Access to Land, Growth and Poverty Reduction in Malawi [*]

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Abstract: After four decades of agricultural-led development strategies in the post-independent Malawi, economic growth has been erratic and a large proportion of the population live below the poverty line and studies suggests that the poverty situation has worsened. Agricultural policies favoured large-scale (estate) production at the expense of smallholder farmers who account for more than 80 percent of households. Smallholder farmers face several constraints including landlessness and small land holdings and declining agricultural productivity. This study argues that past agricultural strategies have been less successful because they ignored the land question among smallholder farmers. We show that access to land via agricultural production is one of the important factors that can translate growth to poverty reduction. Hence, for agricultural based strategies to be pro-poor in Malawi, land redistribution or resettlement programme for the landless or near landless should be central and a pre-condition for the effectiveness of pro-poor growth strategies in agriculture.

1.   Introduction

Malawi has pursued an agricultural-led development strategy since its independence in 1964. This agricultural-led development strategy was based on the promotion of a dual agricultural system comprising estate (large-scale) production mainly for cash (export) crops and smallholder agricultural production mainly to support the food security needs of the population. In the post-independence era the objectives of an agricultural strategy were four fold: to raise agricultural productivity and accelerate growth and export performance; to diversify the export base from the dominance of tea exports; indigenise estate (large-scale) agriculture and to encourage production by smallholder farmers (Kaluwa et al., 1992). In the early years of independence, government policy was biased towards estate-led agricultural development.[1] Nonetheless, smallholder agriculture remains an important source of livelihoods for a majority of the rural population and approximately 84 percent of agriculture value-added comes from 1.8 to 2 million smallholder farmers who on average own only 1

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[1] Smale (1995) notes that estate agriculture was vital for exports since smallholder export production were deemed unreliable because of considerable annual fluctuations. In addition, estate agriculture was also easier to coordinate and made it easier to finance research and development.

hectare of land (World Bank, 2003).

Various policies in the 1960s and 1970s were implemented to support smallholder agricultural development including guaranteed produce prices through the state marketing agency, government administered agricultural input credit, promotion of technologies and subsidies on key agricultural inputs. Although, the policy emphasis has been on the agricultural sector over the past four decades, the economic situation has not changed substantially and recent studies show that poverty is increasing. In 1998 the integrated household survey revealed that 65.3 percent of the population were poor with consumption of basic needs below the minimum level of MK10.47 (US$0.34) per day (GOM, 2000). Thus, although Malawi had almost completed economic policy reforms towards a market economy, the qualitative poverty monitoring study conducted in 2000, however, revealed that the poverty situation was worsening due to several factors some of which were a result of economic liberalisation (GOM, 2002a).

Like many other developing countries, poverty has become the central problem confronting Malawi in the new millennium. It is therefore not surprising that the first Millennium Development Goal requires member countries of the United Nations to reduce the incidence of extreme poverty (per capita expenditure or income of less than one dollar per day) by half by 2015 (Ferreira and Leite, 2003). While many developing countries have undertaken wide ranging economic reforms, some under the auspices of the World Bank and International Monetary Fund through Structural Adjustment Programmes, such reforms have fallen very short of expectations in delivering the prosperity benefits to large masses of the population. Thus, despite decades of economic policy reforms and increased globalisation of developing countries, poverty remains a major challenge today. In many countries, some of the structural adjustment reforms have led to inconsistent policies in promoting economic growth through poor sequencing and lack of understanding of the underlying structural issues specific to individual developing countries. Poverty reduction performance, despite substantial economic reforms in developing countries, has been disappointing (Booth, 2001).

More recently the new instruments, such as the Poverty Reduction Strategy Paper (PRSP), the Poverty Reduction and Growth Facilities (PRGF) of the International Monetary Fund and the Poverty Reduction Support Credit (PRSC) of the World Bank, for integrating poverty into the macroeconomic policy framework have been embraced in developing countries advocating greater participation and ownership of economic policies by developing countries (Bevan and Adam, 2001; Booth, 2001). In Malawi, the PRSP process was embraced as an instrument for participatory policy-making and integrating poverty issues into

national development plans. The PRSP process started in 2000 and the Malawi Poverty Reduction Strategy Paper (MPRSP) was published in 2002 (Jenkins and Tsoka, 2003).

The agricultural sector has been singled out as the most important sector that can deliver pro-poor growth in the MPRSP. Several questions, however, arise in the context of Malawi. After four decades of an agricultural-led development strategy, what will enable Malawi to achieve the millennium goal of reducing poverty? What did the authorities not do in the past 40 years that will bring economic growth and poverty reduction? Is equitable distribution of land a success factor for growth in agricultural production to translate into poverty reduction? This study attempts reviews previous agricultural development in Malawi and demonstrates the importance of land reforms in achieving pro-poor growth in the agricultural sector. The paper is organised as follows. The next section reviews the agricultural development strategies in the post-independence era in Malawi and the link between access to land and poverty reduction. Section 3 presents the methodology and model specification for investigating the relationship between changes in poverty and land. Section 4 presents empirical results on the land-poverty linkages via growth in agricultural development. Section 5 assesses the feasibility of land redistribution or resettlement policy and the salient issues that must be addressed in implementing such a policy. Section 6 provides concluding remarks.

2. Agricultural Development in Malawi: Disappointing Four Decades?

More than 80 percent of the population in Malawi is rural, and since independence in 1964 agricultural activities continue to form the bulk of households' livelihood strategies. As Mellor (1966) observes, the potential for agricultural development to increase welfare in low-income countries derives from the fact that large proportions of the population engage in farming for subsistence needs and to generate cash incomes. There are several ways through which agricultural development will affect the welfare of the population. First, the landless or near landless may benefit from agricultural development through paid employment opportunities in off-farm activities created by technological change. Secondly, those who have land may benefit from higher productivity brought about by technological changes. The extent to which agricultural development can have greater impact on poverty also depends on the availability of land. Like in many low income countries, in Malawi farming systems are organised around family units on small farms whose tenure is not well-defined. With excess supply of family labour in most households, productivity and returns to agriculture tends to

be low on small farms. Furthermore, with the growing population landholding sizes are becoming smaller and fragmented, making some of the productivity-enhancing technologies impossible. It seems reasonable to argue that increasing land holdings provides one of the few possibilities for increasing income of the individual farmer.

