POLICY SERIES

Policy Series 14

RURAL NON-FARM ACTIVITIES AND POVERTY ALLEVIATION IN SUB-SAHARAN AFRICA

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The Natural Resources Institute (NRI) of the University of Greenwich is an internationally recognized centre of expertise in research and consultancy in the environment and natural resources sector. The Institute carries out research and development and training to promote efficient management and use of renewable natural resources in support of sustainable livelihoods.

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PREFACE

This series is principally concerned with current policy issues of importance to developing countries but also covers those relevant to countries in transition. The focus is upon policies which affect the management of natural resources in support of sustainable livelilhoods. Much of the series will be devoted to concerns affecting the livelihoods of poor people in rural areas, recognizing the linkages with non-natural resource-based livelihoods. It will also include the interests of the urban poor, where these are linked to the use of natural resources as part of livelihood strategies.

The series will take a holistic view and cover both the economic and social components affecting livelihoods, and associated factors notably with respect to health and education. The aim is to provide topical analyses which are based upon field research where appropriate, and which will inform development practitioners concerned with issues of poverty in development.

The series is timely, given the increasing focus upon poverty and poverty elimination in the agenda of the development community. It is also timely with respect to the growing body of recent work which seeks to replace earlier, simplistic structural adjustment programmes, with more flexible approaches to livelihoods, institutions and partnerships.

Policy analysis is often assumed to be the remit of social scientists alone. Whilst it is recognized that social science may play a pivotal role, interactions with other disciplines may also be critical in understanding and analysing policy issues of importance to the poor. The series therefore draws upon a wide range of social and natural scientific disciplines reflecting the resource base at the Natural Resources Institute.

EXECUTIVE SUMMARY

This publication is about rural non-farm (RNF) activity in sub-Saharan Africa and the determinants of differential access to RNF incomes. Growing interest in RNF incomes reflects increasing evidence that rural people's livelihoods are derived from diverse sources and are not as overwhelmingly dependent on agriculture as previously assumed. Moreover, policy-makers are looking to the wider rural economy, to reduce persistent rural poverty and stem urban migration. The determinants of *access* to RNF activities, or *capacity* to engage in such activities are discussed. In the 'growth with equity' equation, the focus here is on the equity factors.

Although RNF incomes are important as an off-season, part-time or home-based income supplement for households whose main activity is farming, RNF income in Africa tends to benefit disproportionately the better-off, implying significant entry barriers and market segmentation. Moreover, in the absence of appropriate targeted policy, current trends in the relevant sub-sectors suggest that entry barriers may increase.

Poor people's access to education and skills, infrastructure, financial capital, social capital and natural resources (particularly land) is examined in relation to their participation in RNF activities. The general policy recommendations are in large part clear and uncontroversial. No single factor can guarantee participation in RNF activities; several interrelated factors play an important role. Improvements in infrastructure, education, health and financial services help to facilitate access to RNF income sources. A sound and less risky agricultural base provides a strong foundation on which other activities can develop. Social capital is important. The challenge for policy-makers is to develop pro-poor methods of planning and service delivery at an acceptable cost without inadvertently undermining the potential for growth and employment creation. In rural areas there is a particular need to avoid over-emphasis on cost-recovery in infrastructure because of poor purchasing power and the inherently higher per capita costs of infrastructure in rural areas.

The RNF ‘sector’ is heterogeneous, making blanket policy prescriptions difficult. This underlines the need for participatory consultative processes to define local issues and develop appropriate solutions. Decentralization processes now underway in many African countries may offer a way forward. Traditionally this ‘sector’ has had no specific organization whose remit is focused exclusively on its development – rather it has been covered by numerous organizations, but with none taking overall responsibility. This institutional vacuum demands networking among many different organizations, a task that is likely to be easier at district level, in the context of decentralization, than at national level.

In conclusion, the factors that help to create employment opportunities or growth are briefly reviewed: sound macro-economic management accompanied by recognition of the need for safety nets; promoting rural ‘engines of growth’, such as agriculture or tourism, from which other activities may develop; correcting for urban bias in overall policies; and making sure that policy delivery is consistent with policy intent. Unresolved issues where further research is needed are also highlighted, i.e. equity/ growth trade-offs, impacts of vocational training, social capital interventions, and alternative approaches to better access to transport.

The extent and depth of rural poverty in Africa, and evidence of increasing entry barriers to higher income activities, point to the need for a concerted focus on the research, policies and professionalism capable of delivering sustainable improvements in rural livelihoods in Africa.

POLICY SERIES

1

INTRODUCTION

This publication is about rural non-farm (RNF) activity in sub-Saharan Africa and the determinants of differential access to RNF incomes. There is growing interest in RNF income as research on rural economies is increasingly showing that rural people's livelihoods are derived from diverse sources and are not as overwhelmingly dependent on agriculture as previously assumed. Moreover, policy-makers are turning their attention to the wider rural economy, as they seek ways to reduce persistent rural poverty. The determinants of *access* to RNF activities, or *capacity* to engage in RNF activities, are discussed. The policies that help to create RNF opportunities are not tackled here and in the 'growth with equity' equation the focus is on the equity factors.

This is one of a series of publications that seeks to amplify the relationship between poverty, rural livelihoods and key policy areas. The publications are intended for a wide audience in developing country governments, donor agencies, research institutes and other organizations concerned with development or governance. They are intended to contribute to increased focus on poverty in development by informing and stimulating debate, policy and action amongst key players in the development process.

This paper is divided into four main sections that provide:

- background, definitions, concepts and characteristics of RNF activities;
- an overview of the role of RNF incomes in poverty alleviation in Africa;
- evidence on the factors that determine capacity to engage in RNF activities;
- conclusions and policy implications.

RURAL NON-FARM DEFINITIONS

The literature on income diversification is thwarted with definitional problems and inconsistencies. Here 'non-farm' refers to those activities that are not primary agriculture or forestry or fisheries. However, non-farm does include trade or processing of agricultural products (even if, in the case of micro-processing activities, they take place on the farm). Barrett and Reardon (2001) stress that this definition is sectoral, i.e. it follows the convention used in national accounting systems where a distinction is made between primary production, secondary (manufacturing) activities, and tertiary (service) activities). It does not matter where the activity takes place, at what scale, or with what technology.

The term 'non-farm' should not be confused with 'off-farm'. The latter generally refers to activities undertaken away from the household's own farm, and some authors (e.g. Ellis, 1998) use it to refer exclusively to agricultural labouring on someone else's land, so 'off-farm' used in this sense would not fall within the normal definition of 'non-farm'.

The term 'rural' is subject to a similar amount of debate, hinging on three particular aspects: whether rural towns are rural or urban; at what size does a rural settlement become urban; and the treatment of migration and commuting between rural areas and towns. There is no firm rule that resolves these issues, and the only practical solution is for researchers to make sure that the definition they have adopted is clearly stated.

Finally, there is the unit of analysis. This text refers to 'activities' to emphasize the focus on income generated by an individual's or household's activities, as opposed to remittance income. Reference is also made to livelihoods, with a stronger hint of the process that underpins the way rural people derive their incomes. (A livelihood comprises "...the activities, the assets, and the access that jointly determine the living gained by individual or a household", Ellis, 1999: 1.) 'RNF income' is a useful way in which to categorize income, but care must be taken not to understate earnings or production in-kind. Similarly, for some, 'employment' has connotations of formal employment, or employment by others, thereby downplaying the role of self-employment. The literature sometimes refers to the RNF 'sector' but this might imply a degree of homogeneity that belies the multifarious nature of the activities that comprise that 'sector'. Reference to the RNF 'economy' is finding increasing currency (e.g. Lanjouw and Feder, 2000; Marsland *et al*., 2000). However, there is a potential semantic problem where it is used to describe ‘non-farm’ as defined above, whilst the word ‘economy’ usually includes the linkages that this definition specifically excludes (i.e. many people would include as part of the farm economy aspects of agricultural trade and processing that are defined here as being part of the non-farm economy).

However, words such as income, employment, sector and economy cannot be avoided. In this text, where they are used: income should be understood to include incomes received in cash or in-kind, whether generated through wage labour or self-employment; employment includes self-employment unless otherwise stated or implied by the context; reference to the RNF sector is not meant to imply an erroneous degree of homogeneity; and mention of the RNF economy adheres to the non-farm definition described above.

