Work, Female Empowerment and Economic Development

Sara Horrell, Hazel Johnson and Paul Mosley, with Supriya Garikipati, June Rock and Arjan Verschoor

Routledge
Taylor & Francis Group

Work, Female Empowerment and Economic Development

Accumulation of assets to enable the diversification of activities has been established as crucial in helping the rural poor escape poverty. The empowerment of women has been identified as a way to overcome inefficiencies in the allocation of resources within the family and so improve agrarian households' productivity. However, achieving diversification is not necessarily empowering for women and some initiatives may worsen their position.

This book uses the information collected in original household surveys conducted in rural areas in four countries to investigate the links between women's position in the household, diversification strategies, labour market participation and poverty reduction. The book centres on country-specific chapters that provide an in-depth focus on an issue of relevance to the location and that tease out the interplay between female empowerment and development in that context. In particular, the chapters examine:

- Landlessness in Ethiopia
- Feminization of the agricultural labour market in Andhra Pradesh, India
- Female labour supply and women's power within the household in Uganda
- Disadvantages faced by female-headed households in Zimbabwe

The analysis calls for caution in assuming that labour market expansion necessarily acts to empower women and emphasizes the role female access to assets can have in facilitating diversification and escaping poverty. It will appeal to all those studying development economics, with particular interest in areas such as diversification, poverty and female empowerment.

Sara Horrell is a Senior Lecturer in Economics at the University of Cambridge and a Fellow of New Hall, Cambridge.

Hazel Johnson is Professor of Development Policy and Practice at The Open University.

Paul Mosley is Professor of Economics at the University of Sheffield.

Routledge Studies in Development Economics

1 **Economic Development in the Middle East**
Rodney Wilson

2 **Monetary and Financial Policies in Developing Countries**
Growth and stabilization
Akhtar Hossain and Anis Chowdhury

3 **New Directions in Development Economics**
Growth, environmental concerns and government in the 1990s
Edited by Mats Lundahl and Benno J. Ndulu

4 **Financial Liberalization and Investment**
Kanhaya L. Gupta and Robert Lensink

5 **Liberalization in the Developing World**
Institutional and economic changes in Latin America, Africa and Asia
Edited by Alex E. Fernández Jilberto and André Mommen

6 **Financial Development and Economic Growth**
Theory and experiences from developing countries
Edited by Niels Hermes and Robert Lensink

7 **The South African Economy**
Macroeconomic prospects for the medium term
Finn Tarp and Peter Brixen

8 **Public Sector Pay and Adjustment**
Lessons from five countries
Edited by Christopher Colclough

9 **Europe and Economic Reform in Africa**
Structural adjustment and economic diplomacy
Obed O. Mailafia

10 **Post-apartheid Southern Africa**
Economic challenges and policies for the future
Edited by Lennart Petersson

11 **Financial Integration and Development**
Liberalization and reform in sub-Saharan Africa
Ernest Aryeetey and Machiko Nissanke

12 **Regionalization and Globalization in the Modern World Economy**
Perspectives on the Third World and transitional economies
Edited by Alex E. Fernández Jilberto and André Mommen

13 **The African Economy**
Policy, institutions and the future
Steve Kayizzi-Mugerwa

14 **Recovery from Armed Conflict in Developing Countries**
Edited by Geoff Harris

15 **Small Enterprises and Economic Development**
The dynamics of micro and small enterprises
Carl Liedholm and Donald C. Mead

16 **The World Bank**
New agendas in a changing world
Michelle Miller-Adams

17 **Development Policy in the Twenty-First Century**
Beyond the post-Washington consensus
Edited by Ben Fine, Costas Lapavitsas and Jonathan Pincus

18 **State-Owned Enterprises in the Middle East and North Africa**
Privatization, performance and reform
Edited by Merih Celasun

19 **Finance and Competitiveness in Developing Countries**
Edited by José María Fanelli and Rohinton Medhora

20 **Contemporary Issues in Development Economics**
Edited by B.N. Ghosh

21 **Mexico Beyond NAFTA**
Edited by Martín Puchet Anyul and Lionello F. Punzo

22 **Economies in Transition**
A guide to China, Cuba, Mongolia, North Korea and Vietnam at the turn of the twenty-first century
Ian Jeffries

23 **Population, Economic Growth and Agriculture in Less Developed Countries**
Nadia Cuffaro

24 **From Crisis to Growth in Africa?**
Edited by Mats Lundal

25 **The Macroeconomics of Monetary Union**
An analysis of the CFA franc zone
David Fielding

26 **Endogenous Development**
Networking, innovation, institutions and cities
Antonio Vasquez-Barquero

27 **Labour Relations in Development**
Edited by Alex E. Fernández Jilberto and Marieke Riethof

28 **The Crisis of Rural Poverty and Hunger**
An essay on the complementarity between market and government-led land reform for its resolution
M. Riad El-Ghonemy

28 **Globalization, Marginalization and Development**
Edited by S. Mansoob Murshed

29 **Programme Aid and Development**
Beyond conditionality
Howard White and Geske Dijkstra

30 **Competitiveness Strategy in Developing Countries**
A manual for policy analysis
Edited by Ganeshan Wignaraja

31 **The African Manufacturing Firm**
An analysis based on firm surveys in sub-Saharan Africa
Dipak Mazumdar and Ata Mazaheri

32 Trade Policy, Growth and Poverty in Asian Developing Countries
Edited by Kishor Sharma

33 International Competitiveness, Investment and Finance
A case study of India
Edited by A. Ganesh Kumar, Kunal Sen and Rajendra R. Vaidya

34 The Pattern of Aid Giving
The impact of good governance on development assistance
Eric Neumayer

35 New International Poverty Reduction Strategies
Edited by Jean-Pierre Cling, Mireille Razafindrakoto and François Roubaud

36 Targeting Development
Critical perspectives on the Millennium Development Goals
Edited by Richard Black and Howard White

37 Essays on Balance of Payments Constrained Growth
Theory and evidence
Edited by J.S.L. McCombie and A.P. Thirlwall

38 The Private Sector After Communism
New entrepreneurial firms in transition economies
Jan Winiecki, Vladimir Benacek and Mihaly Laki

39 Information Technology and Development
A new paradigm for delivering the internet to rural areas in developing countries
Jeffrey James

40 The Economics of Palestine
Economic policy and institutional reform for a viable Palestine state
Edited by David Cobham and Nu'man Kanafani

41 Development Dilemmas
The methods and political ethics of growth policy
Melvin Ayogu and Don Ross

42 Rural Livelihoods and Poverty Reduction Policies
Edited by Frank Ellis and H. Ade Freeman

43 Beyond Market-Driven Development
Drawing on the experience of Asia and Latin America
Edited by Makoto Noguchi and Costas Lapavitsas

44 The Political Economy of Reform Failure
Edited by Mats Lundahl and Michael L. Wyzan

45 Overcoming Inequality in Latin America
Issues and challenges for the twenty-first century
Edited by Ricardo Gottschalk and Patricia Justino

46 Trade, Growth and Inequality in the Era of Globalization
Edited by Kishor Sharma and Oliver Morrissey

47 Microfinance
Perils and prospects
Edited by Jude L. Fernando

48 The IMF, World Bank and Policy Reform
Edited by Alberto Paloni and Maurizio Zanardi

49 Managing Development
Globalization, economic restructuring and social policy
Edited by Junji Nakagawa

50 Who Gains from Free Trade?
Export-led growth, inequality and poverty in Latin America
Edited by Rob Vos, Enrique Ganuza, Samuel Morley, and Sherman Robinson

51 Evolution of Markets and Institutions
A study of an emerging economy
Murali Patibandla

52 The New Famines
Why famines exist in an era of globalization
Edited by Stephen Devereux

53 Development Ethics at work
Explorations – 1960–2002
Denis Goulet

54 Law Reform in Developing and Transitional States
Edited by Tim Lindsey

55 The Assymetries of Globalization
Edited by Pan A. Yotopoulos and Donato Romano

56 Ideas, Policies and Economic Development in the Americas
Edited by Esteban Pérez-Caldentey and Matias Vernengo

57 European Union Trade Politics and Development
Everything but arms unravelled
Edited by Gerrit Faber and Jan Orbie

58 Membership Based Organizations of the Poor
Edited by Martha Chen, Renana Jhabvala, Ravi Kanbur and Carol Richards

59 The Politics of Aid Selectivity
Good governance criteria in World Bank, U.S. and Dutch development assistance
Wil Hout

60 Economic Development, Education and Transnational Corporations
Mark Hanson

61 Achieving Economic Development in the Era of Globalization
Shalendra Sharma

62 Sustainable Development and Free Trade
Shawkat Alam

63 The Impact of International Debt Relief
Geske Dijkstra

64 Europe's Troubled Region
Economic development, institutional reform and social welfare in the Western Balkans
William Bartlett

65 Work, Female Empowerment and Economic Development
Sara Horrell, Hazel Johnson and Paul Mosley, with Supriya Garikipati, June Rock and Arjan Verschoor

Work, Female Empowerment and Economic Development

Sara Horrell, Hazel Johnson and Paul Mosley, with Supriya Garikipati, June Rock and Arjan Verschoor

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2008 by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
270 Madison Ave, New York, NY 10016

This edition published in the Taylor & Francis e-Library, 2008.

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
Horrell, Sara.
Work, female empowerment and economic development / Sara Horrell, Hazel Johnson and Paul Mosley.
p. cm.
Includes bibliographical references and index.
1. Rural women—Employment—Developing countries. 2. Sexual division of labor—Developing countries. 3. Sex discrimination in employment—Developing countries. 4. Poverty—Developing countries. I. Johnson, Hazel. II. Mosley, Paul. III. Title.
HD6223.H67 2008
331.409172'4–dc22 2007032797

ISBN 0-203-93126-2 Master e-book ISBN

ISBN13: 978-0-415-43757-8 (hbk)
ISBN13: 978-0-203-93126-4 (ebk)

To Veeraj, Renata and William,
all born during the implementation of this project

Contents

Illustrations

Figures

Boxes

Tables

Contributors

Supriya Garikipati is Lecturer in Applied Economics in the School of Management at the University of Liverpool. Her research is in development economics, particularly in the Indian sub-continent. It includes displacement by the Sardar Sarovar dam in Western India and the impact of microfinance and micro-insurance schemes in Andhra Pradesh.

Sara Horrell is Senior Lecturer in Economics at the University of Cambridge and a Fellow of New Hall, Cambridge. Her research has focused on households, labour supply and consumption in contemporary and historical contexts and she has published extensively in these areas.

Hazel Johnson is Professor of Development Policy and Practice at The Open University. She has been involved in projects on food security, social learning in development interventions, and education for development policy and management, and has published in these areas.

Paul Mosley is Professor of Economics at the University of Sheffield. He has worked extensively in the area of development, political economy and economic history, with an emphasis on Africa.

June Rock is Research Officer at the University of Bradford. She has conducted fieldwork in Ethiopia, Uganda and Zimbabwe and has an interest in agricultural productivity and microfinance in poor rural households.

Arjan Verschoor is Lecturer in Economics at the School of Development Studies and an economist in the Overseas Development Group at the University of East Anglia. His research interests include intra-household economics, aid effectiveness, the relationship between economic growth and poverty reduction, social capital and poor farmers' decision-making under uncertainty. He has done fieldwork in Uganda.

Acknowledgements

This research was primarily based on a project financed under the UK Department for International Development's Pro-Poor Growth Programme that was aimed at understanding the type of economic growth that can help the poor escape poverty (project number R7615). The Newton Trust financed the research assistance and the full-scale re-survey conducted in India (award number INT 2.05 (d)). We gratefully acknowledge these sources of finance. However, the views expressed in this book are those of the authors alone. There are many people who contributed to the project. We would like to thank all those who participated in the surveys; without their time and the insights they allowed us into their lives this work would not have been possible. We are also grateful to those who conducted the fieldwork. In particular, we thank Munhamo Chisvo and JIMAT Development Consultants in Harare for help with developing the questionnaire, providing background information and conducting the fieldwork in Zimbabwe; Joshua Balungira, Sarah Khanakwa and Richard Nalela for overseeing the interviewing and data entry in Uganda; Tegegne Teka and Abrar Suleiman in Ethiopia; and the field research team, Chandrasekhar, Lakshmama, Narsimhlu, Lakshmi, Padma, Ratish and Sridevi, in Andhra Pradesh. We also gratefully acknowledge the information and support provided by P. Achari of Sanghameshwara Grameen Bank, K. Raju of VELUGU and Andhra Pradesh District Poverty Initiatives Project, C. S. Reddy of Mahila Abhivruddhi Society Andhra Pradesh, Y. Thorat of NABARD and V. Mahajan of BASIX. We thank Jesimen Chipika for detailed and thoughtful comments on an earlier version of this book. Sara Horrell and Pramila Krishnan, 'Poverty and productivity in female-headed households in Zimbabwe' was published in the *Journal of Development Studies*, 43 (8) in November 2007 (website: www.informaworld.com/smpp/title~content=t713395137~db=all) and the present chapter 7 rests substantially on that work. We thank Pramila Krishnan for her co-authorship of the article and Taylor & Francis Group for permission to reproduce sections of that work. Hazel Johnson was instrumental in orchestrating the Zimbabwe survey and we thank her for helpful comments on various versions of this chapter.

