AGRICULTURAL COMMERCIALIZATION, RURAL ECONOMY AND HOUSEHOLD LIVELIHOODS, 1990-1997

Final Report

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I Introduction

This report is the most recent in a series documenting the processes of agricultural commercialization, income strategies and food security among smallholder families in the Zomba district of Southern Malawi. The families were first studied during 1986/7, then again in 1990/1. Shorter visits were made from 1993 through to 1996, when some comparative study was also conducted in the Ulongwe area in Machinga district. A final full year's study of the Zomba sample was conducted during calendar 1997. The past decade has been a period of wide-ranging changes in economic and political life in Malawi but the study of villagers in southern Malawi reveals both considerable change and the continued centrality of tested and true strategies of livelihood. The most dramatic national changes include the decision made by Dr Banda's government, under pressure from donors, to allow smallholder farmers to grow burley. Hence, in 1990, a pilot project enabling farmers to grow burley legally was initiated in several areas of the country, including the Zomba sample area. Since then, the project has become a major national programme, large numbers of burley clubs have been formed which allow farmers to sell on the Auction floors at world prices, a new category of "intermediate" buyers are licensed to purchase burley and to on-sell at the Auction floors, and a large influx of unlicensed, small-scale buyers have entered this new market. The liberalization of the grain and related food markets begun in 1987 is a second source of significant influence on farming families. Thirdly, the profoundly important political changes, from a one-party to a multi-party regime in 1994, have had ramifying effects through rural life. Finally, the repeated droughts and volatile weather patterns during the past decade have deeply affected rural production and income.

The single most striking change in the sample families has been the enormous increase in burley growing from one third of households in 1986 to almost two thirds in 1997. The great attraction of burley is its potentially high earnings. In addition, the reduction in the monopolistic marketing practices (by ADMARC), the consequent proliferation of selling outlets for crops and of buying points for a wide range of goods have had considerable significance for people's livelihoods. But along with these more obvious changes is the clear maintenance of a pattern of diversification that characterises both people's cropping techniques and their income strategies more generally. I shall argue that the driving force behind these two forms of diversification is

the volatility in natural, social and political-economic conditions with which people have to grapple. Since the droughts, policy shifts, and political upheavals of the past decade have increased volatility and uncertainty, the strategy of diversification has probably even increased in importance. However that may be, it is a strategy that will continue to typify most families for some time to come.

This report presents data and a discussion of key changes and continuities observed in the study area between 1986 to 1997. A second, accompanying, report presents an overview of the situation of the sample households during calendar year 1997. Before discussing the key aspects of the past decade in study villages, brief details about the sample villages are given (see Appendix I for more details on the sample and methods, and Appendix II for a sketch of village life).

The study villages occupy an areas in southern Zomba district of approximately fifteen miles east-west and ten miles north-south. The six village clusters are bisected by a reasonably good dirt road which was well maintained under the Rural Roads Programme but which has deteriorated greatly since the mid 1990s. The dirt road links the main Zomba-Blantyre tarmac road to the east with the good dirt road from Zomba to Phalombe in the west. The road is also the site of the three largest trading centres and local markets in the area, as well as two of the three main clinics available to villagers. Because the main purpose of the original research in 1986/7 was to investigate the effects of agricultural commercialization on production, food consumption and nutrition, the sampled households were purposively selected to include smallholder tobacco growers and maize growers, with a range of landholding sizes, and to include households with at least one child six years or younger. This selection resulted in a sample that was better-off than the average for the area. The sample mean land size of 1.5 ha was above the then national average of 1.17 ha and considerably above the average of 0.8 ha reported for the Zomba Project Area just to the north of the research area. Since the sample households were monitored throughout the period, ending in 1997, the sample means remain above average. However, the range of households in the sample is typical for most rural areas in the local area and nationally except for the exclusion of totally landless families. Moreover, the focus of the research and this report is on the dynamics or processes of change, an understanding of which is relevant to the country as a whole.

The research was designed and conducted on the basis of complementary and integrated methods of data collection in order to facilitate interpretation and analysis of the data. While survey methods produce large bodies of quantitative data, often the most convincing among competing interpretations of correlations or their absence cannot be determined from those analytical procedures themselves. Information gathered through ethnographic methods, based on residence and participation in village life, is essential to guide the appropriate interpretation of quantitative data. Conversely, an understanding of such patterns of social relations in work, food consumption or marketing derived from the ethnographic analysis of necessarily non-random sets of individuals and families is narrowly bound by the methods used. Therefore, the research was designed to benefit from multiple methods of data collection and of analysis.

From the first year of research, in 1986/7, our data collection revealed the following key characteristics of the sample village households: One, there is a highly skewed income distribution; second, there is a very high degree of diversification in agricultural production and in income sources; third, the area has high density of population and land that is virtually in permanent use; fourth, the main household types have shifted over time: for example, in 1986/7, a key type was the household headed by women whose husbands were working in South Africa. By 1990, these had disappeared as a type consequent on the Malawi government banning migrant labour as a response to South Africa's strictures concerning AIDS. Subsequently, the political changes in South Africa have effectively removed the opportunity for such migrant jobs. The key types remaining throughout the period are those distinguished by composition, described in terms of "headship" (female-headed de jure, female-headed de facto, and male-headed), tobacco growing vs non-tobacco growing, and land size.

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II Key Changes and Persistent Patterns

The past decade has been one of considerable change but many of the strategies followed by people in gaining their livelihoods continue to prove effective. Hence, we see both changes and persistencies in the strategies, levels and distribution of income among households. The main changes seen in the research area include the spread of burley growing, an influx of traders at harvest times, an increase in the scale and intensity of crop trading among local traders and farmers, and a perceptible growth in trading centres and local markets. Persistent patterns include the diversification of agricultural production and of income strategies, the signal importance of maize production in households at all levels of wealth, and the skewed distribution of income.

1. Household income, 1986-1997

(a) Income levels:

When income levels (proxied on expenditures) are compared over the past decade, specifically at points in 1986/7, 1990/1, and 1997, the sample as a whole has experienced an increase of 59%, although there were much larger gains in the second period than in the first. (See Table 1). Between 1986 and 1990, the sample expenditures dropped overall by 8% whereas between 1990 and 1997, they rose by 72%. The skewed distribution has worsened since 1986/7. The ratio of the richest quartile's average compared with the poorest quartile's has increased from 9:1 in 1990/1 to 11.5 in 1997. This ratio is reduced slightly (to 10.5) with reference to per capita levels because household size tends to increase with wealth and income. Hence, the average household sizes for the four quartiles were 5.8, 6.0, 6.2, and 6.8 respectively for the lowest to the highest and the respective per capita means for 1997 were K137.79, K271.63, K456.37, and K1449.29.

The skewed distribution of income across the sample (as in the country as a whole) entails differences in experience for different groups. Hence, in the years between 1986 and 1990, the benefits were concentrated among the top quartile, with others registering a decline in income. The pattern was, in fact, regressive, in that the poorest quartile suffered the greatest decline. This pattern of overall decline was reversed between 1990 and 1997 when all quartiles experienced an improvement in income level (as measured by expenditures). Because of the difference between the two periods, the overall change between 1986 and 1997 suggests

considerable improvement for the top quartile households, some improvement for the third quartile (next to top), virtual stasis for the households in the second quartile, and a decline for the bottom quartile households.

In summary, household income per capita in the sample as a whole has improved over the period of ten years (1986-1997), but the greatest benefits have gone to the better-off households. The sharp decline in relative income for the bottom quartile in the first period of 1986-1990 has led to an overall decline over the ten year period. Some hope is seen in the positive gains even for the bottom income quartile in the more recent period 1990-1997, but they have lost ground both relatively vis a vis the better-off fifty percent of sample households and absolutely.

(b) Income sources:

Over the decade, there has been a shift in the relative weights of different income sources for different categories of household. Households in the top income quartile have increased the proportion of their income earned from agricultural sales relative to "off-farm" sources, while those in the bottom quartile have made a reverse shift: less from marketed agricultural production and more from wage labour. The interpretation of this shift is as follows: the overwhelming source of cash income from agriculture for the top quartile households is burley tobacco, with important contributions of cash sales of vegetables, maize and legumes, and the value of consumed home-produced maize. The poorest quartile, in contrast, have found it more difficult to obtain all the maize they need for consumption because of the increased volatility in maize supplies and prices in the deficit season, and have therefore reduced even further the (small) proportion of their own harvest sold and replaced it mainly with intensified wage labour, most of it temporary agricultural work for local farmers. A few have also managed to increase the income earned from growing small amounts of burley tobacco.

The shifts in income strategies across income quartiles are the only ones to be a relatively clear trend. Across the years, there have been some changes in the income strategies of female-headed households but these do not follow a clear trend and are likely to be the consequence of one, the relative aging of the sample over the decade, and two, the small numbers which reduce the statisitical significance of differences. Thus, between 1986/7 and 1990/1, female de facto heads (those with husbands who were away at least half of the time) increased their share of home produced maize compared with female de jure heads (those without husbands, ie. widows

or divorcees). Also, in 1990/1 de jure female heads engaged more in retailing crops than de facto female heads, whereas this was reversed in 1997. This reversal may be due both to the fact that the de jure female-headed households in 1997 included more older widows as well as more tobacco growers, but also to the difficulties inherent in small numbers (only eighteen de facto female heads compared with fifty-one de jure female heads).

(c) Income Diversification:

Key features of income strategies are diversity, even among the richest households who produce large amounts of tobacco and/or maize, and the centrality of providing as much of the family's food needs as possible through one's own production. This latter aim is unsurprising in a chronically under-nourished population and in uncertain climatic conditions. One of the regularly repeated nostrums about market liberalization is that more efficient food markets will improve people's stable access to food sources. But Malawi is one case among many documented in Africa over the past ten to fifteen years of the failure of efficient markets to be developed in countries that are overwhelmingly rural and agricultural, that have been suffering economic strains and politcal upheavals, that are relatively small, weak economies struggling to cope with stiff competition in an increasingly "globalized" world, and that have high incidence of poverty, under-nutrition and sickness. The inability of existing trading agents and practices to supply all the maize needed in average to poor years in the area of research (as elsewhere in the country) is described in a separate section below but it is crucial to understand that farmers' strategies of trying to provide as much of their own food as possible is a direct response to this chronic problem of food supply.

A key feature of rural life is diversification: diversification within agricultural activities (mainly concerning cropping patterns) and within income strategies (which combine on-farm and off-farm activities). Diversification of cropping and of income strategies has long been the major way in which rural families deal with the inevitable but unpredictable risks entailed in rain-fed, hoe-based agriculture. Variability in climatic conditions, outbreaks of pests and crop diseases, family sickness or crisis all compound to make production risky, while shifts in market and related conditions affecting prices and distribution of food and goods add to the unpredictability. The past decade of radical policy changes, particularly economic liberalization, the unprecedented number of droughts, and political changes have all added to the volatility of these

conditions. It is therefore unsurprising that farmers continue to practise diversity in production and livelihood strategies and that they are rather bemused to hear that people in Lilongwe are promoting "diversification" as a new strategy. As population presses on available resources and as many families end up with little land, those who can manage to maintain a viable agricultural base will continue to diversify to protect themselves against the unpredictabilities noted and those whose agricultural base is dwindling will come to rely more and more on off-farm sources of livelihood. This is one of the major challenges facing Malawian people today. The following sections (2 and 3) consider, first, diversified agricultural production and then (section 4), the diversity of income sources. Following these, food security and nutritional status of children are discussed.

2. Diversified agriculture: maize and other crops

(a) Crop Diversity: intercropping and new crops

Agricultural production revolves around maize production with over 80% of cultivated land under maize. Most is for family consumption though around one tenth of an average year's maize harvest is sold, with many people selling very small quantities and the few true "surplus" producers selling between a few and hundreds of bags of maize. Even though maize is the single most ubiquitous crop, it is almost always intercropped in the sample families' fields, and the remaining land is filled with a wide range of crops. The main food crops grown alongside maize include pigeon peas, cowpeas, many bean varieties, groundnuts, other pulses, cassava, pumpkins, sweet potatoes, sorghum, and a wide range of vegetables. These and various fruits (mango, banana, guava, avocado) are grown for home consumption and sale. The main non-food crops include burley tobacco, dark-fired tobacco, chillies, sunflower, grass and trees. Fields are divided into plots of different crops organized according to perceived differences in the soil, sunlight or other qualities of micro ecological niches. In addition to inter-cropping and the use of multiple plots, farmers also use crop sequencing to great effect. For example, towards the end of the rains when pumpkin are harvested and maize is maturing, many of the lower leaves are stripped off the maize plants to create light on the ridges and green peas are planted half way down the ridge. These are a major cash crop in the area, though they are also eaten by families (as, indeed, all food crops are).

Several reasons account for the great diversity of crop type, inter-cropping, and crop sequencing: greater diversity reduces the vulnerability of any one crop to pests, predators or climatic problems; growing many types of crops protects sellers against a precipitous drop in price for any one; diversity provides more options for family meals; and the diversity enables farmers to exploit most fully the different qualities of the land available and the timing of labour in the family. There is now a growing body of studies of intercropping in Africa (though few in Malawi) which document the advantages of what has been called "one of the great glories of African science" (Richards 1983:27). Intercopping of grains and legumes helps preserve the soil fertility in permanently used land. Land in the sample villages, as in much of the southern region, was heavily used under estate management in the colonial era. Those areas that remained under-used up to the 1940s (as in the eastern parts of the research area) are now all under cultivation. The rising population means this is going to intensify for the foreseeable future. Hence, land has been under permanent cultivation for the past fifty years at least, and a strong argument can be made that the leguminous intercrops as well as the careful, intensive methods of field preparation in which residues are incorporated into ridges have helped moderate the loss of nutrients and fertility over time.

The crops produced also have a wide range of uses. Some are used for own food, some for sale, some for processing and resale (such as cereal-based beers, or cooked vegetables), some for the many little gifts and contributions that keep social networks alive, some to compensate neighbours and relatives who do temporary work in the fields or compounds. Some of the non-food crops such as grass and tree products are used for sale and some for the production of crafts for sale. Add to this the multiple uses of livestock, the vast bulk being small stock (goats, pigs, turkeys, chickens, ducks, rabbits, doves), as food, sale produce, gifts, and as stores of value (“banks”), then one begins to see the overwhelming significance of land-based production.

A key question concerning crop diversification is how farmers decide what to plant and what changes to make in their cropping patterns. One determining factor is clearly the amount of land an individual and family have at their disposal. In general, the smaller landholdings have fewer crops than the bigger ones because there is just not room for all the crops families would like to grow. The quality of land also affects choices: someone with most of their land in low-lying areas of black cotton soil will grow far less cassava than someone with more upland; a person with dimba (streambed gardens) almost always manages to grow some sugar-cane and

bananas, as well as vegetables. In addition, the marketing conditions for crops and the prices available for their sale are extremely influential in the choices made by the sample families.

