academicJournals

Vol. 8(44), pp. 5416-5423, 14 November, 2013
DOI: 10.5897/AJAR08.401
ISSN 1992-1950 ©2013 Academic Journals
http://www.academicjournals.org/AJAR

African Journal of Agricultural Research

Full Length Research Paper

Smallholder livelihoods under economic liberalization in Malawi

T. Takane

Department of International Agricultural Development, Tokyo University of Agriculture, 1-1-1 Sakuragaoka, Setagayaku, Tokyo 156-8502, Japan.

Accepted 7 March, 2011

This paper examines the livelihoods of smallholder households in Malawi based on information derived from six villages in various parts of the country. Through detailed analysis of own-farm production and off-farm economic activities, the study explores similarities, diversities and disparities in rural livelihoods. Liberalization policies and the high risk of crop failure have produced large disparities between those who achieve high income from own-farm production and those who do not. Off-farm income can help to reduce the risk of own-farm production, but is also a source of income disparity and provides little opportunity for upward economic mobility to escape poverty.

Key words: Malawi, livelihoods, rural development, poverty, tobacco, maize, nonfarm income.

INTRODUCTION

After the introduction of structural adjustment programs in the 1980s, the government of Malawi implemented a series of reforms that brought about major changes in the smallholder sector. These include the deregulation of marketing activities, the reconstruction of input and output price regimes and the restructuring of state marketing agencies (Chilowa, 1998; Harrigan, 2003). In the food crop sector, the agricultural development and marketing corporation (ADMARC), which had monopolized the inputs and produce marketing of smallholders, ceased to be the sole marketing agent for smallholder produce, once licensed private traders were allowed to enter the market in 1987. By the mid-1990s, licensing was no longer required to handle the smallholder crops, and the maize price band was abandoned in 2000 (Mvula et al., 2003; Devereux and Tibaz, 2007). The liberalization of produce marketing was followed by further deregulation of agricultural inputs in the 1990s. The marketing of hybrid maize seeds was liberalized in 1993 and subsidies were removed in 1994. Similarly, private companies were allowed to market fertilizer after 1994 and subsidies were removed in 1995 (Smale and Phiri, 1998). The removal of subsidies together with the depreciation of Malawi Kwacha in the 1990s resulted in sharp price increases for seeds and fertilizer, which adversely affected smallholders' access to agricultural inputs. In the tobacco sector, major reforms occurred in the early 1990s when the Special Crops Act of 1972 was amended to allow smallholders to grow burley tobacco under a quota system. Initially, farmers were required to sell their tobacco to ADMARC, but later they were organized into clubs and given direct access to auction floors. In 1993/1994, more than 30,000 smallholders were organized under 1,318 clubs (Van Donge, 2002). Thereafter, the number of smallholder tobacco producers increased and smallholder tobacco production expanded dramatically in the 1990s. From 1992 through 1995, smallholders produced, on average, only 23% of the total tobacco crop in Malawi. The share reached 72% in years 2001 to 2004 (Government of Malawi, various issues a, b).

According to one estimate (Jaffee, 2003), there were 315,000 to 330,000 smallholders producing tobacco in the early 2000s. This paper is about livelihood strategies

E-mail: t3takane@nodai.ac.jp, Tel/Fax: +81-3-5477-2421.

adopted by the Malawian rural population.

The purpose of this study is in threefold; the first is to clarify the effects of recent policy changes regarding economic liberalization for smallholder producers; the second is to find common features in the livelihoods of smallholder households across different locations in Malawi; the third is to examine the diversity of livelihood strategies and the disparities among smallholders. Smallholder livelihoods in Malawi are characterized by a lack of mechanization in agriculture, increasing land shortages, limited opportunities for off-farm income, and the dependence on and the high risks of rain-fed agriculture. Wealth status, access to resources, and livelihood options differ markedly from household to household. By adopting differentiated analysis across socioeconomic groups, this study highlights both the similarities of livelihood strategies and the factors of social differentiation among smallholder households. This paper broadens the scope of existing studies of rural livelihoods in Malawi. First, it provides a comparative perspective of rural livelihoods in different locations. Past literature (Orr and Mwale, 2001; Ellis et al., 2003; Peters, 2006) tends to focus on southern Malawi, and relatively little is known about the livelihoods of other rural areas. This paper uses case studies of six villages with varied socioeconomic situations in northern, central, and southern Malawi to take a wider perspective than the existing literature.

