls during most of the 1980s. The devaluation of the exchange rate in 1991 (by 34%) still left it 25% overvalued and overvaluation has persisted throughout the 1990s.

Overall, Zimbabwe's post independence experience clearly shows the importance of pricing in ensuring good agricultural performance. However, the same experience can also be used to show that prices are not all that count in achieving production growth.

Meanwhile, Zimbabwe has entered into a number of trade agreements with the EU (which constitutes the market for 50 % of Zimbabwe's exports) and within Africa, especially with South Africa.

The paper highlights the importance of non-farm employment to the livelihoods of poor rural households. Overall it appears that employment opportunities elsewhere in the economy did little to assist rural poverty reduction either in the later 1980s or 1990s. Communal areas continued to absorb much under employed labour and in some cases to suffer from unsustainably high population densities. Expanded opportunities to seek employment in South Africa did arise in 1994. Surveys in Matabeleland in the later 1990s showed high levels of female-headed households, with males in employment in South Africa. However, there is little evidence that remittance income was invested in improved agricultural production in these risk-prone, semi arid regions.

## **Drought Management Policies**

In the period 1980 to 1995 Zimbabwe experienced 4 major droughts; consequently drought management policies are imperative. In the mid-1980s a Public Works Programme was initiated in drought-stricken areas. In 1992 this provided aid for 75% of the rural population. Seed and fertiliser packs have also been distributed in badly affected areas. In addition, some efforts have

been made to lessen the impact of droughts themselves. Extension advice has concentrated on multi-cropping and terracing, together with the introduction of new drought resistant varieties. In some parts of natural region V it is estimated that households may only have a reasonable harvest once every five years. In such areas crop agriculture is unlikely to provide a significant engine for poverty reducing growth.

### **Commodity Case Studies**

To tie some of the foregoing threads together, the paper examines two case studies of supposed crop “success stories”: smallholder maize and cotton. Trends in smallholder maize production in the early 1980s prompted claims about a Zimbabwean “green revolution”. However, in many ways this success story has proved to be short lived. The factors behind the success included the investment in maize research (by colonial governments), the setting of prices at an attractive level and the expansion of Grain Marketing Board (GMB) depots and seasonal buying points into the communal areas. In addition, in the 1980s credit was made available to promote use of improved seed and fertilisers by smallholder producers. (A second expansion in communal maize production in the 1990s occurred without this facility, however). Consequently maize production virtually doubled in the period 1980-86 and an increasing proportion of the marketed maize surplus came from the smallholder sector. However, this success was achieved at high cost. The GMB could not avoid going into deficit with high storage costs and the maintenance of pan-territorial pricing. The single marketing channel system also supported a high cost processing industry that led to an unnecessary premium being paid by poor consumers for their staple food item.

Despite the system of pan-territorial (and pan-seasonal) pricing that subsidised production in the more remote regions, smallholder production expansion was limited to a relatively small proportion of better-endowed households in higher potential areas. Most poorer households remained net purchasers of maize. ESAP contained proposals to liberalise grain marketing and gradually the maize market was opened up to private traders. The dominant position of the large-scale roller mills was exposed to competition from small-scale hammer mills that grew in large numbers in urban and rural areas. The most notable early success of the reforms was that the maize meal bill faced by poor consumers did not dramatically increase on the removal of subsidies, as consumers switched to the whole maize meal.

The reforms initially worsened the budgetary situation for the GMB, as it was left servicing the remote areas of the country without cross-subsidy from more profitable areas. Furthermore, GMB has continued to intervene in maize markets and this has been a major cause of market instability.

Largely due to trends in the commercial sector, national maize production per capita continued to decline in the 1990s. In 1997 GMB exported significant quantities of maize, in contravention of their mandate to maintain a food security buffer stock. This resulted in price rises and ensuing riots in Harare. The small hammer millers suffered from the fall-out from this crisis, as price controls were reintroduced on commercial maize meal.

In 2001 the situation worsened as a result of reduced planting by commercial farmers and poor weather. With debts and low stocks, the entire GMB board was suspended leaving the Minister to control operations. More depots were opened to collect grain in a move back to 1980s’ policies, but eventually the government had to ask for assistance from the World Food Programme.

Standing back from the current difficulties, the paper highlights the general lessons learnt from the last 20 years. Firstly, better-resourced smallholders are capable of producing surpluses of maize if inputs, credit, extension advice and marketing outlets are available and prices are attractive. Secondly, land reform should greatly increase the number of smallholders able to do

this. Thirdly, the poverty reduction impact of the 1980s production increases was really limited to the high potential areas. Finally, GMB has not exhibited the flexibility or independence to perform its price stabilisation or food security functions effectively.

Cotton has been another commodity to experience some successes. In 1980 smallholder producers accounted for only 10% of national seed cotton production, but by the end of the 1980s they accounted for 50%. This was partly because Cotton Marketing Board (CMB) policy was to expand into the communal areas and partly because commercial farmers moved out of cotton production, as government directives that CMB provide lint to the domestic spinning industry at subsidised prices restricted the prices that CMB could offer producers. In 1994 a new (private) company Cottco replaced CMB and this was joined in the market by a limited number of competitors. For much of the 1990s producers received an unparalleled (for Africa) proportion of the export parity price for their seed cotton. Cotton companies are expanding into new production areas, most of which are in natural region III and IV. This expansion is being assisted by successful input credit schemes. Consequently by 2000 80% of cotton production was accounted for by smallholders.

### **Linking Policy to Trends in Poverty**

The effects of policy on poverty are difficult to discern in the 1980s. However, in the 1990s the situation is clearer: poverty worsened. This has been attributed to the impact of ESAP, the frequency of droughts and the full onslaught of HIV/AIDS. The increase in poverty has been greatest in urban areas, although the overall poverty situation remains more acute in rural areas.

Following independence the government gave high priority to the reduction of poverty, expanding rural infrastructure and trying to address racially-based income inequality. The methods used to alleviate poverty turned out to be unsustainable. The large social spending could only be sustained if the economy was growing rapidly, which was not the case in the 1980s. It was realized that ESAP would have a negative effect on vulnerable groups, so the government introduced the Social Development Fund to cushion these groups. The idea was good, but implementation was problematic, funding declined, it was not well targeted and had significant biases. Drawing on the lessons learnt, the Poverty Alleviation Action Plan was introduced in 1994. Despite its improved conception, poverty grew at a rate too fast for the programme to cope with and poverty levels rose.

The paper addresses the question of the impact on poverty of the smallholder maize “revolution” of the early-mid 1980s. Although the main participants were smallholders in natural regions II and III with above average landholdings, poorer households could have benefited through increased labour demands, the consumption demand generated by the increased spending power of the surplus households or possibly by the contribution of enhanced agricultural growth to overall economic growth. Of these possible linkage effects, the paper hypothesises that the first two occurred, but their impact was probably only felt by households in close proximity to the surplus producers (i.e. largely within Mashonaland). Meanwhile, due to the inefficiencies of the maize marketing system and the increasing margins reaped by commercial millers, the potential benefits of the maize “revolution” to the wider economy (e.g. lower real food prices) were dissipated. The paper concludes that for smallholder agricultural growth to stimulate broader processes of poverty reduction, it should translate into lower real food prices and should not be achieved at too high a fiscal cost. Also, agricultural growth in higher potential communal areas will have to be stronger and more enduring than was the case in the 1980s to impact on the distant parts of the country.

The question, therefore, arises as to whether agricultural investment (for example, in research) should be concentrated in the higher or lower potential areas. There is still plenty of scope for

poverty reduction in the higher potential areas and returns to investment may be higher in these areas than in the less densely populated lower potential areas. On the other hand, the majority of the poor are located in the lower potential areas and the trickle down effect to these areas may not be strong.

### **Towards a Pro-Poor Agricultural Policy**

The poor performance of agriculture in reducing poverty has prompted a number of suggestions as to priority actions to foster growth in the smallholder areas, including greater emphasis on research, extension and input supply, further trade liberalization and changing land reform proposals. An important result obtained by (Bautista and Thomas 2000) is that the combination of land reform with trade liberalization and maize price decontrol leads to greater gains than the sum of the component parts and hence there is a complementarity between asset redistribution and market liberalization.

Clearly, land reform has to play a part in any pro-poor agricultural growth strategy for Zimbabwe and a reform that retains viable existing “core” enterprises whilst redistributing peripheral land to smallholders has compelling economic logic. Even within this scenario, however, the exact magnitude and distribution of benefits will depend on who receives the redistributed land. Maximum short-term poverty reduction might be achieved by redistributing land to the near-landless. However, this will do least to take pressure off over-exploited resources within communal areas and may lead to the longest lags before a significant supply response is observed within the resettled lands.

The paper notes the potential fiscal trade-offs between the liberalization plus land reform agenda and the public investment-led agenda. Whilst we have not found conclusive evidence for the importance of credit to broad-based smallholder agricultural growth, we also pose the question of how credit will be delivered to smallholder producers in a fully liberalised market environment.

Finally, the poor road infrastructure and underdeveloped nature of transport services within Zimbabwe’s communal areas remains a key issue. Whilst the situation may have eased somewhat in the early 1990s (as foreign exchange constraints in the late 1980s made imported vehicles and spare parts hard to come by), investment in this area would seem to offer a good opportunity both to stimulate agricultural production in less favoured areas and to facilitate the mobility that allows other, non-agricultural activity to flourish.

### **Modeling Scenarios**

The paper concludes by suggesting various scenarios that the “Institutions and Economic Policies for Pro Poor Agricultural Growth” project might seek to simulate through its linked CGE and household models. These are divided into six scenarios to be handled primarily at macro level and two that are best handled within the household models.

#### *Macro Scenarios*

1. Enhanced investment in agricultural research: Given the difficulty in generating plausible costs and benefits for different research scenarios, the emphasis here should be on comparing the outcomes of increased agricultural productivity in major crops in high and low potential areas. For a given R+D expenditure, one might expect a higher rate of productivity increase in higher potential areas. However, given the distribution of poverty within Zimbabwe, this might not translate into greater poverty reduction.

2. Increased investment in extension provision: (Owens, Hoddinott et al. 2001) estimate the impact of 1-2 extension visits per year on agricultural productivity in selected resettlement areas. Assuming similar responses in other areas and drawing on local survey results showing proportions of households currently receiving this level of extension contact, costs and benefits of enhanced expenditure on extension could be estimated and their impacts on poverty simulated.
3. Transport investment: Transport costs could be compared with those recorded for other countries and the benefits from bringing them closer in line with international best practice could be simulated. This may involve investment in feeder roads. However, policies towards the transport sector are often as important determinant of comparative transport costs as the state of roads.
4. Maize price liberalisation: Following (Bautista and Thomas 2000), the growth and poverty impacts of bringing smallholder maize producer prices either to ZIMACE-equivalent levels or towards export parity price could be simulated, the difference this time being that impacts will be examined across a highly disaggregated smallholder agricultural sector.
5. Land reform: two approaches, as per (Bautista and Thomas 2000).

Growth in non-agricultural employment: the benchmark against which all agricultural policy scenarios should be assessed if the claim is to be substantiated that agricultural growth is the key to successful poverty reduction in Zimbabwe.

#### *Household-Level Scenarios*

7. Credit access: The production response of different household types can be examined with and without credit access. The impact that different credit rationing approaches (e.g. based on asset holdings or on debt capacity in bad years<sup>2</sup> (von Pischke 1991)) have on poverty levels can also be simulated.
8. AIDS: Making assumptions about labour availability and using available data on household medical expenditure, the production response of different household types can be examined with and without one member suffering from AIDS. This will give a crude, but potentially useful, assessment of the contribution of AIDS to poverty levels.

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<sup>2</sup> All scenarios can, of course, be run for good and bad agricultural seasons.

# 1 INTRODUCTION

The agricultural sector has the potential to make a significant contribution to poverty reduction in Zimbabwe. The sector is the backbone of Zimbabwe's economy and will continue to be so for the foreseeable future. Although contributing less than one fifth of total GDP, it provides livelihoods for 70 percent of the population, including many of the poorest. In addition, historically, close to half of total export earnings have originated from agriculture and forestry (Government of Zimbabwe 1995). It is thus a key sector in determining overall economic performance.

The agricultural sector in Zimbabwe is highly dualistic. In the commercial sector, land is privately owned, production is for the market and farms are run as commercial profit-seeking enterprises. By contrast, in the smallholder sector, households do not have title to the land they farm, much of the production activity is family-based and subsistence production remains an important part of livelihood strategies<sup>3</sup>. This dualism not only affects income distribution within the sector but also has important consequences for the rest of the economy, particularly through its impact on the labour market.

This paper attempts to provide a descriptive inventory of the sector and the evolution of policies towards it in the post-independence period. It argues that, despite some well-known success stories, the agricultural sector has not yet, in practice, made a significant or sustained contribution to poverty reduction in post-independence Zimbabwe. The paper makes some suggestions, and raises some key questions, regarding a pro-poor agricultural growth strategy for Zimbabwe.

In general, the analysis in this paper stops at the end of the 1990s. Events since 1999 have been dominated by the barely controlled land resettlement process and by crisis management of the economy more generally. These have had major implications for many aspects of agricultural production and marketing even outside the commercial sector (e.g. GMB pricing and control policies, input cost and availability), but do not provide reliable insights into sustainable, long-term policy directions for Zimbabwean agriculture. Instead lessons from the future are drawn from the broader experience of the first two decades of post-independence agricultural policy. This period has witnessed a range of state interventions in the agricultural sector, with differential impacts and outcomes over time, space and type of rural household.

We begin the paper with a brief review of poverty in Zimbabwe (section 2) and of the agricultural sector, providing some general information on the sector, including the important agro-ecological divisions (Section 3). We then examine policy towards land distribution (Section 4), output marketing (Section 5), provision of agricultural services (Section 6), inputs (Section 7) and livestock (Section 8). In each of these sections we attempt to describe the situation at independence, the policies in the 1980s and the reforms that took place in the 1990s. Section 9 then considers the importance of macroeconomic and trade policy on agricultural performance and rural livelihoods. Following a review of drought management policies (Section 10), we then attempt to examine the combined impact of the various government policies on two commodity systems: maize and cotton, both of which have been held up as smallholder success stories at

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<sup>3</sup> The commercial sector can be disaggregated into large-scale (LSC) and small-scale (SSC). The smallholder sector comprises communal (CA) and resettlement farms – see Section 4. As in much of the rest of Africa, the rights of individual households within communal areas to the arable land they farm have been strengthening over time. Grazing land remains in communal ownership and is steadily being encroached by the expanding number of cultivators. Although subsistence production remains important in these areas, population growth and the monetisation of the rest of the economy mean that virtually all households regularly sell some of their agricultural produce.

different times since Independence (Section 11). The final section attempts to link the policy environment to the trends in poverty and to identify a pro-poor agricultural policy (Section 12).

## 2 OVERVIEW OF POVERTY IN ZIMBABWE

Poverty in Zimbabwe is primarily a rural phenomenon, although urban poverty has risen alarmingly in the 1990s. In rural areas, poverty is inextricably linked to the highly skewed distribution of land, with the majority of rural residents consigned by colonial governments to live in areas of low agricultural potential. From there, they were expected to provide a source of cheap labour for white-owned mines, industries and the commercial farms that occupied the main areas of high potential agricultural land<sup>4</sup>.

Trends in poverty since 1980 will be discussed in section 12. In this section we describe the main features of poverty in Zimbabwe in the 1990s. The discussion is based on two national Income, Consumption and Expenditure Surveys (ICES) - conducted by CSO in 1990 and 1995 – along with the Poverty Assessment Sample Survey (PASS) - conducted in 1995 by the Ministry of Public Service, Labour and Social Welfare, as part of the Poverty Alleviation Action Plan (PAAP). All three surveys were national in coverage. ICES used a sample of 14,000 households, PASS 15,000.

### 2.1. POVERTY LINES AND POVERTY LEVELS

**Table 1: Estimates of Overall Poverty in Zimbabwe in the 1990s**

	Proportion of Population (%) Classed as	
	Poor	Very Poor
ICES 1990	40.4	16.7
ICES 1990 (WB)	25	7
ICES 1995	63.3	35.7
PASS 1995	61	46

Note: ICES 1990 (WB) refers to the poverty estimates produced by (World Bank 1995) on the basis of ICES 1990 data.

Table 1 shows that, according to both surveys conducted in 1995, the majority of the population were classed as poor and over a third as very poor. This represented an increase in poverty over 1990 (the ICES 1990 and 1995 measures of poverty being directly comparable). The absolute figures for those in poverty are, however, crucially dependent on the poverty line chosen.

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<sup>4</sup> This is not to say that all (or even a majority) of those currently living in low potential areas could be accommodated on high potential land, if only such land were radically redistributed. Even under optimistic assumptions of resettlement capacity in LSC areas, the population remaining in CAs remains large. Thus, achieving the rehabilitation of, and increased productivity in, lower potential agricultural areas is a major challenge for pro-poor policy in Zimbabwe.



In the case of ICES, the very poor are classed as those with an expenditure level below the so-called Food Poverty Line (FPL), where:

“The FPL represents the minimum consumption expenditure necessary to ensure that each household member can (if all expenditure were devoted to food) consume a minimum food basket representing 2100 calories.”

(Central Statistical Office 1998), p26

Meanwhile, the poor (who by definition include the very poor) are classed as those with an expenditure level below the somewhat higher Total Poverty Line (TPL), where:

“The TPL includes an allowance for non-food minimum need requirements such as housing, clothing, transportation, health care etc.”

(Central Statistical Office 1998), p27

In 1990 the FPL was set at Z\$28.1 per person per month (Z\$337 p.a.) and the TPL at Z\$53.5 per person per month (Z\$642 p.a.). In 1995 the FPL and TPL were set such that, when converted to 1990 Z\$ using the consumer price index, their value was unchanged. (Central Statistical Office 1998) describes the FPL and TPL as “conservative” and the resulting estimates of poverty as “upper bound”.

A major criticism of the FPL and TPL is that they do not vary for urban and rural areas, even though many equivalent commodities may be cheaper in rural areas than in urban areas. (For example, in 1990 most poor urban households still had to rely on expensive commercial, roller-milled maize, whereas poor rural households consumed cheaper, less-refined, locally hammer-milled maize). Thus, use of a single FPL and TPL will tend to overstate rural poverty relative to urban.

(World Bank 1995) recalculate the numbers in poverty in Zimbabwe in 1990 using ICES data combined with their own estimates of costs of basic food and non-food items in urban and rural areas. The poverty lines for 1990 produced by their cost estimates are shown in Table 2:

**Table 2: Alternative Poverty Lines for Zimbabwe 1990 (Z\$ p.a.)**

	ICES 1990	World Bank (1995)	
	National	Urban	Rural
Poor	642	550	340
Very Poor	337	325	209

The figures in Table 2 highlight the cost differences between urban and rural areas. Given the much lower poverty line for rural areas (where the majority of the population live) than that used by CSO, these figures generate much lower estimates of the number of people in poverty than official CSO figures (Table 1).

PASS also used different food baskets and prices for urban and rural areas. However, the poverty figures generated by this survey have been criticised as being implausibly high, with claims, for example, that home consumption from garden plots was underestimated.

Meanwhile, (Cavendish 1999) argues that, if income from consumption of wild resources (ignored by all of the above surveys) is taken into consideration, estimated poverty levels may fall by as much as 50%.

An alternative approach to estimating poverty, which avoids some of the problems with consumption-based estimates but which may be weaker for doing so, is to adopt the poverty line used by the International Development Targets, i.e. the number of people with incomes under US\$1 per day. (DFID 1999) estimate that there are around five million poor people in Zimbabwe (around 40% of the total population) on this basis. They note, as do others, that the high level of inequality in Zimbabwe produces much higher poverty figures than might be expected given average income levels for the country as a whole.

## 2.2. WHERE DO THE POOR LIVE?

Table 3 (in which the figures for the poor exclude those classed separately as very poor) shows that poverty remains predominantly a rural phenomenon in Zimbabwe. (Note that this is despite the different food baskets used by PASS for urban and rural areas). Moreover, poverty is most acute in communal areas, where 84% of people were found to be either poor or very poor.

**Table 3: Poverty by Land Type in 1995**

<b>Sectional Classification</b>	<b>Very Poor(%)</b>	<b>Poor(%)</b>	<b>Non-Poor(%)</b>
<b>Communal Lands</b>	71	13	17
<b>Large Scale Commercial farms</b>	35	22	43
<b>Small Scale commercial Farms</b>	57	13	30
<b>Urban Areas</b>	21	18	60

Source: 1995 PASS main Report

PASS found 70% of households in resettlement areas to be either poor or very poor. By contrast, the 1995 ICES survey showed poverty to be higher in resettlement areas (88.1%) than in communal areas (81.7%). This finding has been criticised by (Deininger, van den Brink et al. 2000), who argue that:

- Data collection took place during a drought period, which would have affected resettlement households more acutely than communal farmers, because of the lower levels of off-farm income earned by the former;
- The ICES poverty line calculation does not use adult equivalence scale. Again, this tends to overestimate poverty in resettlement areas in particular, because of the large household sizes (large numbers of children) found there;
- The bias against consumption from home production would adversely affect resettlement areas, too.

Table 4 shows that, in 1995, the incidence of rural poverty increased as one moved into lower potential natural regions. As the largest number of rural residents are found in NRIV (just over 2.5 million in 1992), it is also clear that the largest number of rural poor are found in this natural region. In addition, whilst (Central Statistical Office 1998) does not provide figures on poverty incidence by land type by natural region, if incidence of poverty in LSC, SSC and resettlement

areas is assumed to be constant across natural regions, then we calculate that incidence of poverty within semi-arid communal areas is higher than that within higher potential ones<sup>5</sup>.

**Table 4: Poverty by Natural Region in Rural Areas**

Natural Region	Prevalence (%) of	
	Poverty	Extreme Poverty
I	62.4	36.2
II	71.6	41.2
III	77.3	51.4
IV	81.6	57.2
V	79.5	55.7

Source: (Central Statistical Office 1998), citing ICES 1995

(Central Statistical Office 1998) also calculates the highest incidence of rural poverty to be found in Matabeleland North (87.2% of households), followed by Mashonaland Central (85.2%), Matabeleland South (80.2%) and Masvingo (80.0%). However, even (Central Statistical Office 1998) admits that Mashonaland Central is an “enigma” - it has 74% of households in NRI and II, is located fairly close to Harare and is well served by transport<sup>6</sup> – whilst figures on livestock ownership quoted in section 8 suggest that Matabeleland North might fare better if it was wealth, rather than income, that was being measured.

### 2.3. CHARACTERISTICS OF THE POOR

According to (Central Statistical Office 1998), poor households tend to be characterized by the following features:

- large household size
- high dependency ratios
- older heads of households (though the very young household heads are also poor households)
- small landholding
- low levels of education.

The sex of the household head is also likely to be significant, though the exact nature of the impact is open to debate. Households with *de jure* female heads (i.e. widows, single unmarried women and divorcees) tend to have high incidences of poverty. Households with *de facto* female heads (i.e. the husbands are absent) are often less poor, providing the husbands send remittances (Cavendish 2000), (Rohrbach 2001)<sup>7</sup>.

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<sup>5</sup> Using 1992 population census figures and ICES 1995 national estimates of poverty incidence within land types, we calculate that poverty incidence within communal areas in NRIV to be 91%, compared with 82% in NRII. Arguably, however, when both figures are so high, the difference is academic!

<sup>6</sup> (World Bank 1995) notes that Mashonaland Central also fared badly in nutritional surveys. However, its recalculation of poverty levels based on 1990 ICES data showed Mashonaland Central to have one of the lowest incidences of poverty in the country.

<sup>7</sup> Note that these stylised facts are not supported by ICES data, which show that the depth and severity of poverty show very little difference between male and female-headed households. Contrary to expectations, the 1995 ICES survey showed *de facto* female-headed households to have the highest incidence of poverty. The nature of the *de jure* female-headed household was also important, with the widowed group appearing to fair the worst (Central Statistical

Apart from the basic composition of the household, another important determinant of poverty is the activities and income sources that the household can engage in. According to the PASS data, the categories of people most likely to be poor were food crop farmers, migrant workers in communal areas, workers on commercial farms in LSC and SSC areas<sup>8</sup> (Nkum 1998).

A 1984-5 study by (Jackson and Collier 1991) of 600 communal area households spread across all five main agro-ecological zones (though excluding Matabeleland) found that the poorest households were those that had relied on a narrow agricultural base for their income. Households that had diversified income sources experience less poverty and were less vulnerable. Access by even one household member to the formal labour market cut poverty by a half. However, (Jackson and Collier 1991) also noted that, whilst households that had specialized in wage employment had higher incomes, they were also more at risk through job loss. The importance of wage income is also demonstrated by Table 5.

