The United Nations University

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World Institute for Development Economics Research

Working Papers No.171

December 1999

Rebuilding Rural Livelihoods and Social Capital:

Mozambique's Experience

Clara de Sousa

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Development Economics Research
(UNU/WIDER)

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This study has been prepared within the UNU/WIDER project on Underdevelopment, Transition and Reconstruction in Sub-Saharan Africa, which is directed by Professor Tony Addison, UNU/WIDER.

UNU/WIDER gratefully acknowledges the financial contributions to the project by the Government of Italy (Directorate General for Development Cooperation), the Government of Sweden (Swedish International Development Cooperation Agency-Sida), and the Government of the United Kingdom (Department for International Development). These agencies can accept no responsibility for any information provided or views expressed.

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Camera-ready typescript prepared by Anne Ruohonen at UNU/WIDER
Printed at Pikapaino Paatelainen Oy, Helsinki

ISSN 0782-8233
ISBN 952-455-023-7 (printed publication)
ISBN 952-455-024-5 (internet publication)

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ACKNOWLEDGEMENTS

A first draft of this paper was presented at the UNU/WIDER project meeting on Underdevelopment, Transition, and Reconstruction in Sub-Saharan Africa, in Helsinki on 16-17 April 1999. The author is grateful to the meeting participants for their comments and suggestions. Further comments and suggestions from Tony Addison are gratefully acknowledged. The usual caveats apply.

ABSTRACT

Mozambique has now enjoyed eight years of peace after a 16-year war that massively damaged the economy, caused over a million deaths, and displaced more than 3 million people. This paper aims to improve our understanding of how rural societies reconstruct using the district of Sussundenga in Manica Province in central Mozambique as a case study. The paper analyses household and community-level data collected by the author to assess the determinants of livelihoods in Sussundenga. It focuses on farm and non-farm incomes, access to land and other productive factors, as well as the importance of road infrastructure and education and health provisions. The paper finds the existence of substantial poverty, but also high levels of income inequality reflecting inequality in asset ownership - particularly of livestock. Variations in poverty and inequality across localities in Sussundenga also reflect the differential impact of the war on households; refugees in camps that offered education and training have done better in the post-war rural economy than refugees who received only food assistance. The paper also finds that female-headed households face severe problems and quantifies the extensive disadvantages that they suffer in comparison to male-headed households. The paper concludes that much more needs to be done if all households are to benefit from the post-war recovery of Mozambique's economy.

PROJECT SUMMARY

Underdevelopment, Transition and Reconstruction in Sub-Saharan Africa

This UNU/WIDER project focuses on Angola, Eritrea, Ethiopia, Guinea-Bissau, Mozambique, and Somalia. These countries share a common history; state socialism was the ideology of their early development strategies and liberation movements, and economic failure together with the politics of the Cold War led to intense, and often recurring, conflict. Conflict erupted again in Angola, Eritrea, Ethiopia, and Guinea-Bissau during 1998 and 1999 while Somalia remains highly unstable.

Communities need help to reconstruct, private sectors must revitalize themselves, and state capacities must be built. This is an exceptionally demanding set of tasks given the scarcity of financial resources and skills. Moreover, economic reform is on the agenda for all of these countries, but progress is at best hesitant and, in many cases, stalled. The relationship between reconstruction and reform is also an uneasy one; the two agendas should be mutually supporting but this is often far from the case and in consequence opportunities to accelerate growth and poverty reduction are missed. These failures reinforce the already high vulnerability of these countries to conflict.

Further details of the project and its research outputs can be found on the UNU/WIDER website (www.wider.unu.edu) and/or by contacting the project director, Professor Tony Addison (email: addison@wider.unu.edu).

1. INTRODUCTION

Mozambique has now enjoyed eight years of peace after a 16-year war that massively damaged the economy, caused over a million deaths, and displaced more than 3 million people. The education and health systems were severely hit - 60 per cent of the rural school network and much of the rural health system was destroyed - together with other basic infrastructure including electricity and water supplies as well as road networks. Land mines limited the access of smallholders to the land and natural resources on which their livelihoods are based. This, together with the loss of oxen and difficulties in accessing agricultural inputs, led to a severe contraction in smallholder output in the war-affected areas. The war also reduced the ability of rural households to diversify by selling their labour. The rural non-farm economy, including the micro-enterprise sector, contracted along with the decline in rural purchasing power. Moreover, the displacement of communities fractured social networks and traditional safety nets.

The 1992 Peace Accords laid the basis for reconstructing the economy, a process enhanced by the peaceful democratic elections of 1994 (and sustained in the elections of 1999). This has provided a favourable political background for the continuation of the economic transition that began in the mid-1980s. Successive reform programmes have been undertaken, including price liberalization, privatization, and fiscal reform together with considerable institutional change (discussed in Addison and de Sousa 1999) Therefore, communities have had to adapt to the new economic environment created by the transition from state planning in addition to rebuilding their livelihoods from war. Despite severe constraints - such as limited education and lack of access to credit (to name but two) - rural people have been able to rebuild to an extent not yet possible in Angola or Guinea-Bissau (see Adauta *et al.* 1999, and Kovsted and Tarp 1999). While the 2000 floods ravaged rural Mozambique, the society is resilient and the longer-term outlook remains broadly positive.

The general improvement in the economic and political environment raises new challenges and presents new opportunities. Thus Mozambique has passed beyond the earliest stages of transition - currency reform and price liberalization - and is now engaged in 'second-generation' reforms, in particular measures to improve the quality of fiscal management and to

focus public spending (and policy more generally) on the objective of poverty reduction (see Addison 1998). Thus priorities for allocating public money need to be identified and sharpened, in particular to reduce the potential trade-off between programmes for immediate reconstruction and longer-term efforts in community development (an issue also addressed by Adauta *et al.* 1999, on Angola).

But priorities can only be effectively set if they are based upon good information about communities and the poor within them (Addison 1996, Colletta *et al.* 1996, GOM 1995, and World Bank 1991). Since the end of the war, Mozambique has undertaken a national household survey and a national participatory survey (see Datt *et al.* 2000, and Ginja 1999). But in addition to national-level studies, there is also an important role for smaller studies to focus on living standards in particular regions and districts. Intensive study of one area yields not only valuable information to inform poverty reduction efforts in that locality, but also provides insights that can inform the national debate - particularly regarding the constraints on households that must be overcome for reconstruction and reform to benefit the poor (for discussion of poverty reduction at the three levels of local, sectoral, and national see Adauta *et al.* 1999). Accordingly, this paper aims to improve our understanding of how rural societies reconstruct using the district of Sussundenga in Central Mozambique as a case study. It therefore complements the national level discussions of Datt *et al.* (2000), Ginja (1999) and Wuyts (1999).

Section 2 discusses the determinants of household livelihoods in Sussundenga, focusing on farm and non-farm incomes, access to land and other productive factors, as well as the importance of road infrastructure and education and health provisions. This provides the context for Section 3's discussion of poverty and inequality in the district: we find substantial rural poverty but also a high level of income inequality reflecting asset inequality. High inequality is partly the result of the differential impact of the war on households, the subject of section 4. Section 5 focuses on the problems facing female-headed households, and quantifies their extensive disadvantages in comparison to male-headed households. Finally, Section 6 discusses the implications of the analysis for poverty reduction more generally.

2. DETERMINANTS OF LIVELIHOODS IN SUSSUNDENGA

This case study is based on data collected in 1995 in the district of Sussundenga, covering a sample of 300 households: this is referred to as the Sussundenga Living Standards Survey (SLSS) and is discussed in de Sousa (1998). The survey was undertaken combining a formal household questionnaire and participatory methods. Both techniques are essential to an understanding of poverty and its causes (see Addison 1996, and Chambers 1994).