2.1   Agricultural Strategies and Policies before Reforms

Agricultural development in Malawi has been based on a dual strategy. First, the promotion of estate agriculture that has since independence expanded rapidly on leasehold land from unused customary land. Lele (1989) argues that the rapid expansion of estate agriculture, particularly for production of tobacco, has resulted in a more unequal distribution of land in rural Malawi. Most estates grow high value cash crops, and it is not surprising that estate-led agricultural development was the main economic strategy in Malawi. Secondly, the promotion of smallholder agriculture on customary land, on which rights to cultivate and transfer land are conferred by traditional chiefs. In 1997/98 it was estimated that one third of smallholder households were cultivating between 0.5 and 1 hectare of land (GOM, 2001). Recent estimates indicate that 55 percent of smallholder farmers have less than 1 hectare of cultivatable land (GOM, 2002c). Others such as Alwang and Siegel (1999) estimate that 70 percent of Malawian smallholder farmers cultivate 1.0 hectare with the median area cultivated being 0.6 hectares, and devote 70 percent of the land to maize, the main staple food.[2]

Over the past four decades, government's strategy in the smallholder agricultural sector has aimed at increasing output and productivity to meet the food security needs and the cash requirements of the population. As such the smallholder agricultural development strategy mainly focused on increasing the productivity of maize. Several policies were implemented to support the strategy including promotion of technology adoption among smallholder farmers particularly hybrid maize and application of fertilizers supported by a government administered credit scheme, provision of extension services through a network of extension offices across the country, subsidies on inputs and a system of guaranteed pan-territorial and pan-seasonal prices for agricultural produce through the state marketing agency, the Agricultural Development and Marketing Agency (ADMARC).

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[2] Kydd and Christiansen (1982) and Lele (1989) note that per capita maize output from smallholder farmers stagnated and the output of other crops either declined or showed no trend and small farms were getting smaller.

However, Kydd and Christiansen (1982) argue that government policy facilitated the rapid expansion of estate agriculture at the expense of smallholder agriculture through easy acquisition of land; implicit taxation of smallholder agriculture through the smallholder produce pricing policy implemented by state marketing agency whose proceeds were used to develop estates by the state marketing agency; control of the commercial banks by the state marketing agency, the Agricultural Development and Marketing Corporation (ADMARC). As a result there was remarkable growth in estate agriculture particularly in burley tobacco production, with the ratio of the value of estate production to the value of officially marketed smallholder production increasing from 0.79 in 1964 to 1.93 in 1979 based on three-year moving averages (Kydd and Christiansen, 1982). This estate-led agricultural development has not benefited the majority of the smallholder population, whose return to labour was significantly squeezed by the produce pricing policy. The performance of the agricultural sector, as was the performance of many sectors in the economy, was impressive in the 1960s and early 1970s, but stagnated in the late 1970s and early 1980s.

2.2 Structural Reforms and the Agricultural Sector

The country experienced an economic crisis in 1979 and 1980 that led the government to adopt structural adjustment programmes under the auspices of the International Monetary fund and the World Bank in 1981. The diagnostic analysis for the first structural adjustment loan revealed several structural weaknesses in the economy including slow growth of smallholder exports, narrow export base and increasing reliance on tobacco exports, deteriorating financial position of state enterprises including ADMARC and inflexibility in prices and wages due to government control (Harrigan, 1991). A series of structural adjustment and sectoral loans and stand-by facilities have been obtained by the government to support structural adjustment reforms. Several of these reforms were targeted at the agricultural sector and aimed at improving the performance of the smallholder agricultural sector. Some of the objectives of structural adjustment policies in agriculture included diversification of the export base, ensuring appropriate price and incomes policy to offer adequate incentives to smallholder farmers, expanding the role of the private sector in the marketing of agricultural produce, increasing the efficiency and incomes of smallholder farmers.

Several policies have been implemented to achieve the reform objectives in the

agricultural sector.[3] Notably the phased removal of fertilizer subsidies in 1984; annual adjustment in agricultural produce prices; liberalisation of agricultural marketing activities in 1987; deregulation of fertilizer marketing in 1990; liberalisation of burley tobacco production by smallholder farmers in 1990; liberalisation of agricultural producer prices except maize in 1995, devaluation of currency and eventual floatation in1994 and liberalisation of maize pricing in 2000. The liberalisation of burley tobacco has led to an increase in the number of smallholder farmers growing burley tobacco and smallholder farmers have rapidly become the main producers of burley tobacco accounting for about 70 percent of national production (World Bank, 2003).[4]

Although structural adjustment programs have resulted in removing policy linked distortions in the agricultural sector to a larger extent (Chirwa and Zakeyo, 2003), the agricultural sector still experiences problems of physical access to domestic markets, access to rural credit facilities, low productivity and inequitable distribution of land. Kaluwa et al. (1992) also notes that although the reforms were necessary to halt the further deterioration in the economy, they were not sufficient for increasing the incomes and growth potential for a majority of the Malawian population. Smallholder production, especially in maize yields, and expansion of acreage has been devoted to food production rather than diversification into high value or export crops. The disappointing performance of the agricultural sector is at variance with intentions of the many economic reforms and policies aimed at enhancing the productivity of smallholder agriculture that have been implemented by the government.

However, one policy reform area that relating to equitable distribution of land, important for smallholder agriculture has been conspicuously absent in the reform and policy agenda in the past four decades. While government has promoting the adoption of fertilizers, hybrid seeds and modern methods of farming and the provision of price incentives through progressive market reforms, it had assumed that the existing small land holdings of smallholder farmers and worse still the diminishing smallholder land holdings would enable smallholder farmers respond to the various market incentives. However, there is evidence in Malawi that adoption of agricultural productivity-enhancing technologies is positively associated with the size of cultivatable land (Green and Ng'ong'ola, 1993; Zeller et al., 1998; Chirwa, 2003). Doward (1999) find a significant positive relation between output per capita and farm size while Chirwa (2002a) find farmers with small land holdings to be technically inefficient. No efforts have been made to redistribute the land to the landless. The only

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[3] For a detailed analysis of agricultural related reforms, see Chirwa (1998) and Chirwa and Zakeyo (2003).
[4] Prior to liberalisation, burley tobacco was only grown on estates and exported directly by estate owners.

resettlement schemes that existed were involuntary in which most of the settlers were graduates from Malawi Young Pioneers training course and in some cases led to the displacement of local population without compensation and in some cases land holdings were even smaller. These schemes were small-scale irrigated operations and have not been sustainable.[5] For example, Chirwa (2002b) find that small-scale irrigated schemes are characterized by high turnover, seasonal variation in patronage, under-utilization facilities and inputs.