Secondly, this paper explicitly examines the role of tobacco production. Smallholder burley tobacco production became a new economic opportunity as a result of government liberalization policies in the early 1990s (Jaffee, 2003; Orr, 2000; van Donge, 2002; Hazarika and Alwang, 2003). Despite the importance of smallholder tobacco production in the reduction of poverty, relatively little information is available about the role of tobacco in smallholder livelihoods. With this in mind, Jaffee (2003), in his review of Malawi's tobacco sector, stated that "some work on this (that is, the impact of tobacco production on smallholders) were undertaken in the mid-1990s, yet there have been little or no household/community studies done in recent years to expressly examine the impacts..." This information gap led another scholar to argue that "much of the policy debate has taken place in a vacuum with little reference to what is happening to poverty" (Harrigan, 2003). This paper intends to fill this gap in knowledge. The third way this paper broadens the scope of existing studies is by contributing to the discussion of nonfarm income's role in reducing poverty in Africa. Much has been written on the diversification of income sources among African rural households and how this could potentially increase incomes and reduce vulnerability. Less emphasis has been placed on the limitation of the nonfarm income in reducing poverty and its potential effects on widening the economic disparities. This paper emphasizes the differentiated access to lucrative nonfarm income among rural households and the limited capacity of nonfarm income to stimulate upward economic mobility in rural Malawi.

The analytical approach adopted in this study is based on the framework of sustainable rural livelihoods (Carney, 1998; Ellis, 2000; Ellis and Freeman, 2005; Scoones, 1998; Scoones and Wolmer, 2002).

METHODOLOGY

Fieldwork for this study was carried out in six villages in various parts of Malawi (Table 1): Kachamba (Mchinji District), Belo (Mangochi District), Horo (Phalombe District), Bongololo (Rumphi District), Mulawa (Mzimba District) and Mbila (Kasungu District). Care was taken to choose villages that represent several socioeconomic characteristics, such as location, the predominant ethnic group, the degree of population pressure on the land, variations in access to non-farm activities, and proximity or remoteness from trading centers. The aim of this selection procedure was to include both various socioeconomic situations in which smallholder production is taking place, and to provide a location and context-specific understanding of livelihood circumstances in various areas of rural Malawi. No claim is made, therefore that the results of this study represent national patterns in a statistical sense. Fieldwork in Kachamba and Belo were undertaken between August and October 2004, and data were obtained for the 2003/2004 agricultural season, when agricultural production was normal. In the remaining four villages, data were collected between May and September 2005 for the 2004/2005 agricultural season, when a severe crop failure occurred due to erratic rain. A structured questionnaire was used in the survey, and this writer attended, recorded and reviewed all interviews. In addition, farms operated by sample households were measured using global positioning systems to obtain accurate data on the size of the plots. The sampling framework comprises of all households in each village. The households were divided into two categories: those that had grown tobacco in the previous season and those that had not. Equal numbers of households were randomly selected from both groups.