Sussundenga district is situated in Manica Province (which has 7 districts) in central Mozambique along the border with Zimbabwe. Sussundenga is divided into four administrative posts, namely Sussundenga Sede, Muoha, Rotanda and Dombe. Administrative posts are, in turn, divided into localities (see Table 1). Sussundenga district has an area of 7,060 km^2 and a population of 59,684 people, distributed in 14,425 households (Table 2).

Table 1 Sussundenga district: administrative posts and localities

Administrative post	Localities
Sussundenga Sede	Sussundenga Sede, Matica, Munhinga and Mavusi
Muoha	Muoha Sede, Mpandeia
Rotanda	Rotanda Sede, Tsetsere, Mussapa
Dombe	Darue, Mabaia

Table 2 Distribution of the population of Sussundenga

	Number of villages	Area (km^2)	Population	Number of households
District of Sussundenga		7060	59684	14425
1 – Administrative Post of Sussundenga Sede	34	1422.5	30581	6980
Sussundenga Sede	(i)	13933	13933	3463
Matica	6		5652	1203
Munhinga	14		5978	1328
Mavusi	14		5018	986
2 – Administrative Post of Muoha	12	787.5	8678	2368
Muoha Sede	4		1478	314
Mpandeia	8		7200	2057
3 – Administrative Post of Rotanda	13	1625	10371	3049
Rotanda Sede			968	133
Tsetsere	7		4054	1865
Mussapa	6		5349	1051
4 – Administrative Post of Dombe	n.a	325	10054	2028
Darue	n.a	n.a	n.a	n.a
Mabaia	n.a	n.a	n.a	n.a

Note: n.a.: not available.

Source: Sussundenga District Government (1995).

Sussundenga was greatly affected by the civil war, which led to a large-scale exodus out of the most dangerous areas. However, the return home was rapid. About 80 per cent of families had returned to their villages within 18 months of the 1992 cease-fire (Sussundenga District Government 1995). The only exception is Dombe where security remained precarious during the period in which this study took place. Therefore Dombe was excluded from the data collection.

2.1 Economic activities

As in much of rural Africa, agriculture is very important to household livelihoods in Sussundenga (Mellor *et al.* 1987, Lipton and Ravallion 1995). Agriculture accounts for over 80 per cent of the district's income and provides 90 per cent of employment (Sussundenga District Government 1995). Maize is the main food staple and the principal cash crop. Sesame, cassava, yam, wheat, onions and garlic are the other important crops. Non-farm earnings, including the wages and the profits of non-farm businesses, account for less then 10 per cent of household income in the district. This is substantially below the average (30 per cent) for developing countries (Chuta and Liedholm 1981) and reflects the collapse in rural purchasing power - and thus the market for products and services of microenterprises - during the war.

Until the mid-1980s, off-farm employment was provided by state and private commercial farms, timber mills, an electricity generating plant, and an asbestos mine. The war and agricultural policy reform led to the closure of many state and private commercial farms and off-farm employment opportunities fell substantially (Cramer *et al.* 1999, Myers 1993). The Mavita asbestos mining company was another casualty of war. However, at the time of the 1995 survey, entrepreneurs were returning to the district. In 1995 there were 98 registered commercial farms in Sussundenga, employing on average 4 permanent and 20 seasonal workers each. Muoha alone accounted for 41 per cent of these, and the rest were distributed across the other localities - with the exception of Mavusi which has no known commercial farm. Sussundenga's households face considerable competition from job-seekers coming from outside the district, and the lack of skills among locals - reflecting the impact of war on the district's schooling - puts them at a significant disadvantage. For instance, the power stations in Mavusi and Mpandeia recruit most of their workers from outside Sussundenga because locals do not possess the necessary skills.

Farm incomes therefore remain central to household livelihoods. Farm incomes in turn depend on access to productive assets (most importantly land and other natural resources, the amount and quality of labour, and oxen), as well as on economic and social infrastructure, public services, and the policy framework. We now evaluate smallholders' access to factors of production, roads and trading networks, as well as education and health services.

2.2 Access to land and other agricultural production factors

The average size of household farms in the SLSS sample is 2.8 hectares, much higher than the Mozambican average of 1.9 hectares (INE 1997, Ministry of Agriculture 1994). Tsetsere is the locality with the largest average farm size (3.7 hectares) while Mavusi has the smallest - about 2 hectares (see Table 3).

Sussundenga does not yet have major conflict over access to land - unlike Maputo or some regions of Gaza Province in the south of Mozambique (see Myers 1993, for details and Cramer *et al.* 1999, on the impact of privatization on land access). Nevertheless, Sussundenga's households do report growing anxiety about their future access to farming and common grazing land. This anxiety is exacerbated by the ongoing debate over land

tenure law and the rise in the number of smallholders dispossessed by commercial operators (Myers 1993).[1] The localities of Matica and Tsetsere are relatively well served by roads and other infrastructure - thus enhancing their suitability for commercial agriculture - and not surprisingly they have the highest proportion of households reporting problems of land access (Table 3).

Table 3 Access to land

	Average farm size	Percentage of households reporting problems with access to land			
	Total	Losing land	Difficulty in obtaining new plots	Problems in access to grazing land	Worried about access to land
Sussundenga	2.8	6.3	5.9	10.0	27.4
Matica	2.6	18.8	15.0	16.7	35.4
Munhinga	2.3	7.0	7.0	4.7	27.9
Mavusi	1.7	2.8	0.0	0.0	19.4
Muoha	2.7	3.3	7.0	3.3	30.0
Mpandeia	3.0	0.0	3.0	16.6	25.0
Mussapa	3.2	0.0	0.0	5.9	11.8
Tsetsere	3.7	7.5	7.0	18.6	37.0

Source: SLSS (de Sousa 1998).

Smallholders have only rudimentary technologies: over 75 per cent of households use only hoes. Their use of chemical fertilizer or pesticides is very limited (see Table 4) a consequence of post-war difficulties in establishing input markets, especially in Mozambique's remoter regions. This in turn reflects the impact of the war on marketing systems, as well as the uneven response by private traders to the liberalization of agricultural marketing. Land use is therefore very much determined by the household's labour resources and its access to draft animals. The localities with larger farm sizes - Tsetsere and Mussapa - are those in which a higher proportion of households report the use of ploughs.

[1] The reform of land tenure legislation is extremely sensitive in all of Africa's transition economies (Addison 1998). Under state socialism, land and common property resources were nationalized (see for example, Ayalew *et al.* 1999, on this issue in Ethiopia).

Table 4 Use of technologies and chemical inputs

	Percentage of households using hoes		Percentage of households using ploughs		Percentage of households using tractors		Percentage of households using fertilizer and pesticide (chemical)	
	Own	Rented	Own	Rented	Own	Rented	Fertilizer	Pesticide
Sussundenga	100.0	0.0	25.2	7.9	0.0	0.0	0.7	0.7
Matica	100.0	0.0	18.9	17.0	0.0	0.0	0.0	2.1
Munhinga	100.0	0.0	7.1	2.4	0.0	0.0	0.0	0.0
Mavusi	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Muoha	100.0	0.0	3.4	0.0	0.0	2.8	0.0	0.0
Mpandeia	100.0	0.0	22.2	13.9	0.0	0.0	0.0	0.0
Mussapa	100.0	0.0	41.9	8.8	0.0	0.0	0.0	0.0
Tsetsere	100.0	0.0	44.1	9.3	0.0	0.0	5.9	2.9

Source: SLSS (de Sousa 1998).