2.3   The Malawi Poverty Reduction Strategy Paper

With the failure of other plans to address poverty in Malawi, what the government has hailed a consultative and participatory policy formulation process was initiated in 2000, leading to the publication of the Malawi PRSP in 2002. As Jenkins and Tsoka (2003) note, prior to MPRSP the poverty plans that were formulated in the 1990s were based on strategies and policies that were without prioritisation, costing and outcome-orientation. The MPRSP is a strategy document based on a consultative process involving a broad range of stakeholders and represents a consensus about how Malawi can develop and achieve its core objective of poverty reduction (GOM, 2002b).[6] The main objective of the MPRSP is to achieve sustainable poverty reduction through socio-economic and political empowerment of the poor. According to GOM (2002b) the MPRSP has four core broad elements, known as pillars, believed to be central to sustainable poverty reduction. The first pillar is sustainable pro-poor economic growth – which recognizes the importance of growth in poverty reduction. The belief in this pillar is that empowering the poor through macroeconomic stability, access to credit and markets, development of skills and generation of employment would lead to economic growth that benefit the poor. The second pillar is human capital development in which the objective is to ensure that the poor have the health status and education that takes them out of poverty. The third pillar is improving the quality of life for the most vulnerable by providing sustainable safety nets for those who are unable to benefit from the pro-poor economic growth and human capital development. The fourth pillar is

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[5]   The Malawi Young Pioneers movement was part of the single party machinery which collapsed in 1994 following the introduction of a multiparty system of government. These resettlement schemes similarly collapsed.

[6] The extent to which the process was participatory is a matter of debate in the poverty reduction strategy papers in developing countries. In Malawi, the civil society organisations were initially excluded in the process and the process was dominated by government officials with very little participation at community level. The process

good governance which aims at ensuring that public and civil society institutions and systems protect and benefit the poor. These four pillars are inter-twined with issues relating to HIV/AIDS, gender, environment, and science and technology.

Sustainable pro-poor growth is the core strategic pillar in the MPRSP, with other pillars providing the lubricants for reducing poverty. There are two main goals in sustainable pro-poor growth: promoting sources of growth (sectoral) and creation of an enabling environment. With respect to sources of growth, six sectors have been identified as potential sources of pro-poor growth comprising agriculture; natural resources; micro, small and medium enterprises; manufacturing and agro-processing; tourism and small-scale mining. Several strategies have been formulated in the MPRSP in achieving the objective of pro-poor growth through agricultural development. The following strategies in order of priority have been articulated to achieve pro-poor growth in agriculture: (1) expanding and strengthening access to agricultural inputs; (2) improving research and extension services; (3) improving access to domestic, regional and international markets; (4) promoting small-scale irrigation schemes and drainage; (5) encouraging production of specific crops; (6) encouraging production of livestock; (7) reducing land shortages and degradation; (8) promoting and expanding farm mechanisation; (9) reducing weakness in institutional and policy framework.

Addressing the credit constraint experienced by poor or smallholder farmers must be given the greatest attention, followed by extension services and access to markets. The problem of land is ranked seventh among the nine issues that have to be addressed in the agricultural sector for pro-poor growth; yet adequate land may be a necessary condition for achieving other objectives in agriculture in the MPRSP. Moreover, addressing land shortages is one of the strategies that are new.[7] The MPRSP strategy on the question of land point to two policy issues: guaranteeing the security of customary land and facilitating the redistribution of land to 3,500 households on a voluntary basis.

Jenkins and Tsoka (2003) argue that the key constraints in realising the growth and redistribution benefits are the absence of high-level political commitment to reform and lack of a thorough overhaul of conditionalities imposed by the international financial institutions. The government's own annual review of the implementation of the MPRSP reveals the lack of commitment to implementation of strategies. For instance, GOM (2003) note that the resource allocation in the MPRSP are more comprehensive than in the budget and that the 0.1

was also rushed through in order to meet target to accessing HIPC funds.
[7] Many of the strategies and strategic actions for increasing agricultural incomes have existed since independence or are being revived after being less emphasized during the adjustment period.

percent growth due to the implementation of the strategy has not come from sectors that are pro-poor. In addition, the allocation of resources to pro-poor activities in the budget does not reflect the priorities articulated in the MPRSP. For instance, improving agricultural production through research and extension services is ranked second in the MPRSP while small scale irrigation scheme is ranked fourth, yet in the 2002/03 budget these activities got 36 percent and 170 percent of their MPRSP allocations in the budget (GOM, 2003).

2.4 Land, Growth and Poverty Reduction: Is there a Link?

There is growing realization that growth is a necessary but not a sufficient condition for poverty reduction. While the bulk of evidence suggests that the higher the growth rates, on average the more the incidence of poverty falls. However, as the World Bank (2001) notes, the patterns of growth, the changes in the distribution of income and resulting opportunities and the rates of poverty distribution are a result of a complex interaction among the policies, institutions, history and geography of countries. Thus, countries that achieve the same growth rate are unlikely to reduce poverty in the same manner. The extent to which a given rate of growth translate into poverty reduction will depend on how distribution of income changes with growth and on initial inequalities in incomes, assets and access to opportunities that allow poor people to participate in generating growth (World Bank, 2001). Thus, for growth to have some meaningful impact on poverty, that growth must occur in sectors in which a large proportion of the poor derive their livelihood. However, Bigsten and Shimeles (2003) assert that the direction of causality of growth-income distribution-poverty relationship is still very unclear in theory as well as in empirical studies.