Glossary

CGE	Computable General Equilibrium
GDP	Gross Domestic Product
HDI	Human Development Index
HIPC	Highly-Indebted Poor Countries
HYV	High Yield Varieties
IMF	International Monetary Fund
MDG	Millennium Development Goals
NGO	Non-Government Organization
PA	Peasant Association
SHG	Self-Help Group

1 Introduction

Sara Horrell and Paul Mosley

The diversification of economic activity and labour market development have both been identified as possible strategies to reduce the vulnerability of the poor and enable the ascent out of poverty. Whether such policies are necessarily empowering for women has been much debated but less well documented. In this book we adopt a comparative case study approach using original survey material for three African countries and a state in India to investigate these links.

Much recent work has emphasized the role of diversification in achieving poverty reduction (see, for example, Carney 1988; Ellis 1998; Ellis 2001; Ellis and Freeman 2004). This literature has highlighted how local labour market employment options, urban migration of some household members, agriculture-related small enterprises, increased agricultural productivity and non-farm self-employment activities may all present opportunities for income generation. These are not mutually exclusive options even for an individual and the multi-person household may devote time to a number or indeed all, of these activities. Diversification can result in cash-generation that is used to fund the accumulation of assets and so secure the household's future income stream and enable it to climb out of poverty. However, multiple equilibria exist and initial ownership of, and access to, assets determine the options available. Assets are broadly defined, ranging from the physical, human, social and natural to the financial. Access to these assets is mediated through institutions, social relations and organizations. Those with few assets, who suffer cash liquidity constraints or social exclusion and who are located in geographically less favoured areas are restricted to low-return diversification as a way of minimizing risk and protecting crucial productive assets (Barrett *et al.* 2006a). Furthermore, Dercon and Krishnan (1996) demonstrate that being excluded from certain activities by binding constraints can limit diversification and be more influential than the desire for risk reduction. Specifically, they find that ownership of potentially lucrative cattle in Tanzania and Ethiopia is constrained by lack of assets and access to finance. Similar constraints may also affect entry into high-return or low-return off-farm activities. Enabling high-return, high-risk diversification requires improved asset bases.

Acknowledgement of the central role of diversification in assuring rural livelihoods has shifted the focus from income or consumption poverty to asset poverty and thus from short-term headcount poverty to persistent or chronic poverty (see,

for example, Barrett *et al.* 2006b). Identifying those who suffer an inability to accumulate or a depletion of assets below a threshold level in the aftermath of a shock, rather than those who are making transitory moves either upwards or downwards, is now deemed crucial in orchestrating poverty reduction (Carter and Barrett 2006). These insights have suggested policies to alleviate chronic poverty through insurance against shocks that deplete critical assets and strategies to enable accumulation for the poorest by the acquisition of more assets and by improving the productivity of the assets held.

However, little of this literature has fully integrated the role gender may play in outcomes. A landmark in the recognition of gender and women's subordination as a cause of poverty and underdevelopment was Ester Boserup's (1970) classic, *Woman's Role in Economic Development*. She spotlighted the contribution made by women to the household and informal economies of developing countries and illustrated that, because much of this contribution was unpaid, it was undervalued, thereby causing a misallocation of resources between men and women. She also drew attention to the large element in interpersonal inequalities that is caused by relationships and status differences within the household. Although it took some time before these insights made their way into the development mainstream, by the twenty-first century gender issues and women's empowerment featured strongly in development analysis and strategy. However, a comprehensive understanding of the impact of development policy on both households and the individuals within them still evades us and the gender benefits often remain uncertain.

Indeed there is debate about whether women will benefit sufficiently from the supposed trickle-down of general poverty-relieving measures to obviate the need for specific gender policies or whether improving women's position is the key to alleviating poverty. It is tempting to treat the various forms of discrimination against women which exist within labour and product markets as a tax (adopting the approach of Becker 1971) and to imagine that market liberalization and removal of the various 'poor policies and institutional failures' (Binswanger and Townsend 2000) would improve the quality of life of women and the population as a whole. However, it is widely observed that those who can benefit from macroeconomic policies and market liberalization are those who already possess assets and operate in conducive environment.[1] The less poor benefit more than the very poor and so these policies act to widen inequality. In Ghana, for instance, those with assets managed to benefit from new opportunities as they could afford to take the risks involved, while those without assets had to work for others to get access to vital resources, such as draught power for cultivation, but by so doing became further impoverished (Whitehead 2006). Simulations of the impact of free trade and a more open economy on women, using a Computable General Equilibrium approach (Fontana *et al.* 1998; Fontana and Wood 2000; Fontana 2003), also show a complex picture: the extent of benefit to women from liberalization not only is country-specific but also depends on the market which is liberalized.[2] One key element in impact is the extent to which women are established in tradable or in non-tradable sectors as well as the extent to which they can and want to adapt in response to price stimuli. If the typically-assumed gender division of labour, in

which women are specialized in non-tradable cash crops, were an accurate description of reality and did not adapt in response to relative price shifts in favour of tradables, then adjustment of a 'Washington consensus' variety would hurt women (Elson 1990, 1995).

Culturally-determined divisions of labour are one aspect of the processes which may operate to negate any beneficial impacts of macroeconomic policies on women. Other processes may operate within the household. The observation of poor households being characterized by separate spheres of responsibility and loci of control has led to the view that the household is more accurately described by a conflict model where bargaining underpins its operation than by a unitary, consensus model. In this case inefficient outcomes may result and the internal operation of the household may hijack the benefits of poverty alleviation policies. The losses incurred from allocative inefficiency within the household are argued to be significant. Using a bargaining model of the household, Udry (1996) has found that the sub-optimal allocation of labour and fertilizer across male and female plots in Burkina Faso reduced yields on female plots so that some 10 to 20 per cent of potential output was lost. Policies too can have unanticipated outcomes. A project in the Gambia designed to assist rural women farmers by commercializing rice, a women's crop, failed to achieve this because men acquired rights to the land, designated rice a communal crop and thus gained control over its production. It was their material position, not women's, which improved (Saito 1994). Similarly the introduction of a rice project to supplement incomes in Cameroon failed to realize its full potential because women, who provide labour to rice production on men's plots, did not contribute as much labour as envisaged because men controlled the income from rice sales. Women preferred to utilize their labour where the returns had more direct benefit, in subsistence agriculture. In Kenya too differential yields for maize in male- and female-headed households indicate that wives put in less effort than lone women because the wives do not control the income generated by maize sales (Blackden and Bhanu 1998).

These examples suggest that focusing on evening out gender inequalities within the household will cause significant growth and poverty reduction to occur. Indeed, more control of expenditure by women has been associated with increases in children's and, possibly, household welfare (Mencher 1988; Kennedy and Peters 1992; Haddad *et al.* 1997). The corollary to this is that a bottom-up rather than a top-down approach to poverty reduction is advocated. The implication is that we need to open up the household and identify areas which are best placed to improve women's relative position and, hence, reduce poverty. However, the primacy of this objective has not gone uncontested. Whitehead and Kabeer (2001) point out that households have spheres of cooperation as well as conflict and persuasively argue that the focus on gender conflict may obscure the extent to which factors outside the household are responsible for inefficient outcomes. They advocate that we look at the constraints under which households, and women, operate and that hamper the achievement of their objectives. Indeed an apparently inefficient outcome may be rational if viewed in the context of diversification faced with constraints, such as access to markets and cultural norms. Instead, they

argue for an approach that puts more emphasis on identifying how these institutional barriers can be removed if significant reductions in poverty are to be achieved. Ellis (2001) endorses this view, noting that women are more constrained in their access to productive assets than men and therefore have fewer diversification options open to them. Indeed, he argues, policies 'that view women as instrumental to other objectives, such as poverty reduction, farm efficiency or better environmental management possess serious flaws because they fail to recognize or to address the social relations and institutions by which gender inequality is perpetuated over time' (Ellis 2001: 234). Because of this, diversification itself may widen gender inequalities by trapping women in traditional roles, such as domestic chores and subsistence production. What is needed is more information on women's ability to diversify and so earn more from the productive economy. For instance, it is possible to improve women's productivity in own agriculture, where technologically feasible, by changing the mix of crops produced. But this requires women to have access to the requisite inputs and advice and, as already noted, even achieving reasonable yields from existing crops is constrained by women's lack of access to the household's resources. Another option is for women to engage in small business enterprises, either agriculture-related or non-farm. But the ability to do this depends on having the wherewithal to withdraw labour from family subsistence activities and farming male plots and having access to the necessary set-up resources, such as microfinance. Having control over the gains from these activities is also crucial to whether women undertake them in the first place. Ownership of and control over assets typically emerges as key to improving women's position both outside and within the household (see, for example, Blackden and Bhanu 1998). Understanding the gendered nature of access to diversification opportunities and control over the resultant rewards is essential to designing policies that maximize their poverty reduction impact. But, as noted by Whitehead and Kabeer for sub-Saharan Africa (2001:13), 'there is little systematic research on women's non-farm income activities'. This gap in our knowledge needs to be filled.

Our approach is to build on the existing literature by combining the insights of the asset poverty approach in identifying who is poor and the constraints they face in improving their position with that on the intra-household division of resources and how overcoming allocative inefficiencies within the household may help improve women's bargaining position and household welfare. Essentially two routes for household improvement are identified: diversification for the less-poor, as described above, and labour market participation for the very poor.

The opportunities offered by greater labour market participation remain unclear. On the surface, most very poor people derive most of their income from casual labour, therefore the labour market must offer the key to poverty reduction. However, turning the key, as a mountain of research has already illustrated, is not easy. In some historical cases, a positive effect of labour market expansion on overall poverty is very clear, notably in the cases of the green revolutions, and associated industrialization processes, in North India, China and South-East Asia between the 1960s and the 1980s (Meinzen-Dick *et al*. 2004). But this outcome is not guaranteed. Indeed the efficacy of labour market participation as a poverty-

reduction strategy has been much debated, with authors noting that labour market participation may be impoverishing if the person enters into an area requiring few set-up costs, incurs losses in own agriculture when productivity is sacrificed to satisfy short-term income needs, and where over-supply drives down the wage. Under these conditions people may be driven further into poverty by increasing participation in labour markers: a vicious circle into chronic poverty rather than a virtuous climb out. But, with appropriate assets, such as education or ownership of agricultural inputs such as draught power, enabling access to the better end of the market, it may offer a route for accumulation of assets, diversification and an end to poverty (Dercon and Krishnan 1996; Ellis 2001; Whitehead 2006). Even in those countries, such as India, where the labour market has had a beneficial effect on household poverty we know less about whether both men and women have access to this market and whether they both realize the potential benefits.

In many rural regions of Africa, labour markets are thin. Poor rural women have limited access to waged work and tend to be concentrated at the lower end of the labour market. There are many factors that hamper women's access to labour markets. We might highlight, particularly, disapproval of women undertaking paid work, inability to offset the risks involved, such as non-payment and detriment to productivity on own plots, and whether women themselves benefit from engaging in paid work.

Women face social discrimination within labour markets. For example, research in Eastern Uganda has found that employers, who were generally but not exclusively male, found it easier to deal with male employees because there were 'fewer misunderstandings between men'. Many referred to the rumours and innuendo that would start in the village if a woman, and particularly a married woman, worked for another man for payment. The few male employers that did hire women generally hired women that were divorced, widowed or separated. On the supply side, men and women both stated that doing manual work for another was no better than begging, and was a reflection of a poor and disorganized home. A married woman working for a male employer was considered to be particularly damaging, not only to her own reputation, but also to the reputation of her husband (Evans 1992; Muzaki 1998). Such discrimination needs to be reduced if women are to find it easier to take up jobs.

In both developing and industrial countries, risk inhibits participation in both formal and informal labour markets. An important issue for the level of female labour supply is therefore how to mitigate the risks associated with labour market participation. The available mechanisms for mitigating risk may be gender-biased and, if they exclude women, will mean that women are likely to face higher risks than men in the activities they undertake (Elson 1999; Whitehead 2001). What is uncertain is how to offset this bias. Central to the issue is the ability of women to form informal associations, for instance, in extension, microfinance and health insurance, the degree and quality of solidarity achieved within such associations and also whether those associations perform a purely protective, or a transformative and developmental, role (Narayan *et al.* 2000). The risk mitigation and trust relations created are important to the circumstances under which labour

markets form, their durability and the benefit which women are able to extract from them.

If these obstacles can be overcome and the supply of labour by low-income women in Asia and Africa increased, it is still controversial whether labour markets offer a trapdoor out of, or trap poor women into, poverty (Dasgupta 1993). Many have been pessimistic about women's ability to gain from this process. In his work on famine Sen (1990a) has shown that women's waged work can improve the household's situation and the woman's relative position within it, but, where the woman engages in homeworking, perceptions of her contribution are devalued as non-work by both family and society. This has the consequence of work enhancing neither the woman's relative share nor the household's position, as it undermines her ability to bargain with the employer for appropriate wages and so reduces the benefit this work should achieve for the family. More optimistic views include that put forward by Singh (1990) who visualizes the expansion of the labour market as being the key element which enabled the green revolution to deliver poverty reduction in South Asia, specifically for women as well as men, in the 1970s and 80s. The controversy is difficult to resolve and depends upon the environment under consideration: the demand for labour, the quality of the jobs on offer, the timing of waged work opportunities and whether intra-household bargaining and resource allocation systems reduce some of the benefit women may realize from working.

