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Living with uncertainty: gender, livelihoods and pro-poor growth in rural sub-Saharan Africa

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Summary

This paper provides a gender perspective on recent arguments about the link between economic growth and poverty reduction in rural sub-Saharan Africa. Recent research from the African context, which adopts a 'bargaining' approach in place of the earlier 'unified' approach to the study of household economics, has suggested that gender relations within the household are a major factor constraining women's productivity in African agriculture and leading to various types of allocational inefficiency. The paper suggests that many of these studies overlook the fact that households are arenas of joint, as well as competing, interests, and may overstate the extent to which gender conflict underlies observed low productivity. A livelihoods approach, which takes account of the key objectives which characterise households in poor, agrarian environments, and the multiplicity of ways in which they seek to attain these objectives, provides a richer and more nuanced account of nature of poverty in the region. Using such an approach, the paper discusses the role of households and families in an environment characterised by pervasive uncertainty and notes the various ways in which women are disadvantaged, relative to men, in the pursuit of security of livelihoods. These include both intra-household inequalities, but also inequalities generated by biases in the wider institutional arena. The paper concludes by noting some of the ways in which addressing these gendered constraints might contribute to the long-term effectiveness of pro-poor growth strategies as well as to the goal of greater gender equity.

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1 Introduction

The link between gender and poverty has come under increasingly critical and sophisticated scrutiny in the last decade. While continuing to confirm that women's poverty is widespread, two recent important collections have criticised as overstated and over general a number of ideas that have gained considerable currency in advocacy arguments (IDS Bulletin 1997; Development and Change 1999; see also Cagatay 1998). Several authors seek to undermine the simple views that women are always the poorest, that poverty is feminised, or that female-headed households are always poor. (Chant 1997; Kabeer 1997; Jackson 1996; Razavi 1999) At the same time as the gender and poverty analysis has become more sophisticated, poverty eradication has become established as the primary development objective of the new century, making it even more important to understand the whys and wherefores of women's poverty and to get this analysis into mainstream thinking. This is especially the case, since as Jackson has pointed out, there is a worrying tendency in some quarters to treat gender equity and poverty reduction as achievable by identical policies. (Jackson 1996) Gender advocates are not objecting to this kind of supposed synergy on the basis of philosophy – i.e. women's goals *must* come first – but rather on the basis of whether such synergy is in fact in play. Will addressing poverty issues also address gender equity issues and, of course, will addressing gender equity issues lead to falls in poverty?

During the last decade the international poverty agenda was dominated by arguments about the ways in which growth can and does lead to poverty reduction. As the 1990's progressed, we saw a major emphasis on labour-intensive, market-led growth as a pro-poor strategy for combining efficiency and equity concerns, with social investment in human resources, primarily education, playing a critical complementary role. Safety-nets were suggested for the minority who would not benefit from a human resource intensive growth strategy. Although considerable rethinking of the nineties agenda is evident in the 2000/2001 World Development Report, growth is still seen as central to global poverty reduction. One particular set of criticisms of the earlier approach has been the universalism of the prescriptions for pro-poor growth. This universalism has been undermined by work by Demery and Walton (1997) and Baulch and Grant (1999), among others, which suggests that the initial levels of economic inequality within countries are likely to determine the extent to which growth has pro-poor implications.

This paper takes up arguments about the link between growth and poverty in rural sub-Saharan Africa (SSA) from the perspective of its gender dimensions. It is not concerned with the degree and character of women's poverty, but rather with the influence that gender relations, both within and without the household, have on growth and by implication on the direction and efficiency of pro-poor growth policies. It focuses mainly on areas of smallholder farming. This is partly justified because of the importance of agriculture within national and rural economies. Although the degree of dependence on agriculture and the characteristics of the agricultural sector vary widely in different countries, strategies for poverty reduction in most sub-Saharan Africa states must pay, and are paying, close attention to the prospects for growth in African agriculture. Areas of small holding agriculture are also areas where the majority of the population (usually reckoned as between 60 and 90 per cent) are poor or very poor.

In general, rural SSA has several characteristics that are likely to affect the outcomes of strategies for pro-poor growth. In many rural areas of SSA there is an overall context of labour shortage, certainly given current levels of agricultural technology. Furthermore, prevailing patterns of land use, agricultural practices and input use keep returns to labour painfully poor. With few exceptions, the rural subcontinent is faced with wide spread resource poverty and farmer investment has been historically very low. Labour saving technologies and policies to overcome capital constraints are likely to be more relevant here than labour intensive employment generation which are more suitable for contexts characterised by labour surpluses.

Moreover, economic growth as a poverty reducing strategy depends on extending or improving the functions of markets, but markets are very variable in sub-Saharan Africa. In some urban and rural areas, markets may function to provide appropriate signals to poor households and may also reduce the risks that they face. However, in a substantial part of the rural sub-continent, markets are not well developed and some element of agricultural production continues to by-pass the market. Poor rural infrastructure place further limits on markets and depresses the development of off-farm employment and of basic services. Effectively remote, no matter what the map says, and forced back over and over again by climatic shocks and external economic shocks to a beleaguered self sufficiency, many rural households are slowly losing the physical, social and human capitals that are the key to survival, adaptation and accumulation. In these circumstances partially developed markets may increase rather than reduce risks.

One particularity of African small holder agriculture is the importance of women's role in productive activities. The highly stereotyped idea of sub-Saharan Africa as a 'female farming' area has been gradually superseded by more complex ideas about the role that both men and women play in agricultural work. (Bryceson 1995; Whitehead 1991). It is one of the paradoxes of gender relations in sub-Saharan Africa that while women play a considerable role in production, rural households and families are institutions of considerable gender inequality. In addition to unequal work burdens and access to resources, rural women are more poorly educated than men and have much less agency and capacity to act. Women's capabilities and their role in production are significant elements in the prospects for growth in agriculture and may have significant implications for poverty reduction.

Considerable theoretical attention has been paid to gender relations and growth in African farm families because of the absence of intra-household norms of pooling of resources. These smallholder households thus form a special and extreme case of the more general feminist arguments that households are not necessarily sites of sharing and equity – an approach which entails a strong challenge to the neo-classical assumption of household unity in the modelling of household behaviour (Agarwal 1997; Evans 1989; Hart 1997; Haddad *et al.* 1997a, 1997b; Kabeer 1994; Sen 1990; Hoddinott, Alderman and Haddad 1997). The implications of demonstrable intra-household differences in well being and poverty and the fact that household income, food and capabilities are not shared on the basis of need have lead to recent attempts by micro-economists to develop alternative models of household behaviour. These non-unitary models are characterised by conflictual interpretations of intra-household relations in contrast to previous 'altruistic' interpretations.

This paper is not concerned with exploring this fast-developing field as a whole. Its starting point is instead some recent attempts to link the prospects for economic growth in rural sub-Saharan Africa with the nature of gender relations on a wider canvas. Nevertheless, as these arguments are concerned with gender both within the household as well as outside it they draw heavily on some studies using conflictual models of the household. We therefore begin by reassessing two much-quoted examples of intrahousehold production and consumption behaviour in smallholder farming families in sub-Saharan Africa which use or are influenced by these models. Our main strategy is to place these studies into a wider empirical context, drawing on other, often sociological, work about intrahousehold relations and also work which provides much more information about the wider rural economic environment. On the basis of this contextual evidence, we argue that simple conflictual interpretations misunderstand the nature of intrahousehold relations. This leads us to suggest that a broader livelihoods approach helps to understand smallholder behaviour better and we go on in the rest of the paper to use the idea of sustainable livelihoods to explore other important aspects of the gender-poverty-growth linkages. Section 3 examines gender differentials in livelihoods diversification. It focuses particularly on the gendered nature of rural labour markets and income opportunities, where we also look at the issue of women's education and how this affects these opportunities. Section 4 examines the gender dimensions of intra-household welfare and finally, the implications of our analysis for a gender-equitable, pro-poor growth strategy in Africa are discussed in section 5.