There are several studies that have examined what determine inequality in Africa and other developing countries. Bigsten and Shimeles (2003) note that inequality in Africa is quite high due partly to the underlying distribution of assets particularly land, physical and human capital. Ravallion and Datt (2002) in a study of growth and poverty in India find that initial inequality in interaction with literacy, farm productivity and asset distribution affects the relationship between growth and poverty. Bigsten et al. (2003) using panel data find land ownership, education, type of crops, dependency and location to be important determinants of poverty in Ethiopia. In addition, Bigsten et al. (2003) find that the production of a non-traditional export crop increased households' per capita expenditure and reduced the

probability of falling into poverty or of being chronically poor and increased the chance of escaping poverty. The poverty studies in Malawi also show that the main determinants of poverty are education, occupation, per capita land, type of crops, diversification out of maize and tobacco, participation in public works programs and paid employment opportunities (NEC, NSO and IFPRI, 2001; Mukherjee and Benson, 2003). Mukherjee and Benson (2003) find that increasing cultivated area per capita increases per capita consumption by 13 – 17 percent.

The various studies on determinants of poverty in developing countries that are dependent on agriculture find land as one of the important variables in explaining the welfare of the population. Access to land will lead to both increase in growth and reduction in poverty. For instance, the redistribution of land is likely to lead to derived demand for agricultural inputs such as fertilizers and improved seeds varieties, and addressing the land question may be critical in translating growth to poverty reduction. As Bigsten and Shimeles (2003), Ravallion and Datt (2002) argue, redistribution of land can ease the credit constraint poor farmers experienced, such that where land rights are well-defined farmers can use their land as collateral in formal credit. Furthermore, land reforms and redistribution will enable the poor to diversify into non-traditional cash crop production. World Bank (2001) notes that the main engine for poverty reduction in Vietnam was the land reform policy. This created opportunities for poor people to improve their lives and livelihoods.

3. Data Sources and Econometric Specifications

3.1 Data Sources

Data used in the study comes from two sources. Panel data is generated from two household surveys in 1998 and 2002. The first panel comes from household survey done in 1998 by the National Statistical Office (NSO) in the Integrated Household Survey (IHS). The second panel comes from the Complementary Panel Study (CPS), done in 2002 by Centre for Social Research (CSR). The households in the CPS are a sub-sample of the households drawn in the IHS. Both surveys collected data on the demographic characteristics of households, education, health status, own production, income and expenditure and employment. We obtained a usable sample of a matched panel of 349 rural households from 13 districts.

3.2 Econometric Specification and Choice of Variables

Our approach is to study the probability of being poor in 2002 and changes in the poverty status conditional on the household demographic and economic characteristics observed in 1998. First, using initial conditions and changes in other variables, we explore the determinants of poverty in 2002 using the following probit regression model:

$$P2002_i = \alpha + \beta X_i + \gamma Y_i + \lambda Z_i + \mu \tag{1}$$

where $P2002_i$ is the poverty outcome dummy variable that takes the value of 1 if the household was poor in 2002 and value of 0 if the household was non-poor in 2002; X_i is the vector of agricultural variables including household land size holdings, cultivation of cash crops and ownership of livestock; Y_i is a vector of household characteristics in 1998 or average of 1998 and 2002 variables including headship of household, human capital, household size, age of household head and health status of household head; Z_i is a vector representing non-farm income generating activities including ownership on a non-farm business enterprise in 1998 and whether the household head in salaried employment in 2002 and μ is the error term.

Secondly, we explore the importance of land and initial factors in explaining households' transition out of and into poverty and those that remain poor and non-poor. We have four types of chances in the poverty status. Some households succeed in escaping poverty and the change in poverty is -1 and others fall into poverty and the change in poverty status is 1. Those whose poverty status did not change had a poverty status change of zero, but we distinguished between those that remained in poverty and those that remained non-poor. The following regression model is estimated:

$$\Delta P_i = \alpha + \beta X_i + \gamma Y_i + \lambda Z_i + \mu \tag{2}$$

where ΔP_i is the change in the poverty status between 1998 and 2002, and the other variables are as defined earlier. We follow the procedure by Bigsten et al. (2003) in which we examine conditional probabilities of households falling into and escaping poverty for those who were non-poor and poor in 1998, respectively; and multinomial logit model on those that remained poor and non-poor with those that changed their poverty status as a base category.

3.2.1 Definition and Measurement of Variables

The dependent variables in the poverty models are the poverty status and changes in the poverty status between 1998 and 2002. The poverty status was derived from consumption expenditure data, with those that had household per capita expenditure per day less than the poverty line of MK10.47 at 1998 prices were categorised as poor in both 1998 and 2002.[8] The poor are represented by a dummy variable equal to 1, otherwise equal to zero.

We turn to the independent variables included in the poverty models. Two agricultural variables are included in the model: the average land holding of the household in 1998 and 2002 in hectares, a dummy variable capturing whether the household cultivated cash crop in 1998 and a household owning livestock in 1998. Land holding size, cultivation of cash crops and livestock ownership are expected to reduce the probability of being poor or increase the probability of escaping poverty.

The variable representing initial household characteristics in the model include headship of the household, age of the household head in years, education of the household head, health status of household head and average household size. Headship of household is represented by a dummy variable that takes the value of 1 if male-headed and zero, otherwise. The education of the household head is a categorical variable of different education classes: 0 – never attended school; 1 – completed early primary school standards I – IV); 2 – completed late primary school (standards V – VIII); 3 – completed junior secondary school (Junior Certificate of Education); 4 – completed senior secondary school (Malawi School Certificate of Education). We expect education level to reduce poverty and increase the probability of escaping poverty. The health status of the household head is captured by a dummy variable equal to 1 if the household head was ill in the past two weeks before the survey, otherwise equal to zero. Illness reduces the ability of the household to generate income for the household and we expect a positive relationship between the probability of being poor and illness.

Two non-farm income generating activities are included in the poverty model to capture the impact of non-agricultural activities. First, ownership of a non-farm business enterprise is captured by a dummy variable equal to 1 if the household operated non-farm business enterprise in 1998, otherwise equal to zero. Secondly, household heads in salaried

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[8] Real expenditure figures for 2002 obtained by deflating nominal figures by the consumer price index (CPI).

employment have more stable income sources and are likely to escape poverty. The impact of salaried employment is represented by a dummy variable equal to 1 if the household head was in salaried employment in 2002, otherwise equal to zero.