RURAL NON-FARM ACTIVITIES – THEIR RELATIVE IMPORTANCE WITHIN RURAL ECONOMIES

In many rural areas, agriculture alone cannot provide sufficient livelihood opportunities. Migration is not an option for everyone and where possible, policy-makers may in any case prefer to limit the worst excesses of urbanization with its associated social and environmental problems. Rural non-farm employment can play a potentially significant role in reducing rural poverty and numerous studies indicate the importance of non-farm enterprise to rural incomes. Reardon (1997) documents small enterprise studies that show that the typical rural household in Africa has more than one member employed in a non-farm enterprise. Islam (1997) reports that the share of the non-farm sector in rural employment in developing countries varies from 20% to 50%. Reardon (1997) finds RNF income shares in Africa ranging from 22% to 93%, and Newman and Canagarajah (1999) point to a large body of recent research that indicates that the RNF sector is now thought to be more dynamic and important than previously believed.

In Africa, the average share of RNF incomes as a proportion of total rural incomes, at 42%, is higher than in Latin America and higher still than in Asia (Reardon *et al*., 1998). Most evidence shows that RNF activity in Africa is fairly evenly divided across commerce, manufacturing and services, linked directly or indirectly to local agriculture or small towns, and is largely informal rather than formal (Reardon, 1997). Haggblade *et al.* (1987) found services, commerce and restaurants to be the fastest-growing, non-farm sectors. Households earn much more from RNF activity than from farm wage labour, but (where the available data permit this comparison) non-farm wage labour is more important than self-employment in the non-farm sector (Reardon, 1997). Haggblade *et al.* (1987) found that more than 95% of RNF enterprises employ five people or fewer.

Livelihood diversification is often characterized as being driven by two processes: distress-push, where the poor are driven to seek non-farm employment for want of adequate on-farm opportunities; and demand-pull, where rural people are able to respond to new opportunities. In the former situation, large numbers may be drawn into poorly remunerated low entry-barrier activities, whilst the latter are more likely to offer a route to improved livelihoods. This two-way categorization is undoubtedly an oversimplification, but it is a useful reminder that participation in RNF activities may derive from quite different circumstances and have quite different outcomes. Moreover, some of the evidence on income distribution, discussed in section 2, lends support to the view of two qualitatively different categories of RNF employment. It is important, however, that policy analysts do not neglect the low return activities. Lanjouw and Feder (2000: 17) point out that:

> "Such employment may nevertheless be very important from a welfare perspective for the following reasons: off-farm employment income may serve to reduce aggregate inequality; where there exists seasonal or longer-term unemployment in agriculture, households may benefit even from low non-farm earnings; and for certain sub-groups of the population that are unable to participate in the agricultural labour market, non-farm incomes offer some means to economic security."

Decisions by rural households concerning involvement in RNF activities depend on two main factors, i.e. incentives offered and household capacity (Reardon *et al*., 1998). The latter is the focus of this paper, which aims to provide more information on access constraints faced by poor people seeking to work in the RNF economy. Some of the constraints identified may be equally applicable to participation in wage labour in the farm sector. Many factors are at play, and the particular activities that result are rarely attributable to a single factor.

2

RURAL NON-FARM ACTIVITIES AND POVERTY ALLEVIATION IN AFRICA

POTENTIAL ROLE IN POVERTY ALLEVIATION

In many parts of the world, the number of poor people in rural areas exceeds the capacity of agriculture to provide sustainable livelihood opportunities. Even with a decline in fertility rates and a slowing of population growth, this situation will not change significantly. Whilst there is potential for out-migration, urban centres cannot be assumed to be capable of providing adequate livelihood opportunities for all those unable to make a living in agriculture (Marsland *et al.*, 2000). This indicates a potentially important role for RNF activities in reducing poverty in rural areas. Rural non-farm activities may:

- absorb surplus labour in rural areas;
- help farm-based households spread risks;
- offer more remunerative activities to supplement or replace agricultural income;
- offer income potential during the agricultural off-season;
- provide a means to cope or survive when farming fails.

Rural non-farm opportunities can have an indirect effect on wages amongst the rural poor also:

> "...expansion of non-agricultural employment opportunities is likely to tighten casual labour markets in general and thus raise wages in the agricultural labour market" (Lanjouw, 1999: 4).

A further indirect effect occurs where RNF income enables poor households to overcome credit and risk constraints on agricultural innovation (Ellis, 1998, citing work by Taylor and Wyatt, 1996).

EVIDENCE ON RURAL NON-FARM INCOMES AND POVERTY IMPACTS

The evidence on poverty impacts is less promising than the vision. Drawing on data from 33 field studies in Africa, Reardon (1997: 1) states:

> "The most worrying finding was the poor distribution of non-farm earnings in rural areas, despite the importance of these earnings to food security and farm investments. This poor distribution implies significant entry barriers and market segmentation; it is probable that it will lead over time to skewed distribution of land and other assets in rural Africa."

The short-term effects of RNF income on farm household food security are reasonably clear. Non-farm incomes provide the cash that enables a farm household to purchase food during a drought or after a harvest shortfall. Non-farm income is also a source of farm household savings, used for food purchase in difficult times. On the long-term effects on food security, however, there is relatively little empirical evidence and what exists is inconclusive (Barrett and Reardon, 2001).

There has been much more study of RNF activity effects on income inequality.

Growth in the RNF sector may reduce income inequality if income from such activities disproportionately favours the poor. This is the conventional wisdom that underpins many rural enterprise programmes, which assume that RNF income can compensate for the inadequate farm incomes of the poorest. However, income distribution may worsen if the better-off benefit from RNF activities to a greater extent than the poor.

The evidence on the relationship between the share of non-farm income in total household income and the level of total income (and/or size of landholdings, as a proxy indicator of wealth) is very mixed. Reardon's (1997) review found a strong and positive relationship in 18 field studies in Africa, indicating that RNF income was more important to the higher income households. However, there were also examples where the opposite was true (e.g. central Kenya) or where there was a U-shaped relationship, indicating comparable importance of RNF income in total income to both the poorest and the least poor households (e.g. Northern Nigeria). When incomes (rather than income shares) from RNF activity are compared across income groups, the differences are more pronounced, reflecting the low wages typically received by low-income households engaging in RNF activities. Barrett and Reardon (2001) argue that as this relationship is less common in other low and middle-income countries, there must be particular impediments to the participation of the poor in RNF activity in Africa. (A study by Adams and He (1995), is particularly interesting on this point – though unfortunately the evidence comes from Pakistan, not Africa. They found that non-farm income as whole reduced income inequality, but when it was disaggregated into unskilled labour, self-employment and government employment, only the first category decreased income inequality. Both self-employment and government employment had high entry costs that effectively excluded the poor.)

Where RNF activities seem to exacerbate income inequality, as observed in much of Africa, Reardon *et al.* (1998: 322) note:

> "There is a scarcity of labour-intensive activities that have low entry barriers; this is so in both non-farm and farm sectors that are characterized by an underdeveloped farm labour market and predominantly traditional production technologies using family inputs. Additional factors include a relatively equal land distribution (and a virtual absence of landless households), a low population and infrastructure density, a relatively low level of rural town development and significant entry barriers for investment in capital-intensive subsectors."

Nonetheless, there are many ways in which RNF activities are important to the poor in Africa. Cottage industry enables women to combine income-generating activities with other tasks, such as food preparation and childcare (Lanjouw and Lanjouw, 1997; Gordon *et al*., 2000a). Examples in sub-Saharan Africa include beer brewing, fish processing, edible oil processing, crochet, pottery, rice husking, groundnut shelling, preparation and sale of prepared foods, and other small trading activities that can be carried from the home or nearby.

Participation in the RNF sector allows poor people to smooth out or offset fluctuations in agricultural income that might occur on a seasonal basis or as a result of unexpected events. This is especially the case where savings, credit and insurance mechanisms are not available for this purpose, as is the case in many rural areas in Africa. Where the agricultural sector is dominant, non-farm income opportunities are likely to echo trends and shocks in agriculture, but may nonetheless be somewhat more stable. Reardon *et al*. (1992) studied three regions in Burkina Faso and found that total income was considerably more stable than cropping income alone.

There are numerous studies that document an indirect effect of RNF income in Africa showing how it permits investment in agriculture (e.g. Tiffen and Mortimore, 1992; Reardon *et al.,* 1998).