2 Gender, livelihoods and agricultural productivity

2.1 Gender and growth interlinkages: some recent accounts

One recent sustained analysis of the links between gender relations, growth and poverty was the 1998 SPA report (Blackden and Bhanu 1999). It took the more general argument being taken up by the World Bank that economic inequalities affect the extent and character of growth (Birdsall and Londono 1997; Deininger and Squire 1998) one step further by showing that the relevant inequalities include those of gender. It paid particular attention to gender inequalities in education and physical assets as possible factors in determining how growth strategies in Africa would impact on poverty. These issues will be taken up later in the paper.

A further central element of the 1998 SPA report concerned the link between growth in agriculture and the gender division of labour. The context is one of growing evidence of a very poor or sluggish agricultural supply response to liberalisation in many SSA countries. The gender and economics literature contains a number of arguments that posit a link between intra-household gender relations and economic growth in sub-Saharan Africa. One is the 'time constraint argument', which suggests that women's workloads, given their multiple responsibilities in contributing to household production as well as caring for the family, will hamper their ability to respond to economic incentives. (See Palmer 1991; Elson 1995 and Blackden and Bhanu 1999 for versions of this argument.) A second set of arguments, associated, amongst others, with Collier (1988; 1993), focuses on inefficiencies due to the norms governing the gender division of labour and responsibilities within the household. The strength of custom in reinforcing division and specialisation within the household, particularly between men/boys and women/girls implies that allocative decisions are determined by normative rather than efficiency considerations.

Most attention is being paid recently to a third set of arguments – those which point to economic inefficiencies arising from the intra-household incentive systems (Jones 1983; 1986; Dey 1994; Udry *et al.* 1995), which are structured by the non-unitary nature of household norms and arrangements. These are all arguments that adopt bargaining or conflictual household models. Darity (1995) makes this argument at the most general and abstract level and suggests that low supply response in African agriculture, and hence poor growth, arises because women are unwilling to put labour into men's cash crops. His analysis depends on the assumptions that men grow export cash crops and get the income for this work; women grow food, but also provide labour on cash crops, although they do not receive direct income from them. (See also Elson and Evers 1997.)

Evidence of men using violence to coerce women into providing labour on their fields (Jones 1986), of preventing wives from selling their labour (Sender and Smith 1990), of women demanding 'wages' for providing labour on husband's land (Dey 1994), all point to the existence of conflicting objectives within the household. The 1998 SPA report draws on these, but also emphasises the findings of a small number of econometric studies which argue that the incentives of men and women to work in certain ways or on certain crops or to allocate inputs to particular crops or fields is altered by the intrahousehold budgetary and labour relations marked by separation of men's and women's income streams and by non-pooling. This produces allocative inefficiencies in productive behaviour because women and men are likely to give greater priority to crops under their direct control, regardless of the collective welfare of the household.

This is a highly significant argument for those concerned with economic growth and gender in sub-Saharan Africa for it achieves a linkage between poor agricultural, supply response – the failure to respond positively to price signals – and intra-household gender relations, by suggesting that the latter produce inefficient production decisions. It constitutes a particularly elegant example of the general class of gender synergy arguments referred to earlier, for if true, it implies that improving women's position in the context of smallholder household relations (this is only one option) will at the same time have positive consequences for agricultural supply response and hence for growth. It is thus important to examine these studies carefully.

2.2 Explaining agricultural supply response in Zambia: household norms and institutional constraints

The issue of the gendered supply response in agriculture is the subject of Wold's study of rural Zambia (Wold 1997). His starting hypotheses was that gender and size of farms would affect supply response: 'Small-scale female headed farm households would give a negative supply response due to their family obligations and time constraints' while 'medium scale male headed households would offer a positive supply response to higher price and market liberalisation' (p 30). He found that as the price of maize fell in Zambia, there was a major expansion in the cultivation of maize, especially for sale. Moreover, 'all the groups, women farmers and men farmers, small sale and medium scale, were found to have a negative supply response; the lower the producer price level was in the community the higher the volume of maize produced'. However, while the negative supply response was shown by male headed and female headed households, it was stronger in the case of women. Some producers did respond to relative price changes by switching to relatively better paid crops and this was on a significantly gender differentiated basis. Male farmers switched between crops, but women respond more weakly to relative price changes.

Despite the fact that all farmers showed a negative supply response, Wold explained women's response primarily in gender terms, and in particular attributed it to a normative division of responsibilities within the household. 'Given their obligations, it is almost impossible for women farmers not to produce the traditional food crops e.g. they can hardly switch to cotton production' (p 30). Yet the rest of Wold's own analysis points to evidence that male and female farmers faced very different institutional and resource constraints, which would have also affected their supply response. For instance, the most important factors associated with the increased production of maize were the ownership of a plough, non-farm sources of income, use of fertiliser and access to different kinds of marketing channels, all of which were more likely to be available to men rather than women.

Evidence from earlier farm level studies suggests that women farmers are at a considerable disadvantage in relation to all the inputs, and in particular labour, required for marketed crops or for investing in new crops (Kumar 1994; Sutherland 1988; Evans and Young 1988). A recent study by Deininger and Olinto (2000), which was specifically looking at why Zambia's liberalisation had not produced much crop switching or improved outputs and rural incomes, found that access to credit, ownership of cattle and labour supply increases output or productivity. All these factors are likely to be gender differentiated (see Moore and Vaughan 1994; Evans and Young 1988).

Wold's explanation for gender differentials in supply response in terms of women's presumed obligations to grow traditional food crops is an example of the way in which conventional representations of the gender's work and food security obligations have been integrated into arguments about the link between gender, economic growth and poverty. Yet, further on in his study Wold reports that 'the pattern of gender roles and obligations with regard to different crops is a complex matrix and … subject to change' (p 30).

The complex and changing character of gendered responsibilities in agriculture is supported by other farm level studies in Zambia. These studies also typically show that a significant proportion of crops are grown in systems of joint production between husbands and wives and also that men put in labour to women's crops (see studies discussed in Whitehead 1998). This joint fund for own consumption is necessarily conceptually invisibilised in approaches stressing the separation of male and female activities and interests. Whitehead (1998) argues that joint staple food production of the Zambian kind is a specific example of the more general sense in which there are joint interests in food in small holder households. These arise because all household members have some claims on own-produced food, although men and women may well differ in their dependence on this joint element of the household economy. Whitehead also argues that the extent to which food security is a male or female concern varies and is a matter for empirical investigation.

In sub-Saharan Africa as a whole, qualitative studies show a more complex picture of who produces food and who is responsible for food security, including many regions where men are responsible for staple food production (see Burkina Faso described below). Male household heads growing cash crops may well be simultaneously concerned about the self-provisioning element of household production and responsibility for overall family welfare may not rest solely with women. The centrality of own produced food to total household income and to food security for all household members and the variability in norms as to who has responsibility for family welfare raise important doubts about the assumption that it is women who are risk averse and act to protect food security.

2.3 Explaining allocative inefficiency in Burkina Faso: a household economic perspective

The importance of considering households as arenas of both joint and separate interests and the implications of this for household economic behaviour can be illustrated through a critical evaluation of the findings reported by Udry *et al.* (1995) in their study into allocative efficiency in Burkina Faso farm households. This study is a central plank of the argument in Blackden and Bhanu (1999), but it is also widely quoted by others who link intrahousehold gender relations with constraints on growth in rural sub-Saharan Africa. Re-analysing time panel data collected by ICRISAT during the 1980's from six communities, the authors showed that, within the same household, yields were lower on women's plots than on men's for the same crop in the same year, for all plot sizes.[1] They explained this result in terms of differences in labour and other input use, rather than in terms of the lower productivity of female labour. Yield differences between men and women's plots were related to differences in input intensity. Far more household male labour was devoted to a hectare of land controlled by men than to land controlled by women in the same household, although some male labour was used on many women's plots. Men's plots also used more non-household labour than women's. All fertiliser was concentrated on male plots.