2.3 Road and trading network

The access of households to roads (and the quality of road infrastructure) determines market opportunities as well as travel costs to schools and clinics, and is thus a key determinant of living standards in rural Africa. Economies that are reconstructing from war must give priority to road investment and rehabilitation as a poverty reduction measure (see for instance Bigsten 1999, on Ethiopia). All of Sussundenga's administrative posts are linked by road but none of them is tarmac. These roads are passable during the rainy season, although with great difficulty in some areas. Mussapa, for instance, can only be reached by four-wheel drive vehicles in the dry season, and a tractor is needed in the rainy season. Localities with better roads have better access to public transport and trading posts. Tsetsere, for instance, benefits from a relatively good road network and less than 4 per cent of the locality's households have to travel further than 5 kilometres to reach a trading post.

Matica benefits from roads and other economic and social infrastructure built during the war to serve camps for displaced people. Households in this locality live closer together than in any other localities included in the SLSS; the maximum distance between living quarters and trading posts or shops is 5 kilometres. Only 2.2 per cent of this locality's population report having to travel that distance to sell their output or buy consumption goods. At the other extreme are Muoha and Mussapa, where about 85 per cent of households travel distances greater than 5 kilometres to reach a trading post or a shop.

2.4 Education and health services

Sussundenga has 19 primary schools, with only one of them teaching the two levels of primary education. Secondary schools are only found in neighbouring districts. Table 5 shows the distances that children have to travel (mostly by foot) to school. We would expect a negative correlation between the enrolment rate and distance to school, but Table 5 shows that the link between distance to school and enrolment rates is not always clear. In Munhinga, for example, children walk 9.7 kilometres to school, but enrolment rates are much higher than in Mavusi, where average distance is about half that of Munhinga. Since Mavusi has a substantially higher incidence of poverty than Munhinga (see the next section's discussion), this indicates that income (i.e. the opportunity cost of sending children to school) is a more serious constraint than distance to school for Mavusi's households.

The provision of health services is more limited than schools. Even where health centres exist, lack of personnel and medicines reduce their ability to provide even basic services (de Sousa 1998). Mozambique needs to increase the funding of the recurrent budget of the health sector to raise the social return to capital investments in rehabilitating rural health posts.

Table 5 Distances to school, enrolment rates and household head attainment

	Distance to school (kms)	Enrolment (rates)	Grade attainment (percentage with grade 3 or more)
Sussundenga	4.6	55.1	64.5
Matica	2.4	47.0	50.0
Munhuinga	9.7	54.0	59.3
Mavusi	4.8	35.0	47.8
Muoha	3.4	66.0	55.0
Mpandeia	5.4	46.0	72.0
Mussapa	3.7	63.0	65.7
Tsetsere	3.1	65.0	88.5

Source: SLSS (de Sousa 1998).

3. POVERTY AND INEQUALITY IN SUSSUNDENGA

To assess poverty in Sussundenga we define a poverty line based on the expenditures required to ensure a food basket with a minimum requirement of calories (de Sousa 1998, describes the method in more detail). Hence the

poor in this analysis are those whose standard of living is insufficient to meet even basic food requirements.

Using this definition of the poverty line, 39.9 per cent of Sussundenga's households are classified as poor (de Sousa 1998). They are poor because they depend on subsistence agriculture (and have less income from wages and remittances), their educational attainment is low (the heads of poor households average only 2.5 years of schooling), and they keep less oxen, an important asset not only for agricultural production but also for household-income diversification (Table 6).[2]

Table 6 Living standards of the poor and the non-poor

	Poor	Non-Poor
Number of households	105	158
Mean household size	7.3	6.9
Mean expenditure per adult equivalent ($)	$ 52.9	$ 179
Wages and remittances as a percentage of yearly income	3.6 per cent	5.4 per cent
Average years of schooling of the household head	2.5	4.1
Average number of oxen per household	1.6	2.8

Source: SLSS (de Sousa 1998).
Note: 263 households from the sample of 300 were used for the calculation of poverty incidence since information was incomplete on the remaining 37.

The significant differences in living standards between households in Sussundenga that Table 6 indicates are confirmed when Gini coefficients - for income, equivalent expenditure, land, oxen ownership, and access to schooling - are calculated (Table 7). The Gini coefficient for expenditure - used as a proxy for income - is estimated to be 0.40. This is surprisingly high considering that the sample only covers smallholders with land holdings of less than 10 hectares. Inequality in the distribution of land is very close to inequality in income - the Gini of land distribution is 0.39. There is strong inequality in oxen ownership, followed by access to schooling.

Table 7 Gini coefficients of Sussundenga

	Gini
Expenditures	0.40
Equivalent Expenditures	0.35
Land	0.39
Oxen	0.86
Children at School	0.64

Source: SLSS (de Sousa 1998).

[2] For an econometric analysis of the determinants of poverty see de Sousa (1998).

In summary, substantial differentiation among households is observed, thus confirming at a district level the conclusions of Wuyts' national-level discussion (Wuyts 1999), and those of other recent contributors to the debate on rural development (Cramer and Pontara 1997). To understand the determinants of this differentiation we now turn to inequality across localities followed by discussion of intra-locality inequality.

3.1 Inequality across localities

There are significant differences in living standards across Sussundenga's seven localities. Table 8 shows the incidence of poverty by locality; Mavusi has the highest incidence of food poverty, with 62.9 per cent of households falling below the food poverty line, while Tsetsere has the lowest incidence of poverty (at 12.1 per cent).

Table 8 Food poor households by locality

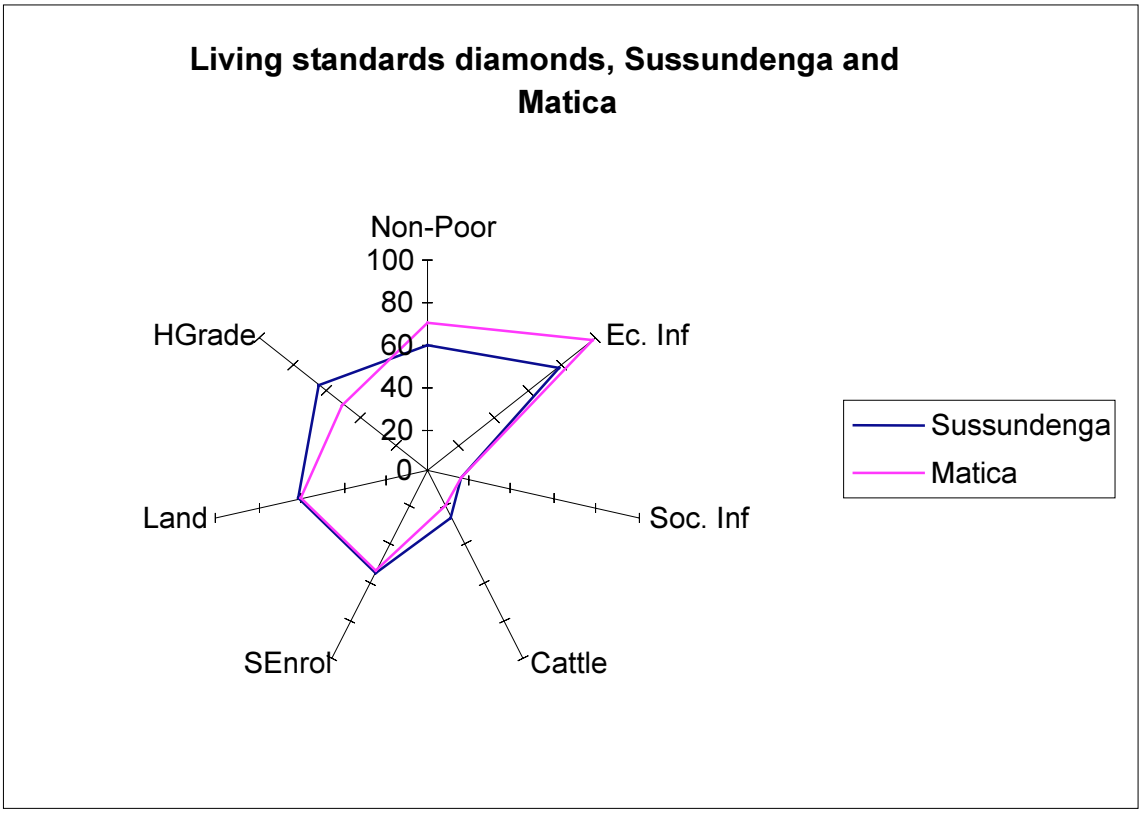
Locality	Food poor	Food non-poor
Mavusi	62.9	37.1
Muoha	55.6	44.4
Munhinga	47.6	52.4
Mussapa	39.5	60.5
Mpandeia	36.1	63.9
Matica	29.8	70.2
Tsetsere	12.1	87.9
Sussundenga	39.9	60.1