Where the rural poor are landless, non-farm income can be particularly important. Ellis (1998: 9–10) remarked a greater reliance on non-farm income in Asia (around 60%) as compared with sub-Saharan Africa (where 30–50% reliance is commonplace).

> "This difference is consistent with other evidence suggesting that the roots of rural poverty differ between Asia and Africa. Whereas in Asia, a prevalent feature of rural poverty is near or actual landlessness so that poor households must rely on off-farm and non-farm income sources for survival; in Africa, the main factors contributing to rural poverty are locational and reflect not so much lack of access to land, but location-specific lack of access to an array of services and opportunities (roads, schools, market services, input supplies, power, non-farm activities), as well as environmental constraints."

RURAL NON-FARM ACTIVITIES IMPORTANT TO THE POOR

Reardon *et al*. (1998) argue that there are three distinct stages of RNF sector transformation:

- during the first stage, RNF activity tends to be closely linked to agriculture, with agriculture still employing a large share of the population, and RNF activity taking place in the countryside itself rather than in rural towns;

- the second stage is characterized by a greater mix of situations, with rural-urban linkages becoming stronger, some tendency towards commuting, and some rapid growth in agro-industrialization but farming nonetheless, still encompassing all scales of activity;

- the third stage involves an increasing tendency towards the trends seen in the second stage, much greater emphasis on rural-urban linkages, substantial employment in sectors completely unrelated to agriculture, and rapid agro-industrialization in commercial agriculture.

Sub-Saharan Africa and South Asia are purportedly in the first stage, whilst Latin America is a second stage example, and East Asia has reached the third stage.

This has implications for the types of RNF activity present. Reardon *et al*. (1998) argue that the first stage rural economies are characterized by RNF activities that are closely linked to agriculture, either in terms of input supply and services, or crop processing and distribution. This being the case, a dynamic agriculture sector will tend to be associated with relatively more RNF activity and vice versa.

Islam (1997) argues that the poor tend to engage in low-paid employment, often as wage labourers, or they are self-employed at home. Reardon *et al*. (1998) agree in part, although emphasizing the importance of labour-intensive wage employment more than self-employment. Poorer households are less able to tolerate negative shocks to their income, and are, therefore, likely to diversify into less risky activities. Better-off households, on the other hand, are often engaged in industry, commerce and trade as entrepreneurs and employers, occupations from which they have the possibility of earning higher incomes than those available to poor people. Reardon (1997) states that own-cash sources are an important determinant of households' capacity to start non-farm businesses or to obtain off-farm employment. Therefore, upper income strata households have much higher shares of non-farm income as a proportion of total income, and have higher absolute non-farm earnings. Bryceson (1999) also comments on the growing divide between those with and without sufficient financial capital to enter non-agricultural activities with high returns to labour. Low-asset households can spend a large share of their time in non-farm employment, but the wage they receive is low.

Smith *et al.*'s (2001) research on rural livelihoods in Uganda finds similar patterns.

> "A disaggregation of livelihood activities in these two districts by wealth and gender revealed that the greatest diversity could be found amongst the poorer strata. Next to own farm activity, the poorer men in Rakai engaged in several activities (including carpentry, fish marketing and labouring), whilst the women were predominantly engaged in labouring, the production and sale of handicrafts and trading farm produce. This contrasts to Kumi, where wage labouring on other farms was classified as the key activity (after own farm work) of poorer men and women. In addition, brick-making for men and the production and sale of alcoholic brew for women were also important livelihood activities.
>
> There was significantly less diversification and greater symmetry across districts amongst the better-off, who were typically engaged in the rearing of livestock (in both districts) and agricultural commodity trading (in Rakai district)... Whilst current labouring patterns [amongst poorer men] in Kumi have historical precedence, traditionally used by the poor as a source of income for food in times of drought, the loss of cattle and oxen has forced a much larger proportion of the rural population into this lower entry barrier activity. Remaining assets, particularly cattle and productive land, have been sold or rented to meet short-term survival needs, and many households have been pushed out of higher entry barrier activities into these lower entry barrier, lower income activities.
>
> For those engaged in higher entry barrier activities such as trading (in both districts), be it livestock or coffee, there appears to be a self-sustaining cycle of knowledge, social networks and income potential. The better-off buy from other local producers, transport to bigger markets and re-sell. They exploit their superior knowledge of non-local markets, their ability to assess risks, and their pre-existing solvency."

Reardon *et al.* (2000) raise concerns about the evidence of significant entry barriers faced by the poor in engaging in non-farm activity. They note that this trend may intensify because:

- growing markets in the off-farm food system are high-value niche markets, whose entry requirements pose considerable entry barriers to the poor;
- the service sector is likely to become more sophisticated, in response to media exposure and rising incomes in rural towns;
- outsourcing will be increasingly determined by skills and co-ordination rather than low wages;
- as rural towns grow, skilled wages in rural areas will rise;
- these pressures will be reinforced by globalization and trade liberalization.

The next section explores possible explanations for these wealth-differentiated patterns of participation in RNF activities. The livelihoods literature focuses on the influence of household or individual assets as determinants of poverty and livelihood outcomes. Five categories of asset are identified: human capital, social capital, physical capital, natural capital and financial capital. These asset categories are used to structure the discussion that follows.

3

DETERMINANTS OF POOR PEOPLE'S PARTICIPATION IN RURAL NON-FARM ACTIVITIES

CONCEPTUAL OVERVIEW

Many donors are changing their approach to rural poverty alleviation to one that emphasizes (Bryceson, 1999):

- reducing vulnerability to increase resilience and improve livelihood sustainability;
- participatory methods;
- holistic analysis, focusing on multiple determinants of livelihood outcomes;
- the role of a broader range of assets (natural, physical, financial, human and social) over the narrower, traditional focus on farmers' means of production (land, labour capital).

The policies aim to improve the assets held by the poor and/or increase their productivity. Carney (1998: 8) stresses the importance of factors that determine who gains access to assets, their productive value, and the uses to which they are put:

> "...there is a need to understand the vulnerability context in which assets exist (the trends, shocks and local cultural practices which affect livelihoods). Second, it is vital to understand the structures (organizations...) and processes (policies, laws, rules of the game and incentives) which define people's livelihood options."

Box 1 explains the different types of capital asset. These categories provide an appropriate way in which to structure the evidence on livelihood choices and outcomes reviewed here.

Box 1 Capital assets

Natural capital: the natural resource stocks from which resource flows useful for livelihoods are derived (e.g. land, water, wildlife, biodiversity, environmental resources).

Social capital: the social resources (e.g. networks, membership of groups, relationships of trust, access to wider institutions of society) upon which people draw in pursuit of livelihoods.

Human capital: the skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies.

Physical capital: the basic infrastructure (e.g. transport, shelter, water, energy and communications) and the production equipment and means which enable people to pursue their livelihoods.

Financial capital: the financial resources which are available to people (whether savings, supplies of credit or regular remittances or pensions) and which provide them with different livelihood options.

Source: Carney (1998), adapted from Scoones (1998).

HUMAN CAPITAL

Human capital comprises the skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies.

Education

The existence of a positive link between access to, and level of, education on one hand and involvement in the more remunerative non-farm activities on the other is virtually undisputed in the literature. Lanjouw (1999: 5) states:

> “Breaking down the non-farm sector between casual non-agricultural wage employment and regular, salaried employment typically reveals that the probability of employment in the latter sector rises as education levels rise. The opposite is often observed for employment in the casual non-agricultural wage sector. (Involvement in self-employment is usually most likely for those with some basic

> education, but is lower for both the illiterate and those with high levels of education) . . . [The models used to derive these probabilities are such that it is] . . . not very likely that education levels are actually proxying the influence of some other characteristic. Additional analysis, examining the returns to education within the non-farm sector confirms that earnings tend to rise sharply with higher education levels . . ."

There are several processes that reinforce the effect of education on incomes:

- education increases skill levels, which are required for some RNF activities, or contribute to increased productivity, or may be an employment rationing device;

- education can set in train processes that increase confidence, establish useful networks or contribute to productive investment (exposure outside the home village, migration, using improved earnings to educate other family members or invest in rural enterprise);

- education tends to be closely correlated with other variables that also improve access to higher income employment (pre-existing wealth, useful social networks and confidence);

- non-educated family members may benefit from advice given by more educated relatives.

