Chronic poverty in semi-arid Zimbabwe

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[1] It is possible that the much higher mean incomes for male headed households involved in 'mixed' and 'wage only' activities may be biased by the inclusion of a few high earning graduates, who are probably all male.

Abstract[2]

This paper examines the causes of chronic poverty in the remote rural areas (RRAs) of Zimbabwe's semi-arid communal lands. We found that persistent poverty was strongly associated with the structural poverty of Zimbabwe's semi-arid communal areas. Relative urban proximity (non-remoteness) assisted income diversification and improvement in a very poor, socially and politically excluded area. Less excluded but remote areas remained poor but not as poor as those in the excluded area. Livelihoods changed and diversified more in the non-remote area, speeding poverty reduction as measured by an index of perceived change.

The paper explores what can be done to improve links between policy-makers and programme designers and poor farm households at risk from drought and examines whether diversification into non-farming occupations offers an exit route from poverty.

The paper suggests that Zimbabwe's poor are substantially located in the semi-arid regions. These areas have been neglected by both the state and the private sector. Our findings indicate a massive decline in wellbeing and consumption between 1993 and 1998 and a failure to rebuild assets after the devastating 1991 drought. We found that semi-arid economies are largely un-monetised as huge swathes of semi-arid Zimbabwe have retreated into subsistence. Markets are not generally sufficiently organised or attractive to engage poor people: barter dominates as a form of exchange and poor households make few cash-based transactions through the market.

Key findings are that:

- The very poorest households have very limited non-farm or off-farm livelihood activities, indicating that for them, improvements in their incomes from agriculture are crucial if their well-being is to improve – either that or new low skill employment opportunities
- Contrary to expectations for an economy dominated by subsistence production, households with large numbers of people in them as well as those with large numbers of economically active adults are more likely to be poor.
- Despite attempts to provide a safety net during the 1991-92 drought government grain loans and food-for-work programmes were too limited to be effective.
- Many poorer households have land lying fallow due to insufficient draught oxen and labour shortages – primarily due to migration and HIV/Aids.
- The livelihood portfolios which generated the best recovery from drought were waged, non-farm and mixed farm and non-farm with proximity to urban areas.
- For most households the value of retained output was more significant than cash income from crop/livestock sales, by factors of between 3 and 10.

Lastly we suggest a number of areas for pro-poor policy intervention, including social protection and a focus on improved delivery of social services, (appropriate) agricultural extension and pro-poor financial sector reform.

(Findings from this research were used as a basis for 'Livelihoods and Chronic Poverty in Zimbabwe.' World Development, Vol.31, No.3, pp591-610. 2003)

[2] With thanks to Karen Moore, IDPM, for her helpful comments on an earlier draft.

1. Chronic poverty in underdeveloped rural regions.

Remote rural areas (RRAs) contain a substantial proportion of the world's chronically poor people. Concentration of severe, persistent and multi-dimensional poverty is a function of 'geographic' capital (the physical, social and human capital of an area), the high levels of risk characteristic of remote areas consequent on a very low level of institutional development, and the strength of social and political exclusion. There has been widespread policy failure in RRAs, and remote areas tend to be economically undeveloped, in comparison with less remote regions in the same country. While well institutionalised democratic politics can bring benefits to the poor as a whole, dealing with the long term problems and deprivations of RRAs does not easily fit electoral periods, or the need for equitable inter-regional resource allocation, and the votes of such areas may be seen to count for less than the average. Decentralisation is critical, given the different characteristics of RRAs as compared to non-remote areas, but successful decentralisation requires significantly improved RRA governance, not yet addressed by governance reform agendas. Livelihoods programmes have been modelled on successes in non-remote areas, unadapted for the special risk, exclusion and marginalisation features of RRAs. A greater emphasis on security as a basis for livelihood improvement would be required, a key policy sequencing issue (Bird et al, 2002a).

Semi-arid regions.

Semi-arid regions are not necessarily remote; one of the three districts covered in this paper is significantly less remote than the other two, and poor households there experienced considerably greater dynamic post-drought recovery and upward mobility in the 1990s. However, this dynamic improvement was from a very low base. There are many remote semi-arid regions where a majority of the population is chronically poor; and there are other semi-arid regions which are not remote, which also contain substantial pockets of persistent and deep poverty. The analytical framework advanced in Bird et al (2002a) will be used to re-examine data from a study of 3 semi-arid areas in Zimbabwe which includes information about the livelihood strategies and changes in wellbeing during the 1990s of a sample of about 600 households (Bird et al, 2002b). The concepts of geographic capital, responses to risk and recovery from drought will be used at an area level, alongside an examination of the livelihood strategies of the poor and very poor during the 1990s, to draw some conclusions about policy and research directions for the reduction of chronic poverty in semi-arid regions.

2. Zimbabwe after the 1991 drought[3].

This study focuses on three semi-arid areas in Zimbabwe between 1993 and 1998 (see Section 4, *Chronically Poor Areas*, below, for a description of the study sites). The work builds on the arguments presented in Bird et al (2002b)[4] which explored the livelihood and coping strategies of poor households in semi-arid communal farming areas in Zimbabwe. These were developed

[3] It is important to note that this paper does not attempt to analyse the impact of the current economic and political crisis in Zimbabwe, although it is having a profound effect, particularly on those made vulnerable by previous losses.

[4] Produced as part of the DFID funded research project R7847 'Coping Strategies of Poor Households In Semi-Arid Zimbabwe.'

through the reanalysis of a dataset generated by ITDG in 1998[5] (see Chipika and Chisvo (1997), Chipika and Shumba, 1999, and Chipika et al (1999)) and some limited 'gap filling' field work in mid-2000 (see Section 5, *Methods*, below).

This paper focuses on the recovery, or absence of recovery in the five years following the severe southern African drought of 1991-92 which affected agriculture and other natural resource based activities across the region. It was the worst drought experienced in Zimbabwe during the twentieth century[6], and struck just as structural adjustment was beginning to bite. Most areas produced no crops and livestock populations were wiped out[7]. The table below shows that while the 1991-92 drought was regarded as having been the most severe in living memory, this was perhaps because of the specific timing of the rain failure (cf. 1982-83) and the impact on households who had already drawn down on their assets during previous periods of hardship.

Table 1: Zimbabwe's drought years

Planting / Harvest Year	% Deviation from mean	Severity[8]
1981-82	-21.6	☆☆
1982-83	-74.6	☆☆☆
1983-84	-30.1	☆☆☆
1985-86	-19.6	☆☆
1988-89	-10.1	☆
1990-91	-31.0	☆☆☆
1991-92	-72.6	☆☆☆☆
1994-95	n/a	☆
1995-96	n/a	☆☆
1996-97	n/a	
1997-98	n/a	☆☆☆
1998-99	n/a	☆
1999-2000	n/a	
2000-01	n/a	☆
2001-02[9]	n/a	☆☆☆☆

[5] For the DFID funded project 'Economic Reform and Smallholder Communal Agricultural Development in Zimbabwe'.
[6] Zimbabwe defines years with rainfall 100mm or more below the recent 30 year average for the area as drought years.
[7] Of our study areas (Chivi, Gutu and Matopo), Chivi and Gutu suffered drought in the same years 1991-92; 1994/95; 1997/98 and 2001/02. Matopo suffered drought in 1990-91; 1991-92; 1993-94; 1997-98; 1998-99; 2000-01 and 2001-02 (Blessing Butaumocho, personal correspondence, 2002).
[8] No stars = not a severe drought , four stars = very severe.

The rain failure prevalent in the 1980s and '90s was reversed in 1999-2000 when the El Niño brought Cyclone Eline and devastating floods to the region. This series of shocks wiped out savings and productive assets, increased peoples' vulnerability and reduced their productivity.

During the 1990s there was increasing pressure on land in the relatively crowded 'communal' areas due to population growth, and the return of unemployed people to their 'rural homes'. Reduced per capita income at the beginning of the 1990s followed the devastating 1991 drought and low and volatile economic growth in the 1980s. Growth and incomes picked up somewhat by 1997 but significant dependence of per capita income trends on the rainfall pattern (strongly below the average during the period) and the performance of the agricultural sector indicated the Zimbabwean economy's narrow base. While there had been progress in smallholder maize production this was restricted to the 10% of households in the higher potential areas with capital to invest in fertiliser. Increased farm gate prices following devaluations and the removal of pan-territorial pricing in the early 1990s benefited few farmers as only a minority produced much surplus for sale, and many were net buyers of maize. The long-term trend in real crop prices was in any case strongly downward, as elsewhere in the world. There was chronic under-employment and open unemployment, and the 'peasant farming sector' absorbed much of this.

Three quarters of the rural population was reckoned to be below the national consumption poverty line in 1995, and the prevalence of extreme poverty, as measured by the Food Poverty Line, increased in the 1990s from 17 to 37% of the rural population[10].

The government's major rural development policies centred on increasing smallholder agricultural production, land redistribution and resettlement, and drought relief. These generally proved unequal to the task of assuring improving livelihoods for the majority, and were unable to restrain the growth of extreme rural poverty.

HIV/AIDS began to take a heavy toll, with deaths in the 15-35 age bracket, increasing numbers of orphans and households headed by grandparents and women. Despite under-reporting due to stigma, over 25% of the economically active population (1.5m people aged 15-49) were reported to be living with HIV/ AIDS in 1997 (UNDP, 2000b). This has already resulted in reduced life expectancy and is expected to translate into a declining population by 2003. Livelihood impacts of HIV/AIDS included increased responsibilities for care and income for grandparents; reduced ability to pay school fees; reduced school attendance among girls; women's time increasingly taken up with caring, and reduced time available for income generation; increased use of child labour; reduced agricultural output and the asset stripping of widows and orphans (see Box 1). Government policies have been inadequate to this challenge, and all the signs were of worse to come.

This was a gloomy scenario, in which it would be expected that few poor people could find ways of becoming securely non-poor. While this was indeed the overwhelming finding of the research, there were significant exceptions.

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[10] In 2000, the *Rural* Food Poverty line (FPL) was Z$1180.49 per capita, and the Total Consumption Poverty Line (TCPL) Z$1924.20 per capita.(The US$/Z$ exchange rate in 2000 was 43.52. Source: http://www.oanda.com/convert/fxhistory.)

Box 1: Death and poverty: the asset stripping of widows

Marriage in rural Zimbabwe is patrilocal (i.e. a woman moves to her husband's area on marriage). This has implications for families' interest to invest in their daughters' education, as they are likely to lose the long-term benefits of that investment. Newly married women, having just moved to her husband's village, must build up the social networks (capital) that are important sources of support for agricultural production and other activities. If they fail to develop these linkages and if their husbands are unsupportive life can be hard.

Women in Zimbabwe do not traditionally inherit land or property. They generally access land for agricultural production through their father or husband. If a woman is widowed, and she does not have an adult son clearly in line to inherit, she is in danger of losing land (and other assets) to her husband's family, and being forced to return to her father's house. The death of the male head of household has a significant impact on the household. It can reduce crucial labour inputs making diversification impossible and shifting dependency ratios. It can also result in widows losing access to land and other assets.

Widow-headed households and other women-headed households are therefore more likely to have low incomes, and are likely to be in low return high drudgery activities. However, women without their own fields may be involved in horticulture (gardening) through access to communal garden plots, and if they are able to buy grain inputs, may be able to move into small-scale commercial poultry production. Depending on the human capital in their household, they may also have access to formal sector wage employment.

In Chivi a young pregnant widow with two young children was stripped of her assets by her husband's family. They 'sent her back to her parents' with the excuse that only part of the labolo (bride price) had been paid and her parents might cause trouble for her in-laws. However, paying only part of the labolo is customary, and is used to symbolise the long-term link and trust between the two families. The young woman lost her house, land and all her livestock, pots, pans, tools and other assets. She returned to her parent's house, where she had her third child. Her father allocated a small portion of his land to her, so she now scratches a living and faces a very uncertain future.

Source: Fieldwork, July 2000.

3. Methods.

This paper is based on a study analysing changes in well-being, coping and livelihood strategies in semi-arid Zimbabwe during the 1990s (Bird et al, 2002b) which reanalysed a dataset constructed by ITDG in 1998.

(a) Communal areas

Land and agricultural policies during the colonial period resulted in the majority of the rural black populations being concentrated in 'communal areas', where land is held by the state and allocated by traditional leaders according to customary law. These communal areas, which make up 42% of Zimbabwe's land area, are generally in natural regions IV and V[11], and are inadequate for intensive crop production. Nevertheless, they are home to two thirds of Zimbabwe's population. As a result the land has been divided into small land holdings where people attempt to generate a livelihood. Some land redistribution was attempted in the early 1980s, which recent studies (e.g. Hoogeveen and Kinsey, 2001) have found to be more effective than previously thought. Current land reform processes are highly controversial, with land reallocation not appearing to follow systematic procedures and the destruction of the commercial farming sector being partially blamed for the current food security crisis in Zimbabwe.

[11] Zimbabwe is divided into 5 agro-ecological zones. NRI receives the highest rainfall of over 1000mm/ year and NRV the least with <450mm/ year.

(b) The dataset

The detailed approach and method for this study was described in Bird et al (2002b). In brief, the sample for the ITDG dataset was drawn from four districts selected purposively on the basis of (i) agro-ecological conditions, to ensure that the areas selected were representative of each of the 'natural regions' found in Zimbabwe's communal areas; (ii) enterprise mix; (iii) presence of non-government organisation projects in the study area, partly to provide baseline data on the study area; (iv) the range of infrastructural development, and (v) the ethnic background of the residents.

A ward in each district was then selected on the basis of similar: (i) proximity to markets; (ii) access to basic socio-economic infrastructure; (iii) agricultural production and marketing activities, and (iv) interaction between farmers and public and private service providers (including agricultural extension, input suppliers and output marketing agents). 798 households were randomly selected from a sampling frame listing all farm households in the selected wards (199 households, Gulati Ward, Matopo; 197 households, Ward 8, Gutu; 198 households, Ward 10, Chivi, and 204 households, Souguru Ward, Guruve). ITDG undertook the survey[12] and PRA exercises[13] in 1998 in the same wards to allow for cross referencing (see Chipika and Shumba, 1999, and Chipika, Chisvo and Chipika, 1999 for further information on methodological approaches).

The authors reanalysed the dataset, focusing on the 594 households in the sample from the three semi-arid districts (Chivi, Gutu and Matopo). Guruve was excluded as it falls outside the semi-arid zone. We also undertook additional qualitative field work in Chivi and Gutu in mid 2000 to capture thematic issues not covered by either the survey or original PRA.

One of the three districts, Matopo, is significantly less remote than the other two. It is 35km away from Bulawayo, Zimbabwe's second city, and is well connected with markets. Chivi and Gutu are both fairly remote (>100km from a major town or city), and the study areas were distant from all-weather roads. Each of the wards selected were approximately 10km from the nearest 'growth point' or marketing centre. The Matopos site is, in addition, close to Bulawayo (Zimbabwe's second city), making it much less remote than the other study sites.

[12] The survey included two questionnaires, the first on household characteristics, asset ownership, agricultural enterprise mix and income sources, and the second on agricultural services management.

[13] These including key informant interviews (e.g. with local government officials) and semi-structured focus group discussions, with groups constructed to represent age, gender, rich and poor farm households, informal traders and, households involved in 'special enterprises' e.g. dairy production.

Figure 1: Location of study districts

The original survey was designed to explore the impact of structural adjustment. It was not an ideal instrument for the assessment of poverty dynamics; however, it did produce a set of subjective perceptions about change across a range of indicators between 1993 and 1998, as well as a small amount of (unverified) income change data. It also provides a baseline against which a re-survey will now enable a much more precise analysis of poverty dynamics.

(c) Poverty categories

. We divided sample households into three categories using key Zimbabwean national poverty lines. In order to arrive at these categories we divided households from the three semi-arid areas into income groups 1 – 5 in four stages.