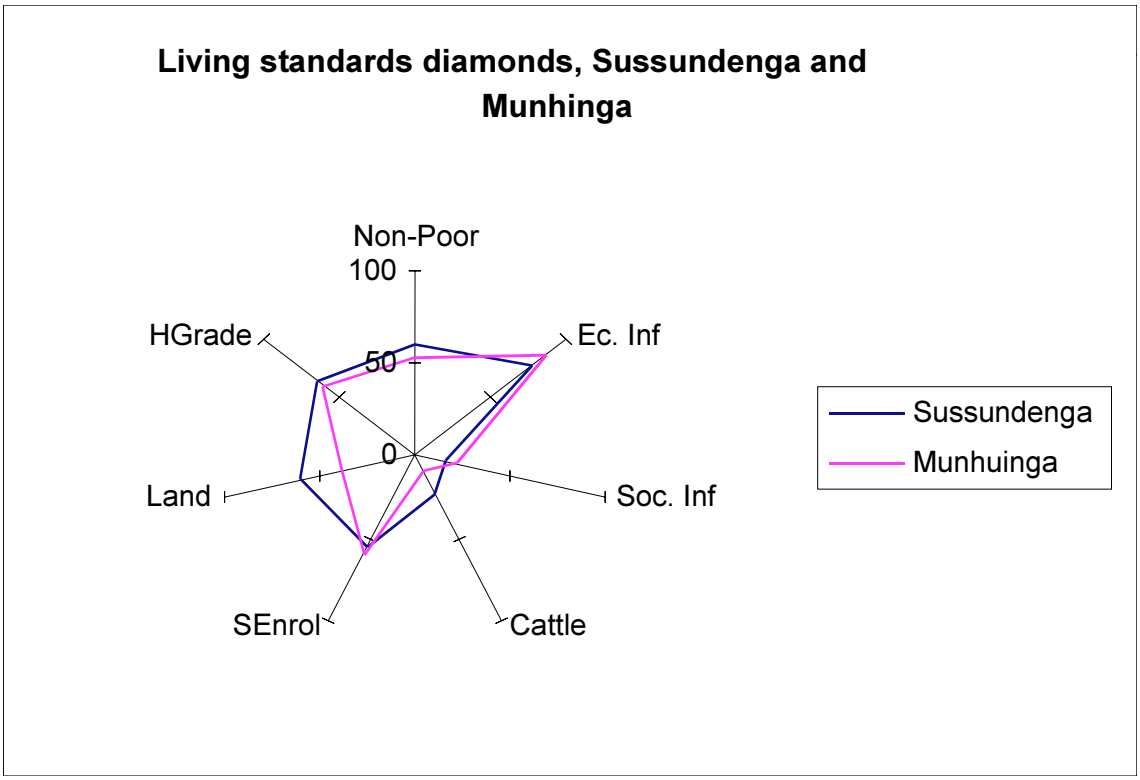
Source: SLSS (de Sousa 1998).

Since the standard of living has many dimensions, it is useful to compare localities using the summary information contained in 'development diamonds' (these are usually used to make comparisons between countries, see for instance UNDP 1996).[3] The diamonds in this case are compiled using measures of welfare outcomes such as the proportion of the population above the food poverty line and the primary school enrolment rate. We also use inputs into the household's living standard including its access to economic and social infrastructure, educational attainment of heads, oxen ownership and the proportion of households cultivating 1.7 or more hectares of land.

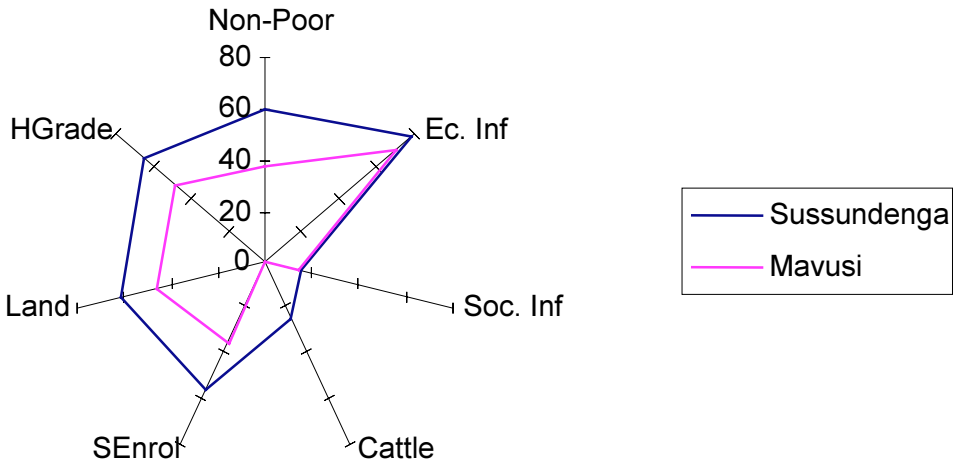
[3] Development diamonds are radar charts derived by combining socio-economic information such as income per capita, the proportion of the population above the poverty line, life expectancy, primary school enrolment and access to clean water. The greater the area covered by the radar (diamond), the better is the living standard of the population represented.