Table 1 presents descriptive statistics of the data used in the models. The data show that 80 percent of the sample households in the panel were poor in 1998 but poverty head count increased to 91 percent in 2002. Only 3.4 percent escaped poverty, 15.2 percent fell into poverty, 76.2 percent remained poor and 5.2 percent remained non-poor in the two periods. The average household size is 5.16 and 36 percent of household heads were reported ill in 1998. Most of the households were male-headed households (79.4 percent) and only 10.6 percent of household heads were in salaried employment in the 2002 survey. The average land size of the households is 1.54 hectares.

Table 1. Descriptive statistics of variables

Variable	Mean	S.D	Min	Max
Household was poor in 2002	0.9140	0.2807	0	1
Escaping poverty	0.0344	0.1825	0	1
Falling into poverty	0.1519	0.3594	0	1
Remaining poor	0.7622	0.4264	0	1
Remaining non-poor	0.0516	0.2215	0	1
Male-headed household in 1998	0.7937	0.4052	0	1
Age of HH in 1998	44.1404	15.699	20	95
Education of HH in 1998	1.3123	1.0841	0	5
HH was ill in 1998	0.3610	0.4810	0	1
HH in salaried employment in 2002	0.1060	0.3083	0	1
Mean household size	5.1605	2.1864	0	15
Squared average household size	31.3969	25.893	0	225
Household grew cash crop in 1998	0.2407	0.4281	0	1
Mean household land size	1.5421	1.1678	0	6.7
Household had livestock in 1998	0.2321	0.4228	0	1
Household had business in 1998	0.2779	0.4486	0	1
Household was poor in 1998	0.7966	0.4031	0	1
Sample Size	*349*			

## 4.	Land Holdings and Poverty Reduction: Empirical Results

The importance of land in poverty reduction through agricultural growth is revealed in the poverty change regression results. Table 2 shows the marginal effects of initial conditions on household poverty in 2002 in Malawi. The results show that households with large mean land sizes were unlikely to be poor in 2002 and a unit increase in land would lead to a 1.8 percent reduction in the probability of being poor. The importance of human capital is reflected by the significant negative relationship between the education of the household head and poverty status in 2002. The marginal effects on education show that households with more educated heads had 2.7 percent smaller probability of being poor. Household's head ill-health in 1998 is significantly associated with poverty with 3.8 percent higher probability of being poor. Household head that were in salaried employment had a 14.2 percent better chance of being non-poor in 2002. Household size is also positively and significantly associated with poverty, suggesting the potential negative effect of the dependency burden on poverty. Households that were poor in 1992 had an 8.9 percent higher chance of being poor in 2002.

Table 2. Marginal effects at means from probit estimates of determinants of poverty among rural households in 2002

Variable	dF/dx	S.E
Male-headed household in 1998 [*]	0.03726	0.0371
Age of HH in 1998	-0.00041	0.0006
Education of HH in 1998 [+]	**-0.02698**	0.0094
HH was ill in 1998 [*]	**0.03750**	0.0179
HH in salaried employment in 2002 [*]	**-0.14235**	0.0716
Mean household size	**0.04165**	0.0127
Squared average household size	**-0.00245**	0.0010
Household grew cash crop in 1998 [*]	-0.00816	0.0263
Mean household land size	**-0.01832**	0.0075
Household had livestock in 1998 [*]	-0.00310	0.0216
Household had business in 1998 [*]	-0.00670	0.0213
Household was poor in 1998 [*]	**0.08862**	0.0395
Number of observations	349	
Wald chi-squared	49.82	
Prob > chi-squared	0.0000	
Pseudo R^2	0.2843	

* = dF/dx is for discrete change of the dummy variable from 0 to 1; + = categorical variable; variables significant at 5% are given in bold.

We turn to the results on the factors that made household escape poverty given that they were poor in 1998 and fall into poverty given that they were non-poor in 1998. Table 3 presents the marginal effects of factors associated with positive and negative changes in poverty status. The signs of most of the coefficients in the 'out of poverty' model have opposite signs in the 'into poverty' model as expected. The main variable in the model, mean household land size is only statistically significant among household that fell into poverty and show that those with larger land sizes had a 9.0 percent smaller probability of falling into poverty. The education variable is also statistically significant in the 'into poverty' model, with household heads with higher education having a 26.4 percent smaller probability of falling into poverty. Household with a household head who was ill in 1998 had a 2.3 percent of smaller chance of escaping from poverty and a 15.9 percent greater chance of falling into poverty. The employment status of the household head only significantly affected the probability of escaping poverty. The results show household heads in salaried employment increase the chance of escaping poverty by 12.8 percent. The results also show that larger households reduce the probability of escaping poverty although such a relationship is non-linear.

Table 3. Marginal effects at means from probit estimates for rural households moving out of and falling into poverty, 1998 - 2002

Variables	Out of Poverty		Into Poverty	
	dF/dx	*S.E*	*dF/dx*	*S.E*
Male-headed household in 1998 [*]	0.00668	0.0153	**0.68187**	0.1726
Age of HH in 1998	0.00029	0.0005	**-0.00606**	0.0030
Education of HH in 1998 [+]	0.00422	0.0070	**-0.26418**	0.0705
HH was ill in 1998 [*]	**-0.02695**	0.0155	**0.15935**	0.0757
HH in salaried employment in 2002 [*]	**0.12789**	0.0587	0.09401	0.0730
Mean household size	**-0.02607**	0.0092	0.10993	0.0749
Squared average household size	**0.00159**	0.0007	-0.00396	0.0065
Household grew cash crop in 1998 [*]	-0.00645	0.0221	-0.05367	0.1067
Mean household land size	0.00732	0.0063	**-0.08995**	0.0317
Household had livestock in 1998 [*]	-0.01105	0.0173	-0.07769	0.0925
Household had business in 1998 [*]	0.00285	0.0163	0.03857	0.0950
Number of observations	278		71	
Wald chi-squared	42.67		23.86	
Prob > chi-squared	0.0000		0.0133	
Pseudo R^2	0.2115		0.4099	

* = dF/dx is for discrete change of the dummy variable from 0 to 1; + = categorical variable; variables significant at 5% are given in bold.