Any benefits from increasing supply require an increase in the demand for labour. In Asia and some African cases, such as Uganda and Ethiopia, labour market development has been driven by rural industry and agriculture, which in turn is driven by smallholder agricultural productivity[3] and so argues for policies which boost this productivity (Mosley *et al*. 2004; Mosley and Suleiman 2004). Enabling diversification within the agricultural sector may be one route to job creation. Sustainable improvement requires the momentum of community development: the poor and the very poor need opportunities to improve their lot and the opportunities chosen need to be symbiotic. However, some have argued that Africa, in particular, is undergoing a process of 'de-agrarianization' (Bryceson 1995, 1999; Ashley and Maxwell 2001) which puts in question the viability of small-farmer based development strategies, instead arguing that any boost in the demand for labour must be urban and not rural. However, in many environments it is still cheaper to sustain the food security of small farms by improving foodcrop productivity alongside protectional investments than through imports and food aid. In any case, in no part of Africa does the alternative of urban- and non-traditional sector development have the absorptive capacity to create the livelihoods displaced from rural subsistence environments. Furthermore, many parts of agriculture are export-competitive and tradable and offer production and consumption linkages that are greater than for other sectors. Thus expanding work opportunities in the rural sector may still offer the possibility of poverty alleviation both to women and to households.

This book builds upon the diversification, asset-based poverty and constraints literatures by bringing a gender dimension into much of the analysis. Specifically

we have addressed these issues through surveys of rural households in four regions of the developing world: Ethiopia, Uganda, Zimbabwe and Andhra Pradesh in India. These countries offer differing macroeconomic and political backgrounds, varying degrees of labour market and institutional development and levels of achieved poverty reduction. Two approaches to gathering information were adopted. Structured quantitative surveys of 300 households were carried out in each country. These involved a common research methodology and questionnaire and sampled both female-headed and male-headed households. The initial surveys were followed by more qualitative resurveys of a selection of the original respondents. Combining these approaches has the advantage that the quantitative work enables general propositions to be developed but these are given life by the qualitative information. The surveys provide detailed evidence on household structure, time allocation, economic activity, agricultural production and intra-household processes. This wealth of information is used to investigate the relationship between income generation and empowerment. In particular, the book centres around country-specific chapters that provide an in-depth focus on an issue of particular relevance to the location and tease out the interplay of, for instance, increased labour market participation and gender relations. The use of a survey common to all four countries allows these detailed pictures to be set against a comparative background.

Although an important aim of the book is to investigate the possibilities for poverty alleviation, it should be noted at the outset that the book makes no grand claims about the ability to generalize from its findings. These are country case studies, they are context-specific and the stories they tell will not necessarily translate to other situations. However, they each relate an important story and highlight factors that are relevant to poverty alleviation. It is cognizance of these factors when thinking about policy formation in other countries that is the generalizable finding. For instance, the India case study calls for caution in assuming labour market expansion necessarily acts to empower women. While doubt about the positive relationship between paid work and empowerment has certainly been voiced by seminal contributors in the area, such as Amartya Sen, this work provides a detailed and complex picture of women's position in the home and the wider world and lends empirical support to the view. This is a key finding. It is context-specific but it does exhort policy makers everywhere to investigate whether labour market expansion is likely to improve women's position in the circumstances for which they are devising policy and gives an example of a route through which the purported benefits may be hijacked.

The Ugandan case study too highlights that women's paid work does not invariably empower women. Instead it is most effective where the household is initially richer and where the woman has access to assets to put to productive uses. Much existing work has cited women's lack of assets as central to their impoverishment. For example, Agarwal (1994) has argued that securing land rights is crucial for women. The studies presented here confirm the importance of assets but also show that the ones that it is particularly important to acquire are culturally specific. Again this calls for policy-makers to consider both power relationships within the

household and in society and how these affect women's access to assets in the design of effective poverty alleviation measures.

It is in this sense that the book offers general guidance. Each study contributes to our knowledge of the operation of an identifiable group of households within a specific region of a specific country. Clearly the same factors will not necessarily pertain in all places, but their importance in one setting must at least point up the question to be asked in other settings. Commonalities between the countries selected for study reinforce the notion that these may be instrumental.

Chapter 2 documents the background to the countries and regions surveyed and details the surveys undertaken. Uganda, Ethiopia, Zimbabwe and Andhra Pradesh in India were selected because there is relatively little research on women's empowerment, its links to the labour market and the potential for poverty reduction in Africa and even in India the links are contested. Despite the green revolution and feminization of the labour force in India, poverty remains huge and massive inequalities between men and women remain. Understanding the limitations to the advances made is an important lesson for other parts of the world. The locations also offer different degrees of labour market development. Andhra Pradesh represents a state where the rural labour market is relatively developed and women's involvement high, Zimbabwe represents the opposite extreme where recent circumstances have lead to the implosion of the economy and retrenchment into own-farm activities. Uganda is a country where labour markets are in early stages of development and the economy is showing positive signs of growth. Ethiopia has some rural labour markets, largely provided by coffee plantations, but has been hit by fluctuations in world coffee prices. Women's participation in these labour markets has been limited. Thus the four countries offer distinctly different conditions, provide fertile ground for exploring the links between work, empowerment and poverty reduction and offer opportunities for contrast and confirmation.

The data collected allow us to develop a poverty profile classification that recognizes the multiple dimensions of poverty by incorporating both income and assets to understand the resources our households had available. We use this classification subsequently when household labour allocation is considered, thus allowing differentiation between the households on the basis of the resources they have at their command.

Chapter 3 provides a comparative analysis of the survey material. It details households' current allocations of time, paying particular attention to the time use of different family members, the importance of extra-household links and obligations, the different forms of productive activity the household may be engaged in and the varieties of remuneration that may be received. It investigates the relationship between household time spent working its own agricultural land and the effective hourly wage realized and reveals some common traits across countries. Households that can afford to release labour from agriculture can gain cash from income-generating activities that is utilized to improve own agriculture, either through acquisition of assets or inputs or diversification into new crops. However, the very poorest lack agricultural assets and may be constrained to supply labour for wages. These results form an overview against which the specific results in the

case study chapters can be considered. The chapter also explores the relationship between female empowerment and time-use choices. It uses information on household divisions of labour, control over money and attitudinal variables to develop indicators to reflect women's strength in household bargaining and demonstrates that this power can then influence observable outcomes. For instance, one result indicates that women can gain from access to assets and greater access enables diversification into income-generating activities which can be put to investment uses and, if put into own agriculture, can result in higher yields and hence incomes. A power–productivity–profit nexus is identified. Detailed analysis and consideration of the underlying mechanisms occurs in the country-specific chapters.

Chapters 4 to 7 use the methods and classifications developed earlier to investigate labour supply and gender issues in the country-specific contexts. In Ethiopia (Chapter 4) the pro-poor land reforms of 1975 were intended to reallocate land back to artisans and small farmers. However, land reform has been only partly implemented in the areas studied and households without land tend to be viewed as inferior and have limited, often second-rate, options available to them. The chapter compares the situation of landed and landless households and pays particular attention to the implications for income, labour supply and gender relations within the household.

Chapter 5 examines the case of Andhra Pradesh, the Indian state in which there has been the greatest degree of feminization in the labour market. Whether this feminization has been empowering for women is controversial. The chapter argues that the development of the labour market has seen women brought in for agricultural waged labour thus releasing men for the superior self-employed and off-farm activities. Migration too is undertaken by men. This division has forced a wedge between the social status of men and women in the household and, in many cases, has increased women's work burden, reduced their bargaining power with their employers (if their husbands have entered into loan arrangements involving tied labour) and increased their responsibility for household maintenance. The outcome has not been empowerment for women. However, in a minority of cases the experience of recent changes has been more positive. Some women have been able to join the microfinance Self-Help Groups, use their loans to improve their asset holdings, particularly through small business ventures often related to own-farm activities, and have consequently improved their bargaining position within the household.

In Uganda (Chapter 6) the fragmentation of plots and erosion of land creates pressure to obtain both agricultural and non-agricultural jobs. However, this has led to depressed wages in the agricultural sector and people, often women, end up working for a pittance. The chapter analyses the determinants of female labour supply and shows the way in which women's fallback positions within the household influence the terms on which they engage in the labour market and how this can then affect the productive uses to which the income is put. In particular, poor women may take on paid labour because of insufficient funds to maintain the household. Women from richer households have greater scope for control over an income stream and can use this to engage in ventures that enhance their fallback

position and improve both female and household welfare. Labour market participation does not invariably empower women. The outcome will depend on the power relationships within the household and in society at large, but it does have the potential to do so if the woman has some assets behind her when she enters the transaction.

In Zimbabwe (Chapter 7) we focus on the high and growing number of female-headed households. De facto female-headed households are not more likely to be income poor than male-headed household but they do lack assets, particularly those related to agricultural production. Male migration may be a strategy to accumulate income to acquire such assets. De jure female-headed households are more likely to be income poor but have access to a reasonable range of assets. However they may not be able to use these assets to maximum potential: widowed households have significantly lower yields than male-headed households in cotton production. Indeed, both types of female-headed household are hampered in their activities: they show less diversification in crop production and are disadvantaged in the prices they receive in selling produce and pay for buying inputs. Female access to extension services and participation in networks emerge as important in resolving these problems. It is important to note that this chapter provides a snapshot at a particular moment in the fast deteriorating Zimbabwean economy of the early twenty-first century.

The final chapter collates what has been learned about poverty reduction and female empowerment from the preceding chapters. It identifies common findings across the different settings and gives particular emphasis to the consideration of these in policy design. It calls for policy-makers to consider power relationships both within the household and in society and how these affect women's access to assets in the design of effective poverty alleviation measures, and it outlines policy options that could be beneficial to women.

Notes

1 Environment here encompasses the sociopolitical as well as geographical, such as infrastructure, markets and agroclimate.
2 Fontana's simulations show a net positive benefit from trade liberalization to women in Zambia, but even more in Bangladesh where the concentration of women in export sectors is greater.
3 This increases the wages of female labourers both by augmenting demand for them and by raising the supply price of labour, which is the amount women can produce from their holdings.

2 The surveys

Countries, methodology and poverty classifications

Hazel Johnson and Sara Horrell

Introduction

Sites in four countries were selected for the research: Uganda, Ethiopia and Zimbabwe in Africa and the state of Andhra Pradesh in India. Each country offered a very different set of circumstances within which to consider the operation of labour markets and effectiveness of poverty reduction policies. The broad differences at the time of the research (2001–3) included the following features. From the mid-1990s, Zimbabwe has suffered economic implosion: drought has severely affected agricultural production, macroeconomic policies have created instability, inflation has been rampant and land reallocation has added to general uncertainty. People have been forced down a route of retrograde retrenchment. In Ethiopia, the declining world price of coffee from 1999 impacted on job availability and rural incomes, and land reforms intended to improve the lot of the rural poor may have had the consequence of worsening the position of those left without a land allocation. At the time of the research, Uganda presented a more encouraging picture with general economic growth in the 1990s, a decline in poverty and an increase in living standards. Particular elements in this picture included favourable coffee prices during the 1990s (until 1999), while 'households with higher education, more initial assets (land), better health and better access to infrastructure (electricity) and location (distance to municipality) were far less likely to fall into poverty' (Christiaensen *et al.*: 14). India is a rather different case. Here markets are more developed, macroeconomic instability is less evident and waged labour is commonly undertaken. Nevertheless, a third of the population was still living in poverty (three out of four in rural areas) in 2000, and there seemed to have been a reduction in the rate of decline in poverty in the 1990s (Government of India 2000a: 1–2). We now look at these country differences in more detail.

Country backgrounds

The 1980s in Zimbabwe were characterized by an average growth of GDP of 2.7 per cent and a population growth rate of 3.2 per cent (SAPES Trust 2001: 69). However, there was rising internal and external debt, inflation and unemployment, which led to a series of programmes being adopted to achieve macroeconomic stability. The

Economic Structural Adjustment Programme introduced in 1990 was based on trade liberalization, reforms and deregulation but failed to deliver improvement (Sachikonye 1999). Indeed, the economy declined and the Zimbabwe Programme for Economic and Social Transformation was introduced, followed by the Millennium Economic Recovery Programme in 2000. However, the Zimbabwean government increased its fiscal deficit through payments to war veterans who had entered the war in the Democratic Republic of Congo in 1998 and the conflictive nature of the land reform and its lack of international support, as well as further droughts, served to deepen the economic crisis.[1] Poverty increased during the 1990s.