Figure 1 Living standards diamonds for Sussundenga and localities

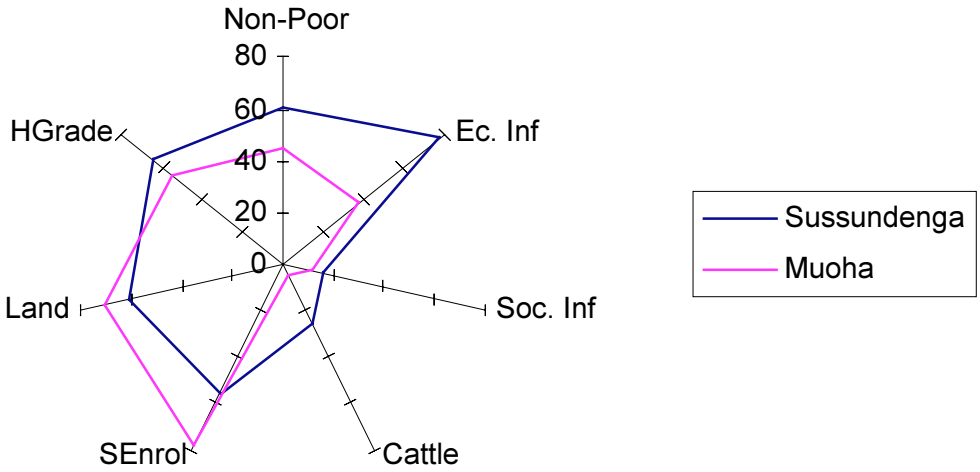




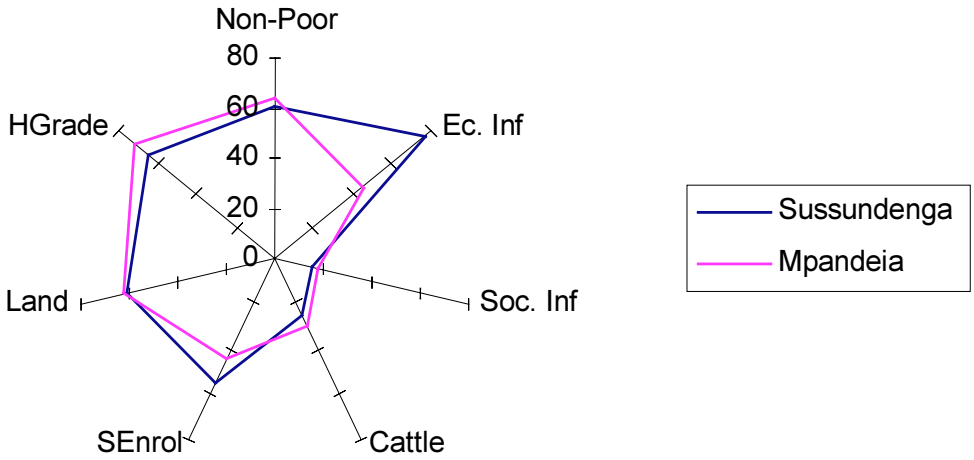
Living standards diamonds, Sussundenga and Mavusi



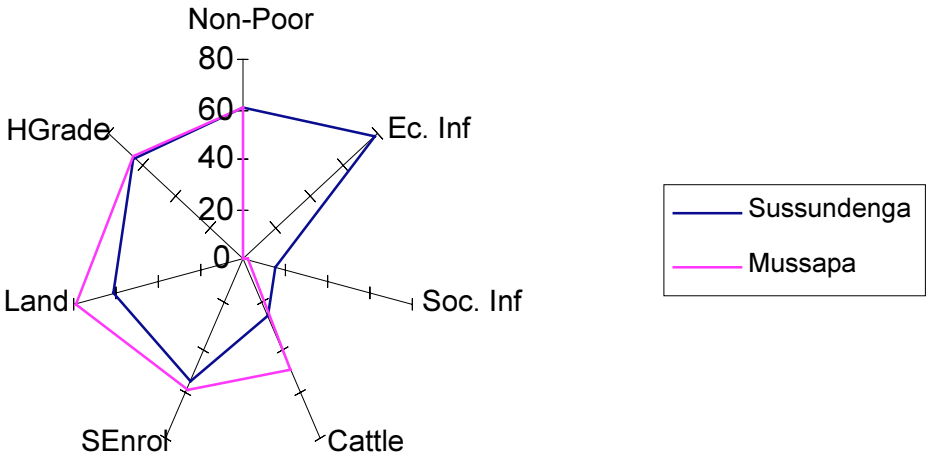
Living standards diamonds, Sussundenga and Muoha



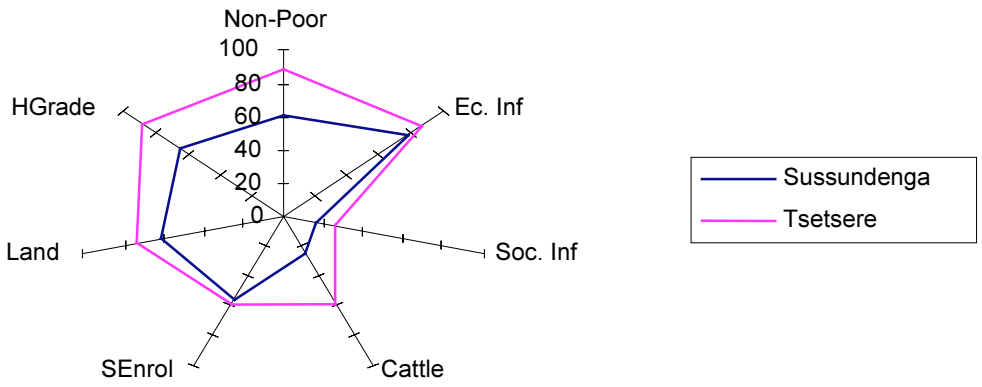
Living standards diamonds, Sussundenga and Mpandeia



Living standards diamonds, Sussundenga and Mussapa



Living standards diamonds, Sussundenga and Tsetsere



Source: SLSS (de Sousa 1998).

Notes: Distances to economic infrastructure were defined as the average distance to a shop, trading post, commercial farm (which usually provide employment and also exchange goods with households), and pick up points for public transport. Distance to social infrastructure are the average distance to a hospital or health centre, a primary school, the offices of the government representative and the home of the traditional chief. For the radar chart, we consider the proportion of households living at a distance less than the average to those facilities. The educational attainment of household heads is given by the proportion of heads that have achieved third grade of primary school or higher. Oxen ownership is measured by the proportion of households owning oxen, while land tenure is measured by the proportion of households holding over 1.7 hectares of land (the district average is 2.8 hectares per household).

Inspection of the diamonds confirms that Tsetsere's households enjoy higher living standards than other localities; access to economic and social infrastructure, land and oxen is above the Sussundenga average and a greater proportion of household heads attained the third grade of primary school or higher. These factors contribute to the smaller proportion of food-poor households in Tsetsere (12.1 per cent) as compared with Sussundenga as a whole (39.9 per cent). In contrast, Mavusi falls well below the Sussundenga average; this locality has poor infrastructure, lack of oxen, and farms that are smaller than the average. Hence, 62.9 per cent of Mavusi's households are food poor (Muoha's households are similarly desperate).

Mussapa's living-standards diamond is a curious case; above average welfare outcomes despite its lack of public infrastructure. This may be explained by the locality's proximity to Zimbabwe, and the easy access that this affords to Zimbabwe's markets and infrastructure. Exchanges of goods and services across the border are common, and these reduce the economic and social isolation that would otherwise prevail if Mussapa's households were reliant only on domestic markets and institutions (de Sousa 1998).[4]

In Matica and Munhinga the proportion of heads with more than the third grade of primary school is below the Sussundenga average. The provision of infrastructure is similar or better than the Sussundenga average, but oxen ownership is slightly below. Yet, the proportion of the non-poor is higher than the Sussundenga average in Matica and below the average in Munhinga, perhaps due to smaller land holdings.

3.2 Inequality within localities

Not only is there high inequality across localities in Sussundenga but there is also high inequality between households in each locality. The assessment of inequality within each locality, as for the district as a whole, is undertaken using Gini coefficients for expenditure, land, oxen ownership and access to schooling. The results are summarized in Table 9. These indicate that Muoha is the locality with the highest inequality in expenditure, closely followed by Mussapa. Tsetsere, with the highest living standard of the district, has the lowest inequality in income, land and oxen (excluding Mavusi where nobody holds cattle and thus there is absolute

[4] A similar story could be told for Mpandeia, although the locality has slightly better infrastructure than Mussapa, although it has less economic interaction with Zimbabwe.

equality in oxen ownership). Inequalities in oxen ownership and access to schooling are high for all other localities, particularly Munhinga and Mpandeia.