The main cash crops over the decade, apart from tobacco and maize, have included sunflower, legumes (beans and peas of all types), groundnuts, and chillies. Fluctuations in the growing and selling of these crops by sample farmers have been due primarily to the prices being offered by buyers (although individual farmers are influenced by their relative ability to get seed or cuttings and other inputs, by pests, and other such factors). The number growing sunflower, for example, has risen and fallen: in 1986/7, people told us they were disappointed with their efforts at producing sunflower because ADMARC was then offering such low prices. In some subsequent years, the price has risen as more private traders have sought to purchase the crop and fallen again as the markets for the crop shift and fewer traders buy or offer lower prices.

Farmers tend to respond quickly to shifts in these non-food crops. An instructive example is chillies. This crop was grown by few in 1986/7 but between then and 1990/1 it had been taken up by more people, including some who had been growing very small amounts of dark-fired tobacco for sale. We were told that traders had started coming into the village areas looking for chillies to buy. They, in turn, were on-selling to companies in Limbe-Blantyre, some of whom were exporting to Europe and some processing for domestic use and export (the most famous being Nali pepper sauces). However, after the first flush of demand and rising prices offered by traders and then by ADMARC, the response of farmers was so great that the markets became sated. Several companies and ADMARC found themselves at the end of the 1989-90 season with unsold surpluses of chillies rotting in their warehouses. During 1990-1, I was told by both ADMARC officers and private company representatives that they were trying to identify new markets. As for the farmers, they had been enthused by the rise in prices over the previous four years from about 15 tambala to K2 a kilo but the dropping price in 1990 made them cautious and they told us in 1990-1 that they were cutting back their production and "waiting to see what happened". In fact, during 1992/3 the price again surged as traders came looking for chillies, reaching K5 a kilo in a year when sunflower was being bought at 50t and pigon peas around 80t. Prices were also good in 1995 but by 1997 had once again fallen to the point where a very few farmers in our sample still grew chillies, most having switched to burley and other crops.

A conclusion to be drawn from such examples is the degree to which changes in marketing and price conditions tend to cause farmers to shift <u>among</u> crops. Many commentators

have pointed out since the early 1980s, hard on the heels of the first major increases in producer prices for smallholders, that the usual result is a shift among crops rather than an aggregate rise in output. Obviously, this is due to the constraints of land and access to inputs as well as peak season labour shortages (or what writers such as Lele and Sahn among others refer to as "structural" constaints). A major challenge facing agriculture in Malawi is how to increase output and recent experience shows that it cannot be only through price and related market manipulations.

Some productive directions in the search for high-value crops suitable for smallholders (in addition to burley tobacco - see section below) include the recent introduction of paprika. Here, one should also note the initiatives of some private estates in the Zomba area (and apparently other areas) in developing crops for specialised markets, such as organic herbs, as well as spice plants like paprika. The interesting question that arises is whether some form of partnership could be arranged between groups of smallholders or particular villages with such private growers in order to expand the production among smallholders. This is possibly a direction that could interest some non-governmental organizations.

(b) Maize Production

i) Maize Harvests: The maize harvests of 1997 were disappointingly small compared with previous non-drought years largely because of too heavy and prolonged rains during the key weeding and cultivating season -- one of the sad ironies of volatile weather patterns, (see Report on Situation Analysis, 1997). The mean household harvest (see Tables 2 and 3) was much lower in 1997 (586 kg) than in 1990/1 (1305 kg) and even than 1986/7 (880 kg). These differences represent an increase of just under fifty percent between 1986/7 and 1990/1 and a decrease of just over fifty percent between 1990/1 and 1997. In per capita terms, the decrease was from 219 kg in 1990/1 to 104 kg in 1997: the former approximates the mimimum subsistence level according to FAO and others, whereas the 1997 figure is barely half that. The poor harvests occurred in all land groups though the fall between 1990/1 and 1997 was slightly larger for those in the smallest landholding category. Thus, in 1990/1 the mean per capita harvest for landholdings less than 0.7 ha was 110 kg compared with only 44 kg in 1997, for those with between 0.7 and 1.5 ha the respective figures were 196 and 99 kg, and for those with over 1.5 ha

the figures were 295 and 136 kg. These differences between the two years represent a decrease of about 60% for those in the smallest landholding category, and 50-54% for those in the two larger categories.

ii) Hybrid and Local Varieties of Maize and Fertilizer Use: In 1997, 61% of the sample households grew hybrid maize. This represents an increase from the proportion of around 40% growing hybrid in the previous year, 1996/7. This increase is almost certainly due to the introduction of the new maize clubs with their subsidised fertilizer and hybrid seed in late 1997. After the rapid increase in hybrid maize production between 1986/7 and 1990/1, which was the result of aggressive government efforts to promote seed and fertilizer through the provision of credit, there has been a steady fall in the proportion of households growing hybrid maize (see Table 4). The exceptions to this trend are the years where there have been distributions of either free or subsidised seed and fertilizer, as in 1992/3 and 1994/5. The new programme introduced in 1997 with EU funds by which companies sold inputs on subsidised credit through local stores (and a few through ADMARC) increased the numbers planting hybrid in December, 1997. As explained in the 1997 report, many of the poorer households are keen on planting hybrid maize yet are usually too limited in cash income to be able to purchase new seed. The coverage of the clubs was very patchy and by no means universal: eighteen percent of sample households joined the new clubs. It appears that most of the very poorest did not join both because they fear they would not be able to repay the loan (despite the heavy subsidy) and because often they were not asked to attend the meeting where the scheme was introduced. However, our observations suggest that, except for one village where the new clubs were dominated by the better-off households who were closely related to the headman, in the other villages, poorer as well as better-off households joined the new clubs.

Around 75% of households used fertilizer (proportionately more on hybrid maize and burley than on local maize). This proportion is virtually the same as that for 1996/7 (obtained from the baseline fields survey conducted in January, 1997) and represents an increase over that of 1995/6. As Table 5 shows, the proportion of people using fertilizer has fluctuated over the years, dropping when prices rise and when credit sources collapse (as in 1993/4), rising in years when programmes of free distribution (as in 1994/5) or new credit (as in the past year of 1997) appear.

Two points may be made about the inter-year patterns of use of hybrid seed and fertilizer. First, the programmes of free, subsidised or targetted inputs definitely result in an increase in the numbers of people growing hybrid maize and, in particular, the numbers of the poorer fifty percent of households who do so. Secondly, the expenditure patterns of households suggest that people, on average, are also putting more emphasis on obtaining fertilizer and other agricultural inputs.

Overall, the sample mean expenditure shares on fertilizer and agricultural labour have greatly increased since 1990/1. However, as one would expect, the increase is far more marked for the top quartiles than the bottom quartile. In 1997, the richest households spent approximately 13% of total expenditures on fertilizers as contrasted with 6% in 1990/1, while the bottom quartile households averaged 1.3% in 1990/1 and 1.5% in 1997. Similarly, the top quartile averaged 8.7% of expenditures on hiring labour in 1990/1 and 11% in 1997. Interestingly, the increase in the share spent on labour hiring by the other quartiles (one, two and three) was greater than for that spent on fertilizers: the bottom quartile households averaged 4% on labour in 1997 compared with only 1% in 1990/1 (and in 1986/7); quartile two averaged 4.7% in 1997 compared with 2% in 1990/1 and 1986/7; quartile three averaged 7.5% in 1997 compared with 3.7% in both 1990/1 and 1986/7.

There has been a very sharp increase in fertilizer prices following on the complete removal of the subsidy by 1995, followed by the devaluation of the kwacha and inflation. The price quadrupled in two years, from 1993/4 to 1995/6. Since this increase is more than those of other prices and of wage rates, the lack of change in the already tiny percentage spent by the lowest quartile households reflects a decrease in the fertilizer they obtain (apart from free distribution). The approximate doubling in expenditure shares for the other quartiles suggests an attempt to obtain fertilizer but, again, is less than the rise in fertilizer price. The difference in total quantity of fertilizer obtained may be made up for those who obtain fertilizer on credit from the burley clubs. On the whole, however, the expenditures support what farmers say – that the increase in fertilizer costs has meant that they obtain less than they used to and would like.

I interpret the increase in the share of expenditures on labour costs as reflecting the increase in burley production by the majority of the sample. The difference in scale of burley production, however, is reflected in the persistence of the fact that the richer households are responsible for the bulk of expenditures on hired labour. However, even here, we see a change.

In 1990/1, 67% of the total amount of money spent on hiring labourers was spent by the top ten percent of households. In 1997, the top decile's share had dropped to 48% with the top twenty percent being responsible for 68%. Thus, there has been an expansion in the degree of labour hiring (which is almost entirely from neighbours) among a broader section of the population. The concentration among the better-off remains, however: the top 30% of households were responsible for 78% of all labour expenses whereas the bottom 30% for only 3%.

3. Burley Production

(a) The spread of burley tobacco growing

The most striking change in the villages in southern Zomba has been the huge increase in numbers of people growing burley tobacco.This was initiated by a pilot project for smallholder burley production in 1990, after Dr Banda's government, under pressure from the donors and a serious economic downturn in the country, allowed smallholders to grow burley legally for the first time. Up to that point, burley had been the prerogative of estates or, more precisely, leaseholders. Smallholders were able to grow dark-fired tobacco although they were obliged to sell this through ADMARC at prices always far below world levels. (Some, of course, sold to local estates or private buyers.) The spread of burley growing has been fuelled by the formation of burley clubs from 1991/2 onwards that enable small farmers to group together to sell on the Auction Floors at world price, and by the more recent entry of so-called "intermediate" tobacco buyers who buy largely from growers who are not members of clubs. The entry of these licensed tobacco buyers, in turn, has facilitated large numbers of unlicensed smallholder farmers and estate owners starting to buy and sell tobacco. This proliferation of trading in tobacco is particularly marked in the Zomba area, presumably because of the proximity to the Limbe Auction Floors, the concentration of burley tobacco growing by smallholders and by numerous small estates, as well as the presence locally of a number of big estates whose owners/managers engage in tobacco trading.

As the income figures demonstrate, income from burley growing is the single most significant discriminating factor among sample households. Burley is the crop that currently provides the highest returns to farmers, a fact that has attracted increasing numbers of people to the crop, despite the high labour and other input demands it makes. With only one or two exceptions, burley provides the source of the high income enjoyed by a minority of the sample

(about twenty percent). The exceptions are a few families who have very large landholdings and who concentrate on the production of maize, other food crops and livestock, and a single family where the husband is a skilled dairy farmer with stall-fed cows: he had acquired these skills in his long employment at an agricultural research station until his recent retirement.

In 1986/7 when the sample was selected for a study comparing food crop production with non-food cash cropping, a choice was made to over-sample the tobacco growers in Zomba. Hence, around 30% of the sample was made up of tobacco growers. At that period, all of these were growing dark-fired tobacco though a few also grew some burley "on the side" since it only leaseholders who were supposed to grow burley. The next phase of the research, in 1990/1, was designed to monitor the effects of the liberalization of grain marketing but also coincided with the decision to allow smallholder farmers to grow burley tobacco. Most of the farmers growing dark-fired tobacco switched over to burley tobacco, largely because they were already finding it difficult to find the firewood needed to cure the tobacco whereas burley is air-dried. During 1990/1, too, approximately 30% of the sample grew burley. In subsequent years, there has been an overall increase in the numbers of people growing burley tobacco although the numbers fluctuate from year to year depending on climate, and prices of tobacco and of inputs, especially fertilizer. Thus, the proportion of the sample growing burley in 1992/3 increased to 60%, dropped to 44% in 1993/4, largely because of the drought, and increased to 59% in 1994/5 and 71% in 1995/6. (In these years, a partial re-survey of the sample was the basis for these figures). In 1997, despite the widespread disappointment with the prices among those selling to Auction Floors in the previous season, an astonishing 80% grew burley tobacco.

The spread of burley has meant a widening of the range of income levels and landholding sizes among burley growers. Whereas in the first years of the study we found that burley growers were disproportionately drawn from the families with larger landholdings and higher income, today the range of growers is much wider, excluding only the very poorest, those who have other income sources (large scale-maize production, milk-cows, a successful business, white-collar employment), and a few for other reasons (one family said their church forbade them having anything to do with tobacco). On the other hand, the spread of burley growing among so many of the sample families also entails a much wider scale of production. Large numbers grow only small amounts of burley. Burley clubs have increased in number so that in 1997 57% of the sample burley growers belonged to a club. This expansion has meant that the clubs have

expanded their membership beyond the top thirty percent (in terms of income and landholding), although they still disproportionately account for the biggest burley growers and, hence, the richest families.

(b) Tobacco and maize

The survey data reveal some interesting aspects of the relationship between tobacco production and maize production, including some changes since 1990 when burley started to be grown by larger number of families. A common question concerning the effects of burley production on smallholder livelihood is whether there are negative effects for maize production and, in turn, what are the implications for household food supply. The latter could be either an overall fall in family food supply because of the reduced maize harvests or an overall increase because the burley revenues enable more food to be purchased. The reduction of maize harvests would be produced either because burley tobacco displaces maize on the family land or the labour demands of tobacco reduce maize cultivation or the quality of its production. In the 1990/1 study, we found that tobacco growers, on average, had both a higher per capita maize harvest than those not growing tobacco and a higher overall maize supply during the year (measured as harvest minus sales plus purchases).

In 1997, tobacco producers reaped a larger mean household harvest than other families (611 kg vs 483 kg) but the very high variance among both groups renders the difference insignificant statistically. The same is true for the per capita figures of 102 kg for tobacco growers compared with 114 kg for others. Given the enormous heterogeneity among both groups, it is important to consider this relation disaggregated by income. Table 6 shows the results: the mean per capita harvests are higher for those who do not grow tobacco in quartiles one, three and four, whereas the second quartile tobacco-growing households had larger harvests (per capita) than non-growers. However, once again, a T test showed statistical significance only for the difference in the top quartile. This can be explained by the larger amounts of land cultivated by most families in the top income quartile and the consequent concentration of large "surplus" maize producers in that category of households. In sum, there is no significant

difference in current data to suggest that poorer households who grow tobacco have lower maize harvests on average than those who do not (or, indeeed, the reverse).

With respect to the one statistically significant difference, namely, that tobacco growers in the top income quartile harvested smaller maize harvests than non-growers, the interpretation concerns not food security but income strategy. A number of the larger scale tobacco growers who have been making large amounts of money from their burley sales at auction, have found it more profitable to increase their burley production relative to maize cultivation. They say that they can make far more money selling burley than maize so that, if needed, they prefer to use some of their cash earnings to purchase household maize after the harvest. None of these households has given up maize altogether and virtually all are self-sufficient in maize. The wealthier households who do not grow burley have concentrated on growing large amounts of maize for sale. In short, it seems there is developing a certain level of specialization among the wealthier farmers with larger landholdings, with most in the Zomba area putting more effort into burley and a smaller number into surplus maize production. Note the "surplus" maize. The relative decrease in maize production among the larger scale tobacco growers (those with larger landholdings and overall greater wealth) is in their surplus maize. They still, like other households, retain their commitment to producing as much of their own staple food needs as possible. Hence, the reduction in the mean per capita harvests for the better-off tobacco farmers probably is more significant for overall local and regional supplies on the market (whether through ADMARC or traders) than for their own family food. Here, it is important to recognise the regional variation: there is a very high concentration of burley growing in Zomba with the implications noted for maize sales and supplies, but, apart from similar areas in Kasungu, Lilongwe, and parts of Machinga districts with high concentrations of burley growers, large land-holders in most areas concentrate on maize and crops like legumes, sunflower, cotton, and so forth for their main cash crops.