In Kachamba, however, all households were interviewed because the sample frame was small. For the same season, all households in Mulawa except one were interviewed. In Bongololo, the number of sample households that grew tobacco exceeded those that did not, because there were only six households that did not. The total sample size for all villages was 186 households, which comprised 116 tobacco-growing and 70 non-tobacco-growing households. In all study villages, farmers gave priority to the production of maize, the staple food. It is estimated that 64% of total area farmed was allocated to maize production. The second-most important crop in terms of allocated area was tobacco, which was estimated to occupy about 19% of total area farmed. The percentage of tobacco-growing households in the six villages was 59%. Average farm size varied greatly. Households in Belo on average farmed 1.76 ha, while those in Horo farmed only 0.58 ha. The average for all households was 1.03 ha. The difference stems from the unique history of each village and the resultant degree of population pressure on land (Takane, 2008).

RESULTS AND DISCUSSION

This section examines the characteristics of major income sources (maize production, tobacco production and off-farm economic activities) of sampled households. The aim is to highlight the economic disparities among the

Table 1. Summary of study villages and samples.

Study village	Kachamba	Belo	Horo	Bongololo	Mulawa	Mbila	Total
Administrative region	Central	Central	Southern	Northern	Northern	Central	-
Number of sample households	31	30	32	33	28	32	186
Average farm size per household	0.98	1.76	0.58	0.80	1.18	0.94	1.03
Average production of maize (kg/AEU)	260	182	64	206	228	109	175
Average fertilizer application on maize farm (kg/ha)	71	15	90	77	123	105	71

*Adult equivalent unit (AEU): male 15 years or older = 1; female 15 years or older = 0.8; male or female 14 years or under = 0.5. Source: Author's survey.

households and the factors behind such differentiation.

Maize production

The production of maize in Malawi is largely rain-fed, and the national production level fluctuates widely depending on the weather in a given year. Since the start of the 1990s, Malawi has suffered crop failures in 1991/1992, 1993/1994, 1996/1997, 2000/2001 and 2004/2005. Given such uncertainty, self-sufficiency in maize production is a major priority for most smallholder households. This is not simply because maize is used to make the staple meal of stiff porridge (nsima). In the lean period of January to March, it often becomes very difficult to purchase maize due to supply shortages and high prices. The malfunctioning of food markets causes people's lack of confidence in the markets, inducing the rural households to grow as much maize as possible to secure their consumption needs (Alwang and Siegel, 1999). As a result of this food security concern, maize was cultivated by every sample household. Despite this food security-driven planting pattern, self-sufficiency of maize production among the sample households was far from adequate. Maize production per adult equivalent unit (AEU) in the sample averaged 175 kg, falling short of the minimum requirement of 200 kg. On average, the sample households were not self sufficient in maize production, but judging the overall average masks large variations among the villages and households. As Table 1 shows, per-AEU maize production in Kachamba, Bongololo, and Mulawa were above the minimum requirement, while the other three villages were below. Particularly inadequate were Horo and Mbila, where production was severely affected by erratic rain in 2004/2005. Horo was the worst hit, averaging only 64 kg per AEU, even though fertilizer application had been above the six-village average. Across the sample, 30% of households produced more than 250 kg of maize per AEU, which is well above the self-sufficiency level.

On the other hand, 28% produced less than 50 kg per AEU, falling far below the minimum requirement. Similarly, 20% retained maize stocks until the next harvest (meaning they attained self sufficiency), while 13% exhausted their stocks before October, more than six months prior to the next harvest. These signify the existence of large differences in the degree of maize self-sufficiency among the households. A major similarity in the production cost structure of maize across the villages was the high cost of fertilizer and hired labor (Table 2). The most expensive input was fertilizer, which accounted for 50% of total cost, followed by hired labor (22%). Net crop income from maize did not increase as the level of fertilizer (and production) increased. This was because the high gross revenue due to aggressive fertilizing was largely cancelled by the high cost of purchasing fertilizer. The correlation coefficients between maize income and the amount of fertilizer applied were positive but statistically insignificant in two villages, and negative in other villages, of which two were statistically significant. This suggests that the increased application of fertilizer does not increase net crop income. In addition, when production fails due to bad weather, households that apply more fertilizer may experience higher losses than those who do not, because of the added cost. Increased maize production through fertilizer application certainly improves the food security situation of households. Given the fact that it often becomes very difficult to purchase maize through markets in lean periods, keeping enough maize stock in household granaries is particularly important.