Reardon (1997) cites a number of authors who have addressed the importance of education and skills as determinants of business start-ups and wages earned off-farm in Africa. Better-educated members of rural populations have better access to any non-farm employment on offer, and are also more likely to establish their own non-farm businesses. Better-educated individuals are more likely to migrate to take up employment opportunities in other areas, as they have greater chances of success than their less-educated or uneducated counterparts. Reardon (1997) infers a self-perpetuating effect of education in the long term: earnings from migration may be invested in the education of individuals within the migrant's household, which gives new generations a continuing advantage in the non-farm sector. Over time, this appears to lead to a dominance of the non-farm sector by a subset of local families. It seems that a tradition of involvement in the non-farm sector develops, and members of a household build up confidence in their ability to succeed in that sector. Reardon *et al.* (1998) indicate that education is one of the first major investments of farmers in cash-cropping zones, illustrating the point with evidence from cotton-growing areas in Mali following the 1994 devaluation of the CFA franc. Indeed there is ample evidence from rural poverty surveys that underline the importance that the poor attach to the education of their children.

Women are identified as a specific group for which access to education is more limited. The effect of this, in combination with childcare responsibilities and other social expectations, means that there is greater involvement of women in the informal than the formal employment sector (Haggblade *et al*., 1987).

Islam (1997) argues that primary education enhances the productivity of the workforce, whilst secondary education stimulates entrepreneurial activity. In addition, being educated themselves, entrepreneurs are better equipped to train employees on-the-job. Islam (1997: 21) also cites interesting work in Ghana that explores the wider family impacts of one person's education.

> "A recent survey . . . concludes that not only do the years of schooling of entrepreneurs and family workers employed in the enterprise have an impact on incomes of such enterprises but also the education of other family members who are not directly employed in the business (Vijverberg, 1995) . . . those who are not directly employed in the enterprise . . . contribute indirectly through discussion and suggestions. The crossover effects are significant when entrepreneurs are not educated . . ."

Whilst remittances may help to provide cash to pay for the education of other family members, an additional positive aspect of migration is evident: Smith (2000: 1) points out that migration itself can "influence attitudes, values and access to information and skills." This means that on their return to rural areas, migrants are in a better position to command non-farm work, both through their level of education and skills (formal or informal) and through the improved social status that often results from spending some time outside the home area. Using an example from

Kenya, Reardon (1997) also highlights the ability of migrants returning with skills to secure the more skilled non-farm jobs.

Vocational training

Small business development projects often offer a range of services including education in business skills. Vocational training in traditional trades (baking, brick-making, building skills, handicrafts, workshop repairs and so on) may also be offered at specialized colleges, or sometimes as part of school curricula. Some organizations run short courses targeted to local needs.

Although several authors indicate the importance of specialist skills (e.g. Reardon *et al.*, 1998; Lanjouw, 1999; Bryceson, 1999), and projects and beneficiaries alike stress this dimension to business development, there seems to have been relatively little systematic study of the impact of alternative approaches to vocational training in African countries. Certainly, there are many ways in which such services can be provided (e.g. government-run specialized training centres, private training institutes, NGO or project-run courses delivering training in formal or informal ways, vocational training as part of school curricula, or as part of the services offered by agricultural extension teams).

As a consequence the evidence is rather piecemeal. Islam (1997) argues that small business development programmes need to take care that the services they offer are tailored to the requirements of the individual enterprise. Jeans (1998) observes that organizations that provide skills and training for enterprise development are increasingly charging for these services. Cost-recovery (even if partial) facilitates wider coverage and, more significantly, it has been found that charging a fee increases the proportion of trainees who actually make effective use of their training. However, it is not clear whether this arises from an enhanced degree of motivation, or whether ability to pay for training also implies access to the necessary financial base or stability from which to launch a new business.

Tovo (1991) studied women receiving small business training in Tanzania in 1989. Her findings suggest a positive impact from training and extension services. (These were offered by the Government of Tanzania in a variety of fields including co-operatives, home economics, community development, small-scale industry development and agriculture.) She found that extension services have been particularly helpful, as is evident in the success rate achieved by those who received training or extension. She suggests that those putting themselves forward for such services may be more dynamic and entrepreneurial individuals, the implication being that they would in any case show a greater degree of success in their enterprise, with or without assistance. She also suggests that during their training courses, the women may have made contacts that contributed to the success of their businesses (see sub-section below on social networks).

In their research on women's enterprise in Mozambique, Horn *et al.* (2000) found that respondents recognized their need for training in the management of money as a prerequisite for success in business. This is likely to be applicable to all farm and non-farm business since micro-entrepreneurs tend not to keep detailed records of income and expenditure and, therefore, find accurate financial planning and cash flow forecasting difficult, if not impossible. Work by the Co-operative League of the USA (CLUSA), also in Mozambique, stresses financial skills, as well as business and marketing planning, in their training of farmers' groups (Kindness and Gordon, 2001).

Health

There is no doubt that the health status of household members has a significant bearing on their participation in income-generating activities. While this general rule applies to health in its broadest sense, at the present time in parts of sub-Saharan Africa concerns about health tend inevitably to focus on HIV/AIDS. White and Robinson (2000) outline the considerable extent to which HIV/AIDS has impacted on household livelihoods in sub-Saharan Africa. Many of their conclusions might be equally applicable to health problems other than AIDS.

HIV/AIDS is particularly relevant to this discussion as it often results in the loss of household members who are at the peak of their productivity, and potentially have most to contribute to the livelihood of the household. Productive time and material resources are further lost in caring for those afflicted with the disease, and households may have the additional burden of having to take in orphans or other dependants of the person in question. Coping strategies to tackle this situation mirror to some extent the strategies used by rural households for coping with other shocks, for example, diversifying income sources or migrating to seek work (however, migration has also been found to be a significant factor in the spread of AIDS). Some of the coping strategies adopted by AIDS-afflicted or AIDS-affected households may have negative long-term effects on livelihoods, for example, withdrawing children from school to assist with household tasks and to save money. White and Robinson (2000) argue that the full impact of the epidemic will only be known in the future, when these wider effects of reduced investment in human capital become evident.

White and Robinson (2000) found that as a result of the impact of HIV/AIDS on household livelihoods, there appears to be growing reliance on non-farm income-generating activities. Households already involved in a fairly large number of such activities, as well as agriculture, were better able to buffer themselves against the impact of HIV/AIDS. They further suggest that the commercial sector offers employment opportunities to, for example, AIDS orphans who have no access to land and require an income to support themselves.

Islam (1997) discusses the importance of investment in health more broadly, which results in reduction in morbidity and improved nutrition, and thereby increases labour productivity, in both farm and non-farm sectors. Families who have limited access to health facilities, whether for reasons of location or affordability, inevitably suffer the consequences in loss of potentially productive time. In their research in Uganda, Smith *et al*. (2001) note that the RNF activities of the poor are often more demanding physically. Respondents recognized that good health was important to their ability to earn RNF income.

Personal vision

Very little has been written about personal vision as a possible determinant of participation in the non-farm sector. It is nonetheless interesting to consider a finding of Horn *et al.* (2000), that the potential of the women interviewed in Mozambique was severely constrained by their inability to see themselves in situations very different from those in which they currently live. This may be a result of years of war and poverty, and may not apply very widely, but may equally be relevant in particularly isolated areas, where limited contact with others results in narrow perceptions of what is possible. Improvements in communication and travel may reduce the significance of this factor.

Limitations of personal vision may also relate to the issue of confidence touched on briefly above. Those individuals or households with little or no experience of the non-farm sector may not trust their ability to participate successfully, and may decide to settle for lower returns from agricultural activities, in which they feel more confident. The women interviewed by Horn *et al.* (2000) were risk-averse, fearing living their lives differently, although there was evidence that with age, women were willing to adopt new activities.

Age

Several authors address the significance of household members' age in relation to their participation in the non-farm sector. It is a dimension of human capital and although it may not be amenable to change (except in the aggregate), it is important to understand how it affects participation in the non-farm sector.

Smith (2000) notes that it is generally the younger household members who migrate in search of non-farm, income-earning opportunities, and points out that age is a factor synonymous with moving into the non-farm sector more broadly. Bryceson (1999) considers that both gender barriers and barriers to youth involvement in the non-farm sector are declining. She points out that through the expansion of the service economy, youth have been afforded cash-earning opportunities that were previously lacking.