As noted, the lower mean per capita maize harvests among tobacco households in the bottom income quartile than non-growers found in 1997 is not statistically significant. The logic of viewing poorer households as vulnerable to reduced maize harvests if they grow burley tobacco is that, especially in a poor year, spreading their few assets (labour, inputs) over several demanding crops will increase their risk of loss. The data do not show this (significantly) for the very poor harvest year of 1997. Moreover, countering this potential vulnerability of poorer

tobacco growing households to a reduced maize harvest, which constitutes such an important part of a family's food supply, is the information collected on household maize stores throughout the year for 1997. This information does not suggest an overall lower maize supply for poorer quartile tobacco growers. In the lowest income quartile, non-growers of burley ran out of maize stores earlier than growers. For example, in December 1997, 94% of the non-burley growers in the bottom income quartile had run out of maize compared with 84% of the burley growers in the same quartile. This suggests that even these poorer tobacco households were able to supplement their own small maize harvests with purchased maize. However, there is virtually no difference in the average share of expenditures on maize for tobacco and non-tobacco households in the bottom quartile with both around 21%.

It is important to raise this issue because observers often raise the potential problem of burley production systematically lowering the maize production and, thereby, the food security for growers who have very little land and income. This is not to deny, of course, that individual families do indeed end up with less maize than they might have had if they did not grow burley and, if the harvests of both maize and burley were poor, then their overall lower cash income as well as maize stores can result in lower maize supplies for consumption. Not only have such cases emerged in the sample surveys but people themselves express concern about this risk. The point here is that the survey data do not show any consistent pattern of either lower levels of maize production or lower levels of maize consumption for those families in the bottom income quartile who grow some burley tobacco.

It was only among the richest twenty-five percent that non-burley growers had larger maize stores for longer periods than growers. This is because the wealthiest non-burley growers are farmers with large amounts of land who specialize in maize growing (some also keep livestock). In contrast, as noted above, some of the wealthiest burley growers have reduced their surplus maize in favour of burley and other business activities. Some have said they do not worry now if they run out of their own maize before the next harvest because they earn enough cash to be able to purchase maize (usually just after the harvest when prices are lower). However, the severe shortages of maize in 1997 led even these few farmers to rethink that strategy and to redouble their efforts on producing all the maize they need. Hence, several explicitly stated that they were intending to increase maize production and stores in the 1997/8 season.

In short, there have been some moves over the past decade towards partial specialization among those farmers who can afford to do so, that is, those who have sufficient land and enough of a cushion (in savings, animals or other income sources) to face risk when they decrease their surplus maize and increase burley production. But during 1997, it appeared that the volatility in national and regional maize supplies in the deficit season is causing a reversal in this trend. For the vast majority of rural families, such specialization is not an option because they do not have the wherewithal in land, food supplies and other income to feel confident in not trying to grow as much staple food as possible.

(c) Burley Clubs: Enterprise and Institutions

It is very important to realise the fundamental revolution represented in smallholder farmers being able to grow burley tobacco and, for those organized in clubs, to sell their crop on the Auction Floor. The overall sense of exhilaration that the removal of the ban on burley production generated is captured in the remark of one farmer to me in 1990: "Now a door has been opened for us!". He meant that, for years, small farmers like himself had been consistently excluded from one of the most valuable crops. But he also referred, more implicitly, to the years of being constantly harried in so many ways by representatives of the former regime, the MCP and MYP. The introduction of burley clubs represents a signally important institutional and political shift in Malawian rural life that fits with the shift from a one-party to a multi-party system. Such fundamental changes in institutions and political culture are not simple, nor are they generally smooth and without problems. I shall describe here some of the real achievements of the new burley clubs and their promise for a more vibrant economic and more open political life for rural dwellers, but also the obstacles they have to overcome and the profound changes in social expectations and practice they entail.

In 1993 I included in an annual monitoring of the research sample households an enquiry into how the burley clubs were functioning. This was done through conversations with members of clubs, club officers and those not in clubs but with knowledge of them. Virtually all those conversations were with people in the research sample who already know me well. Also, both then and subsequently, I have been able to learn about the clubs in informal ways as people describe what is happening generally in the villages or as discussions take place among people I know are members of clubs. The advantage of this method is to reveal activities and processes

that would be more difficult to ascertain through a simple questionnaire survey by outside researchers. In 1993, the clubs had been operating for just two years. My assessment then was that the clubs and individual members had achieved quite a lot but that there also were certain problems and shortcomings. The simpler set of problems to explain were those of management procedures: the difficulties of keeping clear records, of arranging the grading, baling, and transportation of members' tobacco for the Auction Floors, and of managing meetings, information and disputes within the club or between the clubs. The more profound difficulties had more to do with "inappropriate ideas about the type and extent of authority exercised by club officers" (Peters 1993:52).

The specific problems that were revealed by the 1993 enquiry included: a) a de facto monopoly by a minority of members of the burley quota allocated to a club; b) a failure by clubs to ensure an adequate access to and scrutiny of records by all club members and the tendency for records to be treated by club officers as their property rather than belonging to all members; c) a lack of open and regular discussion of club financial affairs by all members which, in turn, reinforces shortcomings in the management of revenues and expenditures of the club; d) inadequate means for airing and resolving intra-club disputes; e) the phenomenon of "shadow" members, that is, persons who did not appear on the membership list but who, through alliances with key club officers, were able to sell their burley on the Auction Floor through the club; significantly, most of these shadow members were local agricultural office staff. It is worth pointing out that my discussions with people working in other areas of the country suggested that these problems were not peculiar to the Zomba villages but found in other burley-growing areas.

My interpretation of some of these problems was that they derived from the tendency for club organization and the behaviour of club officers to follow the long-standing cultural models of estate-tenant and autocratic president-people. The small cliques of leading members, always the better-off and best connected people, tended to treat the other members as though they were clients. Rather than officers considering themselves (and being considered) representatives on behalf of all members, they behaved as owners or managers vis a vis workers or as leader vis a vis subjects. This exclusionary, even dictatorial behaviour was seen in the cases of unfair allocation of quota shares; unfair distribution of costs vis a vis revenues; refusal of officers to make accessible financial records as of right to members; officers' facilitating influential outsiders to sell through the club (as shadow members) which, inevitably, exacerbated inequities

in quota allocation; officers' unwillingness to take account of members' complaints or to treat them as subversive rather than as possibly justifiable comments about management. (Specific details and cases can be found in my 1993 report.)

Between 1993 and 1997 there has been a huge increase in the number of burley clubs formed, both those that officially are under the Ministry of Agriculture and those started in projects aimed at low-resource farmers and/or female farmers, such as the IFAD projects. The overall expansion of burley growing and of clubs has been associated with a very large increase in the quota available to smallholder growers so some of the acute problems of allocation within clubs visible in the first few years (1990-3) seem to have been diminished. More positively, many of the clubs in my research sample appear to have made progress in their own organization and one can see a real process of institutional learning taking place. Not only have several clubs found ways to improve their own management regarding record keeping, bank accounts, arranging for baling, transporting to Auction Floors, etc., but also are developing their own methods of dealing with internal disputes.

One example can be given. A treasurer in one of the earliest founded clubs in the research villages was found to have some K2000 less than he should (when K1=$5). After being questioned by club members, he disappeared from the village, followed shortly afterwards by his wife (like most families, they were living in the village of his wife). It was widely assumed that he had spent the money and, unable to repay, had fled. In conversations with me and (separately) with the local agricultural office, the other club officers and leading members said they did not want to bring a formal case against him through the police. After some months, club members discovered that the man was living in Blantyre, and, after more time, he was finally contacted by members representing the club. Several discussions were held between the man and club members and among the latter themselves. Finally, after more than a year had passed, the club members decided as a group that he was to be allowed to return to the village and to rejoin the burley club (officially, of course, he had never left although his quota for the intervening year was used by the club). But he was not allowed to continue as a treasurer and he was to use the revenues from his burley earnings that year to repay the club. When I was told this, in the year when it happened, those explaining to me pointed out that it was important to the village and the wife's family that they not be "exiled" any longer, and that to have brought a case and perhaps for him to have landed in jail would have not benefited the club or the village or his family but,

on the contrary, would have merely added to the burdens of the wife and her family. Moreover, it turned out that the treasurer had not merely stolen the money. On the contrary, he had been begged by a person of some social standing in the area to lend the money because of some crisis against receiving burley from that person to sell through the club in full repayment. Unfortunately, that person had defaulted on his promise, leaving the treasurer with no money and no tobacco. The general sense among club members I spoke with was that he had learned a hard lesson and that the club had found its own way to deal with the problem in a way that caused least disruption to everyone's lives. This is one example among several suggesting that institutional change, including the management of business enterprises, takes time and has to take the forms that make most sense to the participants.

This does not mean, however, that the clubs are uninterested in advice on business enterprise. On the contrary. A number of the clubs in the research area reported having benefitted from a USAID-funded project on small enterprise management which had targetted some of the burley clubs. The project had a field staff that spent large amounts of time instructing farmers with "hands-on" methods on management, especially record keeping, arranging for services of grading, baling, transportation, etc., tracking prices at the Auction Floors, assessing costs and revenues, such as using some of their revenues to purchase fertilizer for the next season, and so forth. Clubs lucky enough to be part of the project were delighted with the advice and material help they received and other clubs kept asking when the project would reach them. While the USAID project was well financed and used highly skilled staff in an intensive manner, the potential for more modestly funded efforts to help infant enterprises like the burley clubs is obvious and large. Not only burley clubs would benefit from such skills but so would many other groups (eg. women retailers interested in supplying vegetables to urban agencies, groups of basket makers, and so on).

(d) Pluses and minuses of the spread of burley production

In terms of the income effects, the spread of burley growing is a clear gain for most farmers. That the larger gains from large-scale production and sales through the Auction Floors means a disproportionate benefit to a small minority has been pointed out. But it is also important to stress that, without exception, even the smallest burley growers say, when asked why they grow burley which is a demanding crop on labour and other inputs, “yes, that’s true,

but it gives us money!". Many growers, male and female, freely admit the heavy work demands made by burley – it has a much longer season than other crops since nurseries have to be started at the time of the early rains in early October, and harvesting, processing and selling can extend all the way to the following September for the bigger scale producers. Given the demands from maize and other crops that all the burley growers also plant, there is a substantial increase in work required by adding burley with particular stress during the weeding periods of January-February. However, I have been told over and over again that they are willing to work hard because, unlike maize and most other crops, burley "brings money". Everyone is aware that the prices through Auction Floor are much higher than those they can obtain from other buyers. Nevertheless, even the many unable to sell through Auction are still drawn to the crop because of the relatively higher returns to their efforts. This does not mean that people do not complain about low prices: those selling through Auction Floors complain when the price drops below what they expect (as in 1996 and 1997) and those selling to private traders complain that the prices are below those obtainable at Auction Floors.

In addition to the direct monies obtained by growers, there is also the question of the degree to which the larger flows of burley revenues spread beyond the specific households receiving them. In normal to good years, this appears to be occurring. The families with large burley incomes are spending some of their money on building better houses and other buildings, or improving and extending existing structures, on furniture and other household goods such as mats and baskets, on bicycles which then need repairing, and on clothing and tailoring. All these activities provide employment and demands for goods and services from local people. The larger growers also employ more people in the fields, as the increasing expenditures on labour indicate. Some burley growers also set up their own businesses, especially "hawkers" (wokala) or small kiosks which are mini-stores selling a range of basic items, and shops or tea-rooms. These, too, can benefit locals by providing more sources of goods. A check on prices at these establishments did not suggest that they were any higher than shops existing prior to the burley-related expansion.

Potentially negative aspects of burley production include the following. As more and more people have taken up burley production, activity appears to be outstripping appropriate knowledge and practices. By this I mean that many of the smallest growers and some of even the largest scale producers are not following the currently recommended practices of burley

production. For the families with small landholdings and very limited cash budgets, the problems are obtaining fertilizer and new seed, obtaining access to streambed sites for nurseries, and following the proper rotation. While the larger-scale producers have less financial and land constraints, a surprisingly large proportion use recycled seed. Only 24% of growers reported using only new seed, 47% used their own “recycled” seed, 17% used a mix of new and recycled, and 20% purchased seedlings or received seed or seedlings as a gift, which are likely to be partially or largely recycled. A brief enquiry into the practice of using their own seed revealed that some of this is due to seed arriving late so that farmers feel compelled to use recycled seed to get the nurseries started, but many also say that the new seed they obtain is often poor and that they do not find that using their own seed from the previous year reduces the yield or quality of their burley. I am aware that this is contrary to what agronomists say and I do not know how to judge farmers’ statements which, I believe, are made in good faith. Finally, many burley growers interplant or sequence burley with crops said to be incompatible with burley tobacco (such as tomatoes).

Three issues arise. First, there is the apparent danger of such practices (low levels of fertilizer, recycling seed, insufficient rotation, incompatible crop mixes) leading to poor quality products. Secondly, the danger would seem to go beyond the quality of tobacco to the quality of production in general. If poor practices lead to build-up of such problems as nematodes in the soil, then other parts of the cropping system will be negatively affected. Thirdly, it is quite insufficient to pin blame on farmers. There is a desperate need for more careful and systematic extension work with burley growers in a range of landholding and income categories. Farmers I know well are quite open about the fact that, despite being told by extension staff not to intercrop the burley, they do so in some of their burley fields, retaining at least one planted only with burley to show anyone who inspects the fields for recommended use. Several farmers whom I know well and whom I have observed as hard workers and as experimenters with crops and crop mixes, have told me that they do not see any negative effects on their tobacco of certain intercrops such as rape. On the other hand, there are some farmers growing tomatoes or similarly incompatible crops with burley tobacco who will surely experience problems. The issue is that there is no systematic effort to work <u>with</u> farmers on these questions -- testing whether some crops can be intercropped or sequenced with burley with either indifferent or positive effects. The "deviance" from recommended practices, therefore, is not due to simple ignorance or sheer

perversity but is a response to a continuing top-down and autocratic style of extension in the face of a need to draw as much from the restricted land and labour resources as possible. Despite many improvements in recent years in the broader and local political scene, the culture of bureaucracies changes slowly and the shift towards seeing farmers as clients whose problems the extension agents are supposed to be helping solve has not yet occurred. Here, again, is a critical area for policy and programme development.