Udry *et al.* offer a cautious interpretation in their paper, which is mainly a discussion of the adequacy of conventional economic models of the household. 'The evidence presented here demonstrates the existence of substantial inefficiencies within households engaged in agricultural production. These inefficiencies may be indicative of a system of production in which resources are neither pooled or traded among household members … but taken at face value, these results contradict the hypothesis of Pareto

[1] Quisumbing (1996) points out that very few sub-Saharan Africa studies have good enough data to measure gender differences in agricultural productivity. She reviews the few that do and in sub-Saharan Africa finds no difference between men and women in their levels of productivity once all other factors are controlled for.

efficiency[2] within the household' (p 418). An implication of their study is that households were not unitary constructs and were instead sites of power and inequality. In discussing whether targeting interventions at women would improve their position, they note the ways in which this may well be subverted by men, who may change their behaviour in the light of the new levels of income or welfare that women can achieve.

The potential of this study for the arguments about intra-household gender dynamics and growth is clear. Greater productivity and household production could be achieved either by reallocating women's plots to men or reallocating the variable factors of production, (labour and fertiliser), from men's plots to women's. The 1998 SPA Report uses a figure of 10–20 per cent as that by which production could be increased here by a more efficient and gender equal intra-household allocation of inputs. The argument is that allocative inefficiency and hence depressed production arise because the separation of resource streams implies individual, not shared, incentives. Women's low level of inputs on smaller parcels of land can be seen as a measure of their weak bargaining position, while men act to protect and maximise 'their own' production.

One problem with this study and perhaps especially its use to make the broader sub-continent wide argument about gender and agricultural productivity and supply response, is that it is focused on a very narrow subset of data on household behaviour. 'Efficiency' is seen as a matter of maximising the output of a particular crop from amongst a range of crops in the span of a single annual agricultural cycle. This begs a number of questions. What are the economic objectives of farming households? What part does the protection of household food supply play in them? How are these affected by the opportunities and constraints offered by the rural and farming economy and the agro-ecological situation in which these are taking place? Are there other ways in which the social organisation of the household and its gender relations contributes to these objectives? In order to understand how these households achieve economic success to meet the needs of their members we need much more contextual information. Fortunately there are a number of other studies from Burkina Faso which shed light on the findings in Udry *et al.*

2.4 Responding to agroclimatic and market uncertainty in Burkina Faso: domestic organisation and livelihoods

Burkina Faso is one of a number of examples in the dry zones of the West African savannah where large and complexly organised households are associated with relative economic success They are also areas where male labour input to staple cereal crops is high. In the Burkina Faso regions covered by the ICRISAT data, the proportion of agricultural land farmed by women is small and household food supply is grown mainly by men. Savadogo *et al.* (1994), show that median size for all households in the ICRISAT data set is approximately 9.00, but that for households that have animal traction this rises to 12.2. These are wealthier households that have invested in agricultural technology. Their larger size is a result of

[2] Pareto efficiency refers to optimal allocation of household resources (equalisation of their marginal productivities across uses) such that their marginal productivities are equal so that overall output is maximised.

household heads retaining adult male labour (with polygamy also playing a role). Using the same data set, a study by Vierich (1986) focuses on how various features of the sociological organisation of family farming affect productivity. She picks up on the fact that intra-household variations in same crop yields are not purely a matter of female-male differentials. They also exist between men within the household.

Vierich describes farming as carried out within a nested hierarchy of compounds, production units and conjugal units. The compound is a male-related family cluster of more than one married man and is divided into production units. The head of a production unit has higher yields on his plots than other males in household, mostly sons and brothers, some of whom are married. She suggests there is an 18 per cent difference in output between them. This finding is very similar in form to those flagged by Udry *et al.*, namely that younger men, as well as women, are at a deep disadvantage in the allocation of variable inputs in a system of familial relations which privileges age, kinship status and maleness. Control over variable factors accrues to senior males, rather than to all males.

Udry *et al.*'s further argument, that there is an overall depression in production as a result of unequal access to resources, is rather contradicted by another of Vierich's findings: there are wide variations in per capita outputs between production units. Some of these production units were headed by men who were also compound heads and some by ordinary household heads. There was a very wide range in the amount of cereal produced per agricultural worker in different farming units. Veirich found that (1) production units headed by compound leaders were, on average, twice as large as those headed by ordinary household heads; (2) cereal production per worker in production units headed by compound heads was nearly double that of production units headed by ordinary household heads; (3) the amount of cash involved in livestock transactions (sales and purchases) was far greater in production units headed by compound leaders. On the face of it, rather than equalising the input use onto men's and women's farms, overall production in this system could be improved by increasing compound and household size and sociological complexity.

These findings raise important questions about joint and separate interests and incentives. Unless the glue that keeps larger households and compounds together is pure despotism, some incentives must be in play for men other than the household head to stay in them. Here the interests that all household members may have in the overall economic success and in this case food and other domestic production – i.e. the extent to which they have some share in its consumption goods – is important. The greater per capita yields trickle down in some way, although not necessarily equitably.

Veirich also suggests that the centralised compound organisation 'provided more vulnerable units with a buffer against misfortune.' (p 163). The study communities are in one of many areas in sub-Saharan Africa of considerable agroclimatic difficulty and uncertainty. Soils are poor and rain patterns highly variable, producing a risky annual environment for farming. Uncertain and unreliable rains produce years of poor yields in some staples and occasionally outright failures. As numerous studies have shown, farming households in these circumstances adopt risk averse or 'safety first' behaviour, including coping strategies to deal with external climatic shocks which compromise food supplies (Berry 1993; Richards

1985; Scoones *et al.* 1996). These include cutting down consumption, eating gathered and hunted food, liquidating saving and stripping assets (Davies 1995; Devereux 1992; 1993). Risk is also managed through crop diversification and diversification of livelihoods to include self employment and wage labour in both farm and non-farm sector (Reardon, Delgado *et al.* 1992; Savagado, Reardon *et al.* 1994; Savadogo 1997). In these strategies, the mature heads of larger households may be at an advantage in many ways. They can manage more household members into different parts of the rural labour market; they may have more experience and hence make better decisions in managing risk, through coping strategies and flexible production decisions; the stronger discipline they can exert may pull the whole household through.

Some confirmation of the importance of risk management in shaping household behaviour is to be found in an interesting account by Chipande of a resettlement programme in Burkina Faso. Land had been assigned for the intensive cultivation for sale of particular grains. Farming systems research seemed to indicate that settlers neither adopted intensive cultivation techniques nor did they market more crops as hoped. Chipande's qualitative case study research gave access to household objectives and the gender aspects of the programme. He found that what concerned the project households was the importance of diversifying out of agriculture into non-farm sources of income in the face of uncertain rainfall and the uncertainty of the project's future. Consequently, increase in sales of grain was negligible. More area was planted under grain, but the additional output did not enter official markets and instead was used as gifts or to pay for livestock and hired labour. In other words, the profits from the better yields were bypassing the market and being used directly to invest in social capital to produce future output (by hiring labour paid in kind) and for savings (livestock).

This illustrates the importance of adopting a broader, livelihoods approach to efficiency and incentive arguments in small holder households. Efficiency cannot be measured in terms of the output of one particular crop, in one particular year. The inefficient allocation of labour and fertiliser to some men's plots can buttress a system of authority relations which enables economic gains to be made elsewhere. Maximising marketed output of a particular crop, which is the central plank of the allocative inefficiency argument, is not always the priority. Food security may be prioritised over maximising income; or again, not just food security, but long term security and the possibility of accumulation. Diversification into several income sources rather than concentrating on the ones with greatest returns may be a major buttress against vulnerability.

The Burkina Faso material also suggests that assumptions of separate interests within households and hence of potential conflicts between individual outcomes and collectives outcomes needs to be balanced with an understanding of areas of joint interest. Non-pooling in some spheres coexists with interdependencies in others. In the Burkina Faso case, empirical differences in the output of production units is linked to the presence of additional male labour. When risk is high, household heads' greater access to resources for managing risk may be an important element in retaining men and women household members. But the arguments can be generalised to gender issues. When risk is high, men's greater access to resources for managing risk is likely to be an important element in women's behaviour.