Horn *et al*. (2000), in their research on women's enterprise Mozambique, note that as women mature they are more likely to take up business opportunities. This finding relates to a particular cultural context, in which traditionally women were in stable, long-term family situations, depending on their husbands for the household's cash needs. However, with more break-up of marriages and a greater number of shorter duration, non-married situations, more women realize that they have only themselves on whom to depend and, therefore, enter the non-farm sector later than they might otherwise. Women with childcare responsibilities are also somewhat confined to home-based activities, until their children can be left with others in the home. This means that women in their late twenties and older were found to be more active in non-farm activities which involved periods away from their homes.

SOCIAL CAPITAL

Social capital comprises the social resources (e.g. networks, membership of groups, relationships of trust, access to wider institutions of society) upon which people draw in pursuit of livelihoods. There is ample anecdotal evidence of the influence of social capital on access to different types of employment, and an increasing amount of empirical research that supports this also. Lanjouw (1999: 3) observes that:

> "...other characteristics [aside from education], such as race, gender or caste, also play an important role in determining the probability of employment..."

Gender

Like age, gender is a dimension of human capital, but its effects are mediated through social institutions – hence its discussion here under social capital.

There is general consensus in the literature that gender is a significant factor determining access to RNF opportunities. As Griffith *et al.* (1999) remind us, the majority of the poor in sub-Saharan Africa are women. They have, therefore, greater need than most for the income that can be secured through involvement in the non-farm sector. Women have long been constrained in the activities in which they are permitted or able to participate, by tradition, religion, or other social mores. Both Ellis (1998) and Newman and Canagarajah (1999) point out the activities in which women are involved are more circumscribed than those for men.

As far as non-farm income is concerned, women participate to a greater degree in wholesale or retail trade or in manufacturing, than in other sectors. Haggblade *et al.* (1987) provide data from five African countries (Benin, Ghana, Nigeria, Kenya and Zambia) where women's share in non-farm employment ranged from 25% to 54%. (It may be significant, however, that this group includes three West African countries where women traditionally play an important role in trade, and Zambia where male migration to work in the mines has left a high proportion of female-headed households in rural areas.) For reasons of differential access to education, childcare responsibilities and social expectations, women are more involved in the informal sector than the formal sector. Figures quoted by Haggblade *et al.* (1987) for Ghana and Kenya show women's share in formal employment as 10% and 14%, respectively, compared with 54% and 25% in informal, small enterprises. Women also tend to engage in businesses that require lower start-up capital than those in which men become involved. Women's involvement in income-earning opportunities has greater significance than simply increasing their own or household income. Islam (1997) states that it strengthens their decision-making power within the household, helps limit family size, and improves child nutrition and education.

Bryceson (1999), using evidence from seven country studies in Africa, goes further than most, in concluding that gender barriers are declining rapidly. In worsening economic circumstances, men have had to accept that their wives and daughters can and should work outside the home to earn money. However, this has not been balanced by a lessening of women's household duties; they remain responsible for raising children and caring for the family. Contrary to other writers, Bryceson finds a breakdown in patterns of work ascribed strictly to men, or alternatively to women, and she notes the broad nature and range of activities currently pursued by women.

Tovo (1991) found Tanzanian women having to provide both food and cash for their families, as a result of the erosion of the subsistence base in rural areas and the decline in real wages. In some cases, women were left solely in charge of the home, farm and family as a result of men migrating to urban areas, though this is often within the context of the extended family. Horn *et al.* (2000) similarly found Mozambican women having to seek means of supporting themselves and their families, as traditional family structures have weakened and stable long-term relationships are no longer the norm. White and Robinson (2000) discuss the increase in female-headed households which has resulted from the incidence of HIV/AIDS. The disease may also lead to the loss of women's assets, such as land, following the deaths of husbands, thereby increasing 'distress-push' into the non-farm sector.

Newman and Canagarajah (1999) found in both Ghana and Uganda that female participation in non-farm work is increasing. During the periods studied, their findings were that poverty rates in both countries fell most rapidly among female household heads engaged in non-farm work. Their research considered sub-groups within the overall group of women, including female heads of households, female spouses and 'other females'. Interesting differences were found in the extent of involvement of those sub-groups in non-farm activities. Working females with the greatest responsibility for family welfare, i.e. heads of household and spouses, were more active in non-farm activities than 'other women'. Women in both Uganda and Ghana work primarily in agriculture, but among secondary activities, women were more likely to be involved in non-farm work than men. Newman and Canagarajah (1999) also found that women in Ghana and Uganda earned substantially less than men.

In relation to the gender profile of migrant labour, Smith (2000) suggests that although historically the majority of migrants were men, this varies within and between regions, and over time, depending on the types of employment available for women and men in rural and urban economies. Women's household responsibilities are more likely to prevent them from spending extended periods away from the home.

White and Robinson (2000), point out that female-headed households have long been identified as being especially vulnerable to poverty. In their work on the impact of HIV/AIDS in sub-Saharan Africa, they note the increase in female-headed and youth-headed households as a result of the spread of the disease. The implication is that female heads of household in particular will be an increasingly important target group for initiatives aimed at increasing the contribution of the non-farm economy to rural livelihoods.

Religion

Several authors note the influence of religious factors on participation in the non-farm sector, always in relation to women's involvement. Haggblade *et al.* (1987) observe that social and religious norms may tightly shape the economic options available to women. They use the example of a Muslim country, Chad, to illustrate the lower participation of women. In their work in Mozambique, Horn *et al.* (2000) report that home-based activities were most common among Muslim women.

A different aspect of the influence of religion is highlighted by Tovo (1991), who reports that in Tanzania, Christian women are more 'risk-taking' than Muslim women. The consequence is somewhat mixed, however, since she also observes amongst Christian women "... higher proportions at both ends of the income spectrum" (Tovo, 1991: 26).

Networks

Individuals and households with better social networks have greater opportunities in the non-farm sector. Once again, this discriminates against the poorest, who suffer a lack of (useful) social networks and are, therefore, unable to capitalize on informal opportunities and remain excluded from formal support systems (Smith, 2000).

Gordon *et al.* (2000b) report that the ability to migrate, and the choice of destination for migration, is influenced by social networks. Typically, men will migrate to areas where they already have relatives or friends, on whom they can rely for initial support and information. They might also learn of employment or business opportunities through friends or family who are already involved in the non-farm sector.

Tovo (1991) found that the women she interviewed in Tanzania had made some important contacts through training or extension in which they were involved. These contacts helped them to obtain scarce inputs for their businesses and to find customers.

Fafchamps and Minten (1998) attempted to quantify social capital amongst agricultural traders and their clients in Madagascar using a questionnaire-based sample survey for data collection and econometric techniques for analysis of data. They defined social capital in two ways: as a 'stock' of trust and an emotional attachment to a group or society at large that facilitates the provision of public goods, and as an individual asset that benefits a single individual or firm. The latter is sometimes referred to as social network capital to emphasize that agents derive benefits from knowing others with whom they form networks. Using regression analyses, Fafchamps and Minten (1998) demonstrate that social network capital raises total sales and gross margins. They identify several quantifiable dimensions of social capital, including the number of traders that the respondent knows, the number of friends and family who can help with an enterprise, and the number of suppliers and clients that the respondent knows personally. They use regression analysis to determine the returns to these dimensions of social capital.

From a policy perspective, an interesting question concerns the amenability of networks to intervention. There are many examples that demonstrate how the development of useful networks can be promoted through deliberate government or aid project interventions. However, there has been little systematic study of these results, as distinct from the effects of other components of the same programme. For instance, an initiative to develop community groups could yield a number of separate benefits including:

- improvements in human capital through group literacy and numeracy training;
- improved access to loans, through group lending mechanisms;
- improved crop marketing, as a result of crop assembly;
- improved crop marketing through facilitation of farmer proactive contact with traders;
- improved leverage with government through organization, representation at other fora and capacity to speak on issues of concern to the whole community.

The initiative, therefore, helps to develop social capital: within the group, between the group and trader networks, and between the group and other networks. Tovo (1991) observes that training also exposed women participants to contacts who were useful to their subsequent business activities. Islam (1997) discusses the role that personal contacts have played in sub-contracts between urban and rural enterprise. The most successful examples of such arrangements have developed without state intervention, but there may nonetheless be measures that could be taken to promote such relationships, such as government-supported work experience or apprenticeship schemes.