Table 9 Gini coefficients for income, land, oxen ownership and access to education

	Expenditure	Land	Oxen	Education
Sussundenga	0.40	0.39	0.86	0.64
Matica	0.36	0.37	0.86	0.64
Munhinga	0.35	0.35	0.94	0.66
Mavusi	0.39	0.4	0.00	0.70
Muoha	0.46	0.42	1	0.46
Mpandeia	0.34	0.36	0.80	0.72
Mussapa	0.44	0.47	0.76	0.63
Tsetsete	0.24	0.24	0.59	0.57

Source: SLSS (de Sousa 1998).

Over time, as households rebuild, some of the poorer households will be able to catch up with the better-off households. But how many do so is an open question given the lack of savings among poor households and the underdevelopment of the rural credit market, both of which are serious constraints on capital accumulation. Hence it likely that significant inequality will persist unless efforts to redress it - such as micro-credit - are put into effect. Otherwise, the future pattern of rural growth will remain highly uneven with many households unable to take advantage of the livelihood opportunities brought by peace and economic reform.

4. THE IMPACT OF THE WAR

War had profound effects on Mozambique's rural communities, including the contraction of markets, the loss of employment, and the disruption to education and health services - aside from the death and terror of war itself. Since quantitative information about the losses incurred by Sussundenga's households during the war years is not available, inferences about conflict's impact on the poor are made by comparing the incidence of poverty per locality and the proportion of households displaced during the war.

Table 10 Proportion of households that returned to localities of origin three years after the end of the war

Locality	Percentage of food poor	Percentage of returnees
Mavusi	62.9	5.6
Muoha	55.6	10.0
Munhinga	47.6	32.6
Mussapa	39.5	20.9
Mpandeia	36.1	27.8
Matica	29.8	18.8
Tsetsere	12.1	26.5

Source: SLSS (de Sousa 1998).
Note: estimates regarding displaced people in Sussundenga are based on the numbers of people who returned to the district after the war ended.

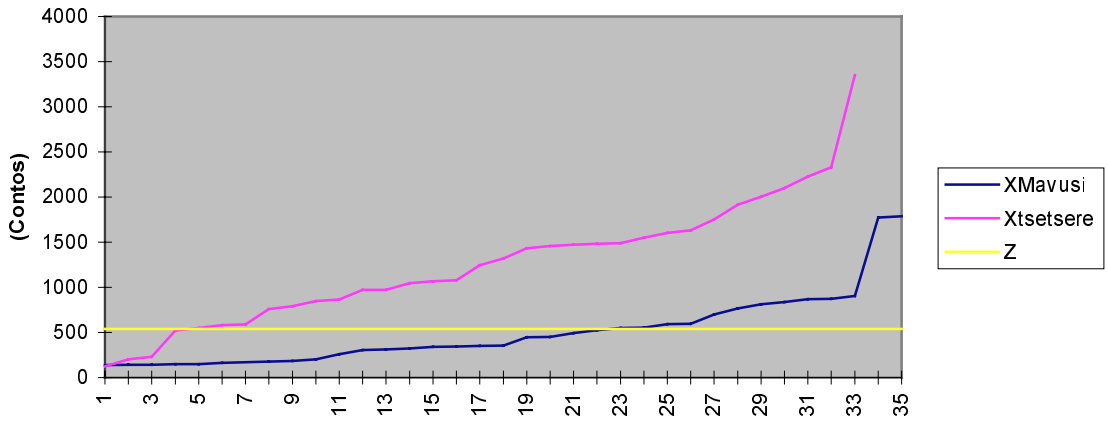
One hypothesis is that the poorest localities will have the highest proportion of returnees; they would start poor (having lost their assets in the war) and it would take time for them to rebuild. However, the data do not support this view. The localities of Mavusi, Muoha, and Munhinga show the highest incidence of poverty but only Munhinga has a higher proportion of returnees than the localities with less food-poor households. Furthermore, Mavusi - the poorest locality of all - has the smallest proportion of returnees in Sussundenga (5.6 per cent) followed by the second poorest, Muoha (10 per cent). In contrast, Tsetsere - the locality with the least poor people - has the third highest proportion of returnees (26.5 per cent).

One possible explanation for this is found by comparing the experiences of returnees in different localities of the district. Returnees to Matica, Munhinga, Mavusi and Muoha spent the worst period of the war years in camps inside the country. This imposed serious constraints on their livelihoods. Safety concerns prevented the opening of large farms since land had to be distributed equitably and this implied the concentration of plots around the residential areas of the camps. The exception is Matica whose camps had a privileged location - less than 20 kilometres away from Sussundenga's main urban centre, and close to the main road to the provincial capital. Besides a privileged location, camps accommodating people from Matica benefited from development programmes supported by GTZ, an international NGO that built a school, a health centre, and provided training. Agricultural extension projects were also undertaken. Thus, people from Matica were privileged when compared to refugees from elsewhere in Sussundenga. Support in these other camps was largely confined to the distribution of food and other basic goods, occasional medical care and, in some cases, education.

Refugees from Tsetsere, Mpandeia and Mussapa - localities along the border - found safety in Zimbabwe, some in camps and others with relatives. Some obtained wage employment on Zimbabwean farms and income from employment on the farms of relatives. This peaceful environment provided these refugees with an opportunity to accumulate enough to return home with new productive assets such as oxen and ploughs, as well as new work experiences, all of which helped them to eventually rebuild their livelihoods (similar considerations apply to Matica).

Most people in Mavusi and Muoha did not leave their homes and therefore suffered as markets contracted. The war also forced them to cultivate smaller plots close to the (relative) safety of their homes, a major factor in the wartime deterioration of food security in Sussundenga (and in other regions - see Tschirley, *et al.* 1994). Thus although these households did not lose access to land, their isolation led to the depletion of assets and human capital - effects that are not reflected in the data for the proportion of refugees in these areas. As Figure 2 shows, household incomes in Mavusi are much lower than in Tsetsere reflecting in part the differential impact of the war on the two localities.

Figure 2 Expenditure per adult equivalent and poverty line, Mavusi and Tsetsere



Source: SLSS (de Sousa 1998).
Note: Z is the poverty line.

In summary, the war affected people's lives in complex ways and our analysis of the data calls for caution in reaching conclusions about the war's poverty impact based on single indicators such as the number of refugees returning to a given area. How and where people organize their lives in wartime are critical determinants of their prospects for post-war reconstruction as well as the character of post-war poverty. Those with the best hopes will have accumulated enough assets during the war to achieve incomes that keep their households above the poverty line when peace is achieved (see Adam 1995, for further evidence). It is therefore important to initiate projects during wartime so that refugees can continue to make a living as well as prepare themselves for peace (see Adauta *et al.* 1999 on such projects in Angola).

5. CONSTRAINTS FACING FEMALE-HEADED HOUSEHOLDS

A key policy issue is whether households headed by women are at a significant disadvantage to male-headed households. A priori, differences in living standards between female-headed households and male-headed households are likely given the different roles of men and women in society, differences in their prospects for the accumulation of capital and education, cultural discrimination, and differences in time constraints (Adepoju and Oppong 1994, Çagatay *et al.* 1995, Elson 1995).

Sussundenga is no exception to the generally low living standard of Africa's women and their households: 47.1 per cent of female-headed households are poor in contrast to 38.9 per cent of male-headed households (Table 11). Moreover, average incomes per adult equivalent in male-headed households are 30 per cent higher than those in female-headed households, further evidence that living standards are higher in households with male heads than in households headed by women.