**Table 5: Prevalence of Household Poverty by Whether any Household Member Avails of Salaries and Wages**

	Salaried/ Wage Worker		No Salaried/ Wage Worker	
	Poor	Very Poor	Poor	Very Poor
All Zimbabwe	45.4	16.3	80.7	54.5
Rural	55.7	27.5	86.0	61.3
Urban	38.1	8.3	52.2	17.3

Source: 1995/1996 ICES

Whilst (Jackson and Collier 1991) highlight the importance of access to some form of wage employment, they also found investment in livestock to be an important first step in diversification away from purely crop agriculture. Ownership of livestock, especially cattle, has important benefits for agricultural production activities, but can also contribute to household nutrition, income (through sales) and the ability to withstand difficult periods such as droughts (Section 8).

Additionally, (Nkum 1998) notes that the most vulnerable groups with low income are those with limited access to productive resources such as land, credit and technology. Together with the ability to access the formal labour market, Nkum found the most important poverty correlate to be the availability of land. Those with small or no land holdings are likely to be poor (Cavendish 2000). The poorest communal households rarely have financial savings with formal or informal intermediaries. Their main assets tend to be (small) livestock with limited amounts of durables such as implements and bikes.

As well as income and consumption based measures of poverty, techniques such as wealth ranking have been used in the resettlement areas and these basically support the income-based stratification of poverty. The main difference involved is the gender bias in the rankings. Whereas women tended to rank on the basis of visible assets such as clothes, dwelling, and durables, men tended to rank on the basis of productive assets such as land, cattle or capital equipment.

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Office 1998). The PASS data indicates that a feature of poverty is that most female-headed households in rural or urban areas are below the TPL (Nkum 1998).

<sup>8</sup> This group is often comprised of state sponsored migrants from Malawi and Mozambique.

Extension workers often ranked poverty on the basis of farming ability (Owens, Hoddinott et al. 2001).

Finally, (Jackson and Collier 1991) also highlight the large inequality within communal area households. Within their sample, the top 10% controlled 42% of all measured income, whereas the bottom 25% controlled only 4.3%.

## 2.4. AIDS

The incidence and impact of AIDS have escalated dramatically in Zimbabwe in the 1990s. (WHO 2000) estimate that, at the end of 1999, around 1.4 million adults (i.e. 25% of the population aged 15-49) were HIV-positive, along with 56,000 children. Nationwide, around 160,000 people were estimated to have died from AIDS in 1999 and there were over 600,000 orphans in the country who had lost one or both parents from AIDS. Meanwhile, FAO estimate that 23% of Zimbabwe's rural labour force could be lost due to AIDS between 1985 and 2020, making it potentially the second hardest hit country in Africa in this regard (<http://www.fao.org/Focus/E/aids/aids1-e.htm>).

Information on HIV/AIDS incidence in rural areas is, however, extremely patchy, as most monitoring is conducted in hospitals and clinics that, even if they are outside the main cities, are still located in towns. Outside Harare, Chitungwiza and Bulawayo, surveillance of antenatal clinic attendees only began in 1990. In that year, 12% of attendees outside these main centres tested HIV-positive, a figure that rose to 37% in 1995<sup>9</sup>. There is, however, considerable variability between sites. In 1997, for example, 7.0% of attendees in Kwekwe (Midlands) and Karirangwe (Matabeleland North) tested HIV-positive, compared with 50.8% in Buhera and 53.3% at Veringe clinic (both in Manicaland) (WHO 2000). Thus, whilst one might expect lower infection rates in rural areas away from major transport routes, the available data in no way provides conclusive support for this.

What is clear is that rural households in which a member(s) contracts AIDS will suffer from loss of labour for agricultural and other activities (both through the illness of the sufferer and nursing time provided by carers) and also from reduced cash availability due to increased medical expenditures. Funerals can also consume valuable time (particularly if they occur during peak agricultural seasons), although, as they become more and more common, the customs surrounding how much time is put aside and by whom are having to evolve [B.Mukamuri, *pers.comm.*]. FAO (*op.cit.*) note the following as likely consequences of AIDS incidence in a rural household:

- Reduction in area of land under cultivation
- Declining yields, as timing as well as quantity of labour input is affected and efforts to maintain fertility are reduced in favour of more immediate, survival priorities
- Abandonment of cash crop production in a bid to satisfy basic food requirements
- Switch to less labour-intensive crops
- Sale of livestock to meet medical or other expenses
- Loss of agricultural skills, which are traditionally passed on by parents and children working together in the field
- Reduced investment in education

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<sup>9</sup> These are medians of the figures reported by different sites at which surveillance was undertaken. Having risen steadily from 1990-95, the median figure jumped to 47% in 1996 then fell to 30% in 1997, suggesting a problem of small sample numbers.

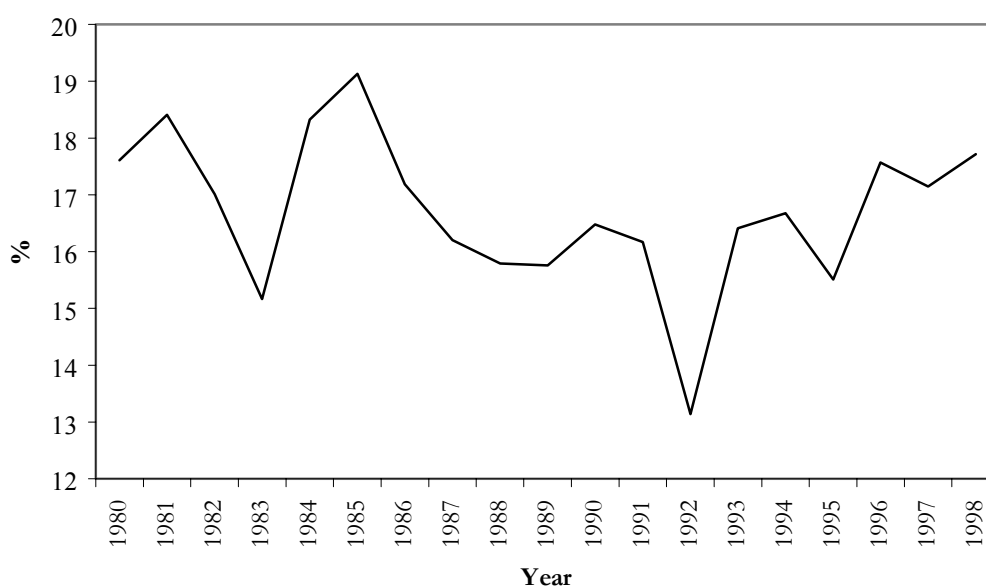
- Loss of remittance income (where an infected migrant returns home to be cared for by the family).

### 3 GENERAL BACKGROUND TO THE AGRICULTURAL SECTOR

#### 3.1. AGRICULTURE AND THE ECONOMY

The contribution of agriculture and forestry to gross domestic product (GDP) fluctuated between 13 and 19 percent during the 1980s and 1990s as can be seen in Table 6. With the exception of the second half of the 1980s, these fluctuations follow rainfall variations quite closely.

**Table 6: AGRICULTURE AS PERCENTAGE OF GDP**



*Source: CSO DATA*

Agriculture is the largest employer of the total labour force of Zimbabwe. It “provides employment and livelihood for approximately 70% of the population” (Central Statistical Office 1998), p6, including around 30 percent of formal employment<sup>10</sup>. The second largest source of formal employment is manufacturing at 16 percent. Virtually all rural households are engaged in agricultural production to a greater or lesser degree (Jackson and Collier 1991).

Agriculture contributes to other industries by supplying 60 percent of the raw materials required by the industrial sector. Depending on the year, the agricultural sector also generates 40-50% of total export revenues, over half of which comes from tobacco (Ministry of Lands and Agriculture 1998). Table 7 shows the relative contribution of different crops and products to agricultural exports in 1996. The only products shown in the table for which communal farmers make a

<sup>10</sup> Official figures show just over 300,000 workers employed on LSC farms in the mid-1990s, up from 240,000 in 1988 (Ministry of Lands and Agriculture 1998). However, there is some dispute over these figure, not least because of an alleged shift towards hiring of casual workers within the sector.

significant contribution to overall production are cotton, maize and burley tobacco (Sukume, Makaudze et al. 2000).

**Table 7: Agricultural Exports 1996**

PRODUCT	VALUE (1996 Z\$'000)	SHARE (%)
Tobacco (various) <sup>11</sup>	7,246,456	65
“Other food” (primarily horticulture) <sup>12</sup>	1,186,960	11
Sugar (raw and refined)	1,105,059	10
Cotton lint	663,366	6
Maize and maize seed	351,552	3
Coffee	263,486	2
Meat products and cattle hides	257,409	2
Tea	129,640	1
TOTAL	11,203,928	100

Source: (Ministry of Lands and Agriculture 1998)

### 3.2. AGRO-ECOLOGICAL CONDITIONS

Zimbabwe has a sub-tropical climate that is influenced by altitude. It lies within the tropics, is landlocked and covers about 390 000 square kilometers. Tropical conditions are only experienced in the low lying areas of the Zambezi and Limpopo valleys. The remaining parts experience subtropical climate with one fifth of the terrain above 1 200 meters and three fifths lying between 600 and 1 200 meters above sea level.

There are four distinct seasons: a warm wet season from November to March, transitional season in April and May, a cool dry winter season from May to August and a warm dry season from August to October. Rainfall in the rainy season varies widely both temporally and spatially. The reliability of rainfall increases with altitude, and from south to north. Coefficients of variability range from >40% in areas south of Bulawayo to <20% in some parts of the Highveld and Eastern Highlands (Gambiza and Nyama, 2000). Rainfall is highest on the Highveld with an average annual precipitation of up to 1 020 mm (40 inches) while the Middleveld receives 410 mm to 610 mm (16 to 24 inches) and the Lowveld receives less than 400 mm (12 inches).

Zimbabwe's soils are mostly sandy. Heavier loamy and clay soils are found in patches across the country. Granitic sandy soils are most common in communal areas. These are often highly leached and thus depleted of base nutrients (Muir 1997, citing various other sources). Note that sandy soils are ideal for tobacco production, especially under the extensive cultivation practices

<sup>11</sup> Flue-cured tobacco, produced on LSC farms, accounted for 92% of this. Burley tobacco contributed just under 3%. Whereas, in 1980, almost all burley tobacco production was undertaken by LSC farms, in the mid-1990s smallholder production levels caught up with and then surpassed production by LSC farms.

<sup>12</sup> In fact, half of this figure is accounted for by flowers, the remainder by fruits (including citrus) and vegetables.

used in LSC areas, but are liable to rapid nutrient depletion when cultivated intensively for low value food crops (that support only limited inorganic fertiliser usage).

Land in Zimbabwe has been classified into five natural regions based on rainfall and type of agriculture. A residual area is unsuitable for agricultural activity. Table 8 identifies and characterizes the land in Zimbabwe.

**Table 8: THE NATURAL REGIONS OF ZIMBABWE**

NATURAL REGION	AREA (ha)	%age	CHARACTERISTICS
I	613 233	1.56	1 050 mm plus rainfall per annum with some rain in all months of the year and relatively low temperatures
II	7 343 059	18.68	700 – 1 050 mm rainfall per annum with rainfall confined to summer
III	6 854 958	17.43	500 - 700 mm rainfall per annum with relatively high temperatures and infrequent, heavy falls of rain; subject to seasonal droughts
IV	13 010 036	33.03	450 - 600 mm rainfall per annum and subject to frequent seasonal droughts
V	10 288 036	26.2	Normally less than 500 mm rainfall per annum. Very erratic rainfall. Northern low veld may have more rain but the topography and soils are poorer.
The remainder	1 220 254	3.1	Unsuitable for any form of agricultural use

Source: Adapted from (Muir 1997). Original work by Vincent and Thomas (1962).

### *Natural Region I*

Natural Region I stretches along the eastern boarder, in Manicaland, and is especially suitable for silviculture. Communal farmers occupy about 20 percent of the land, with the rest owned by multinationals and the state who mostly grow exotic conifers and eucalyptus (Muir 1997). Whilst the prominent activity that takes place in the area is timber production, communal farmers produce and market fruit, vegetables<sup>13</sup> and other tropical commodities like coffee and tea (Muir 1997).

### *Natural Region II*

This area is located primarily in Mashonaland. Muir observes that over 75 percent of the area of Zimbabwe that is suitable for crop production is in this region (Muir 1997). Communal farmers occupy only 21 percent of this high potential land. A variety of crops are grown throughout the year. Cured tobacco, maize, cotton, wheat, soybeans and coffee are the main crops grown during the conventional season of November to March<sup>14</sup>. The bulk of large-scale (domestic and export) horticultural production activities - and also much smallholder (primarily domestic) horticultural production - are concentrated in this region, as are other activities that are not strictly seasonal (beef, dairy, pig, poultry, ostrich and crocodile production).

<sup>13</sup> This covers, among others, tomatoes, peas and potatoes.

<sup>14</sup> Other crops that are also produced in this Natural Region include groundnuts, sorghum, seed maize and burley tobacco.



### ***Natural Region III***

Citing Roth's 1990 paper, Muir states that the large-scale sector uses only 15 percent of its arable land in Natural Region III for crop production, while the rest is used for beef ranching (Muir 1997). In contrast, communal farmers use the land quite intensively for crop production. Maize, cotton, groundnuts and sunflowers are the main crops produced in this area.

### ***Natural Regions IV and V***

These regions are highly risky for crop production without some form of irrigation. Thus, cattle ranching dominates large-scale production activity in these areas (Muir 1997), with the exception of irrigated cropping (sugar, cotton) around Chiredzi in the southeast lowveld. Livestock keeping also plays a key role in the livelihood systems of communal households in these areas (section 8). In addition, though, most communal farmers in these regions do attempt some crop production. Despite the low rainfall, maize is the main crop grown. Millet and sorghum are also common, as are legumes. In some areas, a good harvest may only be expected every four to five years. Smallholder cotton production is also expanding quite rapidly into some communal lands situated within Natural Region IV.

## **3.3. AGRICULTURAL PERFORMANCE SINCE INDEPENDENCE**

As already shown in Table 6, agricultural production in Zimbabwe varies dramatically from year to year according to rainfall. Since independence, there have been droughts in the 1982-3, 1986-7, 1991-2 (most serious) and 1994-5 agricultural seasons. These generally hit lower potential agro-ecological zones harder than higher potential ones and, therefore, the communal sector (taken as a whole) harder than commercial producers.

Table 9 shows moderate growth in the value of agricultural output produced in both commercial (including SSC) and communal (including resettlement) areas over the 1982-97 period. If the data series could be extended back to 1980, the figures would show greater growth, as there was a strong initial production response to the end of the liberation war and the associated return to the land. According to the right-hand column, production in the commercial sector stagnated during the 1980s, but rose somewhat during the 1990s. By contrast, (Thirtle, Atkins et al. 1993) find that commercial agricultural output rose by 2.18% p.a. over the period 1980-9, despite a decline in land input (as a number of LSC farms were resettled by smallholders) and labour input (as minimum wage legislation encouraged substitution of labour by capital).

With major fluctuations in production according to weather conditions, calculation of production growth rates is somewhat hazardous (particularly based on the limited number of years covered by Table 9). However, the table suggests that between 1982-4 and 1996 the real value of production in communal areas grew by 40%, whilst between 1983-4 and 1996 the real value of production in commercial areas grew by 35%.

**Table 9: Agricultural Production in Commercial and Communal Areas 1982-1997**

	Total Gross Output at Current Prices (Z\$M)		Value Index of Gross Output		Real Value of Output (1990 Z\$M)	
	Commercial	Communal	Commercial (1983-4=100)	Communal (1982-4=100)	Commercial	Communal
1982	N/a	272	N/a	115.1	N/a	847.9
1983	869	168	89.1	71.1	2808.8	543.0
1984	1082	269	110.9	113.8	3130.4	778.3
1985	1366	609	140.0	257.7	2196.1	979.1
1986	1519	597	155.7	252.6	2527.5	993.3
1987	1654	408	169.6	172.6	2996.4	739.1
1988	1861	721	190.8	305.1	2445.5	947.4
1989	2140	698	219.4	295.3	2593.9	846.1
1990	2694	1061	276.2	448.9	2694.0	1061.0
1991	4183	1032	428.8	436.7	3357.1	828.3
1992	3599	585	368.9	247.5	3832.8	623.0
1993	5700	1358	584.3	574.6	3071.1	731.7
1994	8338	3195	854.7	1351.9	2933.8	1124.2
1995	10271	1244	1052.9	526.4	3334.7	403.9
1996	16097	4063	1650.1	1719.2	4000.2	1009.7
1997	17221	5460	1765.4	2310.3	N/a	N/a

Source: CSO (various)

Notes:

- Commercial includes LSC and SSC; communal includes communal and resettlement.
- Gross output comprises marketed crop output, value of crop production consumed at home and net change in livestock herd.
- Real values are calculated using the national agricultural and forestry sector deflator.
- Communal production figures are derived from an annual survey of 2850 households conducted by CSO, using respondent recall. (The survey is conducted in September). Commercial production figures are based on an annual census of commercial farms.

**Table 10: Agricultural Production Per Capita in Communal and Resettlement Areas 1982-1997**

	Real Value of Output (1990 Z\$M)	Population in CA and Resettlement Areas (mill)	Real Value of Output Per Capita (1990 Z\$M)	Maize Producer Price (Z\$/mt)	Value of Output (mill. maize tons equiv.)	Value of Output Per Capita (maize tons equiv.)
1982	847.9	4.277	198.3	120	2.27	0.53
1983	543.0	4.408	123.2	140	1.20	0.27
1984	778.3	4.542	171.3	180	1.49	0.33
1985	979.1	4.681	209.2	180	3.38	0.72
1986	993.3	4.824	205.9	180	3.32	0.69
1987	739.1	4.972	148.7	180	2.27	0.46
1988	947.4	5.123	184.9	195	3.70	0.72
1989	846.1	5.280	160.2	215	3.25	0.61
1990	1061.0	5.441	195.0	250	4.24	0.78
1991	828.3	5.608	147.7	270	3.82	0.68
1992	623.0	5.779	107.8	550	1.06	0.18
1993	731.7	5.884	124.4	900	1.51	0.26
1994	1124.2	5.990	187.7	900	3.55	0.59
1995	403.9	6.098	66.2	1050	1.18	0.19
1996	1009.7	6.209	162.6	1200	3.39	0.55
1997	N/a	6.321	N/a	3000	1.82	0.29

Source: CSO (various)

Notes:

- Population figures are based on 1982 and 1992 census data, with figures for 1983-91 calculated on the assumption of a linear growth in population between the two dates. 1982 figures are actually for CA plus SSC, rather than CA plus resettlement. 1993-97 figures are projections.
- The final two columns are based on the figures for total gross output at current prices shown in Table 9.

Table 10 compares agricultural production performance with population growth in communal and resettlement areas. This gives a useful initial indication of the extent to which the agricultural sector has acted as a “driver” for poverty reduction within these areas. As an alternative to using the national agricultural and forestry sector price deflator, the table also deflates the value of communal and resettlement agricultural output by the maize producer price, given the importance of maize in both production and household expenditures in these areas<sup>15</sup>. The maize producer price has itself been subject to considerable fluctuations in real terms as a result of swings in government policy. However, the peaks and troughs when using this measure, as opposed to the national agricultural and forestry deflator, are broadly similar. Table 10 shows that, although in good years in the 1990s the real value of smallholder agricultural production has exceeded its peak levels in the 1980s, since 1985-6 agricultural production growth has not kept pace with population growth in communal and resettlement areas. This provides an important part of the explanation for the disappointing poverty story told in Section 2.

It is against this backdrop that we now examine individual elements of agricultural policy and performance since Independence.

## 4 LAND DISTRIBUTION AND POLICY

### 4.1. LAND DISTRIBUTION AT INDEPENDENCE

Land distribution was a thorny issue at independence because of the way the land was racially distributed. Most of the land that was classified as high potential was owned by white farmers and the black people who constituted the majority of the population occupied areas in the low potential regions.

**Table 11: Land allocation ('000 hectares) in relation to natural region and land tenure in Zimbabwe 1980**

Natural Region	Commercial Farming				Communal		Other Land		Total	
	Large Scale		Small Scale		Area	%	Area	%	Area	%
	Area	%	Area	%						
I	440.2	63	7.3	1	128.3	18	127.6	18	703.4	100.0
II	4324.5	74	252.1	4	1255.1	21	29.1	1	5861.4	100.0
III	3240.6	44	536.1	7	2814.7	39	696.3	10	7287.7	100.0
IV	4025.8	27	532.0	4	7307.3	49	2696.2	20	14782.3	100.0
V	3648.4	35	97.6	1	4774.0	46	1921.1	18	10441.1	100.0
Total	15679.5	40	1425.1	4	16279.4	42	5470.3	15	39075.9	100.0

Source: (Government of Zimbabwe 1982), page 67.

<sup>15</sup> To give an assessment of the purchasing power of communal production in terms of maize, we should use the consumer price of maize (meal) rather than the producer price. The consumer price has generally risen faster than the producer price during the period in question (see Jayne and Chisvo 1992) for the pre-liberalisation case of the 1980s, during which consumer prices were subsidised), so use of a consumer price would further depress the growth figures.

About 6 000 commercial farmers (mainly white) held title to about fifty one percent of the land outside urban areas and national parks, including most of the land in Natural Regions I, II and III. This constituted forty four percent of the total land in Zimbabwe (Table 11). By contrast, the communal areas (formerly known as tribal trust lands) constituted forty two percent of the total land, but were inhabited by about 700,000 families (Government of Zimbabwe 1982). The land was grossly overpopulated as it was considered to be enough for 325 000 families - just forty six percent of the inhabitants who were actually occupying it.

## 4.2. LAND POLICY BEFORE INDEPENDENCE

Table 12 summarizes the major milestones in land policy before 1980.

**Table 12: HISTORY OF LAND POLICY 1891-1980**

YEAR	LAND ACT/ COMMISSION	PURPOSE	RESULT
1891	The Lippert Concession	White settlers to acquire land rights from native Zimbabweans	BSAC buy concession and uses it as basis for land appropriation.
1898	Native Reserves Order in Council	Create Native Reserves in the face of mass land appropriation by White settlers	Native reserves created haphazardly in low potential areas and subsequently become CAs.
1931	Land Apportionment Act	To separate by law, land between Black and White	The high potential areas become White large scale privately owned farms.
1951	Native Land Husbandry Act	To enforce private ownership of land, destocking and conservation practices on Black smallholders.	Mass resistance to legislation fueling nationalistic politics. Law scrapped in 1961.
1965	Tribal Trust Land Act	To change the name of Native Reserves and create trustees for the land.	Because of population pressure, tribal trust lands became degraded "homelands".
1969	Land Tenure Act	To replace the Land Apportionment Act of 1931 and finally divide land 50% White and 50% Black	Combined with the Tribal Trust Land Act, Rhodesia had the equivalent of apartheid.

Source: (Rukuni 1994)

The imbalance in the distribution of land at independence has its roots in the appropriation of African land by settlers. During the colonial period, land policy was aimed at attracting white settlers from abroad and placing them on large farms in areas that had high potential for agricultural production. Indigenous Zimbabweans were settled on land that was regarded as unsuitable for whites: drier and in more remote parts of the country (Rukuni 1994). Agricultural policy also discriminated against black smallholders by barring them from entering large-scale farming<sup>16</sup>.

<sup>16</sup> Pre-independence agricultural policies were "designed to produce a dual system in which land distribution, organization of marketing institutions and the development of infrastructure were biased in favour of the commercial agriculture" (GoZ, 1982 page 10).

### **4.3. LAND POLICY IN THE 1980S**

The immediate priority at independence was land distribution to address the inequalities of the colonial era (Mataya, Gondo et al. 2000). Government wanted to steer the distribution of land so that the majority of the people would get access to land in high rainfall regions or where the possibility of irrigation would enhance their chances of raising agricultural productivity. Policies were supposed to balance land ownership changes with food security through adequate local production, employment creation and efforts to improve the incomes of the rural population (Jansen and Rukovo 1992).

Land reforms during the 1980s can usefully be divided into two phases. Although both phases had the common underlying target of redressing the inequalities created under the colonial period, the initial phase, which ran from independence to 1985, was mainly targeted at transitional issues arising from the war of liberation. The second phase ran from 1985, after the Land Acquisition Act of 1985, until 1990.

#### ***The First Phase***

In 1981 a new ministry, the Ministry of Lands Resettlement and Rural Development, was created to spearhead the land redistribution programmes. In the same year, the 1981 Land Act changed tribal trust lands to Communal Lands. This change mainly affected the administration of CAs. Where previously tribal trust lands were administered under trustees, the Communal Lands became the responsibility of the local government (Rukuni 1994).