Family size and structure

The structure of rural families plays a significant part in determining access by individuals to non-farm opportunities. Reardon (1997) observes that family size and structure affect the ability of a household to supply labour to the non-farm sector. Larger families and those with multiple conjugal units supply more labour to the RNF sector, as sufficient family members remain in the home or on the farm to meet labour needs for subsistence. Smith (2000) applies the same logic to migration opportunities, observing that extended family structure influences access to migration. In this case, the longer absences involved make it all the more important that those remaining in the home are able to supply the basic labour required for subsistence.

The work of Bryceson (1999), Tovo (1991) and Horn *et al.* (2000) indicates how family structure and traditional roles have had to adapt to allow broader participation in the non-farm sector. Tovo (1991) describes a situation where this is needs-driven. Bryceson (1999) also seems to portray the removal of age and gender barriers as a positive outcome of deterioration in traditional livelihoods, although she notes that the assertion of economic autonomy by formerly dependent women and youth is at the expense of social cohesion in the short term.

PHYSICAL CAPITAL

Physical capital includes hard infrastructure (e.g. roads, telecommunications, power and water), as well as production equipment and buildings that are more likely to be individually owned.

There is a consensus in the literature on the critical role of infrastructure in the development of the RNF economy. Lanjouw (1999: 3) notes:

> "... innumerable studies that document the constrained access of rural enterprises to power and telecommunications, and the high transaction costs caused by inadequate roads. Moreover, there is ample evidence to show that banks, marketing and service centres, training centres and other support activities tend to locate where infrastructure is adequate (Binswanger *et al.,* 1989)."

Reardon *et al*. (1998) find that the availability of low entry barrier, labour intensive jobs tends to be associated with good infrastructure, high population and market densities (which lower the per capita costs of providing infrastructure), dynamic agriculture, unequal landholdings and the development of rural towns outside metropolitan areas.

Roads

In his review of literature relating to diversification, Ellis (1998) observes that in Africa, poverty can be largely explained in terms of location, and lack of access to facilities. When asked what improvements in their circumstances they would most like, villagers most frequently cite road access. The majority of African farmers currently ‘head-load’ their produce to local markets.

However, improvements in transportation can also usher in increased competition for rural enterprises, formerly protected by their remoteness. Islam (1997) points out that infrastructure improvements not only increase the supply of competing products, they can also contribute to a change in rural tastes and preferences, towards more urban products. Reardon *et al.* (1998) comment that the distributional impact of road improvements is uncertain and will depend on the involvement of lower-asset households in activities favoured or harmed by improved market integration. Certainly access to employment in rural towns will improve. Moreover, proximity to cities and mines, when coupled with efficient transport links, tends to increase the importance of remittance income in overall rural incomes.

Electricity

Power is another critical component of infrastructure. Mains electricity helps to create increased RNF opportunities in several ways:

- by enabling the development of enterprise for which electricity is a prerequisite;
- by reducing the costs of, for example, diesel-powered, small-scale milling to a viable level;
- by providing lighting and hence increasing the hours that can be spent in (selected) RNF activities;
- by releasing labour from time-consuming and low productivity chores such as manual pounding of grain.

Of these, the first is perhaps the most obvious and receives most attention in the literature. However, the others may have far-reaching poverty impacts, particularly on women. The importance of the release of labour from low productivity tasks in agriculture has been noted by many authors (e.g. Reardon *et al.*, 1998), but the release of women from low productivity household and income-generating activities generally receives much less attention in this context. There is also an issue of cause and effect: women tend to take-up labour-saving technologies (e.g. custom milling) in response to two separate factors – sufficient income to pay for custom-milling and a fall in the price of custom-milling.

There may also be indirect and long-term effects. Respiratory disease is widespread in Africa and partly attributed to the smoky environment in which many rural households live. Fires do not just serve as stoves, they are often kept going to provide light and (sometimes) warmth. Less dependence on this source of light should have long-run, knock-on effects on health and labour force participation.

Telecommunications

Improvement in the cost and coverage of telecommunications reduces transaction costs, by improving information flow. Other things being equal, this should contribute to development of rural enterprise, particularly relative to the poor telecommunications access that has been the norm for many rural communities. Advances in technology, as well as card phones and mobile phones, are contributing to rapidly expanding networks, lower costs and more affordable telephone systems. In some countries, phones themselves create a small business with land lines and mobile phones 'rented' to occasional callers.

FINANCIAL CAPITAL

One of the principal problems for rural households and individuals wishing to start a business, whether in the farm or non-farm sector, is access to capital or credit. Without start-up funds, or with only little cash available for investment, households are limited to a small number of activities which yield poor returns, partly because of the proliferation of similar low entry barrier enterprise. In the same way, individuals with little or no personal savings may find themselves unable to meet the 'start-up' costs of migration.

Islam (1997) cites the results of a four-country study in Africa (Bagachwa and Stewart, 1992) where 30–84% of rural industries complained of poor access to credit – next in importance to lack of infrastructure inputs and markets. Land is often required as loan collateral and this can exacerbate income inequality associated with RNF activity. Reasons for market failure in credit include:

- the lender does not know the default risk of each potential borrower and to collect this information is costly; moreover there is an associated moral hazard problem that rural credit programmes may attract borrowers with no intention to repay;

- it is costly to ensure that the potential borrowers take those actions which make loan repayment more likely;
- it is difficult and costly to enforce repayment;
- the cost of providing services to the rural poor is high because they are located in remote areas, want to borrow small amounts, and illiteracy, lack of experience of banks and lack of collateral necessitate the development of tailored approaches.

Ironically, RNF activities are both a response to, and a consequence of, failure in credit markets. They are a response in the sense that rural households use RNF income to substitute for other sources of agricultural investment, and a consequence in the sense that the *nature* of RNF activity might be different were credit more readily available for rural business start-ups.

A further response to the failure in credit markets has been the development of micro-credit initiatives. Sound schemes targeted to the poor tend to be characterized by:

- small, short-term loans, and savings mechanisms;
- simplified loan appraisal procedures;
- innovative approaches to collateral;
- rapid approval/disbursement of repeat loans after repayment;
- high transaction costs;
- high repayment rates;
- savings and loan services provided at a location and time convenient to the poor.

Thus, micro-credit schemes are often associated with group-lending (where peer pressure effectively substitutes for collateral, and other group members may take action to prevent one member defaulting, for instance, by providing labour to assure timely harvest), extension inputs arranged by the micro-finance institute (MFI), and mobile banking arrangements. Cash-flow analysis may concentrate on overall ability to repay the loan rather than a particular investment project. In some respects, MFIs try to imitate the strengths of the informal sector (using local information to ensure repayment, for instance) and some MFIs are experimenting with ways to link their operations with some of the informal sector financial agents.

Whilst there is wide and growing experience with micro-credit, the vast majority of rural people do not have access to any such scheme. Many authors comment on the consequent importance of informal sources of credit. Gordon (2000) highlights the importance of funds available from friends and family in meeting unforeseen needs, or in investing in non-farm enterprise. These are, however, inadequate, since household expenditure follows a similar seasonal pattern in rural areas, with everyone's need arising at the same time, i.e. when food supplies are running low and the next crop is not yet ready for harvesting. Reardon (1997) observes that own-cash sources, or financing from moneylenders, are an important determinant of capacity to start non-farm businesses or to obtain employment. Horn *et al.* (2000), however, found that women in northern Mozambique generally chose not to borrow from family members, due to the potential for problems if they were unable to repay the loan.

The requirement for cash as start-up capital for non-farm enterprise may be to meet regulatory requirements, as much as, if not more than, any investment in physical capital. An example is given by Horn *et al.* (2000) in relation to women in Mozambique. Those wishing to prepare and sell food, a business particularly favoured by women, are required to obtain a sanitary certificate from the health department, indicating that they and their premises are free from health risks. Even though their businesses can be closed down if they are unable to produce this certificate, the authors observed that few women actually met this requirement, due to the prohibitively high cost of the certificate relative to the meagre profits realized from the business. A similar problem arises with the registration of farmers associations in Mozambique – though in this case it is exacerbated by the time taken to process the applications, which can run into years.

NATURAL CAPITAL

Natural capital comprises the natural resources, such as water, land and common property resources that are so central to rural livelihoods. These resources provide a foundation for farming and also for much of the RNF economy. The influence of natural capital on non-farm activities is felt in several ways:

- through forward and backward linkages between agriculture, post-harvest activities and agricultural inputs and services;

- through consumption multipliers, that magnify the effects of growth (or decline) in the farm economy;
- through linked labour markets for farm and non-farm activities and hence, transmission of higher wages in one sector to the other;
- through correlation between household access to land and other wealth-enhancing assets such as education, contacts, finance;
- through the knock-on effects of risk and vulnerability associated with certain natural resource-based activities on the choice of RNF activities also pursued.