In 2000, agriculture contributed 15.7 per cent to GDP, 26.3 per cent to employment and 34.7 per cent to foreign exchange. Analysis of the agricultural sector during the 1990s suggests that economic reform did not greatly benefit the small farmer (Chipika *et al.* 1998). The devaluation of the Zimbabwean dollar and domestic price decontrols had had the effect of increasing the local prices of purchased inputs, many of which were imported, which had a negative impact on production of cash crops, such as cotton. Poorer farmers too had reduced their utilization of inorganic fertilizers and purchased hybrid seed for the production of key crops such as maize and this had led to a decline in productivity. Furthermore, access to cattle is of crucial importance to small farmers but livestock numbers had decreased, mainly due to droughts, also adversely affecting productivity.

Thus neither macro- nor microeconomic stability had materialized at the beginning of the new millennium. Instead Zimbabwe had descended into macroeconomic decline. GDP declined by 12 per cent in 2002, while inflation rates reached 455 per cent and unemployment was estimated at 70 per cent in 2003.[2] At the time of the research (2001–2), the country was in the grip of a severe food crisis. The price of maize on the black market increased by 167 per cent in 2002. Although livestock prices and wages increased nominally they fell by at least a third relative to the price of grain. There were increased deaths of livestock due both to drought and disease, casual labour opportunities had become more limited, women and children were vying for work, and increased job losses both from commercial farms and urban centres had reduced the remittances sent back to the rural areas and increased pressure on resources there. In December 2002 a food deficit of up to 30 per cent of the national requirement was estimated (ZNVAC 2002). And prospects for 2002–3 were poor. Some 7.2 million people were estimated to be in need out of a total population of 13.7 million (ZNVAC 2002: 5–6). To cope, households were engaging in a variety of strategies: cutting consumption of food, reducing expenditure on items such as health and education, selling off assets and migrating. Such strategies embed households in poverty and undo the few gains that have been achieved. Female-headed and poorer households were disproportionately affected by food insecurity.

Ethiopia is one of the poorest countries in the world. In 2004, the estimated annual income per capita was $100 against the average for Sub-Saharan Africa of $450.[3] Agriculture accounts for 50 per cent of GDP, 80 per cent of export earnings (with coffee earning 60 per cent of these) and provides livelihoods for 85 per cent of the population of 64 million. During the 1970s (1972–4) and 1980s (1983–5)

Ethiopia experienced the droughts and famines that affected the Horn of Africa. Food production declined below population growth, resulting in food imports and aid. In addition to these factors, Ethiopia has experienced both prolonged civil war (1961–91) and a command economy under the Mengistu regime (1974–91). Under the state controls of the Mengistu period, much of the economy was transferred to the public sector, including land and large-scale agriculture. However, since the overthrow of the Mengistu regime in 1991, there has been a different process of political and economic reconstruction. On the political side, the current structure is based on ethnic federalism, with the Ethiopian People's Revolutionary Democratic Front (EPRDF) maintaining its hegemony as the ruling and unifying party. On the economic front, the EPRDF has supported market liberalization and in 1992 began a process of economic reform, although it has resisted pressures to privatize rural land.

Since 1994 Ethiopia has followed a long-term strategy of Agricultural-Development-Led Industrialization (ADLI). Agriculture is seen as the engine of growth. The initial phases were intended to create national food security, with the support of food aid and assistance for voluntary resettlement from highlands to lowlands in relation to irrigation schemes (Government of Ethiopia 2000). The longer-term aim is to commercialize agriculture, promote more intensive farming and generate greater marketable output and a decreasing proportion of output for own consumption, thus creating internal markets for industrialization as well as developing internationally competitive exports. Commercialization and more intensive farming are promoted through the deregulation of producer prices. Other dimensions of the strategy include extension services, credit (micro-finance) provision, removing regulatory impediments to private investment, encouraging public–private partnerships and creating a more conducive environment for business (ibid.).

The initial results of these economic reforms have been positive. GDP grew from an annual average of 1.7 per cent in the 1980s to an average of 5.5 per cent in the period 1992 to 1998. This resulted mainly from high growth in the previously small industrial and service sectors but even within agriculture growth rates rose from only 1 per cent to 3.4 per cent (Chole 1990; Government of Ethiopia 2000: 6; World Bank 2001a: 49–50, appendix 7). Growth in food production averaged 4.9 per cent over the period 1993 to 1998 and agricultural output increased from an average of 6 million tons a year to more than 10 million tons.

However, in spite of economic growth, the evidence on poverty trends in Ethiopia during the 1990s is inconclusive. Dercon and Krishnan (2000a) estimate that rural poverty declined from 61 per cent to 51 per cent between 1989 and 1995 and attribute this to Ethiopia's liberalization policies. Bigsten *et al.* (2003) find continued decline in both urban and rural areas from 1994 to 1997. The Ethiopia Household Income, Consumption and Expenditure surveys in 1995/6 and 1999/00 estimate a more modest fall in poverty over the latter half of the decade, from 45.5 per cent to 44.2 per cent nationally and from 47.0 per cent to 45.0 per cent in rural areas (FDRE 2002a). But the number of people estimated to be in need of food aid rose from 2.7 million in 1996 to 7.9 million in 2000 (Devereux 2000). Between 1997/8 and1999/00 Ethiopia's agricultural growth was negative as a result of

consecutive years of drought and Ethiopia's heavy dependence on rain-fed agriculture (FDRE 2002b: 3, table 2.3). The adverse effects on producer incomes following the slump in world coffee prices from the mid-1990s,[4] together with unfavourable input and output prices for virtually all of Ethiopia's major food crops (FDRE 2002b) were likely to have exacerbated the effects of drought and to have undermined the sustainability of any gains to be had from agricultural growth in the first half of the decade. Indeed the growth rate of GDP fell to 1.9 per cent in 2002 and to –3.9 per cent in 2003.[5]

Uganda was given its independence in 1962 amid hopes of a prosperous future, but by the mid-1980s these hopes lay shattered by tribal animosity and military tyranny. Normal economic activity had by then virtually come to a halt: trade had become exceedingly difficult and this gave rise to a desperate shortage of essential goods and rampant inflation. In 1986 there was a dramatic turnaround when the National Resistance Army, harbinger of the National Resistance Movement (NRM), took possession of the capital. In 1987 the newly installed, reform-minded NRM government introduced an ambitious economic recovery programme and by 1992 Uganda had achieved macroeconomic stability while continuing to privatize and deregulate its internal and external trade sectors.

Growth rates of GDP and GDP per capita were positive throughout the 1990s. They were helped by increased security and political stability, by the structural adjustment that international financial institutions encouraged Uganda to pursue, and by substantial aid flows and the coffee boom of the mid-1990s (Collier and Reinikka 2001). Growth resulted in a fall of the national poverty headcount measure from 56 per cent in 1992 to 35 per cent in 2000 (Appleton 2001a). The coffee boom on its own was estimated to have achieved more than half of this fall in poverty, although some of this benefit may have been lost by the subsequent decline in price (ibid.). However, the story was not all positive. Poverty increased over the same period in the conflict-ridden North and pockets of poverty in other, more secure, parts of the country remained impervious to the benefits that stability, deregulation and privatization may bring. Even in rural East Uganda, where our research sites are located, poverty had only declined from 61 per cent to 57 per cent in the period 1992 to 1997 (Appleton 2001b). It has been argued that this persistent poverty may partly be explained by a legacy of violence and conflict between social groups that thwarts the evolution of institutions basic to the formation of markets (Evans 1996). Deep-rooted gender inequalities in rural areas, most notably in access to land, provide another thread to the explanation of why not all segments of society were enjoying the fruits of Uganda's growing economy (Benschop 2002).

In India rapid growth has been accompanied by considerable poverty reduction since the mid-1970s but the process slowed during the 1990s (Government of India 2000a: 1). Moreover, there were differences between and within states, with performance lagging behind in the poorer states. Until the early 1990s, India reduced the depth and severity of poverty as well as the headcount ratio. One of the main factors identified in this reduction was the high growth rates achieved in agriculture and in agricultural wages as a result of technology changes. Increased rural non-farm employment too was important. Additionally, lower inflation, the development of

infrastructure and improvements in human capital, especially female literacy, also played their parts (ibid.: 3–4). However, 34 per cent of the population remained below the poverty line in 1997 compared to 35 per cent in 1993–4, and growth had reduced from 7 per cent per annum between 1993 and 1997 to 6 per cent per annum in the last years of the decade (World Bank 2001b: 14). Although this difference might be the outcome of different types of measurement (see Government of India 2000a), there was also higher inflation during the latter part of the 1990s, a reduction in the growth of rural wages and an uneven distribution of agricultural growth. There was also a decline in the rate of increase in off-farm employment (ibid.: 8–9). In its 2001 report on country assistance, the World Bank suggested that the agricultural sector should undergo reform and highlighted the glut of grains, low prices for agricultural commodities and unsustainable subsidies on agricultural inputs as areas for improvement (World Bank 2001b:14).

Andhra Pradesh is in the group of stronger performing states in India. In 1993–4 its headcount poverty was 22 per cent compared with 36 per cent for the whole of India. However, its literacy rate was lower, at 54 per cent compared with 62 per cent, and mortality rates for under-5-year-olds were only just below the national level (World Bank 2001b: 12). There has been a number of programmes to support poverty reduction in Andhra Pradesh, including immunization, maternal and child health awareness, improved water and housing supplies, increased school enrolment and self- and wage-employment programmes (Government of Andhra Pradesh 2002b: 2), as well as programmes to conserve and manage natural resources more effectively and support economic growth and livelihoods. In agriculture the focus has been on processing and export opportunities.

Overall, there are considerable differences between the social and economic contexts of this research, and in the economic policies that have been pursued. Zimbabwe has been in deep economic crisis, while Uganda, Ethiopia and India (Andhra Pradesh in this case) have experienced economic growth but with different effects on different parts of the population. In Ethiopia, growth has been accompanied by a worsening income distribution, while access to land and education correlate with household benefits from growth (Christiaensen *et al.* 2003). In Uganda there are districts in crisis in the North and other parts of the country that have not benefited from the national increase in income. In India, despite the reduction in the depth and breadth of poverty, there are still millions of poor people and scheduled caste and tribal people are particularly vulnerable. A closer look at rural poverty and the decisions made by men and women within households with respect to their land, other assets and labour use may hold the clues for policies that can reach more vulnerable sectors.

Survey methodology

Household surveys were conducted in a minimum of two locations in each of the four countries studied. Follow-up surveys were also conducted: a complete re-survey of all the original households in India and more limited, qualitative surveys of a few of the original respondents in the African countries.

The initial survey took the form of a structured, enumerator-administered questionnaire. The questions asked were largely common to the four countries although changes were made to ensure appropriateness to the context. The aim was to collect data that would inform us on household time allocation for all household members at a variety of activities in a way that would enable quantitative statistical analysis to be conducted and valid comparisons to be made. Information on household structure, income, activities and agricultural production was collected. In addition, we asked about household time use and had questions designed to elicit information on intra-household bargaining.

Time budget data is typically used to determine an individual's allocation of time across alternative uses in response to a set of economic variables, most importantly wages and income. This data can be collected in a number of ways. We opted for a 24 hour recall method administered as part of the questionnaire. This required the respondent to recall what he or she had been doing at hourly intervals on the preceding day. This is thought to be a reliable way of reconstructing a person's day and can be relatively easily collected (Juster and Stafford 1991). It provided detailed information on the individual's time use at market, non-market and leisure activities, but to put it in context information on time use of other household members was also needed. We collected this by asking, for every member of the household, what his or her main activity was and how many hours per day they usually spent at this activity. While this will only provide a proximate picture of household time allocation, particularly where multiple activities might be undertaken, it does give some sense of the main activities in which the household is involved and the time devoted to these. Similar methods of capturing the essence of, typically, complex household interactions have been used to good effect elsewhere (see, for example, Marsh 1991).

One of our hypotheses was that time allocation would be gender sensitive. Men and women would have different calls on their time and their time use might be determined by traditional divisions of labour, both across and within activities, by notions of appropriate work for each sex and by the autonomy each had to determine their own time allocation. In Africa, at least, there is evidence to suggest that bargaining between spouses, and indeed with other household members, over allocations of time, responsibility for tasks, expenditures and food provision occurs and this can influence labour allocation. To incorporate an understanding of these intra-household processes into the analysis of labour supply we asked respondents a number of questions regarding ownership of assets, responsibility for growing various crops and keeping different types of livestock, who in the household made decisions about sales of produce, who actually made the sale, who kept the money from the sale and what was this money usually spent on.[6] Additionally there were questions on divisions of labour, individual responsibilities and how a recent financial decision had been reached. These data were intended to give insight into the internal workings of the household and provide the information from which relative bargaining positions might be deduced.

The surveys were conducted for a total of 300 households in each country. Within each region households were randomly selected, although the person

interviewed within the household had to be economically active so was likely to be younger than average and unlikely to be chronically ill. Female-headed households are numerically important in many of these countries and their overrepresentation in statistics on poverty suggest that they may be subject to a different type of poverty requiring a different set of solutions. To investigate this we stratified the sample so that up to one quarter of the interviews would be with female heads of households. The actual sample size depended on the prevalence of female headship in the interview location (see Table 2.1). The remaining three quarters were male-headed households. In around two thirds of these the male head was selected as the respondent for the interview, and in the remaining cases the female partner of the head of household was selected as the respondent. Typically the interviews took one to two hours to complete. The surveys were conducted between July 2001 and April 2002.