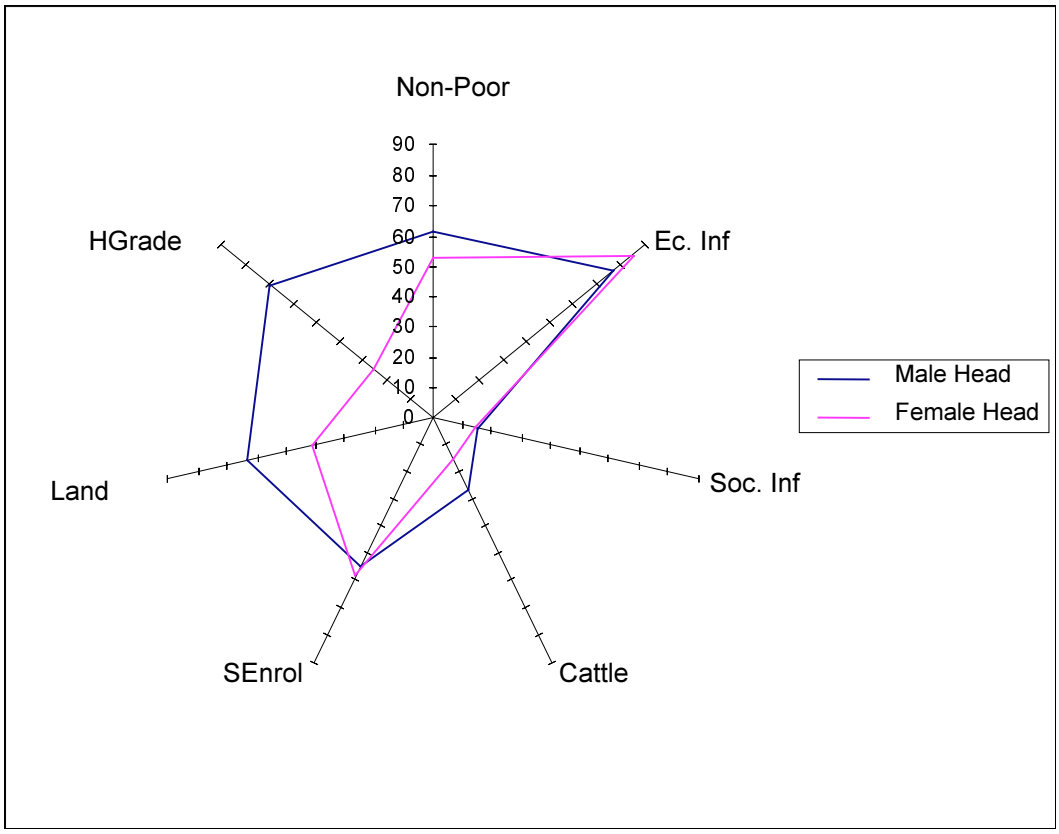
Table 11 Average expenditure per equivalent adult (EQXN) and food poverty, by sex of the head

	Average EQXN (Contos)	Percentage of food poor households
All Households	797.8	39.9
Households with male heads	822.9	38.9
Households with female heads	628.4	47.1

Source: SLSS (de Sousa 1998).

The fact that outcomes for women are generally worse than those for men are amplified if we develop living standards diamonds for male- and female- headed households (Figure 3).

Figure 3 Living standards diamonds for households with male and female heads



Source: SLSS (de Sousa 1998).
Note: for definitions of the variables see Figure 1.

Female-headed households are poorer, less educated, hold smaller areas of land and own fewer oxen than male heads (see Table 12). However, differences in their access to economic and social infrastructure are small (and in favour of female-headed households), and accordingly school enrolment rates are similar between male-headed and female-headed households.

Table 12 Access to land, oxen and non-farm incomes, by male-headed and female-headed households

	Male-headed households	Female-headed households	All households
1. Land tenure			
Average area (hectares)	2.9	2.2	2.8
Land losses (percentage of households)	4.7	17.6	6.4
Problems obtaining new land (percentage of households)	4.7	14.7	6.0
Problems using grazing land (percentage of households)	9.7	11.8	10.0
Worries about losing land (percentage of households)	25.8	38.2	27.4
2. Oxen Ownership (percentage of households)	26.2	14.7	24.7

Source: SLSS (de Sousa 1998).

Gini coefficients, presented in Table 13, indicate higher inequality in living standards among male-headed households (Gini coefficient of 0.41) than among female-headed households (0.32). This result is also apparent in other economies that have undergone both war and economic liberalization. For example, inequality is lower among Angolan women than among Angolan men, reflecting the greater constraints on women's livelihoods which limit their gains from the opportunities (and thus the higher incomes) resulting from economic liberalization (see Adauta *et al.* 1999).

Table 13 Gini coefficients of gender inequality

	All	Male	Female
Income	0.40	0.41	0.32
Income per adult equivalent	0.35	0.39	0.32
Land	0.39	0.41	0.30
Oxen	0.86	0.83	0.91
Education	0.64	0.66	0.62

Source: SLSS (de Sousa 1998).

For oxen, the Gini coefficients are 0.83 and 0.91 for male- and female-headed households respectively. This is the only case in which the Gini coefficient for female-headed households is larger than the district's average. The very high inequality in oxen ownership in both male and female households reflects the destruction of oxen during the war, and the fact that only better off households were able to restock their herds in the immediate post-war period. This is an important source of gender income inequality, especially since many female households have less access to able-bodied labour, and thus have a greater need to substitute animal draft power for human labour.

Substantial gender differences are also evident in the ability of households to reduce their dependence on agricultural income. Women are very active in urban micro-enterprises (especially in the Maputo region) and some female heads with low education and little capital prefer these activities to formal employment because the returns are higher (UNESCO/ILO 1997). Yet, female heads in Sussundenga are absent in these activities. Our interpretation is that time and capital constraints prevent women from running non-farm businesses in Sussundenga. These constraints are partly the result of the war which hit female-headed households particularly hard, especially in their ability to accumulate the savings necessary to start a business.

Unfortunately, no information is available on micro-enterprises in Sussundenga before the war. Our supposition is that Sussundenga's women were involved in non-farm businesses, as in most of Mozambique's regions. However, female-headed households found it difficult to re-enter non-farm businesses after the war because of wartime changes in the household's composition. For example, women who were widowed during the war had to re-start their lives as household heads, with no other adults - or many fewer - to share the burden of rebuilding businesses and homes. Inheritance rules discriminating against women add to the difficulties faced by these households. With few resources, female heads must give priority to food production. However, as production grows and capital constraints are relaxed, more female-headed households are expected to run non-farm businesses - a trend that could be accelerated if more resources were committed to projects such as micro-credit and training for women.

Male-headed households have higher wage incomes than female-headed households - averages of 205,000 and 90,000 meticais respectively - in common with other SSA countries (see Collier 1993, and Adauta *et al.* 1999). Women are employed in low paid jobs such as domestic service and work on other smallholder farms, while men work as drivers, machine operators in timber mills, extension workers, veterinary technicians and public servants. Aside from employer discrimination, the poor performance of women in the labour market is partly due to their low school attainment. About 90 per cent of female heads either never attended school or spent too little time at school to achieve a reasonable standard of literacy. However, 60 per cent of male heads report having completed at least the first three grades of primary school.