A number of studies have sought to estimate the effect of additional agricultural income on non-farm incomes. Three results are important here: it seems that a more dynamic agricultural sector will generate stronger non-farm multipliers (which supports the ‘agriculture as the engine of growth’ model); the African multipliers tend to be smaller than those in Asia (which is consistent with a less dynamic agriculture); and in Africa, the consumption linkages tend to be stronger than the production linkages. Data from Sierra Leone and Nigeria revealed that an additional dollar of agricultural income would generate another 50 cents of non-farm income (Haggblade *et al*., 1989).

As with the discussion of infrastructure, when considering the influence of natural capital on poor people’s *capacity* to engage in RNF activity, there is some overlap with the *incentive* part of the equation. Natural capital and infrastructure contribute to improved availability of *opportunities*, as well as improved *capacity* to access those opportunities. Of the ways in which natural capital influences the RNF economy identified above, those four whose influence is felt partly through an effect on *capacity* to participate in the RNF economy, are discussed here.

Forward and backward linkages with agriculture

There are a number of ways in which the nature and performance of agricultural production affects the nature of RNF activities that can be pursued. Reardon *et al.* (1998) note:

- crop prices influence the potential for profitable processing;
- food prices influence rural wages and hence, the profitability of all rural income-generating activities;

- the composition of agricultural output affects the potential for related non-farm activities, and in general agricultural diversification (away from starchy staples) tends to be associated with more opportunities for value-added, and hence more non-farm activities;
- crop yields and volumes affect non-farm activity by limiting or enabling the trade or processing of a marketable surplus.

Labour market linkages

Risk, factor bias and seasonality of agricultural activities affect the patterns of job-seeking in the RNF economy. For instance, Reardon *et al*. (1998) observe a negative relationship between advantageous agro-climatic conditions and the share of income earned from migration. Where agriculture is less risky, non-farm linkages are more likely to occur in the local economy. It is important to distinguish between seasonal unemployment and absolute underemployment. In many rural areas of Africa, there are labour shortages during the peak agricultural season, but job-seeking in the RNF economy during the rest of the year. For the non-farm sector to draw people out of agriculture permanently, the opportunities would have to be perceived as sufficiently attractive (well-paid and secure) to compensate for the loss of security from own-farm activities or (as discussed earlier in relation to social capital) the family sufficiently large that other relatives could take care of farm activities. A consequence of this may be a desire to adopt labour-saving technologies on-farm that permit a beneficial diversification into RNF activities (Low (1986) illustrates this with an example from Botswana, where farmers choose farm technology that presents the least obstacle to participation in the mining sector).

Associated income inequalities in farm and non-farm sector

Unequal access to RNF income to a large extent echoes inequality in access to land, an effect that is mediated through both capital and labour markets. Thus, those with better access to land (or access to better land) are likely to be wealthier and more educated. They are also likely to be better connected. Education and contacts improve prospects in the RNF labour market considerably.

Similarly, where land is important as loan collateral it affects access to start-up capital for non-farm enterprise. Moreover, Reardon *et al*. (2000)

provide examples of where steady pay in the non-farm sector may serve as loan collateral for agricultural loans in the informal and formal markets, further reinforcing the effects of relative wealth in one sector on wealth in the other.

Inequality in non-farm incomes may exacerbate inequality in land endowments, where those with non-farm incomes are able to purchase land sold under distress conditions. Examples of this process in Africa have been documented by Francis and Hoddinott (1993) (for Kenya) and Andre and Platteau (1998) (for Rwanda).

Risk and vulnerability in the agricultural economy

Risk and vulnerability associated with agricultural livelihoods condition participation in the RNF sector partly through labour market linkages (discussed above) but also through overall ability (or willingness) to take risk. Both effects help explain Reardon's (1997) finding that in Africa RNF wage employment is much more important than self-employment – the latter being more risky and capital-intensive. Reardon stresses, however, that these findings merit further investigation, because they are based on a small number of studies that permit this comparison (only seven) and there are a number of potential ambiguities relating to the classification of employment within very small businesses. Risk associated with agricultural incomes limits access to finance for non-farm investments, in both formal and informal credit markets.

4

CONCLUSIONS

IMPROVING CAPACITY TO PARTICIPATE IN RURAL NON-FARM ACTIVITIES: POLICY IMPLICATIONS

Fine-tuning policies to be more pro-poor

The interrelationship between different types of capital asset and RNF income was reviewed in the previous section. The general policy recommendations are in large part clear and uncontroversial. Improvements in infrastructure, education, health and financial services help to facilitate access to RNF income sources. A sound and less risky agricultural base provides a strong foundation on which other activities can develop. Social capital is important. Consideration should be given to ways to promote useful networks and discourage negative institutions (such as gender or caste-prejudicial recruitment practices).

The challenge is in fine-tuning these policies to be pro-poor, but to achieve this at an acceptable cost without inadvertently undermining the potential for growth and employment creation. Examples include:

- poverty and gender-aware delivery of financial services, to reduce the barriers posed by literacy and form-filling requirements, the intimidating formality of the surroundings, and inconvenient locations and hours;
- better targeting and sensitivity in the delivery of pro-poor rural services in general and in the implementation of consultative processes;
- the use of participatory methods to plan development to address the needs of the poor; an interesting example comes from the

Department for International Development (DFID)-funded road development in Cameroon, where a consultative process with local communities resulted in low-cost 'add-ons' that increased local impact (e.g. the creation and siting of designated market areas);

- seizing infrastructure development opportunities to also promote employment prospects for the rural poor, by using labour-intensive public works programmes wherever practicable;

- adjusting regulations so that they do not pose a particular obstacle to the employment opportunities available to the poor, for example, avoid outlawing the informal sector, or making obligatory licensing activities overly onerous, time-consuming or costly.

Avoiding too much emphasis on cost-recovery in rural infrastructure

There is a real tension between stronger cost-recovery and equitable access to infrastructure, an issue that is brought into particularly sharp focus because it occurs at the interface between new public management policies and poverty reduction strategies. The arguments in favour of cost-recovery schemes (which can extend to roads, education and health services) are that they improve the targeting and effectiveness of scarce public resources, as well as making limited public funds go further. The problem with such schemes in rural areas is that where there is so much poverty, there is a critical lack of purchasing power, and infrastructure has an inherently high per capita cost because of lower population densities. Too great an emphasis on cost-recovery would relegate rural populations to persistently poor access to infrastructure – a point underlined by Lanjouw and Feder (2000: 48):

> "... recent initiatives to engage the private sector in the provision of infrastructure may be more difficult to apply in rural than in urban areas."

Heterogeneity, decentralization and participation

It is commonplace now to remark the heterogeneous nature of the RNF 'sector' – or even to avoid using the word 'sector' which might give a false impression of cohesion or similarity. This makes it difficult to be too prescriptive with respect to appropriate policy, whilst underlining the need for decentralized, consultative processes designed to tease out the components, issues and potential actions and interventions appropriate to local circumstances.

However, the trend towards decentralization is not entirely positive. Where decentralization results in the devolution of spending power decisions to communities, there is a real danger that those decisions will reflect the needs of the better-endowed communities or community members (Griffith *et al.*, 1999; Lanjouw, 1999). This underlines the need, not only for appropriate policy, but also for training and capacity building to promote the implementation of policy that is true to its spirit as well as its word.

A side-effect of the 'sector's' heterogeneous nature is that until recently it has not been the focus of attention in its own right, and there are rarely institutions whose remit is specifically focused on it. Rather, responsibility is accorded to many (or none) of a variety of government bodies, whose remit is partially relevant, for example, departments of agriculture or rural development, small industry development boards, infrastructure and public works departments, and so on. However, the trend towards decentralization, where horizontal co-ordination is easier and a goal in its own right, may offer an enhanced opportunity to bridge these institutional divides.

Not one but many enabling factors

The review in the previous section highlighted the influence of numerous factors on participation in RNF activity, as well as the interrelationship between many of these factors. This strongly suggests that attempts to improve access to RNF employment based on uni-dimensional interventions are not likely to succeed. Poor people's participation in the RNF economy is constrained by multiple factors including poor health, education and skills, social capital, access to finance, as well as poor rural services and infrastructure. Some of the more subtle components of that equation (such as certain skills, confidence and contacts) may be some of the harder constraints to address.