On the other hand, households can achieve food security only by purchasing expensive fertilizer. Those who produced enough maize did so at the expense of having to bear higher production costs. The adoption of the improved technology in maize production with the use of fertilizer and modern varieties of seeds has been limited in Malawi (Smale and Phiri, 1998). The major reason has been the cost of purchasing fertilizer and seeds. Although, farmers know the advantages of these technologies and desire to adopt them, the cost is more than they can afford. As a result, the average application of fertilizer on maize farm per hectare among the sample households was only 71 kg, which was less than one third of the recommended amount of 250 kg (Langyintuo, 2004). Even with this small amount of fertilizer applied by the sample households, the cost of fertilizer alone accounted for 50% of the total production cost. Assuming

Table 2. Production cost structure of maize (kwacha per hectare).

Number of sample household	**186**	
Average area of maize farm (ha/household)	0.63	
Fertilizer application per ha (kg/ha)	71	
Production per ha (kg/ha)	863	
	%	**kwacha**
Gross revenue from maize (1)		**10,819**
Input cost (2)	**100**	**7,184**
Seeds	11	818
Fertilizer	50	3,582
Manure	2	125
Annual depreciation and maintenance of tools, oxcarts and oxen	11	775
Hired transport/machinery	2	179
Hired labor	22	1,561
Land rent	1	87
Interest payment	1	58
Net crop income, (1) minus (2)		3,635

Exchange rates in 2005 were between 115 and 121 Malawi kwacha (MK) per US dollar. Source: Author's survey.

that a farmer with the average maize farm among the samples (0.63 ha) bought the recommended amount of fertilizer and hybrid seeds, they had to spend the amount equivalent to more than half of the average annual household income of the sample households. Due to a lack of credit for maize production, most farmers simply cannot afford the recommended inputs. Adoption of improved technologies is further inhibited by the high risk of agricultural production. Farmers in Malawi occasionally experience production failure caused by erratic rain. Investing in high-cost inputs under such conditions increases the risk of income loss.

For example, assuming that the recommended amount of fertilizer and hybrid seeds were purchased and the other production costs were the same as those in Table 2, the minimum breakeven yield is 1.84 tons. This figure is very close to the mean yield of hybrid maize in a drought year (1.9 tons) reported by Smale (1995), suggesting that adopting new technologies does not guarantee sufficient net maize income in a bad-weather year. Consequently, high cost and high risk have the limited adoption of improved technologies.

Tobacco production

This section reviews certain features of smallholder tobacco production from two perspectives. Firstly, tobacco and maize production are compared in terms of labor use, land allocation and production cost structure. Secondly, socioeconomic characteristics of tobacco growers and non-growers are highlighted. These analyses show that not all smallholder farmers can grow tobacco, because some face entry barriers to tobacco production. A comparison of tobacco and maize production reveals four distinctive features of tobacco production. First, it requires much more labor than maize production in terms of both tasks and duration of work. The survey found that total labor input per hectare was 4.1 times as much as that for maize, a clear indication of the labor-intensive nature of tobacco production. Secondly, tobacco requires more working capital than maize. The labor-intensive nature of tobacco often forces farmers to hire workers to complement family labor. The cost of hired labor on tobacco farms per hectare far (Table 3) exceeded that used on maize farms (MK14,954 and MK1,561, respectively). In addition, tobacco production requires current inputs such as seeds, fertilizer, manure, and materials for barns and bales, which increases the cost of production. As a result, farmers need 6.1 times more working capital for tobacco than maize. Only farmers who can afford such high production costs can engage in tobacco production. Thirdly, the net income per hectare from tobacco is high, but the high income is subjected to high risks. Table 3 shows that net income per hectare among the sample households was MK14,315, or 3.9 times higher than that for maize. Although high production costs can be compensated by high gross revenue and net income per hectare, tobacco income is subjected to risk in terms of both price and production. The average price of tobacco on the auction floor declined from 1.61 US dollars per kg in 1996 to 0.99 US dollars in 2005, resulting in much lower net income than in the 1990s. There is also the high risk of incurring a loss when a crop fails due to bad weather. In all six villages, 34% of sampled tobacco growers experienced negative income from the crop. This

Table 3. Production cost structure of tobacco (kwacha/ha).