(1) Adult equivalent units per household (individuals over 15 = 1, those under 15 = 0.5) were noted;
(2) Grand Total Household Income was calculated. The survey allowed us to calculate each household's current income from a range of sources: total wage income; total remittance income – cash and kind; other non-farm income; total income from livestock sales; total income from sold agricultural output; total value of retained output. Note: this includes a value for 'retained output', i.e. consumption of home produce, which was very important for the poor and even more so for the severely poor.
(3) Grand Total Household Income was divided by the adult equivalent units in the household;
(4) Households were placed in five income groups and three categories:

- *the severely poor:* income group 1 (Z$ 0 – 500 p.a.) and income group 2 (Z$501 – 1,180 p.a.) (below the 2000 *Rural* Food Poverty line (FPL) of Z$1180.49 per capita, which was

less than two-thirds of the Total Consumption Poverty Line (TCPL) of Z$1924.20 per capita);

- *the poor:* income group 3 (Z$1,181 – Z$1,925 p.a.) (below the TCPL but above the FPL); and
- *the non-poor:* income group 4 (Z$ 1,925 – 5,000 p.a.) and income group 5 (Z$5,001+ p.a.) (above the TCPL).

Table 2: Income groups and poverty lines

Category	Income Group	Range (Z$)	Poverty lines
Severely poor	**1**	0 – 500	
	2	501 – 1,180	Z$ 1180 'food poverty line'
Poor	**3**	1,181 – 1,925	Z$ 1925 'total consumption poverty line'
Non-poor	**4**	1,925 – 5,000	
	5	5,001 +	

(d) Chronic poverty: the 'recovery index'

While the 1998 survey and qualitative research in 1997-98 and 2000 do not provide time series data, we have explored the relationship between the severity and duration of poverty using a 'recovery index' derived from data collected in 1998 as part of the household survey. This data contains detailed information on people's perceptions of change in a number of relevant dimensions over the 5 years prior to the date of the survey. These were used to create and index measuring the degree of perceived improvement or decline over the period 1993-8. It was labelled a 'recovery' index as it sought to measure households' bounce back after the widespread impoverishment associated with the 1991 drought (see e.g. Corbett, 1994; Scoones, 1996; Cavendish, 1999). The index was simply calculated based on responses to 8 questions about change in food security related variables[14], positive answers to which would broadly indicate a degree of recovery. A positive response on each question scored 1, no change scored 0, and a negative response –1. The scores were then aggregated (but not weighted) for each household. The minimum possible was –8 and the maximum +8[15].

The recovery index gives us a subjective assessment of change in assets, which we can associate with income groups and other correlates to arrive at an analysis of chronic poverty. Hulme and Shepherd (2003, forthcoming) argue that asset change gives a better picture of chronic poverty than income or consumption change: this is a first (and methodologically simple) attempt to use asset change in this way.

[14] The indicators were: access to farmland, total crop output, household food security, livestock holdings, draught power availability, children's education – affordability, and health services – affordability.

[15] It is not *completely* clear that the respondent was being asked to comment on improvement/ decline/ standstill with respect to his/her own household (as opposed to with respect to the whole community): however, this is the supposition in the analysis presented here.

4. Chronically Poor Areas.

Physical Remoteness.

The three areas in this study, Chivi, Gutu and Matopo differ in levels of remoteness. Matopo is the least remote, as it is only 35 km away from Bulawayo, Zimbabwe's second city, and so is well connected with markets. At 350 km from Harare and over an hour's drive from Masvingo, the regional centre, Chivi is fairly remote. Gutu is similarly remote as it is 100km from Masvingo but only 228km from Harare

Geographical Capital.

We have found that the three semi-arid areas focused on in this study have many of the characteristics of 'spatial poverty traps' (Bird, et al, 2002a:25), with low 'geographic capital' (the natural, physical, political, social and human capital of *an area*) (ibid). This has limited households' abilities to escape poverty.

In this section we assess the level of geographical capital in Chivi, Matopo and Gutu in the 1992-98 period and comment on whether the attributes of the area made people more likely to be poor and affected their ability to exit poverty. We have investigated the following components of geographic capital: natural capital; political capital; social capital; human capital and some directly relevant contextual issues, related to financial capital, namely the local economy and low returns on investment.

The Natural Capital of the Study Areas.

All three of the semi-arid districts in this study (Chivi, Gutu and Matopo) are communal farming areas with low levels of natural capital. They do not have the agro-ecological conditions suited to cropping. However, due to the resettlement policies of the colonial period these communal areas are densely populated with populations largely dependent on agriculture for their livelihoods. The districts all contain natural forests and common grazing which have become fragile through over exploitation.

Chivi District (Masvingo Province) is very dry. Two thirds of the district's land is in Zimbabwe's lowest agro-ecological classification (66% in NR V) and the remaining third is not much better (33% in NR IV). Persistent droughts are common and rainfall is not only low (mean rainfall 650mm/ annum) but erratic, with severe mid-season dry spells common.

Soils are inherently low fertility sandy or sandy loams with low moisture retention capacity and declining fertility due to the increased cost of inorganic fertilisers and the scarcity of natural alternatives (leaf-litter, anthill soil and manure).[16] In 1998 soil erosion was high and deepening poverty had led poor households to increasingly exploit common property resources to supplement their incomes. They were widely perceived as being in decline, with biodiversity reducing, stocking numbers increasing and deforestation deepening. The overuse of both renewable (firewood) and non-renewable resources (clay) had resulted in increased scarcity and

[16] There are three dominant soil types clay (most fertile, good water retention, good for maize and sorghum), red (fertile, easily waterlogged), and sandy (infertile, free draining, good for watermelon and groundnuts).

collection times for a wide range of CPR goods, with particular implications for the very poor who commonly cannot afford to purchase alternatives from the market. A third of the district was 'natural forest' (34%) but deforestation was widespread and game animals increasingly scarce.

Gutu District (Masvingo Province) is less arid than Chivi and has land categorised as NR III (17%), NR IV (70%) and NR V (13%). It has less forest cover (31%) and also suffers from recurrent droughts. The terrain is rugged with similarly poor soils to Chivi. By 1998 overgrazing and diminishing pastures had combined with pronounced deforestation and severe soil erosion to lead to acute environmental degradation. The degradation of CPRs (Common Property Resources) was already causing shortages of firewood and thatch grass and the over-harvesting of edible caterpillars (mostly for sale) had led to scarcity, negatively affecting households depending on them as a food source. Rivers and dams were reported to have silted and dried up. In addition, a profound shortage of draft power and severe land pressure had led some households to subdivide or sell their land.

Matopo District (Matebeleland South Province) is arid (NR IV and V) and the 26% cultivable land is fragmented by mountainous terrain (73% is designated as natural forest). Some soils are better quality than in either Chivi or Gutu, but soil fertility has declined and gully erosion is a serious problem. Livelihoods have traditionally relied substantially on livestock herding, but with an average herd size of 4 animals (in 1998) few were able to depend on livestock for their livelihood. In 1998 the sustainability of natural resource based livelihoods were in the process of being undermined by a combination of recurrent drought and pest attack and environmental degradation.

Despite low population densities (12 persons per km^2 compared with 45 in Chivi and 28 in Gutu) increased population pressure and land sub-division has led to declining landholdings. In 1998 returns on marginal holdings were declining as yields fell due to high fertiliser costs not allowing farmers to compensate for reduced soil fertility.

Deforestation in Matopo was severe with communities being driven to sacrifice the future productivity of the commons. Sacred trees and fruit trees were being used for firewood and to fire kilns for brick making. In 1995 economic hardship led to the increased exploitation of wild fruit from the commons, with households harvesting the fruit for sale in Bulawayo. In addition, the severity of overgrazing on common land was being heightened by encroachment for cultivation, mining and the construction of homes and fencing for private paddocks.

Table 3: Common Properties in Chivi

	Main uses	Main users	Trends/ Issues
Grasslands	▪ **Grazing** for cattle, goats, donkeys ▪ **Thatching grass** – for thatching houses and granaries	• Non-poor (poor own few livestock) • Widespread users	• Gutu: sale of best quality grazing land (by unscrupulous kraal heads) during liberation war to settlers from other parts of the province • Grass-cover poor, livestock graze leaves from shrubby trees (mihombo, misasa mpembere)
Ant-hills	▪ Soil dug & applied to land to increase soil fertility	▪ Non-poor (poor do not own scotch-carts or livestock for transport)	▪ Lack of labour and transport (scotch cart, donkeys or cattle) = major barrier to access
Wild foods	**Mice:** • trapped by children, to contribute to household 'relish' • trapped by adults (coping strategy) household food security and income through sale **Leaves and insects:** **Game animals:** **Wild fruit trees:** • all, especially the poor	▪ Children and the very poor ▪ Important coping strategy	• Lack of labour is key barrier to access • Declining availability
Wetlands	**Reeds:** • basket-making **Rice cultivation:** • grown in vleis and dambos	• Specialised craft • Poorer households	• Availability related to rainfall. Reeds - access related to labour and transport. Rice – free-ranging cattle mean that cultivators must guard crop. Conflict of interest. Cattle ownership by non-poor creates cost for poor
Clay	**Brick-making:** ▪ brick-making: costs = labour charges. **Pottery**	• Brickmaking: most households make their own bricks. Market in Gutu better developed. • Pottery: specialised craft. Poor to middle poor	• Declining availability. Access determined by labour and transport availability
River banks and beds	• Gold from panning in river banks and beds	• Poor - coping strategy '91-92 (Chivi)	• Environmentally damaging. Illegal.
Water	• Small-scale irrigation • Watering livestock • Domestic use[17] • Beer brewing	• Non-poor • Non-poor • All households • Poorer women	
Wood	• Leaf Litter • Carpenters - implements, furniture • Carving • Construction • Households – firewood • Blacksmiths (charcoal) • Brickmakers	• Collected by poor for fertiliser for non poor • Poor to middle income • Poor to middle income • All households • All households • Middle income • Most households (occasional), others as input for key income source	• Deforestation: severe wood and bark shortage (carpenters now using trees stumps). Competition between uses and users. Still few alternatives to wood and bark. By-laws tightened in Ward 10, Chivi e.g. felling mopane trees for firewood illegal - increased demand for Misivisve (until law to protect it) and other species - with poorer burning qualities, but better charcoal-making qualities. Wood for charcoal twice as scarce (increasing constraints for blacksmiths etc.) • Murambatsvina, Misvisve, Miwonde and Mushavhu - used by carpenters in Gutu to produce tools and household items. • Cutting live trees illegal.
Bark and fibres	• Potters – firing kilns (Chivi) • Basket makers (Gutu) fibres (including barks, grasses, rushes, and reeds	• Poor to middle income	

Source: Gap-filling fieldwork, July-August 2000.

[17] Some households in Gutu have artesian wells, but this did not appear common in Chivi (Gap-filling research, July-August 2000).

The importance of common property resources (CPRs) was a recurrent theme in participatory research undertaken by ITDG in each of the study areas. CPRs underpin livelihoods in a vital manner, some are of particular use for the poor (e.g. mice trapped for food, wild fruits) while others are of more importance for the non-poor (e.g. grazing). CPRs commonly provide inputs for livelihood activities and for direct consumption in addition to substituting for purchased goods during difficulty (see Table 3) as part of coping strategies. CPRs are also important in generating a range of indirect values (shade, windbreaks, soil erosion protection and locations of spiritual importance). Coping strategies in times of crisis often rely on common properties, and so in poor and highly risk prone areas the degradation of CPRs is of particular relevance. Table 3 provides some detail on the uses, users and trends in CPRs in Chivi.

The Local Economy.

In remote rural areas with low geographic capital returns to investment even in human capital will be low (Ravallion and Wodon 1999), partly because of poorly functioning markets: they are 'thinner' - more interlocked (Singh 1989) with smaller marketable surpluses, higher transactions costs, and possibly less good social co-operation to overcome the obstacles. All of these are partly related to distance from major urban centres. Greater distance reduces trade, specialisation opportunities and access to credit. Distance interacts with agro-ecology as a determinant of geographic capital (Bigman and Fofack, 2000).

Poorly endowed remote rural areas are typically areas of out-migration (Bird et al, 2002a:27). In semi arid Zimbabwe productivity of the residual population is negatively affected due to the loss of crucial agricultural labour and reduced access to social fora. To a certain extent this is influenced by socially determined gender roles in productive and reproductive tasks, and also by the exclusion of women (e.g. from Farmer's Groups).

In Chivi the economic performance was worsening in 1998. Unemployment was on the rise, barter trade was increasing, and the cost of agricultural inputs had risen beyond the reach of many farmers. The increased cost of borrowing from Cottco and AFC[18] meant that few farmers had new equipment.

In Gutu structural adjustment and market liberalisation had a positive impact on artisans (many of whom were retrenchees from the cities and commercial farms) and small-scale manufacture grew, stimulated by demand, as local consumers sought alternatives to expensive imports and 'urban' manufactured goods. However, liberalisation was damaging to the poor, who faced higher costs for agricultural inputs and artisanal goods. In addition, markets did not develop well following the removal of the GMB (Grain Marketing Board) monopoly. Farmers took time to adjust to the disappearance of a guaranteed purchaser, and although there was an increase in the number of marketing channels, new traders failed to materialise in sufficient numbers and farmers had to sell at distress prices.

In Matopo in 1998 the proximity of Bulawayo was encouraging farmers to produce crops for market, rather than maize for home consumption. This combined with erratic rainfall and the shortage of affordable inputs to result in limited grain surpluses for sale, meaning that poor net consuming households[19] found ensuring household food security difficult. Proximity to markets encouraged wood carving (to sell to tourists at the Matopos National Park) and the migration of young men and women to South Africa.

[18] Cottco and AFC are large agricultural companies active in Zimbabwe.
[19] Households having to purchase more from the market than they were able to produce for sale.

Dam construction in Matopo from the early 1980s[20] stimulated vegetable production. By 1998 production was quickly saturating the small local market, and women were having to travel to Bulawayo to sell produce to wholesalers. New traders were coming into the area after the removal of the GMB monopoly. National Food Ltd. and small millers were buying maize directly from farmers, and providing prompt payment. There were examples of market interlocking with market intermediaries paying for the transport and packaging of goods. Common local crops (groundnuts, *rapoko*[21] and sweet potato) were being sold to traders and self-marketed in Bulawayo. The economy appeared to be relatively vibrant with non-locals choosing to invest in enterprise in the area, in contrast to Chivi and Gutu where there was little inward investment.

Retrenchment, connected with the impact of structural adjustment and the slowing of the economy, resulted in unemployed workers returning to communal areas. These returnees had to build new homes, which stimulated construction, with positive impacts for the construction sector, but negative impacts on the environment (over exploitation of clay for bricks and wood for brick kilns and construction). Remittance flows had declined due to increased unemployment and urban living costs, and increased transport costs had led migrants to return with money less often. Youths were dropping out of school due to the increase in school fees.

Governance/ Political Capital.

Spatial patterns of poverty and well-being are partially determined by differential government spending, particularly on infrastructure and services (Bird, et al, 2002a:26). Spending on an area is influenced by its political marginality, the level of electoral mileage it is perceived as providing, ethnic and religious differences underlying politics, and whether policy makers perceive that investing in high potential areas will generate greater benefits (Bigman and Fofack, 2000: 135).

Ethnicity and historical political loyalties and relationships with the state provides an important contrast between the three semi-arid sites in this study. Matopo in Matabeleland has had harsher experiences in the post independence era than either Chivi or Gutu (both in Masvingo).

In the early 1980s, return to civilian life was difficult for some in the aftermath of the liberation war. There were several assassination attempts on Robert Mugabe, and outbreaks of violence near guerrilla assembly points around the country (CCJPZ, 1997), and 'war veterans' have been sporadically involved on both sides of the ethno-political divide ever since.

The Shona-Ndebele divide has dominated post-independence politics in Zimbabwe (Butcher, 2002) and in the early 1980s the partnership between (Shona) Robert Mugabe of ZANU and his vice president (Ndebele) Joshua Nkomo (ZAPU) crumbled. The (ZANU) government became involved in two overlapping conflicts in Matabeleland, against guerrillas and against unarmed civilian ZAPU supporters. Both sets of opponents were treated alike[22] (CCJPZ, 1997) in one of the most violent ethnic struggles in recent African history (Butcher, 2002). Nkomo fled to Botswana (BBC, 2000) but returned in 1987 to sign a peace accord. However, the Ndebele have

[20] Supported by the Build-a-dam Campaign (UNDP), with inputs from bilaterals (New Zealand Embassy and Canadian High Commission), NGOs (Catholic Development Commission, Lutheran World Federation [4 dams in Gulati Communal lands, the data collection area within Matopo for this study]).
[21] Finger millet.
[22] Suppression of the guerrillas was largely undertaken by Government defence units, which included 4 Brigade, 6 Brigade, the Paratroopers, the CIO and the Police Support Unit. While attacks on civilians were carried out mainly by 5 Brigade, the CIO, PISI and the ZANU-PF Youth Brigades.

not forgiven Mugabe and ZANU-PF for the up to 20,000 deaths and disappearances of this period (Butcher, 2002). In the 2002 general elections ZANU-PF won just 2 of the 23 seats in the province, with the rest going to the opposition Movement for Democratic Change (BBC, 2000).