The Lancaster House Constitution of 1981, which remained in force for the first ten years of Independence, required the government to acquire land for redistribution on a willing-buyer-willing-seller basis. Land that was acquired on this basis (with some support from aid funds) was turned into resettlement schemes.

The first phase of the resettlement program targeted mainly refugees, displaced people, squatters, the landless and the land-short in over-populated communal areas, in that order of priority. Substantial development within the densely populated communal areas was considered impossible without a reduction in population densities. Government policies were therefore aimed at achieving quantitative and qualitative redistribution of land. Land policies were complemented by other policies, which included provision of loans to smallholder farmers and improving access to markets (see later sections).

Despite the initial impetus to resettlement and its high importance in policy statements, implementation was very slow. Conventional wisdom – and the Government's explanation – places most of the blame on the willing buyer-willing seller provision of the Lancaster House Constitution. This constitutional restriction on land acquisition, coupled with high costs of land, limited the amount that government could acquire. Furthermore, much of the land government could afford was in marginal areas – where the willingness of white farmers to sell was greater – so that the qualitative aims of government (to provide access to good land for the targeted population) were not met.

Progress was also constrained by the inability of government to finance the infrastructural investment required to make the resettled areas productive. The infrastructure in these areas was geared towards LSC farms. Breaking up these areas into smallholder agriculture required substantial investment in roads and water as well as in social infrastructure such as schools and medical facilities.

While these factors did impose real constraints on the pace of land reform, arguments can be made that the pace was in fact slower than they allowed. For example, Government did not introduce a land tax (as recommended by the 1986 Commission of Enquiry into Taxation (Chelliah 1986)), which could have increased the willingness of farmers to sell underutilised land and raised additional revenue for land purchase. Nor did they change the Town and Country Planning Act, which made the subdivision of farms difficult. While this might not have affected the official resettlement programme, permitting subdivision might have speeded up market-driven land redistribution, particularly if coupled with a land tax<sup>17</sup>. Moreover, government budgetary allocations for land redistribution and complementary activities were substantially cut in 1983, suggesting that priorities lay elsewhere.

It is now argued that part of the reason for government not allocating more of its own resources to land acquisition was because government should not spend money on buying back land that had been stolen during colonization. However, this argument was not publicly enunciated until the 1990s and there is an element of *ex post* rationalization in it.

Whatever the reasons, government did not meet its initial target of resettling 162,000 families on productive land by 1985. As can be seen from Table 13, by 1985 only 36 616 families had been resettled on 74 848 hectares (at a total cost of \$51 690 897).

### *The Second Phase*

With the Land Acquisition Act of 1985, the government aimed to intensify the resettlement programme by improving land availability. The act allowed “compulsory acquisition” of underutilised or abandoned land to take place, albeit still with payment of adequate compensation. According to the first Five Year Development Plan that covered the period 1986-90, 15,000 families were to be resettled every year. In addition, back up services (especially extension and credit) were to be increased in order to ensure that agriculture production would increase.

In practice, whilst small quantities of abandoned land were acquired under the provisions of the Land Acquisition Act, no “underutilised” land was acquired. Table 13 summarizes information on the total progress of resettlement by providing statistics on the hectareage used for resettlement, the total number of people resettled and the total cost of the exercise, for each year. By the end of the 1980s, just over 51,000 families had been resettled on around 3 million hectares of land. This means that less than 20% of the land controlled by commercial farming interests at independence had been redistributed to small-scale producers.

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<sup>17</sup> Note, however, that easing the subdivision process, in conjunction with the imposition of a land tax, might also have resulted in “fictitious” (i.e. on paper only) subdivisions designed to avoid liability for higher rates of tax (Poulton and Kydd 2000). Arguably, if the government’s aim was to acquire the maximum quantity of land for its official resettlement programme at minimum cost, its best strategy would have been to impose a highly progressive land tax whilst retaining controls on subdivision, thereby forcing landowners to sell entire properties to it as “buyer of last resort”.

**Table 13: Resettlement Area and Numbers**

Year	Area	Settlers		Cost			
	Ha	Annual <sup>a</sup>	Total	per ha	Total		per settler
					Annual	Total	
1979/80	162555			\$19.09	\$3,103,175	\$3,103,175	
1980/81	219152	1971	1971	\$16.14	\$3,537,113	\$6,640,288	\$3,369
1981/82	819155	8848	10819	\$18.82	\$15,416,497	\$22,056,785	\$2,039
1982/83	807573	14179	24998	\$26.66	\$21,529,896	\$43,586,682	\$1,744
1983/84	173848	7959	32957	\$26.44	\$4,596,541	\$48,183,223	\$1,462
1984/85	74848	3659	36616	\$40.92	\$3,062,780	\$51,246,003	\$1,400
1985/86	86187	4716	41332	\$39.97	\$3,444,894	\$54,690,897	\$1,323
1986/87	133515	1250	42582	\$29.20	\$3,898,638	\$58,589,535	\$1,376
1987/88	80554	6142	48724	\$35.87	\$2,889,472	\$61,479,007	\$1,262
1988/89	78097	2686	51410	\$95.16	\$7,431,711	\$68,910,718	\$1,340
Total	2635484	51410		\$26.14	\$68,891,552		
State land	504491						
Total	3139975						

Notes: <sup>a</sup> figures relate to second year cited

Source: (International Labour Office 1993) page 60

Table 14 gives a sense of the distribution of redistributed / resettled land by Natural Region<sup>18</sup>. It shows that around 40% of land used for resettlement in the 1980s was located in NRIII. The table lends some support to the view that redistributed land was located disproportionately within the poorer agro-ecological regions of the country.

<sup>18</sup> It should be noted that there are some discrepancies between the two main sources used in the table.



**Table 14: Land Redistribution by Agro-Ecological Region**

Natural Region	LSC Land Holding in 1980 (000 ha)	Area of 1980s Resettlement Schemes (000 ha)	LSC Land Holding in 1990 (000 ha)	Resettled Land as %age of 1980 LSC Holding	1990 LSC Land Holding as %age of 1980 LSC Holding
I	440	28	338	6.4	76.8
II	4325	664	3223	15.4	74.5
III	3241	1270	1972	39.2	60.8
IV	4026	771	2840	19.2	70.5
V	3648	358	2896	9.8	79.4
TOTAL	15680	3090	11270	19.7	71.9

Sources: (Ashworth 1990), (Government of Zimbabwe 1982)

### *Lessons from the Resettlement Exercises*

After the initial resettlement exercises, the government became aware of the limitations and weaknesses of simply taking anyone and resettling them without any consideration of the settled people's agriculture knowledge and experience base (Jansen and Rukovo 1992). Their paper cites a joint venture at Trewlawney, where the Zimbabwe Tobacco Association and the Government of Zimbabwe trained would-be farmers on all aspects related to flue cured tobacco production. The results illustrated that if resettlement programmes were planned well and the farmers were given adequate basic training before being allocated land, then efficiency in both land management and methods of production would lead to higher levels of production output.

The resettlement exercises also revealed that there was need to increase human resources to plan, service and staff resettlement areas (Rukuni 1994). The majority of the people who were resettled were the displaced and landless people. Rukuni pointed out that since these groups were amongst the poorest people in this country (e.g. without draft cattle) their agricultural activities produced yields that were below the expected targets. Thus the resettlement exercises did not (in their early years, at least) meet the goals that were the driving force of the whole programme.

What was learnt from the resettlement exercises was that although financial resources were scarce and the government was constrained by shortage of funds, it was critical that sacrifices be made in order to train the would be farmers, construct the necessary infrastructure, and support the resettled people with the basic requirements that would kick-start their livelihood on the new land. Any group of resettled farmers should have access to agricultural support services such as research, extension services, credit and marketing of their produce (Jansen and Rukovo 1992).

Recent work by (Kinsey, Burger et al. 1998), qualifies these original findings, however, suggesting that early analyses of the "failure" of resettlement schemes may have been premature. Whilst it did take time for resettled households to accumulate a non-land asset base (principally livestock)<sup>19</sup>, having done this, many are now emerging as strong, independent cultivators.

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<sup>19</sup> According to (Kinsey, Burger et al. 1998), during their 1983-4 baseline survey of 400 households on three resettlement schemes in eastern Zimbabwe, 58% of households owned some cattle. By the mid-90s, 90% of the same sampled households owned cattle, with an average of 10 owned per household.

According to (Moyo 1995), the 70,000 households that had by then benefited from land redistribution represented just 5% of the peasant farmer population, but accounted for 15-20% of their total marketed surplus of maize and cotton<sup>20</sup>. Table 15 shows official figures on production of maize and cotton (the two main crops grown on resettlement schemes) for 1991-97, expressed as a proportion of total production in communal and resettlement areas.

**Table 15: Maize and Cotton Production on Resettlement Schemes**

	1991	1992	1993	1994	1995	1996	1997
Maize Production on Resettlement Schemes	127572	18374	178220	150043	67253	167741	127687
Total Maize Production by Communal and Resettlement Farmers	1019300	115200	1133600	1313800	399400	1687000	1453800
Resettlement as % of Total	12.5	15.9	15.7	11.4	16.8	9.9	8.9
Seed Cotton Production on Resettlement Schemes	14434	4173	16104	21635	6424	19751	22065
Total Seed Cotton Production by Communal and Resettlement Farmers	137900	35700	134500	110805	56100	157584	197825
Resettlement as % of Total	10.5	11.7	12.0	19.5	11.5	12.5	11.2

Source: (Central Statistical Office 1997)

Given that, with an adequate land allocation, even poor resettled households have eventually been able to develop their farming activities through own saving, we conclude that the extent of support services provided to resettled households may influence the time-scale over which they establish viable farming activities more than their absolute ability to do so. Nevertheless, it is still far from clear that existing resettlement schemes (where an average resettled household has 50 ha or more of land)<sup>21</sup> represent efficient land use. In terms of the number of livelihoods supported per hectare, they rank far behind communal areas and probably also behind many LSC farms<sup>22</sup>.

#### **4.4. LAND POLICY IN THE 1990s**

The Lancaster House Constitution expired in 1991, removing supposedly one of the main constraints to rapid land redistribution. At about the same time, the government embarked on an economic liberalisation programme (ESAP) affecting virtually all sectors of the economy. In agriculture the policy that was adopted aimed to resettle 100 000 families on five million hectares of land, which was to be acquired from large-scale areas. The land policy statement of 1990 shifted the emphasis towards resettling proven competent farmers and other trained agricultural

<sup>20</sup> This appears somewhat less impressive when it is noted that they occupied around 15% of total land under smallholder cultivation.

<sup>21</sup> The amount of land varies by natural region, with much larger averages than this in parts of NRIV and V. A large part of the land allocation per household in all areas comprises grazing rights, as opposed to land designated for arable production by the household.

<sup>22</sup> According to a recent study commissioned by the Ministry of Lands, Agriculture and Rural Resettlement, the latest land redistribution proposals will create the equivalent of 342 962 jobs, which is marginally more than the 334 521 permanent workers on large scale commercial farms (The Sunday Mail, 29 July 2001).

people so as to maximize the use of land and to increase the number of indigenous people in large-scale commercial farming.

In 1992 the government signalled its desire to acquire a further 6.9 million hectares of land from LSC farms. The intention was to acquire “underutilised” land first and only later to acquire more intensively utilised farms. Although the 1992 Land Acquisition Act provided for a number of “non-market” instruments (such as designation of areas for acquisition and reliance on government land valuation), the principle of compensation was not abandoned. Perhaps more importantly, few resources were provided to turn rhetoric into reality.

(Jenkins 1997) argues that, within a few years of Independence, Zimbabwe’s black elite (technocratic and professional) had lost its appetite for asset redistribution to poor households. Instead, together with LSC farmers<sup>23</sup> and white industrialists, it came to believe that enhanced service provision for poor groups, accompanied if necessary by economic reform, could keep poor households happy. Thus, momentum for land reform had declined considerably by the early 1990s<sup>24</sup>. However, as 1980s advances in service provision were rolled back in the early 1990s (see below) and public discontent with the apparent results of ESAP grew, ZANU(PF) once again returned to the land reform issue to maintain political support in rural areas.

In November 1997 the government published in the Government Gazette a preliminary notice of its intention to acquire 1471 farms, covering around half the commercial farming area. Even supporters of a direct state role in land redistribution (e.g. (Moyo 1999)) agree that there were irregularities in the list of gazetted farms. However, they argue that most of the gazetted properties could have been redistributed without serious macroeconomic consequences for the country. In the event, the process of completing acquisition became bogged down in legal disputes and in disagreements with the IMF and other donors over compensation payments and the effect on investment incentives of arbitrary seizures of property. A total of 109 of the 1471 farms were eventually acquired through more or less “voluntary” sale (Adams and Howell 2001).

In 1999-2000 certain rural residents started to take land issues into their own hands and occupy LSC farms. Meanwhile, the government modified both the constitution and the 1992 Land Acquisition Act to free it from its obligation to pay compensation for seized LSC farms. By September 2000, 2159 LSC farms were under gazettelement, probably 1000-1500 of which were subject to occupation (Adams and Howell 2001). This number has increased considerably since.

#### **4.5. LAND REFORM: MODELS AND BENEFITS**

There has been considerable debate on the degree of “underutilisation” of land within the LSC sector and, therefore, on the likely impact of a properly managed land redistribution programme on both food production and agricultural exports. However, the evidence points to considerable potential for land redistribution:

- (Weiner, Moyo et al. 1985) discussed the debates in the early 1980s, falling clearly on the side of those who argued that much land was underutilised. Based on official figures for 1981-2, they suggested that a maximum of 50% of arable land within LSC areas of Mashonaland Province was actually used. This figure allowed one year in three as a fallow period and defined usable arable land in terms of that suitable for mechanised cultivation, whereas smallholders could utilise a larger area quite readily. Whilst the choice of year, immediately

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<sup>23</sup> By this time, there was also an increasing number of black LSC farmers, albeit still very much a minority within the commercial sector.

<sup>24</sup> The figures given in Table 13 indicate that expenditure on resettlement fell dramatically after 1982/3.

after the upheavals of Independence, might have been problematic, they also cited studies from the 1970s that came to similar conclusions.

- According to (Weiner, Moyo et al. 1985), three other post-Independence studies defended LSC farms as efficient users of resources. One of these, however, suggested that LSC farms were constrained in their land usage by the availability of family labour (a management and supervision, rather than power/energy, input). (Weiner, Moyo et al. 1985) argued instead that, with greater access to capital, LSC farms could and would expand production through increasing their degree of mechanisation, an approach that would minimise the labour input on the nation's best land.
- In the 1990s the World Bank swung strongly round to the side of those arguing that a large proportion of LSC land was underutilised<sup>25</sup>. They attributed this to negligible land taxation combined with the retention of pre-Independence controls on land sub-division in LSC areas.
- (Sukume 1999) documented a clear negative correlation, within the LSC sector, between farm size and gross turnover per hectare. This held for LSC farms in all natural regions. Only a minority of farms achieved a return to their land comparable with the return available on treasury bills.

(World Bank 1995) suggested that, of the six million hectares or so of LSC land in NRI-III in 1993, "approximately 1.6 million ha is not presently used for agricultural purposes, but could be effectively used for cropping (600,000ha) or livestock production (1 million ha)" (para 44, p19). However, as this land was not in contiguous blocks, it was "ill-suited to the type of administered resettlement program carried out since independence". Instead, the report advocated the introduction of some form of progressive land taxation, combined with: a relaxation of sub-division controls in LSC areas; financial support for smallholders to purchase, lease or develop land; programmes of technical and marketing assistance to resettled households, and public infrastructural investments targeted to areas where resettlement activity was strongest. A Land Tax Bill was indeed presented to Parliament in 1999, although without clear proposals to deliver any of the accompanying elements of the programme suggested by the World Bank. The tax proposal – as a tool for land redistribution, if not for ongoing revenue raising - has subsequently been overtaken by events.

(Poulton and Kydd 2000) see one of the major advantages of the mixing of LSC and small-scale farm holdings in high potential areas (as envisioned by (World Bank 1995)) as being the ability to develop outgrower arrangements between remaining "core" LSC estates and surrounding smallholder households. This would reduce the costs of providing some forms of technical assistance to incoming smallholder households, as well as allowing them to access high value international markets through existing LSC export operations. Thus, not only might domestic food production not suffer from land redistribution, but agricultural export earnings need not do so

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<sup>25</sup> (World Bank 1995) argued that, "The present dualistic agrarian structure and distribution of land is inefficient, environmentally unsustainable and a barrier to the achievement of both rapid agricultural growth and the reduction of rural poverty. It is inefficient since one of the country's most scarce resources – high potential agricultural land – is being underutilized. It is also inefficient in the sense that, in terms of technical efficiency, economic efficiency and managerial efficiency, the 'optimal' range of farm sizes in Zimbabwe's different agro-ecological areas are most certainly smaller than most of the existing large-scale commercial farms and larger than the vast majority of communal farms. This agrarian structure is environmentally unsustainable due to the over-exploitation of natural resources in the communal areas." (para 40, p18)

either<sup>26</sup>.

Looking at the current land situation in Zimbabwe, a key issue would appear to be whether viable “core” LSC estates will be maintained in high potential areas to provide these service functions to surrounding smallholder producers<sup>27</sup>. Assuming LSC producers choose (are able) to remain in Zimbabwe and are willing to orient themselves to being marketing value adders and service providers to smallholder neighbours, then their core estate area needs only to be big enough to provide some stability to flows through their processing and packaging operations. One hundred hectares may suffice for horticultural operations, somewhat more for tobacco producers<sup>28</sup>. A major political objection to this type of arrangement is that it maintains some degree of racial dualism within the agricultural sector. However:

- The reality is that much management expertise and understanding of, and access to, international markets is currently embodied in white farm owners and managers. It is much easier to transfer the natural capital (land) of existing LSC farm enterprises to smallholders than it is to transfer the human and social capital associated with them. Besides, a typical smallholder farm enterprise is not large enough to generate the returns necessary to remunerate this level of human capital.
- The economic inequality implied by the difference in size between core estate and surrounding smallholders could be diluted further by schemes that allowed smallholders to acquire shares in the core estate business.
- The dualism need not last forever. Whilst existing farm owners / managers might choose to remain on the land that they have worked for years, it should not be taken for granted that their children will want to pursue the same career path.

Meanwhile, the optimal future for ex-LSC estates in NRIV and V is less clear. The land on many of these estates (irrigated sugar producers in Triangle being a significant exception) is not suitable for arable agriculture. Meanwhile, even extensive beef production was suffering a profitability crisis in the 1990s, leading to the consolidation of holdings and conversion to nature conservancies and game ranching. (Adams and Howell 2001) argue that, “Pastoral settlement schemes in Africa suggest that neither the subdivision of commercial ranches into family livestock farms, nor group or cooperative ranching are viable options. The costs of settling families with small herds on individual farms, with reasonable standards of social and economic infrastructure, are very high and both economic returns and environmental effects almost certainly negative.” (p1-2). One option is that land on some large estates is simply reabsorbed into neighbouring communal areas, where it can serve primarily to increase the grazing area available for local livestock (Cliffe 1988).

The considerations in the previous couple of paragraphs are, however, highly theoretical! At present, the intention of the government is to redistribute all gazetted LSC land according to four main resettlement models (A1, A2, Three-Tier and Irrigation). These are briefly discussed below:

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<sup>26</sup> The need to protect commercial seed multiplication farms from cross-pollination from neighbouring properties is sometimes advanced as a reason for not mixing LSC and smallholder farms. However, this protection could be achieved by other means.

<sup>27</sup> One way of achieving this might be to grant titles to all those currently occupying LSC farms, then to buy out some of these occupants if a viable “core” estate does not exist.

<sup>28</sup> This compares with a mean size of 1380ha for the 2565 LSC farms in the three Mashonaland Provinces (predominantly in NRII) in 1994 (Sukume 1999).

### *Model A1*

Under this scheme, each family has title over homestead and arable blocks. Common land like grazing land, woodlots and water points are registered under group title. The target groups of beneficiaries for A1 are mainly the landless, the poor households currently residing in overcrowded communal areas and retrenched farm workers who wish to be resettled. This is the major resettlement model and will account for about 75 percent of the total program beneficiaries. The size of the allocated land, however, depends on the Natural Region but on average it should be three to six hectares for residential and cropping requirements. Grazing areas range from twenty four to one hundred and eighty hectares.

### *Model A2*

Each family has a consolidated title. Arable and homestead allocations have individual titles and common land is registered under an individual title. An estimated 17 percent of beneficiaries will be settled under this model. The size of the farm units also depends on Natural Regions.

- Those resettled in Natural Region II will get about fifty hectares
- Those placed in Natural Region III will be allocated as much as one hundred and fifty hectares
- Those admitted in Natural Regions IV and V will be designated three hundred hectares.

### *Three-Tier Model*

This model is designed for drier areas where livestock ranching is the suitable form of land use. Grazing is communally managed while the farm units are self contained and individually managed. The main target beneficiaries are poor and landless families in crowded drier areas of the country. About 3 percent of beneficiaries will be settled under this scheme.

The settled people will be allocated one hundred and eighty hectares. Only three hectares of this land is for agriculture and residential purposes; the rest of the land will be communally owned and divided into three tiers.

- The first tier is villagized and divided into arable land and social services.
- The second tier is where each benefiting family keeps its livestock
- The final tier is where land is reserved for commercial purposes (grazing area).

### *Irrigation*

This model will be based on the National Master Plan for the construction of dams. Specific model designs vary according to water resource and irrigable soils, and also crop production systems for irrigation and residential land. About 4 percent of the beneficiaries will be settled under this scheme. Those resettled under this model will get land ranging from one to ten hectares, and the size is ultimately determined by the farming activity that is suitable on the designated land.

It should be noted that, at present, there is no provision for the retention of core estates in high potential areas, as advocated by (World Bank 1995) or discussed above. The experience of resettlement efforts in the 1980s, therefore, suggests that, in the absence of a huge inflow of aid funds to support service provision to resettled farmers, current proposals will cause agricultural

production levels to remain below pre-1999 levels for a decade or more, whilst agricultural exports could be adversely affected for longer still.

#### 4.6. IRRIGATION AND WATER CONTROL

Table 16 shows the current status of irrigation development in Zimbabwe. Both the government and donors have invested in smallholder irrigation development since 1980, such that by 1999 there were an estimated 187 irrigation schemes in the smallholder (communal plus resettlement) sector. However, the combined area of irrigated land in the smallholder sector was only an estimated 11,000 ha, plus 2,200ha on outgrower schemes, i.e. less than 0.1% of total communal area and resettlement land.

**Table 16: Irrigation Development in Zimbabwe**

Sector	Area Under Irrigation (ha)	As % of Total Area Under Irrigation
LSC	98,400	82
State Farms	8,400	7
Outgrower Schemes	2,200	2
Smallholder	11,000	9
TOTAL	120,000	100

Source: 1999 Agritex estimates, quoted in (FAO 2000)

Of the 11,000ha within communal and resettlement areas, the largest proportion is located within Manicaland (4,248ha), followed by Masvingo (2,795ha) and Matabeleland South (1,234ha). Thus, there is some bias towards drier areas of the country, although Matabeleland North stands out as an exception here with very little smallholder irrigation. Around 2/3 of schemes use surface irrigation, with the remainder using sprinkler irrigation. More water-efficient (and expensive) drip irrigation systems have yet to be introduced onto smallholder schemes.

According to Ministry of Agriculture (1994, quoted in FAO 2000), the total potential for further irrigation development in Zimbabwe, using water from transboundary rivers and inland dams, is 240,000ha<sup>29</sup>. At the time the strategy was prepared, it was envisaged that perhaps 90,000ha of this would be in the smallholder sector. However, subsequent developments in land redistribution may have changed this.

Based on a review of ten smallholder irrigation schemes, five of which were performing well and five badly, (FAO 2000) concluded that smallholder irrigation in Zimbabwe can be financially and economically viable<sup>30</sup>. However, good performance depends on:

<sup>29</sup> The current authors are not sure what assumptions this figure makes about demand for urban water supplies.

<sup>30</sup> (FAO 2000) claim economic IRRs of 19-90% on the five successful schemes studied, when costs of drought relief foregone are included. However, the costs of weirs or dams were not always included in the calculations, as these predated the development of some of the schemes in question. The figures might, therefore, give an unduly optimistic impression of the likely returns to new schemes.

- Active farmer involvement in scheme planning and management, which fosters a sense of ownership of the scheme and makes members more willing to contribute to operation and maintenance activities. (Inheritance rights for scheme members are also advocated, as these encourage farmers to invest in their schemes);
- Cultivation of high value crops, such as horticultural products (some of which can be grown almost continually throughout the year). This in turn requires that those selected to receive plots be “entrepreneurial” and/or that training on marketing skills be provided to scheme members. Away from Harare, larger schemes may have more difficulty in finding remunerative markets for horticultural produce than smaller ones;
- Existence of reasonable supporting infrastructure, especially roads, to facilitate scheme links with markets.