Number of samples	**116**	
Average area of tobacco farm (ha/household)	0.350	
Production per hectare (kg)	749	
	%	**kwacha**
Gross revenue from tobacco		**62,101**
Input costs	**100**	**47,786**
Seeds	1	569
Fertilizer	41	19,582
Other chemicals	1	370
Manure	1	635
Materials for barn and sacks	12	5,623
Annual depreciation and maintenance of tools, oxcarts and oxen	2	1,004
Club fees	1	505
Hired transport/machinery	5	2,361
Hired labor	31	14,954
Land rent	0	135
Interest payment	4	2,047
Net crop income		14,315

Exchange rates in 2005 were between 115 and 121 Malawi kwacha (MK) per US dollar. Source: Author's survey.

clearly shows that tobacco is a risky business. The fourth distinctive feature of tobacco is that households with relatively large farms are more likely to grow tobacco than those with small farms. Households give priority to maize over other crops to secure food for consumption. Therefore, those with limited land do not venture into tobacco production at the expense of maize production. In addition, it is difficult for farmers with small tobacco farms to achieve the minimum production level of one bale (about 100 kg) required for sale through the official marketing channel. For these two reasons, the percentage of tobacco-growing household rises as farm size increases.

There are four major differences between tobacco-growing and non-growing households (Table 4). Firstly, tobacco-growing households held more land and operated larger farms. Secondly, more family labor (household members 15 years old or over) was available in tobacco-growing households. Abundant family labor is an advantage for tobacco production because of its labor-intensive nature. Thirdly, average household income per AEU among the tobacco-growing households was higher. This was because the high net income per hectare of tobacco increased household income. Fourthly, tobacco-growing households applied more fertilizer on maize and achieved higher productivity (yield per hectare and yield per AEU). These findings suggest that the opportunity for high income from tobacco production is available only to households that possess sufficient capital, land and labor, while those that do not have been excluded from the economic opportunities created with the introduction of burley tobacco production in the early 1990s. But even for those who have managed to venture into tobacco production, it is still a risky business. High production costs may be compensated with a high income when weather and prices are favorable, but unfavorable conditions may result in large losses. For poorer households, tobacco production is an extravagant gamble beyond their means.

Off-farm income

Off-farm income can be classified into four categories; agricultural wage income, nonagricultural wage income, nonfarm self-employment income and other income. In the study villages, 44% of the sample households earned agricultural wage income, but the average daily income from agricultural wage labor was less than that from other off-farm activities. In addition, the demand for agricultural labor rises only during the peak agricultural season. Therefore, the income smoothening throughout a year cannot be achieved by engaging only in agricultural wage labor. As a result, agricultural wage income accounted for only 5% of overall household income among sample households (Table 5). Moreover, the demand for agricultural wage labor may markedly decrease due to unfavorable weather and resultant crop failure. On the other hand, the peak demand for agricultural wage labor coincides with the period when many households have exhausted their maize stocks. Non-agricultural wage income was far less common than agricultural wage labor.

Table 4. Comparison of tobacco-growing and non-growing households.