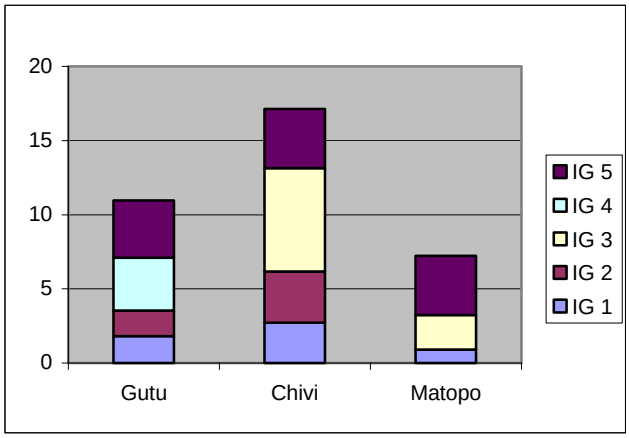
So, as we have shown elsewhere, Matopo in Matabeleland is the least remote, but in 1998 it was recovering not only from drought but also from the counter-insurgency and its aftermath, and although 20 years have passed, the Ndebele still form the largest ethno-geographic locus of opposition.

Unfortunately little attention was given to political and governance issues in the design of the questionnaire underpinning this study. In this section we use the delivery of agricultural extension services and the distribution of the Government Grain Loan (GGL) as proxies for government service provision.

Delivery of Government Services: Agricultural extension.

The provision of agricultural extension, in terms of *supply*, was good in all three districts, with one extension worker per 860 farmers in Chivi, 1:610 in Gutu and 1:780 in Matopo, and the survey indicated a high degree of satisfaction with agricultural extension services amongst the communities of Chivi, Gutu and Matopo. The all-male Farmer's Clubs were important intermediaries, with club members invited for training events in the local town passing on the information to other members. Unfortunately mechanisms for including women appeared limited. Direct training had been provided to surprisingly high numbers (though low proportions) of poor households. An *output indicator* is provided by the numbers who had received formal agricultural training (trained as Master Farmers, in crop cultivation, poultry rearing or animal husbandry). As we can see from the chart below a relatively high proportion of households had received formal agricultural training.

Figure 2: Percentage of households that received formal agricultural training (1998)



Over 60% of households reported increased contact with extension agents between 1993 and 1998. This was especially marked for Matopo (where informal agricultural training was common), poor households, and women-headed households. Only households with very high dependency ratios, who were likely to be highly subsistence oriented, saw themselves as relatively neglected.

However good the extension services was, measured by input or output indicators, the outcome was poor. There was relatively low *and declining* use of hybrid seed and other purchased inputs, except for maize and the majority of households produced primarily for home consumption. However, disengagement from markets was not a result of absence of information or a willingness to innovate but due to other constraints.

Delivery of Government Services: Social Protection.

The numbers of severely poor people in semi-arid Zimbabwe mean that even during a normal year many people are below the food poverty line - in other words, they are unable to consume enough protein or calories to sustain health. Where idiosyncratic (affecting single households) or covariant shocks (affecting whole areas or communities) diminish levels of consumption still further it is clear that some sort of social protection mechanism is necessary in order to protect individual's food security and limit the damaging intergenerational transmission of poverty (Moore, 2001). The extended families of chronically poor people may also be chronically poor, so the possibilities of informal safety nets are limited for them, and world-wide trends to the nuclear family have also eroded traditional redistributive or insurance mechanisms. Low social capital may make it difficult for poor people to join associations and groups to which they are expected to contribute (Bird et al, 2002a). Where poverty is widespread informal systems will struggle to cope, and in any case they have been found to work best during peak seasons, when the better off can redistribute to less fortunate neighbours and relatives. Formal safety net systems work best when there are severe crises, but neither may work well during slack seasons of normal years (Watts and Bohle 1993).

Formal social protection mechanisms rarely extend to RRAs, however we have found that some programmes were delivered to the study regions of Chivi, Gutu and Matopo. These included school feeding programmes, humanitarian and supplementary feeding programmes (Owens and Hoddinott, 1998) and pensions. Over 60% of women were signed up for supplementary feeding in 1990-91, which was a moderately bad drought year (Corbett, 1994:58). In addition, consumption-saving transfers, such as free medical treatment are reported as being important to the poor (Dashwood, 1999). Food for work (FFW) was also an important form of social protection in the area during the 1991-92 drought, Scoones reports that during the 1991-92 drought 80% of households in Chivi were involved in FFW programmes (Scoones, et al 1996: 178). In 1998 some households (1% of sample) were still able to access FFW and used the cash they generated to invest in agricultural activities. Other programmes included Government Grain Loans, pensions for widows and the disabled, a tillage service and health fee exemptions. However, by 1998 government support to widows and disabled (regarded locally as the poorest) had declined, and the 'tillage service', which benefited the poorest and used to be provided by the District Development Fund, had been discontinued. In addition, while health fee exemptions were available for the poorest, red-tape[23] meant that few of the target group benefited.

Matopo's proximity to markets appeared to strengthen people's ability to withstand shocks and bounce back from the 1991-92 drought was better than in either of the other two districts. However the non-uniform distribution of formal safety nets (e.g. Government Grain Loans, as described below) indicates that the advantages of proximity to markets is possibly counteracted by political exclusion due to the ethnic identity of the majority of the population (Ndebele).

[23] They could only be accessed by those with a letter District Administrator, District Councillor or Ward Councillor.

In 1998 many poor households received Government Grain Loans (GGLs) in our study areas (an average of 52% in income groups [IGs] 1-3, compared with 29% of IGs 4 and 5). Distribution was not even across districts, reaching only a third of households in Matopo compared with two thirds in Gutu and Chivi. Loan size covered a wider range in Chivi, and more households received large loans than in either of the other two districts. Low repayment rates across income groups and districts indicate that the majority of households viewed these schemes as transfers rather than loans, and fewer households from Chivi repaid their grain loans (<9%). The differential disbursement and repayment levels may be related to the political economy in Zimbabwe, where the Ndebele tribe (the majority ethnic group in Matopo) regard themselves to be ill-treated by the majority Shona population (majority in Chivi).

However, the net effect of social protection measures in the study areas was certainly not enough to prevent impoverishment or provide a floor to poverty. In the absence of successful formal social protection, the poor tend to be thrown back on informal mechanisms and coping strategies, many of which will depend on the exploitation of CPRs (Bird et al, 2002a:28). Informal safety nets, which depend on social capital and CPRs therefore form important parts of the geographic capital of an area (ibid), indicating perhaps why the levels of environmental degradation are so high in all three of the study areas.

Figure 3: Number of h'hs receiving government grain loans, by district (1998)

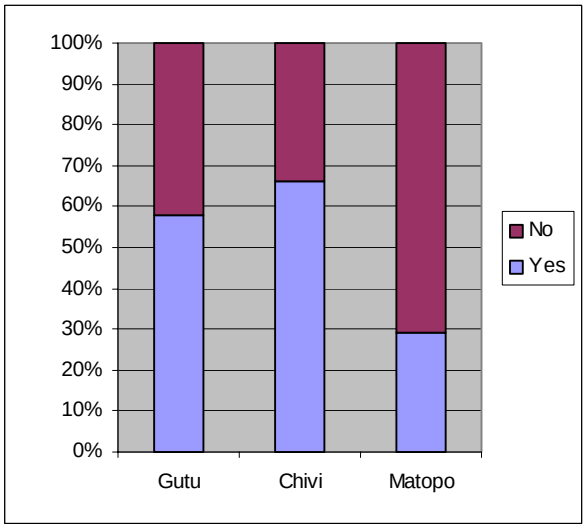


Figure 4: Percentage of h'hs gaining government grain loan, by size and district (1998)

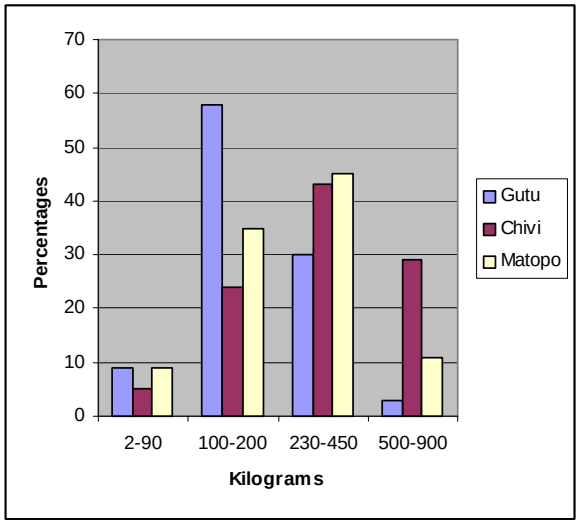
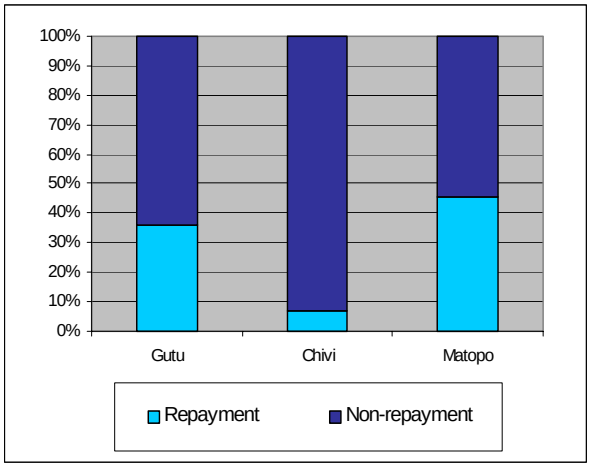


Figure 5: Repayment rates for grain loans by district (1998)



Interventions.

There were a number of interventions in Chivi during the reference period (1993-98), including agro-forestry, veterinary services, alternative forms of agricultural research and extension, on-farm seed trials, irrigation, community gardens, and out-grower schemes (see Bird et al, 2002b Annex 2a for more information).

Gutu appears to have had fewer interventions than Chivi during the same period, but they included an agro-forestry and woodlot management project, on-farm seed trials, gully reclamation and a long-term land-use, crop and livestock development programme.

There was a wide range of natural resource related interventions in Matopo, including credit schemes (Agricultural Finance Corporation, ORAP, Catholic Development Commission, and the Cold Storage Commission)[24]; borehole drilling (Lutheran World Federation); the Matopo Research Station; dam and irrigation projects; the 'ORAP' programme to establish milk collection depots and to provide credit to purchase improved breeds and build herd size and quality; environmental management projects (Natural Resource Board and Forestry Commission), and private sector supported on-farm seed trials. This high level of intervention may help to explain the significantly higher levels of *improvement* in wellbeing (from a very low base) found in Matopo in comparison to the other study sites[25].

The Social Capital of the Study Areas.

Social capital may be lower in RRAs than in non-remote areas. Populations are likely to be isolated from the national economy, and from national cultural and political movements. People

[24] Providing usually group credit at usually concessionary rates for dairy, poultry and irrigated cropping.
[25] We are not sure whether the number and range of interventions in Matopo is actually higher than in the other study sites, or if reporting is simply better. If it *is* higher, it may be explained by its greater proximity to a city (Bulawayo) or NGOs interest in helping the Ndebele overcome the violent oppression they experienced during the 1980s.

may have strong family networks, but they may lack individuals able to act as interlocutors with the powerful. The chronically poor are likely to be best linked, socially, with other poor households rather than to the 'gatekeepers' to important goods and services. They are therefore more likely to experience exclusion or adverse incorporation than positive power relations and mutually supportive networks. Bebbington (1997) shows that this is not always the case, and that where conditions are right social capital can play a critical role in renegotiating relationships with the market, state and other civil society actors with an important potential for poverty reduction. However, traditional safety nets based on transfers within networks of poor people are not capable of providing adequate social protection (see Hulme et al, 2001 for more on social capital and chronic poverty).

The form of social interaction at the community level in rural Zimbabwe is likely to depend on how long an area has been settled. Long settled areas with a strong tradition of lineage-based production around kraal heads may have more patron-client relations, while recently settled areas organised into nuclear family clusters are likely to have few households who have accumulated enough to provide loans, so may have more 'loners' and exchange-based interactions.

As other commentators have noted (Putzel 1997), social capital is not always positive for everyone. Horizontal transfers may well be a 'good thing' at the community level but can be disadvantageous for some individuals, with claims on labour or livestock being made at awkward times. Richer households may feel that they need to hide their wealth and stores in order to keep them from prying eyes, and patron-client relations may become exploitative or abusive (Davies 1996, CARE 1999:10).

Increased stock thefts during the mid to late 1990s were seen in the study areas as evidence of the community breaking down under pressure, with the incomes of the poor declining and increased numbers of unemployed youths and returned urban migrants.

We found that the majority of households in the study areas were intricately linked by economic exchange supported by social interaction. Unfortunately the survey included only proxies for social capital such as (1) borrowing from other people - labour, livestock, money and implements and (2) membership of farmers', women's and gardening clubs and other informal organisations, but this was supplemented by qualitative information gathered through key informant interviews.

Looking at patterns of membership, more households in Chivi (79%) were involved in clubs and societies than in Matopo (47%) or Gutu (63%). There was much higher membership of the ZFU (Zimbabwe Farmer's Union) in Matopo and of farmers' groups, agricultural co-operatives and traditional societies in Chivi.

Club membership did not have a strong relationship with income, other than in Matopo where the very poor (IG 1) had much lower levels of membership (10%) than in Gutu (80%) or Chivi (74%)[26]. This indicates that these very poor households experienced greater social exclusion in the context of better market connnections.

These proxies for social capital did not indicate a strong relationship with income distribution. However, the formal membership of clubs and societies poorly captures the real world of networks and interconnections found in the real world of social capital. It also misses vital

[26] There were only 3 households in IG 5 in Matopo putting the high levels of membership in this group into context.

functions (more likely amongst higher income households) such as those provided by urban-dwelling extended family members, who provide remittances to a third of households in the sample and a vital base for trading activities and for looking for urban employment. The borrowing and lending of labour and livestock may represent social capital more effectively.

We found that good linkages with neighbours were crucial for poor households. They were short of labour and livestock (and to a lesser extent, implements) and without social networks they were less able to cope with these shortages. Many households in the study areas borrowed livestock (>50% of IG1; 35% of IG 5) and the majority of them (60%) borrowed from kin, representing an important form of social capital. Few hired instead of borrowing or implements. When short of household labour poor households could rarely afford to hire it. They either had to borrow labour, increase their use of child labour or remain short.

Traditionally, labour sharing networks for large agricultural tasks (including 'work parties' in which beer and food is provided in exchange for help) which allowed labour and draft power to be pooled efficiently, were common in rural Zimbabwe. They facilitated in-kind transfers to the elderly, to poorer relatives and to those with limited labour or draught power, which reduced vulnerability. However, as Box 2 indicates these networks are not accessible to all. Those new to an area or without the surplus grain and goats to provide beer and food for work parties may be excluded. Also, poor households who are heavily reliant on casual labour are unable to turn down paid work on traditional rest days (Wednesdays in Chivi, Tuesdays in Gutu), which is when community activities including work parties, Farmers' Group and Women's Club meetings take place (see *Casual Labour*, below). As a result the poorest become increasingly excluded from such networks. So, well functioning networks can mitigate risk and improve returns but breakdowns in social relations leave households highly vulnerable, and as Scoones shows, for those 'without effective social networks, farming can be a major struggle, and vulnerability to risks can rise' (Scoones et al 1996:83-4).

Box 2: New Comers: the impact of low natural, social and financial capital.