4. Income Diversification

Rural families diversify not only their agricultural activities (their "on-farm" activities), but their income strategies more generally. Thus, virtually all families have members engaged in a range of activities designed to earn income, including wage labour and small-scale businesses and services ("off-farm" activities). Throughout the period of research, since 1986, families earn, on average, about a third of their total income from such off-farm activities, with another third from agricultural sales and another third from self-subsistence (as measured in maize). These proportions, especially the first two (agricultural sales and off-farm) vary across the income/wealth groups with the richest quartile earning more from agricultural income than off-farm and the reverse for bottom quartile families. The work for wages is disproportionately temporary farm work such as clearing fields and weeding, but also includes compensation for rendering various services such as thatching roofs, digging wells, making bricks, and so forth for men, and drawing water and pounding maize for women. There are a very small number of men who have permanent labouring jobs in neighbouring farms or estates, and even fewer men and women who hold "white collar" jobs, all teachers. Much larger numbers of people engage part-time and some full-time in small-scale businesses: for men these include carpentry, brick-making (preparing the kilns, overseeing the brick-moulding and the firing), bicycle mending, shoe-mending, weaving mats and baskets, tailoring, retailing crops and fish, and hawking goods purchased wholesale from the nearby towns. For women, the main enterprises include making beer and kachasu (local gin made from sugar and other ingredients), food processing for sale (cereals into flour, millet into chimera for beer, making scones and cakes, cooking meat, vegetables, etc), pot-making, and retailing crops. Transfers ("gifts") from household members living or working elsewhere are reported by households in all the income quartiles averaging around 14% of total income although their contribution to livelihood is more significant for the

poorer twenty-five percent of families, particularly for the poorer female de jure households. The contribution of transfers has not changed significantly over the decade except for the families in the top income quartile where it has decreased. This I interpret as due to two factors: one, the disappearance of the better-off households of migrant workers to South Africa (some of whom were among the top income quartile in the early research rounds) and, more recently, the increasing contribution of burley income to families with larger land-holdings and access to burley clubs.

The picture of a rural population immersed as much in non-farm based income strategies as much as those on the farm is now well-established for most of the sub-continent. In fact, the interdependence in these activities is so great that the conventional distinctions of rural vs. urban, and farm vs. non-farm activities are becoming an obstacle to analytical and policy work. People are engaged in regional economies and, in their attempts to make a living, they deploy whatever assets they have across bureaucratically labeled "sectors". However, this is not a static picture. The importance of non-farm income for rural populations varies across rural areas in Malawi, being more crucial in areas such as that of the sample, where land density rates are high and proximity to towns provide a wider range of opportunities for work and services. Nevertheless, given the trajectory of population growth and the decreasing land available, the importance of non-farm income can only increase over time.

5. Food Security

(a) The centrality of maize

Since I first started doing research and living in the villages of Zomba district, I have been struck by the enormous cultural and practical emphasis placed on maize. The phrase, "chimanga ndi moyo" or "maize is [our] life" that I recorded in the first report (1989) captures this emphasis. People's staple in the southern villages, as in most of the country, is maize, eaten mostly in the form of nsima, a paste-like porridge that resembles stiff mashed potatoes, eaten with an accompanying "relish", usually vegetables, occasionally fish, eggs, doves or other small birds, and rarely chicken or "red" meat. The vast proportion of land is cultivated with maize inter-cropped with a range of legumes and vegetables. The very definition of food (chakudya) is nsima, so that when people say they haven't eaten that day, they almost always mean they haven't had a dish of nsima. This does not mean necessarily that they haven't eaten any other

foods such as cassava, sweet potatoes, mangoes, and so on. The single most important measure of success in assuring one's family a decent life is the degree to which they are able to eat nsima at least once and preferably twice a day throughout the year, except in those periods of seasonal foods, such as the midday meals of groundnuts and sweet potatoes in the early harvest season or of pigeon peas later in the year, or dishes of mangoes or other fruits in their season. The pride in a well-filled granary after harvest is one of the joys of a good year. Even though in very recent years the fear of theft has led more people to store their food out of sight inside houses, the more obvious markers of the most successful families in the villages still include two or three big granaries filled to the brim with maize.

(b) Household maize supplies

The outcome of the centrality of maize in people's definition of a proper life is its centrality in cropping and income strategies. The surveys and other enquiries made in the sample villages over the past decade have shown no decrease in the effort made by virtually all households to produce as much of their own maize and other food crops as is possible. The shortage of land and other resources do not make the goal of self-sufficiency a reality except for a very small minority – perhaps about a quarter of sample families can produce most of the maize they need in an average year of reasonable conditions. This would probably be about one in ten in the general population of the area. In a year of exceptionally good conditions when harvests are large, such as in 1996/7, this might increase to about one in five in the general population. In poor to bad years, only a handful are able to rely on their own supplies. The volatility in maize supplies and maize prices over the past decade resulting from a combination of climatic and policy shifts has only reinforced the attempt by people to retain as much of their staple crops as they can. The overall drop in the number of people selling maize is one reflection of this.

(c) Maize expenditure shares

Even if fewer people are selling maize or many reducing the amount they sell, most still have to purchase maize for their own food needs. The share of expenditures put to maize purchases has increased most obviously for the bottom twenty-five percent of households from 25% in 1986/7 to 30% in 1997 (see Table 7). There was a blip in the earlier part of this period

with a sharp increase from 25% in 1986 to 36% in 1990/1. This I interpreted as reflecting the sudden rise in maize prices in that period and the lack a rise in the levels of income available to the poorer households. The slight moderation since then (to about 30%) may reflect a slight improvement in the work opportunities in the area which may have increased due to the intensification of economic activity and to the spread of burley production (described in other sections). Some may also be due to the ability of even the bottom twenty-five percent to earn some cash from growing burley. At all events, the increase over the period in the amount of cash expenditures spent on basic food by the bottom twenty-five percent is not a good sign and signals an increasing pressure on those households in obtaining their food needs. In complete contrast, the share of budget spent by the top twenty-five percent of households on maize has dropped sharply to just under 7% in 1997. This is in line with the expected decrease in share of budget going to basic foods as income rises. In comparison with what it is happening among the bottom twenty-five percent, it highlights the persistent skewness in the distribution of income and indicates that the richest twenty-five percent are improving faster than the bottom half and certainly than the bottom twenty-five percent. In the general population, this probably translates into disproportionate benefit to the top ten percent of households.

(d) The uses of hybrid and local maize

As has been found for other parts of the country, local varieties of maize dominate the sample households' maize fields. Some writers have related this preference for local maize as due to taste, higher yield from the mortar (local maize produces more flour per unit than hybrids), and the greater resistance to weevils in storage (Smale). Some point to the lower costs for inputs and labour in local maize production (Zeller et al.). My own emphasis would be on the lesser vulnerability of local maize to deterioration in storage which, as I point out below, has relevance not only to food security aims but also to the more commercial aims of the minority surplus producers. Even the new semi-flint varieties are said by farmers not to store as well as the local types. People also mention more work related to hybrid production: for those who fertilize local varieties, virtually all apply fertilizer only once as opposed to the recommended and partially practised two stage application for hybrids. Also the work in storing hybrids is greater because they have to be shelled in order for the pesticides to have effect. The cost of pesticide is another obstacle for many.

Some of the food security strategies turn on the relation between local maize and hybrid varieties. For too long, there has been an oversimplistic view in the policy field that posits local maize as food and hybrid maize as cash crop. I have argued at length in earlier reports that both local and hybrid maize are used for family food, for selling for cash, and for compensating temporary labourers. The particular mix of local and hybrid maize grown and the particular mix of uses depend on the resources at a family's command. The choice normally facing a family in the sample area is not a simple either/or ("shall we grow hybrid or not?") but the particular combination that makes sense for them, given their resources and needs.

All maize sellers sell a larger proportion of their hybrid than of their local maize.This is because hybrid maize, even the newer, semi-flint varieties, do not store as well as the local maize. Since people need to store maize to last them as long as possible through the year, the relative resistance to weevils is extremely important. Although the new semi-flint varieties are much appreciated for their better storage and pounding characteristics than the dent hybrids, they are not considered to store as well as local maize. Moreover, people point out that not only do they have the added cost of pesticides for the proper storage of hybrids, but, over the past few years, they have been noticing an increasing resistance of weevils and other pests to the common pesticides (particularly actellic), so that the costs of storage are becoming higher. Because hybrid maize has to be stored off the cob (in order for the pesticide to be effective), people also mention the added labour involved as a deterrent. Overall, then, the key determinant in the pattern of relatively more of the hybrid maize harvest being sold than local maize is the greater difficulties in storing the hybrids.

The fact that, of maize sales, a larger proportion of hybrid maize is sold than of local maize harvests has led to the common notion among policy analysts that hybrid maize is only a cash crop. But this formulation ignores two equally important facts: that hybrid maize is used for family food, a characteristic especially important for the poorer; and that local maize is a cash crop for many, particularly for the richest twenty-five percent of households. On the first, one of the main reasons people want to grow hybrid maize is that several varieties mature considerably earlier than the "local" varieties. For the large number of families who are never able to produce all the maize they need, the attraction of early maturing is obvious: they have an earlier supply of food than otherwise. Since it is precisely these families that are compelled to take green maize for flour as soon as the maize is ripe (and sometimes before that), the early maturing reduces that

particular loss. The important use of hybrid maize as food for the poorer means that they often sell none at all. The importance of hybrids, especially the early maturing varieties, as a source of flour for the deficit majority needs to be stressed because many commentators on Malawi still cast hybrids as cash crops and, at most, a fall-back food. One must also remember that the majority of families eat quite a lot of hybrid maize because this is what most of them find to purchase in ADMARC centres in a normal to poor year. Although most people continue to favour -- in principle --local maize for eating, especially in the form of white flour (ufa woyera), a small but growing number of families grow no local maize at all. The reason given by all of them is the poor yields obtainable from the local varieties compared with the hybrids.

Turning now to the importance of local maize both as a cash crop and as a prime exchange good, two important uses of maize by the wealthiest twenty-five percent of households are to sell in the deficit season (November to February) and to compensate the temporary workers who are hired to clear, plant and weed in this period. It is for these reasons that some of the largest producers of maize who are also among the wealthiest families and who therefore are normally able to afford new seed and fertilizer, grow a large amount of local maize. The superior storage qualities, with lesser demands for labour (in shelling the maize) and cash (for pesticides), make local maize the preeminent crop for retaining till just before the next harvest. This is still the case, despite an increase over the last decade of large maize producers storing some of the new, semi-flint hybrid varieties until the deficit season.

In summary, people use local and hybrid varieties of maize in several ways as part of their food and income strategies. When people are asked why they grow hybrid varieties, all, without exception, say that hybrid varieties' generally higher yields are among the most important attractions. Many add spontaneously that the fertility of the land has decreased and, when asked to expand on this statement, they point to the increased density of population on the land, hence the inability to either fallow or open unused "bush" and the need to keep most land under permanent cultivation. The minority of growers who grow no local maize at all say bluntly that the latter "is a waste of time" because of the very low yields achieved. For those who sell maize, hybrids comprise the largest proportion of their maize sales. The wealthier households with large landholdings tend to plant a considerable amount of local maize that provides the bulk of their household food but that also is stored for selling in the deficit season when local market prices for maize are usually high, and for remunerating farm labourers hired in the same season.

But for the poorer families, one of the main attractions of the hybrid varieties is their early maturing and their earlier availability as food. Finally, I should stress that the heterogeneity in ecological and agricultural conditions through the country must also be factored in. For example, the proportion of people growing hybrid maize in Ulongwe and fertilizing their maize was much lower than in the Zomba villages, a circumstance that is due entirely to the higher levels of fertility in the former (as witnessed by the density of acacia albida trees among others).

(e) Maize sales

While the bumper harvest of 1996 led to far more people in the area selling maize even up to January, 1997, the much poorer harvest of 1997 reduced the number of people who sold maize as well as the amount sold. Whereas 60% of sample households sold some of their maize in 1990/1, only 29% did so in 1997. Apart from the ups and downs due to drought or other climatic problems over the past decade, the percentage of households selling maize has been dropping since 1990/1 (see Table 8). Basing my opinion on what sample farmers say and on matching their statements with their behaviour, I believe that this average drop in numbers of people selling is due to the increased volatility in maize supplies and in maize prices during the deficit season. In other words, people are concerned about their food security.

There are the usual differences according to level of resources. In 1997, as one would expect, the reduction in sellers was least marked for the top quartile. In 1997, the percentages of sellers in each quartile were: 18% for the bottom quartile, 19% for the second quartile, 26% for the third and 53% for the top quartile. In 1990/1, the equivalent figures were 44%, 59%, 58% and 78%. The largest drop was for households in the second quartile, which corroborates the pattern we have observed throughout the decade. This is a slightly U-shaped curve for maize sales, a pattern that reflects sales by the poorest (those with lowest income, least land, smallest harvests) because they have few other sources of cash, the least sales by those in the second quartile (of income or of harvest), and then increasing sales with income and harvest size. The mean value of maize sales for the 29% who sold was K315. Assuming an average price of K2 per kilo, the household mean sale would translate into 156 kg. The mean varied by income quartile, with the top quartile earning an average of K515 from sales, the third quartile K181, the second quartile K112, and the bottom quartile K126. The last two figures again demonstrate the U-shape of maize sales.

(f) Maize marketing and market liberalization

The sources of maize to which people turn to supplement their own, largely insufficient production, are the local markets, ADMARC, and traders. A key point to stress about maize supplies is that they are not guaranteed. The severe shortages in 1997/8 and the rapid escalation of prices are only the most recent, albeit intensified, reflection of this fact. Families are thus confirmed in their attempts to produce as much as they can for their own consumption but, willy-nilly, to be driven onto the unstable markets.

The market liberalization measures taken from 1987 onwards appear to have had largely positive results for maize sellers, in increasing the number of outlets for their sales, but to have had mixed to negative effects on the ability of households to purchase maize in the deficit season.

Post-harvest season: Liberalization has essentially involved breaking ADMARC's monopsony on buying crops. Even before the government's announcement that private traders were encouraged to enter the marketing of all crops (at first excluding tobacco), there was active buying and selling in the villages. But after 1987 and especially from the early 1990s, large numbers of traders have entered the Zomba area at harvest time to purchase crops. Today, large numbers of traders using scales can be seen congregating at the local markets, although they are still a minority in comparison with the numbers of local sellers (some of whom include our sample household members). The proximity to major urban centres (Blantyre-Limbe and Zomba), to numerous ADMARC centres, and the relatively good roads account for the influx of traders from about May for the main harvests of maize and other food crops through to around October when the pigeon peas are harvested. The range of people trading has also increased over time. They include large scale traders based in the towns, locally based traders who operate on a medium to small scale, and large numbers of opportunistic traders who are otherwise farmers or labourers.

The influx of traders at harvest time has led to more people in the sample to shift their sales of maize from ADMARC to traders. However, the pattern observed from 1990 on seems still to hold. Most sellers sell only small quantities of maize and prefer to do so in the local markets where they are able to obtain better prices than either ADMARC or traders offer. The minority of farmers who sell large quantities of maize, especially hybrid maize, sell either to

ADMARC or to traders, depending on the conditions of the sale. For example, in 1990/1, most of these large-scale sellers continued to sell to ADMARC because there were still relatively few traders around and they were not offering attractive prices. In subsequent years, the bigger sellers have decided to sell to a trader or to ADMARC depending on the going price, on whether the trader is willing to collect the maize from the compound (an action that was supposedly outlawed in the early years of the liberalization measures), and on whether there are social connections and deals between the seller and buyer (trader or employees of ADMARC).