The multinomial logit regression results for no change in the poverty status are presented in Table 4. The base category is for those households that changed their poverty status (those that escaped from and fell into poverty). The marginal effects on the 'remaining non-poor' model were not statistically significant although some of the parameters in the underlying regression were statistically significant. Focusing on the results of those that remained in poverty, the results show that the probability of remaining in poverty falls among male-headed households, with higher education, with being in salaried employment, with the cultivation of cash crops and with ownership of livestock but increases with household heads' illness and household size. The results also show that the marginal impact of salaried employment is larger than any other variable and reduces the likelihood of remaining in poverty by 12 percent. Land size is not directly reducing the probability of remaining in poverty, but show indirect impact through cultivation of cash crops.

Table 4. Marginal effects at means from multinomial logit estimates for rural households remaining non-poor and poor, 1998 - 2002

Variables	Remaining Non-poor		Remaining Poor	
	dF/dx	S.E	dF/dx	S.E
Male-headed household in 1998 [*]	**-0.01666**	0.0123[c]	**-0.12473**	0.0415[a]
Age of HH in 1998	0.00014	0.0001	-0.00051	0.0014
Education of HH in 1998 [+]	**0.01001**	0.0068[c]	**-0.05538**	0.0217[a]
HH was ill in 1998 [*]	-0.00622	0.0046	**0.08733**	0.0389[a]
HH in salaried employment in 2002 [*]	0.00301	0.0065	**-0.13194**	0.0790[a]
Mean household size	**-0.00799**	0.0052[c]	**0.12161**	0.0303[b]
Squared average household size	0.00039	0.0003	**-0.00546**	0.0024[a]
Household grew cash crop in 1998 [*]	0.01487	0.0115	**-0.11461**	0.0618[b]
Mean household land size	**0.00286**	0.0019[c]	-0.02243	0.0169
Household had livestock in 1998 [*]	0.01477	0.0098	**-0.11237**	0.0581[b]
Household had business in 1998 [*]	-0.00030	0.0029	-0.05990	0.0486
Number of observations			349	
Wald chi-squared			69.83	
Prob > chi-squared			0.0000	
Pseudo R^2			0.2385	

* = dF/dx is for discrete change of the dummy variable from 0 to 1; + = categorical variable; variables significant at 5% and 10% are in bold and denoted by superscripts *a* and *b*, respectively. Superscript *c* denotes variables that were significant at 5% in the underlying equation but not significant in the marginal effects.

Overall, the results show that initial conditions are important in explaining poverty but household land size holding contribute marginally to reducing the probability of being poor. The analysis of changes in poverty, however, shows that land size holdings is only important for non-poor households as it reduces the probability of falling into poverty or increasing the probability of remaining non-poor. While the coefficients of land size have the expected signs in the models focusing on those escaping poverty or those remaining poor, they are statistically insignificant. The insignificance of land size in the 'out of poverty' and 'remaining poor' models is rather surprising given that the data show considerable upward movement in land holdings. Our sample of 349 households show that only 15.2 percent of households in 1998 had land of more than equal to 1.5 hectares, but the share of households with the same land size increased to 73.6 percent. This suggests that although there were upward movements in households' land holding sizes, productivity was possibly low.[9] One other reason for the insignificance of land size holding in the 'remaining poor' and 'out of poverty' models could be the fact that the poor have small land holdings and this perpetuates their remaining in poverty or those that gained some land such acquisition were marginal to take them out of poverty.

One interesting result, which is usually ignored in poverty studies, is the fact that being

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[9] The data in 2002 should be interpreted with caution because the 2001/2002 agricultural season was a drought year, thereby reducing the potential impact of land through agricultural production on poverty reduction.

in salaried employment has the largest marginal impact on poverty compared to household land sizes. The employment status of the household head reduces the probability of being poor, increases the probability of escaping poverty and reduces the probability of remaining poor. The marginal impact of the household head being in salaried employment is higher than any other variable in these models. This result is consistent with the findings by Mukherjee and Benson (2003) in which the effect of per capita land holding on per capita expenditure were smaller than the effects of participation in a public works employment programme (a safety net based on salaried employment).

As has been the case in other empirical studies, human capital variables such as education and health status play an important role in poverty reduction. There is consistent evidence that illness of the household head increases the probability of being poor, reduces the probability of escaping poverty, increases the probability of falling into poverty and increases the chance of remaining poor. Similarly, education of the household head reduces the chance of being poor, reduces the probability of falling into poverty, increases the probability of remaining non-poor and reduces the probability of remaining poor.

5.   Is Land Redistribution a Feasible Option in Malawi?

The importance of land in agricultural based economies cannot be understated. In Malawi, previous poverty studies (NEC et al., 2001; Mukherjee and Benson, 2003) and our results shows that access to land is an important variable in poverty. Given that the land markets are underdeveloped and the fact that most land is under customary tenure, it can be argued that access to land affects poverty through growth in agricultural production.[10] Land in Malawi is a critical resource for most rural households, but its distribution is not equitable. The average per capita cultivated land area is 0.22 hectares, with the ultra-poor holding 0.16 hectare per capita and the non-poor holding 0.28 hectares per capita (NSO, 2002). NSO (2002) also finds that mean production of maize (main staple crop) per capita was 48.5 kilograms for the ultra-poor, 63.3 kilograms for the poor and 115.8 kilograms for the non-poor. According to World Bank (2003b) about 1.8 to 2.0 million smallholder farmers cultivate on average 1 hectare of land compared with 30,000 estates cultivating 1.1 million hectares with an average landholding of between 10 to 500 hectares. Other studies estimate that about 3 percent of households (about 75,000 households) were landless in 1998 (Bosworth, 1998).

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[10]   In countries with developed land markets other channels such as land rentals through which land affects poverty are plausible (World Bank, 2003a).