Nathan and Mary are a young couple, with no children, who migrated to Chivi about five years ago. They joined Nathan's father's village, but because Nathan is illegitimate and did not grow up in the area he has had difficulty accessing adequate land. The local Kraal Head allocated him and his wife a small plot of land, but they are finding it almost impossible to meet their needs through agriculture.

They do not produce a grain surplus and do not own any goats so feel that it is impossible for them to take part in any of the reciprocal work parties. They do not have oxen or a plough, so must hand cultivate their land with a hoe. As a result they are trapped in a low level of production. However, both of them are doing all they can to bring in an income.

Mary collects old jumpers and unpicks them. She washes the wool and rewinds it, before knitting it into new items. She barters these in the surrounding area for things she and her husband need. Recently she bartered a jumper for a chicken. Unfortunately one of their chickens was stolen, so they only have two left. They have no goats, cattle or donkeys.

Nathan walks to where neighbours are sitting eating fruit. He collects the seeds that they spit on the floor and germinates them. Through this labour intensive and humiliating process he has established his own orchard. He also sells seedlings in pots to other gardeners.

Both Nathan and Mary work together to trap and roast field-mice, which are a local delicacy. They belong to a strict local apostolic church which forbids the consumption of rodents (amongst other things) so they sell them to other local households.

Through a combination of enterprise and hardwork the couple hope to survive.

Source: Fieldwork, July 2000.

Constrained by poor financial services markets most households funded agricultural inputs and contingencies through savings or wages from casual labour, but around 13% of poor households (in IG 1 and 2) borrowed from kin, with many more probably relying on the extended family network for dealing with contingencies, again indicating the importance of social networks. However, the wealthiest households had opted out of lending systems – perhaps as a strategy to protect their accumulating assets, and the social capital available to poor households was largely in the form of links with other poor households. These enabled survival, but not progress.

In conclusion, households with high levels of social capital appeared likely to be more able to start diversified livelihood activities or to gain higher returns from existing activities. In a cash poor economy, where barter is the main form of exchange, having a good network takes on a higher level of significance. Households short of agricultural labour, ploughs, oxen, scotch carts or cash for seasonal inputs need to be able to borrow. Individuals wanting to gain paid urban employment need someone to stay with while they search, so rely heavily on the extended kinship network. Formal social protection is patchy in coverage, so households need richer relatives and community members willing to support them in time of need. And improved access to technical information, credit, inputs and markets are mediated by Farmers' Groups and Womens Clubs. Households with low levels of engagement can be predicted to be poor.

The Human Capital of the Study Areas.

Human capital in RRAs may be lower than elsewhere. Food security may be erratic, leading to under-nutrition, damaging children's mental and physical development. Government provision of

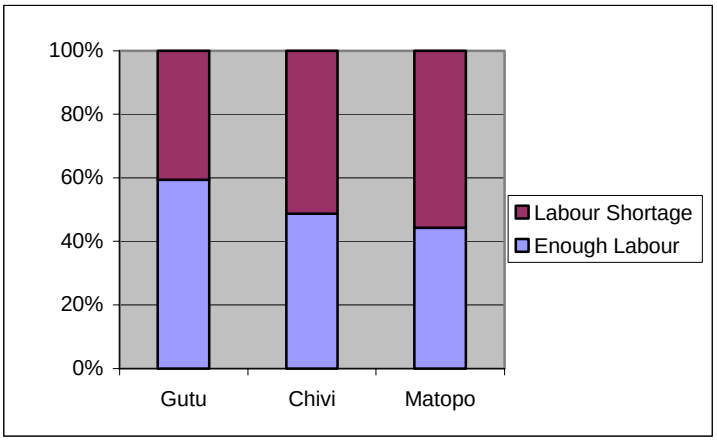
education and health services is likely to be poor and private sector providers difficult to attract due to low levels of effective demand (Bird et al, 2002a).

The indicators of human capital used in this study are the level of education of the household head; the availability of household labour for agricultural production; women-headed households (as these are likely to lack – or have low levels of - crucial adult male labour) and dependency ratios.

The availability of labour was a constraint for many households. This was especially so in Matopo, despite the district having a greater number of large households (9-13, and 14+ people) than the other areas. This can be explained by there being more competition for available labour leading to small families facing particular difficulties. In Chivi a key cause of shortage was illness. Whereas in Gutu labour constraints were lower, possibly because the stagnant economy created fewer opportunities and households had lower expectations. Very few households looked to the labour market to solve labour constraints, indicating the low level of market involvement of most households. Some used children (<12s) as a source of agricultural labour. This was more common in Matopo (72% of households) than in the other two districts (Chivi, 52%, and Gutu, 42%). Borrowing labour was important for many households (see *Social Capital*, above).

Enabling children to live long enough to be healthy productive adults was clearly critical to household well-being. Given the increased prevalence of HIV, especially among teenagers, this is likely to have become an even bigger constraint for many households since the survey was carried out.

Figure 6: Agricultural labour shortage, by district (1998)



Education.

The analysis of households' educational achievement was difficult because of the way in which the data on household members' educational attainment could not be easily aggregated. Further time consuming work is required to produce an index of household educational achievement. In the meantime, education of the household head has been used as a proxy for household educational level – this is likely to be quite inaccurate, however, as there was very substantial investment in primary and secondary education in Zimbabwe during the 1980s and 1990s which would not be reflected in many household heads in 1997.

Education was widely perceived to be a high priority in the study areas. One fifth of respondents reported increasing education consumption between 1993 and 1998, more among the non-poor, and almost half reported reducing it, more among the poor. Although education levels were similar in the three districts, slightly more heads of households in Matopo were better educated at the lower level. Fewer households were headed by someone with no education (10%), more had some primary education and more had completed their primary schooling (gaining a junior certificate), but Matopo also had fewer household heads educated to the senior secondary level, perhaps due to the prohibitive cost of school fees.

Table 4: Education level of household head, by district (1998)

	Gutu	Chivi	Matopo
None	20	27	10
Primary	106	99	113
Junior Certificate	28	32	47
Senior Secondary	38	33	17
College/ Diploma	4	6	8
Other	0	2	1
Totals	**196**	**199**	**196**

Education enabled households to engage in the wage labour market and diversify at least partially from subsistence agricultural production. This meant that households headed by individuals with primary level education or less were much more likely to found in the poorest two income categories, while households in IG 5 were much more likely to be headed by individuals with 'senior secondary' or college level education. There was a statistically significant relationship between households with a wage component to their income and the level of education of the household head. Low education was also linked with being dependent on transfers from the extended family. Remittance receiving households tended to have heads with low levels of education [none/ primary], and the more educated the household head the less significant the contribution made by remittances[27]. However, the level of income derived from remittances was low for these households with low levels of education, suggesting a strong

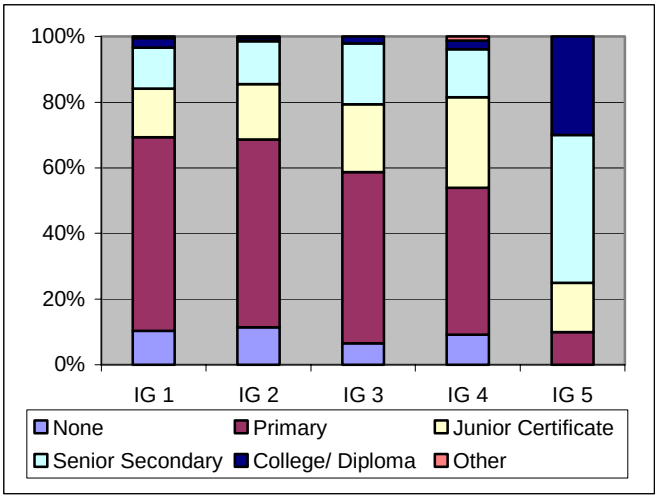
[27] The Chi square value is 80.83 with 4 df.

association between low education levels, depedence on limited remittances and severe poverty.

Women-headed households were also likely to be in this group, as women heads of household were generally poorly educated. The strength of these associations needs to be further investigated.

More educated households also appear to have had more assets. This is indicated by these households gaining a greater share of their income from lending out implements.

Figure 7: Education of household head, by income group (1998)



Sex of Household Head.

About one third of households in Gutu (36%) and Chivi (31%) were *de jure* women-headed in 1998 but in Matopo the incidence was much lower (20%). A further 9% of households are *de facto* women-headed. The difference between districts is possibly due Matopo's proximity to Bulawayo, and the greater effectiveness of markets reducing the need for migration for work by male heads of household.

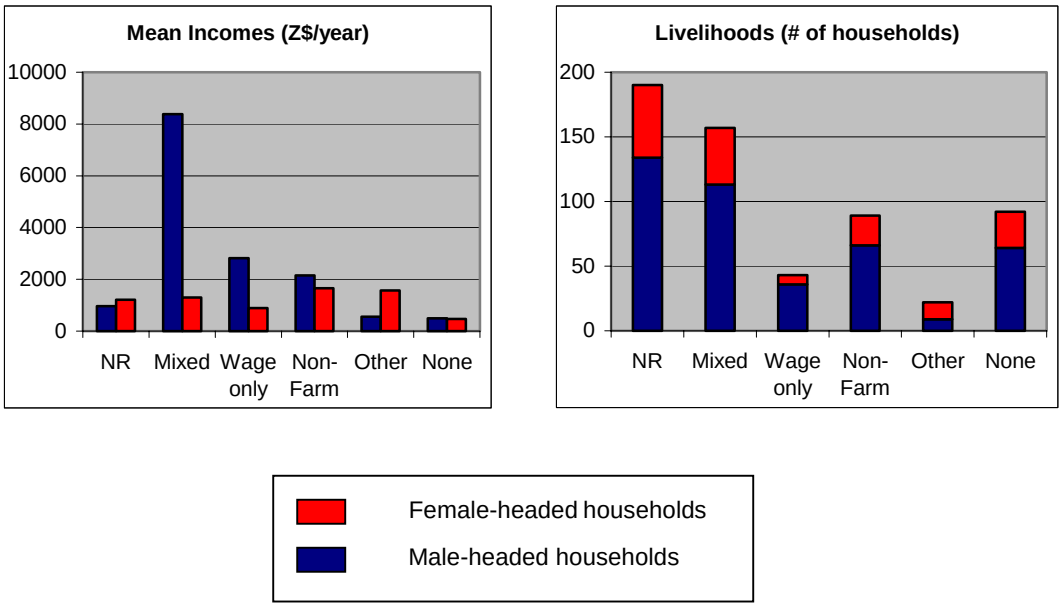
The sex of the head of household has implications for household income and asset holdings. Although many agricultural tasks are undertaken jointly, in semi-arid Zimbabwe as in many parts of the world, they are normally distributed by gender. Responsibility for household food security seems to rest largely on women and key food crops such as (groundnuts, sweet potatoes and the millets) are regarded as women's crops and are generally planted, weeded and harvested by women alone (fieldwork interviews, Chivi, July 2000). Fencing, the building kraals, manure collection and livestock care are generally undertaken by men, while water collection, weeding and reproductive tasks are predominantly undertaken by women.

Women-headed households (in our sample) were crowded into low income, high drudgery occupations, and where they were, they often did better than male-headed households. They gained higher incomes than male-headed households in the following natural resource (NR)-related livelihoods: farming and poultry, farming and gardening, farming gardening and poultry, agriculture and remittances, agriculture and trade. The key to this was adding a poultry and/or gardening enterprise to the farm. The opposite was true for wage work, and non-farm or mixed

livelihood portfolios where they performed less well than male-headed households. They also performed better in beer brewing, knitting, petty trade, remittances and remittances with casual labour, but men tend to have more education and so gained access to high return wage labour.

Male-headed households had higher levels of oxen ownership, but female heads of household were keen to build NR related productive assets and in many livelihood categories were more likely to own scotch-carts. Where they had access to cash from wages, remittance or casual labour they were also more likely to own donkeys, ploughs and wheelbarrows than their male counterparts, and female-headed households relying solely on remittances or casual labour (or a combination of the two) owned more assets across all categories.

Figure 8: Livelihoods and mean incomes of male and female-headed households[28].



Human capital: Household Size and Structure.

Income was associated with household size and structure, the sex of the household head, and dependency ratios. Contrary to expectation for an economy dominated by subsistence production, and agricultural activities more generally, households with large numbers of economically active adults were more likely to be poor. However, there was much variation across the income groups. Overall wealthier households were smaller; poorer households had more children but the degree of association was not very strong (Fig 9). It could be that the larger number of children in IG1 is what has kept them very poor, but will allow these households to become less poor as children mature into adults, and will enable these households to be well supported as the children's parents age – the classic Chayanovian model (Ellis, 1993). On the other hand, the large number of children in today's economy, with its associated cash costs of education, health care and even food, may be enough to ensure persistent severe poverty for the household. This is particularly likely to be the case where land is no longer abundant and

[28] It is possible that the much higher mean incomes for male headed households involved in 'mixed' and 'wage only' activities may be biased by the inclusion of a few high earning graduates, who are probably all male.

fragmentation occurs once the male youth of the household separate off to form their own households. The significantly larger mean number of children in the households in (land scarce) Matopo may also explain (or be a result of) the higher levels of poverty there (Fig 10).

Figure 9: Number of children per household, by income group

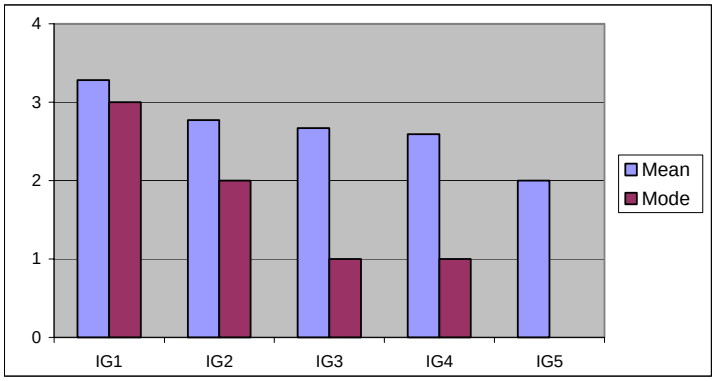
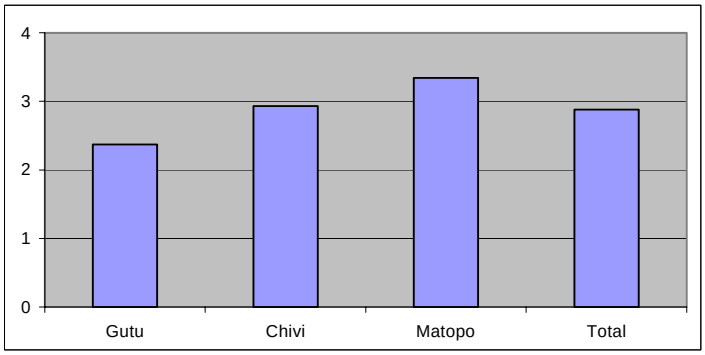


Figure 10: Mean number of children per household, by district



Migration.

30% of households received remittances, a crucial underpinning of livelihoods for many. This is particularly true of the very poor, who receive lower amounts than non-poor households, but for whom remittances form a higher proportion of total household income.

Risk and Responses to Risk.

Table 1 (above) showing the severity of droughts in Zimbabwe illustrates an important dimension of risk in semi-arid areas. Rainfall is low and variable, and rain failure compounds other harvest and post harvest risks. The highly risky environment faced by agricultural producers in semi-arid areas results in risk aversion being a key element of farmer's enterprise choice.

Table 5 shows drought and disease risk (but not pest[29] or post harvest loss[30] risks, which are significant) alongside a number of other key characteristics.

[29] E.g. Quelia bird attacks to millet fields, especially Rapoko (Finger Millet).

Table 5: Characteristics of commonly grown crops in Chivi (ranked perceptions).