As well as access to output markets, reasonable access to purchased inputs is required to support intensive cultivation. However, dynamic schemes provide attractive markets for input stockists, so service provision should follow where minimum infrastructure requirements are met.

On some of the high performing schemes, farmers did grow some maize (in conjunction with horticultural products) and achieved yields of 6-7 tons/ha. Despite this, it is not clear that smallholder irrigation is a cost-effective means of ensuring availability of maize, even in drought-prone areas. On the other hand, as well as generating sizable incomes for members (well in excess of minimum wages in industrial occupations, let alone commercial agricultural labour), successful schemes also hire significant quantities of labour from neighbouring households for land preparation, weeding and harvesting. In this way, they do contribute to the broader objective of food security.

The choice of basic irrigation technology is also important. Surface irrigation systems were found to be more labour-intensive than sprinkler systems. Pumps have a habit of breaking down and also incur high costs for diesel or electricity. Coping with these challenges places considerable demands on scheme members’ organisation. However, where the conditions above are satisfied, the challenges are not insuperable. On the other hand, (FAO 2000) suggest that “Systems that require less energy, like low pressure sprinkler and localized systems, should be looked at seriously.”

Looking critically at irrigation development as a tool for poverty alleviation and, in particular, for overcoming the problems caused by low and unreliable rainfall in poorer areas, the major problems are that:

- Relatively high capital costs place a strain on the available development budget of central or, even more so, local government, thus constraining the amount of public investment that is likely to take place. Despite the high returns to irrigation projects claimed by (FAO 2000) and the active farmer participation in operation and maintenance of successful schemes, there is as yet no mechanism for directly recovering even a portion of the initial capital costs from scheme members. Even the suggestion of this may be enough to discourage most potential members from applying to join a new scheme, as scheme success in full economic terms cannot be confidently predicted *ex ante*.
- The “external” conditions for full scheme viability (i.e. quality of basic infrastructure and access to markets that will reliably pay reasonable prices for scheme produce) tend to favour less remote sites, in other words not those areas that are perhaps the highest priority in terms of water control and poverty reduction.



Meanwhile, despite the fact that improved water control has been a pre-requisite for successful agricultural intensification in other parts of the world (indeed, in localised African success stories such as Machakos), the authors have not encountered evidence of significant efforts to promote water conservation in rainfed communal agriculture in Zimbabwe.

## **5 OUTPUT MARKETING**

### **5.1. OUTPUT MARKETING BEFORE REFORMS**

During the 1980s agricultural marketing was dominated by four parastatals<sup>31</sup>, which bought agricultural products from both smallholders and LSC farmers. These four parastatals were:

- Grain Marketing Board (GMB), which was responsible for the marketing of white maize, soyabeans, wheat, sunflower seed and coffee (controlled products) plus red sorghum, white sorghum, pearl millet, groundnuts, edible beans and rice (regulated products);
- Cotton Marketing Board (CMB);
- Dairy Marketing Board (DMB), which bought milk and butterfat, and
- Cold Storage Commission (CSC), which handled beef and sheep products.

Supervision of the operations of marketing boards was vested with the Agricultural Marketing Authority (AMA<sup>32</sup>), which operated through commodity committees and served as a conduit between government and producer interests in terms of prices. It also undertook external borrowings, project approval, and other administrative matters on behalf of the marketing boards.

The single-channel marketing system operated by the marketing boards was designed to guarantee state procurement and disposal of surplus production. The effective control of prices by government required suppression of uncontrolled private trading that would interfere with the aims of the official marketing system. According to (Jayne, Takavarasha et al. 1994), some of the practices used in Zimbabwe to preserve the dominance of the official marketing system and to impede private trade included the following:

- Mandating a state monopoly on cross border trade;
- Prohibiting private movement of controlled products across district or zonal boundaries<sup>33</sup>; and
- Preferentially supplying grain to a select group of ‘vertically integrated’ industrial processing firms.

Producer and selling prices for controlled commodities were fixed by government following recommendations by the Ministry of Agriculture and negotiations with producers (Sellen 1993). Cost-plus pricing was the main method used to arrive at the price. However, the final price was derived from interrelated factors that were weighted individually according to the commodity in question. Those commodities that were exported were priced in a manner that made the prices

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<sup>31</sup> The use of marketing boards in agriculture marketing did not start after independence; it stretches back to 1931 when the government was reacting to world economic depression that affected the sector because of over reliance on exports. The initial design of the then Maize Control Board was aimed at stabilizing the industry and making domestic consumers subsidize producers (Muir and Takavarasha, 1988).

<sup>32</sup> The Agricultural Marketing Authority was established in 1967 as a central authority that controlled and coordinated major parastatals (GMB, CSC, DMB and later (1969) CMB) (Rukuni, 1991).

<sup>33</sup> Within communal areas, local private trade in controlled products was allowed.

come close to border prices. For commodities like maize, wheat and soybeans, internal selling prices were given more weight than the opportunity cost (Muir and Takavarasha 1988). Other factors that were considered in the determination of the price included subjective assessments of the probable impact on national stocks, consumer welfare, export earnings and marketing board costs (Sellen 1993).

Set prices were announced either before planting or before harvest. They were generally both pan-seasonal and pan-territorial. Table 17 describes the goals of such pricing practices, along with some of the additional consequences.

**Table 17: PRE-ESAP AGRICULTURAL PRICING POLICY**

POLICY	POLICY FEATURES	POLICY GOAL
a) Pre-planting prices	-Producer prices were announced before season's planting.	-To boost producer incentives as it reduced risk and uncertainty. Also enabled farmers to make decisions based on relative prices
b) Pre-harvest and post harvest prices	-Producer prices were set and announced around April-May.	-Enabled government to gauge potential harvests and stocking levels before announcing prices.
c) Pan-territorial pricing	-Payment of uniform prices through the country.	-Benefited farmers in remote surplus regions at the expense of those close to markets but in deficit.  -Discouraged production of high value-low volume crops (Export crops) these implied implicit transport subsidy to remote farmers
d) Pan-Seasonal pricing	-Producer and consumer prices are set annually.	-No incentive for off-season production.  -Encouraged centralized as opposed to on farm storage.

*Source: Adapted from (Muir and Takavarasha 1988)*

The government, through the Ministry of Agriculture, defined its policy objectives in controlling producer prices as follows (Government of Zimbabwe 1995):

- To improve the allocation of resources within the economy;
- To promote self sufficiency in food production and to satisfy demand for agricultural raw material;
- To achieve a greater control over supply thereby reducing price and income stability;
- To retain expertise and capital within the agricultural industry through incentive pricing.

Unfortunately, achievement of these objectives did not come cheaply. The deficit of the four marketing boards accounted for between 16 percent (1985) and 51 percent (1986) of the government expenditure on agriculture and between 2.7 percent and 5.8 percent of total government spending (Sellen 1993). According to (Jenkins 1997), the perception amongst Zimbabwe's technocratic elite (shared by the commercial farming lobby and World Bank

officials) that the tightly controlled policy regime of the 1980s was unsustainable was a major factor encouraging the adoption of ESAP in 1991.

## **5.2. OUTPUT MARKETING REFORMS**

Reform of agricultural marketing systems started in 1990 with the setting up of autonomous boards of directors for the four marketing boards (This required the dissolution of the AMA). This was intended to reduce government control on the operations of the marketing boards and simultaneously to make the marketing boards more responsive to the needs of the market place. The ultimate objective was to move towards full commercialization of the boards that hitherto had been incurring huge trading losses under the pretext of performing social and developmental obligations.

The restructuring of the functions and objectives of the marketing boards was accompanied by:

- the setting of targets for subsidy reduction. Reducing the political demands on CMB and DMB management led to a swift improvement in their financial position. The losses of GMB and CSC proved more stubborn, although the 1991-92 drought was partly to blame for this (Jansen and Rukovo 1992).
- the development of options for managing the inherent conflict between their social obligations and commercial objectives.

This was then followed by:

- Conversion from a system of controlled producer and selling prices firstly to a system of floor prices (1992), then to a completely market-based price system (1993), for all crops except maize and wheat.
- Deregulation of statutory marketing controls to facilitate competition between marketing boards and private traders (i.e. conversion from single channel to a multi-channel marketing system).

The agricultural reform program clearly reflected acceptance by government of the need to withdraw from direct price intervention and indirect marketing subsidies to mechanisms that allow market supply and demand to set prices. However, (Sithole 1996) noted that the easiest reform to implement was moving producer prices towards export or import parity. The most difficult reform was to limit boards to their identified commercial and food security functions in light of concerns about unemployment and protecting producers' access to markets in remote areas. As will be described in more detail below, the government never completely withdrew from intervention in the maize sector, because of the sensitivity of maize for both producers and consumers within the domestic economy.

### **ZIMACE**

One important institutional response to the general deregulation of agricultural trade was the establishment, in 1994, of the Zimbabwe Agricultural Commodity Exchange (ZIMACE). ZIMACE is a private sector initiative, which brokers trade in all agricultural commodities with the exception of tobacco and horticultural products. It thus provides an independent source of information on supply and demand conditions for agricultural commodities within the country. During the 1990s, volumes of commodities traded at ZIMACE increased by an average of 35 percent per year, reflecting the growing popularity of the exchange as commercial farmers took

advantage of the partially liberalized agricultural marketing system. Smallholders do not sell through ZIMACE, however, as the minimum transaction volume is five tons.

In 2000 ZIMACE started an initiative where farmers could use the ZIMACE Silo Document to secure loans from financial institutions and also prove the ownership of a commodity in their silos. The document is a useful marketing and negotiating tool when an individual is trying to secure loans from banks because it has value attached to it (The Financial Gazette, 28 September 2000). Initially, the main products for which documents were obtained were grain, cocoa, soybeans, maize and coffee.

Until this year, ZIMACE provided a major alternative (to GMB) channel for large-scale grain sales. However, on 16 July 2001 statutory instrument 235A of 2001 was released. Under this instrument, maize and maize products and wheat and wheat products were declared to be controlled products within Zimbabwe in terms of the Grain Marketing Act. This effectively makes it illegal to buy, sell or move maize or wheat (and their respective products) within Zimbabwe other than to and from the Grain Marketing Board (<http://site.mweb.co.zw/zimace/trade.cfm>). ZIMACE trade information has since stopped.

Alongside ZIMACE, AGPRO Transparent Marketing has also been set up to deal in horticulture and floriculture (AGPRO, <http://www.samara.co.zw/agpro/about.html>).

## **6 AGRICULTURAL SUPPORT SERVICES**

In the 1980s the government made considerable efforts to provide agricultural support services to the communal areas, which had historically suffered neglect relative to the commercial areas.

Table 18, admittedly a somewhat ad hoc and incomplete collection of figures, nevertheless gives some indication of spending priorities during the early 1980s (before budgetary constraints forced gains in service provision to be gradually reversed). As well as showing spending on agricultural support services, it emphasises how little, in relative terms, was spent on land acquisition for resettlement<sup>34</sup>, and how much was consumed by marketing board subsidies. (CSC and DMB required similar subsidies to GMB).

Writers such as (Rukuni and Eicher 1994) and (Eicher 1995) argue that, even in the 1980s, the proportion of state funds allocated to agricultural service provision was much too low, given the significance of the agricultural sector to the Zimbabwean economy.

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<sup>34</sup> The costs of settling and developing acquired land amounted to at least US\$70M by 1984 (Bratton 1994), i.e. more than the purchase costs themselves. However, whilst the purchase costs were largely met by the Government of Zimbabwe, resettlement and development costs were largely financed by external donors.

**Table 18: Selected Government Expenditure Allocations Relevant to the Poor Rural Households 1981/2 – 1985/6 (Z\$M)**

	1981/2	1982/3	1983/4	1984/5	1985/6
Total Recurrent Government Expenditure on Agriculture	99.6	153.8	221.4	225.4	319.7
Recurrent Expenditure on Agriculture as Proportion of Total Recurrent Government Expenditure	3.4%	5.0%	6.5%	5.8%	7.0%
Land Purchase for Resettlement	15.4	21.5	4.6	3.1	3.4
Extension	c.17	c.26			c.32
Research	c.8	c.12			c.25
AFC Credit Disbursements to Communal and Resettlement Farmers	10.6	23.7	33.8	42.7	47.4
Drought Aid		19.1	5.5	26.9	
GMB Subsidy				Z\$30-90M p.a. during mid-1980s	
Government Expenditure on Education	119.0 (1979-80)				638.3
Public Assistance and Social Welfare	2.1			30.2	

Sources: (Government of Zimbabwe 1986), (Ministry of Lands and Agriculture 1998), (Jansen and Rukovo 1992), (Kaliyati 1998), Table 13 ,Table 19

Notes:

- Items such as Land Purchase for Resettlement and AFC Credit Disbursements would not be included within the figure for Total Recurrent Government Expenditure on Agriculture
- Figures for Extension and Research are based on the proportions of total agricultural expenditure devoted to these areas quoted from (Jansen and Rukovo 1992) in sections 6.1 and 6.2.

### **6.1. AGRICULTURAL EXTENSION SERVICES**

Before independence, the Department of Conservation and Extension provided extension services to LSC farmers (mainly whites), whilst Communal Areas were covered by the Department of Agricultural Development. In 1981 the two departments were merged to form the Agricultural, Technical and Extension Service (Agritex) and the focus of government extension efforts was redirected to small-scale farmers (Jansen and Rukovo 1992). (Rukuni 1994) observes that the new department managed to expand coverage by focusing on group extension in place of the previous Master Farmer training approach. Meanwhile, LSC farmers were increasingly serviced by the private sector and were only assisted by Agritex when they specifically requested such help.

In order to extend coverage of extension services across CAs, government extension expenditure rose from 9.5% of all agricultural expenditure prior to 1980 to 16.8% during 1980-83. This degree

of support could not be sustained, however, and the figure fell back to an average of 8.8% during the remainder of the 1980s (Jansen and Rukovo 1992).

The efforts of the national extension service, Agritex, are considered a key factor in the rapid uptake of hybrid maize varieties by smallholder producers (see below). Agritex has also played a role in promoting smallholder horticultural production on irrigation schemes that it runs and in supporting households resettled on former LSC land. Although it is generally accepted that resettlement households needed more state support than they were actually given in their early years, (Owens, Hoddinott et al. 2001) find that one or two extension visits per year have had a statistically significant effect on crop production amongst resettlement households (raising it by 15% after controlling for differences in assets and farmer abilities). This positive relationship was found for both maize and non-maize crops. However, there was no additional impact from receiving more than two visits per year.

(World Bank 1995) suggest a number of measures that could improve yields of major smallholder crops, such as maize, cotton, small grains and oilseeds. These are: “further development and adoption of short-season planting varieties, improved pest management techniques, increased use of minimum tillage techniques, broader use of water harvesting and other water conservation techniques, and a variety of techniques to stem soil erosion and improve soil fertility” (para 68, page 27). They also note that improved husbandry practices could raise livestock productivity in smallholder areas. The utility of such measures in helping to sustain the livelihoods of households in the less favoured natural regions (where the majority of Zimbabwe’s poor are found) is clear. However, their widespread adoption will depend on a well-focused and adequately resourced extension effort by Agritex, NGOs and community-based organisations.

Unfortunately, in the 1990s real government spending on agricultural services, including Agritex, has declined considerably. According to (Chisvo 2000), “by 1994/95 real per capita spending on agricultural support services was 26% lower than the peak in 1990/91”<sup>35</sup>. As attempts have been made (at least until recently) to maintain staffing levels within Agritex, cuts have fallen particularly on other recurrent expenditures such as travel costs, significantly reducing the effectiveness of field staff.

A final point worth noting is the strong production- (as opposed to market-) orientation of Agritex<sup>36</sup>. The Marketing Section within Agritex, only established in 1998, remains small. Thus, where technical advice has resulted in a strong production response, this has at times led to problems of how the resulting volumes of produce will be marketed profitably. This has been the case for smallholder horticulture on several Agritex-run irrigation schemes. A recent pilot study to integrate provision of marketing information into Agritex activities showed the potential benefits of focusing production advice on identified market opportunities and also revealed the value that producers attach to Agritex advice if they can get it (Poulton 2000). However, continuation of the pilot project has fallen foul of the worsening national economic situation (especially petrol shortages) and the specific constraints on the Agritex budget.

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<sup>35</sup> It appears that “agricultural support services” here refers primarily to the budgets allocated to Agritex, government veterinary services (including tsetse and trypanosomiasis control) and the research service DR&SS. The denominator for the figures quoted by (Jansen and Rukovo 1992) appears to be rather broader than this.

<sup>36</sup> This is perhaps more of a problem in NRII+III than in NRIV+V, where the extension priorities should be to sustain production for home consumption by poor households.

## **6.2. AGRICULTURAL RESEARCH**

Prior to 1980 LSC farmers proved effective at lobbying for state-supported agricultural research and also established a private research station to complement the efforts of publicly-funded agricultural research<sup>37</sup>. Incentives for researchers were good and major outputs of the research effort included the hybrid maize varieties SR-52, R200, R201 and R215, plus breakthroughs against cotton pests and diseases (Rukuni 1994). Whilst research efforts were directed primarily at the problems facing LSC farmers, the short-season maize hybrids R200, R201 and R215 were suitable for many smallholder producers, too, and featured prominently in the abortive “smallholder green revolution” of the early 1980s (Eicher 1995).

After Independence, national agricultural research priorities were officially reoriented towards the problems of smallholder producers in drier areas. However, the relative emphasis placed on research, as opposed to extension or other agricultural services, fell in the 1980s. According to (Jansen and Rukovo 1992), research accounted for 10.8% of agricultural expenditure in the years prior to Independence, but only 7.9% during the 1980s. By 1991-92 government expenditures on extension were double that on research. Many experienced personnel also left, leading to the “slow erosion of one of Zimbabwe’s national treasures, its public R+D system” (Eicher 1995).

In the 1990s the situation has continued to deteriorate, as total government spending on agricultural services has declined (in real terms) as a result of ESAP-induced budget cuts. A much greater emphasis on agricultural research, particularly into the challenges facing low-medium potential areas, is necessary if Zimbabwe is to enhance the livelihoods of the majority of the population still living in communal areas and, thereby, to reduce the incidence of poverty.

## **6.3. AGRICULTURE LOANS AND CREDITS**

Zimbabwe’s urban financial sector is in many ways quite highly developed. Yet there has been relatively little progress in making formal financial services available to poor rural residents since Independence.

During the 1980s one of the government’s agricultural policy priorities was to increase the number of smallholders receiving credit from the parastatal Agricultural Finance Corporation (AFC). The government recognized the inherent risk in providing credit for the development of the rural areas and the comparatively high cost of administering small units of credit to a large number of clients scattered over a broad geographical area. The government accordingly agreed to underwrite any losses that AFC incurred under its “small loans scheme” and the net cost thereof (Agricultural Finance Corporation 1986).

The number of smallholders receiving AFC loans increased from 18,000 in 1980-81 to 77,000 in 1985-86 (Table 19). Loans were provided at subsidized interest rates. However, according to (Eicher 1995), the rapid expansion of AFC’s loan portfolio ran into managerial constraints, leading, amongst other things, to inadequate supervision of lending activities. Poor seasons (e.g. 1983 and 1987) led to genuine problems with loan repayment, but delinquency and default were also encouraged by the belief amongst many smallholders in the immediate post-Independence years that credit was an entitlement, rather than a commercial contract to be honoured<sup>38</sup>. In the second half of the 1980s, therefore, AFC was forced to scale back its lending to smallholders.

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<sup>37</sup> Worried that agricultural research would receive reduced priority after Independence, LSC farmers also established a second privately-funded research site in 1982 (Eicher 1995).

<sup>38</sup> The general problem of “strategic default” on smallholder loans is described in (Poulton, Dorward et al. 1998).



**Table 19: NUMBER AND VALUE OF AFC LOANS**

Year ended March	Large Scale Commercial		Small Scale Commercial		Resettlement Farmers		Communal Farmers		Grand Total	
	Number Granted	Value \$m	Number Granted	Value \$m	Number Granted	Value \$m	Number Granted	Value \$m	Number Granted	Value \$m
1979-80	2233	75.6	4348	1.7	-	-	-	-	6581	77.3
1980-81	2526	86.9	3333	3.7	-	-	18000	4.2	23859	94.8
1981-82	2103	88.8	3649	4.6	911	0.5	30150	10.1	36813	110.0
1982-83	1645	88.7	2953	4.5	4154	10.5	38912	13.2	47664	110.0
1983-84	1400	110.2	3052	8.1	19874	10.4	50036	23.4	74361	135.5
1984-85	1484	110.3	2844	8.7	19926	10.7	65793	32.0	89947	161.7
1985-86	1308	113.0	2569	11.5	13866	8.5	77526	38.9	95269	173.9
1986-87	1007	94.9	1910	9.6	11800	8.6	77384	60.0	92101	173.1
1987-88	990	111.2	1542	6.8	11217	9.0	69885	49.4	83634	177.4
1988-89	900	117.4	1140	5.3	7022	5.9	57679	41.3	66741	164.0
1989-90	969	136.3	844	4.5	5193	5.9	43846	33.4	50852	180.1
1990-91	1133	195.1	761	3.6	4658	4.7	30190	26.4	36742	224.8
1991-92	1499	358.2	727	6.78	6307	10.52	27344	29.73	35877	405.2
1992-93	1340	248.6	376	7.59	4624	13.73	15973	34.04	22319	304.9
1993-94	808	308.6	379	9.65	3706	18.39	13855	54.95	18652	391.5
1994-95	954	411.2	404	15.97	3556	23.45	9228	74.65	14144	525.4
1995-96	1203	598.5	435	17.96	3084	25.44	9214	73.07	13939	714.5
1996-97	1046	673.1	579	38.28	4447	42.97	15698	119.2	21770	873.3

NB: From 1993 the Grand totals included cooperatives and cooperative unions. Adding the number granted and the values, the difference is a result of the inclusion of cooperatives.

Source: (Chimedza 1994) (Updated from various *Agricultural and Economic Review* publications).

By 1990 only 30,000 smallholders were in receipt of AFC loans and the total value of these loans was only 1/7 that of the value of loans to 1,100 commercial farmers (Eicher 1995). Whereas in 1985 AFC credit to smallholders covered around 2/3 of the value of inputs purchased by smallholders, in 1991 this figure had fallen to 1/3 and by 1995 it was perhaps only 1/5 (Chisvo 2000). Despite this scaling back, in January 1990, 80% of the smallholders borrowing from AFC were in arrears (Chimedza 1994).

In the early 1990s AFC was “commercialised” and its lending to smallholders declined still further, despite the introduction of a group lending scheme aimed at smallholders (Chisvo 2000). High interest rates and tight monetary policy were serious constraints to lending targeted at smallholders in the 1990s. Poor harvests in the early 1990s (e.g. 1992, 1995) created a genuinely difficult environment for lending to farmers on rainfed land. Moreover, the difficulties were exacerbated by political pressures for loan repayments to be waived when borrowers got into difficulties. AFC’s status as a parastatal probably did not help it to devise sustainable strategies

for dealing with poor seasons, thus impeding the development of any smallholder lending programme. AFC has now been divided into a commercial company (Agribank) and a soft-loan company (ADAF) which aims to increase lending to poor households primarily in communal areas.

Since 1998-99 GMB has been advancing credit to some smallholder producers in an attempt to stimulate maize production (Tschirley, Jayne et al. 1999). In 2000-2001, some Z\$500 million was lent for this purpose. Some smallholder producers also gain access to credit in kind for agricultural production through contract farming schemes (see below).

Meanwhile, during the 1990s there was a sharp rise in the number of savings clubs in rural areas. The first such clubs pre-date Independence, whilst their recent development has been encouraged by independent organisations such as the Zimbabwe Self-Help Development Foundation, churches and even by agricultural input firms such as Windmill and Agricura. In 2000 there were an estimated 12,000 such clubs, with a total membership of over 300,000 (a 50% increase over 1990) (Chisvo 2000). Whilst the savings may be used to meet immediate needs such as school fees and health care costs, there has been some emphasis on income generation activities, including agriculture. Nevertheless, a 2000 study in Guruve, Gutu, Chivi and Matopo districts by ITDG-Zimbabwe (quoted in (Chisvo 2000)) found the vast majority of respondents (85%+) entirely dependent on own resources to fund their agricultural activities. Virtually no respondents accessed formal sector loans and the various informal sources of finance (including savings clubs) only assisted 10-15%.