Most land under smallholder cultivation in Malawi falls under customary tenure, and it is estimated that about two-thirds of the country's total land is under customary tenure.[11] Customary land which is under the traditional authority administration has come under pressure through subdivision among family members with increases in the population, with the average household land holding declining from 1.5 hectares in 1969 to 0.80 hectares in 2000 (GOM, 2001). Recent studies also find that the frontiers of land available for allocation from the traditional chiefs have declined and most land is inherited from parents (Bosworth, 1998; Chirwa et al., 2003). Since property rights are not well defined in traditional land ownership systems, literature suggests that traditional land ownership systems usually make land insecure and provide disincentives to investments. However, studies in Malawi show that even under the existing customary land tenure system land is secure and there is no evidence that customary tenure create disincentives to investment (Place and Otsuka, 2001; Chirwa et al., 2003; BDPA, 1998).[12]

The MPRSP identifies two ways in which the problem of small land holdings among smallholder farmers can be addressed: ensuring security of tenure and distributing land to the landless. Ensuring security of tenure will help in developing the land market in Malawi, which will have implications of poverty reduction – such as facilitating access to financial or physical capital and rent or sales. Since empirical studies suggest that customary land is secure land redistribution may have greater immediate impact on growth and poverty reduction, than formalization of the security of tenure of customary land as stipulated in the Malawi National Land Policy.[13] However, given the diminishing per capita land sizes among the smallholder farmers which partly result from family subdivision of household land, it is likely that access to land will constrain the effectiveness of pro-poor policies in agriculture in Malawi. The MPRSP set a target of redistributing 14,000 hectares of land to 3,500 households on voluntary basis. The question that arises is whether a land reform program that increases access to land of the landless or near landless is feasible? In addition, what are the implications of land reforms and how best should be implemented to minimize disruption to productivity and social problems?

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[11] The Land Act of 1965 recognizes three tenure regimes: customary, freehold and leasehold tenure.
[12] Once customary land has been allocated to the family or lineage under the customary tenure such land is perceived as the property of the family in perpetuity (Bosworth, 1998).
[13] The Malawi Government is currently in the process of drafting a new Land Act in line with the Malawi National Land Policy, which among other things will provide a new legal framework for land reforms and administration of land matters.

5.1   Opportunities for Land Reform and Resettlement

There are several opportunities for land redistribution on voluntary basis in Malawi. First, it is estimated that 2.6 million hectares of suitable agricultural land remain uncultivated (GOM, 2002c), but the landless do not have information on the availability of land and the resources that would enable them emigrate to such areas. Secondly, recent studies show that the changing economic environment and the decline in estate agriculture, particularly tobacco estates, offer some opportunity for the government to attend to the land problem in the smallholder agriculture sector. A survey of 34 probable abandoned estates confirmed that 17 were actually abandoned, 9 were dormant with owners intending to use them while 6 were being used and 2 had never been estates (Mapemba, 1997). The abandoned estates had a total area of 1,685 hectares while dormant estates covered a total area of 1,100 hectares. Estates occupy over 1 million hectares, but much of this land is being under-utilized partly due to poor management and competition from smallholder burley tobacco production leading to declining profitability of estate tobacco (World Bank, 2003b). There has also been an increase in the number of estates that are being offered for sale in the print media. For example, in one of the adverts in *The Nation* of 16 January 2004 five estates with a total of 972 hectares in the Central region were being offered for sale for a combined sum in excess of MK4.8 million (US$0.044 million). The Ministry of Lands, Physical Planning and Surveys (MLPPS) expects that a good number of tobacco estates will be available for redistribution given the declining profitability of burley tobacco and has already identified between 17,000 to 25,000 hectares of land for acquisition.

Thirdly, most estate land, particularly for non-plantation agriculture is owned by Malawians, and problems of land reforms that ensued under a fast track land reform programme in neighbouring Zimbabwe due to ethnicity of commercial farm ownership structure may not be experienced in Malawi.[14]

Fourthly, the demand for a land redistribution and resettlement programme is high among smallholder farmers, landless and those who have some land. Using a sample the 827 smallholder farmers drawn from four districts in southern Malawi, 58 percent expressed willingness to participate in a land development programme that promise more land and more than 90 percent of those that are willing to participate were also willing to contribute towards

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[14] Waeterloos and Rutherford (2004) note that by 2000, the majority of the 15.5 million hectares of large scale commercial farms were owned by the minority white Zimbabweans and international companies.

community based investments, to adopt modern techniques of farming and willing to register and title their land (Chirwa et al., 2003).

5.2   Issues in the Land Reform and Resettlement Programme

Although land reforms are one of the strategies in the MPRSP albeit ranked seventh in pro-poor agricultural strategies progress has been slow in implementation of land reforms. Two years after the MPRSP and the National Land Policy, the progress on land reforms has been dismal. The new Land Act that will provide the legal framework for land reforms and formalise the security of tenure of customary land is just being drafted. While the Ministry of Lands has identified estate land for acquisition, there are several issues that may impede the implementation of the land distribution policy in Malawi.

Firstly, the government is resource-constrained to implementation of the project and acquisition of land. The poor and landless households cannot afford to acquire land from private estate land owners that are offing it for sale without massive financial and organisational support from the government. Currently, the project is highly dependent on donor funding. The costs of preparing the project have been funded by the World Bank under the Project Preparation Facility and studies that e been completed have largely been funded by donors. Similarly, the funds for acquisition of land are expected to come from the World Bank and African Development Bank and the implementation of the land redistribution strategy will depend on availability of funds from donors. The government is providing resources for operating expenses but there is no provision in the government budget for the acquisition of land. According to GOM (2004), the government has purchased 17 estates, but only 450 farm families have been resettled on one of the estates.

Secondly, the demand for land among smallholder farmers is likely to be overwhelming against the limited supply of acquired land. This will raise the question of targeting of project areas and beneficiaries. Targeting of areas can be done using either the poverty maps based on the 1998 poverty data or population density information at traditional authority level (Benson, 2002). The areas with the highest poverty or the highest population density in rural areas should be targeted first.

With respect to beneficiary targeting the Ministry of Lands envisages a community based land reform programme in which eligible households self-select into groups of 20 farmers

and identify land for acquisition.[15] The proposed eligibility criteria for self-selecting households include landlessness, levels of income, ability to work in a group and those who are above the age of 18 years. The clubs will submit proposals to the local government (participating District Assembly through the District Development Committee) for land acquisition and funds will directly be paid to the seller. Once land has been acquired for the club, it will be registered under proposed customary land registration system under the local authority and land holders will not be allowed to dispose the land in the first five years and will not be allowed to subdivide it below 2 hectares. Under the CBRLDP farming households will be exposed to extension services on modern farming techniques and input assistance.