Crop	**Profit/ acre**[31]	**Risk - drought & disease**[32]	**Labour Intensity**[33]	**Capital Intensity**[34]	**Skills/ Knowledge needed**[35]	**Comment regarding profit/ sale**
	1 = high profit	1 = risky	1 = labour intensive	1 = capital intensive	1 = skills needed	
Maize	4	1	10	2	9	Mainly for home consumption – not much profit
Pearl Millet (Mhunga)	11	8	3	9	7	No-one wants to buy it, it is really just for local beer brewing
(Finger Millet) Rapoko	6	8	3	7	6	Profitable - can be used to brew beer
Sorghum	8	7	7	7	8	Can sell to breweries
Rice	2	11	--	--	--	Small patches cultivated in vlei (rainy season marsh) areas
Roundnuts	9	2	3	4	4	Mainly for home consumption
Groundnuts	3	3	6	3	5	Some produce peanut butter and sell in Harare
Sunflower	9	6	9	10	10	Very profitable if yields are good
Cotton	1	5	1	1	1	Cargill (a large agro company) will collect
Horticulture ('gardening')	7	3	2	6	2	Sell locally – head-load to local villages
Sugar Beans	4	8	8	4	3	Higher sale price than cotton, but the most expensive seed (Z$50/ 500g)

The risky environment results in highly variable yields in all of the main crops. The table below shows that commonly grown subsistence food crops are hit by low yields for 5 or 6 years in every 10. The footnotes below show the expected range of yields in good, average and bad

[30] E.g. baboon attacks on grain stores.
[31] Combined score from pair-wise ranking with focus group, interviews with an extension officer and a number of farmers
[32] Combined score from interviews with an extension officer and farmers.
[33] From pair-wise ranking exercise with focus group.
[34] From pair-wise ranking exercise with focus group.
[35] From a simple verbal ranking exercise with a focus group.

years. These ranges indicate that yields are commonly more than quartered in bad years. Yield variations are particularly acute in mhunga (pearl millet) and sorghum but less so for roundnuts.

Table 6: Farmer perceptions of risk.

Crop	Yields in 'good', 'bad' and 'average' years	Farmer perceptions of frequency of low yield (bad) years (in 10 years)
Mhunga (Pearl Millet)	• Good year = 4.5 x 90kg bags. • Bad = 1 x 20 litre tin. • Average 1 x 90kg bag & 2 x 20 litre tins	5
Rapoko (Finger Millet)	• Good year = 10 x 90 kg bag. • Bad = 2 x 90kg bag. • Average = 6-7 x 90 kg bag	5
Sorghum	• Good year = 3 x 90kg bags. • Bad = 2-3 x 20 litre tins. • Average = 1-1.5 x 90kg bags	6
Groundnuts (unshelled)	• Good year = 22 x 90kg bags. • Bad = 4-7 x90kg bags. • Average = 10 x 90kg bags	5
Roundnuts	• Good year = 9 x 90kg bags. • Bad = <5 x 90kg bags. • Average = 7 x 90kg bags	?
Cotton	• Good year = 3-4 x bale. • Bad = 1 x bale. • Average = 2 bale	2
Sunflower	• Good year = 6 x 50kg bags. • Bad = 1-2 x 50kg bags. • Average = 3.5 x 50kg bags	3

Other components of the risk environment include personal security and property theft and a wide range of health risks.

Research in South Africa (Aliber, 2001) has shown that personal security in southern Africa can be poorer in rural than urban areas. Policing is inadequate and theft is common. Theft of goats and chickens from just outside the owner's house is reported as having become more common (own field work), reducing the possibility of moving up the livestock 'ladder' (chickens to goats to cattle) to save and accumulate.

5. Livelihoods of the severely poor.

A static analysis of the livelihoods of the poor in the three semi-arid districts focused on the correlates of poverty and the relationship between poverty, well-being and livelihood strategies. There were significant variations among the three districts.

Poverty in the Study Areas.

Poverty was widespread in the three study areas with over 80% of households being below the total consumption poverty line in 1998 (see Table 7). 86% of households in Matopo were below the poverty line in 1998, 84% in Gutu and 83% in Chivi. Mean incomes in each of the three districts were below the TCPL, and in Matopo they were even below the food poverty line (means: Gutu Z$ 1,343; Chivi, Z$ 1,353 and Matopo, Z$ 1,011). It is important to note that the calculation of income included a value for 'retained output', i.e. consumption of home produce, indicating that poor households are food poor as well as cash poor.

Nearly three quarters of households in the sample[36] were severely poor (below the FPL), and only 16% of the sample were non-poor. Matopo had more very poor households (97 households were in IG 1, compared with 61 in Chivi and 46 in Gutu) and fewer non poor (28 households in IGs 4 and 5, compared with 36 in Chivi and 32 in Gutu) despite its proximity to Bulawayo. However, the economy in Matopo was more diversified, despite much lower population densities, reflecting the power of urban proximity, and households in Matopo in all income groups obtained higher mean incomes than those in Chivi or Gutu (particularly IG 5), but the mean income figures were dragged down by the high numbers of households in IG 1.

Table 7: Breakdown of sample households by poverty levels.

	Severely Poor (%) (IG 1 & 2)	**Poor** (%) (IG 1, 2, 3)	**Non-Poor** (%) (IG 4 & 5)
Matopo	70.7	85.9	14.1
Chivi	66.3	81.9	18.1
Gutu	67.9	83.7	16.3

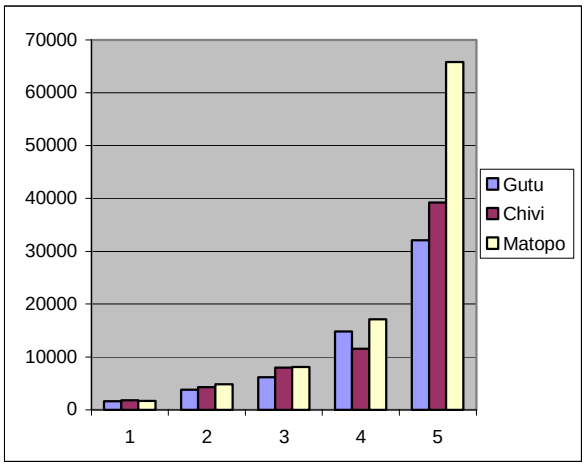
Source: Dataset analysis.

There was substantial income differentiation in all three areas, and the mean figures masked the depth of poverty experienced by many households. On average, households in IG 1 were more than 20 times poorer than households in IG 5 (see Figure 11).

Three quarters of the rural population of Zimbabwe was reckoned to be below the national TCPL in 1995, and the prevalence of severe poverty, as measured by the FPL, increased during the 1990s from 17 to 37% of the rural population. The level of severe poverty was far higher in the three semi-arid areas studied. It is argued here that there is a substantial 'neighbourhood effect': the sheer weight of very poor people in the area provided a poor environment for investment, and for the development of human, social and political capital. Children growing up in such areas are less likely to develop the skills and the drive to get out or get rich than in areas where there are more role models, greater support, and better chances locally. This argument derives from American studies which argue that 'bad neighbourhoods' play a strong role in the intergenerational transmission of poverty (see Hulme et al, 2002).

[36] Meaning the restricted sample of the 3 semi-arid areas.

Figure 11: Mean incomes (Z$), by income group and district (1998)



Under the circumstances found in semi-arid Zimbabwe in the late 1990s – a low or negative rate of national economic growth, low geographic capital, a high risk environment, and a large population of very poor people, it is argued that severe poverty is highly likely to translate into chronic poverty.

It would seem that the severely poor in remote and underdeveloped rural regions would be likely to suffer long term poverty given the combination of area-based and household-based multiple disadvantage. In this Zimbabwean sample two-thirds of all households were severely poor, and this was four-fifths of those who were poor. It is likely that this is not an atypical distribution in underdeveloped or remote regions of countries that have experienced long-term economic stagnation.

Livelihood Activities.

In this section, we start by making some general statements about the districts before going on to discuss the livelihoods of the poorest.

We found that Matopo had a more developed wage economy than Gutu or Chivi. More households gained their livelihoods from wage income alone, fewer depended mainly on farming, and above average numbers were involved in construction. Nevertheless, households in Matopo obtained higher mean incomes from sold crop output than those in the other two districts and more households obtained remittances than in Chivi or Gutu - they also tended to receive larger amounts, presumably due to proximity to Bulawayo. Subsistence was slightly less important in Matopo, as households were appeared to be more linked into markets and sold a higher proportion of their agricultural output. However, in-kind payments for casual labour were most common in Matopo (55%) and least common in Chivi (22%), which is interesting as other indicators show better market development in Matopo. Also, livestock sales appeared to be of less importance in Matopo than in Chivi or Gutu despite Matopo's traditional status as a cattle herding area. Enterprise development in Matopo was being stimulated by investment both by 'outsiders' and also 'ordinary people'. This differed from Gutu, where investments were made solely by locals.

Gutu had a stagnant economy, and although it was predominantly reliant on agriculture, mean incomes from sold or retained crop output were low (the value of retained output was highest in Chivi and lowest in Gutu). In addition, although more households in Gutu were reliant on wage income (45) than in either Matopo or Chivi (both with 31) their mean incomes were lower.

Table 8: Mean Wage Income[37], by Income Group and District (1998)

Income Group	**Gutu**	**Chivi**	**Matopo**	**Mean**
1	800	659	1,325	1,057
2	2,244	2,038	3,146	2,461
3	3,952	4,416	5,601	4,649
4	9,804	11,344	11,250	10,614
5	30,234	33,204	51,947	35,069

Moving on to analysis by income group, the non-poor (i.e. households in IGs 4 and 5) were more likely to have access to wage employment and were either engaged in waged work as a sole activity in or various mixes with trading or agriculture. Conversely poor households were much more likely to be solely engaged in farming or in a mix of NR-based enterprises, or in activities with low social status (casual labour), a high degree of drudgery (beer brewing, construction) or with low entry barriers and returns to labour ('services').

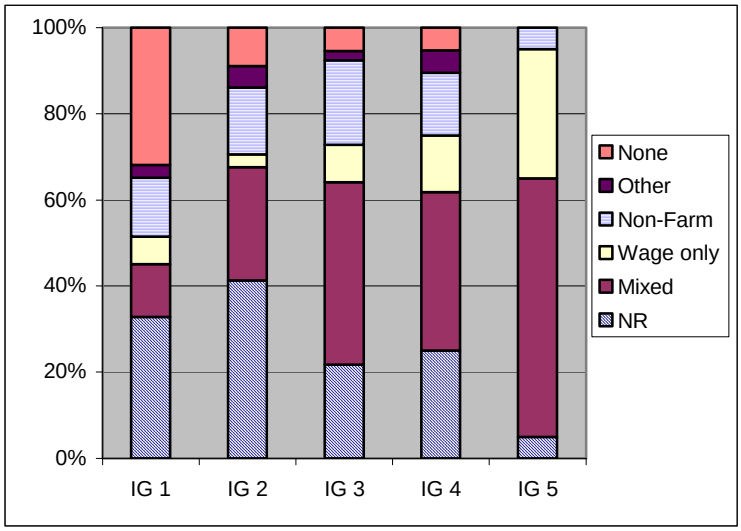
A large proportion of the poorest households claimed to have no income earning occupations in 1998. This occupational cluster ('None') is smaller, but still present, in the higher income groups. These households commonly had some form of income, however, they clearly either perceived themselves to be unemployed or were not willing to discuss their livelihoods with outsiders.

Non-poor households (in IGs 4 and 5) used their higher human capital (and their assets, savings and high degree of urban linkage) to access high return wage employment. This was compatible with their smaller household size and the disengagement of IG 5 households from reciprocal social arrangements at the village level.

Almost all households in the survey relied on subsistence to a certain extent (only 3 households out of 600 did not retain some agricultural output for home consumption), but richer households generated more of a surplus and gained a higher income from selling it into the market. This was despite their having more diversified livelihoods, which included a wider range of non-natural resource based activities. Non-farm income, wage income and remittances were all significant sources for a significant proportion of households. Higher income households typically received more wage and remittance income, while lower income households were more dependent on retained agricultural output and were generally less likely to be strongly engaged in markets, with the exception of those in Matopo where markets worked better. The markets that did engage poor households were in activities that involved high levels of drudgery, and low entry barriers.

[37] i.e. regular cash payments for employment, as opposed to casual work or micro-enterprise

Figure 12: Proportion of households involved in livelihood activities, by income group (1998)



Crop production.

Almost everyone in the sample grew maize (580 of the 593 households for whom we have 1998 crop area data). Almost all households also grew sweet potato in their home plots, but interestingly this was not recorded by the survey[38]. Groundnuts and *nyimo* (roundnuts) are the second and third most popular crops in terms of the number of households involved in their cultivation. Not all households grow *mhunga* (pearl millet) or sorghum, but households growing these crops tend to dedicate a high proportion of their land to them.

Casual Labour.

Casual labour was a component of household portfolios for many poorer households. It is poorly paid, low status and keeps workers from their own fields when they most need attention, depressing productivity. See Table 9 for an indication of the types of casual labour activity undertaken in the study areas, and Table 10 for an understanding of how casual labour fits into the annual work cycle of the poor. As shown in our discussion of social capital (see above), heavy reliance on casual labour can also lead to exclusion and intensify poverty and isolation. Many sought casual work only when other livelihood activities failed, or large amounts of cash was needed. Due to its low status, even the poorest households preferred to gain self-reliance through agricultural production, rather than 'working for others', and only took casual work when their granaries were empty or they needed money to pay for school fees or other 'lumpy' expenditures.

In Chivi we found that casual labour was a component of livelihood portfolios for many households, but not the sole source of livelihood. We have not identified any households in the

[38] Sweet potato is a 'woman's crop', and is grown in the home plot, which may explain the lack of reporting.

dataset which relied entirely on casual labour, and although many used casual labour as their key source of cash income, they obtained much of their food security from subsistence crop production. This contrasts with studies of Masvingo in the 1980s which showed that casual labour was the sole source of income for many of the poorest households (Adams 1991:164), and that almost 30% of the (*de facto*) female-headed households in Adams' sample relied on casual work as their main source of income.

Most casual work revolved around agricultural production, with the main pre-harvest activities being land preparation, planting, weeding, spraying, crop fertilisation and harvesting and the main post-harvest activities being threshing, winnowing and packing. Other significant forms of agriculturally related casual work was the digging out kraals (manure digging and spreading) and 'ant hill digging' (collecting and spreading termitaria), while non-agricultural work included brick making or firewood collection (see Table 9).

Table 9: Selected Casual Labour Activities in Ward 10 villages, Chivi.

Activity	Returns	Constraints & Barriers to entry	Working capital/ labour intensity	Synergies, other benefits/ disbenefits	Trends & Risks
Domestic work (within village)	Very Low	• Demand co-varies with agricultural risk • Power asymmetries	• Low to medium labour intensity • No working capital	Regular wage	Increasing formal sector unemployment forcing wage rates down
General Hand	Very Low		• Medium to high labour intensity • No working capital		
Weeding	Very Low		• High labour intensity • No working capital	Removes labour from agricultural production	
Groundnut picking (from dried harvested plants)	Low		• Medium labour intensity • No working capital		
Cotton picking	Very Low		• Medium to high labour intensity • No working capital		
Anthill digging	Very Low	• Demand co-varies with agricultural risk • Power asymmetries • CPR reliant	• High drudgery		
Thatching houses	Medium	• Demand co-varies with agricultural risk • CPR reliant	--		

Source: Gap-filling fieldwork, July-August, 2000.

Table 10: Seasonal activities of the rich and poor.