Initial analysis of these surveys highlighted some issues on which it was felt additional, often more qualitative, information was desirable. In Andhra Pradesh we re-interviewed all 300 households. A structured questionnaire was administered containing questions on the seasonality of tasks, migration, risks of and responses to the drought situation encountered there when initially interviewing, and detail on demand for labour among these households. The African resurveys were more limited in number but used semi-structured questionnaires to obtain qualitative data. In particular, responses to food shortage, recent changes in labour market opportunities, including migration, changes in divisions of labour within the household, access to networks for purchasing inputs and selling output of agricultural activities, and the importance of wage earning were investigated in Zimbabwe. Similar issues were addressed in Uganda and Ethiopia, but these re-interviews also explored attitudes to risk and the formation of social capital. The re-survey details are summarized in Table 2.2.

Location and village descriptions

The locations selected in each country were to offer different characteristics or possibilities for explaining different types of labour use. Thus they varied across a number of dimensions: proximity or remoteness from urban centres or particular markets and the related degree of labour market development; social structure, which impinged on female involvement in work activities; types of production; and the existence of institutions such as extension services and the availability of credit.

Zimbabwe

Three areas were chosen for sampling in Zimbabwe: Mutoko in Mashonaland East, Chivi in Masvingo province and Makoni in Manicaland.[7] The areas were selected for the diverse agricultural and employment opportunities they offered.[8] Mutoko is a prime horticultural producing area and some 23,500 of its 24,925 households are cultivators (1991 Population Census). Farm sizes are larger in this

area than the other two surveyed because of resettlement. Maize, groundnuts and vegetables are the main crops while sunflower, small grains, fruits and cotton are also grown. Cash income is mainly derived from crop sales although granite quarrying has been a growing employer in the region since the 1980s and Mutoko is also adjacent to a district that has a thriving gold-panning business. These provide non-agricultural employment opportunities. The district is well served by extension workers but their efforts have been hampered by lack of finance among farmers to purchase the necessary hybrid seed and fertilizer input and the numbers using these have been declining. Households that need extra labour at weeding and

Table 2.1 Survey and location details

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Location	*Chivi*	*Afeta PA, Mana, Oromiya*	*Sironko township, Sironko*	*Vepur, Mahabubnagar*
Characteristics	Low-potential agricultural area	Crops: coffee, maize, teff. Nearest town 5 km. Substantial landlessness.	Trading centre therefore non-agricultural labour opportunities. Grow maize and beans.	Drought-prone, seasonal migration, grow paddy, groundnuts, jowar; 11 km to town.
Location	*Mutoko*	*Omo Beko PA, Goma, Oromiya*	*Bufumbo, Mbale*	*Guddimalakapur, Mahabubnagar*
Characteristics	Prime horticultural producer, granite quarrying and gold panning. Maize main crop.	Crops: coffee, maize, teff. Nearest town 5 km. Substantial landlessness.	Fragmented landholding, diversified crops: maize, beans, coffee, bananas, vegetables. Conservative Muslim area.	Drought-prone, seasonal migration, grow paddy, groundnuts, jowar; 22.5 km to town.
Location	*Makoni*			
Characteristics	Adjacent to large scale commercial farming areas and close to a large urban area so offering possibilities for labour mobility.			
Total number of households surveyed	300	296	297	302
Male-headed	225	235	266	255
Female-headed	75	61	31	33
Survey dates	Dec 2001–Feb 2002	April 2002	October 2001	July–Oct 2001

Table 2.2 Summary of re-survey details

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Number re-surveyed	20	35	34	302
Survey dates	January–February 2003	March 2003	February 2003	April–July 2002
Characteristics of re-survey sample	10 in each of Chivi and Mutoko covering male- and female-headed households and with different poverty profiles. Cluster interviews also conducted in each location.	24 men and 11 married women were interviewed in Afeta PA.	21 women and 14 men. 10 from each group of asset poor or income poor with high crop yields. 14 chosen at random from each of the poverty groupings.	100% re-sample.

harvest time are generally able to procure labour locally, often through reciprocal arrangements. However, very low adult literacy levels, particularly for women, impact on the level of formal employment and Mutoko suffers poor roads.

Chivi is a poor, maize deficit and low potential agricultural area in a dry zone. Maize, sorghum and millet are the main crops with cash crops, such as sunflowers and cotton, being grown only in insignificant amounts thus yielding little cash income. Poorer households hire out their labour to the richer households in the peak cropping seasons but remittances do not form a significant part of these households' incomes and few alternative employment opportunities exist. In 1996/97, 80 per cent of the households in Chivi fell into the very poor category (Chipika *et al.* 1998: 40). The area is served by a few extension workers, possibly 1 to every 860 farmers, who have promoted food security, encouraged growing nutrition gardens as part of nutritional support to under-5s and been involved in agro-forestry projects, livestock extension programmes and on-farm trials. Availability of credit is limited.

Makoni is adjacent to large-scale commercial farming areas and close to a large urban area so offers possibilities for labour mobility. However, agriculture is the main source of livelihood and the quality of its land is considered good. The main crops are maize, tobacco, paprika, sunflower, groundnuts and roundnuts. Livestock are also kept although the availability of grazing land is declining as more becomes used for arable purposes. Many households have cattle and those in the drier regions also keep sheep and goats. Villages in Makoni district can be from 2 to 170 kilometres from the nearest market. Roads are poor, especially in the rainy season, but there are banks in the towns, which are widely used by farmers, and there were several operating national and international NGOs in Makoni at the

time of survey. These included a cooperative union and a scheme providing credit for women.[9]

The survey took place between December 2001 and February 2002, in the middle of the wet, main cropping season (the wet season is from November to March). During this period, households would have planted their main crop, maize, and would have been undertaking tasks such as weeding. Cropping activities would have been fairly constant during the months of the survey for other key crops such as cotton, groundnuts and roundnuts.

Ethiopia

Household surveys were undertaken in April 2002, during the sowing season for maize and land preparation time for coffee. The survey took place in two peasant associations:[10] Afeta PA, Mana district and Omo Beko PA, Goma district both in Jimma Administrative Zone in the south-western part of Oromiya Region.[11] In this region 91 per cent of the population live in the rural areas and Oromos represent almost 90 per cent of this population. Oromiya has the second highest headcount poverty rate, 6.7 million, among Ethiopia's regions (World Bank 2001a: 4, table 2.3). Coffee is Ethiopia's main export crop. It is grown by small-scale farmers and on state-owned plantations and Jimma is one of the main coffee-growing areas. Demand for labour is highly seasonal with a peak at coffee-picking time (October–January). Both male and female labourers are hired by coffee plantations. A few are hired on a permanent basis but most are temporary and paid on a piece rate basis for the harvest period. Coffee-shelling mills also offer seasonal employment, primarily to female workers. These small to medium enterprises hire labour during the period November through March. However, the main source of employment in the surveyed areas is the wealthier farmers. Again demand is seasonal and peaks during the coffee-picking season. There are few other economic opportunities.[12] Extension services for both cereal crops and coffee are available throughout the region but adoption of the packages by small-scale producers is very uneven, reportedly because the cost of the package is prohibitive. There is an absence of capital markets, which is a legacy of Ethiopia's 15-year-long command economy (1975–1990).

Omo Beko PA comprises nine villages and 1,178 households. The nearest town, Agaro (the district capital and administrative centre and the zone's second largest town after Jimma) is some 5 kilometres away. Afeta PA comprises 12 villages and 1,380 households. The nearest town, Yebu (the district capital) is also 5 kilometres away. In both PAs the staple crop is maize, which is grown both for consumption and sale. In Omo Beko some households also grow *teff*, which is mainly grown as a cash crop,[13] and some vegetables, such as garlic, peppers and greens. In both areas the main cash crop is coffee. This is grown by all households and by far the bulk of all landholdings are planted with coffee.

Uganda

Two contrasting areas were selected for the survey in Southeast Uganda, Sironko Township in Sironko District and Bufumbo sub-county in Mbale district, both

bordering Kenya.[14] More than 90 per cent of people in both areas are farmers (usually semi-subsistence) although a large number of them have a number of extra income sources. The main crops grown are bananas, maize, groundnuts and beans. In Bufumbo coffee and horticultural crops, such as tomatoes, cabbages and onions, are also grown. Bufumbo's agricultural lands are on the slopes of Mount Elgon and are more fertile than Sironko's marshy plain at its foot. Most farmers keep livestock: mainly cattle, goats and poultry.

The areas are broadly similar in terms of the provision of schools, clinics and extension services but they differ markedly in terms of agro-ecology, cropping patterns, agricultural commercialization, population density, ethnicity, and access to credit and infrastructure (Table 2.3). Bufumbo has a relatively inactive agricultural labour market, which may be explained by smaller plot sizes and the lower availability of credit than in Sironko. The demand for non-agricultural labour is also lower in Bufumbo; in Sironko there is a lively trading centre. The survey was conducted in October 2001 during the minor rain period, which is slightly busier than most of the rest of the year, but not as busy as the major rain period. The main cropping activities at that time included weeding the second maize crop and harvesting coffee.

Andhra Pradesh, India

The two survey villages chosen for sampling in India, Vepur and Guddimalakapura, belong to the Hanwada *mandal* of Mahabubnagar district in the State of Andhra Pradesh.[15] The district is a semi-arid region which is prone to drought and with only limited irrigation. This has favoured its adoption for a number of development programmes which have changed its profile from that of a backward region to one with much potential for non-agricultural activities. However, nearly all of the Mahabubnagar rural population depends on agriculture for its livelihood (Population Census 1991) and nearly 45 per cent of rural households belong to the low-income category (Below Poverty Line Survey for IX Five Year Plan (1997–2002) 1996). Population density is high and land is typically a limiting factor of production. There exists a high degree of awareness of the importance and desirability of use of hybrids and other modern agricultural techniques among the farmers, although modest farm sizes often preclude their usage. The main crops grown are paddy (rice), jowar (sorghum), ragi (millet), castor and groundnuts. These crops are cultivated around the year in two main agricultural seasons, *Kharif* and *Rabi*. *Kharif* is the rainy season that starts in April and lasts till September during which people can cultivate both dry and irrigated land. *Rabi*, the dry season, lasts from October to March.

Many farmers depend on waged work to supplement their farm incomes. This can be achieved because there are two long growing seasons which reduces the need for synchronic operations and so allows small cultivators to work for wages alongside growing crops. Non-cultivating households also sell their labour. Waged work is done by the backward castes only. Most farming families supplement their income by keeping some livestock. People also migrate to nearby towns

Table 2.3 Characteristics of the research locations in Uganda

	Sironko	*Bufumbo*
Type of agricultural land	Lowlands at the foot of Mount Elgon, marshy plain in the South, savannah grassland in the North, few volcanic soils	Highlands on the slopes of Mount Elgon, volcanic soils
Average rainfall	1580 mm/year	2168mm/year
Population size	6,400	15,285
Farmers (% of population)	> 90	> 90
Casual agricultural labourers (% of working-age population)	27.3	1.3
Main crops	Bananas, maize, groundnuts, beans	Bananas, maize, groundnuts, beans, coffee, tomatoes, cabbages, onions
Typical number of crops per farmer	Two	Three
Typical plot size	2–3 acres	1.5–2 acres
Large farms (> 20 acres)	5%	0%
Tribes	Iteso (immigrants from Kumi) and Bagisu (indigenous)	Bagisu (usually called Bamasaba in Bufumbo)
Religion	Predominantly Christian (Catholic, Protestant, Pentecostal)	Islam (80–90%)
Nearest town	Mbale (10 km)	Mbale (12 km)
Roads	Good quality asphalt motor road to Mbale town, bad quality dirt tracks otherwise	Bad quality dirt tracks (including the one to Mbale town)
Electricity	85%	0%
Water and sanitation	No piped water	No piped water
Extension services	Uganda National Farmers Association, Mbale (not very active in Sironko)	Uganda National Farmers Association, Mbale (very active in Bufumbo)
Non-agricultural employment opportunities	Trade, hotels and bars in trading centre, ginnery, processing plant for maize, abattoir, mechanics	Trade (mainly in Mbale town), beekeeping
Access to credit	CERUDEB: rural development bank FOCCAS: micro-credit to women PACODEF: anti-poverty action for communities	Little access to credit. CERUDEB deems the risk of default too high. FOCCAS is the only organisation that provides credit in Bufumbo.

Source: background reports compiled on request by Mbale local government officers

in search of work because of the perennial drought conditions. Migration is typically seasonal: people who own dry land, hence cannot cultivate in the Rabi season, tend to leave in October and return in June. An organized market for migration exists and contracts often require the labour of both husband and wife. Again, it is only those who belong to the lower castes that migrate.

Diversification into non-farm activities to smooth income fluctuations and reduce exposure to risk from drought has been facilitated by the advent of microfinance in Mahabubnagar. A State-initiated microfinance programme has encouraged rural women to amalgamate into Self Help Groups for the rotation of saving and credit. The credit is often used to start up a micro-enterprise. One of the differences between the two villages surveyed is the absence of institutional credit facilities and the struggling women's microcredit groups in Guddimalakapura compared with good facilities and active groups in Vepur.