However, the problem with targeting in Malawi is that the landless or near landless are not concentrated in geographical pockets of the country, and it may be difficult to find eligible landless solidarity clubs of 20 households. This implies that adequate flexibility in the eligibility criteria need to be accommodated to allow households with less than 2 hectares of land to be prioritised in the selection of beneficiaries. Another issue in the solidarity groups relates to the gender composition of the clubs, the project does not consider the gender dimensions of these solidarity groups. Other studies have shown that mixed gender groups are less cohesive than gender-specific groups.

Thirdly, for a land distribution policy to be effective, it should not only focus on the distribution of acquired land but also the organisation of land in areas from which settlers emigrate and in promoting productivity. For example, if flexibility in targeting allows participation of households with less than 2 hectares of land, there will be less land pressure in places of origin for the settlers and there will be need to organize or redistribute land, to make land more equitable and productive in those areas. This would imply that the similar extension services and infrastructure investments should also be put in place in those areas. Thus, the land reform programme should to take a holistic approach that incorporates a land use strategies that may enhance productivity.

5.3   Implications for Land Redistribution

A land reform programme is likely to result in several externalities with implication on the potential for the programme to contribute to poverty reduction or reduction in vulnerability.

Firstly, programmes that target beneficiaries usually create opportunities for rent-seeking

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[15] A minimum of 2 hectares per household including settlement areas is being proposed as the land size holding under the proposed land redistribution programme.

by various stake holders. Other studies in targeted programmes show that while in principle the beneficiary selection procedure ensures that there are no biases, in practice rules on the identification of beneficiaries are usually broken particularly where the demand is overwhelming (Mvula et al, 2000). There will be need therefore to ensure that corrupt practices and political biases are minimized in the selection of beneficiaries. Some of the aspects that can minimize these biases include establishment of clear rules at a local level, participation of beneficiaries and civil society organisation in beneficiary selection, dissemination of accurate information, involving the communities in evaluating potential beneficiaries and making available information to the public on the households that have been selected within the community.

Secondly, there is a potential risk that redistribution of land from estates to smallholder farmers may lead to reduction in productivity and loss of employment by farm workers. However, there is evidence in Malawi that there is declining profitability in estate agriculture (particularly tobacco production), and redistribution of optimal land sizes to smallholder may actually increase productivity given appropriate support to smallholder farmers.

Thirdly, land redistribution alone is not sufficient for poverty reduction. The approach to land reform has to be holistic. Land distribution must ensure that land is secure and households must be provided with base capital and extension services that will enable them make the best use of the land. Access to land must be complemented by access to non-land assets, access to credit markets, access to extension services and training of beneficiaries in modern farming techniques. Since agriculture in southern Africa is subjected to weather shocks, it is also important to invest in water harvesting facilities under the land reform programme to facilitate irrigation farming. This implies that a lot of resources will be required to implement an effective land reform programme in an integrated manner. As World Bank (2003a) argues, a key precondition for land reform to be feasible and effective in improving livelihoods of beneficiaries establishing a favourable environment for the development of smallholder agriculture, and a land reform strategy should form a broader strategy for rural development. Waeterloos and Rutherford (2004) provide a case study of Zimbabwe in which the land reform programme increasingly became a land acquisition and land redistribution programme, consequently ignoring farm workers that lost their jobs and agricultural and rural development issues.

6.   Conclusions

Various agricultural development policies have been implemented by the government in the past. These policies include promotion of modern techniques of production among smallholder farmers including application of fertilizers and use of hybrid seeds, provision of extension services through a network of extension officers across the country and provision of credit facilities to smallholder farmers. Malawi adopted structural adjustment program in 1981 and has pursued policies aimed at liberalising the agricultural sector among other policies. This paper set to review previous policies in the agricultural sector and evaluate the role of access to land in changes in the poverty status of landless and farming households.

It has been argued that earlier agricultural development policies and structural reforms have not turned the performance of the economy around and poverty seems to be increasing among the population, a large proportion of which are smallholder farmers cultivating on less than a hectare. One of the structural issues affecting smallholder agricultural development in Malawi is smallness of land holdings partly resulting from family subdivision of customary land and the expansion of estate agriculture over time. No attempt in the past four decades has been made to address the land question in Malawi, yet many studies point to the importance of land in the effectiveness of modern techniques of farming. Surprisingly, the MPRSP ranks seventh the problem of land among smallholder farmers among the pro-poor agricultural strategies.

Our econometric results, based on household panel data from rural Malawi, show that access to land reduces the probability of being poor; prevents the poor from falling into poverty; and helps the non-poor to remain non-poor. Since customary land is not marketable, the link between access to land and poverty is via the growth in agricultural production. It can therefore be argued that pro-poor growth strategies in agriculture are likely to be ineffective in reducing poverty as has been the case in the past four decades unless land reform is taken as a basic precondition of other pro-poor agricultural strategies in the MPRSP. Thus, increasing access to agricultural credit and inputs, provision of research and extension services, improving market access and encouraging production of specific crops, without first improving access to land is likely to be an ineffective way of translating agricultural growth to poverty reduction in Malawi.

It is evident that opportunities for land reforms, particularly those that can increase access to land for the landless or near landless, do exist with the resulting poor performance of estate agriculture. The problem of ethnicity in estate ownership (that is politically sensitive

in many African countries) is less relevant in Malawi, and some estates have been abandoned and other estate owners are offering their estates for sale. In addition, there is high willingness among smallholder farmers to participate in a community based rural land development programme. However, government has been slow in taking advantage of these opportunities due to resource constraints, the donor dependence of the land reform programme and the low priority accorded to land reform in the poverty reduction strategies. Nonetheless, when funds become available to implement a land redistribution programme it will be important to ensure that the process of beneficiary selection is clear and transparent embracing the active participation of communities and that the programme need to place the whole rural development context into perspective both in the resettlement and emigration areas. Hence, ensuring that land redistribution is accompanied by complementary policies such as promotion of land use, extension services, easing the credit and capital constraints and basic infrastructure that is conducive to agricultural development will be critical if land reforms are to effectively lead to poverty reduction.

Land reform is ranked a seventh strategy in the current MPRS, yet adequate land is a basic resource for any viable agricultural strategy. Arguably, agricultural based pro-poor strategies without addressing the question of access to land in Malawi will be as ineffective as they have been in the past four decades. It is therefore recommended that as Malawi reviews her poverty reduction strategies, land reform should be the first ranked strategy for the agricultural sector to generate pro-poor growth.

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