A corollary of this is that while women have a strong interest in men's economic behaviour, men also have an interest in women's economic spheres. In the resettlement project in Burkina Faso researched by Chipande, women were far more economically active than had been envisaged by project officials. They engaged in private cultivation as well as animal husbandry and trade, none of which were built into the design of the project and of its extension services. The importance of their contributions and recognition of their economic losses within the project design was acknowledged by household men. In the early stages of the project they gave cash gifts to their wives and to younger men, (the other category of losers in the project design) to start up their own enterprises.

In the later years of the project, private fields for women had re-emerged. Gender spending patterns had also shifted. In contrast to the pre-project period, women's crops were now sold rather than consumed. Male heads were responsible for sauce condiments, school materials and clothing. Women's income was used for their personal needs, for investment in jewellery, for travel, clothes, gifts, trade goods and livestock. At the beginning of the project, women had very few livestock, yet within five years, some of them had accumulated a small herd. None of this fits with an intra-household gender conflict model, or with the idea that men's and women's incentives are associated mainly with their separate economic spheres, or indeed with a view that family welfare is based on women's spending (discussed further below). Instead, the household emerges, for both men and women, as a complex and shifting arena of separations and interdependencies.

In this section then, we are arguing that the efficiency, or otherwise, of production decisions within smallholder households cannot be determined without considering the whole range of allocative decisions and over a long time span. The value of a livelihoods perspective is that it takes account of the fact that farm households engage in a portfolio of activities to meet multiple objectives which include immediate well-being as well as the capacity to maintain this over time. We have considered how smallholder households prioritised certain crops over others, sought to diversify their crops as well as to diversify out of agriculture in response to their circumstances. We have also suggested that the apparent rigidities in agricultural supply response, and the sub-optimal use of agricultural resources which this was seen to represent, might make sense when evaluated as the management of complex family relations with positive production spin-offs in the enterprise as a whole.

That being said it is important to place the arguments about gender conflict and agricultural supply response into a wider perspective. It remains the case that in many areas of SSA agricultural supply response throughout the 90's was sluggish, if not apparently perverse. There are a number of reasons for this including poorly developed markets for inputs and crops (Deininger and Olinto 2000; UNCTAD 1998). Many discussions of agricultural supply response suggest that the nature of the economic environment for African farm families is rather poorly understood. There are also some important gender supply response issues, although these take us into the more familiar territory of women's access to information, institutions and resources, which numerous studies (with few exceptions) have shown are inferior to men's.[3]

In our view, in many (but not all) areas in sub-Saharan Africa, women's access to labour and to cash or other resources to mobilise labour are more important than access to land.[4] The generally very small sizes of women's farms reflect their labour and cash constraints and not lack of rights. Although women lack secure titles and their access to land is through men, their entitlement are often recognised by men, even in situations of modernising agriculture (see for instance, Sorensen 1996; Kasente *et al.* 2000; World Bank 1994). However poor access to resources is very critical for women's own farming. Most smallholder farming in SSA now requires purchased inputs and these are fundamental to improving its productivity. The sums may be quite small, but they are often beyond the reach of many women, through whose hands pitifully little cash may pass during the normal year. Dealing with this aspect of resource poverty is crucial to improving supply response. Improving extension and credit delivery are clearly important parts of a gendered antipoverty strategy, but they are relatively well understood and embedded in public policy approaches and need not be discussed further.

One of the main problems with agricultural supply response studies is that they have rarely been able to take into account all the factors we have just been considering, together with intra-household gender issues. Here the point is not to deny that there are gender conflicts over production in small holder families, but rather to insist that the impact of these on production needs to be empirically investigated alongside investigations of these other issues. The complexity and multi-sited nature of household economic behaviour is one of the issues highlighted by livelihood approaches. In the next section we turn to consider these in relation to rural income diversification and its gendered characteristics.

3 Gender, livelihoods diversification and poverty

3.1 Livelihoods diversification: survival or accumulation?

The Burkina Faso studies in the previous section have shown the significance of diversifying out of farm income for rural households and this is generally the case for sub-Saharan Africa as a whole. Given the low productivity of its agriculture, it is not surprising that large sections of the rural labour force seeks at least some part of its income from other sources. Reardon (1997) in a comprehensive review of 23 field studies across sub-Saharan Africa reports that, on average, 45 per cent of the income earned by rural households came from the non-farm sector. Chuta and Leidholm (1990) suggest that 30–50 per cent of African rural household income comes from micro enterprises. However, although rural non-farm income is ubiquitous, its role in livelihood strategies is disputed.

One view is that diversification represents a survival strategy, a response to crisis, and this is given credence by studies which show increasing diversification, often for very low returns, as part of coping

[3] See, for instance, examples reviewed in Basu, King and Mason (1999).
[4] For another view see World Development (1997).

strategies in areas of high agroclimatic risk (Reardon and Taylor 1996b; Reardon and Vosti 1995). The other sees it as an accumulation strategy, a response to opportunity (Ellis 1998; 1999). One possible reason for these differing interpretations of the meaning and motivations for livelihood diversification is that the studies in question were carried out in differing geographical locations. Thus, in areas on a downward spiral, diversification 'does not contribute to the achievement of sustainable livelihoods but to a cycle of impoverishment' (Hussein and Nelson 1998). On the other hand, commentators who see diversification feeding into a process of accumulation tend to draw on studies located in countries where there is evidence of agricultural take off, such as Kenya.

There is also another possible reason for these conflicting interpretations of livelihood diversification, which is that accumulation through diversification may not be equally available to all rural households. This point is made by Dercon and Krishnan (1996), in a study of two areas in respectively Ethiopia and Tanzania, where crop income formed only about 25 per cent of household income and where there was considerable economic inequality between households. Dercon and Krishnan found that what mattered for household income was not off-farm income per se, but the kind of off-farm income achieved. Off farm incomes could be divided into two broad categories: a set of low return activities with few entry constraints and a smaller set of entry- constrained high return activities. Given poor credit facilities, entry into these different categories was largely determined by initial endowments. Livestock rearing for example constituted one of the high return, entry constrained activities which required investment and resources, but which contributed to increased incomes. The study lends empirical support to Reardon's view that while risk management is one factor underlying diversification, another is to provide investment capital. Given the widespread failure or absence of credit markets, access to high-return off-farm activities provide one source of surplus for investing in improving agricultural productivity and other forms of accumulation.

A further dimension to these debates is the question of whether access to non-farm income dampens down inequality or exacerbates it. Clearly, once again the answer will vary according to context. In the impoverished and high-risk agricultural regions, diversification provides better-off farmers with a form of insurance for poor crop years, and studies have tended to emphasise the inequality-exacerbating effects of diversification. However, Piesse and Thirtle (1999) suggests that in the sub-continent as a whole there may be many other factors which affect the equality or inequality producing affects of diversification as an aspect of household livelihood strategies. They mention especially access to local and national markets as well as the existence of financial and credit institutions.

In their study of two communities in the communal lands areas of Zimbabwe, Piesse and Thirtle (1999) found differences in the impact of off-farm income resulting significantly from differences in degree of production for the market and in physical remoteness. They found that:

> In more remote areas with traditional mainly subsistence agriculture, the agrarian power structures result in a situation where those who have better farm incomes are also in a better position to exploit non-farm income opportunities. Conversely, where there is a more developed

> infrastructure and urban proximity, the commercialisation of agriculture may result in less equal farm incomes, but gives greater opportunities for non-farm employment and thus more equalising non farm income. p 13

This is an important finding, since it indicates a strong role for public policy in determining whether diversification will increase or decrease equality. The area closer to the capital had a much more developed infrastructure and rural employment market. This enabled poorer households to escape the effects of the agrarian power structure on levels of entry to the non-farm sector. One element in the agrarian power structure not mentioned by Piesse and Thirtle, but fully capable of being included in this kind of analysis, is gender relations.