Vepur and Guddimalakapura are 27 and 14 kilometres, respectively, to the north-west of Mahabubnagar, the nearest major town. Unusually for a typical Indian village, Vepur has a high school, a bank and a hospital. Guddimalakapura relies on Mahabubnagar for these facilities. Almost everyone in the villages depend on agriculture or associated activities like animal husbandry. Most own some land. The average landholding is small, 4.80 acres in Vepur and 3.78 acres in Guddimalakapura, and there are few large farmers – the biggest landholding among the respondents was only 42 acres.[16] The survey was conducted in the Kharif season in 2001. The activities normally taking place at this time include land preparation, planting, weeding, and, in October, harvesting. Unfortunately the survey year was declared as a drought year which affected the range of activities actually observed.

Characteristics of the populations surveyed

Table 2.4 summarizes some of the key characteristics of the households surveyed in each country and region. Between countries certain distinguishing features are apparent. Uganda has a smaller household size than the average found elsewhere and male-headed households have higher levels of education in Zimbabwe and Uganda than in Ethiopia and India. Most households own some land and the amount of land owned is usually around three to four acres, although less in Ethiopia. A low level of livestock ownership is particularly pronounced in Ethiopia but is also evident in India. In Ethiopia there is a very high reliance on crop income for those households with land. In India wages are as important as crops in providing a source of income and other income sources, such as small businesses and remittances, provide substantial proportions of household income in Uganda and Zimbabwe. Overall, nearly half of the surveyed households are income poor with the highest proportions in poverty evident in Zimbabwe and India.

Between regions, characteristics related to the local opportunities available to the household emerge. In Zimbabwe the reliance on agriculture in a poor agricultural region is reflected in low incomes and high poverty in Chivi; the greater ability to diversify agricultural activities and the resultant beneficial effect on

Table 2.4 Key characteristics of the surveyed households in each region

	Zimbabwe (male-headed households)			*Ethiopia (male-headed households)*		*Uganda (all households)*		*India (all households)*	
	Mutoko	*Makoni*	*Chivi*	*Afeta*	*Omo Beko*	*Sironko*	*Bufumbo*	*Vepur*	*Guddi*
Sample size	81	75	75	106	128	146	151	152	150
Mean household size	5.2	5.4	6.1	5.7	5.3	3.0	3.5	6.2	6.0
Education level of male (%):									
None	5	5	16	42	57	9	15	56	70
Primary	63	60	53	47	34	54	56	25	21
Secondary and above	29	33	30	10	9	37	29	20	10
Source of income (%):									
Outside	11	7	19	[e]	[e]			11	4
Crops	48	30	39	72	89	40[a]		35[f]	33
Livestock	6	2	8	6	1	16			
Wages	10	6	2	15	5	8		34	49
Other	25	54	32	7[b]	4[b]	35[b]		21	14
Total income (currency)	39,407	32,680	25,172	1,310	1,168	250,216		11,046	12,991
% households poor[h]	43	51	52	29	41	38	48	56[g]	45[g]

Table 2.4 ctd.

	Zimbabwe (male-headed households)			*Ethiopia (male-headed households)*		*Uganda (all households)*		*India (all households)*	
	Mutoko	*Makoni*	*Chivi*	*Afeta*	*Omo Beko*	*Sironko*	*Bufumbo*	*Vepur*	*Guddi*
% own land	90	95	89	90	85	92	100	95	93
Acres owned	7.7	3.4	3.6	1.8	2.3	5.4	3.9	3.8	3.3
Main crops grown	Maize Groundnuts Roundnuts Vegetables	Maize Groundnuts Roundnuts Sweet potato	Maize Groundnuts Roundnuts Cotton	Coffee Maize	Coffee Maize Teff	Maize Beans Groundnuts	Maize Beans Coffee Banana Tomato Cabbages	Paddy Jowar Ragmalt Castor	Paddy Jowar Ragmalt Castor
No. crops mentioned	22	19	12	–	–	7	9	–	–
% own cattle	65	65	72	20[d]		66	82	43	43
No. cattle	4.1	3.5	4.5	1.5		2[c]	2[c]	5.5	4.1
% own goats	53	49	56	2		67	66	12	14
No. goats	1.8	1.8	3.3			4[c]	2[c]	5.1	3.1
% own chickens	78	84	79			79	76	39	40
No. chickens	10.1	14.4	10.4			8[c]	5[c]	4.9	4.5

Notes
a Includes imputed income for own crops grown for consumption.
b Includes income from small business, remittances and other sources.
c Median values.
d Oxen only.
e Households with land only, excludes valuation of own crops for consumption which constitute 14% of gross household income in Afeta, 25% in Omo Beko.
f Crop and livestock income reported together.
g Using the official poverty line for 1999–2000 for rural Andhra Pradesh of Rs262.94 per capita per month (Planning Commission, Press release 22 February 2001).
h Based on household income per capita measure which includes valuation of crops for own consumption and excludes costs of this production, see below.

income is evident in Mutoko; whereas Makoni shows more diversification across agricultural and other income earning activities. In Ethiopia, Afeta shows more diversification across activities and slightly higher incomes than found in Omo Beko. This may reflect the benefits of being closer to a large town. In Uganda, Sironko residents show less diversification within agricultural activities than households in Bufumbo and are less likely to be in poverty. The opportunities offered by the township appear to be beneficial here. In Andhra Pradesh, Vepur and Guddimalakapura are in many respects very similar but greater wage earning opportunities and a lower incidence of poverty are evident in Guddimalakapura, which may reflect its closer proximity to a town. The range of locations surveyed allows a diverse range of factors to be considered in the search for routes out of poverty.

Poverty profiles

A standard way to differentiate households in the political economy tradition is by access to land and use of labour (hire labour, hire out labour, neither hire in nor hire out labour). However, although this categorization might be appropriate in the Indian case it may not be in the African countries where practices are more varied. Instead, to compare households, we use a more complex definition of poverty that incorporates a broad income measure and ownership of and access to various assets that reflects both their economic position and their livelihood capabilities, the latter being primarily based on the rural livelihoods framework (Carney 1988; Ellis 1998, 2001; Ellis and Freeman 2005). This framework considers ownership of and access to a wide range of assets, how access to these is mitigated by institutions and how this then structures the evolution of livelihood strategies and the household's vulnerability to shocks. Here a comprehensive calculation of the income available to the household and an eclectic range of assets are used to construct a two-way classification of households into poverty profiles. Income is essentially the sum of individual components of income from all sources to the household: agricultural incomes, wage earning, remittances from outside the household, income from own business, rental of equipment and any other activities. In addition, the use of crops, livestock and produce for own consumption is given a market valuation. Against these income sources are set the costs of production of crops: costs of fertilizer, seed, pesticide, land rental, draught power rented and paid for in cash or kind, and labour outside of the household employed to work on the land. A range of assets was considered from the physical (land, property, machinery, livestock, labour available to the household and health) to human (education) to financial (savings accounts). In addition a component was added to reflect, as far as possible within the confines of the available survey data, social capital. This captured the extent of economic interactions with other households and the household's involvement in and use of special programmes and extension services operating in the area. More detailed notes on construction are given in Box 2.1, p. 28.

For each country an established poverty line was found (Box 2.2, p. 30) and applied to the household's calculated income. When ranked by assets, the same

Table 2.5 Poverty profiles (% households in each category)

	Income-poor Asset-poor	*Income-poor Asset-rich*	*Income-rich Asset-poor*	*Income-rich Asset-rich*
Zimbabwe	31.3	19.7	19.7	29.3
Ethiopia	23.0	22.0	21.3	33.5
Uganda	27.6	15.5	15.5	41.4
India	29.3	21.2	21.2	28.3

proportion of households as found in income poverty, although not necessarily the same households, were deemed to suffer asset poverty. Thus each household could be classified as income and asset rich or poor (Table 2.5).

In the African countries, differences by household type were evident. Female-headed households were significantly more likely to be income poor than male-headed households. In Zimbabwe and Uganda, female-headed households were more likely to be asset poor, thus compounding their relative poverty. In Ethiopia this was not so marked. In India, female-headed households were only slightly more likely to be income poor than male-headed households and, although they had fewer assets, the difference was not significant.[17]

Summary

This chapter has outlined the different contexts in which the household surveys were conducted. It has shown both country and regional differences and has demonstrated how the structure of the household, the opportunities available, the extent of poverty and the form of poverty all vary. These differences were expected to impact on households' time allocation and labour supply behaviour, as analysed in the subsequent chapters. The surveys cannot, of course, be seen to be representative of the regions or countries as a whole. However, the methodological approach and the findings can be used to raise questions about other locations. In our final chapter, it will become apparent that the findings have general pertinence for policy development.

Box 2.1

Property profile construction: income

Gross income components:
Value of crops: *Total yield of crop valued at sale price where a proportion of the crop is sold. Where the household sells none of the crop, the yield is valued at the average sale price for that crop achieved in the region*
Value of livestock: *Amount realized annually is taken as sale value of the animal adjusted for the assumed lifetime of the animal*
Imputed income from produce of livestock: *Based on sale values where available*
Income from waged work: *All those earning within the household*
Income from rental of farm equipment
Income from other sources – business or other remunerated activities
Remittances made by those outside the household

Costs associated with growing crops:
Cost of fertilizer
Cost of seeds
Cost of pesticide
Rent of land
Draught power: *If rented and not paid for by reciprocal arrangements or free*
Outside labour: *If paid for the work in any form, i.e. if not free or repaid through reciprocal labour*

Net income per capita
Gross income less costs of production per person in the household

Assets

Economically active workers available to the household
(labour available valued as number of persons)
All adults and children aged over 10 in the household less those identified as having a long-term or chronic illness. Additional equivalent labour valuations of those who live outside the household but make a contribution in cash, labour or kind, less similar services provided by the household to others.

Education level of household
Sum of education level of each person in the household / number of people in the household.
Level: 0 = none, 10 = primary, 20 = secondary, 30 = high school or vocational, 40 = higher education or formal training

Land owned by the household
(acres, excluding rented land)

Property and financial assets
Ownership of house, barn, cattlepens
Having a savings account or receiving a pension or compensation
Ownership of machinery – valued by type and potential for renting out
Ownership of livestock – valuation based on potential asset uses (draught power, asset and only sell when household needs money) and notional relative price

Box 2.1 ctd

Social capital

Contributions from others outside the household (number)

Contributions made by the household interviewed to others outside the household (number)

Community supportive of interviewee undertaking paid work

Household affected by the introduction of any special programmes operating in the area

Anyone in the household in receipt of support from an extension service

Household assets index

Each of the above five elements was multiplied by a suitable factor to give it an equal valuation in the overall index once the components were summed

Notes

The methodology employed differed by country. Main differences in the way the components were calculated are outlined below.

Ethiopia

Income: no use of fertilizer, seeds or pesticides was reported by the households surveyed. Although these were available, they could only be bought as part of a costly package and so were eschewed by most farmers. Assets: land cultivated by the household, as land is state owned. Weights used to calculate the number of economically active workers, man aged 12–64 years = 1, woman aged 12–64 years = 0.8, child 8–12 years = 0.5. Property index was based on detailed valuations of the property owned thus allowing more differentiation between households. Social capital, no households reported contributions being made to other households. None were in receipt of support from an extension service nor had any been affected by the introduction of any other programmes.

India

Income: wages for outside labour were calculated with the recognition that the survey area was experiencing a drought at the time of the interviews which had led to a collapse in wages for that particular season. The average number of days worked was imputed from the average figures available for each crop from local sources because the figures given by respondents tended to overstate the involvement of outside labour as they often also included days spent looking after livestock or doing household work. Assets: land, gross sale value of land owned by households. Property, valued according to size and construction. Gross sale values of machinery and livestock. These valuations were combined to give physical wealth. Economically active workers were weighted as man = 1, woman = 0.8, child > 12 = 0.8, others 0.5. Education level: the highest level of education had by any member of the household was taken to indicate the household's educational capability. These two variables were combined to give a human capital indicator. Social capital: two further components were added, whether the household received reciprocal labour, whether the household received free or reciprocal draught power. These three components – physical, human and social capital – were given equal weighting in the overall index, thus giving a higher weight to the social capital element than found for either Zimbabwe or Ethiopia.

Uganda

Income: net income from crops also takes account of the cost of credit. Assets: physical, monetary value per adult equivalent of the household's land, house, livestock, farm equipment and farm buildings. Human: total discounted future income per adult equivalent that can be attributed to the level of education achieved by household members using the private rates of return currently prevailing in Uganda on primary, secondary and tertiary education. Rates reported in S. Appleton (2001), 'Poverty reduction during growth: the case of Uganda, 1992–2000', mimeo, University of Nottingham. Social: as for other countries – reciprocal bonds with outsiders, perceived degree of community support and benefits from government. The assets index is computed from the weighted sum of these three components.

Box 2.2

Poverty lines

Zimbabwe

Poverty lines for two regions, Chivi and Mutasa, had been developed in the 1995 Poverty Assessment Survey. These had been inflated to suggest real values of Z$1,151 for Chivi and Z$1,169 for Mutasa to represent per capita food lines, and thus the very poor, in 1998, and Z$1,872 and Z$1,905 respectively for per capita total consumption representing the poor. Mutasa figures for the poor increased for inflation using figures from the IMF International Financial Statistics, September 2002: 148 for consumer prices in Zimbabwe suggested a per capita poverty line of Z$8,315 at the time the surveys were conducted. On this basis 51 per cent of the households were income poor. Similarly the lowest 51 per cent of households when ranked by the asset index were deemed asset poor.