## **7 AGRICULTURAL INPUTS**

### **7.1. PRE-REFORM CONTROLS ON AGRICULTURAL INPUTS INDUSTRIES**

During the 1980s Zimbabwe's Ministry of Agriculture controlled inputs production and trade through multiple mechanisms, even though much marketing activity remained in private hands. For instance, the ministry:

- allocated an annual foreign exchange budget among trade associations for agricultural machinery, pesticides and seeds. Trade associations, in turn, distributed foreign exchange to their members;
- registered inputs producers and traders in a way that restricted competition;
- administered price controls (to limit the impact on prices of having protected oligopolies for seeds and other inputs). Government also subsidized inputs through under-priced foreign exchange;
- fixed parastatal fertiliser prices. Whilst, in most years, government set prices were below import parity levels, at times during the 1980s they were higher than the import parity price - in 1987 by around 20% (Jansen and Rukovo 1992). In real terms (compared to the national CPI) fertiliser prices rose sharply in 1985, but then declined until the mid-1990s, the one exception to this being the years 1990-92 (Chisvo 2000). Relative to output prices of major smallholder crops (maize, cotton, sunflower, groundnuts) average fertiliser prices were relatively stable across the three periods 1981-85, 1986-90 and 1991-95. The one exception in this case relates to maize, with maize prices rising much more slowly than fertiliser prices during 1986-90 before recovering during 1991-95 (Chisvo 2000).

Undoubtedly, these controls had some negative impacts, various of which are listed in Table 20. (Gisselquist and Rusike 1997) argue that the arrangements for the allocation of foreign exchange gave trade associations authority to organize and protect oligopoly markets. Moreover, the agricultural machinery companies that were allocated foreign exchange (that is, members of the Agricultural Dealers' and Manufacturers' Association) imported high cost machinery suitable for wealthy farmers, rather than the low cost machinery suitable for small farmers. They also argue that lack of competition amongst fertiliser suppliers resulted in farmers having a limited choice of fertilisers. For instance, the two companies that dominated the fertiliser trade from the 1970s to the early 1990s offered only 13 compounds and 8 single nutrient fertilisers for all crops and soil conditions throughout the country<sup>39</sup>.

**Table 20: IMPACT OF PRE-REFORM CONTROLS ON INPUTS TRADE**

Input	Major Consequences
Agricultural Machinery	Shortages;  Limited choice with few low cost makes and models;  Available machinery favored the large farmers.
Fertilisers	Few dealers, so that fertiliser not always conveniently available, particularly for small farmers  Limited choice of nutrients; farmers not able to match nutrients with soil deficiencies
Seeds	Commercial seeds offered a limited choice of cultivars for maize, other field crops and vegetables  Few dealers, so that seeds not always conveniently available, particularly for small farmers
Pesticides	Weak competition and high prices

Source: (Gisselquist and Rusike 1997)

On the other hand, the 1980s also saw significant successes in the area of input provision to smallholder producers:

- (Eicher 1995) praises the quality of Zimbabwe's seed distribution system and particularly the role of Seed Coop Company of Zimbabwe, "the crown jewel of seed systems in Africa", which now (post-liberalisation) competes within Zimbabwe with international seed firms such as Pannar and Pioneer. During the 1980s there was a rapid spread of hybrid maize varieties, with almost 100% of the maize area planted to hybrids by the early 1990s. Various factors together contributed to the adoption of these varieties – including promotion by Agritex, the availability of credit from AFC and the assured market provided by GMB – but the effectiveness of the seed distribution system should not be neglected. The Seed Coop Company was very active in promoting hybrid seeds to smallholders and, amongst other

<sup>39</sup> Nevertheless, this probably compared favourably with the situation in most neighbouring countries.

things, introduced small packs targeted at poor customers. As a result sales of hybrid maize seed to communal farmers rose from 4,500 tons in 1980/1 to 15,000 tons in 1985/6 and at an annual rate of 27% throughout the decade 1980-90 (Blackie 1994)<sup>40</sup>.

- Adoption of hybrid maize and the expansion of smallholder cotton production (amongst other things) were associated with increases in fertiliser use by smallholders. Figures quoted by (Jayne, Shaffer et al. 1997) show that total fertiliser consumption by the smallholder sector rose from 27,100 tons p.a. in 1975-79 to 97,200 tons p.a. in 1980-84 and 119,000 tons p.a. in 1985-89.

## 7.2. LIBERALISATION IN THE 1990s

The coming of the ESAP reforms brought about significant changes in the provision of most agricultural inputs. These changes are summarized in Table 21:

**Table 21: REGULATORY BARRIERS AND REFORMS**

<i>Input</i>	<i>Major Obstacles Before 1990</i>	<i>Situation in Early 1996</i>
Agricultural Machinery	No market access to foreign exchange.	Removed.
	Mandatory government testing and approval of agricultural machinery.	Removed.
	Price controlled.	Removed.
Fertilisers	No market access to foreign exchange.	Removed.
	Import permits required.	No change.
	Mandatory government approval of fertiliser compositions.	No change.
	Prices controlled.	Removed.
	Parastatals offer subsidized fertilisers.	Removed.
Seeds	No market access to foreign exchange.	Removed.
	Difficult environment for foreign companies.	Removed.
	Prices controlled.	Removed.
	New varieties allowed without variety registration.	Government imposes new controls: from 1993, certification required for 11 crops.
	Seed sale allowed without seed certification.	Government imposes new controls: from 1993, certification required for 11 crops.
	Registration for seed companies not freely granted.	No change.
Pesticides	Registration required for retail seed sales.	No change.
	No market access to foreign exchange.	Removed.
	For new formulations, long registration process delays market entry.	No change.
	For competing brands of old formulations, long registration process limits competition.	No change.

Source: (Gisselquist and Rusike 1997)

<sup>40</sup> In addition to the spread of hybrid maize varieties, since 1980 the proportion of the sorghum area planted with improved varieties has increased from 8-12% to 30-36% (Rusike 2001). Government and donor programmes distributed improved varieties of sorghum free in 1992/93 in response to the previous season's drought. The improved variety SV2 offers yield increases of 50% over traditional varieties. However, commercial demand for sorghum seed is low as they can be replanted with little deterioration. Meanwhile, it is argued that the handing out of free seeds after droughts has hampered the development of commercial seed channels.

In 1993, the government of Zimbabwe lifted price controls for all but two fertilisers, ammonium nitrate and compound D (recommended for maize), which are important for communal farmers. However all price controls of fertiliser ended in 1995 (Gisselquist and Rusike 1997). Nevertheless, as of mid-1997, officials in the Ministry of Agriculture continued to manage fertiliser imports through permits. Moreover, liberalised markets for inputs are not without their problems.

## **Seeds**

(Rusike 2001) argues that, post-liberalisation, smallholder demand for improved seeds is limited by weak (unpredictable?) demand for many final commodities, as a result of the dismantling of the marketing boards. In some areas this is combined with lack of information and inadequate access to the seeds themselves (partly related to the reduced role played by Agritex). Setting up marketing channels in rural areas is expensive, transport costs are high, shopkeepers lack the necessary technical knowledge (not to mention the book-keeping and credit management skills) and credit default is a major problem. Meanwhile, the sector as a whole suffers from inconsistent and poorly enforced government regulations, whilst the cost of seed certification is high and, therefore, prevents development.

(Tripp 2000) notes that the problems of establishing strong, private sector seed distribution systems are particularly acute for crops such as sorghum and millet that are grown primarily in drier and poorer areas. The major seed companies (amongst which Seed Co is still dominant) have tended to focus their promotional and distributional efforts on hybrid maize and a few other crops (and hence, too, on higher potential areas). Stockists are often unfamiliar with other products, are reluctant to stock seeds for which they are not sure in advance of demand and are not used as a source of feedback on demand by the seed companies. For reasons of both supply and demand, commercial markets for sorghum and millet seed are only likely to develop slowly. For the foreseeable future, neighbours, periodic drought relief efforts and NGO promotional activity are likely to remain important sources of sorghum and millet seed for households in NRIV and V.

## **Fertilisers**

Unlike in many other Sub-Saharan African countries, where the removal of fertiliser subsidies has had a major impact on the profitability of fertiliser use (see, for example, (Gerner, Asante et al. 1995) for the case of Ghana), the pricing story in Zimbabwe suggests that the impact of ESAP on fertiliser consumption should have been modest<sup>41</sup>. However, as just noted, economic reform has led to the final dismantling of the package of policy measures that supported (in particular) smallholder maize production in the early 1980s. Where fertiliser use is concerned, the reduction in credit available to smallholders is especially important.

The task of assessing the impact of policy reforms on fertiliser consumption by smallholders is somewhat complicated by the major droughts in the early 1990s. After rising during the 1980s fertiliser consumption by the smallholder sector declined to 86,600 tons p.a. by 1993-94 (Jayne, Shaffer et al. 1997)<sup>42</sup>. This is despite the introduction of a Crop Packs Programme to aid recovery

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<sup>41</sup> Figures quoted by (Durevall and Mabugu 2000) show a sharp rise in the real price of fertiliser in 1996-7. This is not linked to ESAP. (Durevall and Mabugu 2000) do not provide an explanation for this rise and the current authors have not investigated the trend after 1998.

<sup>42</sup> (Rusike 2001) reports similar trends. By contrast, (Chisvo 2000) shows static / falling fertiliser consumption 1985-91, but then a sharp rise during 1991-95.

following the 1991/92 drought. Following the 1995 drought the government offered vouchers to assist smallholders in affected areas to access fertiliser.

(Jayne, Shaffer et al. 1997) find that the value of crop production per hectare and per head of population in smallholder areas (in constant 1993 US\$) both fell between 1985-89 and 1990-94 (having risen more even sharply between 1980-84 and 1985-89). Whilst value of crop production depends, inter alia, on the mix of crops grown, they do suggest that the productivity falls in the early 1990s are related to trends in fertiliser use. By contrast, in Ethiopia, Mali and Burkina Faso, where both partial productivity measures improved between 1985-89 and 1990-94, inorganic fertiliser use increased across the two periods.

Local level survey evidence (formal and informal) suggests that many households cut back on inorganic fertiliser purchases during the 1990s. Informal survey work by (Chisvo 2000) in Mutasa (maize surplus) and Chivi (maize deficit) districts highlighted reduced access to credit and to purchased inputs (due to prohibitive prices) as some of the major negative impacts of agricultural policy reform. Respondents in these districts noted that reduced access to inorganic fertiliser coincided with reduced availability of animal manure due to livestock losses as a result of the two major droughts in the 1990s. Similarly, an ITDG study covering four districts in different natural regions of the country (also quoted by Chisvo 2000), reported that the majority of respondents in Guruve and Chivi districts cut down on their use of inorganic fertiliser between 1991/92 and 1996/97. In Gutu a significant minority did so (with a similar proportion reporting no change). However, in both Guruve and Matopo, a significant minority increased their purchases during the same period. Disaggregating these responses by wealth class indicated that fertiliser purchases by the “upper non-poor” group had held up better than those by three poorer groups.

By contrast, recent surveys of smallholder horticultural producers in Mashonaland East show that 90% of households producing regular marketed surpluses of leafy vegetables, tomatoes, carrots or onions use inorganic fertilisers – often in quantities well in excess of recommended levels (Poulton, *pers.comm.*). These surveys also show that producers predominantly use either compound D or ammonium nitrate (or a home mix of the two known locally as compound X), rather than the fertilisers recommended for their particular crops. This is because compound D and ammonium nitrate remain the cheapest fertilisers available (in per kg terms, not in per nutrient terms) and because farmers are used to them. The envisaged benefit of market liberalisation allowing producers to access a much wider range of fertilisers appropriate to their particular agronomic conditions has yet to be realised.

### ***Contract Farming Schemes***

Some smallholders, generally in higher potential areas, have received seed, fertiliser and crop protection chemicals on credit through contract farming schemes. These schemes have been run by, inter alia: Cottco (55,000 smallholder cotton producers, primarily in Mashonaland Central, Mashonaland West and Midlands), Hortico (export horticulture, primarily in Mashonaland East), Reapers (groundnuts, around Buhera), Chibuku (red sorghum, countrywide), Cairns (plum tomatoes for canning, Manicaland) and Olivine (sunflower, Mashonaland East and Manicaland). Whilst some of these schemes (e.g. the Cottco scheme) have been highly successful (Gordon and Goodland 2000), others have been dogged by problems of side-selling of produce to other buyers. The strength of local agribusiness and the political attractions of being able to claim to source from smallholders (possibly soon the necessity of relying on them!) mean that contract farming has huge potential in Zimbabwe. However, at policy level, there is a need to agree “rules of the game” governing both the contracting firm and smallholder suppliers within such arrangements. At ground level, these rules need to be discussed with, and understood by, CA farmers. The

introduction of such rules may thus involve stakeholder discussions, supportive legislation (possibly establishing local arbitration procedures) and widespread consultation with CA farmers. Agribusiness, NGOs and Agritex should all be involved in the process.

## 8 LIVESTOCK

Section 2 highlighted the importance of livestock holding to rural livelihoods in Zimbabwe and of investment in livestock as a pathway out of poverty. In this section we provide a brief overview of the livestock sector in Zimbabwe (encompassing beef and dairy cattle, sheep, goats, pigs and poultry), paying particular attention to communal areas. We examine the contribution of livestock to rural livelihoods in more detail, look at trends in livestock holding and outline key policies affecting the livestock sector since 1980.

Livestock perform a number of crucial functions for smallholder households (Campbell, Dore et al. 2000). They provide:

- Draft power for crop production. Ownership of cattle and ploughing equipment is a key determinant of a household's crop production potential (Rohrbach 2001). There is very little use of tractors in communal areas and reliance on hand hoeing severely limits the area that can be cultivated. Whilst ploughing services can be rented, owners tend only to make their animals and equipment available for hire after they have ploughed their own land. Thus, reliance on hiring in can lead to late planting and (particularly in lower rainfall years) resultant lower yields (Govereh and Mudimu 1991).
- Manure (again, primarily from cattle). This is more important in higher potential areas than in semi-arid areas, where households often do not bother to apply manure, given the uncertainties surrounding rainfall (Rohrbach 2001), (Mombeshora and Wolmer 2000).
- Milk and meat for own consumption. (Barrett 1991) finds milk production to be the second most valuable contribution made by cattle to communal household livelihoods (a distant second to draft power) and also cites other studies that reached similar conclusions.
- Income from livestock sales. (Zindi and Stack 1992) suggest that, in communal areas, cattle are generally regarded as an investment, whereas goats are seen as a ready source of cash. They also suggest that wealthier households rely more on regular income from sales of livestock and livestock products than poorer households, who own fewer livestock<sup>43</sup>. Amongst poorer households who did sell livestock, the principal use of the money raised was the purchase of grain. Payment of school fees was an important use for all wealth groups. In addition, 10-15% of all groups used money from livestock sales to buy clothes, whilst 10-15% of the top two wealth quartiles purchased farm inputs. Given the explosion in AIDS case, one might expect medical expenditure to rank more highly in a similar survey in 2001 than it did in 1991. Off-take rates from livestock herds in communal areas are generally low – 1-3% is a widely quoted figure for cattle (Ndlovu 1994), (Chigumira 1993)<sup>44</sup> – but may be higher in Matabeleland, where there are fewer alternative sources of income and (according to industry “insiders”) larger livestock herds. In addition, (Campbell and Mukamuri 1998) suggest that

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<sup>43</sup> Note that their survey was based entirely on households in Manicaland and that it contained more households of average wealth and above in NRIII-V than in NRI-II (perhaps partly because livestock holding was an important component of calculated wealth).

<sup>44</sup> By contrast, the same authors suggest figures of 17-23% and 20-25% respectively on LSC farms. (Chigumira 1993) suggests that the 1-3% figure may underestimate informal slaughtering of cattle by communal farmers. (Jackson and Collier 1991) point out that off-take rates depend on the nature of the year and suggest a range of 2-12% for communal herds - highest when there is a drought and lowest when households are restocking after a drought.

off-take rates may have risen in the 1990s as households have become more desperate for cash.

- A source of savings and insurance, especially to provide income during drought years. Both cattle and small stock may be sold to fund consumption in very bad years, although steers are the last animals to be slaughtered (Zindi and Stack 1992). (Kinsey, Burger et al. 1998) observe that livestock sales were the main mechanism by which households within their three sampled resettlement areas smoothed consumption during the terrible drought year 1991-2.
- Social values. For example, lobola payments for brides are generally made in cattle (Barrett 1991).

Overall, (Barrett 1991) estimated gross revenue (including the value of derived services) from communal cattle production to be Z\$30 per ha (or around US\$6 per ha), compared with Z\$20 per ha for LSC cattle production. In addition, the latter incurs much higher costs (perhaps 50% of gross returns).

### **8.1. PATTERNS OF LIVESTOCK OWNERSHIP**

Table 22 presents estimates of the number of livestock in commercial and communal (including resettlement) areas since 1980. A clear decline is seen in livestock numbers in commercial areas, reflecting declining profitability of livestock ownership, despite the opening up of the EU market to beef exports from Zimbabwe during the 1980s. By contrast, numbers of livestock held in communal and resettlement areas has risen steadily over the same period. Taking the period between the two (human) population censuses of 1982 and 1992, the number of cattle held within the communal sector rose fractionally more slowly than the number of humans resident in these areas, whilst the number of small stock (and, therefore, total livestock numbers) rose considerably faster. This contrasts with the trends in crop production described in 3.3. However, inferences regarding poverty would depend on the distribution of this increase.

Factors that have contributed to the rising numbers within the communal herd include the improvement of dipping and veterinary services in communal areas and the introduction of grazing schemes (Chigumira 1993).



**Table 22: Livestock Numbers by Sector (000s)**

	Commercial Sector		Communal Sector	
Year	Cattle	Small Stock	Cattle	Small Stock
1979-80	2410	313	2869	1188
1980-1	2391	311	2895	1584
1981-2	2400	316	3262	1187
1982-3	2358	318	3189	1345
1983-4	2231	307	3234	1809
1984-5	2090	286	3409	2078
1985-6	2126	N/a	3657	2380
1986-7	2013	288	3905	2657
1987-8	2005	304	3815	2922
1988-9	1990	314	3856	2897
1989-90	1831	256	4576	3186
1990-1	1840	249	3509	3067
1991-2	1765	256	4259	3062
1992-3	1566	234	3589	2995
1993-4	1488	223	4279	N/a
1994-5	1436	234	3381	2848
1995-6	1422	241	3518	3090
1996-7	1409	231	N/a	N/a

Source: (Ministry of Lands and Agriculture 1998)

Notes:

- 1990-4 figures for communal areas are described as “provisional”.
- Around 100,000 cattle within the commercial sector are classed as “dairy”; the remainder are “beef”.
- Within the commercial small stock figure, sheep and goats have progressively declined in importance, whilst pigs have risen (to over 50% of the total from 1994-5 onwards). By contrast, goats dominate the communal small stock figure (82% of the total in 1995-6). Although pigs are the least numerous category within communal areas, there are still as many pigs in communal areas as in commercial areas.

There is some dispute over distribution of cattle ownership by geographical area and natural region. (Kinsey, Burger et al. 1998) quote a number of studies showing cattle ownership to be more prevalent in higher potential communal areas (where 70-80% of households might own some cattle) than in poorer communal areas (where 50% or more of households might not own any). Similarly, (Jackson and Collier 1991) found that most livestock (including the majority of larger herds) were held in NR II and III. However, at the same time, 48% of households in NR II

were stockless compared with only 30% in NRIV and 40% in NRV. In the survey of 20 villages in Manicaland (distributed across all five natural regions) reported by (Zindi and Stack 1992), 82% of households within the NRIII, IV and V areas were found to own some cattle, compared to only 70% within NRII and 30% within NRI. In this survey, the majority of cattle were thus found in the lower potential agro-ecological zones. Note, however, that few, if any, of these studies covered Matabeleland and it is a common perception that communal livestock are most plentiful there<sup>45</sup>.

(Ministry of Lands and Agriculture 1998) suggest the following cattle numbers by Province before and after the main adjustments as a result of the 1991-2 drought:

**Table 23: Changes in the Communal Cattle Herd as a Result of the 1991-2 Drought**

Province	No.of Cattle December 1991	No.of Cattle January 1993	% Change	No. of Cattle per Person December 1991	No. of Cattle per Person January 1993
Mashonaland East	516,246	640,974	24.2%	0.67	0.83
Mashonaland Cent.	331,126	395,926	19.6%	0.64	0.77
Mashonaland West	445,986	413,338	-7.3%	0.97	0.89
Midlands	863,713	505,403	-41.5%	0.91	0.53
Matabeleland North	571,910	415,108	-27.4%	1.20	0.87
Matabeleland South	308,268	217,440	-29.5%	0.64	0.45
Masvingo	776,906	359,898	-53.7%	0.78	0.36
Manicaland	719,682	543,781	-24.4%	0.67	0.51
TOTAL	4,533,837	3,491,868	-23.0%		

Source: (Ministry of Lands and Agriculture 1998)

Note: The figures in the final two columns were obtained by dividing the numbers of cattle by the number of people living in communal and resettlement areas within each Province as recorded by the 1992 census.

These figures show the terrible impact of the drought on cattle numbers in drier parts of the country. Although we may expect more vigorous restocking in these drier parts than in Mashonaland, the figures do suggest that drought may have led to a (temporary?) shift within the communal herd from semi-arid areas towards higher potential areas.

Dividing cattle numbers by number of communal residents in each Province makes drier areas (especially Matabeleland North) seem more “cattle rich” than the figures for number of cattle on their own. However, it does not overturn the basic finding of the rest of table that, immediately after the 1991-2 drought, communal households on the Mashonaland plateau generally owned more cattle than their counterparts in drier parts of the country.

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<sup>45</sup> The majority of CSC purchases from communal areas are made in Matabeleland and private traders exporting meat to Democratic Republic of Congo and other regional markets also source primarily from Matabeleland.

Meanwhile, there is a debate over both the sustainability of stocking levels and optimal stocking practices within communal areas. Whilst extension recommendations have continued to promote a fairly constant stocking rate, irrespective of annual rainfall, livestock owners within communal areas have tended to let herd numbers fluctuate with weather patterns, selling heavily during droughts (see above) and restocking in earnest in good years. Some observers have recently argued that optimal stocking practice would be to accentuate inter-annual fluctuations in herd numbers even further.

(Campbell, Dore et al. 2000) attempt to quantify the costs and benefits of different stocking regimes using simulations for the period 1981-95 based on data for Mangwende (NRIII) and Chivi (NRIV) communal areas. They find that the net present value of livestock production over this period achieved through maintaining a fairly constant stocking rate would have exceeded that from observed stocking practice and that this, in turn, would have exceeded that from the recently advocated “biological tracking” approach. The main driver behind this result is the fact that capital is invested in livestock when prices are high after a drought, but that livestock are then sold when prices fall during a drought (as everybody tries to sell together).

(Campbell, Dore et al. 2000)’s results question the rationality of communal cattle owners. However, it would not require a very high weighting to be given to income in drought years relative to income and expenditures in good years to generate a result in which observed practice yields the highest net present value. (Such a weighting would reflect the insurance value of livestock sales during drought years when other sources of income, especially from crop sales, are scarce). Thus, observed practice may be seen to achieve a balance between making the best use of short-term carrying capacity on the one hand and wise use of scarce capital on the other.

Meanwhile, the main thrust of government research in support of communal livestock production is to maximise available feed resources (browse, forage crops, stover fortification) during the annual dry season [S.Moyo, *pers.comm.*]. This is based on the perception that seasonal feed availability is the primary (technical) constraint to increased livestock holding in communal areas.

Finally, having earlier noted the benefits that livestock ownership can bring to crop agriculture, it is important to note a growing conflict between arable production and livestock holding. As populations increase in communal areas, new arable land is opened up in what was previously grazing land. The resulting reduction in available grazing land only makes research into feed resources more critical.

## **8.2. POLICIES AFFECTING SMALLHOLDER LIVESTOCK PRODUCERS**

### ***Support for Smallholder Livestock Production in the 1980s***

Since Independence, there have been continual initiatives to support restocking of the communal livestock herd, following, first, the effects of the liberation war and, subsequently, the four main droughts. These have been administered by CSC, which has lent or sold cattle cheaply to communal producers, and by NGOs. State efforts have focused more on the eastern lowveld than Matabeleland, although the precise reasons for this can only be conjectured:

- The east was worse affected by the liberation war
- There has been a perception that Matabeleland was rich in livestock
- Matabeleland was the major beneficiary of the boom in remittances from South Africa in the mid-1990s
- Matabeleland was a centre of political opposition in the 1980s and is again now.

As already noted, during the 1980s the state also made a concerted attempt to expand and improve the quality of veterinary services available to smallholder livestock owners. In the early 1980s,

cattle dipping and vaccination was compulsory, but was free or heavily subsidised. However, due to the high cost, compulsory subsidised services were gradually withdrawn later, starting in Mashonaland West in 1985. The theory was that – despite the public good dimension to these services – private veterinary services would replace state dipping and vaccination. In the absence of compulsion, however, uptake rates are variable. In the event of a disease outbreak, dipping and/or vaccination can be insisted upon within the affected area. However, delivery relies upon semi-private veterinary officers and so might be higher cost than delivery through the previous state system. One might expect the ending of subsidised, compulsory cattle dipping and vaccination services to lead to lower livestock survival rates and (possibly) less investment in cattle beyond the basic number (four) necessary to ensure availability of draft power.