It is important to stress the close interaction between the traders and ADMARC. Before the official opening of ADMARC centres for buying maize, traders offer the lowest prices they can. Once ADMARC opens, they have to offer at least the ADMARC price in most cases because they know sellers will choose to sell to ADMARC without an incentive of either the price and/or reduced transport costs. The price thereafter depends on the relative supplies that particular year. In a year of poor harvest, traders who wish to sell in urban centres usually offer farmers a price slightly higher than ADMARC's in order to be able to obtain what they want. In bumper harvest years, they will seek to obtain supplies at prices below ADMARC's, thus allowing them to on-sell to ADMARC for a margin or to sell in towns. It is obvious that the low prices offered by traders before ADMARC opens are received by "desperation sellers", those people who have very small food stores but who sell because they have no other source of cash. On the other hand, once ADMARC is open, the competition between traders and ADMARC and among traders themselves has generally worked to the advantage of sellers who have been able to shop around for the best price they can get and/or negotiate some other part of a deal, such as transportation of the maize. While the biggest maize sellers benefit the most from this, smaller sellers may also benefit. As noted, most of the latter prefer to sell in the local markets because they are able to get the best prices there. However, people tend not to include the value of their own time in selling. For anyone who does – for example, if a person would prefer to be doing something else than sitting selling – the slightly lower unit price offered by a trader may be worth it. Obviously, in such cases, there is a fairly complex set of calculations going on that include not merely money but also the gains of selling in a market where one has to go anyway to buy other goods or to obtain information about something or to pass the time gossiping with friends.

Much of the influence of such a big player as ADMARC obviously depends on its having the ability to play a role. Some of the liberalization measures that have directly affected the agency have led to frequent liquidity crises and its running short of cash to purchase crops

. In 1995, for example, the parastatal had to order its officers to stop purchasing maize in late June in order to concentrate on tobacco, sunflowers, chillies, gram and other crops that were expected to earn them a larger profit. Between then and when it reopened at the end of July, the price offered to farmers by traders dropped from the K1.25 that had been set by ADMARC's price to K1. ADMARC, then, continues to be a key actor in maize buying and it has a strong influence on the prices offered to sellers.

The influx of traders has had a more obvious effect on the prices for legumes. There has been a definite increase in traders buying legumes, especially pigeon peas, chick peas and gram since 1990/1. These crops are apparently sought by urban wholesalers who sell some on the domestic market but also export to Asian countries. Farmers say the prices for these legumes have increased markedly since traders started competing with ADMARC for the crops. Traders in the area have also told us that, except in a poor harvest year when the demand for maize is high and the price rockets up, they make a much lower profit from maize than from legumes. Hence, for most years, most traders prefer to concentrate heavily on legumes, although most also buy maize. Part of this seems to be an increasing demand for legumes from urban wholesalers which, in turn, seems to derive from both an increased domestic demand for such crops but also from an expanding export market. As with the volatility of the European markets for chillies, the fluctuations in demand, funnelled to farmers by traders, explain the continued practice by farmers in diversifying their cropping patterns and, somewhat similarly, the tendency of traders to trade in a range of crops.

Deficit season maize trade: While large numbers of traders come into the village areas and trading centres during the harvest season to purchase crops, they dwindle to a tiny number selling maize in the deficit season. During November and December, 1997, for example, in two of the main markets (Thondwe and Dzaone) no traders were selling maize and in the other, Mayaka, six traders who have stores in the centre were selling (and buying) maize. Most of the traders whom we have interviewed over the past few years say they do not have the resources to be able to store large quantities of maize to sell from November onward. In each of the trading centres are a few such traders but although their number has increased somewhat since 1987,

they cannot provide the level of supplies needed for consumers. Similarly, except in years of exceptionally bumper harvests, such as 1996, local markets have low supplies during the deficit season and at very high prices. In a year of normal rainfall and average harvest, the price for maize is at its lowest immediately after the harvest and at its highest in the following "deficit period" of December through February. In years of poor harvest, there are smaller supplies available for sale from local sellers, more people seeking to buy, and therefore a greater rise in prices in the local markets. Our market surveys conducted in the three major market centres of the area over the years show the rise in price by January or February to anything between twice and seven times the previous harvest prices. The highest increases occurred in the years of drought. (Maize in the markets is sold by the plate. Our surveyors buy several samples of maize at a certain value –say K2- which are later weighed to find the kilo price equivalent).

What was remarkable about 1997 was the reversal in this normal pattern. The post-harvest price for maize was actually higher than the price in the previous January (see Graph 1 for 1990 and 2 for 1997). This topsy-turvy situation reflects not an absurdity but the combination of a very poor harvest year (1997) following an extremely good one (1996) in the context of the absence of substantial ADMARC or government or other supplies within the region and country that might have cushioned the run on supplies from mid 1997 onwards.

What happened was the following. In a normal year, the bulk of sales for a sample occurs after the main harvest, with a smaller peak in December and January for the small minority of true surplus producers. Thus, during 1990/1, the peak value of aggregate household sales was during July-August of 1991 while the trough was in February-March. In complete contrast, during1997, the peak in sales value (59% of total sales) was during January-March. This reflects the bumper harvest of 1996 with a much larger number of people with surplus maize than we have seen during the entire decade. In January, 1997, there were more sellers of maize in the local markets than I had ever seen at that period and the price for maize (as measured in our surveys) the lowest, relative to the previous harvest price, we have recorded. However, as people began to realize that the continuing heavy rains were going to reduce their maize harvests, they started to stop selling by February and March. Those with cash available also tried to buy maize. As a result, the local supplies were reduced and the prices started to rise. The harvest did prove poor and very little maize was sold. As a result, the post-harvest market prices rose above those for the previous January. As more people tried to buy, and as traders

scrambled to purchase as much as they could to on-sell in the towns, so the prices rose quickly. In the latter months of the year (October-December), some of the households with the largest landholdings and the largest harvests sold maize to take advantage of the price rise, while a few were planning to wait until even later when they knew the price would go through the roof. Indeed it did. Already at K7 in early January, when we conducted our last market survey, it reportedly rose to around K10 and more in February and March before the new harvest came in.

In light of what happened during 1997, I would wager that it will only serve to reinforce people's concerns about protecting their food stores, inclining them to try even harder to preserve whatever they can produce. Even some of the biggest producers who grow a lot of burley, have substantial cash earnings and savings, and who have cut back on their maize surpluses in the past years, say they are rethinking their idea that they can "always buy maize" if they need to. People are long used to periodic shortages at ADMARC in deficit months, December through February, and in each year I have lived in the villages, I have observed such times. These always caused hardship to the many who are dependent on buying small quantities fairly regularly because they are able to scrape together only small amounts of cash. However, in 1997, people were remarking that such shortages are now happening more often and last year had ADMARC even starting the season with insufficient maize stocks. People also say that ADMARC's shortages mean they are not protected against the higher prices charged by the few traders around in the deficit season.

Interesting here is that public attention in the villages and, to judge by the media, elsewhere is on traders' high prices. However, our surveys of the local market prices show them to be equivalent and often higher than traders' prices during the deficit periods. For example, in December, 1997, the few traders selling maize at Mayaka were charging K5.50 a kilo, whereas the kilo equivalent of the maize being sold by the plate by the small sellers cost K6.50. The prices were higher in Thondwe and Dzaone, where there were no traders selling. The overall average price across the three markets in December was K7. The problem is not who is selling so much as the overall flows of supplies into the rural areas. So far, ADMARC is the only agent able to provide the high volume needed in the "normal" deficit season. Most traders and all other sellers in local markets operate on a small-scale, and neither individually nor in aggregate seem able, to date, to replace ADMARC. If this is so in an area like that of southern Zomba which is near urban centres and is among the best served by both ADMARC centres and by private

traders, it is unsurprising that our much shorter exposure to villages in Ulongwe (Machinga), Ncheu and Namwera suggests that people elsewhere are even more likely to retain as much of their maize as they can in order not to be dependent on unreliable and/or disproportionately expensive supplies.

6 Anthropometry, 1990/1 and 1997

A comparison of the anthropometric measures of children under six years of age shows a slight improvement in all average Z scores in both seasons (December-January and July-August; see Table 9). Overall, in 1997, the sample children remain moderately stunted (with an average height for age z score of –1.978) but with less wasting (weight for height average score being 0.080 compared with –0.11 in 1990/1). The pattern of a better status of girls continues. Also, the one deviation from this pattern noted in 1990/1 when boys in the top income group did better than girls is not present in 1997, therefore there is no support for the hypothesis made then that the richest households might be tending towards a "preference" for boys. Since the top twenty-five percent have become even better-off by comparison both with 1990/1 and with other households in 1997, the reassertion of the overall pattern (also found in national surveys) of young girls having better nutritional scores suggests the one deviation in 1990/1 was a fluke.

Although there is an overall improvement in average scores for the sample, there are distinct differences depending on income level. There has been a clearer improvement in all three z scores for the top income quartile, an improvement in the short-term measure (weight for height) for the middle two quartiles but no obvious change in the longer-term measures (of height for age and weight for age), while the bottom income quartile children are the only ones to have a minus score on weight for height and have slightly worse scores for the longer term measures as in 1990/1. The overall trend is most dismaying since it suggests that the poorest twenty five percent have not been able to improve the nutritional status of their children and may even be losing ground.

As in 1990/1, the differences in the 1997 scores for children in households growing tobacco and those not were not significantly different. Income level, rather than tobacco growing, is more indicative of differences in nutritional status. Similarly, the differences across households according to the criterion of "headship" (which proxies for the permanent or temporary presence or absence of a husband) appear to reflect relative income levels than

anything else. The difference found in 1990/1 when female de facto households (those where the husband was absent for half or more of the time) did rather better in nutritional status for their young children is not found in 1997. One hypothesis put forward for that difference was that the adult women in the female de facto households were putting most of their work effort into growing food crops whereas those in female de jure households were gaining much of their cash income from off-farm activities such as retailing crops. Since the latter strategy involved absences away from the home, it was hypothesised that children were not receiving the level of care, including food, that those in female de facto households were. In 1997, the income strategies had shifted so that retailing was more important for female de facto households than for female de jure. Moreover, the much smaller number of households in the female de facto category makes comparisons with other household types more difficult, especially because of the very small number of children in such households (12) compared with the other two categories (male-headed with 287 and female de jure with 82).

III Broader Processes in the Research Areas

1. Growth in Trading Centres

Throughout the research area over the decade there has been an increase in economic activity that is most marked in the local markets and trading centres. This results from the liberalisation of trading policies as well as political and institutional changes. Perhaps the most obvious change taking place is the growth in the small market centres. The research area is "bracketed" on either end of the east-west dirt road that runs through the middle of the area with two important trading centres: Thondwe in the west, on the tar road from Blantyre-Limbe to Zomba, and in the east, Mayaka. In the middle, also on the east-west road is Dzaone. All three have active markets (Thondwe and Dzaone on Saturdays and Wednesdays, Mayaka on Tuesdays and Fridays) that have expanded over the past decade. Some of this expansion in size derives from the influx of traders since the late 1980s and early 1990s as the market liberalization measures reduced ADMARC's monopsony and encouraged private traders. In addition and relatedly, more of the local farmers appear to have taken up part-time trading on their own account. The spread of burley growing and the licensing of intermediate tobacco buyers have also produced an increase in the numbers of buyers entering the area at the time of the burley harvest. The large-scale buyers include local and neighbouring estate owners and traders as well as some that reportedly have come from Namwera, Machinga and Mangochi. As with food crop trading, burley buying has also attracted fairly large numbers of local farmers into buying and selling relatively small amounts of burley. The overall effect of this increased level and scale of trading is the expansion of the markets. On market days, it is difficult for vehicles to pass through Thondwe and Mayaka markets because sellers have crowded onto the roads and goods and buyers spill into the narrow lane left for vehicles. Dzaone's main market centre is a few hundred yards off the main road, so reducing the kind of congestion seen at the other two. The past couple of years has seen a further intensification of this congestion from the very large number of people selling and buying second-hand clothes, another result of liberalized trade regulations.

The growth of the trading activities in these markets is not due entirely, however, to the policy changes put in place. There are several factors that strike me as important. One is the rapid growth in urban and peri-urban populations who, in turn, are provided with foods and other goods from markets like Thondwe and Mayaka. Thondwe, in particular, is a mecca for traders

and personal buyers from Zomba and Limbe-Blantyre. Early in the mornings of market days and especially on Saturdays, the buses and matola (taxis) come filled with buyers from the towns and, later in the day, return with the many goods purchased in the market. Mayaka also attracts buyers from a much wider area than the immediate surrounding villages.

A second contributing factor is a combination of demography and politics. There is a growing number of young people in Malawi who manage to obtain some education but cannot find full-time jobs. These, particularly young men, are definitely flowing into some of the increased trading activities, some on their own account, some on behalf of others, including full-time traders. The decision by President Muluzi to fund a programme especially designed to enable young people to enter small-scale business has also had an effect. Although this proliferation of young (mainly male) traders is perhaps most obvious on the streets of the main cities (where it is becoming increasingly difficult to walk on the pavements!), some is also taking place in the rural markets.

Finally, perhaps most important but also more difficult to document, is the growing need for rural-based people to find ways of making cash. The growth in market trading seems to be one of the main ways in which farmers and a presumably growing category of landless or near-landless people can "turn a penny". As our household surveys have shown over the years, on average, about a third of total income (including the in-kind income of home-produced maize) comes from "off-farm" activities, including small-scale business and wage work. This percentage increases as total income decreases, reflecting the fact that the poorer families are also those with less land and other assets and therefore need to rely much more on non-farm income. Research from other parts of the continent also suggests that non-farm income activities are becoming more significant for a growing proportion of the rural population (see Reardon, DATE).

The growth of market centres is seen not only in the size of the markets themselves and of the numbers of people active in the markets but also in the buildings in the centres. All three of the sample area markets have experienced expansion in terms of the numbers of buildings over the past decade. Most of these are shops (selling a range of goods including groceries, small hardware, cloth) and tea-rooms or restaurants. A number also include rooms for rent to mobile traders, students at local MCDE schools, and people posted to the area by government and other agencies. Most of the people having these buildings put up are local; they are traders who are

expanding their operations, burley growers and burley buyers who are investing some of their burley money into businesses, or people in civil service or other white-collar employment and retirees who are investing some of their savings in running a business. There are also some non-local people building. In Mayaka, for example, there are several owners of small estates in the area who have had buildings put up, some for renting out to other business-people, some for their own businesses. In 1997, there was also a report that a man who owns a large estate in the Namadzi area was intending to put up a building for a business (possibly for selling fertilizer and other agricultural inputs). In all three market centres, but especially in Mayaka, shops have been rented or built to house private companies selling agricultural inputs.

> Mr KK is a teacher at U Primary School but lives at a trading centre. In 1997 he was building a shop with two rooms and planned to rent out one of the rooms. He grows burley tobacco and also buys some; he also buys maize and pigeon peas to sell to companies in Blantyre. It is the money made from these activities that is being put into the new building. He has also managed to buy a car. His brother, MK, is also a teacher and is also building his own shop at the trading centre. The land they are building on was given to them by their father who used it as a field long ago.
>
> Mr M is building an extension to his tea-room at a trading centre. He has been running the tea-room for about 8 years and says it has brought him profit because on market days there are many people who come and, he added, even on non-market days there are still people around who buy tea (and snacks).