Characteristics		Tobacco-growing households	Non-growing households
	Number of samples	116	70
Income	Average household income per adult equivalent unit (kwacha)	9,449*	6,494*
Assets	Land holding (ha per household)	1.069***	0.730***
	Value of livestock owned	15,642*	7,241*
	Number of household members 15 years old or over	2.5***	1.9***
	Schooling years of household head	5.6***	4.0***
Agriculture	Average area farmed (ha)	1.201***	0.741***
	Maize production per hectare (kg)	1,081***	631***
	Maize production per AEU (kg)	249**	163**
	Fertilizer application on maize farm (kg/ha)	100**	66**
	Net agricultural income per hectare (kwacha)	9,348	3,174

Exchange rates in 2005 were between 115 and 121 Malawi kwacha (MK) per US dollar. * indicates 10% significance level, ** indicates 5% significance level, and *** indicates 1% significance level with t-test. Source: Author's survey.

Although opportunities for non-agricultural wage labor were limited, daily wages tended to be higher than agricultural wages. Moreover, non-agricultural wage income becomes much higher if one is employed on regular basis. As a result, despite the small number of cases, the contribution of non-agricultural wage income to household income (15%) was much higher than that of agricultural wage income. Nonfarm self-employment income accounted for the largest share (34%) of total household income.

More than half (53%) of the sample households engaged in nonfarm self-employment. Although activities varied markedly, most were small businesses requiring little startup or working capital. The most common nonfarm self-employment was brewing and selling beer, which was performed mostly by women. Relatively, profitable activities includes: shop ownership, tobacco trading, fish trading, prepared food sales and brewing/selling beer. Most cases were very small scale, but year-round engagement frequently resulted in high incomes. Several key points were revealed in Table 5, which presents the share of household income by income source across study villages. First, the share of own-farm income (37%) was lower than that of off-farm income (63%). This proportion contrasts with the earlier report of a “50:50 split between own-farm income and off-farm or nonfarm income” in the Dedza District in the 2000/2001 season (Ellis et al., 2003), and a similar ratio reported in the Blantyre Shire Highlands in 1990 (Orr and Mwale, 2001). The low proportion of own-farm income found in this study may partly be explained by the crop failures in Horo and Mbila in 2004/2005. In any case, de-agrarianization (Bryceson and Jamal, 1997) and the increasing share of nonfarm income (Readon and Taylor, 1996) highlighted in the literature were found in rural Malawi. Secondly, off-farm income appeared to be particularly important in the context of uncertainty and risk associated with agricultural production in Malawi.

Given that smallholder agriculture is rain-fed, rural households are likely to face sharp drops in own-farm income in bad-weather years. Households that rely solely on own-farm income are vulnerable to the risk of food insecurity. Engaging in off-farm economic activities can reduce the household vulnerability by securing other income sources when own-farm production fails. In fact, although households in Horo and Mbila experienced losses in own-farm income, they did not experience a net loss in total household income; thanks to off-farm income. Thus, securing off-farm income is an important livelihood strategy both as an ex-ante risk management strategy and as an ex-post coping strategy. Off-farm income is not available to every household, and even when it is available, the level of income may be far below what is needed to compensate drops in own-farm income. The most accessible off-farm activity for rural households is agricultural wage labor, but wage levels are low, job opportunities are restricted to farming seasons, and the demand for labor is prone to covariate risk of crop failure. Some nonfarm self-employment offer relatively high income, but the opportunities are less open to households residing in remote villages. Full-time nonfarm employment is only available to those residing near towns or those with higher education. In the absence of overall development in the non-agricultural sector and limited opportunities for remunerative income from the nonfarm sector, the smallholder strategy of diversification into nonfarm activities at best can only partially help to secure livelihoods.

The livelihood strategies that achieved high income can be classified into three types; the concentration on own-farm production, the combination of regular salaried

Table 5. Household income per adult equivalent unit by source.