### *Cold Storage Commission*

In the early 1980s CSC enjoyed a dominant position in livestock purchase, slaughter and meat wholesaling, as well as performing a retail function in low-income urban areas through Trupac stores. During the 1980s, its dominant position in commercial livestock slaughter and meat wholesaling was challenged by an increasing number of private abattoirs. CSC's share of domestic meat sales fell from over 80% in 1980-3 to around 50% by 1988-90. Concern was voiced about this development in some quarters, as the health standards at private abattoirs were not so rigorously monitored and as they did not necessarily have facilities for utilisation of various by-products of the slaughter process (Chigumira 1993). In 1987 controls were introduced on private trading of meat in urban areas, but these were not effectively enforced.

Until the early 1990s, CSC traded according to government-set floor and ceiling prices for purchases from producers, wholesale prices and retail prices for meat sold through Trupac stores. The margins implied by these prices did not cover CSC's costs of operation and thereby contributed to large operating losses. Between 1982 and 1989 the direct subsidy to CSC averaged Z\$47M p.a., some of which covered the cost of drought relief schemes administered through CSC (Muir 1994)<sup>46</sup>. Moreover, the administered producer prices made it increasingly difficult for CSC to obtain enough animals to maintain reasonable operating capacity at its abattoirs and other facilities.

Following ESAP, private investment in abattoirs has been encouraged and CSC has concentrated instead on meat export (where it still exercises a monopoly in relation to the EU market, justified on quality control grounds). Private traders are allowed to export meat to other markets, the most important of which are South Africa and (recently) Democratic Republic of Congo.

Historically, only around 5% of CSC's supplies have come from communal producers, although, as noted above, it has performed other activities in communal areas. Nevertheless, CSC has been – and remains – the single most important buyer of cattle from communal producers. According to (Zindi and Stack 1992), whose survey was conducted when government still set floor and ceiling prices for purchases from producers, the main marketing problem reported by communal sellers of cattle was low prices<sup>47</sup>. Although the administered prices have subsequently been scrapped, the existence of “buying rounds” (whereby the same few buyers move together from market to market within a district) still keeps prices for communal producers down. Competition at auctions in communal areas is best described as “imperfect”. If a particular buyer (e.g. CSC or a private buyer with an export opportunity) has a strong demand for cattle, then they may bid the

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<sup>46</sup> These were not the only government subsidies paid to the livestock sector. Between 1980 and 1990 the direct subsidy to DMB averaged Z\$34M p.a., most of which accrued to LSC producers or urban consumers (Muir 1994).

<sup>47</sup> By contrast, the main marketing problem reported by sellers of small stock was finding a suitable buyer.

price up quite substantially. This, however, may be more of a temporary price “spike” than a more sustained trend. At other times, buyers may collude to ensure that they all get the quantity of animals that they are looking for, whilst keeping the price below a mutually agreed ceiling<sup>48</sup>.

Communal producers also sell some cattle for local, informal slaughter. However, whilst relatively little is documented about this trade, it is believed that regulations introduced in the early 1990s (to stamp out cattle theft), combined with reduced informal demand due to ESAP, have made this a relatively minor component of sales in communal areas.

## **9 MACRO-ECONOMIC AND TRADE POLICY**

### **9.1. EXCHANGE RATE OVERVALUATION**

(Jansen and Rukovo 1992) examined the overall impact of government policy (including macroeconomic and trade policy) on agricultural production incentives in the 1980s. Their findings were that:

- The aggregate barter terms of trade for agricultural products within Zimbabwe rose in the first few years after Independence. (In other words, a basket of the main agricultural prices rose faster than the overall consumer price index). With the exception of 1987, they remained above their 1980 level throughout the decade. However, if tobacco is removed, this trend in the terms of trade was reversed. The real price of flue cured tobacco (almost solely an LSC crop) doubled during 1980-90 – thanks largely to the reintroduction of a free auction system by the Muzorewa government in 1979. By contrast, as already seen, the real producer price of both maize and cotton declined significantly during the 1985-1990 period.
- The nominal rate of protection for maize, derived from the ratio of the (government-set) producer price to the export parity price at prevailing exchange rates, remained positive throughout 1980-90<sup>49</sup>. By contrast, the nominal rate of protection for cotton was negative throughout period, although it improved slightly during 1985-90.
- However, once the overvaluation of the (administratively set) exchange rate is taken into account, the domestic price of all main crops (tobacco, maize, cotton) was below what it might have been in the absence of controls during most of the 1980s<sup>50</sup>. The exchange rate was overvalued by an estimated 50-80% during 1981-90. There then followed a 34% devaluation during the first nine months of 1991 (ESAP) – but this still left it 25% overvalued!

(Jansen and Rukovo 1992) argued that their study showed the importance of considering macroeconomic policy, and not just sectoral policy, when assessing the impact of policy on agricultural performance. This is true and Zimbabwe’s post-Independence experience clearly shows the importance of pricing in ensuring good agricultural performance. However, the same experience (maize in the 1980s, smallholder cotton throughout) can also be used to show that prices are not all that count in achieving production growth (see section 11).

Meanwhile, overvaluation intensified during the later 1990s, with attendant disincentives for

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<sup>48</sup> Commercial producers, who can sell direct to CSC or to private abattoirs, benefit from more price competition for their animals (Chigumira 1993). Buyers are also willing to pay higher prices for cattle in LSC areas because the transaction costs entailed in obtaining large numbers of high grade cattle are much lower there.

<sup>49</sup> In other words, the export parity price fell by more than the set producer price during 1985-90.

<sup>50</sup> Maize producers were “subsidised” in three years, but “taxed” during the rest.

producers of the main tradable crops. The politics of this are that some of the main beneficiaries of devaluation are LSC farmers selling tobacco and horticulture onto world markets, whilst short-term welfare gains accrue to urban consumers – and even rural net grain buyers in poorer areas.

## **9.2. INTERNATIONAL TRADE AGREEMENTS**

Looking forwards and given that agriculture is one of Zimbabwe's major export earners, it is important to look at the international trade agreements that the government has entered into.

### **COMESA**

COMESA (Common Market for Eastern and Southern Africa) is the successor to the 1981 Preferential Trade Area agreement and it came into existence in 1994. An eventual objective of COMESA is the creation of a common market in goods, services and capital amongst its 20 member countries. According to (Hess 2001):

“Zimbabwe has been an active proponent of the objectives and development of the COMESA programme ... COMESA offers a natural market for which [sic] Zimbabwe could take advantage because of its relatively superior economic development. Zimbabwe is a small economy in terms of geographical and demographic indicators, and COMESA more than compensates for this ‘deficiency’ by offering a market of some 400 million people ...”

(p23)

In October 2000, after some delays due to economic disparities between member states, the COMESA Free Trade Area was set up. This was preceded by measures to reduce and then eliminate customs duties, simplify rules of origin etc. In order to qualify for preferences, manufactured exports are expected to fulfill the rules of origin condition of at least 45 percent local content.

### **SADC**

The successor of SADCC, SADC came into existence in 1992. It has 14 members, all but five of which (Botswana, Lesotho, Mozambique, Tanzania and South Africa) also belong to COMESA. Initially, SADC's approach to regional integration placed more emphasis on infrastructural development than on market integration. However, the 1996 SADC trade protocol also set a goal of free trade in goods and services, beginning with goods. Thus, there is now talk of harmonising the work of the two organisations (Hess 2001).

Although the trade protocol has not yet been ratified by all the member states, the majority of SADC countries should soon be able to start trading under it. Rules of origin are, however, still being negotiated in some contentious areas (e.g. motor vehicles and parts, plastic products, wheat products) and sugar is being negotiated in a separate protocol (Hess 2001). The trade protocol should assist Zimbabwe in its endeavour to expand manufacturing exports.

With regard to the agricultural sector, Zimbabwe has agreed with eight other member countries of SADC and/or COMESA to trade agricultural products on a zero duty basis. These countries are also working towards the setting of a common external tariff for agricultural imports from third countries. At the time of writing this report, a key question that the authors have not answered is whether Zimbabwe has agreed to a relaxation of GMB's control over grain imports and exports as part of these negotiations.

### *Bilateral Trade Agreements*

These have been negotiated with South Africa, Botswana, Malawi and Namibia. The agreement with South Africa, Zimbabwe's single biggest trading partner, is the most important. Zimbabwe runs a continual balance of trade deficit with South Africa, importing primarily capital and intermediate goods. Whilst these largely fall outside the terms of the bilateral agreement, Zimbabwe's exports to South Africa (e.g. textiles and clothing, wood products, minerals, agricultural goods, tobacco, base metal products and furniture) are covered by the agreement. Thus, Zimbabwe is dependent on continuation of the trade agreement in order to be able to export (Hess 2001).

### *Lome Convention*

Under the various Lomé agreements, the vast bulk of Zimbabwe's exports to the European Union (EU) entered the EU under non-reciprocal, preferential arrangements. The major Zimbabwean agricultural product to benefit from duty free entry into the EU was tobacco. Even where there were some exceptions, for example products covered by the EUs' Common Agricultural Policy, the seasonal difference between Zimbabwe and the EU allowed for good margins of preference or even zero tariffs in these cases. As the EU constitutes the market for over 50 percent of Zimbabwe's exports<sup>51</sup>, these arrangements were very important.

Under the Lomé Convention's Beef and Veal Protocol, Zimbabwe had a preferential tariff quota that allowed it to export 9,100 tonnes of beef into the EU annually. Because of the artificially high prices paid for beef within the EU, this allowed Zimbabwe to receive a significantly higher price for its beef exports than it could have done through other markets. Food safety standards within the EU are stringent, however, and the beef quota was not fully utilized between 1995 and 1999 on account of failure to meet the required safety standards. Twice, too (in 1989 and again in 2001), the export of beef to the EU has been halted altogether due to outbreaks of foot and mouth disease within Zimbabwe's designated livestock export zones. Maintaining controls against foot and mouth disease within Zimbabwe is costly (given that the disease is endemic within buffalo in some of the country's national parks) and these costs have to be offset against the benefits of high export prices.

Under the sugar protocol, Zimbabwe's preferential tariff quota stood at 30,225 tonnes annually supplemented by a variable Special Preferential Sugar quota which in the 1997/98 season was 29,744 tonnes (United Nations Development Programme 1999). The country has been able to fully utilize its sugar quotas as well as the special preferential sugar quota.

### *Cotonou Agreement*

The Cotonou Partnership Agreement (CPA) is the successor of the Lomé agreements and is intended as a transitional step towards WTO-compatible trading relationships between the EU and ACP (Africa, Caribbean and Pacific) countries. Essentially, the agricultural trade preferences that existed in the Lomé Convention were maintained in the CPA and a few agricultural tariff lines were added to the schedule of ACP trade preferential duties. However, the non-reciprocal preferential trade arrangements in the CPA are temporary, extending only between 2000 and

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<sup>51</sup> Europe overtook Africa as Zimbabwe's major export region in 1995 and has retained this position since (Hess 2001).

2008. Moreover, there is still no WTO waiver in place for the CPA trade preferences<sup>52</sup>, although in 2000 an application to this effect was made to the WTO by the EU and by Tanzania and Jamaica on behalf of the ACP countries.

The beef and sugar commodity protocols were also maintained. By contrast, the Lome Banana Protocol was not renewed, primarily because it is the subject of a dispute within the WTO. However, it will be extended subject to a new regime to be formulated by the EU. All commodity protocols will now be reviewed in the context of the new trading arrangements, and with a view to their compatibility with WTO rules (implications unclear). Special consideration will be given to retaining the sugar protocol (Article 36.4 of the CPA).

The CPA commits ACP countries and the EU to a timetable of negotiations, the main objective of which is to achieve WTO-compatible trade arrangements. According to current rules, this entails reciprocity and a comprehensive coverage of products and services. Negotiations of reciprocal Economic Partnership Agreements (EPAs) 'will be undertaken with countries which consider themselves in a position to do so', not necessarily with all ACP countries. However, the CPA does not indicate any viable alternatives (Article 37.5). In 2004, the EU 'will assess the situation of the non-LDC ACP countries (possibly including Zimbabwe) which, after consultations with the EU, decide that they are not in a position to enter into EPAs. It has said that it will examine all alternative possibilities in order to provide these countries with a new framework for trade which is equivalent to their existing situation and in conformity with WTO rules. However, this appears to be an empty promise that will come too late in the negotiating timetable.

Another factor likely to erode the value of ACP preferences within the EU market is that, by 2005, all LDC countries, including non-ACP LDC's, will benefit from Lome-equivalent preferential access.

Given that EPAs appear to be the only long-term option available to ACP countries under the CPA, Zimbabwe must now focus on the potential commercial costs and benefits of reciprocal trade with the EU. In the case of agricultural trade, the export subsidies provided to EU agricultural commodities under the Common Agricultural Policy (if maintained) pose an immense threat to Zimbabwean domestic agriculture. Cheap agricultural commodities would compete unfairly with domestic producers and cut their profit margins, thereby affecting their ability to build on existing (and any newly acquired) market access into the EU. Whilst the WTO-induced agricultural reforms of the CAP, coupled with internal pressures for additional reform, may cut EU export subsidies, they are also exerting downward pressure on the commodity prices in the EU market, thereby reducing the value of current and future preferences for countries such as Zimbabwe. Similarly, the extension of similar preferences to other regional blocs, including the imminent non-reciprocal trade preferences to all LDC's, erodes the preferential margins. Therefore, the cost of reciprocity must be calculated taking into account these negative factors.

### ***Generalized System of Preferences***

The United States and other industrial countries established the Generalized System of Preferences in the early 1970s to promote economic development in developing countries through increased trade. The program extends preferential tariff treatment; that is, low or zero duties for designated products exported from beneficiary countries. For example, Zimbabwean sugar enters the United States free of duty, Zimbabwe having been accorded GSP status by that country.

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<sup>52</sup> The CPA preferential arrangements are currently not WTO compatible because they are not reciprocal.



## *The World Trade Organization*

Zimbabwe is a founder member of the WTO. However, it is unclear what benefits the WTO has brought to Zimbabwe. One of the reasons for this is that Zimbabwe does not yet have the legislative basis for activating some of its WTO rights, e.g. on anti-dumping (Hess 2001). At the same time, as noted above, pressures from WTO rules have encouraged the EU to rethink the nature of trade preferences that it offered Zimbabwe and other ACP countries through the various Lome agreements. As a low income country, however, Zimbabwe is entitled to retain GMB's monopoly status as an importer / exporter of grains even under WTO rules.

### **9.3. NON-FARM EMPLOYMENT**

Section 2 highlighted the importance of non-farm employment to the livelihoods of poor rural households (not to mention urban households). Although (Bautista and Thomas 1999) find that the GDP growth multiplier from expansion of labour-intensive light manufacturing is lower than that from any form of agricultural growth<sup>53</sup>, urban-rural linkages are clearly important to rural livelihoods in Zimbabwe.

For current purposes, it is perhaps useful to distinguish the following types of employment:

- Employment in industries and professions for which product demand and employment levels are *not* determined primarily or most directly by the buoyancy of the agricultural sector<sup>54</sup>. This includes public sector employment (whether urban or rural) and most urban employment (formal or informal). When employment is plentiful in these industries and professions, labour will tend to be pulled into them out of agricultural activity. Members of some rural households engage in employment of this nature whilst still resident at their rural home. However, more commonly they migrate to an urban area from where they may or may not send remittances back to those still at home.
- Employment in industries and professions for which product demand and employment levels *are* determined primarily by the buoyancy of the agricultural sector. This is first and foremost the production of goods and services within the rural informal sector, although it also includes formal employment in farm input production and distribution and in agro-processing (by African standards, relatively well developed within Zimbabwe).

(Knight 1997) estimates that, during the 1980s, total formal sector employment increased by 180,000 (or 18%, from a base in 1980 of around 1 million). Approximately 100,000 of this increase was in the public sector, especially education and government administration. This increase, however, did not keep pace with the increasing numbers of students completing secondary school (especially form four). As a result, at the end of the 1980s, whilst there was still

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<sup>53</sup> This can be explained by two factors: i) even in labour-intensive light manufacturing, there is a greater reliance on capital inputs into production than there is into (smallholder) agriculture; ii) employees in the manufacturing sector tend to spend a higher proportion of their marginal income on tradable (imported) goods than agricultural producers. This suggests that a given, proportionate expansion in light manufacturing is likely to have a lower impact on poverty than an equal, proportionate expansion in agricultural production.

<sup>54</sup> This categorisation may appear to contradict earlier sections of this paper that suggested that the health of the agricultural sector is critical to the overall health of the economy and, therefore, to all other parts of it. The point here is not to argue that the health of the agricultural sector is irrelevant to the prosperity of these industries and professions, but to suggest that other factors (e.g. general macroeconomic management, industrial and trade policy, and government budgetary priorities) are as important in determining the levels of employment in these industries and professions as is agricultural prosperity.

a scarcity of highly skilled labour<sup>55</sup> (including any needing specialist training), there was growing unemployment amongst form four leavers, who expected non-agricultural wage jobs. Some of these form four leavers stayed completely unemployed, but many sought work instead in "lesser occupations" and/or the informal sector. According to a national survey, 26% of the urban labour force were unemployed in 1990/1. (Knight 1997) states that:

"The labour market is best seen as one in which the preferred non-agricultural formal sector jobs are rationed by employers and the residual labour force is absorbed into open unemployment or the free-entry informal sector. The glittering urban prizes can be expected to attract migrants from the rural areas and so generate unemployment and an urban informal sector." (p85)

As part of ESAP, 18,000 public service posts were then cut during 1990-95, whilst real wages in the public sector fell by 39% (substituting for further job cuts). Meanwhile, the statutory minimum and maximum wage controls of the 1980s were abolished in 1990, except for those relating to agricultural and domestic workers. Partly as a result, overall employment in the private sector rose 14% during 1990-95. This figure would, however, have been higher, had it not been for a very rapid removal of protective tariffs from important domestic industries (which suffered as a result). The increase of 8% in total formal sector employment during this period was (as in the 1980s) insufficient to cope with the rising number of people, especially school leavers, looking for work.

More recently, the chaotic nature of the land redistribution process, combined with fuel shortages and now foreign exchange constraints, have further restricted formal sector investment and employment<sup>56</sup>.

According to (Knight 1997), "nationally representative" surveys suggested that, in 1991, there were 868,000 micro and small (informal) enterprises in Zimbabwe, employing 1,351,000 workers, i.e. greater than total formal sector employment. Nevertheless, the urban informal sector remained small in relation to those in comparable African economies. According to (Knight 1997),

"This reflects more than the repressed state of the informal sector prior to 1980. It is also due to the relatively advanced formal sector, associated with non-African entrepreneurship and the westernisation of tastes, and the remaining obstacles to entry to informal sector activities [such as prohibition of shanty town development and enforcement of vagrancy laws]." (p88-9)

Some 643,000 of the informal enterprises noted above were rural and the numbers implied that 45% of rural households and 35% of urban households ran an informal (non-farm) business of some sort.

There was a further 14% increase in informal employment by 1993, to around 1,540,000 workers. (Knight 1997) comments that:

"The evidence ... suggests that on the whole the expansion is a sign of failure: most of it occurred in free-entry activities offering relatively low incomes, such as trade in farm products, crocheting and knitting." (p87)

Overall, it appears that opportunities elsewhere in the economy did little to assist rural poverty reduction either in the 1980s or 1990s. This in turn meant that communal areas continued to

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<sup>55</sup> This was exacerbated by a "brain drain" out of Zimbabwe (e.g. to South Africa) by the early 1990s as pay for top staff (especially in the public sector) was kept down. In the early 1990s ESAP led to a widening of differentials again. However, real wages for skilled workers still fell as result of inflation.

<sup>56</sup> Employment was estimated to have decreased by 100,000 jobs in 2000 (Hess 2001).

absorb much underemployed labour and in some cases to suffer from unsustainably high population densities as a result (Davies and Rattso 1996). Opportunities for income from non-farm sources to boost household investment in agricultural improvement (Weiner 1988) were also constrained.

In 1994 a window of opportunity opened for Zimbabwe, particularly those from the south of the country, to seek employment in newly-majority-ruled South Africa. Surveys in Matabeleland in the mid-late 1990s (see, for example, (Rohrbach 2001) found up to 60% of households to be female-headed, in large part because husbands were away working across the border. There was less evidence, however, that remittance income was invested back into agricultural production in these inherently risky, semi-arid areas. There is anecdotal evidence to suggest that recently the window of opportunity for employment in South Africa may have partly closed again.

## **10 DROUGHT MANAGEMENT POLICIES**

Between 1980 and 2000, Zimbabwe experienced four major droughts: 1982-3, 1986-7, 1991-2 and 1994-5. The ever-changing global climatic conditions make it imperative that Zimbabwe have a policy to ensure that the impact of droughts is minimized. The current national drought policy emphasizes efficiency in the utilization of water, increased agricultural productivity in both commercial and communal areas, good land use management and careful management of the environment and natural resources (GoZ, 1996).

In the early 1980s, the government provided relief food to those affected by drought. Under the drought relief programme launched in 1982, food aid was sent only to those areas that were drought stricken. This policy was operative mainly from 1982 to part of 1985. A total of 1,528,631 people were assisted in 1982; 1,542,670 were given aid in 1983; and 1,566,487 received food aid in 1984 (Government of Zimbabwe 1986). The government spent \$Z19.1million (1982/83), \$Z5.5million (1983/84) and \$Z26.9million in 1984/85.

A policy change came in 1983/84 when the government introduced a Public Works Programme. The reasoning behind this move was to instill self-reliance in able-bodied people who required drought aid. (The elderly and disabled did not need to participate to qualify for food). Instead of receiving food handouts, all those who were affected by drought were required to participate in projects that were administered at local level. Some of these projects included work on roads, bridges, toilet pits, irrigation schemes, dams, and piped water schemes (Government of Zimbabwe 1986). According to (Kinsey, Burger et al. 1998), in January 1992 some 873,000 people (out of a total of 2.1 million who had registered for drought assistance) received food aid through participation in food-for work programmes. By November of the same year, the number registering to receive aid had risen to 5.6 million – 75% of the rural population. A Children's Supplementary Feeding Programme, operational for a while during the 1980s, was also reinstated in response to the 1991-2 drought. During 1991-2, one million children under the age of five benefited from the scheme.

Following drought years, a number of programmes have also been implemented to assist in the recovery of agricultural production. Seed and fertiliser packs have been distributed in badly affected areas, and rural households have been provided with assistance by both the state and NGOs to restock their cattle herds.

The other main government strategy has been to implement measures that would counter the effects of droughts in the future. One approach was to create a fund that would kick-start or even run drought related programmes. \$Z50million was the target amount to be raised through the

fiscal system, as drought levy, in 1984/85. Once harnessed, the money was used to set up a Drought Insurance Fund.

As a way of hedging against crop failure in a mono-crop production system the government has encouraged people to practice multi-cropping and terracing of fields. In addition, communities were encouraged to maintain a two-year grain supply in community granaries. For livestock, it was recommended that communities practice multi-species livestock husbandry and supplement livestock feeding. Sources of income should be diversified, while vegetables, meat and indigenous fruits could be dried and stored in a manner that allowed them to be kept for extended periods (GoZ, 1996). Nevertheless, for all the talk of avoiding mono-crop production, few suitable crop rotation packages have been developed that are competitive with monocropping in terms of both cash and calories. An exception is the promotion of soyabean by researchers at University of Zimbabwe, although this has so far spread primarily in higher potential natural regions.

Meanwhile, in Matabeleland and other semi-arid areas, ICRISAT (amongst others) have been promoting improved varieties of sorghum and millet as a way of enhancing household food security, particularly during years of below average rainfall.

Drought is an unavoidable fact of life for many rural households in Zimbabwe. Whilst nationwide “events” have occurred on average once every five years since Independence, (Mombeshora and Wolmer 2000) suggest that households living in some parts of NRV might only be able to harvest a reasonable grain crop once every five years due to insufficient rainfall. Crop agriculture is unlikely to provide a significant engine for poverty-reducing growth in such areas.

## **11 COMMODITY CASE STUDIES**

In this section we look in detail at a couple of crop “success stories” of the post-Independence years. We look in particular at the factors that contributed to success and, related to this, at the role (not always positive) played by various state agencies.