The implications of this flurry of building are several. First and most obviously, the market centres are becoming more important economic distribution centres for crops and other goods. This, in turn, reflects and fuels increased economic flows throughout the area, a great deal of which, in my opinion, is a result of the demands emanating from the growing urban centers of Zomba and Limbe-Blantyre. Second, these activities provide employment for local people and also a demand for other local goods and services.
Another benefit could be the increased lobbying available from a growing local elite for services, such as improved roads, for the area that can benefit a much wider range of persons.

Aspects of this trend that may prove disadvantageous are first, an increased competition over resources. In an area with a relatively high population density (of about 200 per km), land is obviously in short supply for agricultural production. In the villages themselves, people remark on the fact that they are finding it difficult to house the rising generation in light of the need to

protect farm-land. This is the case even though there is a regular out-flow of people taking up permanent residence in districts where they are still able to obtain land, such as parts of Machinga and Mangochi, as well as those who leave for temporary periods in work elsewhere. The burgeoning market centres add to the pressure on land for non-agricultural uses. Clearly, assessing the implications of such expansion for agricultural production is important. Even more important is addressing the issue of tenure and property rights that underlies what is going on. For example, around Mayaka there is an increasing demand for land on which to build stores, etc. A couple of families in our sample have been convinced by one of the wealthiest traders in the area to sell him some of their land. This land, of course, is legally "customary" land and therefore not supposed to be for sale. In the particular cases concerned, there is no immediate danger for the families, given the other land they own and the ratio of heirs to land. However, the larger issue is the degree to which private appropriation can take place in these "grey" areas between tenure types.

There is also competition over resources such as water, sand, gravel and soil (for brick-making), as well as for poles and grass for building and thatching . Again, this intensifying demand for resources may be beneficial in the short-term to those able to sell such items. But where it draws from apparently "free" goods, such as the water, sand and gravel in streams, one is faced again with the problems of overlapping tenure systems and something of a free-for-all in obtaining resources.

Such examples of intensifying resource competition in a situation of overlapping systems of rights point to a crucial need for careful policy attention.

Finally, there is mounting competition over the valuable and scarce streambed gardens (dimba). These naturally and hand-irrigated gardens have long been among the most valuable types of land in the villages. From 1986, we found somewhat less than a third of the sample families with such gardens, some of them very small. (Devereux 1997, cites a national figure of 25% of smallholders having access to streambed gardens.) Over the decade, demand for these gardens has increased. This is because of an increasing need for nursery beds as burley growing spreads as well as the increasingly valuable use for producing vegetables for sale, especially in the dry season when prices rise. While some of these gardens are loaned among relatives and friends in much the way other dryland fields are, most such exchanges occur on the basis of cash payments or in-kind "gifts". Some people refer to such paid loans as "lending" but others use the

term “rent”. The amounts quoted range broadly but have definitely increased since 1990. IN 1997, they ranged from around K30 to several hundred, depending on size and relationship between the transactors.

I am not suggesting here that there is anything intrinsically wrong about gardens being rented. Although land is legally “customary”, the area of the villages is so densely populated that land is practically treated as family property. The processes of transfer and inheritance are complex (see Peters 1997) but the points to be made here are the following. First, the current land rights do NOT equate a situation of “insecurity” as is sometimes mistakenly assumed by outsiders when they come across “customary” land. However, there is such variation in the way land is held and transferred, that the label of “customary land” is vague and misleading. The particular system in place has to be assessed since it varies across the country. In the Zomba area, as noted, land is practically treated as family property. In other areas, however, both from my own research experience and from discussions with other knowledgeable people in Malawi, it appears that there is a danger of a "land grab", with chiefs "selling" land to those able to put up substantial amounts of money. The second point is that the system provides for a considerable amount of flexibility in that fields may be used by a range of persons within families (that is, among sisters and sisters’ children) over time. For example, a woman leaves the village to work in Lilongwe; her field is used by a sister or sister’s daughter until the daughter of the former woman, the “owner”, needs a field and it is transferred back to her; she marries someone who works in Zimbabwe so her field is taken over by a younger sister or a younger, unmarried, brother until further notice. Finally, such flexibility does not rule out conflicts over relative rights but these, too, are mostly dealt with at the level of the family or the village (in which case the village headman holds a hearing of the rival claimants). Thus, in cases where streambed gardens are being rented out, the person renting one out may be too old or sick or otherwise unable to use it for that season, so enabling her to gain a small income that otherwise would not be available. As with dryland gardens, those who rent out or lend land are very insistent that the borrowers not plant any trees or put any permanent structures on the land since these are usually taken to indicate “ownership”. Again, conflicts arise over competing claims but they are not, in my opinion, any more likely than if land were held in some titled form.

A tenure issue that does need regulatory and legislateive attention concerns the close link between the streambed gardens and the streams they rely on. While the gardens are family

property, the water course itself is presumably either state or common property. In practice, the streams are virtually open-access regimes. Water in the streams is used for domestic use, for cultivation (through the gardens), and for fishing in some places. Most of these uses are by locally resident people. But it is also used for dredging sand and gravel by local residents but increasingly and on a larger scale by outsiders coming from neighbouring trading centres or towns. The expanding growth in buildings in trading centres and the even faster growth in the peri-urban and urban areas of Zomba town have produced an accelerating demand for building materials and water. Thus, one has an intensifying set of divergent uses of the water-courses and extremely unclear modes of access and rights. Apparently, some of the largest scale dredgers obtain authorisation from an office in Zomba. But for most uses observed by me over the years, people "just take" what they want, as I have been told many times. This is so taken for granted that sometimes people do not understand why I ask. But this is an issue that needs careful attention since the resources on which local residents depend are being taken or negatively affected (eg. through changes in the course of streams) willy-nilly. Given that these resources can only become more subject to demand from multiple users, it is critical to consider ways of protecting local rights at the same time as regulating outside use and allowing local people to benefit from whatever outside uses are allowed.

2. The poor and the market.[1]

A common assumption of some recent policy documents on food security in Malawi is that poor families are "outside the market". This assumption is held even when the papers are in other ways quite different, even opposed, in their approaches and conclusions. I argue that it is profoundly mistaken to see the poor as "outside the market".

The poorest, food-deficit households do sell less of their maize harvests than other groups. But research also shows that the proportion of households in each income decile selling maize is higher in the bottom decile than the middle deciles and high, again, for the top deciles. This so-called "U curve" is interpreted as indicating that the very poorest sell more food than they would like because they have few other options to earn cash, while the slightly better-off retain more

[1] Sections 2 and 3 are taken from my 1996 discussion paper, Conceptual Quagmires, Old Problems and New Questions: Rethinking Policy Assumptions about Malawi's Rural Economy.

food, earning income in other ways, and the highest proportions of sellers are found among the better-off, food-surplus producers.

The point is that poorer people do sell maize (and other goods) and are, willy-nilly, drawn into markets. As net consumers, too, they are necessarily in the market for obtaining food. However, they usually enter the maize market at the most disadvantageous times -- as sellers, they sell early in the season when the prices are at their lowest, and as buyers, they buy in the deficit season in local markets or villages when prices are highest, and considerably above those at ADMARC centres.

Secondly, although the poorest families in rural areas work more often for food than others, it is a misconception to portray them as existing in an autonomous "world of their own production and barter" (Brown et al. 1996:14). None of even the poorest families and individuals work only for food; all also work for money. All rural Malawians live in a highly commercialized economy where cash is needed for a wide range of goods and services. The poor, in particular, cannot remain within a "world of their own" because their "own production" is so lamentably low, and are drawn into markets -- as diggers and weeders of other people's fields, as drawers of water for brick-making or road-making, as pounders of maize for the families able to hold feasts, as collectors and carriers of grass or wood, as sewers of tobacco leaves, and so forth.

Thirdly, to assume that "barter" or exchange in kind is separate from markets is incorrect. The mistake is in taking types of exchange to be impermeable domains whereas they are closely related and mutually determining. The conversion rates between goods, services and money are determined by the prevailing structures of prices in local areas. The single most important determinant is the price of maize. In similar fashion, the rates of wages for casual work, such as weeding, are recalculated in light of the rise in cost of living, preeminently as determined by maize, but also in relation to the numbers searching for work and those looking for workers. In general, the rate of compensation has increased over the years: for example, the number of planting stations or ridges per tambala earned has decreased. However, it is also the case that most wage situations involve a degree of negotiability and this is least for the poor person looking for work in the deficit period and at a time of severe food scarcity. As one of the poorest women in our sample said in the wake of the 1991/2 drought -- "I have had to work much harder for [a particular quantity of] food this year". When there are many people looking for work and

few needing to hire them, the rates fall. While there is a certain moral compulsion placed on the better-off families in the area whereby poor people "beg" for work (whether for money or food), this is normally insufficient to provide all the support needed by the poor, especially, as noted, in drought conditions.

In sum, because the conversion rates involved in work for food or other goods and barter are keyed to the existing structure of supply and demand and, hence, prices, it is simply wrong to state that the poor are "outside the market".

Hence, even though food-deficit families are not primary beneficiaries of an increased producer price, it does not follow, as has been recently stated (Brown et al., p.23, 14) that, "Market liberalization has almost certainly had very little impact on [them] ... The price of maize has little significance for them". On the contrary, the price of maize and the overall supplies do have a profound effect on the poor. Since the single most important effect on local prices and conversion rates among goods and services comes from maize, when supplies are very short (as in drought years or where the available supplies fail for various reasons), not only are the poorest forced to rely on the most expensive sources for purchase, but they also face low rates of conversion for their work. The challenge is twofold: overall national and regional supplies do matter and it is not a "disingenuous [claim] at best" (Henry 1996) to aim at ensuring adequate supplies; but, as is now well recognised, overall adequacy of supplies is not sufficient if some people are unable to obtain the food. For this, efforts have to be made to increase the purchasing power of the poor in Malawi.

3. Food Security and Cassava

In face of the pervasive food insecurity and malnutrition in Malawi, policy analysts have been debating the most effective way of increasing food supplies at national, household and individual levels. There have been discussions about the centrality of maize as a staple cereal in most of Malawi, about the need to help producers increase yields, and about the role of other major food crops in the diet. Current debates are in danger of polarising into the pro-maize contingent and the pro-cassava contingent. This is a counter-productive and unnecessary opposition. It is a mistake to speak of maize "monocropping" in the maize-growing areas, because this ignores the fact that the farming systems and diets of people in those areas include

substantial amounts of other food crops,as described above. Similarly, it is profoundly mistaken to assume that cassava can replace maize as the staple food in most areas of the country.

Cassava is an important supplementary crop in most of the areas where maize is the staple cereal, but to propose that it replace maize as the primary staple is faulty on several grounds. First, to say in so many words "let them eat cassava", is like telling the Italians to give up pasta for potatoes or the Irish to do vice versa. Food habits are not unchanging (both maize and cassava are wellknown imports into this region some centuries ago from South America). But rarely can they be changed by ultimatum.

Secondly, cassava is far from universally appropriate to the variable ecological and household-level conditions in maize-growing areas. Cassava is an important supplementary crop for many in the Zomba area and, to judge from other research, elsewhere. But many people do not grow it. In 1996, for example, 60% of the 119 Zomba households interviewed did not grow cassava, a much higher percentage than those not growing sorghum (18%) or pigeon peas (31%). The main reasons for not growing include the depredations of goats untethered in the dry season, lack of sufficient land to devote to cassava, and recent repeated outbreaks of pests and disease. In the village situated largely on black cotton soil and dambo land, people also claim that the soil is inhospitable to cassava since it is highly moisture-retentive in the rainy season then hardens, concrete-like, in the dry season.

Cassava's advantages as a supplementary crop are well recognised by farmers: it is relatively more drought-resistant than maize, its growing cycle does not create the same peak labour demands as does maize (for weeding and harvesting), its storage is less a problem since it can be left in the ground for considerable periods, and the leaves of most cassava varieties provide an important accompaniment to nsima when few other leafy vegetables are available. At the same time, cassava is vulnerable to a range of pests and crop diseases, is not suitable, as noted, to all eco-niches and is subject to damage by livestock. In sum, it is an important contributor to the "food basket" of many families, but is far from being the solution to household deficits in staple maize.

Part of the current interest in promoting cassava is that national data indicate an increasing production of cassava. The usual interpretation is that rural households are increasing their cassava production because of their recent increased exposure to repeated droughts and their recognition of cassava's greater resistance to drought (relative to maize). I imagine that

localised research would find this holds in some places. However, I have not found it to be the case in general in the Zomba or Machinga (Ulongwe) sites where we have done research. This led me to the following, alternative or complementary, hypothesis to explain the national data.

Very few households in Zomba report having increased their cassava production over the past few years. However, some of the twenty-five percent with most land and highest overall income report having increased their production for food and for sale. A number of people also pointed out that the cost of cassava in local markets has been increasing relative to other crops. For the minority able to, this was an incentive to maintain or increase their production for own consumption ("so that I don't have to buy cassava for my children to eat"). For those forced to buy, it was yet another problem in the way of achieving adequate levels of food supply for their families. Similarly, there have been reports that the price of cassava is also rising perceptibly faster in the Zomba townships. In addition, some areas around Zomba town, such as Domasi, are said to be big producers of cassava, suggesting a certain specialisation in production and marketing. Finally, the owners of a couple of the small estates in the research area report growing more cassava for sale in the past couple of years and/or an intention to increase their cassava production for sale.

On the basis of such suggestive findings, the hypothesis I propose is that the major determinant behind the national data on increased cassava production is less the attempt by rural households to improve their food security by increasing production of drought-resistant crops and more the fast rising demand for cassava from burgeoning urban and peri-urban populations.

It is among the latter groups that the fastest changes in food habits are occurring. The rhythms of the work-day in wage or salaried labour and the high mobility of people in these environs mean that the nsima-based meal is more appropriate (if at all) for the evening while midday meals must be based on something far more "snackable". The proliferation of road-side chip-makers throughout Zomba town is merely the latest in the many responses to this rising demand. Cassava, as stated above, is already a well-known "snack", boiled or roasted. In addition, the recent years of inflation and stagnant or declining wage levels have made the price of bread, probably the key urban food, out of reach for an increasing proportion of families. Cassava is becoming more and more a replacement for bread. Hence, the rising demand and the rising price in urban markets and the response of some rural producing areas.

If this hypothesis is correct (even partially correct), some of the implications are as follows. First, rural production and food security are inextricably tied to the fast-moving processes in urban and peri-urban areas. And, of course, the reverse holds. While this relationship is important throughout Africa, it is particularly salient in small and densely populated countries like Malawi. Research (at village and national levels) has been slow to develop methods of tracking the dynamic relations between rural and urban areas. The cassava data are only one example: doubtless, it is correct that some rural populations are increasing cassava production for own consumption but, as argued here, I suspect that the urban demand is more salient.

Secondly, as always, the effects differ for poorer and richer households. In the villages, the rising cost of cassava is bad news particularly for the poorest who want to consume cassava but whose lack of resources prevent them from growing it. While it is good news for those with sufficient land and other resources to increase their production to benefit from the rising price.

Thirdly, and most relevant here, is that if the processes hypothesised are underway, to urge "let them eat [and grow] more cassava" is, at best, behind the times, and, at worst, guilty of failing to recognise that the profound differentiation among rural households means that no single strategy can be followed by all families.