The case studies reviewed in this section fit with what we know more generally from historical, political economy and sociological studies. Off farm income is very important in accumulation strategies (where Kenya is an extremely well documented case: see Collier and Lall 1986; Haugeraud 1995; Kitching 1980), but these are not open to all because the off farm employment sector is very varied. As well as a small number of high entry high returns activities there are many, many others giving poor returns that have very low entry costs. As Reardon's study shows, wealthier households tend to have much higher shares of non farm income in their total income and higher absolute non farm earnings, a finding he attributes to significant entry barriers and market segmentation excluding poorer farmers from higher earning opportunities. However Piesse and Thirtle's study suggests that investment in infrastructure and in the development of rural labour markets would have a marked effect on the impact of diversification on livelihoods.

3.2 Gender inequalities and diversification strategies: trends and potentials

Differences in opportunities to diversify have clearly contributed to inequalities in the distribution of income in certain contexts. These findings raise the question that we address in this section, which is to what extent unequal access to diversification opportunities have also served to exacerbate gender inequalities. As we shall see, by and large, the studies available suggest that while diversifying out of farming is widespread among women as well as men, there is no doubt that most women who engaged in such activities tended to be concentrated at the low-return, easy-entry end of the market. This is likely to have contributed to a widening of gender inequalities in rural incomes. If this is the case, the implications of these inequalities at the micro-level are likely to be most severe for women who have no access to male incomes and are likely to be among the poorest sections of the population. At the macro-level, such widening of inequalities has implications for the extent to which economic growth through rural diversification is pro-poor and gender equitable.

There is little systematic research on women's non-farm income activities in sub-Saharan Africa, but what data there is testifies to their active involvement. Sender, for example, cites a study in Arua in Uganda according to which 95 per cent of women reported an off farm income source. Beer brewing (58 per cent), selling crops (34.3 per cent) and casual farm labour (19 per cent) were the three main sources of female off-farm income. Information on the levels of income that rural women get from off – farm activities, other than casual farm labour, is very sparse and mainly qualitative. However, it would appear that the kinds of work that men and women do off-farm are both very different, and also differentially remunerated.

For instance, Hussein and Nelson (1998) cite material from Burkina Faso, where cultivators obtained between one quarter and a half of their income from non agricultural activities, showing that men and women carried out sharply differentiated activities. It also appeared that women's off-farm livelihoods were less well paid. They contrasted the low profit margin of making and selling beer, one of the most popular women's non farm income earners, with the much higher profits from large scale trading in grains, which men do.

Some quantitative evidence on gender differences in off-farm incomes is available from a study by Scott (1995) of the role of home based industries in household security in Zimbabwe. He examined the income generated in the five most important activities as recorded in 12 villages. 58 per cent of men and 42 per cent of women engaged in home based industries but the work undertaken was gender specific. Nearly four out of five of the beer brewers were women. Men were usually smiths, brickmakers and builders, but both men and women sewed and repaired garments. There were very big differences in the incomes generated by these activities. For example, Beer brewing, a female occupation, produced an annual income of 35 Zimbabwean dollars (equivalent to about 18 US$). The lowest annual income for a male home industry – brickmakers – was at least seven times as much. The calculated required minimum annual income in Zimbabwe at this time was $400. Women's beer brewing is clearly making only a marginal contribution to this requirement.

Meagher and Yunusa's study (1996) of the informal sector in Zaria also bring out this theme of low returns to women's business activities in a study of a town in Northern Nigeria. They found that women comprised 45 per cent of enterprise heads. 96 per cent of female entrepreneurs were in low-income enterprises compared with 76 per cent males. Most of these low-income entrepreneurs had at least one other income generating activity. The incomes of female heads were considerably lower than those of male heads. Meagher and Yunusa also show that 57 per cent of the informal sector workers were employees, not independent entrepreneurs. The trend between 1970s and 1991/92 had been for the informal sector to expand, and to widen the gap between the high and low income sectors, and between male and female incomes. Women had taken over from children as cheap labour as employees in the informal sector with a large rise in the proportion of women working there. The average wage of women formal sector workers is 32 per cent of male informal sector workers. This is around one sixth of the official minimum wage, which itself has been pegged in Nigeria so that it is below the 1975 minimum.

Casual wage labour on small holder farms is another under-reported source of rural female income. Employment by day, for cash and for payment in kind, is widespread. Sender reports information from the 1980's which suggests that, in Uganda, 37 per cent of farms hire casual or seasonal labour to weed and pick cotton, coffee and high value vegetables, as well as to herd cattle. Most farmers who hire have farms over 5 hectares. Farm level studies by agricultural economists provides a good deal of information on the use of non household labour in the farm enterprise by hours of input to total labour requirement, but often fail to specify the sex of these workers let alone the forms of contract and levels of pay. The silence might suggest that these labourers are men, but qualitative studies often report that they are women. A good deal of the casual labour used on growing hybrid maize in Zambia in the 1980's was female.[5] Evans and Young (1988) found that in the Northern Province around two thirds of the sampled households hired in labour and that the regular supply of locally hired labour was largely female. In Southern Malawi many female household heads, which are a very poor section of the rural population, engage in casual farm work. This ganyu work has been increasing in the last five years as poverty is increasing in the rural south (Marsland *et al.* 1999).

A study by Adams of female wage employment in agriculture in Zimbabwe showed that women played an active part in the very lively local labour market in a communal land area. All the households in her 250 sample were either buyers or sellers of labour. De facto female headed households, whose husbands were away but sent remittances, hired in labour, while 62 per cent of the household members who worked for wages were female casual day labourers. Much of this low paid casual agricultural work, in which women predominate, was not documented. Adams (1991) suggested that engagement in casual wage labour was a hallmark of female poverty and an indication of the absence of other employment options. Within her sample, households headed by female casual workers appeared to be among the poorest sections: they were less likely to own land or cattle or a plough and they were less likely to receive remittances from an absent male, unlike other female household heads. As a result they were also less able to engage in agricultural production and sales and had few options apart from the low paid agricultural wage labour in which they were largely engaged.

It is likely that the gender profile of casual small holder work varies markedly from situation to situation. In their Northern Province study, Evans and Young argue that the supply of female workers to casual wage labour was high because women were working for commodities such as soap and salt which were very difficult to obtain at that time. At the same time the government's policy of establishing credit facilities for households producing as little as one quarter of an hectare of hybrid maize had improved returns to male labour on their own farms. In contrast, Evans (1992) found a heavily localised labour market and a range of casual labour contracts in two communities in Uganda, but in this instance, most casual labour was being done by men.

These various findings all point to the strong possibility that inequalities in the ability to access better-paid off farm opportunities are likely to reproduce, and may even widen, gender inequalities in rural incomes. This possibility is alluded to by Reardon in his review of rural livelihoods in Africa where he notes that high entry, high return non farm employment are a largely male preserve because 'women sometimes appear to be limited to the low wage activities in the non-farm sector and (to) businesses with

[5] Megan Vaughan – personal communication 1999

low startup costs' (Reardon 1997). He concludes that the 'differential capacity to enter the non farm labour market can effect household and gender income differentiation over time'.

The thesis of widening gender inequalities in rural incomes receives indirect support in Bryceson's (1999) account, based on her work in Tanzania, of 'de-agrarianisation' in the African countryside, in which economic activity is being shifted away from farming along with an increased relocation of people to urban areas. She sees de-agrarianisation as an individualisation of household economic activity, which in situations of crisis is a dissolving force on domestic bonds. Her analysis has echoes with more general literature that argues that social bonds are dissolving in rural areas as a result of shocks, long-term stresses and the resulting changes in agrarian livelihood opportunities. The result is an increase in female marginalisation, especially in some age groups and a rise in poor and vulnerable female headed households.[6] By contrast, young men in particular are flocking to towns to petty trading, because the returns to smallholder agriculture are low and uncertain.