Another smallholder “success story”, albeit restricted largely to Mashonaland East, is horticultural production. This is not told here, but details can be found, inter alia, in (Jackson, Turner et al. 1997). Whilst state agencies (e.g. Agritex and ARDA), with donor assistance, have played a role in promoting smallholder horticultural production, the degree of state involvement in the horticultural sector has been much less than in the maize or cotton sectors reported on here.

### **11.1. MAIZE**

Trends in smallholder maize production in the early 1980s prompted claims about a Zimbabwean “green revolution” (Rukuni and Eicher 1994). However, in many ways this particular success story has proved somewhat short-lived.

White maize is the staple food of the majority of Zimbabweans, with small grains supplementing maize in the driest production areas and in years of anticipated drought. However, maize production and marketing in Zimbabwe has to overcome several significant problems:

- Unreliable rainfall (particularly in NRIII-V) makes production both risky and unpredictable. Cereal yields in Southern Africa as a whole are among the most unstable in the world (Byerlee and Heisey 1996).
- The international market for white maize is thin, leading to severe fluctuations in the world price and increasing the risks of relying on imports for national food security.

- These risks are compounded by the fact that Zimbabwe is landlocked. Imports of maize from the international market take time to reach Zimbabwe and incur high transportation costs.
- Other countries in Southern and Eastern Africa also produce white maize. The correlation between production levels in Zimbabwe and, say, Tanzania is not that high, so surplus maize could in theory be sent from Tanzania to Zimbabwe when the latter was in deficit. However, in practice commodity flows are impeded by slow and inefficient transport infrastructure, compounded by a weak institutional environment for contract negotiation and enforcement, and unsupportive policies regarding intra-regional trade.
- The high cost of transportation, combined with the low value-to-weight ratio of maize, also means that there is a wide gap between the export and import parity prices of maize in Zimbabwe. Thus, in a free market, domestic maize prices would tend to fluctuate considerably in response to changing production conditions. This is a major problem, given that maize purchases constitute an important element of total expenditure by the poorest households.

Government policy from the 1950s onwards promoted the consumption of highly refined maize flour processed by large-scale roller mills (Jayne, Rubey et al. 1995). Colonial policy was also designed to protect maize production by European commercial farmers against both climatic uncertainty and competition from lower cost, African smallholders (Jayne and Jones 1997).

At Independence in 1980, one of the major policy aims of the new government was to expand smallholder maize production by extending government services and support from commercial to communal farming areas<sup>57</sup>. This commitment to smallholder farmers has been described as a “social contract” that the new ZANU PF government entered into with its main constituency of support in the rural areas (Jayne and Jones 1997). In 1980 there were only three GMB depots in CAs. This limited the way in which communal farmers could link up with the only acceptable channel of selling their grain. By 1985 the government had built ten more depots and, by 1991, a total of thirty-seven GMB depots were located in CAs. In addition, GMB established seasonal buying points to receive grain from smallholder producers. In 1980 five such buying points were established. In 1985 (an election year) this number soared to 148, before declining to fifty-five the following year. A larger number of the new stations were in lower potential areas in the south of the country (e.g. Masvingo) and/or to serve resettlement schemes. The system of pan-territorial and pan-seasonal pricing (inherited from pre-Independence days) was maintained, effectively subsidising production in remoter production regions. Prices were also set at attractive levels, such that, from 1980-86, smallholder maize production virtually doubled from 738,000 tons to 1.3M tons (Eicher 1995).

A bumper harvest in 1985 meant that GMB stocks reached 2 million tons or two years’ domestic consumption. Thus prices were reduced by 15-20% in real terms during the latter half of the decade (Jansen and Rukovo 1992) to ease the cost of GMB stock holding<sup>58</sup>. Nevertheless, despite lower production, Zimbabwe remained a regular exporter of maize during this period. As LSC producers shifted into higher value (uncontrolled) crops, the proportion of marketed maize surplus produced by smallholders reached 60% by the end of the 1980s.

This “success” was, however, achieved at high cost:

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<sup>57</sup> In turn, this was intended to raise rural incomes, as it was believed that the majority of rural households were net grain surplus in average years (Jayne and Chisvo 1992).

<sup>58</sup> 9.1 has already noted how they compared to export parity levels, with and without the effect of currency overvaluation.

- Even though it was well run by the standards of many African marketing boards, the GMB could not avoid going into deficit as a result of its policy of pan-territorial pricing, the costs of storing large quantities of maize in good seasons and the requirement to sell maize to millers at fixed prices. (Jayne and Chisvo 1992) reports that the margin between GMB buying and selling price only covered half the related marketing costs in the latter half of the 1980s, whilst (Eicher 1995) reports that the overall subsidy required by GMB was of the order of US\$30-90 million p.a. during the same period.
- The single-channel marketing system for maize grain supported a high cost processing industry. Maize purchased by GMB was sold to large-scale mills in urban areas, where it was turned into highly refined (and, therefore, expensive) flour. There was no encouragement for the establishment of small-scale milling enterprises that could turn out less refined forms of flour (thought to be little in demand even from poor consumers). Moreover, the flour then had to be transported back into rural areas to supply deficit households. Thus poor consumers - urban and rural - paid an unnecessary premium for their staple food item (Jayne and Chisvo 1992).

Despite the effort to send resources to less favoured areas, the increase in smallholder production in the 1980s was generated by a relatively small proportion of better endowed households (with above-average land endowments) in higher potential areas<sup>59</sup>. Most poorer households remained net buyers of maize. (Chisvo, Jayne et al. 1991) reported that the majority of households in drier parts of the country remained net grain buyers even whilst the country as a whole was exporting<sup>60</sup>. However, the single-channel marketing system discouraged direct sales from surplus to deficit households within rural areas.

In the second half of the 1980s, in addition to the lower real producer price for maize, the number of seasonal maize collection points was reduced (to 42 in 1989). However, the main beneficiaries of changes in maize pricing policy during this period were the commercial maize millers, whose margins rose as the GMB's buying and selling prices fell (Jayne and Chisvo 1992).

As noted in 5.2, ESAP contained proposals to remove controls on maize grain marketing and to move towards a more limited, market stabilisation role for the GMB. Although implementation of these reforms was delayed by the 1992 drought, the long-distance grain movement, storage and wholesaling functions of the GMB were gradually opened up to private traders. At local level, traders were initially allowed to enter as private intermediaries between both surplus and deficit households and GMB depots. It was also made clear that depots could sell direct to farm households as well as buy from them. The dominant position of the large-scale roller mills was also exposed to competition from small-scale hammer mills, which rapidly appeared in large numbers in both urban and rural areas. In 1993 maize meal subsidies were abolished and consumer prices decontrolled.

A second phase of grain market reform in 1996-97 meant that the only significant area of maize marketing still controlled by the state was import and export, which remained a GMB monopoly. GMB's share of domestic maize sales had fallen to 10% by 1997 (Abt Associates 1997) and the establishment of ZIMACE provided a major alternative channel for large-scale grain sales within the country.

The most notable early success of the reforms was that the maize meal bill faced by poor (and

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<sup>59</sup> Three quarters of smallholder marketed surplus came from the three Mashonaland Provinces.

<sup>60</sup> Within survey areas in NRIV and V, the figures ranged from 57 to 98%, depending on location and whether or not the areas in question had received average levels of rainfall during the season (1990) in question.

many middle income) consumers did not rise dramatically with the removal of subsidies. Poor consumers rapidly switched from highly refined “roller meal” to whole maize meal, which cost only 60-75% of the price. (Jayne, Rubey et al. 1995) reported that whole maize meal already accounted for around half of all urban meal consumption. In rural areas, consumer prices were assisted by the direct shipment of grain from surplus to deficit areas, in place of the previous circuitous route through the cities.

However, the initial impact of the reforms on the GMB budget was adverse, rather than beneficial. This was because pricing policy was not adequately addressed. GMB continued to set pan-territorial buying and selling prices. As a result of this, the transportation of grain to and from accessible districts rapidly passed into private hands, leaving GMB to service the more remote, high cost areas without cross-subsidy from more profitable areas.

For the 1992-3 season, following the 1991-2 drought, GMB made an early announcement of producer prices that represented a significant real increase on the previous year (Table 10). As the 1993 harvest was a good crop, the GMB received huge quantities of grain that it had to store. In eight months it ran up a trading deficit equal to 2.8% of GNP (Jayne and Jones 1997).

In 1995-96, by contrast, GMB set a purchasing price of Z\$1,050 per tonne, that was too low when compared with supply and demand conditions. Commercial and other farmers with on-farm storage capacity withheld supplies from the market and GMB only received enough grain to supply deficit areas for a few months. Once GMB stocks were exhausted, the price rose sharply.

Indeed, the continuing intervention of GMB in maize markets has been a regular source of instability during the 1990s<sup>61</sup>. Arguably, it is impossible to make any assessment of the pros and cons of “liberalisation” for this reason (Jayne, Chapoto et al. 2001). What can be observed is that:

- In real terms (i.e. deflating nominal prices by the CPI), GMB producer prices fell sharply during 1990-2, then doubled between 1992 and 1994, before falling back to 1991 levels by 1998 (Durevall and Mabugu 2000).
- The area planted to maize in communal areas dipped during 1991-2 (in fact, continuing the downward trend that had started in 1988), but then doubled between 1992 and 1997. This increase was larger than that registered during the early 1980s. In commercial areas, the rise lasted just two years and by 1997 area planted to maize was back to the levels of the later 1980s (Durevall and Mabugu 2000).
- Output per hectare in communal areas, which rose in the early 1980s as smallholders adopted hybrid maize varieties and the associated fertiliser inputs, declined somewhat during the 1990s. (Durevall and Mabugu 2000) run regressions for the period 1980-99 and find that rainfall is by far the most important determinant of yields. The only other variable that they find to be significant is the number of GMB depots and collection points, suggesting the importance of secure market outlets to smallholder productivity<sup>62</sup>. Neither availability of credit nor relative price of fertiliser are found to be significant determinants of yields. However, data for fertiliser use specifically on maize are not available and (Durevall and Mabugu 2000) hypothesise that the number of GMB depots and collection points may in some way capture ease of access to fertiliser.

Largely due to trends in the commercial sector, national maize production per capita continued to

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<sup>61</sup> This may have been less of a problem at local level (Vaze, Wright et al. 1998) than at national level.

<sup>62</sup> Work by Thirtle and others arrived at a similar finding for TFP growth (all crops?) for the period 1970-90 [C. Thirtle, *pers.comm.*].

decline during the 1990s. However, with the exception of 1992 and 1993, Zimbabwe remained a net maize exporter. (Durevall and Mabugu 2000) argue that, as the decline in maize production per capita is largely attributable to shifts into higher value crops by LSC farmers, it will really only become a serious issue if Zimbabwe's net exporter status is threatened<sup>63</sup>. In 1997-98, as buyers anticipated an El Nino-related maize shortfall, domestic maize prices did rise rapidly. However, closer investigation reveals that, whilst domestic production was poor, the real supply problem was caused by significant GMB exports – in contravention of its strategic grain reserve mandate (and for reasons that are not known).

Meanwhile, the price rises in 1998 had much wider repercussions. During 1997 GMB prices had again lost touch with supply and demand conditions within the domestic market. GMB raised its selling price by around 50% in January 1998, as the ZIMACE maize price approached Z\$3,000 per ton. This prompted a 21% price rise from millers, which sparked food riots in Harare. In May 1998, following the poor harvest just noted, GMB doubled its purchasing price (which had remained at Z\$1,200 per tonne since mid-1996) and, therefore, also raised its selling price again. Worried about the consequences for urban consumer prices, however, the government also moved to reintroduce price controls on maize meal for the first time since 1993. It accused millers of taking advantage of conditions of scarcity to reap excessive margins, although research shows that their margins were amongst the lowest in southern and eastern Africa at the time (Tschirley, Jayne et al. 1999). Ironically, despite the souring of relations between the government and the large-scale millers, the main losers from the reimposition of price controls appeared to be small-scale hammer millers. Not only did they now face artificially cheapened competition from roller meal, but, as market prices of maize grain again rose above GMB selling prices in early 1999, they found themselves disadvantaged in accessing cheaper GMB supplies. Large-scale millers, although not happy, could at least afford to send trucks direct to GMB depots in rural areas to buy up supplies that were available.

In 2001 matters got even more desperate. An unfortunately timed dry spell at the turn of the year, combined with occupations of large numbers of LSC farms, meant that the anticipated marketed surplus of maize was only 400,000 tons. GMB had little maize in store<sup>64</sup> and high debts impeded its ability to set a competitive buying price. (ZIMACE prices reached Z\$9,000-10,000, compared to a GMB buying price of Z\$7,500). Moreover, the government had little foreign exchange to import maize. The entire GMB board plus Chief Executive were suspended, leaving the Minister to exercise control over GMB operations. In a return to 1980s policies, it was decreed that a large number of temporary maize buying posts should be opened around the country to make it as easy as possible for producers with surpluses to sell them. In the end a request had to be made for food aid assistance from World Food Programme.

For the purposes of the our project, it is important to stand back from the current crisis and examine more general lessons from the past 20 years' experience with intervention in maize marketing. Lessons that emerge include:

- A minority of better resourced smallholders are capable of delivering significant surpluses of maize (and other crops) if production inputs, credit, extension advice and marketing outlets are available and prices attractive. Land reform could considerably increase the number of smallholders with the capacity to deliver surpluses under such circumstances.

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<sup>63</sup> This goes back to the points raised earlier about the expense of relying on maize imports, given Zimbabwe's landlocked position and the high cost of transportation through neighbouring countries.

<sup>64</sup> In its capacity as manager of the strategic grain reserve, it is supposed to maintain stocks of 500,000 tons (enough for around four months' national consumption).



- It is likely that the poverty-reduction impact of the “smallholder maize revolution” in the 1980s was limited by its concentration within higher potential areas, by the inflexibility of the monopoly marketing channel and by the high cost of the processing operations it supported. Local demand multipliers would have had little impact on the majority of the poor in other parts of the country, whilst increased production did not translate into lower real food prices for poor consumers.
- In the 1990s GMB has not exhibited the flexibility to perform a price stabilisation or food security function effectively within a broadly liberalised market. Infrequently adjusted prices have led either to huge supplies of grain to GMB (which it then finds expensive to store) or to GMB scarcely receiving any supplies. Whilst GMB prices clearly do influence prices elsewhere in the market, the effect is only temporary (as in 1995-96). Eventually, GMB has been forced to fall in line with prevailing supply and demand conditions.
- A question that we have not yet investigated, but which merits attention is whether, given Zimbabwe’s landlocked position, a more liberal trade regime would have resulted in more stable prices through the 1990s.

## **11.2. COTTON**

In 1980 only around 10% of national cotton production was accounted for by smallholder producers. However, CMB policy was to expand operations in communal areas and the number of depots in CAs accordingly rose from five in 1980 to sixteen by 1985. Initially, too, CMB endeavoured to offer attractive producer prices. From 1983 onwards, however, it was directed to provide lint to the domestic spinning industry at prices below export parity price. At the end of the 1980s, the price of lint paid by domestic spinners was less than 60% of the average price received for exports (and less than half of national cotton production was exported, compared with 80% in 1980). This restricted the prices that CMB could afford to pay to producers and the producer price of cotton fell in much the same way as the maize price during 1985-90 (Jansen and Rukovo 1992). Nevertheless, whilst the number of LSC farmers growing cotton began to decline from the mid-1980s onwards (with the volume of LSC cotton production staying fairly constant), production by smallholders rose dramatically. By the end of the decade, over 50% of national production was accounted for by smallholders (Woodend 1995).

In conformity with ESAP, CMB was granted managerial autonomy. It abolished the subsidy on lint sales to domestic spinners, increased the proportion of lint that went to export markets, raised producer prices and made profits during 1990-91 and 1991-92. However, domestic spinners again lobbied the government for preferential treatment, subsidised sales had to be revived in 1992 and CMB again made losses (Larsen 2000), (Jansen and Rukovo 1992).

During the 1993-94 season CMB’s statutory monopoly over purchasing, ginning and exporting cotton was removed. In September 1994 a new company Cottco replaced CMB. This was initially 100% owned by the government, but was privatised in 1997. Cottco remains the dominant player in the sector, where it competes with Cargill and, as of 2001, also four new entrants: Farmers’ World, Batanayi, Cottrade (a broker) and Flemings (a contract ginner). Although low world lint prices in the latter part of the 1990s restrained the prices that could be paid to producers, the proportion of the export parity price that producers receive is unrivalled in Africa (Baffes 2001).

In 1992 CMB launched an input credit scheme to serve smallholders. By 1993-94 over 40,000 producers were benefiting from the scheme (Woodend 1995). Cottco has continued to develop the scheme and by 1999 it was serving 55,000 smallholders (around a quarter of the total), with a remarkable 98% loan repayment record (Gordon and Goodland 2000). The company is continuing

to expand aggressively into new production areas, most of which are either in NRIII or NRIV. By 2000 (a record year), over 80% of national cotton production was produced by smallholders.

The achievement of the Zimbabwean cotton sector in maintaining fair producer prices, whilst at the same time extending credit to large numbers of smallholder producers and (so far) maintaining the country's reputation for quality is possibly unique amongst liberalised African cash crop systems. However, there are question marks about whether a relatively concentrated sector will continue to maintain attractive producer prices as its reliance on commercial producers (who have traditionally had more bargaining clout in price setting) declines<sup>65</sup>. In 2001, as official and parallel exchange rates diverged dramatically, there were accusations that the main cotton companies were offering producer prices based on official exchange rates, whilst benefiting from parallel exchange rates (through a foreign exchange retention scheme) for the export of their lint. Indeed, this was one of the main reasons behind the formation of Cottrade, which aims to enable producers to sell lint direct to foreign buyers.

## **12 LINKING POLICY TO TRENDS IN POVERTY**

### **12.1. TRENDS IN POVERTY**

There are no clear poverty figures for the 1980s, so assessments of poverty have instead tended to be based on assessments of trends in key causal variables. These include the performance of agriculture in the communal areas, the extension of basic services (especially health and education) to previously disadvantaged areas and the general performance of the economy, especially the rate of employment creation. (World Bank 1995) note that the extension of basic services and the general performance of the economy gave conflicting signals about likely trends in poverty. (International Labour Office 1993) suggested that:

“it is very probable that both income inequality and poverty were reduced between independence (1980) and 1990 as a result of developments such as the promotion of agriculture in the communal areas, the substantial expansion of basic services and the Zimbabweanization of the public sector and parts of the private sector”

(p122)

(Davies and Rattso 1996), by contrast, argue that:

“It seems more probable that the dominant influences have been those which ... make for increased inequality and poverty: stagnation of formal employment and real earnings, rising unemployment, the casualization of the workforce, informal sector expansion and the concentration of agricultural output.”

(p398)

As section 2.1 suggested, in the early 1990s the picture is clearer: poverty worsened. Economic restructuring and drought were associated with a serious economic decline between 1990 and 1995, although there is disagreement as to how much of the blame should be attributed to ESAP and how much to the weather (Marquette 1997). Official estimates show that median real household consumption fell by 24.2% during the 1990-95 period (Central Statistical Office 1998). Households in urban areas were hardest hit by these declines. Mean urban expenditures in 1995

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<sup>65</sup> LSC producers have until now produced all the seed distributed to smallholders for planting. Even with the premium that they receive over normal market prices for seed cotton, this has become an increasingly marginal activity for them.

were about 64% of their 1990 level, while rural levels were about 78%. On the other hand the distribution of well being was more equal in 1995 than in 1990<sup>66</sup>.

In 1995, poverty remained more widespread, deeper and more severe in rural areas than in urban areas, but urban poverty rose dramatically between 1990 and 1995. By 1995 urban poverty was recognised as a pressing social problem.

The largest absolute increase in prevalence, depth and severity of poverty in the early 1990s occurred among people residing in households whose head's main source of employment was the urban informal sector. The prevalence of poverty among such people increased almost 14 percentage points, and the depth and severity of poverty grew in a similar fashion (Alwang and Mills, 2001). Increases in urban poverty problem can, thus be traced to low returns in the informal sector and few opportunities in the formal sector economy. While the private formal sector underwent radical restructuring during ESAP, it did not generate significant employment opportunities in the formal sector economy.

An interesting grassroots perspective on rural poverty trends is provided by (Campbell and Mukamuri 1998). They conducted both PRA studies and a formal survey in three communal areas: Mangwende (NRII, 80km north-east of Harare, NE); Hurungwe (NRII, 350km north-west of Harare, NW), and Chivi (NRIII/IV, 360km south of Harare)<sup>67</sup>. They asked their respondents to recall the state of the local economy and their own livelihood strategies in 1985, 1990 and 1995. Their respondents recalled the early 1980s as a boom time – a good period for agriculture (characterised by high prices, significant extension effort and ready availability of credit); a time when there was plenty of investment in schools, health and road infrastructure; and years in which numerous jobs were created in the formal economy. The mid-1980s were seen as a turning point. After this, jobs became scarcer and households had to diversify into new activities (increased exploitation of natural resources, brick making, building, pottery etc) to survive. The 1990s were, however, the most difficult times – characterised by drought, the hardship of ESAP (blamed for high prices for purchased items, but low prices for agricultural produce from new, informal buyers) and the full onslaught of the AIDS pandemic.

## 12.2. POVERTY ALLEVIATING POLICIES

After independence in 1980, the government gave first priority to the reduction of poverty in a bid to redress the socio-economic imbalances inherited from the colonial period. Government embarked on policies that focused on expanding rural infrastructure as well as addressing income inequality distribution between blacks and whites. In addition to the land reform and smallholder agricultural support policies already discussed, policies that were meant to address the income distribution problem included the following (Kaliyati 1998):

- The promotion of black advancement at workplaces
- The provision of subsidies for basic food items
- The introduction of free health for those earning below Z\$150 per month

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<sup>66</sup> Zimbabwe's experience of deepening poverty following liberalisation is unusual, suggesting that ESAP alone is not the reason (although the nature of implementation or non-implementation of ESAP may well be important). Drought undoubtedly did not help and the explosion of AIDS cases in the early 1990s also contributed.

<sup>67</sup> Note that two of their three survey areas were beneficiaries of the smallholder maize "revolution". Additionally, their survey did not include Matabeleland, which suffered political repression in the mid-1980s but benefited from the migrant labour boom to South Africa in the mid-1990s.

- Free primary education for all
- The introduction of the Employment Act (1980) that made it difficult for employers to retrench workers
- The enactment of the Minimum Wage Act (1980).

However, the methods used by government to reduce poverty can be said to be generally short term since they could not be sustained in the long run. The large social spending could only be sustained if the economy was growing and the government's income was increasing, but this was not the case in the 1980s.

It was recognised that the structural adjustment programme (ESAP) introduced in the early 1990s would have a negative effect on certain vulnerable groups and poor communities. Therefore, in 1991 the government established the Social Development Fund (SDF) in order to cushion these disadvantaged groups. The fund had two components:

- The Social Welfare Programme was intended to compensate the poor for new or increased user charges in education and health, and for deregulated maize prices. Payments were designed to finance exemptions from health fees, school fees and examination fees for households with incomes below \$400 per month together with a per capita cash food benefit of Z\$4 per month for urban household earning less than Z\$200 per month.
- The Employment and Training Programme provided an introductory one-week training course in starting up a new business, along with loans for small enterprises.

The idea of establishing the SDF was good but implementation was problematic. Expenditure declined from \$150 million in 1993/94 to Z\$100 million in 1994/95 and Z\$50million in 1995/96. This was against a backdrop of high inflation. The intended beneficiaries stayed out of the scheme, there was gender bias against girls in schools, the administration was slow and there were insufficient staff. This resulted in a strong bias towards government retrenchees, people in urban areas and against women. Meanwhile, the Employment and Training Programme was too short and the skills needed to succeed were in short supply. In summary, therefore, the SDF's contribution to poverty alleviation was minimal.

With the lessons learned from the failures of ESAP to address structural poverty and the failure of the SDF programme, in 1994 the government developed the Poverty Alleviation Action Programme (PAAP). This was intended to be funded mainly by donors. Its objective was the reduction of poverty and unemployment through the implementation of programmes targeted at the poor. It aimed to address all forms of poverty (basic needs, food, housing, clothing, health, education, employment and lack of access to goods services and rights). PAAP's main emphases were on:

- targeting social expenditures;
- decentralizing programme implementation;
- a participatory approach to poverty alleviation
- a partnership approach to address distortions in social provisions and poverty alleviation.

This programme had some successes. However, poverty grew at a rate too fast for the programme to cope with. Consequently poverty levels continued to rise.

### 12.3. SMALLHOLDER AGRICULTURE AND POVERTY

Many of the respondents interviewed by (Campbell and Mukamuri 1998) felt the positive impacts of the smallholder maize “revolution” in the early 1980s. However, other authors – for example, (Weiner 1988) and (Jayne and Chisvo 1992) - have argued that most rural households were either left untouched or made worse off by this “revolution” and the set of policies associated with it. Given the importance attached to agricultural growth linkages by (Bautista and Thomas 1999), it is worth exploring why this might be.