Total household income per AEU (a) + (b)		Own-farm income				Total own-farm income (a)	Off-farm income				Total off-farm income (b)
		Tobacco	Maize	Other crops	Livestock		Agricultural wage income	Non-agricultural wage income	Nonfarm self-employment	Other	
Income share (n = 186) (%)	100	13	10	9	5	37	5	15	34	10	63

Adult equivalent unit (AEU): male 15 years or older = 1; female 15 years or older = 0.8; male or female 14 years or under = 0.5. Own-farm income refers to gross revenue from products minus inputs purchased for production. Hired labour is treated as a purchased input, but family labour is not costed in the calculation. Subsistence consumption of crops and livestock products is valued at average farm gate prices of each village. Source: Author's survey.

jobs and own-farm production, and the combination of own-farm production and high-return nonfarm self-employment. These three types of livelihood strategies were adopted by a minority of households who had the necessary assets (land or education) or access to high-return nonfarm employment. The majority of rural households, however, had no choice but to combine available (low-return) work, usually resulting in low total household incomes. The poorer households typically combine own-farm production, agricultural wage labor, and nonfarm self-employment. Since land productivity in the lower quartiles was much lower than that in the upper quartiles, own-farm income was typically low, or often negative. To compensate low own-farm income, they engaged in low-return agricultural wage labor and nonfarm self employment, but income from these activities only marginally increased total income. While the income diversification strategy adopted by poorer households did provide a means of survival, it did little to enable them to climb the ladder of upward mobility and improve their overall economic situations. The government's liberalization policies after the 1980s dramatically reduced state control of smallholder production. For farmers with sufficient land, labor, and capital, liberalization opened up opportunities for high-return agricultural produce, such as tobacco.

In the study villages, some villagers in the top income quartile achieved high household income by investing in high-return crops and productivity-enhancing inputs (fertilizer). On the other hand, the high risks of production failure and falling prices, as well as the high cost of inputs, made agriculture a risky business. As a result, large disparities existed between those who achieved high income from crop production and those who did not. For farmers with limited resources, "gambling" in agriculture by using expensive inputs was beyond their means. Resource-poor smallholders had no choice but to resort to low-input agriculture on their small landholdings and to compensate the resultant low own-farm income with poorly remunerated off-farm employment.

Patterns of income sources, income levels, and household livelihood strategies varied markedly. Although every sample household had its own farm to cultivate, income from own-farm production differed considerably among villages and among the households within a village, influenced by the degree of access to land, availability of family labor, and disparities in farm productivity due to factors such as the level of fertilizer application. The level and role of off-farm income also varied. Proximity to towns leads to increase in opportunities for nonfarm employment and levels of remuneration. In the drought-hit villages, off-farm income plays an important role in providing ex-post coping strategies for households. Marked disparities in income levels exist between full-time, well-remunerated jobs and poorly paid, casual labor. Regular-salaried jobs, however, are few in number and characterized by entry barriers, such as educational requirements. Off-farm jobs with low entry barriers are often characterized by low wages and ad-hoc hiring, such as agricultural wage labor.

Conclusion

In response to the high risks of agricultural production, many households diversified their activities to secure multiple sources of income. The diversification of income sources has the potential to increase total household income or reduce vulnerability to the risks of crop failure. In the six study villages, a minority of households did actually earn high income from off-farm activities, and also increased their agricultural productivity by reinvesting their off-farm income in own-farm production. But off-farm employment available to the majority of households offered only low-level remuneration and thus only marginal improvements

in household economic status; it was inadequate to compensate for low (sometimes negative own-farm income. Overall, the strategy of livelihood diversification in response to the high risks of agriculture has been only partially successful, and rarely provided opportunities for an escape from poverty.

ACKNOWLEDGEMENTS

The author is grateful to the Centre for Social Research, University of Malawi, for providing an excellent research environment during his stay in Malawi. Financial support for this study was provided by the Institute of Developing Economies.

REFERENCES

Alwang J, Siegel PB (1999). Labor Shortages on Small Landholdings in Malawi: Implications for Policy Reforms. World Develop. 27(8):1461-1475.