In short, there would seem to be scope for helping the poorer families to gain access to cassava cuttings and, perhaps, improved varieties of cassava as a supplementary food-crop. But to ignore what I hypothesise as the intensifying demand for cassava among the growing urban population would be a mistake, leading to misinterpretation of shifts in cassava production. Most mistaken, in my opinion and on the basis of the past decade's research in rural villages, is to assume that cassava can replace maize as the primary staple: the mistakes are ecological, agronomic, and economic.

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APPENDIX I SAMPLE DESIGN AND METHODS

The study area falls in Zomba South where the six village cluster research sites are distributed over an area approximately fifteen miles east-west and ten miles north-south. The research area is bracketed by the tarmac road joining Zomba and Blantyre in the west and the good dirt road joining Zomba and Phalombe in the east. The dirt road joining Thondwe (just off the tarmac road) and Jali (just off the Phalombe dirt road) runs through the middle of the research area. This road was relatively well maintained under the Rural Roads Programme (DRIMP) in the earlier period but over the past four or so years has greatly deteriorated since it is no longer maintained on a regularbasis. This has seriously negative effects on the social and economic life of villagers and others.

The original selection of the sample in 1986 was done with a combination of maps, village lists and vi.sits to villages to select households. The households were purposively sampled to include roughly equal proportions of tobacco growers (growing dark-fired tobacco in 1986 and mostly burley since 1990), "large" maize growers, and "small" to "medium" maize growers. Since everyone grows maize, these last two categories translated into those with relatively large and those with relatively small land-holdings in the villages. This selection was made because the aim of the initial study was to compare "commercial" producers with others, a comparison that became a comparison of producers of non-food cash crops with producers of food crops only. All households selected also had at least one child six years or younger because one of the measures of welfare was anthropometric measures of young children. The overall outcome of the selection, as expected, was to over-represent the better-off families. Hence, the sample means should not be taken to represent the "average" household in Malawi. On the other hand, the main aim of the research was less to provide descriptive statistics, of which there is a plethora in Malawi, and more an analysis of the dynamics of production and consumption among families in relation to cash-cropping and commercialization. After 1990, this focus was sharpened to examine the way market liberalization played itself out in family strategies and the encompassing rural economy.

The methods of research in 1986/7 and 1990/1 were virtually identical; in 1997 certain changes were made, as noted. A baseline survey was conducted at the start of the

research periods, establishing (changes in) household composition and characteristics. Given the matrilineal and matrilocal character of the area (whereby virtually all husbands came to live in their wives' villages and where, on divorce or death, the husband left, leaving the wife), the household relationships were recorded vis a vis "the key woman", who was the woman "in charge" in the sense of being the one most responsible for managing the family regarding food supplies, income, family welfare, and so on. Subsequently, monthly surveys were conducted of income and expenditures by the adult workers in the households: these always included the"key woman", a husband if there was one, and any adult daughters or sons with a key part in the household's livelihood. The monthly surveys also recorded staple food stores, household composition update, morbidity of children under six and the mother/caretaker. In 1990/1, the split-sample design of income and expenditure recall used in 1986 was simplified to a single recall of income and expenditures during the past month. In 1997, the monthly survey was reduced to a two monthly survey (ie. six points in a twelve month) and was also changed to record expenditures only. Incomes sources were recorded but not actual amounts of income. In addition to these regular surveys, single surveys collected data on field measurements (only of changes in land-holdings for 1990 and 1997); cropping patterns; maize harvests; tobacco production and sales; use of fertilizer, seeds and credit. Labour use surveys were conducted monthly in 1986, but reduced to key periods (5 times) during 1990 and 1997. Special-interest surveys, such as local wage rates, eating patterns among families, migration histories, etc. were conducted. In addition, there was a monthly survey of maize and other food crop prices in the three major local markets in each of the periods: the crops are sold "by the plate", hence researchers bought a certain amount (K1 or K2) of maize, for example, which was subsequently measured to calculate the kilo equivalent price. Finally, two anthropometric surveys were conducted in each of the three years, one in the post-harvest, dry season (July-August) and one in the wet, food-deficit season (December-January).

The surveys were conducted by assistants who lived full-time in each of the six village clusters. These were supervised by a graduate of the University of Malawi. In addition, in 1986/7, there were two US graduate students, one concentrating on the socio-economic surveys and one on the nutrition and health issues. In 1990/1, one US graduate

student oversaw all the surveys and logistics throughout the year, while a second graduate student came for a month each time for the anthropometric surveys. In 1997, resources did not permit having such a student so all supervision (as well as design, etc) of surveys was the charge of Pauline Peters, the overall director of the entire series of research (and the author of this report). In addition to the survey methods, ethnographic study was conducted in all three years by Peters, who lived full-time in one of the research villages in 1986/7 and 1990, and in 1997, in a market centre some two miles from the nearest research village. Data entry was done in Zomba, with our own computers but in premises kindly loaned us by the Centre for Social Research. Most of the data analysis was carried out in Cambridge, the home of Harvard and HIID.

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APPENDIX II A Sketch of Village Life

In this appendix, I draw a brief sketch of everyday life in the villages. This is a picture culled from the years I have lived and worked in the villages in southern Zomba district, with shorter experiences in villages in Machinga, Ncheu and Namwera. I think it will resonate in many ways with life elsewhere in the rural areas of Malawi. While the past decade has been one of some momentous changes – the shift from one-party rule to a multi-party regime, considerable adjustments to parastatal and government organizations as part of economic policy reforms, the cessation of war in neighbouring Mozambique – many fundamental strategies of making a living, patterns of social organization, definitions of identity, and ways of organizing in groups remain relatively unchanged

Villages and the world

The experience of living in the rural villages of Southern Malawi reveals to a stranger, such as the author of this report, the constant hard work, deep sociability and good humour of rural lives. But the visitor also sees the sadness and tragedies visited on many families by the early deaths of babies and small children. So, too, one learns about the burdens placed on people's everyday lives by the sheer amount of work entailed in making ends meet, as well as by endemic illnesses, injuries, and, more recently, the traumas of HIV-related sickness and death. To meet the demands these conditions place on their lives, people deploy the energy, social networks and humour most visible to visitors as well as the less obvious but pervasive worries, fears and antagonism both overtly expressed and often cloaked in sorcery and witchcraft accusations. Often, when villagers are asked the "reasons" why they do such and such, they tend to answer that they "have always done that" and to refer to their "miyambo" or "traditions". But, in fact, these ways of thinking and doing have been adapted and transformed over the years through social interaction among groups. People tend to be knowledgeable about what is going on in neighbouring areas and towns, especially concerning the things that most affect their own livelihoods – crops, foods, jobs, clinics, but also concerning the many social networks that are so important to rural life – religious groups and meetings, political organizations, miscellaneous other associations. People travel around a great deal and many work outside the village areas for short to long periods. There are no households who do not have members living outside the

village at some point, and no families without relatives and friends in other parts of the country. In the course of employment and in the countless social interactions in markets, clinics, on the roads, in social gatherings such as funerals, and through letters and oral messages passed from person to person a great deal of information exchange takes place. The "bush telegraph" and gossip chains are amazingly effective. For example, a few years ago, exactly what was happening with the relief distributions for the Phalombe landslide damage was known within a day in the Zomba villages. People also exchange information garnered from newspapers and radios: at the time of the "Gulf War" between the Americans and allies and Iraq, for example, the villagers were able to tell me what was going on. They have also asked me many questions over the years about the landings on the moon, the O.J. Simpson trial and such other matters they have heard about.

One result of people having access to many sources of knowledge and information is to present the visitor with what seems to be a curious mix but which, to the villagers, is not curious at all. For example, a farmer may do all s/he can to find out about the different qualities of new hybrid maize varieties and to obtain extension advice on planting and fertilizing, but also will consult a local doctor (sing'anga) on why the maize harvest, despite enormous care, failed two years in a row. Similarly, a beer brewer will make careful calculation of her costs and sales, but never fails to place special charms around the brewing activities to ensure a good brew. A brick-maker who regularly produces thousands of bricks for village and town needs, will select his wood carefully as well as follow ritual practices and use charms to ensure the kiln burns hot. All this is to say that people's lives take place in a specific social and cultural space but one that has long been part of national, regional and increasingly global political economies and cultures.

Household, family and kinship[i]

Whenever people in the study villages[ii] differentiate themselves from Malawians from further north and south, they identify the different ways of reckoning descent and contracting marriage. They say that they follow their mother's line whereas other groups (such as the Tumbuka from northern Malawi) follow their father's line, and husbands come to live in their wives' villages. The term "breast" (bele) is used to refer to matrikin --persons descended from a named female ancestor. The term may refer to a core group descended from a common grandmother (ie. a four generation line), or wider sets of matrikin, such as a group of

descendants of the siblings of a great-grandmother or great-great-grandmother (ie. several collateral lines of five or more generations).

The term most commonly used to describe matrilineal relatives, apart from bele, is mbumba, which is the group of sisters and their children under the "guardianship" of an elder brother. The English translation for mbumba is usually sorority group and guardian is the usual translation of nkhoswe. Like bele, mbumba can refer to a group of matrikin over a narrower or wider scale. People in the southern Zomba villages tend to describe the mbumba as the group for which a mother's brother or brother will be responsible for chinkhoswe, which is the complex of responsibilities incumbent on family representatives at times of marriage, death, divorce, disputes, and so forth. The "guardian" (nkhoswe) mediates between the woman (and her children) and the rest of the world -- husband and affines, neighbours, others.

Children belong without question to their mother's group, and names and property follow the matriline (ie. descent, succession and inheritance are matrilineal). Since the great majority of marriages in the area are also uxorilocal, whereby the husband lives in his wife's village and, often, family compound, a child is brought up surrounded by his/her mother's matrikin. Children of a group of sisters refer to each other and think of each other as siblings. Throughout life, matrikin provide the surest support and the closest ties to a person, though they are also the main rivals in competition over land, wealth, and status and, therefore, the main subjects of accusations of witchcraft.

At the same time, a child is seen as connected importantly to its father. Although individual marriages often do not last more than a few years, a young woman's first child is ideally the product of a marriage. First marriage is usually the only one celebrated with elaborate ceremony. Fathers are considered to contribute physically to the growth of the baby in the mother's womb and, equally important, to be crucially responsible for the health and wellbeing of the unborn baby and its mother. Hidden adultery and other moral infringements can transfer harm to the child, producing tsempho, which has to be treated with special rituals. After the birth of the child, the father's behaviour continues to have ritual effect for the baby and, of course, his contributions of work and income are essential to the proper upbringing of the child. The husband is referred to as mkamwini, son-in-law, and is expected to impregnate his wife, so "peopling" his wife's matrilineage, to care for his wife and children, as well as to contribute materially to his wife's close kin, especially mother. According to villagers in the research area, a

"good" husband divides the money he earns with his wife whereas a "bad" one uses most for his own purposes, forcing his wife to either beg her husband for help or fend for herself. Both spouses usually keep control over whatever monies they earn (from selling crops, beer, or doing casual work), but a good marriage is marked by the reciprocal knowledge and sharing of each other's income and by a minimum of conflict over the resources directed by each spouse to his/her respective matrilineal group.

Children take the name of the mfunda (matri-clan) of their father and are so addressed in the village. As noted, marriages are often very short (a typical situation among matrilineal peoples), but children often maintain relations with their fathers throughout their life even though they may live with several of their mothers' husbands. The variation seems to owe as much to personalities and circumstances as to the degree of support any father may give his child (and vice versa). While people refer back several generations to their matrilineal forebears, the ties with a father's family rarely last beyond the one generation.

Land, work and family

Today, as in the past, the livelihood of the majority depends on land. The research area is in the densely populated southern region (with densities of over 130 persons/km) where people produce maize and other food crops for sale and food, as well as tobacco, chili peppers, and sunflower. Since the villages are in the orbit of two urban centres, the production of vegetables for sale is also key to people's strategies. All these activities depend on gaining access to land and its resources. Although most of the land is legally under "customary tenure", the absence of any uncultivated "bush" in the area effectively means that fields are family property. They are passed down through the matriline and virtually all are passed to female heirs. A young girl helps work the fields of her mother or grandmother (or another matrilineal relative if she does not live with mother or grandmother), but receives her own field when she marries or, more usually, has her first child. As time goes on, she will receive other fields as elder matrilineal kin become too frail to work them or when they die. The few cases where married sons are given fields to work are those where there is no daughter to inherit or where the family has a great deal of land. In a significant number of the few cases of sons using land in the research villages, serious disputes have broken out between them and the sisters or the sisters' daughters because the stated and practised norm is that daughters have priority over land: people say simply, "sons leave".

The work of cultivating the fields is done by the woman, her husband and children. Often they raise a small amount of cash to hire young men or boys to clear and ridge the fields prior to planting which is done by the woman, husband and children; they may also be helped by one or a few casual workers with the weeding. Often these casual workers, especially for clearing and weeding, are relatives --the older children of sisters and other matrikin resident nearby-- or unrelated neighbours. The better-off households, especially those who grow tobacco, hire a worker or two for the season, from clearing through to harvesting. These are rarely kin or neighbours but usually young men coming from poorer and more densely populated neighbouring districts. Those who grow tobacco on any scale also hire temporary workers (most of them neighbours and relatives) for harvesting the tobacco and sewing the bundles of leaves for hanging to dry.

As far as working the fields goes, then, the unit of production and management is the elementary family -- woman, children, husband, usually referred to today as banja. The kin-based work-groups of other regions in Africa are absent here. Despite living in close proximity to and sharing the family land with sisters and other matrikin, most of the time most women work alone with their children and husband. Occasionally, at harvest, one sees sisters working together, and sisters and other close kin will help one of their group who falls sick. Much the same holds for other income-earning activities. Sisters who brew beer or kachasu (local gin) do so each on her own though they usually coordinate and take turns in brewing in order to avoid an over-supply in relation to expected consumers. Similarly for buying and selling crops, processing and selling foods (flour, cakes, cooked vegetables and meats). Each woman's husband is responsible for her and her children, although the mother of a man's wife is due great respect (and avoidance of any familiarity in demeanour or tone), and both she and the wife's sisters may expect to receive help with "male" work (such as building granaries or thatching), and occasional gifts. Friendship among women and among men is also an important source of regular and sporadic help in day-to-day living.

In much of daily life, the conjugal unit (banja) of a woman and husband with or without children appears to be the main unit of production and income-earning. Others working in the Shire Highlands have noted the "individuated" patterns of work among sisters (Davison 1993; cf. Vaughan 1983). In terms of daily consumption, too, the distinction between sisters is clear. Each woman with a husband has her own fire and cooks alone although the cooked food is often shared across the component households of a compound or neighbouring compounds. However, it would be a mistake to conflate the banja with the patriarchal household that has been promoted by missionaries and colonial agricultural officers and that today is often assumed by non-matilineal groups. A conjugal unit in the research villages is embedded in the wife's matrilineal matrix of relationships. For example, when a husband is away (temporarily or for long periods) or when a woman divorces her husband or is widowed, a woman often gives up her own fire to take turns with sisters or mother to cook. It is well-recognised in the villages, that a wife makes more effort cooking separately if a husband is around than not.