We have already noted that only a minority of communal households – principally those with above-average land holdings in the communal areas falling within NR II and III – were able to produce significant maize surpluses in response to the favourable producer policies pursued by GMB in the early-mid 1980s. However, in theory there are a number of routes by which other poor households could have benefited from the maize expansion:

- Surplus producer households employ additional labour as their production levels (and use of labour-demanding inputs such as fertiliser) increase. This presumably happened, although the number of producers involved may not have been sufficient to have an impact beyond poor, labour-selling households within their immediate vicinity.
- Surplus producer households spend a proportion of their incremental income on goods and services produced within by other communal households. Again, this presumably happened, but the impact may only have been felt by households in neighbouring areas. Better-off communal households in Mashonaland are more likely to spend incremental income on goods and services produced within Zimbabwe’s urban sector than on goods and services produced within, say, rural Matabeleland. (Hazell and Hojjati 1995) argue that one of the reasons why agricultural growth multipliers have generally been found to be weaker in Sub-Saharan Africa than in Asia is because of poor transport infrastructure and low population densities. This would appear to be relevant here.
- The general economic stimulus from agricultural expansion leads to new (urban, migrant) employment opportunities for other poor households. Here we note, firstly, that the increased maize production did not lead to lower real food prices for urban employees, due to the inefficiencies of the maize marketing system and the increasing margins reaped by commercial millers (see section 11.1). Thus, there was no potential for lower wages to provide a stimulus to urban employment<sup>68</sup>. Formal sector wages were, in any case, subject to minimum wage legislation. Secondly, the high fiscal cost of GMB operations exerted a negative impact on general economic growth to counteract the positive growth stimulus from higher incomes amongst surplus maize producers.

This assessment leads to two conclusions:

- For smallholder agricultural growth to stimulate broader processes of poverty reduction, it should translate into lower real food prices and should not be achieved at too high a fiscal cost.
- Agricultural growth in higher potential communal areas (primarily in Mashonaland) will have to be stronger and more enduring than that achieved in the early 1980s to have an impact on distant parts of the country (e.g. Matabeleland).

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<sup>68</sup> The difference in perspective between this paragraph and section Non-Farm Employment comes from the fact that, with the important exceptions of domestic workers and workers on commercial farms, few workers in formal sector jobs are classed as poor.

Of course, smallholder agricultural growth in high potential areas could have greater multiplier potential after the current wave of land resettlement. However, it is worth asking, if poverty reduction is the primary objective, whether agricultural investment should be concentrated in high or low potential areas. The majority of the poor are located in lower potential areas and the “trickle down” mechanisms from growth in other parts of the economy do not seem to be strong in these places.

In defence of investment in high potential areas, we note that (if the figures in Table 4 are to be believed), there is still plenty of scope for poverty reduction even in higher potential communal areas. In addition, returns to investment may well be higher in these areas than in less densely populated, lower potential areas (see (Fan, Hazell et al. 2000) for an alternative argument for India). We may also question the extent to which crop agriculture can ever provide an engine for growth in the lowest potential areas of Zimbabwe, with their extremely low and erratic rainfall. On the other hand, there would appear to be potential for smallholder agricultural intensification at least in NRIII (where agro-ecological conditions are not totally dissimilar to those found in Machakos). Meanwhile, some productivity enhancement is necessary even in the lowest potential areas simply to sustain livelihoods under the pressure of increasing populations, with the attendant danger of natural resource degradation.

#### **12.4. TOWARDS A PRO-POOR AGRICULTURAL POLICY**

This report has started from the assumption that growth in smallholder agricultural production is an essential component in any poverty reduction strategy for Zimbabwe. However, in the years since Independence, smallholder agricultural growth has not been strong enough to contribute significantly to this end. Predictably, different authors have made a number of suggestions as to priority actions to foster faster growth in smallholder areas.

(Rukuni and Eicher 1994) and (Eicher 1995) argue that greater attention needs to be paid to agricultural research, extension and systems for the delivery of purchased inputs. Key dimensions to this are provision of adequate funds for public sector research and service provision, along with a policy environment that encourages the private sector to invest in areas where it can provide high quality services.

If the case for increased public investment in research is accepted, the question remains as to what the research priorities should be. Recognising the importance of maize to communal households, (Blackie 1994) argues for research into varieties and cultural practices that yield good returns even with low levels of purchased inputs, as this is all that the average communal farmer (even in a high potential area) can afford. He also advocates research into cash crops with potential for smallholder production<sup>69</sup>. Bigger questions concern the relative attention given to high potential, as opposed to low potential, areas and to livestock as opposed to crops.

Meanwhile, (Bautista and Thomas 2000) explore a number of policy scenarios using a CGE model of the Zimbabwean economy based on a 1991 SAM. These include:

- Trade liberalisation, which in 1991 meant: removal of non-tariff barriers, including import rationing; adjustment of all tariffs to a uniform 10% rate; dismantling of foreign exchange controls, allowing the market to determine the exchange rate (previously overvalued).

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<sup>69</sup> (Campbell and Mukamuri 1998) note that, in their three study areas, areas planted to maize had fallen since 1985 as the attraction of surplus production for market declines. However, there had been an increase in land allocated to cotton (Hurungwe) and to sunflower and groundnuts (all) as an additional means of earning much-needed cash income.

- Maize price decontrol, which led to a 10% increase in the producer price and higher prices for urban consumers of roller meal.
- Two land reform scenarios, which broadly correspond to the extensive resettlement approach apparently favoured by the Zimbabwean government and the proposals made by (World Bank 1995).

A number of (progressive) adjustments to taxes are explored to either neutralise the revenue effects of lowering tariffs or pay for land resettlement (although it seems optimistic to expect to meet resettlement costs through the land taxes proposed).

(Bautista and Thomas 2000) find that trade liberalisation alone would have led to a 4.4% increase in GDP and a 9.5% increase in agricultural GDP in 1991, but that LSC agriculture would have been the main beneficiary given its much greater export orientation than the smallholder sector. Combining trade liberalisation with maize price decontrol leads to only marginally higher aggregate growth. However, compared to the first scenario, almost all the incremental gains accrue to smallholder households. That said, a few important caveats are required here (arising from the fact that their SAM only contained one “representative” smallholder household type):

- No distinction is made between remote and accessible areas. Whilst 70% or more of smallholder marketed maize surpluses did indeed come from more accessible areas, it is likely that some more remote maize surplus producers would have been made worse off by price liberalisation (assuming that this would have entailed abolition of pan-territorial pricing).
- In addition, the model assumes that higher potential prices from trade liberalisation and maize price decontrol are actually passed onto producers. Some local-level studies (e.g. (Campbell and Mukamuri 1998) and (Chisvo 2000)) suggest that this has not occurred in the 1990s, although there is something of a “chicken and egg” situation here: a strong, private trading sector is unlikely to emerge whilst significant government intervention in maize markets remains (Chisvo, Jayne et al. 1991), yet at the same time a weak private sector response to reforms might discourage the state from withdrawing in the first place.
- No distinction is made between net surplus and net deficit maize households (the “representative” smallholder household is a net surplus producer, despite the fact that 70% or more of smallholder households were net deficit). Whilst (Jayne and Chisvo 1992) argue that rural net deficit households would be major beneficiaries of liberalisation, theirs is not the story being told here.

The extensive resettlement approach to land reform is found to have unfavourable outcomes in terms of overall GDP, agricultural GDP and aggregate household income, whilst smallholders do not benefit much (due in part to the assumption that they pay part of the costs of resettlement through a new land tax). Note that the comparative statics of the CGE model would not capture the long-run investment dynamics observed by (Gunning, Hoddinott et al. 1999) in existing resettlement areas and might, therefore, paint an unwarrantedly bleak picture. By contrast, the alternative land reform scenario results in modest increases in GDP, exports and agricultural GDP, even without fully taking these longer-run dynamics into account. LSC farm production is less affected, but smallholders benefit more.

Perhaps the most important result obtained by (Bautista and Thomas 2000), however, is that combining land reform with trade liberalisation and maize price decontrol leads to greater gains than the sum of the component reforms considered separately. There is thus, apparently, a complementarity between asset redistribution and market liberalisation measures.

Clearly, land reform has to play a part in any pro-poor agricultural growth strategy for Zimbabwe and a reform that retains viable existing “core” enterprises whilst redistributing peripheral land to

smallholders has compelling economic logic. Even within this scenario, however, the exact magnitude and distribution of benefits will depend on who receives the redistributed land. As (Cliffe 1988) points out, maximum short-term poverty reduction might be achieved by redistributing land to the near-landless. However, this will do least to take pressure off over-exploited resources within communal areas and may lead to the longest lags before a significant supply response is observed within the resettled lands.

We also note the potential fiscal trade-offs between the liberalisation-plus-land-reform agenda proposed by (Bautista and Thomas 2000) and the public investment-led agenda proposed by (Eicher 1995). Furthermore, whilst we have not found conclusive evidence for the importance of credit to broad-based smallholder agricultural growth, we also pose the question of how credit will be delivered to smallholder producers in a fully liberalised market environment.

Finally, both (Chisvo, Jayne et al. 1991) and (Blackie 1994) note the poor road infrastructure and underdeveloped nature of transport services within Zimbabwe's communal areas<sup>70</sup>. Whilst the situation may have eased somewhat in the early 1990s (as foreign exchange constraints in the late 1980s made imported vehicles and spare parts hard to come by), investment in this area would seem to offer a good opportunity both to stimulate agricultural production in less favoured areas and to facilitate the mobility that allows other, non-agricultural activity to flourish.

## **12.5. MODELLING SCENARIOS**

In this last section, we suggest various scenarios that the "Institutions and Economic Policies for Pro Poor Agricultural Growth" project should seek to simulate through its linked CGE and household models. We propose six scenarios to be handled primarily at macro level and two that are best handled within the household models.

### ***Macro Scenarios***

6. Enhanced investment in agricultural research: Given the difficulty in generating plausible costs and benefits for different research scenarios, the emphasis here should be on comparing the outcomes of increased agricultural productivity in major crops in high and low potential areas. For a given R+D expenditure, one might expect a higher rate of productivity increase in higher potential areas. However, given the distribution of poverty within Zimbabwe, this might not translate into greater poverty reduction.
7. Increased investment in extension provision: (Owens, Hoddinott et al. 2001) estimate the impact of 1-2 extension visits per year on agricultural productivity in selected resettlement areas. Assuming similar responses in other areas and drawing on local survey results showing proportions of households currently receiving this level of extension contact, costs and benefits of enhanced expenditure on extension could be estimated and their impacts on poverty simulated.
8. Transport investment: Transport costs could be compared with those recorded for other countries and the benefits from bringing them closer in line with international best practice could be simulated. This may involve investment in feeder roads. However, policies towards the transport sector are often as important determinant of comparative transport costs as the state of roads.

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<sup>70</sup> This contrasts with the high quality of the trunk road network (Hess 2001), which primarily serves urban centres and LSC farm areas (Mehretu 1994).



9. Maize price liberalisation: Following (Bautista and Thomas 2000), the growth and poverty impacts of bringing smallholder maize producer prices either to ZIMACE-equivalent levels or towards export parity price could be simulated, the difference this time being that impacts will be examined across a highly disaggregated smallholder agricultural sector.
10. Land reform: two approaches, as per (Bautista and Thomas 2000).
11. Growth in non-agricultural employment: the benchmark against which all agricultural policy scenarios should be assessed if the claim is to be substantiated that agricultural growth is the key to successful poverty reduction in Zimbabwe.

### *Household-Level Scenarios*

9. Credit access: The production response of different household types can be examined with and without credit access. The impact that different credit rationing approaches (e.g. based on asset holdings or on debt capacity in bad years<sup>71</sup> (von Pischke 1991)) have on poverty levels can also be simulated.
10. AIDS: Making assumptions about labour availability and using available data on household medical expenditure, the production response of different household types can be examined with and without one member suffering from AIDS. This will give a crude, but potentially useful, assessment of the contribution of AIDS to poverty levels.

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<sup>71</sup> All scenarios can, of course, be run for good and bad agricultural seasons. However, we note that a bad season for maize may be adequate for cotton and a good maize year may be bad for legumes and horticultural crops!

### 13 REFERENCES

- Adams, M. and J. Howell (2001). *Redistributive Land Reform in Southern Africa*. London, Overseas Development Institute: 6.
- Agricultural Finance Corporation (1986). *Agricultural Finance Corporation Annual Report*. Harare.
- Ashworth, V. (1990). *Agricultural Technology and the Communal Farming Sector*. Washington DC, World Bank.
- Barrett, J. (1991). *The Economic Role of Cattle in Communal Farming Systems in Zimbabwe*.
- Bautista, R. and M. Thomas (1999). "Agricultural Growth Linkages in Zimbabwe: Income and Equity Effects." *Agrekon* **38**(Special Issue (May)): 66-75.
- Bautista, R. and M. Thomas (2000). *Macroeconomic and Agricultural Reforms in Zimbabwe: Policy Complementarities Toward Equitable Growth*. Washington DC, International Food Policy Research Institute.
- Blackie, M. (1994). *Realizing Smallholder Agricultural Potential. Zimbabwe's Agricultural Revolution*. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 335-347.
- Bratton, M. (1994). *Land Redistribution. Zimbabwe's Agricultural Revolution*. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 70-86.
- Campbell, B., D. Dore, et al. (2000). "Economic Comparisons of Livestock Production in Communal Grazing Lands in Zimbabwe." *Ecological Economics* **33**: 413-438.
- Campbell, B. and B. Mukamuri (1998). *Changing Livelihoods Strategies in Zimbabwean Communal Areas: Implications for Woodland Use*. Harare, Institute of Environmental Studies, University of Zimbabwe: 28.
- Cavendish, W. (1999). *Poverty, inequality and environmental resources; Quantitative analysis of rural households*. London, Imperial College.
- Cavendish, W. (2000). "Empirical Regularities in the Poverty-Environment Relationship of Rural Households: Evidence from Zimbabwe." .
- Central Statistical Office (1997). *Agricultural Production on Resettlement Schemes*. Harare, Central Statistical Office, Government of Zimbabwe.
- Central Statistical Office (1998). *Poverty in Zimbabwe*. Harare, CSO.
- Chelliah, R. (1986). *Report of the Commission of Enquiry into Taxation under the Chairmanship of Dr.Raja J.Chelliah*. Harare, Government Printer.
- Chigumira, G. (1993). *The Zimbabwe Beef Industry: A Demand and Supply Analysis. Department of Economics*. Harare, University of Zimbabwe.
- Chimedza, R. (1994). *Rural Financial Markets. Zimbabwe's Agricultural Revolution*. M. Rukuni and C. Eicher. Gweru, University of Zimbabwe Publications.
- Chisvo, M. (2000). *Reaping the Whirlwind: Economic Liberalisation and Food Security in Zimbabwe*. London, Catholic Institute for International Relations: 68.
- Chisvo, M., T. Jayne, et al. (1991). *Traders' Perceptions of Constraints on Informal Grain Marketing in Zimbabwe: Implications for Household Food Security and Needed Research. Market Reforms, Research Policies and SADCC Food Security*. M. Rukuni and J. Wyckoff.

Harare, University of Zimbabwe / MSU Food Security Research in Southern Africa Project: 120-138.

Cliffe, L. (1988). The Prospects for Agricultural Transformation in Zimbabwe. Zimbabwe's Prospects: Issues of Race, Class, State and Capital in Southern Africa. C. Stoneman. London, Macmillan: 309-25.

Davies, R. and J. Rattso (1996). "Growth, Distribution and Environment: Macroeconomic Issues in Zimbabwe." World Development **24**(2): 395-405.

Deininger, K., R. van den Brink, et al. (2000). How Land Reform Can Contribute to Economic Growth and Poverty Reduction: Empirical Evidence from International and Zimbabwean Experience.

DFID (1999). Zimbabwe: Country strategy paper 1999. London, Department for International Development.

Durevall, D. and R. Mabugu (2000). Maize Markets in Zimbabwe. Stockholm, Swedish International Development Cooperation Agency (SIDA): 38.

Eicher, C. (1995). "Zimbabwe's Maize-Based Green Revolution: Preconditions for Replication." World Development **23**(5): 805-818.

Fan, S., P. Hazell, et al. (2000). "Targeting Public Investments by Agro-Ecological Zone to Achieve Growth and Poverty Alleviation Goals in Rural India." Food Policy **25**(4): 411-428.

FAO (2000). Socio-economic Impact of Smallholder Irrigation Development in Zimbabwe. Harare, Food and Agriculture Organisation of the United Nations, Sub-Regional Office, Harare.

Gisselquist, D. and J. Rusike (1997). Zimbabwe's Agricultural Inputs Industries 1990-96: Regulations, Reforms and Impacts.

Govere, J. and G. Mudimu (1991). Prospects for Increasing Household Food Security and Income Through Increased Crop Productivity and Diversification in Low Rainfall Areas of Zimbabwe. Market Reforms, Research Policies and SADCC Food Security. M. Rukuni and J. Wyckoff. Harare, University of Zimbabwe / MSU Food Security Research in Southern Africa Project: 160-182.

Government of Zimbabwe (1982). Transitional National Development Plan: 1982/83-1984/85, Volume 1. Harare, Amalgamated Press (Pvt) Ltd.

Government of Zimbabwe (1986). Socio-Economic Review of Zimbabwe 1980-1985. Harare, Ministry of Finance, Economic Planning and Development.

Government of Zimbabwe (1995). Zimbabwe's Agricultural Policy Framework: 1995 - 2020. Harare, Government Printers.

Gunning, J., J. Hoddinott, et al. (1999). Revisiting Forever Gained: Income Dynamics in the Resettlement Areas of Zimbabwe, 1983-1997. Oxford, Centre for the Study of African Economies.

Hazell, P. and B. Hojjati (1995). "Farm / Non-Farm Growth Linkages in Zambia." Journal of African Economies **4**(3): 406-435.

Hess, R. (2001). Zimbabwe Case Study on Trade Negotiations. London, Overseas Development Institute: 42.

International Labour Office (1993). Structural Change and Adjustment in Zimbabwe. Geneva, ILO.

- Jackson, J. and P. Collier (1991). Incomes, Poverty and Food Security in the Communal Lands of Zimbabwe. Rural Development and Planning in Zimbabwe. N. Mutizwa-Mangiza and A. Helmsing. Aldershot, UK, Avebury: 21-69.
- Jackson, J., A. Turner, et al., Eds. (1997). Smallholder Horticulture in Zimbabwe. Harare, University of Zimbabwe Publications.
- Jansen, J. and A. Rukovo (1992). Agriculture and the Policy Environment: Zambia and Zimbabwe, OECD Development Centre.
- Jayne, T., A. Chapoto, et al. (2001). False Promise or False Premise? The Experience of Food and Input Market Reform in Eastern and Southern Africa. Wye.
- Jayne, T. and M. Chisvo (1992). Zimbabwe's Grain Marketing Policy Challenges in the 1990s: Short Run vs Long Run Options. Food Security Research in Southern Africa: Policy Implications. J. Wyckoff and M. Rukuni. Harare, University of Zimbabwe / MSU Food Security Research in Southern Africa Project: 90-131.
- Jayne, T., T. Takavarasha, et al. (1994). Interaction Between Food Market Reform and Regional Trade in Zimbabwe and South Africa: Implications for Food Security, Michigan State University.
- Kaliyati, J. (1998). Poverty in Zimbabwe Since Independence: Incidence, Intensity and Trends.
- Kinsey, B., K. Burger, et al. (1998). "Coping with Drought in Zimbabwe: Survey Evidence of Responses of Rural Households to Risk." World Development **26**(1): 89-110.
- Knight, J. (1997). "Labour Market Issues in Zimbabwe: Lessons for South Africa." South African Journal of Economics **65**(1): 69-98.
- Marquette, C. (1997). "Current Poverty, Structural Adjustment, and Drought in Zimbabwe." World Development **25**(7): 1141-1149.
- Mataya, C., P. Gondo, et al. (2000). Evolution of Land Policies and Legislation in Malawi and Zimbabwe: Implications for Forestry Development. Bogota, Centre for International Forestry Research (CIFOR).
- Mehretu, A. (1994). Social Poverty Profile of Communal Areas. Zimbabwe's Agricultural Revolution. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 56-69.
- Ministry of Agriculture, L. a. W. D. (1994). Irrigation Policy and Strategy, Draft Document. Harare, Government of Zimbabwe.
- Ministry of Lands and Agriculture (1998). The Agricultural Sector of Zimbabwe. Harare, Policy and Planning Division, Ministry of Lands and Agriculture, Government of Zimbabwe.
- Mombeshora, S. and W. Wolmer (2000). Sustainable Livelihoods in Southern Africa: Institutions, Governance and Policy Processes - Zimbabwe Country Paper, SLISA.
- Moyo, S. (1995). The Land Question in Zimbabwe. Harare, SAPES Books.
- Muir, K. (1994). Agriculture in Zimbabwe. Zimbabwe's Agricultural Revolution. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 40-55.
- Muir, K. (1997). Agriculture in Zimbabwe. Harare, Leadership for Environment and Development.
- Muir, K. and T. Takavarasha (1988). Agricultural Producer Price Policy in Zimbabwe with Special Reference to Pan-Territorial and Pan-Seasonal Pricing for Maize. Harare, University of Zimbabwe.

- Ndlovu, L. (1994). Livestock Research and Development. Zimbabwe's Agricultural Revolution. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 245-257.
- Nkum, J. (1998). Comparative analysis of poverty alleviation action plans in Ghana and Zimbabwe, GTZ.
- Owens, T., J. Hoddinott, et al. (2001). The impact of agricultural extension on farm production in resettlement areas of Zimbabwe. Oxford, Centre for the study of African Economies.
- Rohrbach, D. (2001). Zimbabwe Baseline: Crop Management Options and Investment Priorities in Tsholotsho. Improving Soil Management Options for Women Farmers in Malawi and Zimbabwe, Bulawayo, ICRISAT.
- Rukuni, M. (1994). The Evolution of Agricultural Policy: 1890-1990. Zimbabwe's Agricultural Revolution. M. Rukuni and C. Eicher. Gweru, University of Zimbabwe Publications Office.
- Rukuni, M. (1994). The Prime Movers of Zimbabwe's Agricultural Revolution. Zimbabwe's Agricultural Revolution. M. Rukuni and C. Eicher. Harare, University of Zimbabwe Publications: 1-12.
- Rukuni, M. and C. Eicher, Eds. (1994). Zimbabwe's Agricultural Revolution. Harare, University of Zimbabwe.
- Sellen, D. (1993). Economic Reform and Agricultural Sector Policy in Zimbabwe: Case Studies in Policy Analysis. Washington DC, Economic Development Institute of the World Bank.
- Sithole, G. (1996). Analysis of Policy Reform and Structural Adjustment in Zimbabwe with Emphasis on Agriculture and Trade. Washington DC, AMEX International Inc.
- Sukume, C., E. Makaudze, et al. (2000). Comparative Economic Advantage of Crop Production in Zimbabwe, USAID, Office for Sustainable Development.
- Thirtle, C., J. Atkins, et al. (1993). "The Productivity of Commercial Agriculture in Zimbabwe 1970-89." Journal of International Development 5(2): 193-205.
- Tripp, R. (2000). Strategies for Seed System Development in Sub-Saharan Africa: A Study of Kenya, Malawi, Zambia and Zimbabwe. Bulawayo, ICRISAT: 56.
- United Nations Development Programme (1999). Human Development Report: 1999 Zimbabwe.
- Vaze, P., J. Wright, et al. (1998). Anchoring the Liberalized Market: Zimbabwe's Grain Marketing Board in Rural Deficit Areas. Wageningen.
- von Pischke, J. (1991). Finance at the Frontier: Debt Capacity and the Role of Credit in the Private Economy. Washington, World Bank.
- Weiner, D. (1988). Land and Agricultural Development in Zimbabwe. Zimbabwe's Prospects: Issues of Race, Class, State and Capital in Southern Africa. C. Stoneman. London, Macmillan: 63-89.
- WHO, U. (2000). Epidemiological Fact Sheet on HIV/AIDS and Sexually Transmitted Infections: Zimbabwe. Geneva.
- Woodend, J. (1995). Biotechnology and Sustainable Crop Production in Zimbabwe. OECD Technical Paper 109.
- World Bank (1995). Zimbabwe: Achieving Shared Growth. Washington D.C., World Bank.
- Zindi, C. and J. Stack (1992). Income versus Insurance: Preliminary Findings on the Contribution of livestock to Communal Area Farm Household Food Security. Food Security Research in

Southern Africa: Policy Implications. J. Wyckoff and M. Rukuni. Harare, University of Zimbabwe / MSU Food Security Research in Southern Africa Project: 293-316.