Likewise, there are more male-headed households reporting net remittances than female-headed households. Remittances and transfers were reported in 13 per cent of male-headed households compared with 9 per cent in female-headed households. Male-headed households receive 110,000 meticais in remittances a year on average, over 20 times more than female-headed households, who receive only 4,000 meticais. However, this data must be treated with caution since female heads reported mainly receipts and payments in kind – which involve valuation problems - while their male counterparts reported proportionately more monetary receipts.

5.1 Time constraints

The allocation of time between productive and reproductive activities is also a key constraint on household livelihoods (Çagatay *et al.* 1995, Elson 1995). This is particularly so in societies that are engaging in reconstruction as well as economic transition, since households must make major adjustments to their time allocations if both transition and reconstruction are to succeed in raising national output (Elson 1991).

The daily use of time in crop production, animal care and water collection in Sussundenga is presented in Table 14.[5] The difference between men and women in the number of hours of farm work is small. Men work longer in crop production than women do.[6] Men from male-headed households also allocate more time to animal care than women, but the reverse applies in female-headed households. However, when water fetching is included, the difference between male and female working days in male-headed households becomes negligible. Nevertheless, in female-headed households, the differences are striking. Women work on average 11 hours, as against 9 hours for men.[7] These women work about 1 hour more in farm activities and water collection than women in male-headed households.

[5] Time use in crop production is given by the average number of hours of work during land preparation, planting, weeding and harvesting.

[6] A similar result is reported for rural households for the whole country (PAU 1996). Women usually work a shorter day on the farm in order to gather fuel and water as well as to undertake other housework.

[7] The majority of men in these households are old (father or father-in-law of the head).

Table 14 Time use in Sussundenga (in hours)

	Farm work	Animal care	Water fetching	Total
All households				
Men	6.33	2.90	0.40	9.63
Women	6.18	2.50	1.00	9.68
Average	6.25	2.70	0.70	9.65
Male-headed households				
Men	6.30	2.90	0.50	9.70
Women	6.18	2.50	1.00	9.68
Average	6.24	2.70	0.75	9.69
Female-headed households				
Men	6.33	2.70	0.00	9.03
Women	6.18	3.20	1.30	10.68
Average	6.25	2.95	0.65	9.85

Source: SLSS (de Sousa 1998).

Although data on time spent in most housework activities (including gathering and transporting firewood, cooking, washing and caring for children) and carrying goods (to and from trading posts, markets and the mill) is not available, inferences about differences in male and female workloads can still be made based on information regarding gender roles. In Mozambique, as in much of SSA, men fetch water or firewood only when there is no woman to do it for them. The same is true for cooking, cleaning and many other housekeeping activities. Childcare is also primarily a female task.

Estimates from other SSA countries indicate that women dedicate 4 hours to housework each day, as against 1 hour for men (Adepoju and Oppong 1994). Furthermore, men do not usually increase their share of housework as the domestic workload increases, or when women increase their labour inputs to productive activities. Women consume less leisure than men because of their higher workload. For female-headed households, time allocated to housework also crowds out crop production and other productive activities. Thus female time-constraints are a key impediment to the reconstruction of communities from war, and the adjustment of communities to the new opportunities (but also increased costs) associated with economic transition.

Bryceson and Howe (1993) indicate that in rural Tanzania, men carry just over 10 per cent of the load carried by women in a year. Although no data on loads carried by men and women in Sussundenga is available, the situation in the district is probably worse than that of Tanzania due to the

lack of rural transport. Again, investment in road infrastructure and improvement in rural transport could do much to lighten women's load. This should be taken into account in national and local public spending decisions, and is one way to incorporate the gender dimension into the allocation of public spending.

6. CONCLUSIONS: PROSPECTS FOR POVERTY REDUCTION

Reform has undoubtedly succeeded in reversing the decline in Mozambique's economy. Inflation has been reduced (from 63 per cent in 1994 to 6.4 per cent in 1997), and GDP growth was above 10 per cent in 1998 and 1999 (but will fall in 2000 because of the floods). Public investment in rural roads is progressing - more feeder roads are being rebuilt - and more than 80 per cent of the schools and health-care units destroyed during the war have been reconstructed. In some regions there are now more schools than before the war.

This success has not, however, resulted in a significant reduction in rural poverty. Sussundenga has good agricultural potential and thus good prospects for sustained improvement in farm livelihoods. However, concerted efforts are still necessary to shift its communities above the poverty line. The recreation of market networks is one constraint on rural poverty reduction. Road reconstruction is lowering transactions costs and thus encouraging the entry of more traders - which is good for competition - but in many areas entry has not gone far enough and rural trade continues to be dominated by monopsonies (either single traders or a few traders in a buyer's cartel). Road investment is unquestionably necessary, but attracting traders and other businesses into these regions will involve more than improving transport. Incomes in Sussundenga and other remoter regions are very low and Maputo and its environs offer more profitable investment opportunities given their much better infrastructure and market access.

Farming will remain the main income source of Sussundenga's communities for the foreseeable future and thus efforts to reduce poverty imply greater support to smallholders. This can include the provision of good quality extension services, and schemes to facilitate the purchase of oxen, ploughs, and other inputs. We have seen that the post-war distribution of oxen is highly unequal, and lack of animals is a major

constraint on farm incomes. Such programmes should be accompanied by adequate insurance schemes and safety nets to reduce household vulnerability to shocks, perhaps building on informal safety nets (Morduch 1997). Reducing income variability would further encourage the adoption of new technologies and increase the use of inputs (assuming that public support to extension and input markets both improve) and reduce the gap between Sussundenga's farmers and those elsewhere in Mozambique (and neighbouring Zimbabwe).

Micro-credit schemes can assist the less poor - thus perhaps providing more employment for the very poorest people as well - but micro-credit is not likely to directly meet the needs of the very poorest (Hulme and Mosley 1996). Thus public action must increase its focus on the livelihoods of the very poorest. Perhaps the best way forward is to concentrate on building their productive assets - for example small animals provide valuable income-opportunities - as well as targeted assistance to improve the nutrition and health of their children. Both household surveys and participatory techniques are crucial in identifying the best ways to help the very poorest.

Action is urgently needed to raise educational participation, especially of girls, otherwise the new generation will reach adulthood with as little education as their parents (see Datt *et al.* 2000 on education as a national priority). But this is more difficult than it first appears. Although the supply of education is increasing as schools are rebuilt, household demand for education continues to be deficient. This is partly because children are needed to help rebuild household livelihoods (especially in food production) the first priority of poorer households. Both farm and non-farm livelihoods remain labour-intensive, and thus education has a substantial opportunity cost for households. The withdrawal of children from school is especially high during the periods in which agricultural activity peaks. Failure and drop out rates remain high, thereby wasting scarce public resources and lowering the social (and private) returns to rebuilding the rural school system. The demand for education should increase as household incomes rise. Hence there should be a strong complementarity between stimulating smallholder agriculture - through better marketing, infrastructure etc - and public investment in education. Thus, investment in the former can raise the social return to investment to the latter. Indeed this may be a reason for giving some initial priority to public investment in smallholder agriculture over investment in education - if resources are really tight. But, before making such trade-offs in spending decisions, we

need more information on households to identify the determinants of educational participation, and its private costs and benefits (Bigsten 1999, also discusses this issue in the case of Ethiopia).

In summary, it is apparent that not all households are participating in the process of post-war growth. This is especially so among those who were isolated during the war and thus had the fewest productive assets and the least human capital with which to restart their livelihoods. Unless adequate measures are taken, a large proportion of rural people in Sussundenga (and elsewhere) will remain destitute. Therefore Mozambique's high GDP growth rate over the last few years should not make us complacent about the prospects of the rural poor.

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