Adams' study in Zimbabwe, mentioned earlier found that not all women were economically disadvantaged. Women predominated in certain occupations as teaching, health care, as well as shop or beer hall attendants where wages were higher than in casual farm work. Women, especially those with some education, were thus taking advantage of the more highly developed and differentiated labour market. However, a less positive story emerged from the commercial agricultural sector where Adams studied a sugar cane factory employing 3,400 permanent employees and between 3000 and 1,300 casual workers. Many of the latter were women. Although the casual wage rate was comparatively good, the work was seasonal. While many women were re-hired each season, the length of the working period determining overall wages varied considerably. Adams describes the women employed casually in the factory as in 'desperate' circumstances. Mostly 'single', they were migrants who had left children behind in search of work and who lived all year round near the factory. This raised the question of how they earned income in periods when they were not wanted in the sugar cane fields – perhaps by selling sexual services?

3.3 Gender disadvantage in diversification strategies

What factors can we deduce from the literature as explanation for this gender disadvantage in relation to the non-farm sector? One obvious component of the explanation lies in the lower wages women command in the rural labour market, with most studies offering estimates which suggest that women are paid from one third to one half the male rate for a day's work. The Benin poverty assessment (WorldBank 1994a) reports rural women being paid about half as much as men 'because the work given to them is considered less arduous' (p 64). However, this local justification for low wage rates to women masks the way in which the very different positions of men and women in the rural economy as a whole affects the reserve price of labour. Women's reserve price of labour is likely to be low where the income potential of their own production is low; where the income generating opportunities off farm are few, or give low returns to labour, and where there is urgent need.

6 We are not implying here that female headed households are a homogenous category.

Comments by Evans on female wage rates in Uganda are relevant not only to casual farm work, but also to the conditions on which women enter into other income generating activities.

> In instances where there is a debt to be urgently repaid or a major expenditure to be covered … the reserve price of labour tends to drop. A significant amount of female casual labour is supplied under these conditions … Women are often forced to drop their reserve price below the village 'norm' because of an urgent need for income or food' para 8.17.

Evans suggests that 'distress labour selling' by women arise because of women's contractual inferiority in the labour market (Evans 1992 para 8.18).

Reardon's account points to female disadvantage in relation to start-up capital. In contexts where credit and financial markets are largely absent, it is clear that privileged male access to the existing resources of land, labour and livestock in the agricultural sector may provide them with the surplus needed to invest in the off-farm sector. Consequently, where women have some access to male resources, they may be better placed to engage in some off farm activities. This is evident in Chipande's study cited earlier.

Another source of gender disadvantage in relation to the off-farm sector may lie in inequalities in education and skills. We noted in Adams's study of rural Zimbabwe that not all women were equally badly off. Along with those de facto female household heads who were able to invest husband's remittances in their farming activities, there were a number of women, often educated women, who participated in better paid off-farm activities in largely female segments of local off-farm economy. This fits in well with the arguments in the 1998 SPA and being made strongly by the World Bank among others, about the importance of female education to growth prospects and to the individual's capacity to work themselves out of poverty.

However, the empirical evidence linking education and returns to labour is by no means clear-cut. Certainly, where there are well-developed and relatively well-differentiated labour markets, as in rural Zimbabwe, it is likely that education offers access to better-paid occupations and that gender differentials in educational attainment will play a role in differentiating access. Evidence supporting education as a factor explaining gender differentials in agricultural productivity have tended also to come from parts of Africa which have had agricultural takeoff, such as Kenya (Quisumbing 1996, see below). Overall, however, the evidence that educational inequalities underpin gender inequalities in access to the off-farm sector tends to be strongest for urban areas, and for particular activities in urban areas. Even here, the importance of education as a route out of poverty for women is undermined by other forms of gender inequality (see for example studies by Appleton 1995; Glick and Sahn 1997).

The evidence that education is the important factor in women's employment and income from rural-based studies is even less persuasive. There is some evidence of inequality in returns to male and female education from rural Tanzania where Collier *et al.* (1986) pointed to the extremely skewed access to non-farm employment, with access critically determined by education, age and gender. However, a review by

Quisumbing of studies using econometric approaches to the adoption of technology and new crops found that the education variable had little effect in Zambia (Kumar 1994; Jha *et al.* 1991); Kenya, Tanzania or Cote D'Ivoire (Appleton *et al.* 1991). The main exception to this absence of an educational effect was in Kenya where it was found that while female decision-makers were somewhat less likely to grow coffee than male, more educated females were more likely to do so than those with less education.

All these findings throw considerable doubt on the prioritising of women's education as the main means of reducing their poverty and simultaneously as a means of promoting growth. The general picture emerging from available studies therefore is that while education does appear to increase returns to labour, it does so much more dramatically and consistently in the formal sector and particularly in the public sector where salaries are administratively, rather than market determined. It is likely that educational qualifications are used as a way of rationing highly coveted public sector employment. The impact of education of returns in private employment particularly self-employment, is less consistent.

By largely focusing on returns to education for wage earners, the literature in sub-Saharan Africa has had tended to cover only a very small fraction of the overall labour force and focus mainly on the urban sector. Yet, the region as a whole, and poverty within it, is still predominantly rural. Women in the region are largely concentrated in those areas and activities for which education-related differentials in earnings are likely to be of least relevance. They are mainly in rural areas and work mainly as unpaid family labour and in self-employment in the informal sector.[7]

4 Gender, livelihoods and intra-household welfare

We have so far been discussing the income and productivity implications of gender roles in livelihood strategies. In this section, we briefly consider some of the intra-household welfare implications of gender roles in livelihoods consumption and spending and their treatment in the literature. Two sets of findings will be considered here. The first relates to the positive links made between women's earnings and family welfare, particularly children's welfare. The second relates to household livelihood strategies and women's own welfare.

4.1 Children's welfare and gender spending patterns

The idea that enhancing women's earning power will improve welfare within the family far more than that of men is based on a number of studies showing that income in the hands of women tends to be associated with an enhancement in family, particularly children's, welfare, while income in the hands of men appears to increase the share of household expenditure on items consumed mainly by men, the 'booze and cigarettes' argument. Empirical studies do show different patterns of household expenditure according to the gender of the household head, although these are of course more complex than simple

7 For instance, in Cote D'Ivoire, of instance, only 9 per cent of women aged 15–64 were in wage employment at the time of the Living Standards Measurement Survey (LSMS) (1986) and the formal labour market was non-existent in rural areas.

children's food versus men's drink and tobacco opposition. In our view these patterns in Sub Saharan Africa do not accord with a view that women spend altruistically and men spend selfishly.

Certainly in many parts of Africa, women's control over crops and incomes appears to have a far more immediate and direct effect on family nutritional standards, particularly children's nutritional standards. This appeared to be the case in a number of studies carried out by IFPRI into the impact of the commercialisation of agriculture – the adoption of contract-based sugar cane farming in this case – on intra-household nutrition and health in Kenya (Kennedy and Cogill 1987; Kennedy 1989). Here it was found that while increases in household income among those adopting sugar cane translated into increased caloric intake for the household, the link was weak but significant. The link between household calories and children's calories was also weak, though significant. A doubling of household income (unlikely in the short term) would have been insufficient to cover the caloric deficit of pre-schoolers. Nor had increased prosperity reduced the high prevalence of illness among women and children. However, children from female headed households had consistently better nutritional status than the rest and there was evidence that income controlled by women correlated with improved status. The finding that children in female-headed households do better nutritionally is also reported by Lloyd and Gage-Brandon (1993) for Ghana and by Kennedy and Peters (1992) for Kenya and Malawi. This effect persisted even when income was controlled for.