POLICIES TO IMPROVE OPPORTUNITIES IN THE RURAL NON-FARM ECONOMY

Policies that promote growth

This text has focused predominantly on capacity to engage in RNF activities rather than looking at the wider macro-economic context that conditions the potential for economic growth. The reason for this is that whilst growth-promoting policies have long been an important focus for policy, until recently there has been less policy attention directed to the mechanisms that constrain or permit different groups of the population to participate in that growth. This oversight was nowhere more apparent than in the first round of structural adjustment policies which largely overlooked the short-run distributional and poverty consequences of such reforms only to be subsequently corrected, or partially corrected, by programmes that sort to redress or alleviate negative ‘social dimensions of adjustment’.

However, the focus of this review is not intended to imply that policies to improve capacity to take up RNF employment are sufficient. Clearly, the overall macro-economic environment and the manner in which those policies are implemented are critical determinants of economic growth and employment opportunities in rural and urban areas.

Rural engines of growth

Numerous studies point to the importance of growth in the agricultural sector, to fuel development of the RNF economy. Policies that promote agriculture, therefore, have an important knock-on effect on the RNF economy. Policies intended to benefit either ‘sector’ should take account of the critical linkages between the two. However, there are other potential engines, such as tourism and manufacturing. Lanjouw and Feder (2000) emphasize the importance of the development of those sectors that offer employment to women in particular. Others stress the importance of incomes from government employment in stimulating rural construction and other sub-sectors, for instance, work by Adams and He (1995) in Pakistan and additional work by Adams (personal communication) in Egypt.

Correcting for policy bias against rural economic development

In many countries there is still considerable policy bias against rural economic development. Some of this relates to the agricultural sector, for instance, in respect of pricing and import policies relating to food crops, but others are more far-reaching. Minimum wage legislation may distort labour markets, reducing employment opportunities in rural areas. Its effects may be disproportionately borne by formal, 'visible' enterprise rather than small businesses in the informal sector. Interest rate ceilings may serve to limit the funds available for rural lending by being insufficient to cover the higher costs associated with rural lending programmes.

The manner in which policies are implemented

There are often crucial differences between policy intent and the way in which policy is implemented. The most obvious example arises where public officials use their position to extract bribes and payment for services that should be provided free. However, other more subtle mismatches are also often present. A policy intended to promote co-ordination between line ministries will not be very effective if the relevant officials do not embrace it, regardless of whether or not they adhere to official guidelines on joint meetings and information sharing. Similarly, a policy of free primary health care intended to benefit the poor will not work if the poor are discouraged from using health services because they feel patronized or otherwise unwelcome.

The implications are three-fold:

- consultation and involvement in policy development, at all levels, are likely to lead to greater ownership and better understanding of new policies;
- new policies, and particularly those that challenge ingrained attitudes, need to be accompanied by capacity building and a raising of awareness to equip staff to implement new policy in *spirit* as well as word;
- organizations should be aware of this possible divergence between policy intent and policy practice, and adopt staffing policies and monitoring mechanisms consistent with the promotion of good practice in policy implementation.

Where safety nets and cushions are needed

The experience with structural adjustment has highlighted that: (a) economic growth may not materialize as quickly as anticipated following the implementation of a reform programme; (b) private sector 'take-off' will be patchy, in terms of speed, and geographical and sector coverage; (c) some groups in society may not be able to participate in the gains from economic reform, whilst finding their former livelihoods critically undermined. As a consequence there may be a substantial, and in some areas fairly enduring, mismatch between economic reform policies and poverty reduction. This implies a widely recognized need for safety nets to protect the most vulnerable groups, as well as continued selective involvement of the state in providing critical services in some rural areas. Lanjouw and Feder (2000: 47) propose that:

> "Richer and poorer zones must be treated differently, with less emphasis in richer zones on subsidization and more on reducing transaction costs. In poorer zones public intervention to provide the basic enabling environment will continue to be required."

ISSUES FOR FURTHER RESEARCH

This review has highlighted a number of areas where there is little information or the existing evidence is ambiguous. Four of these are particularly germane to the discussion of *access* to RNF employment opportunities.

Equity/growth trade-offs

Although this issue seems to be perennially topical, there are still a number of unanswered questions that centre on the following dimensions.

- Scale of enterprise – do policies that promote (self-employment in) micro- and small-scale enterprise have a greater impact on poverty than those that promote (employment in) medium- and large-scale enterprise?

- Geographical focus – is the development of high potential zones (as a magnet to labour) more effective in reducing poverty than a focus on low potential zones?

- If these are just issues of time-frame (populations moving to higher potential areas, or macro-economic policies taking time to yield benefits), what policies are necessary and appropriate to protect the poor in the short-run?

- What are the opportunity costs of particular pro-poor policies in terms of possible negative effects on wider growth or through the diversion of public funds from other activities?

Vocational training

The review of experience with skills development highlighted the lack of systematic study of vocational training programme impacts. Such programmes vary in their targeting, scope, organizational and project context, as well as in the manner in which they are delivered. Given the apparent importance of such training programmes to the development of appropriate skills, networks and confidence, a thorough review of experience with such programmes is overdue.

Social capital interventions

Intuitively, social capital seems to be a more difficult area in which to effect development than, say, access to education or financial services. Yet, many interventions have attempted to develop social capital, or have found this to be a beneficial side-effect of another measure (such as training). It would be useful to review some of these experiences more systematically to determine whether, and under what conditions, it is possible to promote the development of networks that are useful to poor people's livelihoods.

Transport revisited

It was noted above that the rural communities often consider poor roads and access to transportation a key constraint on the development of their local economies. There is nothing new about this, but there is now much wider experience of different ways of improving road infrastructure. Bryceson (1999: 51–52) is an enthusiastic proponent of labour-intensive programmes and other 'alternative strategies':

“. . . good road access need not be so expensive if . . [it is] . . carried out with labour-intensive techniques. One of the main obstacles blocking such efforts is the entrenched bias towards capital-intensive construction methods of western-trained engineers (Howe and Bantje, 1995). Local infrastructural building through public works programmes, as already mentioned, can increase local purchasing power, and can provide vital building and maintenance skills to local people, in addition to providing them with better physical amenities (Bryceson and Howe, 1995). In the field of transport, much can be done to improve local-level means of transport. The introduction of appropriate transport technology can expand local employment as well as markedly improving rural people’s mobility (Howe and Barwell, 1987).”

Such strategies merit further investigation and action research to evaluate their impacts.

CONCLUDING COMMENTS

Ellis (1998: 1) argues that the removal of constraints to, and expansion of, opportunities for diversification are desirable overall policy objectives “because they give individuals and households more capabilities to improve livelihood security and to raise living standards.”

Barrett and Reardon (2001: 3) observe that:

“Poverty policy generally aims to improve the asset holdings of the poor, either by endowing them with additional assets by increasing the productivity of the assets . . . they already hold, or both. Diversification patterns reflect individuals’ . . . optimal balance between expected returns and risk exposure conditional on the constraints they face . . . Because it offers a glimpse as to what people presently consider their most attractive options, the study of diversification behaviour thus offers important insights as to what sorts of policy or project interventions might be effective in improving the asset holdings of the poor . . .”

This review has focused on individual or household *capacity* to engage in RNF employment. This is the *equity* factor in the ‘growth with equity’ equation. Just as favourable macro-economic conditions are necessary but not sufficient to promote pro-poor development of the RNF economy, so would be an exclusive focus on household *capacity* issues. Policies that stimulate engines of growth are also needed.

The intention in reviewing the *capacity* issues and lessons was to focus attention on pro-poor strategies for rural development recognizing that this appears to be a particularly important issue in Africa. Existing patterns of RNF participation suggest substantial entry barriers faced by the poor whilst trends in the non-farm part of the food chain suggest that these tendencies may only intensify. The extent and depth of rural poverty in Africa, and the potentially bleak implications of these findings, underline the need for a concerted focus on the research, policy and best practice, capable of delivering sustainable improvements in rural livelihoods in Africa.

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ABBREVIATIONS

CFA	*Comptoir Financière Africaine*
CLUSA	Co-operative League of the USA
DFID	Department for International Development
MFI	micro-finance institute
NGO	non-governmental organization
NRI	Natural Resources Institute
RNF	rural non-farm

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