Ethiopia

The income poverty line used is the household consumption base poverty line for rural Ethiopia of 989 Eth. Birr per annum as reported in the World Bank Report, *Ethiopia: Focusing Public Expenditures on Poverty Reduction, vol. III: Public Expenditure, Review of Oromiya Region,* World Bank, 20 December 2001: 3. Using this valuation 45 per cent of our surveyed households are income-poor. Of these, 64 per cent are extremely poor, that is, more than 20 per cent below the established poverty line.

Uganda

Appleton (2001a) calculates a poverty line for East Uganda in 1993 prices of 15,446 UGS per adult equivalent household member per month. Adjusting this line for inflation using the composite national Consumer Price Index sets it at 25,563 UGS for our survey period. Adult equivalents were calculated at scales appropriate for East Uganda (as reported in Appleton 2001b) and by making a conventional adjustment for economies of scale in group consumption, $\alpha = 0.22$. 43 per cent of the sampled households are therefore classified as income poor.

India

National Sample Survey 55th round gives the poverty line for 1999–2000 for rural Andhra Pradesh as Rs263 per capita per month (Planning Commission, Press release, 22 February 2001). Using a weighting for the household members of adults and children over 12 years of age = 1, children less than 12 = 0.5, suggests 51 per cent of the surveyed households fall below this poverty line.

Notes

1 Phase Two of the land reforms initiated in 1997 was intended to redistribute five million hectares over five years, resettle 91,000 families and reduce poverty. The programme required donor finance, but this was not forthcoming and targets were not achieved. The Accelerated Land Reform and Resettlement Implementation Plan of 2000 was subsequently designed to speed up the process, but at the time of the research had not shown productive results.
2 BBC news report 14th October 2003 (news.bbc.co.uk/2/hi/business/3190494.stm, accessed 2 September 2004).
3 2004 World Bank Development Indicators: 16 (www.worldbank.org/data/wdi2004/tables/table1-1.pdf, accessed 2 September 2004).
4 In Ethiopia, the producer price of coffee in the latter half of the decade fell by 67 per cent (IMF 2003).
5 World Bank Indicators database, August 2004 (devdata.worldbank.org).
6 Following money through the household has been found to be a useful indicator of intra-household processes and the degree of control exercised by men and women within the household (see for example Pahl 1983, 1989).
7 One hundred households were selected for interview in each of the three areas. They were randomly selected from the electoral register. Within the sample of 100, half the interviews were to be conducted with an adult man in the household, and half with an adult woman, either a partner or a female head of household.
8 Makoni falls into climatic zones IIb and III which support semi-intensive and intensive farming but may have severe dry spells. Mutoko falls into zones III and IV, recommended for mixed farming and livestock keeping and Chivi is in regions IV and V, the latter zone characterized by extensive farming due to its low and erratic rainfall and with cattle ranging recommended. Adapted from Government of Zimbabwe (1998).
9 In each district, four clusters of 25 households were selected: one close to the main commercial centre, one more distant; one with development projects, and one without.
10 In Ethiopia, Peasant Associations are administrative units.
11 In both PAs households were selected on a random basis drawn from lists of household heads provided by the respective PA Committee leaders.
12 In 2000–2 the producer price of coffee in the study area had fallen to less than 50 per cent of its 1999 price (interview, Zele Fulas, General Manager of the Coffee Plantation Development Enterprise).
13 *Teff* is a labour intensive, moisture demanding crop, indigenous to Ethiopia which is used to make *injera,* a type of flat bread, the country's main staple food and one highly valued in urban areas.
14 In both Sironko and Bufumbo parishes considered typical for the region as a whole were selected. Three parishes inside Sironko Township and one just outside it and four parishes in Bufumbo sub-county were selected. In Bufumbo, a conservative Muslim area, husbands were likely to object to their wives being interviewed, which might have resulted in local leaders forbidding the continuation of the survey. Thus more men than intended by the survey sampling were interviewed in this area. In order to redress the balance, more women than men were interviewed in Sironko.
15 One hundred and fifty households were selected for interview in each of the two survey villages. They were randomly selected from the electoral register (Village *Panchayat* Voters List: 1999–2000 year: (S01) Andhra Pradesh, for Vepur and Guddimalakapura). In India female-headed households were rare so the sample was not stratified to specifically select these households. A few were covered by the survey but they were usually widowed and effectively headed by a younger male.
16 Vepur has a population of 4,838 and covers 3,010 acres, Guddimalakapura a population of 1,861 covering 1,505 acres.
17 Significance was tested using a χ^2 test.

3 Time use and labour supply in rural households

Sara Horrell and Paul Mosley

Introduction

Routes out of poverty might involve diversification and accumulation and, particularly for the very poor, the deepening and extension of labour markets. However, effectively aiding these ascents requires an understanding of the constraints under which households and individuals operate. Existing patterns of production, particularly agricultural production on own land, the preferences men and women attach to labour applied to alternative uses, and the constraints, both social and practical, which they may face in switching time use to other activities all influence the ease with which people might devote time, and other resources, to new activities.

However, as already observed, there are multiple complexities involved in household time-use strategies in developing countries: more than two actors are often involved in time-use decisions, money can be earned from a number of different work ventures, and individuals may engage in two or more remunerated activities. For instance, many households will be engaged in farming their own plots of land to yield a substantial portion of their income. All members of the household may help to work the land, ranging from elderly relatives, to husband and wife, to children. In addition, the household may draw on labour resources from other relatives or non-relatives within the household or village and this labour may be reciprocal, paid or paid in kind. But the range of activities any one of these household members may engage in can extend from this work on own land, to livestock tending, to waged work for others, to running one's own business, to household work, to migrating to find work and returning remittances. And the types of remuneration received are not just monetary: work may be to provide for own subsistence from crop and livestock output, to sell in the market, for wages or for reciprocal or in-kind payments. Each individual may engage in more than one remunerated activity and undertake different activities according to season. Thus it becomes apparent that each household will be making complex decisions about the use of its labour resources to achieve the careful balance needed to satisfy its various needs, from food security to money; and multiple solutions for the economically efficient use of family time are possible. But all family members cannot be treated as interchangeable units of labour. The activities undertaken by different people may be governed by norms and conventions. For instance, roles

may be gendered, women may only undertake certain tasks on the land with other jobs designated as male, or differentiated by age. Understanding such distinctions is important. Examples can be found where well-meaning policies designed to enhance remuneration by extending cash crop production have as a consequence disturbed an existing gendered division of labour, increased women's work load, given greater control of household resources to men and, ultimately, have had a detrimental effect on household welfare.[1] Gendered divisions of labour and separate spheres of control within the household suggest that outcomes which result from bargaining between spouses may differ from those achieved by consensus; thus factors which enhance women's strength in household negotiations may also impact on time allocations.

This chapter begins by using the survey evidence to document household time use. It describes the range of activities individuals and households engage in, locates them in the wider household context and considers the extent to which different types of household, as defined by their poverty profile, are diversified into various activities. We also explore the extent to which gendered demarcations in the activities undertaken exist and comment on any recent changes. These observations are used to inform our regression analyses of labour supply. We then discuss the potential effect of intra-household bargaining on the observed outcomes and use regression analysis to examine the impact.

Household time use patterns: the current position

Work on own land

Analysis of household members' time spent working at their main activity[2] reveals that Zimbabwean households are working particularly long days, which may be a consequence of the harsh economic climate currently faced there (Table 3.1). There are clear distinctions by country in who works within the household. In Zimbabwe all types of household member are found working, including children; in Ethiopia women are rarely engaging in work outside the household as a main activity although children do contribute considerable amounts; in Uganda women and men both contribute similar work hours but children (classified as being 15 years of age or younger in this case) rarely have work as a main activity. This is a consequence of Uganda's successful commitment to education in the 1990s, which has increased enrolment rates from 30 per cent to nearly universal. Older children do contribute and are to be found classified under other relatives for this country. In India other relatives contribute a high percentage of total work hours, one quarter of the total, and women and children are also working.

The data evidences the primacy of agricultural work on own land in the African regions studied. The vast majority of household time, over 90 per cent, is spent farming own land in Zimbabwe. A little more market orientation is evident in Ethiopia and Uganda and considerably more evident in India, where half of household time is spent in waged labour or other non-agricultural business. Here too there is more diversification into livestock keeping. Farm work is shared by the male and

Table 3.1 Household structure and time spent in work activities – male-headed households (each members' time spent in main activity only, excluding housework and childcare[a])

	Zimbabwe			*Ethiopia*		*Uganda*		*India*	
	Mutoko	*Makoni*	*Chivi*	*Omo Beko*	*Afeta*	*Sironko*	*Bufumbo*	*Vepur*	*Guddi*
Sample	81	75	75	128	106	119	144	135	120
Work hours per day:									
Total per household	15.9	19.7	21.7	10.1	10.2	16.6	16.1	23.8	23.2
Per capita	3.07	3.76	3.57	3.88[b]	3.64[b]	2.24	2.24	3.77	3.61
No. in household	5.17	5.23	6.08	5.1	5.8	7.40	7.20	6.31	6.41
% total work hours contributed by:									
Man	37.2	33.7	30.3	68.0	60.0	33.8	30.4	32.2	30.1
Woman	42.0	35.2	31.6	3.2	13.3	30.9	29.6	23.2	25.3
Children	16.6	24.4	29.1	26.0	22.2	–	4.7	19.9	21.8
Relatives	4.3	6.6	8.3	2.8	4.3	35.3	35.0	24.8	22.9
% total work hours spent on:									
Own farm	89.3	95.3	95.4	83.5	79.0	62.0	67.4	33.6	38.9
Livestock	5.0	1.1	1.2	1.3	4.0	8.4	5.1	16.4	10.7
Waged work/ business	5.7	3.6	3.4	15.2	16.8	28.9	26.0	50.0	50.4
% farm work done by:									
Man	38.6	32.9	30.0	66.6	65.5	30.4	26.0	44.4	38.5
Woman	44.9	36.1	31.7	3.9	13.2	36.2	35.1	18.3	28.2
Children	13.5	24.7	29.3	29.5	19.2	–	6.3	11.8	11.9
Relatives	3.0	6.3	8.7	–	2.1	33.4	32.6	25.5	21.5
% livestock keeping done by:									
Man	–	–	–	–	–	51.0	37.4	29.1	33.6
Woman	–	38.1	–	–	24.3	5.8	19.1	0.0	2.0
Children	81.0	–	100.0	100.0	64.8	–	5.5	48.1	34.2
Relatives			–	–	10.8	43.2	38.0	22.8	30.2
% paid work done by:[c]									
Man	46.2	64.8	51.7	77.5	55.8	36.6	37.1	17.0	17.4
Woman	32.3	11.3	48.3	–	5.1	27.0	20.1	40.8	29.9
Children	9.7	23.9	–	–	23.5	–	–	16.5	27.8
Relatives	11.8	–	–	22.5	15.4	36.4	42.7	25.8	24.9

Notes

a In Zimbabwe no adults reported their main activity as either housework or childcare. However, these activities constituted 18% of women's time and 22% of other relative's time in India and 42% of household total work time in Ethiopia, of which 77% was done by the woman, the remainder being done by children and other relatives.

b These figures are only given for those who reported a main activity; a number of people in Ethiopia were not recorded as having any activity.

c This refers to local waged work on and off farm in India. Of total work hours some 35% were spent as local waged work, mostly on farm, and 10% as waged work away from the village, other paid work and running one's own business.

female partners in the household in Zimbabwe and Uganda, while there is less input by women in India and relatively little in Ethiopia. This follows the same pattern of work hours generally. However, the timing of the survey (April) is important in Ethiopia. This is the time for land preparation, ploughing and sowing, all of which are mainly done by men. Women's involvement would be higher at other times of the year when there is weeding to be done, which is a predominantly female task, and for the harvesting of maize and picking of coffee beans.

In Zimbabwe, Uganda and India most households (90, 84 and 82 per cent respectively) keep some form of livestock, the main ones being chickens, cattle and goats. In Ethiopia about one quarter of the farming households keep livestock, mainly oxen and cattle. Generally, livestock keeping does not take much of the household's main activity time, although more time is spent on this activity in India than in the African countries. Livestock keeping as a main activity is usually done by children in Ethiopia and Zimbabwe, while more involvement of men and other relatives in this activity is evident in Uganda and India. Everywhere, though, wives rarely consider their main activity to be tending animals.

Taking only those households where the man's main activity is work on his own land shows that the vast majority of households surveyed in Zimbabwe, Uganda and Ethiopia (80 to 90 per cent) have the man working his own farm. Other household members are also working this land and there is, in general, little diversification outside this. Over 82 per cent of the total household remunerated work time was spent in own-farm activities. There is little diversification within the family into waged work or other activities by women or children for their main activity in the African countries, although the concentration of effort is more pronounced in Zimbabwe and Ethiopia than it is in Uganda. In India, fewer men work on their own land as a main activity, around one half of the sample, and although many have their wives, children and other relatives working with them, there is also considerable diversification of these household members into waged work. For these farming households just over half of all the work performed is done on farm and over one quarter is waged work, the majority of the remainder is spent looking after livestock.