Bryceson DF, Jamal V (eds.) (1997). Farewell to Farms: De-agrarianisation and Employment in Africa, Hampshire: Ashgate.

Carney D (1998). Implementing the Sustainable Rural Livelihoods Approach. In: D. Carney. ed., Sustainable Rural Livelihoods: What Contribution Can We Make? London: Department for International Development.

Chilowa W (1998). The Impact of Agricultural Liberalisation on Food Security in Malawi. Food Policy 23(6):553-569.

Devereux S, Tiba Z (2007). Malawi's First Famine, 2001-2002. In: S. Devereux ed., The New Faines: Why Famines Persist in an Era of Globalization, London and New York: Routledge.

Ellis F (2000). Rural Livelihoods and Diversity in Developing Countries. Oxford: Oxford University Press.

Ellis F, Freeman HA (eds.) (2005). Rural Livelihoods and Poverty Reduction Policies, London and New York: Routledge.

Ellis F, Kutengule M, Nyasulu A (2003). Livelihoods and Rural Poverty Reduction in Malawi. World Develop. 31(9):1495-1510.

Government of Malawi (Various Issues a). Economic Report. Lilongwe: Ministry of Economic Planning and Development.

Government of Malawi (Various Issues b). Statistical Yearbook. Zomba: National Statistical Office.

Harrigan J (2003). U-Turns and Full Circles: Two Decades of Agricultural Reform in Malawi 1981-2000. World Develop. 31(5):847-863.

Hazarika G, Alwang J (2003). Access to Credit, Plot Size and Cost Inefficiency among Smallholder Tobacco Cultivators in Malawi. Agric. Econ. 29(1):99-109.

Jaffee S (2003). Malawi's Tobacco Sector: Standing on One Strong Leg is Better than on None. The World Bank Africa Region Working Paper No.55, Washington, D. C.: The World Bank.

Langyintuo A (2004). Malawi Maize Sector Stakeholders Workshop Report. Harare: CIMMYT-Zimbabwe.

Mvula PM, Chirwa EW, Kadzandira J (2003). Poverty and Social Impact Assessment in Malawi: Closure of ADMARC Markets. Report prepared for the World Bank.

Orr A (2000). 'Green Gold'?: Burley Tobacco, Smallholder Agriculture, and Poverty Alleviation in Malawi. World Develop. 28(2):347-363.

Orr A, Mwale B (2001). Adapting to Adjustment: Smallholder Livelihood Strategies in Southern Malawi. World Develop. 29(8):1325-1343.

Peters PE (2006). Rural Income and Poverty in a Time of Radical Change in Malawi. Journal of Development Studies, 42(2):322-345.

Readon T, Taylor JE (1996). Agroclimatic Shock, Income Inequality, and Poverty: Evidence from Burkina Faso. World Develop. 24(5):901-914.

Scoones I (1998). Sustainable Rural Livelihoods: A Framework for Analysis. IDS Working Paper No.72, Brighton: Institute of Development Studies.

Scoones I, Wolmer W (eds.) (2002). Pathways of Change in Africa: Crops, Livestock and Livelihoods in Mali, Ethiopia and Zimbabwe, Oxford and Portsmouth: James Currey and Heinemann.

Smale M (1995). "Maize if Life": Malawi's Delayed Green Revolution. World Develop. 23(5):819-831.

Smale M, Phiri A (1998). Institutional Change and Discontinuities in Farmers' Use of Hybrid Maize Seed and Fertilizer in Malawi: Findings from the 1996-97 CIMMYT/MoALD Survey. CIMMYT (Economics Working Paper 98-01).

Takane T (2008). Customary Land Tenure, Inheritance Rules, and Smallholder Farmers in Malawi. J. Southern African Stud. 34(2):269-291.

van Donge JK (2002). Disordering the Market: The Liberalisation of Burley Tobacco in Malawi in the 1990s. J. Southern African Stud. 28(1): 89-115.