However, even if we accept that in certain contexts women do display a 'preference' for investing their income in the nutritional well being of the family, we also need to consider the impact of men's spending patterns before we can make any generalisations about the overall welfare of the household. In general, we need far richer data sets than used in most quantitative analysis in order to control for various possible influences on family and child welfare, aside from gendered ones, and thus arrive at a more grounded interpretation of these apparently findings. Nevertheless, even within the limits of existing studies, a more nuanced interpretation is possible. For instance, conflictual interpretations of the household often cite the finding reported for Cote D'Ivoire by Hoddinott and Haddad (1995) found that female share of income translated into higher share of household income spent on food and an increase in pre-school children's nutritional status. An increase in the share of male income lead to a rise in expenditure on alcohol and tobacco. However, the evidence that women used more of their resources on feeding their children should not overshadow the other findings of the same study, that increases in the male share of income contributed to an increase in the share on children's clothing, particularly education-related clothing needs.

More generally, it is the case that men's income generation either through agriculture or off-farm far exceeds that of women's. While these incomes are not pooled, neither are they spent entirely selfishly. Empirical evidence from various studies suggests that they may be spent on investment (e.g. in Zambia paying off loans on savings (livestock) and also on basic needs for household and family members, including food (Whitehead 1998), on clothes (Moore and Vaughan 1994), on health and education costs (Lloyd and Blanc 1995). In the IFPRI studies in Kenya, male income was found to be associated with housing and education (Kennedy and Cogill 1987). Since men's spending can have a direct and positive welfare effect for women and their children, these spending patterns may give women a positive incentive to put labour into their husbands' activities. It is also worth noting that while the 'booze-and-fags' effect may partly reflect more individualised spending patterns by men, it may also signify the use of alcohol and tobacco as a form of investment in social networks and a medium of exchange in mobilising work parties. Like the 'gifts' in Chipande's study, and male financial responsibility for wedding feasts, circumcision and name-giving festivals in Gambia noted by Webb (1989), this is an investment in social capital and an important aspect of male responsibility.

The need to avoid gender-stereotyping of welfare preferences is also emphasised by findings from areas where men make a major contribution to the production of staple foods for the household as in the Burkina Faso case discussed earlier. In such areas, women's work for men contributes to their own and to their children's welfare. We see this synergy in evidence in the Jahally Pacharr irrigated rice project (von Braun and Puetz 1987). Here the introduction of the project led to the increasing transfer of control over the compound's rice crop from its female members to the compound head, usually an older male. The reduction in the share of cereals produced by women was associated with a reduction in calorie consumption. However, the overall income effect was a favourable one. Poor households benefited relatively more from the scheme than rich ones: the average increase in real incomes was around 13 per cent. With increased access to new rice fields, women's seasonal weight fluctuations went down with favourable implications for children's nutritional status.

Finally, we also need to pay attention to the implications of studies that do not find any strong evidence of the impact of gender-differentiated preferences on welfare. These tend to be far rarer, perhaps because, as Quisumbing (1996) sagely observes, there is a publication bias against studies whose key findings are the absence of significant gender differentials. Nevertheless, one example of such a study is that by Wold (1997) who found that the increase in maize production in Zambia at a time of falling prices did not lead to an increase in nutrition. Indeed, undernutrition increased during the adjustment period. However, gender was not found to be a significant factor in explaining the distribution of children's nutrition. Where gender proved to be relevant was in differentiating which variables helped to explain differentials in children's nutrition. Location was found to matter as was the availability of non-farm income for male, but not female, headed households. These findings point to the existence of greater economic differentiation among male-headed households. While female households were generally poorer and less productive, they were also less well-integrated into the market and hence less affected by its existence or otherwise or by the availability of non-farm income sources (p 40).

It is important to take account of social organisation of households, including their gender relations of production, in terms of the logic of survival in a context of extreme resource poverty and long-term insecurity. This would draw attention to the importance of specialisation in the context of interdependency as a means of reconciling collective responsibilities and individual needs within the household. The combination of joint and individual forms of production within the household has its counter-part in the pooling and non-pooling of responsibilities for different aspects of household needs. We need to unpack the particular forms of interdependencies embodied in this organisation before being able to predict the welfare implications of resources in women's hands.

We need also to ask about how male income is allocated, about male responsibility and the extent to which it observed, before making too narrow an equation between women's income and children's welfare. In other words, we need to look at net overall, rather than partial, welfare impacts before making judgements about the significance of gender-differentiated expenditure patterns, a point also made in Basu, King and Mason (1999). Once again, the distinction between immediate and long-term specialisation in meeting both objectives can help to put these findings into a larger perspective.

4.2 Women's welfare and gender inequality

While a great deal of the household economics literature has tended to focus on gendered expenditure patterns and children's welfare, there is a separate and persuasive literature that suggests that poverty in sub-Saharan Africa also has gender-specific welfare implications. It represents the costs imposed on women's physical well-being by the livelihood strategies that poor households have to pursue, and by their own role within them. The value given to labour in an otherwise resource-poor, semi-subsistence agrarian economy, where along with the absence of widespread and well-developed markets, there is a dearth of basic health services, is manifested in some of the highest rates of mortality, particularly infant mortality, in the world and its corollary, some of the highest rates of fertility. The intersection between nature of women's work burdens, their long hours of work, the often energy-intensive use of their labour and the toll taken on their bodies by childbearing have resulted in some of the highest rates of maternal mortality in the world. Indeed we have not known till recently how high MMRs were in Africa because of the practice of relying on hospital statistics, which only cover a small percentage of maternal deaths in relation to the number of pregnancies occurring.[8]

However, maternal mortality is only one aspect of women's illfare. Others follow on from the point made earlier in relation to women's survival strategies at the lower end of the income scale: they expend a good deal of effort and energy over long hours for very little reward. Women (and girls) suffer from severe malnourishment, part of the reason for high maternal mortality rates, as well as reduced energy among mothers for any activity beyond those essential for basic survival (Leslie *et al.*). Nutritional stress among women in the reproductive age-group, particularly pregnant and lactating women, suggests the widespread incidence of maternal depletion syndrome.

Problems of nutritional depletion have a regional dimension: they appear to be higher among women from the West African region than the rest of Africa, reflecting perhaps higher levels of energy

[8] Differences in estimation procedures show discrepancies between the MMR calculated using unadjusted 1980 data in World Development Report (1990) and using adjusted DHS data for 1989–95 which range between 600 per 10,000 live births and 1451 in the Central African Republic; 420 and 672 in Niger and from 150 and 393 in Zimbabwe. Africa accounts for 20 per cent of the world's births, but 40 per cent of the world's maternal deaths (Leslie *et al.* 1997a).

expenditure to achieve lower levels of food production in drier regions. They also, not surprisingly, appear to have a poverty dimension. In a number of the studies discussed by Leslie *et al.* (1997b) women from lower income households tended to be at a greater nutritional disadvantage than those in better off households (15; 47). A study from Cote D'Ivoire found no significant difference between the BMI of males and females but noted that women's nutritional status was more likely than men's to be substantially influenced by increases and decreases in household income and per capita expenditure. Similarly, in Zimbabwe, Hoddinott and Kinsey (1998) found that the drought of the early 1990s significantly decreased women's body mass index but not men's (cited in Basu *et al.* 1999). It appears therefore that while household coping strategies in times of economic hardship and crises include cutting back on food consumption, women bear the brunt of this strategy far more than men.

Finally, the spread of AIDS in the subcontinent poses a dramatic new set of risks for its population. Africa's proportion of the global HIV burden ie. 79 per cent of DALYs and 81 per cent of deaths massively outweighs its share of the global population which is 10 per cent (Garbus 1998). While AIDS clearly affects both men and women, it does have certain gender-specific causes and consequences. One obvious gender-specific consequence, given women's responsibilities within the domestic division of labour, is that burden of caring for AIDS sufferers very often falls on women reducing their ability to engage in productive labour: Ainsworth and Over (1994) found this to be the case in Tanzania.