Season		Cold Dry Season (Jul-Oct)	Early Rains (Nov-Dec)	Late Rains (Jan-Mar)	Harvest & Threshing (Apr-Jun)
Rich Households	Activities	Winter ploughing with own cattle; Hiring labour to dig ant hills and spread termitaria; Hiring labour to construct and repair housing; Trading goods from South Africa; Selling agricultural surplus; Doing intensive gardening; Selling garden crops to poor; Hiring labour for gardening, paying via beer brewing.	Ploughing with own cattle; Hiring out cattle for ploughing; Adding cattle manure from kraals; Hiring labour for fertilising.	Hiring labour for cattle herding; Working on fields.	Hiring labour for harvesting, paying with last year's (no longer fresh) crops; Collecting the harvest using their own scotch carts; Collecting maize stover and storing it at home for later use as fertiliser; Exchanging maize for cattle at local white farms.
		Remitters are white collar workers who send remittances all year round			
	Indicators	Wearing thick, warm jerseys.	Enjoying Xmas day by having plenty of food e.g. a goat, rice, some Cokes, beer.	All children going to school, including secondary school or even boarding school.	High yields, except where households no longer bother with agriculture due to high remittance levels.
Medium Households	Activities	Temporary employment as cane-cutters at Triangle, but not drinking all their earnings as the poor do; Winter ploughing; digging their own ant hills for termitaria; hiring out ploughing equipment; Carrying manure in their carts to fertilise fields; Selling small quantities of crops and garden produce.	Ploughing with own cattle or borrowed cattle; Fertilizing fields, usually with own labour but sometimes hiring labour.	Beer brewing, sometimes for labour parties (nhimbe) for weeding, other times for sale; Working on fields.	Harvesting their crops; Collecting maize stover; Fencing their gardens with brushwood in preparation for winter vegetables.
	Indicators	Wearing jerseys, but of an inferior quality to rich households.		Most children going to school, wearing uniforms, but not going to boarding school, and carrying books in plastic bags, not "book cases."	Medium to high yields.
Poor Households	Activities	No remittances received; Working for richer households, having little time to work for their own income eg. gardens; Pounding sorghum and millet for other households; Catching and eating or selling mice; Beer brewing in small amounts (due to lack of inputs); Cutting and selling thatching grass; Eating or selling shomwe and dovi reshomwe.	Digging fields with hoes; Adding organic fertilisers (but not cattle manure) to fields; Selling weeding labour in order to buy crop seeds and food; Eating or selling roasted hwakwa from makwakwa.	Selling labour for weeding; Weeding their own fields for a few days only; Brewing and selling wine (mukumbi) from mapfura; Doing other small activities to make money to buy food.	Harvesting for richer households, being paid in money, old crops or clothes; Being sent to local white farms to collect cattle for other households; Repairing fencing for other households; Hunting and fishing, exchanging produce for maize and sorghum; Moulding bricks for other households; Selling roofing poles (nhungo).
	Indicators	Not wearing warm clothes; Collecting a lot of firewood in order to keep warm at night, as they don't have blankets.	Unable to work full time on own fields due to the need to sell labour.	Many children not going to school; Food stress common from this period to the harvest: the poor may have to beg food from other households.	Low yields due to inability to work intensively in fields earlier in the season.

Source: *Four women from Shindi and Mutatvikwa villages in Cavendish 1999*

Correlates of severe poverty.

The analysis below investigates the distribution of agricultural assets, and human and social capital, with particular emphasis on the very poor. So far we have looked at the degree of association between incomes and a number of assets separately. Further work on the dataset will examine the degree to which severe poverty is associated with assetlessness (the absence of assets) across a number of assets and capitals. This will enable a delineation of households who are 'intensely' severely poor (World Bank, 2001: 22). It is most likely that these households will be chronically *and* severely poor. This hypothesis will then be tested through the further work by the Chronic Poverty Research Centre.

Assets.

Critical assets correlated with higher incomes were oxen, scotch carts and wheel-barrows. Overall, household and agricultural assets were very unequally distributed with only poultry being very widely distributed among the principle agricultural assets.

Oxen provide crucial draught power in the study area, and their lack caused a binding constraint in agricultural production which could result in households failing to cultivate any land that they controlled. Households who owned oxen were more likely to have been successful in agriculture and to have bounced back from the 1991-92 drought. In 1998 an astonishing 59% of households did not have any oxen and less than a third of households had a viable ploughing unit of two or more oxen. Almost no-one owned mechanised ploughs. Livestock ownership differed by income group with less than a third of households in the poorest income group owning any oxen, compared to nearly half of the richest. Only one in five of the poorest households had a viable ploughing unit.

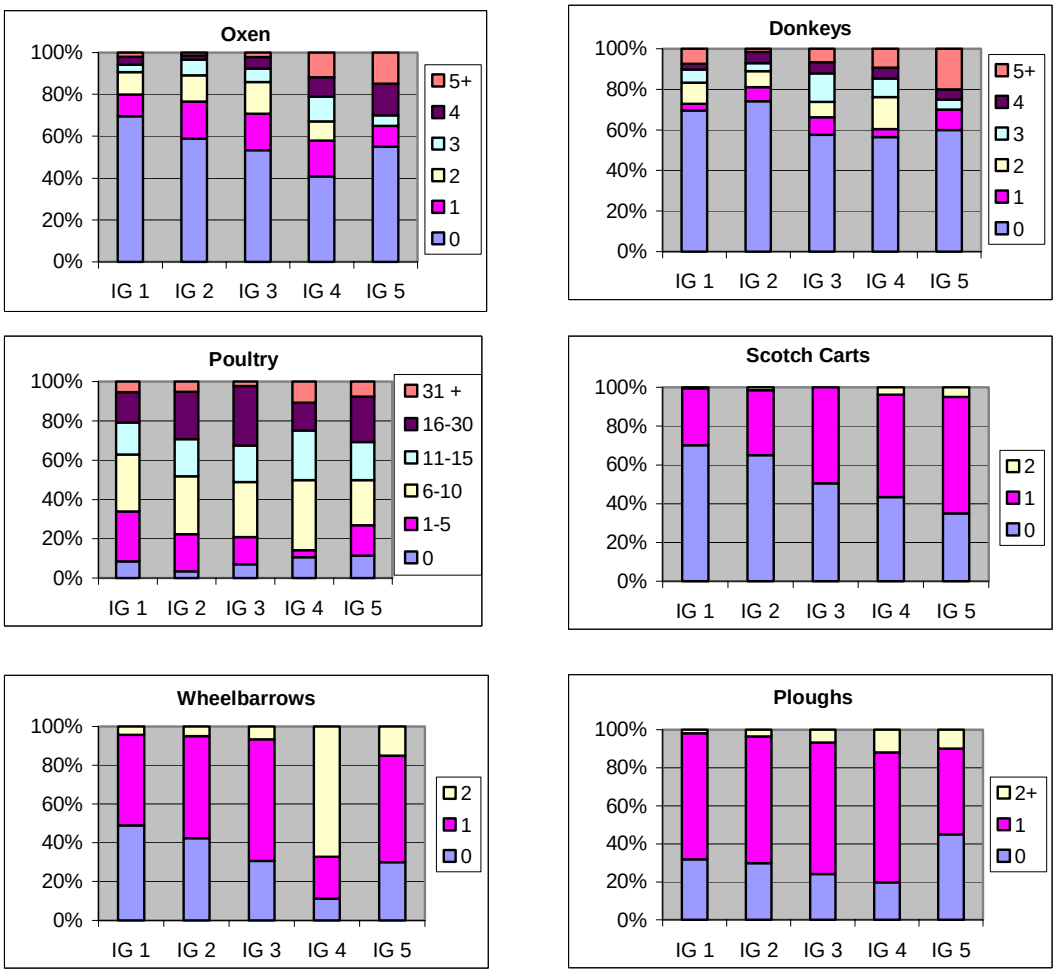
Poultry are important for subsistence and accumulation as they form the first step on the ladder of livestock ownership for the poorest families. Poultry ownership was widespread, in the study areas in 1998, with only 8% of households having no poultry at all. Ownership and flock size were not associated with level of income.

Scotch cart[39] ownership was clearly associated with income group. Over 60% of households in IG 1 and 2 did not own a scotch cart, compared with less than 40% of IG 4 and 5 (some of whom owned two). Scotch carts are key to accessing raw materials and markets, and individuals without one may have to walk long distances with headloads or carry small volumes of inputs and produce in a wheelbarrow, if they own one. So access to markets and servcies were easier for the non-poor.

Large numbers of households did not own their own plough (IG 1, 32%; IG 2, 30%; IG 3, 24%; IG 4, 20% and IG 5, 45%). As almost all households were involved in agriculture (although IG 5 households tended to have diversified, making agriculture less important), those without ploughs had to borrow or hire one (and possibly also draught animals and labour) from their neighbours, or cultivate solely by hoe, limiting the returns to land and labour.

[39] Scotch carts are made of either metal or wood, with two small rubber tyres, and are designed to be pulled behind a donkey or ox. Farm households use the carts to fetch and carry both inputs and outputs from farm and non-farm enterprises (e.g. carrying household and non-household labour from place to place; transporting ant hill soil, firewood and raw materials for artisan and craft activities; taking maize and other outputs to market etc.).

Figure 13: Key agricultural assets, by income group (1998)



Further analysis of the dataset will indicate the proportion of households in IG 1 and 2 have none of any of the above, except perhaps poultry.

Poor Markets.

There was a widespread retreat into subsistence between 1993 and 1998. However, while some were retreating, a quarter or so were experiencing good prices, more outlets and selling more varied products. Within agriculture, changes in cropping patterns seemed to be driven by profitability considerations and price responsiveness, despite the subsistence orientation of many.

Markets were not sufficiently organised or attractive to engage poor people, except in Matopo. Elsewhere barter dominated as a form of exchange, and poor households made few transactions through the monetised market. The only widespread exception was the purchase of maize seed. The prevalence of barter meant that transaction costs were high[40]

[40] If paid in maize the individual would have to search for someone willing and able to barter a chicken or a cooking pot for maize, or they would have to find someone with cash willing to buy the maize – possibly at seasonally depressed prices.

and households were cash poor, making the payment of cash bills (e.g. school fees) extremely difficult for many households. Mothers wanting to pay their children's school fees[41] would seek (loathed) casual work, but this was often also paid for in kind. The limited cash economy meant that individuals had to go to considerable lengths to generate cash surpluses for contingencies or investment (see Box 3, below).

Box 3: Women Earning Cash.

Esther, a young married woman with children in Chivi, has access to cash which she combines with her labour and enterprise to generate a high cash return. She is a very energetic young woman, and uses her physical strength and social networks to help her to more than double her money.

With her seed capital she travels to the nearest trading centre to buy soap, which she brings back to her village and rushes around bartering for maize, which she uses to make beer. Due to poor access to water, this is a heavy task. She sells the beer locally to neighbours and friends and with the value-added income buys more soap or other items that she knows her neighbours are short of. She gains as much as a 500% mark-up on the items she barters, and a further 200% on the sale of beer.

This illustrates the lengths to which young mothers are prepared to go to generate cash to fund their children's education.

Source: Gap-filling fieldwork, July 2000.

Livelihood strategies: analysis of sources of income.

Figures 14 and 15 show the mean levels of grand total household income achieved by households in different income groups from various sources – wages, remittances, non-farm income, livestock sales, crop sales and retained output. These figures were calculated for those households who had incomes from those sources (i.e. excluding those who did not). The numbers in each group with incomes from the different sources are shown in Figure 16.

The very poor (IG 1 and 2) typically had income from remittances, non-farm, crop sales and retained output. Few of them had income from livestock sales or wages. Those who did had relatively small incomes from wages. Retained output, non-farm and remittances provided the very poor with the largest amounts of income. Crop sales were less important.

[41] Mothers rather than fathers were commonly responsible for these payments.

Figure 14: Mean wages of wage earners by income group (Z$/year; 1998)

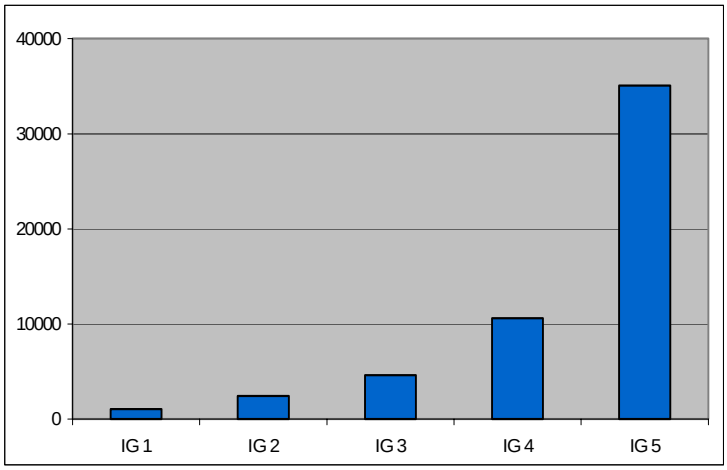
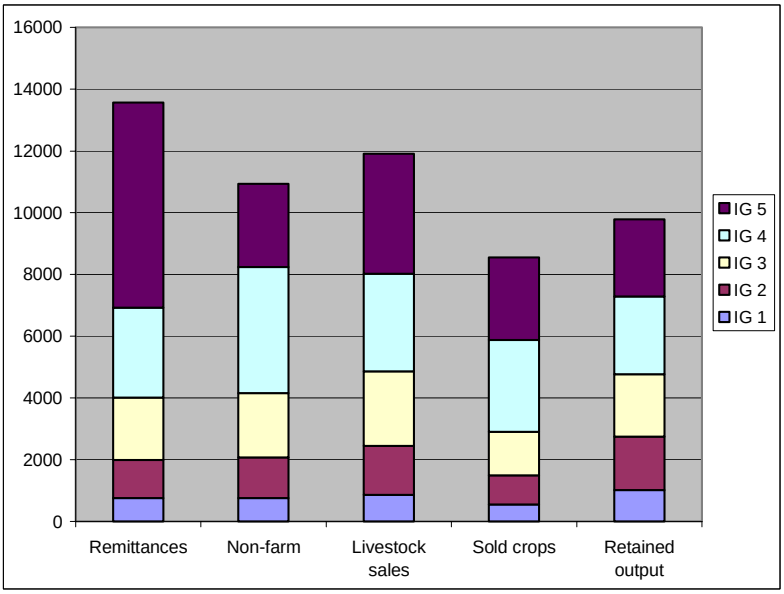


Figure 15: Mean incomes by source of income and income group (Z$/year; 1998)



Livelihood strategies: analysis by 'livelihood portfolios'.

The survey permitted another approach to analysing livelihood strategies. It enabled the identification of the three most important occupations of each household. These were then clustered into a number of common livelihood portfolios: exclusively natural resource based (any of: farming, gardening, poultry); exclusively non-farm based (artisan, services, construction etc); mixed (farm and non-farm); wage based; and casual labour and/or remittance based.

A large proportion of the poorest households claimed to have no income earning occupations in 1998. This occupational cluster ('None') is smaller, but still present, in the higher income groups. While most of these households (two-thirds) did have sources of income, they clearly

either perceived themselves to be unemployed or were not willing to discuss their livelihoods with outsiders. The distribution of livelihood portfolios by income group is shown in Figure 17.

Figure 16: Sources of income by income group (number of households)

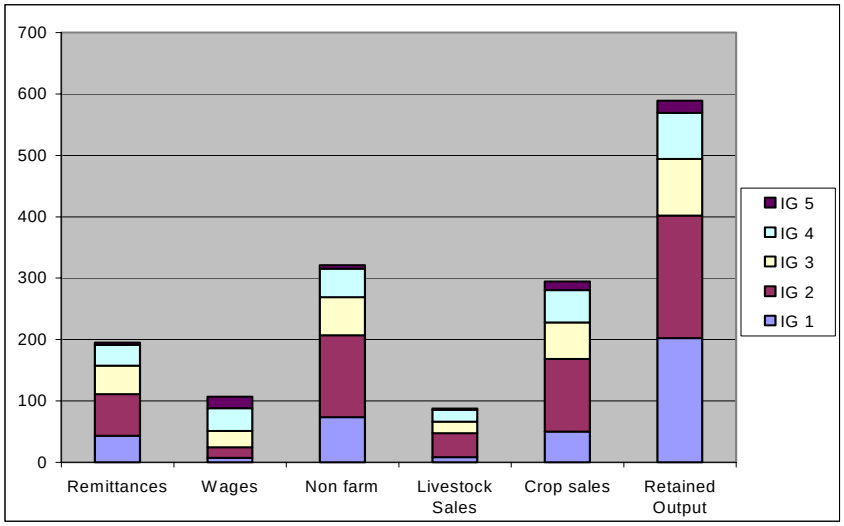
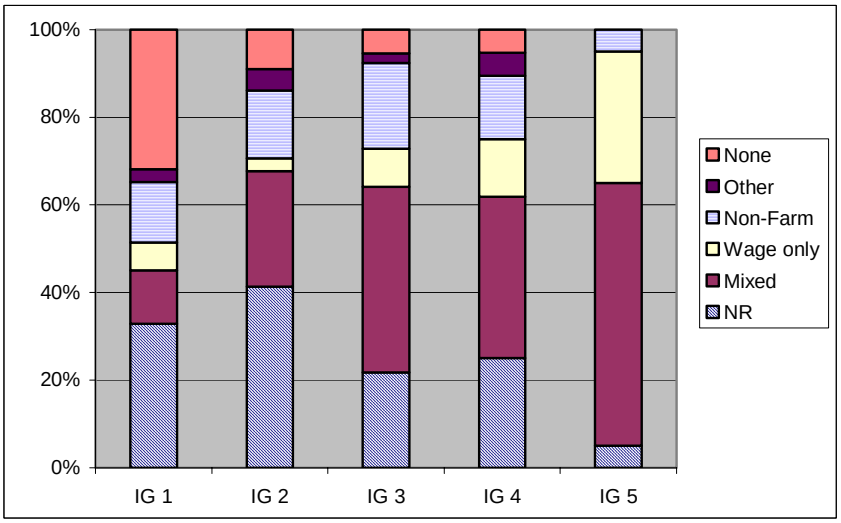


Figure 17: Proportion of households involved in livelihood activities by income group (1998)



As noted above, poor households were much more likely to be solely engaged in farming or in a mix of NR-based enterprises, or in activities with low social status (casual labour), a high degree of drudgery (beer brewing, construction) or with low entry barriers and returns to labour ('services'). The numbers of households in each 'livelihood portfolio' is shown in Table 11. Average per capita income for each livelihood portfolios is given in Table 12.