Moreover, although the production and income strategies of the conjugal unit appear highly individuated, they in fact depend on access to resources, particularly land, through membership of a group of people sharing matrilineal descent. The sharing in consumption of food and other goods among matrikin remarked on by other writers (eg. Vaughan 1983, 1987) stands less in contrast to individuated production as being a more overt expression of the matrilineal relationships and transfers that make the household production possible.

Defining wealth and poverty

When villagers are asked what they mean by wealth and poverty, they reply with deceptively simple definitions. Wealth and poverty are presented as mirror images of one another: the sufficiency versus the insufficiency of food, shelter and clothing. People define the minimal elements of a decent life as sufficient food to avoid hunger, good enough housing to protect against rain and cold and thereby against illness, and sufficient clothes to be able to appear clean and neatly attired at social gatherings (funerals, weddings, markets, religious meetings, etc.). Another common phrase that defines the basic needs of livelihood is “salt and soap”. The most usual answer given by villagers

when they are asked what they do with the money they earn is “buying salt and soap”. This is literally true -– they are common expenditures, and metaphorically true –- salt is desired to enhance the relish that accompanies the staple maize nsima and, thus, is an indicator of food, while soap is the sine qua non for cleanliness of body and clothes, the other markers of relative wealth. It is for these iconic reasons –salt and soap symbolically capture the basic elements of a good livelihood -- that such an answer is often given if a woman is asked about the economic duties of a husband (“he provides me with salt and soap”).

These minimalist definitions capture the most obvious distinctions. The very poor are easy to pick out: they wear ragged cloth that has long lost any semblance of colour; both their clothes and their persons – hair and skin- are dusty and unwashed; they live in small mud huts that usually collapse in the rains; and they are permanently hungry. Similarly, the larger and more substantial houses, large food stores, lack of hunger, and many changes of bright and clean clothes identify the wealthier residents of the villages. In addition, other consumer goods are increasingly acquired by the better-off families – such goods as a clock, watch, radio, store-bought pots and pans, thermos flasks, beds, upholstered furniture, multiple bicycles, and, for the richest, motorbikes and small pickup trucks. Not mentioned in the conventional definitions of wealth and poverty is the ability to engage fully in social networks. Yet this is the most fundamental criterion for achieving a proper livelihood. The work in fields, in other activities, the consumption of food, the mounting of ceremonies, rituals, and other social action are made possible through social networks and relations. Not only are the poorest insufficiently fed, clothed and housed, they also are unable to fulfil the normal social expectations such as making small contributions at funerals, weddings, and other ritual occasions, or giving small amounts of food and other items to neighbours and relatives as part of the normal round of interactions. The very poor also find it difficult to conduct the expected ceremonial and ritual activities associated with initiation of young people, or with memorial services for the dead. More broadly, people depend on family, neighbours and friends for successful living. There are no state pensions or social security and only minimal services of health and education. Households are far from being autarchic units and the sine qua non of livelihood is to be part of viable social networks. As described in the previous

sections, kinship, friendship and residence provide the social bases of organization of production and consumption. In this, the activities related to production cannot be easily separated from those of consumption. Indeed, the strategies of production can be understood only when we recognise that consumption is the driving force of production decisions.

I pointed to the obvious differences seen between the poorest and the wealthy. For most people, the range of goods and conditions that defines the standard of living is narrower. The range covers an occasional period of hunger as opposed to several months; two to three good sets of clothing as opposed to one; canvas or leather shoes as opposed to plastic "flip-flops"; separate kitchen and neatly constructed bathing room as compared with no kitchen or bathing room; several chairs as opposed to none or a simple stool; a blanket for each family member as opposed to one for the children and one for the mother or couple. Because differences can be subtle, judging the relative wealth and wellbeing among the majority is much harder than identifying the poorest or richest, and usually requires residence and actual measures (eg. through surveys, interviews and repeated observations).

Once one begins to investigate how people acquire "salt and soap", then the obvious facts of dependence on sufficient land and sufficient cash emerge clearly. The villagers rely overwhelmingly on land to produce as much of their food as is possible, given resources, and much of the sources of their cash income, the rest coming from a plethora of "business" activities and wage employment (as indicated in the report).

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[i] The two following sections are derived in part from my 1997 article, Against the Odds: Matriliny, Land and Gender in the Shire Highlands of Malawi, Critique of Anthropology, 17:2.

ii.This region has been the scene of complex movements of people. The original inhabitants were Nyanja and Mang'anja; later came Yao and a large influx of Lomwe-speaking groups from Portuguese East Africa from the turn of the century through to the 1930s. These all share basically similar social and cultural characteristics (matrilineal descent and inheritance, uxorilocal residence, as well as key ritual and cosmological beliefs and practices. The predominant population in the research villages are of Lomwe and Nyanja origins, though those following Islam tend to be "Yaoized" to an extent. People today will define their forebears, if asked, but most say "we are all mixed up, now" and all speak Chichewa as their everyday language. For this reason, I do not refer to them with a "tribal" or "ethnic" designation; they seem to me to be a regional population.

Table 1 Sample Per Capita Household Annualized Expenditures: 1986-7, 1990-1, and 1997
Nominal and Adjusted for Inflation

		1986-7	1990-1	1997 (n=215)	1990-1 Deflated **	1997 Deflated **
Total Sample		62.06	109.89	573.91	57.14	98.48
Expenditure Quartile 1 (Lowest)		34.43	32.52	137.07	16.91	23.52
Expenditure Quartile 2		46.11	55.17	271.63	28.69	46.61
Expenditure Quartile 3		64.25	78.61	456.37	40.88	78.31
Expenditure Quartile 4 (Highest)		105.92	276.37	1,449.29	143.71	248.70
Tobacco Producing *		63.86	157.05	621.41	81.67	106.63
	Smallholders		116.55	585.58	60.61	100.49
Non-Tobacco Producing		61.30	78.80	369.70	40.98	63.44
Female de Jure Headed		46.46	109.76	474.85	57.08	81.48
Female de Facto Headed		65.04	57.13	387.58	29.71	66.51
Male Headed		64.42	117.18	631.49	60.93	108.36

Notes: 1986-7 data were for a 10 month period and have been annualized.
1990-1 data were recorded monthly for twelve months
1997 data were recorded six times during a one year period.

* Tobacco Producing equals both smallholders and leaseholders (no leaseholders in 1986/7).

** Low Income Zomba Consumer Price Indices were used to derive a Non-Food Index to account for bias from the large percentage of expenditures spent on food.
A deflator of .33 was used to deflate the 1997 data to a 1990 base and then a deflator of .52 was used to deflate to a 1986 base.

Table 2 Maize Harvest: Household Means, 1986 - 1997

	1986 - 1987			1990 - 1991			1997		
	N	Household	Standard Deviation	N	Household	Standard Deviation	N	Household	Standard Deviation
Total Sample	210	880	703	181	1305	1029	217	586	
Expenditure Quartile* 1 (Lowest)	63	552	399	45	677	468	55	293	331
Expenditure Quartile* 2	48	714	447	45	973	589	53	314	350
Expenditure Quartile* 3	50	1034	802	46	1423	790	54	567	658
Expenditure Quartile* 4 (Highest)	49	1308	843	45	2146	1368	55	1162	1118
Non-Tobacco Producing	148	833	742	123	1152	889	60	483	711
Tobacco Producing	62	993	592	58	1631	1222	177	610	788
Smallholders				53	1527	1138			
Leaseholders				5	2740	1664			
Male Headed	137	954	895	131	1475	1103	148	646	848
Female de Jure Headed	29	646	416	28	752	600	51	493	625
Female de Facto Headed				22	999	629	18	365	395
Female teba**	14	1278	969						
Male absentee***	30	581	437						
Land Group A (< .7 ha)				24	551	364	34	232	248
Land Group B (.7 - 1.5 ha)				94	1082	716	105	500	569
Land Group C (> 1.5 ha)				63	1926	1253	78	857	1043
Land (<.5 hectares)	14	415	233						
(.5 - 1 hectares)	47	460	262						
(1 - 1.5 hectares)	78	757	405						
(1.5 - 2 hectares)	29	906	371						
(2 - 3 hectares)	31	1419	738						
(3 - 5 hectares)	10	2389	1110						
(>5 hectares)	5	4208							

*Income Quartiles for 1990 - 1991 data
**Household of migrant to South Africa
***Other female de facto households

Table 3 Maize Harvest: Per Capita Means, 1986 - 1997

	1986 - 1987			1990 - 1991			1997		
	N	Per Capita	Standard Deviation	N	Per Capita	Standard Deviation	N	Per Capita	Standard Deviation
Total Sample	210	145	117	181	219	195	217	104	128
Expenditure Quartile* 1 (Lowest)	63	109	95	45	87	47	55	59	73
Expenditure Quartile* 2	48	128	76	45	153	81	53	58	69
Expenditure Quartile* 3	50	155	123	46	229	123	54	103	113
Expenditure Quartile* 4 (Highest)	49	198	147	45	408	269	55	193	176
Non-Tobacco Producing	148	145	127	123	196	181	40	112	115
Tobacco Producing	62	146	86	58	268	216	177	102	176
Smallholders				53	257	207			
Leaseholders				5	387	298			
Male Headed	137	155	119	131	246	214	148	111	136
Female de Jure Headed	29	140	124	28	140	116	51	89	112
Female de Facto Headed				22	162	102	18	86	108
Female teba	14	182	141						
Male absentee	30	89	54						
Land Group A (< .7 ha)				24	110	88	34	44	44
Land Group B (.7 - 1.5 ha)				94	196	166	105	99	131
Land Group C (> 1.5 ha)				63	295	211	78	136	139
Land (<.5 hectares)	14	111	82						
(.5 - 1 hectares)	47	95	73						
(1 - 1.5 hectares)	78	136	103						
(1.5 - 2 hectares)	29	135	66						
(2 - 3 hectares)	31	179	95						
(3 - 5 hectares)	10	373	208						
(>5 hectares)	5	601							

*Income Quartiles for 1990 - 1991 data

Table 4 Sample Percentage Growing Hybrid Maize

Years	N	%Growing Hybrid
1986-7	210	2%
1990-1	181	52%
1992-3	208	68%
1993-4	108	42%
1994-5	125	75%
1995-6	119	47%
1996-7	217	39%
1997-8	217	61%

Table 5 Sample Percentage Using Fertilizers on Maize

Years	N	% Using Fertilizers
1986-7	210	28%
1990-1	181	73%
1992-3	208	69%
1993-4	108	50%
1994-5	125	67%
1995-6	119	64%
1996-7	217	76%
1997-8	217	75%

Table 6 Per Capita Maize Harvests by Tobacco and Income, 1997

Quartile	Tobacco	Standard Deviation	Non-Tobacco	Standard Deviation
1 (lowest)	53	61	72	93
2	63	76	38	30
3	101	114	122	109
4 (highest)	170	140	425	326

Table 7 Expenditure Shares on Foods and Selected Items 1986, 1991, 1997

		Percent of Budget Spent					
	Year	Maize	Other Foods	Goods & Services	Health	Education	Fertilizer
Total Sample	1986	20.0	26.0	32.0	2.0	0.4	1.9
	1991	22.0	22.0	31.0	1.1	2.0	3.7
	1997	19.5	19.6	35.1	1.0	0.6	5.6
Expenditure Quartile 1 - (Lowest)	1986	25.0	20.0	32.0	2.2	0.2	0.7
	1991	36.0	23.0	29.0	1.3	2.0	1.3
	1997	29.5	22.0	35.3	0.7	0.6	0.2
Expenditure Quartile 2	1986	23.0	34.0	33.0	2.5	0.6	0.3
	1991	24.0	23.0	31.0	1.2	1.7	3.2
	1997	22.0	22.8	32.5	1.3	0.4	4.6
Expenditure Quartile 3	1986	19.0	25.0	32.0	1.6	0.5	2.2
	1991	19.0	23.0	30.0	1.1	1.7	4.3
	1997	19.8	19.6	32.5	1.4	0.8	5.2
Expenditure Quartile 4 - (Highest)	1986	13.0	25.0	31.0	1.9	0.3	4.4
	1991	9.0	18.0	33.0	0.6	2.7	6.0
	1997	6.6	14.2	37	0.6	0.6	12.6

Table 8 Percentage of Households Selling Own Maize

Years	N	% Selling Own Maize
1986-7	210	53%
1990-1	181	60%
1992-3	208	48%
1993-4	108	16%
1994-5	125	17%
1995-6	119	33%
1997	217	29%

Table 9 Z Scores for Children Under 6 Years, 1990/1 and 1997

	HAZ		WH		WA	
	1990	1997	1990	1997	1990	1997
Dec/Jan	-1.944	-1.89	-0.189	0.021	-1.36	-1.14
S.D.	1.476	1.45	0.93	0.843	1.19	1.05
N	230	196	232	196	232	196
July/Aug	-2.234	-2.064	-0.029	0.138	-1.43	-1.16
S.D.	1.351	1.45	0.882	0.876	1.09	1.06
N	230	185	232	185	232	185
Average	-2.091	-1.978	-0.11	0.08	-1.4	-1.15
S.D.	1.38	na	0.828	na	1.08	na
N	230	na	232	na	232	na
All Boys	-2.15	-2.113	-0.113	0.102	-1.46	-1.21
S.D.	1.421	1.41	0.842	0.847	1.16	0.99
N	123	177	125	177	125	177
All Girls	-2.024	-1.855	-0.106	0.058	-1.32	-1.1
S.D.	1.334	1.48	0.816	0.874	0.99	1.1
N	107	204	107	204	107	204
Income Q1	-2.085	-2.385	-0.162	-0.147	-1.45	-1.56
S.D.	1.535	1.411	0.838	0.891	1.16	0.96
N	73	104	74	104	74	104
Income Q2	-2.256	-1.685	-0.175	0.172	-1.54	-0.93
S.D.	1.262	1.65	0.881	0.763	1.07	1.06
N	56	108	58	108	56	108
Income Q3	-1.922	-2.034	-0.024	0.004	-1.24	-1.23
S.D.	1.337	1.217	0.79	0.885	0.97	1.02
N	57	85	44	85	58	85
Income Q4	-2.112	-1.781	-0.053	0.31	-1.33	-0.84
S.D.	1.323	1.334	0.808	0.853	1.1	1.01
N	44	84	44	84	44	84
Female de jure	-2.233	-2.242	-0.026	0.07	-1.65	-1.32
S.D.	1.015	1.457	0.955	0.858	1.09	1.12
N	27	82	28	82	28	82
Female de facto	-1.838	-2.558	-0.023	0.033	-1.17	-1.53
S.D.	1.514	1.717	0.828	0.56	1.12	0.84
N	24	12	24	12	24	12
Male	-2.104	-1.874	-0.098	0.082	-1.39	-1.08
S.D.	1.411	1.426	0.81	0.874	1.07	1.03
N	719	287	180	287	180	287
Tobacco	-2.139	-1.994	-0.034	0.073	-1.34	-1.16
S.D.	1.301	1.405	0.818	0.877	1.01	1.04
N	74	321	74	321	74	321
Non-Tobacco	-2.039	-1.875	-0.141	0.104	-1.4	-1.08
S.D.	1.412	1.678	0.845	0.775	1.13	1.11
N	147	60	149	60	149	60

Graph 1 Total Monthly Value of Maize Sales & Purchases, 1997