However, there are gender dimensions to the causes as well. First of all, as in the case of most sexually transmitted diseases, women appear to be at greater biological risk than men from contracting the HIV virus from each sexual intercourse (Kurth 1993). Women under 25 represent the fastest growing group with AIDS in Africa, accounting for nearly 30 per cent of all female AIDS cases. Secondly, in a male dominated culture, women are likely to feel constrained in their ability to demand preventive action from their husbands or partner. In addition, however, the gender-specific dimension in spread of AIDS relate to some of the concerns of this paper with gender inequalities in income, wealth and livelihood opportunities. As Doyal (1995) points out, whenever sex is part of an economic exchange, women will be constrained in their attempts to protect themselves from STDs: 'the greater the degree of financial dependence, the greater the constraint' (p 79).

Not surprisingly, some studies suggest a link between poverty and seropositivity, pointing to the growing economic pressures that lead women to sell sex for subsistence. Studies from Zimbabwe and a mining town in South Africa (Bassett and Mhloyi 1991 and Jochelson *et al.* 1991 cited in Doyal 1995) pointed out that the decision by women to sell sex was usually in response to economic need, a way to supplement meagre salaries or replace them. Migrant women engaged in rural contract work seem to resort to selling sex in periods when they are laid off (Adams 1991) Dolman (1997) notes that Kenyan women who acted as brokers in the marketing of 'French' beans often used sexual services as part of the transaction. That women should resort to exploiting their 'body capital' in this way, given their unfavourable access to capital and labour market opportunities, has been one of the less well-documented aspects of livelihood strategies in the region.

5 Gender, livelihoods and pro-poor growth: some policy implications

We have used a livelihoods approach in this paper to make a number of points about the posited links between, gender, poverty and growth in rural sub-Saharan Africa. We have shown that interpretations of the incentive and welfare effects of intrahousehold gender relations which are based on ideas of gender conflict in the household need to be tempered with an understanding of the ways in which men and women act jointly, as wives and husbands, as mothers and fathers – at least to some extent and albeit through normatively defined gender divisions of responsibility. We have also suggested that household welfare more broadly conceived than the spending on, and production of food, is dependent on both male and female patterns of spending. We have specifically suggested that explanations of gendered supply responses are less to likely to lie in women's risk averse behaviour or lack of incentives and more likely to lie in women's poor access to the resources which are required to respond to market signals. We reiterate that the family based household remains a critical area of gender inequity, but suggest that it is more accurately described as an arena of joint and competing interests. To highlight this jointness is not to ignore the evidence of conflict between men and women in the household. There are some areas of sub Saharan African where intrahousehold gender conflicts about work and crop disposal may be affecting levels of agricultural production, but we have explored why this does not stand up as a general explanation of the link between poverty, gender equity and growth. The implications is that the synergy approach (what's good for growth being good for gender inequality and vice versa) adopted in Blackden and Bhanu and also evident is some micro-economic work on gender and growth is not appropriate.

Our analysis suggests that approaches to gender, poverty and growth should focus on the wider economic environment of poor rural households and gender differences in relation to this. This wider economic environment is characterised by a high level of uncertainty and risk, including that brought about by markets. The household and/or family, whether headed by a man or a woman, is one key institution enabling individuals to deal with agro-climatic and other forms of uncertainty in the absence of the kinds of institutions, including well-developed markets, which might have allowed them to reduce unmanageable levels of uncertainty into manageable levels of risk. Poor people's livelihood strategies may involve long time horizons, often comprise a complex portfolio of activities, and are flexible. Objectives include accumulation, protection of food security and the capacity to maintain well-being over time. The nature of the risks and uncertainties and the opportunities for accumulation vary across the subcontinent and household and family strategies to meet them are unlikely to be uniform.

Markets can be important ways of dealing with climatic uncertainty. Markets have also been vital in allowing accumulation and investment in agriculture. They must also be adequate to deliver the inputs required for agriculture. However, in areas where markets are weak or poorly developed in the local economy, they will represent one further source of uncertainty rather than an additional means of managing risk. Markets may be unreliable in the sense that crops are not bought, or bought at poor prices, or there are delays in payment and also in the sense that food and consumption goods are not available.

Diversification of income and employment through the use of markets has emerged as a significant and growing way of managing risk but not all households or household members have been equally well positioned to take advantage of off-farm opportunities. While women, like men, are not a homogenous category, they generally enter labour markets on contractually inferior terms to men. Their diversification strategies tend to entrench them in poverty, as they use their scarce labour time in easy entry low productivity, low return activities. We noted the implications of this for women's own welfare in terms of work burdens. We also noted how women's disadvantaged position in the labour market led to their engagement in sexual transactions as a form of livelihood with the potentially fatal risks that it entailed .Men, on the other hand, generally have better resource endowments even in relation to women within the same household or else are able to migrate further afield in search of better-paid work. We have noted, for instance, how physical location is a far more important factor in explaining women's poverty and supply responses than men's (e.g. Wold 1997; Bryceson 1999).

The process of severe and increasing impoverishment for rural women is not inevitable. Public policy has an important role to play in creating better employment and market opportunities in rural areas, Where the overall local economic situation is improving, conditions can and must be created for women to take advantages of opportunities both on and off farm. This implies that public policy aimed at improving markets is key. Markets are clearly not simply a regime of prices. They are also constituted by physical infrastructure, particularly transport and communications, which reduce the economic element of transaction costs, as well as by regulations, networks and norms which build trust in the system and help to reduce the moral/social/ element of transaction costs. Where these conditions do not exist, the failure to respond to market signals is first and foremost an aspect of institutional failure. Focusing on intra-household rigidities draws attention away from extra-household institutional failures and the persistence of insecurity. In addition, safety net programmes can be used (as Devereux [1999] has argued in the context of Malawi) to compensate for market failure by providing poor households with access to fertiliser, seeds and community infrastructure.

There is considerable scope for reducing the low-productivity drudgery of certain aspects of women's work in order to enable them to shift more of their time into higher-productivity activities. A gender-sensitive labour-intensive growth strategy in Africa might paradoxically, require greater investment in labour saving technology in the domestic arena, of which grinding mills would be a prime example (see Haswell 1988 and Nath n.d.). Better distribution of water, health facilities, wood lots and so on would both have an impact in reducing women's work loads as well as address women's own welfare needs.

A second set of labour-related arguments related to investments in the quality of labour through improved access to basic social services. Here our paper sounds a caution about priorities and sequences. As far as investment in female education is concerned, the empirical findings cited here offer somewhat qualified support for the posited link with labour-intensive economic growth. This does not rule out strategies to close the gender gap in education through greater gender-sensitivity in the design of educational provision. Not only can it be argued that education has intrinsic value, but there is also well-substantiated evidence that it has indirect implications for growth via reduced infant mortality and fertility rates (see, for instance, literature reviewed in Jejeebhoy 1995). However, the argument that female education will have direct productivity-enhancing effects is less persuasive. More robust evidence of the relationship between education and female productivity than the simulations found in the literature has to be established before a direct growth-based argument for investments in female education can be made.

In any case, investments in basic health, family planning, nutrition, water and sanitation should, if anything, take priority over investments in education. Improving basic health for all, reducing infant mortality and creating a stronger demand for fertility reduction all form the enabling preconditions for realising the benefits of education and creating a demand for them (Kabeer 2000). Equalising access to basic health services probably requires a two-pronged approach, with attention paid to improving the quality and availability of health services for all sections of the population, particularly for the poorer population but also targeting gender-specific health needs, such as maternal health and mortality rates.

In this paper, we have argued that labour-intensive growth strategies in sub-Saharan Africa should be complemented with investments in labour productivity, particularly health but also education, as well as in productivity-enhancing assets. However, to make the most of labour inputs into production, policy makers would need to correct for the present biases in the distribution of productive inputs. Women are likely to benefit along with men from improvements in infrastructure and communications: indeed given transportation costs at present, perhaps more. They will not benefit from improvements in the availability of credit, capital, seeds, fertiliser etc. unless an effort is made to ensure a gender-neutral distribution. Women will not benefit from increased off farm employment, which is sorely needed unless these activities bring higher returns to labour. Nor will they benefit from investments in human capital unless effort is made to ensure that the delivery of services is made sensitive to their needs.

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