Non-farm income, wage income and remittances were all significant sources for a significant proportion of households. Higher income households typically received more wage and remittance income, while lower income households were more dependent on retained agricultural output and were generally less likely to be strongly engaged in markets, with the exception of those in Matopo where markets worked better.

Table 11: Numbers of households involved in livelihood activities, by IG (1998).

	IG 1	IG 2	IG 3	IG 4	IG 5	Totals
Farm	42	37	9	7	1	96
Garden	6	9	1	3	0	19
Farm + Poultry	4	4	2	4	0	14
Farm + Garden	13	25	7	1	0	46
Farm + Garden + Poultry	2	8	1	4	0	15
NR/Agric	**67**	**83**	**20**	**19**	**1**	**190**
Agric + Remittances	0	7	6	4	0	17
Agric + Construction	3	14	8	4	0	29
Agric + Trade	2	6	6	4	0	18
Wage + Agric	4	11	14	16	12	57
Casual + Agric	3	10	2	0	0	15
Agric + Services	13	5	3	0	0	21
Mixed (NR & Non-NR)	**25**	**53**	**39**	**28**	**12**	**157**
Wage only	**13**	**6**	**8**	**10**	**6**	**43**
Construction + Trade	0	2	5	1	1	9
Construction	13	8	3	2	0	26
Wage + Trade	0	0	2	2	0	4
Beer Brewing +[42]	8	8	3	0	0	19
Knitting +[43]	5	8	4	4	0	21
Trading	2	5	1	2	0	10
Non-Farm	**28**	**31**	**18**	**11**	**1**	**89**
Remittances	1	3	2	1	0	7
Casual Labour	4	6	0	1	0	11
Remittances + Casual	1	1	0	2	0	4
Other	**6**	**10**	**2**	**4**	**0**	**22**
None	**65**	**18**	**5**	**4**	**0**	**92**
Total	**204**	**201**	**92**	**76**	**20**	**593**

[42] Beer brewing + indicates that the household livelihood was largely composed of beer brewing with some subsidiary activities

[43] Knitting + indicates that the household livelihood was largely composed of knitting with some subsidiary activities

Table 12: Mean incomes by livelihood portfolio and income group

	IG 1	IG 2	IG 3	IG 4	IG 5	Means
Farm	267	768	1509	2676	5173	803
Garden	222	850	1322	2701	0	969
Farm + Poultry	425	915	156	2486	0	1316
Farm + Garden	293	707	1471	2837	0	753
Farm + Garden + Poultry	274	773	1360	2970	0	1332
NR/Agric	**296**	**803**	**1164**	**2734**	**5173**	**1035**
Agric + Remittances	0	777	1391	2739	0	1456
Agric + Construction	292	807	1497	2252	0	1143
Agric + Trade	274	792	1555	4094	0	1722
Wage + Agric	370	898	1459	3019	8327	3158
Casual + Agric	457	694	1257	0	0	722
Agric + Services	262	1008	1531	0	0	621
Mixed (NR & Non-NR)	**331**	**829**	**1448**	**3026**	**8327**	**1470**
Wage only	**268**	**790**	**1556**	**2950**	**9613**	**2508**
Construction + Trade	0	763	1431	2890	7330	2100
Construction	267	805	1295	2261	0	705
Wage + Trade	0	0	1598	2518	0	2058
Beer Brewing +	347	863	1355	0	0	724
Knitting +	253	771	1527	2600	0	1140
Trading	334	684	1233	2209	0	974
Non-Farm	**300**	**777**	**1407**	**2496**	**7330**	**1284**
Remittances	296	799	1375	3003	0	1207
Casual Labour	393	814	0	2676	0	830
Remittances + Casual	493	1077	0	2766	0	1776
Other	**394**	**897**	**1375**	**2815**	**0**	**1271**
None	**223**	**754**	**1393**	**2507**	**0**	**490**
Total	**269**	**784**	**1464**	**2818**	**8505**	**1234**

For the portfolios where significant numbers of severely poor households were concentrated, the following general comment can be made: there was a considerable range of incomes derivable from most livelihood portfolios, suggesting that no particular livelihood strategies were any better than any others. However, Table 11 above tells us that only some of these portfolios were commonly accessible to poor households. Of these, the only clearly promising routes out of extreme poverty were: adding enterprises to a farm, or diversifying into non-farm or wage employment. Adding a poultry or garden enterprise to a farm can make a big difference for the poorest households. This was especially the case for women-

headed households, who as we saw above actually had higher incomes than male-headed households in some sub-sectors (see *Sex of Household Head*, above).

Diversifying into non-farm income sources or wage earning was the second promising strategy. However, the severely poor found difficulty diversifying into higher return, lower drudgery non-farm enterprises due to skills and capital shortages, and into better paying wage work for the same reason, and because they did not have the social capital – in this case relatives in town to broker entry to the labour market. Their prospects under existing circumstances were clearly limited. The level of constraint they faced was probably not amenable to technologically researchable solutions, but rather required a more radical approach.

Household size was found negatively correlated with poverty (see above). The only livelihood portfolios in which large (mostly poor) households had an income advantage were: farming and poultry, construction, agriculture and trade. Of these only construction included a significant percentage of the severely poor. This rather reinforces the general picture that the prospects for poor, large households to diversify were limited.

6. Changes in Well-Being?

The dataset allowed us to explore limited dimensions of livelihood and well-being change between 1993 and 1998 (see *Methods*, above). It contains five sets of change indicators:

- Whether respondent is better or worse off (two questions).[44]
- Income change data for 58 households (all from Matopo).
- Changes in a number of food security-related variables (several questions). However, it is unclear as to whether answers were for the respondent's household or for the community as a whole. This paper assumes that respondents answered primarily on the experiences of their household, but this will need to be verified by any follow-on study).
- Changes in the organization and productivity of household farming (several questions).

These are all based on respondents comparing the situation in 1998 with that of 1993, either qualitatively or quantitatively. Since 1993 was soon after the worst effects of the 1991 drought, it can be assumed that most households had reached a low point on most indicators around this time. *Change is thus perceived and measured from a low base*. Matopo was the only district where the dataset allowed a comparison of income in 1993 and 1998, and that only for about half the households.

During the 1990s, the majority experienced a decline in wellbeing within a context of persistent poverty and vulnerability. The research produced powerful indicators of decline in perceived wellbeing, standard of living, income and even some natural resources. The severely poor were those most likely to be stuck in poverty, but a substantial proportion of respondents (59%) reported their households as worse off on both of the two general questions relating to perceptions of wellbeing or standard of living. This could be compared to only 9% who saw their households as better off. Others saw no change **or** reported inconsistently. The general perception of decline was confirmed by the responses to the detailed food-security related questions (Figures 18 and 19). Perceived decline was widespread, and across the income groups.

There was a positive and statistically significant relationship between perception of change in household food security and income group. A particularly large proportion of IG 1 and 2 households reported a decline in food security, while the non-poor were only somewhat more likely to report improvement or no change.

While most of the indicators in Figure 19 speak for themselves, the category of livestock sales is ambiguous. Livestock were generally sold 'when there is a need'. This was largely to raise money for school fees (except for the non-poor, who pay fees from other sources) or for food, but also to buy farm implements. Almost half the population reported selling livestock less often than 5 years earlier. Given the predominantly need-based reasons for sales, this could be interpreted as a sign of recovery. However, around a quarter of the lower income groups (1 and 2) were selling *more* frequently, suggesting that these households were having difficulty accumulating stock because they needed to finance current consumption from savings.

There were however striking differences between Matopo and the other districts.

[44] There is a reasonable degree of correspondence between the responses to these two questions. One was asked at the very end of the interview together with other questions about the Economic Structural Adjustment Programme.

Figure 18: Perceived change in food security by income group (1993-1998)

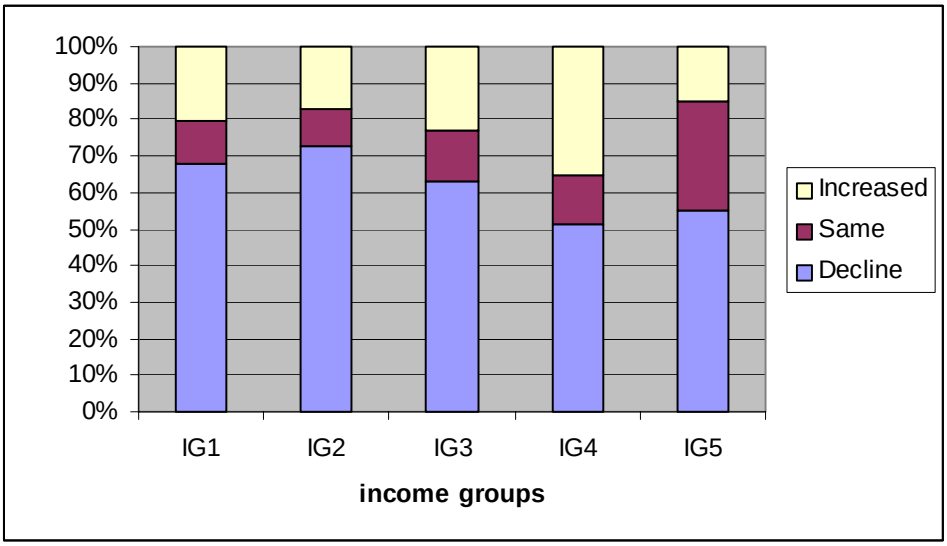
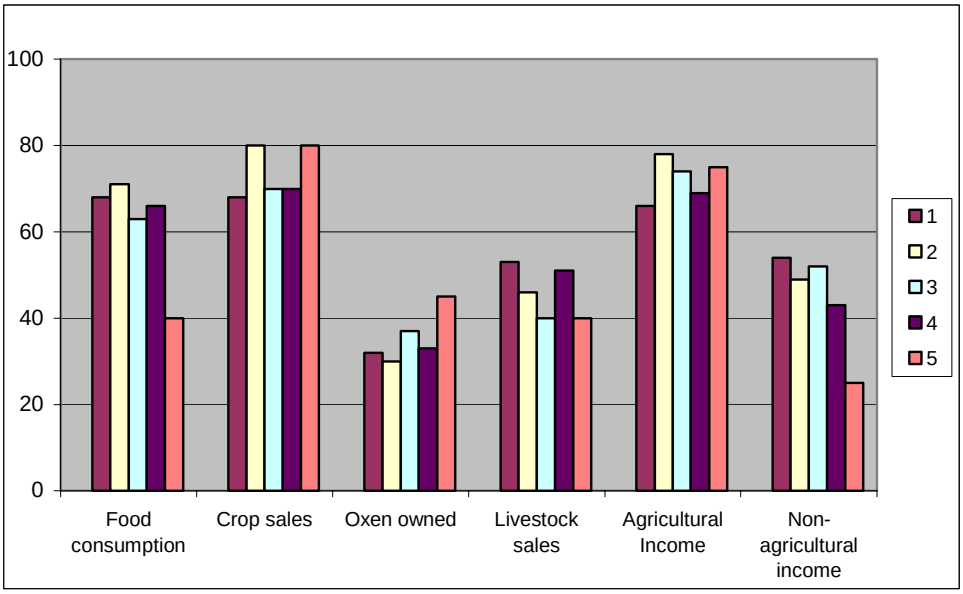


Figure 19: Percentage of households reporting decline in recovery indicators, by income group (1993-1998)



Consumption.

The data provided by the survey is limited to whether consumption of a particular good or service improved, declined or remained the same between 1993 and 1998. Unfortunately there is no indication how *much* consumption levels changed, or from what base. Despite 1993 having been an immediate post-drought period, consumption of food, health services, transport, clothing, had generally declined across the population by 1998.

There was a strong negative association between income and declining consumption of clothes and transport – poorer households reduced their consumption more significantly. However, consumption of health services declined least – suggesting people's dependence on health services in adversity, and the priority given to health expenditure. Over half the population reported consumption of health services remaining the same. A consequence of the commonly reported and multi-dimensional decline in living standards of the very poor was that many IG 1 and 2 respondents reported *increased* expenditure on health – about one-third compared to 15-25% of IG 3-5 - and *decreased* food consumption.

Casual labourers and households dependent on remittances (including a large proportion of women-headed households) were most likely to reduce consumption of health services – this suggests that among the poor this group was the most critically vulnerable. They were more likely to report worsened food security, and least likely to report an improvement.

Education by contrast showed a mixed picture: Although education was widely perceived in rural Zimbabwe as a high priority, one-fifth of respondents reported increasing education consumption, more among the non-poor; while almost half reported reducing it, more of the latter among the poor.

Livelihood portfolios in decline.

The livelihood portfolios which consistently reported decline between 1993 and 1998 across a number of indicators were those dependent on NR-based activities, and those dependent on casual labour and/or remittances. Many of the latter were women-headed households. Both groups of households were most likely to report decline in terms of food security, household food consumption, agricultural income, crop sales, remittances, and consumption of health services. Remittances declined most often for IG 1-2 (and increased most often for the non-poor).

Index of 'recovery'.

Decline was the overwhelming theme running through the data from both the ITDG 1998 dataset and the findings from the fieldwork in Chivi in 2000. This was taken as a reflection of the extent to which households had not only failed to recover from the 1991-92 drought conditions but had also suffered from declines in well-being in the post-drought period. However, this may be a slightly false interpretation, since, although the 1991-92 drought was significantly worse than those of preceding and succeeding years, there were other bad droughts (e.g. 1982-83) and the predominant feature of the climate in the study areas is the overall frequency of drought years. Thus it may be more appropriate to talk about change in a highly drought prone context rather than recovery from a specific event. Nevertheless the results generated by the 'recovery index' below is an attempt to capture the extent of perceived decline within the sample (see *Methods* for a description of the formulation of the index).

The minimum possible score for the index was –8 (bad decline) and the maximum +8 (positive improvement). The mean for households in the 'change' sub-sample of the dataset was –3.98, and the median –5. Only 14.1% of all scores were positive values, and 40% of all households scored –6 or less. Findings suggest that less than one-fifth of the sample 'recovered'[45] during the period of study. Almost half the households in Matopo had a positive score (despite being poorer) while only 5% in Gutu and Chivi recovered. Only IG 4 had a

[45] Measured by a positive score on the index. See text above for how the calculation was made.

substantial proportion (37%) of households scoring positively. Conversely, higher proportions (half or more) of income groups 1, 2 and 3 had very highly negative scores (-5 to –8).

Analysis of the recovery index showed that strong failure to recover was associated with:

- zero education of the household head;
- low income (among the poor, IG 3 had significantly fewer negative scores than IG 1 and 2); and
- woman household-headship.

In terms of recovery, women-headed households were less likely to have positive scores (9%, compared to 20% for male-headed) and more likely to have highly negative scores (74%, compared to 60%). This gender difference was confirmed by the results for changes in standard of living, suggesting that women-headed households (one quarter of the sample) had experienced *significantly* less recovery than male-headed households. Women-headed households had to borrow more frequently: over one quarter reported borrowing more livestock, twice the proportion among men-headed households.

Exit routes: critical assets and livelihood strategies.

In terms of perception of being better off, the livelihood portfolios with the best record were:

- Agriculture and trade (mostly IG 3-5): 56% reported being better off.
- Farming + Poultry + Gardening: 38% reported being better off.
- Beer brewing: 29% reported being better off.
- Farming; gardening; wage only; wage and agriculture; trading: over one fifth with each of these livelihood portfolios reported being better off.

Overall, however, it is worth remembering that three *quarters* of the entire sample felt worse off.

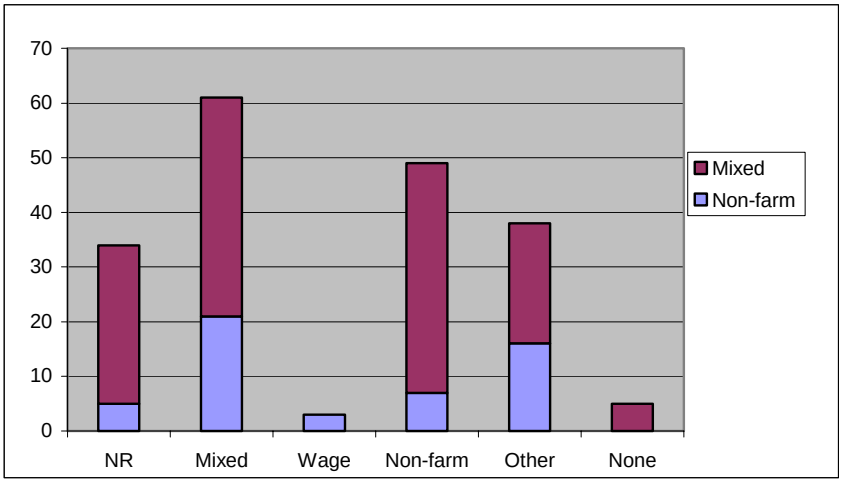
In terms of generating recovery, the best livelihood portfolios were: waged, mixed (farm/NR and non-farm), and non-farm. Overall there was a substantial movement into mixed and non-farm livelihoods. Figure 20 shows the numbers of households moving into these portfolios from their 1993 starting point.

For the poorest (IG 1 and 2), who were very dependent on self-provisioning agriculture, the best strategies were:

- Adding a poultry ‘enterprise’ to the farm;
- Combining wage employment with farming; and
- Combining a ‘service enterprise’ with farming (but this was rarely open to the poorest - IG 1).

For the slightly better-off (IG 3 and 4), getting into trade was a very useful adjunct to agriculture.

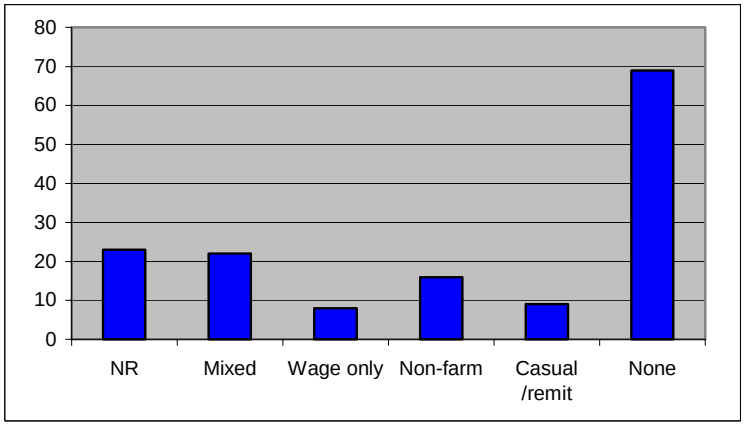
Figure 20: Number of households shifting into non-farm and mixed livelihoods, by 1993 livelihood portfolio



This shift was assisted by education. Only 4% of household heads in the 'mixed', 2% in the wage, and 8% in the non-farm livelihood categories had no education, compared to 11% for NR based livelihoods and 40% in the casual wage/remittance category. 21 and 22% of the non-farm and mixed categories had secondary education, compared to 9% for NR-based and casual/remittances. Recovering households were better educated, but education was no guarantee. 75 out of the 84 households with heads educated to secondary level did not produce positive scores.

There were however also a few signs of recovery among those who were really struggling in 1993. The single most striking change in livelihood portfolios is the reduction in households with casual labour or remittances as their main source of income. There were 147 households in this category in 1993 and only 13 in 1998. These households had moved to a variety of livelihoods – predominantly natural resource based, and mixed farm and non-farm, and even some to non-farm and wage employment. This reflects how uncomfortable this category was. Even women-headed households managed to escape the trap of depending solely on casual labour or remittances for cash income. However, they found entry into non-farm based livelihoods more difficult than male-headed households.

Figure 21: Of those reliant on casual labour and remittances in 1993, number of households in each livelihood activity in 1998



The category 'none' requires further comment in this context. Of the 92 households giving 'none' as their source of income, 91 in fact had retained agricultural output, and all had some non-farm income, though none had wage income. They perceived themselves to have no income earning activities, however, suggesting that they would at least be poor. However, there was only limited concentration of those with 'no' source of income in IG 1 and 2.

7. Policy and research implications

The data analysis presented above leads to some fairly dramatic conclusions, the policy implications of which are far reaching. . The combination of the natural, physical and institutional disadvantages characterising semi-arid districts combined with the fact that a large proportion of their population has been severely and persistently poor is enough to suggest that poverty in these districts will not be substantially reduced under existing policy regime. It is highly unlikely that even a significant and sustained economic growth rate will do much at least for the severely poor – 70% of the population – since they do not have the asset base to take advantage of any opportunities that might be presented. The asset base of these households needs strengthening greatly. The major assets in people's possession are land and labour. Land was being left uncultivated because of deficits in terms of physical (oxen, in particular), financial (cash) or social capital to access labour (See Box 4, below).

Box 4: Increased fallow land.

Of the 44% of households with fallow land, the majority across income groups 1-4 reported *increases in land left fallow*. This is a critical indicator, given the relative ease of entry to agriculture and its importance in terms of food security, as well as its contribution to overall income. Reasons given for leaving land fallow were mainly to do with an inability to cultivate. In order of importance, respondents claimed: insufficient draught power (assets were not owned or could not be borrowed), insufficient money to purchase inputs, poor quality land and a lack of labour. Although plough ownership was widespread, many households, especially in IGs 1 and 2 did not have the required oxen and ploughs and had to borrow. Increases in borrowing oxen were especially marked among women-headed households (25% reported increases), the poor (18%) and in Chivi (22%). This strategy clearly did not entirely solve the problem, and cultivable land was left fallow. *Insufficient draught power stands out as a very substantial constraint.*

Insufficient labour was a strong reason for leaving land fallow in Gutu – indicating a lower level of labour market development there, and also the significantly smaller size of households. The smaller households in the lower income groups did not have adequate labour and did not own, or have access to, the working capital or food or beer supplies required to hire, or to the social capital to borrow labour. Less than one fifth of households mentioned agricultural reasons for fallowing, suggesting that systematic fallowing for fertility restoration is not widely practiced[46].

We can nevertheless conclude that the 'coping strategies' accessible to poor households in particular were not adequate to make use of their major available resource (land).

Key improvements to realise the potential existing assets lie in the fields of:

- Human capital: education is a key exit route to non-poverty wages, but also to greater cash earnings from agriculture, and diversification into the non-farm sector.
- Social capital: labourers are unable to participate strongly in the reciprocal labour exchange activities which built up trust and a sense of obligation because they cannot afford to miss potential days worked, and because they don't have the physical assets (e.g. goats) or non-farm activities (e.g. beer brewing) to exchange for labour themselves.

[46] The questionnaire posed a limited range of questions about fallowing. It is possible that the agricultural reasons were not adequately explored and are hidden in the large number of respondents reporting 'other' reasons for fallowing.

- Financial capital: enabling hiring of labour and purchase of agricultural inputs.

This is not all. Households currently rely on such assets as they have for their security in lean times, since there is little other protection available. There would need to be a strong regime of social protection in place before people would feel free to use physical assets as investments. This could consist of:

- Free and effective primary and secondary health care, or effective insurance to enable payment for health care.
- Financial markets which permit small scale saving, preferably with an insurance component.
- Public works at critical times of the year to put a floor on rural wages[47].

An evaluation of the grain loan scheme[48] would be useful (see our analysis of disbursements and repayments above, under *Delivery of Government Services: Social Protection*). It is clear that its effectiveness could be improved, in theory at least, although there may be serious administrative and political constraints to improvement.

Regional policy and governance.

Is there a justification for special policy and programme measures for semi-arid (or remote semi-arid) regions? Such policies have been widely criticised for their distortionary effects and poor quality implementation. The latter may often be due to poor quality of governance in remote or low potential areas. Rather than focus on area based production subsidies the analysis above would suggest that it would be more relevant to give special attention to getting institutions – e.g. markets and governments – to operate better and help provide better quality social protection, social service and business advisory programmes.

Education policy.

There are clearly barriers to poor children attending and staying in school. Few (less than 20%) of the very poor heads of household had schooling beyond primary. More than 60% had not completed primary. The situation was worse for women heads of household. Further work on the dataset is required to analyse the situation of household members, to see the impact of the dramatic expansion of educational facilities in the 1980s.

It is unlikely that any barriers to education are to do with inadequate provision, more likely with the quality of education combined with household level constraints and attitudes. However, there could also be inadequate provision due to regional biases in investment, geographical remoteness and shortfalls in recurrent funding. Further research is necessary to investigate this in detail. Where fees are charged, the possibility of exemption on the grounds of poverty, or even the introduction of 'universal primary education' (free for all at the point of delivery) needs to be investigated. Ultimately, post-primary education is the real key to the removal of poverty and will have to be made free if policy makers are serious about poverty reduction.

Given the significant number of women-headed households, and the poverty trap partly created by their low levels of education, it would seem critical to emphasise adolescent girls as a special target group for education and other targeted interventions.

[47] Scoones reports that during the 1991-92 drought 80% of households in Chivi were involved in FFW programmes (Scoones, et al 1996: 178)

[48] This scheme was implemented during the 1991-92 drought. Unfortunately the authors have been unable to find out whether grain loans are being disbursed during the current food security crisis.

Social protection policy.

This paper has argued that poor households need better social protection if they are to be able to consider investing and taking risks. Although we were not able to quantify the costs of health care for the poor, they were clearly spending more on health care when consumption of other essentials had declined. Free health care, or effective exemptions (these are very rare in poor countries) would seem to be a must. It has been widely recognised that cost recovery for basic services has damaged access by the poor in SSA: this study simply lends support to that argument.

Financial Intermediation.

Savings institutions accessible to rural people, including the poor, would probably require financial sector reform deliberately constructed to permit this kind of institutional development. A sensitive and efficient approach to public employment schemes are those which help very poor households to 'graduate' into self-employment supported by savings and credit institutions. The government has had experience of food for work programmes, and could re-examine the options.

Agricultural Extension Policy.

Since poor households focus to a large degree on production for home consumption, this needs to be taken into account when designing agricultural research and extension programmes. A greater degree of priority needs to be given to the following in semi-arid districts:

- Low cash and labour input regimes – low external input sustainable agriculture, affordable mechanisation.
- Gardening (horticulture) both for consumption and sale, including water conservation and irrigation.
- Assistance on identifying (demand-led) possibilities for diversification.
- A focus on the possibilities for vertical integration, if necessary supported by public-private partnerships

Land redistribution.

Land reform has been an increasingly contentious issue in Zimbabwe over the last 5 years, and it is difficult to discuss the need for reform without reference to the current political and economic crisis. However, without getting deeply mired in the subject, suffice it to say that there are undoubtedly opportunities for land redistribution which would benefit poor households from semi-arid areas by allocating them better quality land than they have at present. However, this study shows that land *per se* is not the overwhelming constraint for many poor households: the means to cultivate are equally important, and need to be considered in any land redistribution process.[49]

[49] As they have been in the past in Zimbabwe with generally good results.

Sequencing.

When should government and development agencies give serious attention to the problems of semi-arid communal areas? The undeveloped nature of markets suggests that priority should be given to measures to support economic growth in general, such as financial sector reform, which would then have positive spin off effects in semi-arid areas. This is an old debate: the advantages and disadvantages of investments in high versus low potential areas. Should the extra resources required to get markets and government working well in low potential areas be made available now or when there is a better process of economic growth in place? These are legitimate and difficult questions, the answers to which depend partly on an analysis of political feasibility. From a technical point of view, there are issues which can be taken up immediately. For example, with the good outreach among poor households already achieved by Agritex (Zimbabwe's agricultural extension service) it would be relatively easy to redesign its extension package to suit their circumstances better.

Political feasibility.

The political feasibility of pro-poor policy changes and innovations in remote rural areas in Zimbabwe was limited during the 1990s (Dashwood, 1996; 1999). The political élite had embraced a capitalist ideology that placed faith in the market and was less concerned about welfare issues and social justice than it had been during the early 1980s. During this period, political, business and agrarian elites were united behind the need for the economic reforms advocated by the IFIs (International Financial Institutions). However, the decomposition of the élite into its constituent parts in the last five years, and the development of competitive party politics offers new opportunities in the medium term for the representation of the interests of the poor in public policy. While at the time of writing the immediate future seems bleak, it is possible that inter-party political competition combined with the new anti-poverty orientation of international development agencies will eventually again raise issues of distributive justice closer to the top of the policy agenda in Zimbabwe.

8. The Outstanding Research Agenda.

In this section we present a long list of researchable issues, which is then narrowed to a short list using the following criteria:

a) Researchability in today's Zimbabwe
b) Likely dissemination and use of results
c) Degree of impact on the poor and very poor

1. How to extend critical secondary **markets** (e.g. savings and insurance) which could enable commodity and labour markets to function better?

2. **Sub-sectoral analysis** to see what can be done to stimulate labour-intensive growth locally and nationally.
   - What existing and new opportunities could be available to people with different levels of education?

3. Scope to extend **vertical integration** to low risk crops (e.g. sorghum-*chibuku* breweries) or stock (e.g. poultry)?

4. What can be done to enhance the **returns to women's labour**?
   - Better access to farmers' groups (women are currently unable to access these except through their husbands, so women-headed households are excluded).

5. Why is the current level of development of the **poultry market** so low?

6. How can the role of **rural growth centres and small towns** be enhanced to maximise the impact on rural markets?

7. What are the **key transport constraints** which make rural Zimbabwe increasingly a head-load economy?

8. Has **HIV/AIDS** exacerbated the decline in well-being experienced by the majority of the sample between 1993 and 1998? Coping strategies of household reformation would have had beneficial effects on livelihoods and well-being if they resulted in greater resources of adult labour.

9. What are the constraints in the way of a more dynamic supply of cash wage **labour opportunities** in semi-arid communal areas?

Table 13: Evaluation of potential further research questions.

Criteria	*Researchability*	*Dissemination potential within Zimbabwe*	*Potential impact on the poor*
Extension of financial services markets	High	Medium	High
Sub-sectoral analysis	High	High	Low-medium
Vertical integration	High	High	High
Returns to women's labour	Medium	Low	High
Poultry	High	Medium	High
Rural growth centres and small towns	High	Medium	Medium
Key transport constraints	High	Low	High
HIV/AIDS	Low	Low	High
Labour market	Medium	Low	Very high

Based on this analysis, the researchers' proposal is twofold:

1. Market improvement

A research project focusing on the reduction of risk for poor households in semi-arid areas through the improvement of markets including vertical integration, the extension of financial services to enterprise and households, the opening up of the labour market, and understanding the constraints in the poultry (and vegetable/fruit) markets.

2. Social protection

A wider policy research project focusing on the extent to which a stronger approach to drought-related safety nets and social protection could be developed in Zimbabwe, in order to underwrite rural livelihoods in a fragile, AIDS-affected and highly unequal economy.

Either or both of these research projects would ideally be accompanied at the least by a resurvey of the same households in 2003, to track their progress 6 years from the original survey. This would be a tremendous opportunity to track the impact of change, in particular of HIV/AIDS, in Zimbabwe on this population of largely poor and very households.

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