Analysis of the detailed 24 hour time budget results for respondents supports this picture, although the findings are more nuanced because all the activities undertaken are recorded (Table 3.2). Focusing on farming households reveals some involvement of women in agriculture in Ethiopia, but they are spending many more hours in housework hence the classification of this as the main activity for many. In Uganda, men and women spend similar hours working on their own farm but women spend more time doing housework than agricultural work. Men spend additional time working with livestock and doing other remunerated work. The limited diversification into other forms of remunerated work amongst Zimbabwean couples is evident, with both spending similar, long hours on their own agriculture. The length of work day is similar in Zimbabwe, Ethiopia and Uganda, with around nine hours per day available for leisure, but in all three countries women work longer days than men and have two hours less leisure than their husbands. In India men and women spend less time farming their own plots than in

Table 3.2 Detailed time use for survey respondents: men and women where the man works on their own farm as the main activity, male-headed households (taken from time budget 0500–2400 on a typical day)

	Zimbabwe		*Ethiopia*		*Uganda*		*India*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
Sample	145	45	185	20	127	67	82	50
Hours spent on:								
Agriculture	9.10	8.89	7.3	3.9	5.15	4.99	3.60	1.92
Livestock	0.32	–	–	–	1.81	0.57	3.41	0.26
Other work	0.44	0.13	1.1	0.6	2.38	0.85	1.35	3.64
Housework	0.28	1.45	–	6.1	1.45	6.27	0.43	5.96
Relaxing	9.37	8.96	10.6	8.4	8.99	7.11	7.78	6.22
Travel					0.23	0.15	2.43	1.00
Within agriculture, hours spent on:								
Ploughing	1.34	0.91						
Weeding	5.43	5.64						
Preparing land	0.23	0.53						
Manuring	0.14	0.09						
Irrigating	0.09	0.13						
Spraying	0.06	–						
Within housework, hours spent on:								
Housework	0.01	0.56	–	1.7	1.39	5.48	0.02	2.02
Cooking	0.19	0.73	–	2.3			0.04	2.78
Fetching water	0.01	0.13	–	0.8	0.06	0.79	0.16	0.40
Fetching fuel	0.02	0.04	–	1.2	With water	With water	0.02	0.02
Collecting produce	0.05	–	–	–	–	–	–	–
Within other work, hours spent on:								
Buying/ selling provisions	–	–	0.7	0.4	0.15	–	0.25	0.41
Paid work – on farm	–	–	0.0	0.0	0.21	0.09	0.93	3.24
Paid work – off farm	–	–	–	–	0.59	–	0.18	–
Own business	–	–	–	–	1.43	0.76	0.11	0.16

Africa but men spend considerably more time tending livestock. The greater diversification into other remunerated work is again evident, particularly amongst the female respondents whose husbands work their own land.

Different types of agriculture and size of landholding might underlie some of the observed differences in household time use. Farming households farm approximately 5.5 acres in Zimbabwe, 3.4 acres in Uganda and Ethiopia[3] and 4.9 acres in

India. There is some correlation between size of landholding and time spent by the whole household in agricultural work but no such straightforward correlation exists with men's hours on the farm (see Table 3.2).[4] The crops grown vary but probably not sufficiently to explain the variation in the total number of hours farming own land. In Zimbabwe the main crop is maize with groundnuts, with cotton and roundnuts appearing as important secondary crops. In Ethiopia maize is the staple and is grown in both survey areas and coffee is also grown. In Uganda the most important crop is again maize, while beans and coffee are important secondary crops. In India the main crops are jowar, paddy, ragi and groundnuts. Paddy and groundnuts are more labour intensive crops than ragi and jowar, thus some relationship might be expected between type of crop grown and time use. However, most households in the sample combine growing crops with different labour intensities thus reducing overall time differentials; only six out of the 132 farming households in the Indian sample grew a single crop.

For the farming households studied, around half of household income is earned from agriculture: approximately four fifths in Ethiopia, one half in Zimbabwe and Uganda and over two fifths in India. In Zimbabwe income is also derived from remittances and activities such as buying and selling products, crafts and trades. In Uganda and India wage earning opportunities are important. Agriculture clearly takes primacy in terms of the main activity and work time and supplies much of the households' food needs and is often the single most important source of income.[5]

The evidence challenges the conventional view of the highly-diversified African rural household when compared with the less-diversified Asian one (Collier and Gunning 1999). The African farmers spend a larger, not a smaller, fraction of their working hours farming their own land than Asian farmers. As a main activity the African households spend at least 82 per cent of their work time on farm compared with 57 per cent of the Indian households' time. Income figures show the greater dependence of the African household on income from farming and there is slightly more reliance on producing food for own consumption in Africa than India. The relationship with climatic risk may help to explain this. Only in Uganda was climate cited as one of the main risks to crop income, and this was alongside price fluctuations. Elsewhere in the African countries, input costs, falling product prices and access to resources were seen as the main risks. In Andhra Pradesh the vast majority of respondents cited drought, the situation pertaining in the region at the time of the survey. It may be that the perennial drought conditions are the reason that these households want to diversify at least as much as typical African samples and maybe makes them untypical of Asian households.

The extent of waged work

Waged work in local labour markets and running one's own business currently form a relatively minor part of household main activity total work hours in most of the African countries studied. Even in the more developed labour market in India, only half of total household work time is spent in waged work or non-agricultural self employment (Table 3.1). The wage earning opportunities available also vary

considerably. In the Zimbabwean areas there are some quarrying, commercial farming and close-by urban opportunities, but few of our sample engage in these to any substantial degree. In Ethiopia most waged labour is associated with coffee planting and growing and it is usually the landless who undertake this work on a regular basis. In Uganda, particularly in Sironko, opportunities are more widely available. Jobs are offered in trades, hotels, bars and food processing activities. But even here few male heads of household undertake these jobs as a main occupation (Table 3.3). A higher proportion of household time is spent in a paid job as a main occupation in Andra Pradesh and around one fifth of the male household heads have waged work as their main occupation. This work is usually in trades or agricultural waged labour. [6]

Where paid work is undertaken in Africa, most hours are put in by the male household heads. Women contribute a reasonable proportion of the paid work time

Table 3.3 Household time use in male-headed households where the man's main activity is waged work (average hours per household; main activity for each household member only)

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Sample size	10	25	22	55
% all male-headed households	4.3 (off farm only)	10.7	8.4	21.6[a]
Man's hours of work in:				
Waged work	6.1	6.76	7.9	7.22
Woman's hours of work on:				
Own farm	7.2	–	4.5	0.71
Livestock	–	–	–	0.11
Waged work	–	0.28	0.3	5.56
Own business	0.8	0.28	–	–
Children's hours of work on:				
Own farm	5.6	0.4	–	0.15
Livestock	0.5	–	–	0.40
Waged work	–	0.72	–	1.75
Own business	–	0.4	–	–
Relatives' hours of work on:				
Own farm	–	–	3.9	0.40
Livestock	0.2	–	1.1	–
Waged work	–	1.56	0.8	2.15
Own business	–	–	0.4	–
Total hours of work	20.40	10.4	18.9	19.2[b]
% farm work	62.7	3.8	44.4	6.6

Notes:

a Five heads of household reported farm and waged work as joint main activities so have been excluded from this analysis

b Includes 0.35 hours of work on own farm for the man and 0.42 hours of other work by all household members

in Zimbabwe, but children and other relatives are more important contributors than wives in Ethiopia and Uganda. In contrast, in India men contribute the fewest hours to paid labour. Instead women are the main participants, with other relatives and children also emerging as important suppliers of labour (Table 3.1).

Taking only those households where the man's main activity is local waged work shows different patterns of household diversification across countries (Table 3.3). Where men engage in paid work in Zimbabwe, women and children continue to put their labour time into working the household's land. Some 63 per cent of total work hours are still farm work in these households. Uganda shows a similar although slightly less pronounced pattern. In Ethiopia, men who engage in waged work as their main activity do so because they are landless and this ensures that other household members either have to follow them into waged work or run their own businesses. In India too we find that if the male head of household is primarily engaged in paid work other family members also engage in this as their main activity, although in some cases they do spend a little time farming their own land. Later in this chapter we examine the extent to which households' diversification of activities is related to their income level and asset ownership, and the specific cases of the feminization of the labour market in India and the position of the landless in Ethiopia are explored in the relevant country chapters.

Around one third of the surveyed households in the African countries have someone engaged in paid work. In Uganda most of the work available is non-farm waged work. For men this pays a median wage of 2,000 or 2,600 Ugandan shillings (USh) per day (dependent on survey village) and for women 1,000 or 1,800 USh. Most workers are paid daily and only about 10 per cent of the workers have a contract. A few also receive a meal, particularly women working in restaurants. Farm work is casual and rewarded at piece rates. In no cases were these workers given contracts and median pay was 1,200 or 1,500 USh for men and 1,000 USh for women. Although employment conditions may be insecure, wage rates do not compare that unfavourably with the poverty line of 25,563 USh. per adult equivalent per month (see Chapter 2). In Zimbabwe most workers are on day rates (32 per cent of men, 61 per cent of women, 65 per cent of children), others are paid a lump sum for a task (35, 30 and 22 per cent respectively). A few men are paid monthly and these form most of the 14 per cent of workers who have a contract from their employer. Only three people said they had permanent jobs. Women tend to work around seven days in the year, men around 20 days on average. Daily rates of pay are around Z$100 for women and Z$150 for men but the work is infrequent. Furthermore, survey respondents feel that engagement in paid work carries with it risks of non-payment or part payment due to the imposition of penalties and fines, that they will not be adequately fed and that they will be overworked with little time for rest. Additionally, getting a job is viewed as a corrupt and nepotistic process with bribes having to be offered to acquire a job. In Ethiopia the main source of employment is seasonal coffee-picking for the wealthier farmers. The work is casual and paid around three Ethiopian birr per day.

In India some 84 per cent of the surveyed households have someone participating in the labour market. The wages earned depend on the village in which the

household is located but annual wages are 3,952 to 4,822 rupees (Rs) per annum for men and Rs1,677 to Rs2,539 for women. These compare poorly with a per capita poverty line of Rs3,156 per annum. Workers also receive liquor each day and, sometimes, grain in lieu of cash. Only 5 per cent of these workers have a contract of employment and only 10 per cent of these have a permanent contract.

In general, most of the jobs on offer in the local labour markets observed are a combination of infrequent, insecure and badly paid. This will obviously impact on the perceived desirability of undertaking waged work and its role in livelihood strategies. There is also little evidence that these households are better off from engaging in paid work than their agricultural counterparts. Incomes tend to be comparable, except in Ethiopia where waged work appears to be associated with an impoverished position, but asset positions are typically worse.

Contributions to and from others outside the household

One aspect of household income earning strategies and diversification evident in the survey sample is migration and the return of remittances. In Africa, migration of men to towns to find work, leaving women to manage the household's agriculture, is commonplace. Children too may migrate along with their father. This leaves high numbers of de facto female-headed households in rural areas. But links outside the household are not only of this kind. Many male-headed households will also receive remittances from children away from home, in some cases labour will be intermittently provided to the household rather than cash incomes being received, and flows may go from the household to those away, for instance through the provision of food to those in urban areas. Such flows of resources can be important in household survival and offer the family an important route for income generation and asset accumulation. In the Indian villages surveyed it was apparent that migration also occurred and, in many instances, was precipitated by the drought conditions that prevailed. Here migration tended to be seasonal and could involve both husband and wife so took a different form to that typical in Africa. The surveys asked about flows of resources into and out of the household and later we examine the impact of remittances and quantities of labour available to the household on time allocation and diversification of activities. A detailed analysis of the causes and consequences of migration in India is presented in Chapter 5 and the effects of remittances on the strategies adopted by female-headed households in Zimbabwe is explored further in Chapter 7.

While nearly one third of all households across the surveyed sample have someone away who they consider to be part of their household only in about half the cases do the people away regularly return any money to the household (Table 3.4). Of the 297 households surveyed in Uganda only 15 per cent received cash remittances. Similarly, in India only 16 per cent of the 302 households receive cash remittances. In Ethiopia the figure for all households was even lower, at 8 per cent (13 per cent for female-headed households and 6 per cent for male-headed ones). But in Zimbabwe 31 per cent (43 per cent of female-headed and 27 per cent of male-headed) of all households were in receipt of cash from people living away from the

household. Thus in Zimbabwe households were quite heavily reliant on this source of income. These remittances were often used for the purchase of food and were crucial to the household. In India remittances were sometimes used to buy land, while in Uganda they were typically small unless the illness of a parent or other unfortunate circumstance required them to be larger. Migration and the resultant remittances need to be understood as one of the strategies open to the diversifying

Table 3.4 Contributions to and from the household

	Zimbabwe (male-headed)	*Ethiopia (male- headed)*	*Uganda (all households)*	*India (all households)*
People away from home who are considered as part of the household:				
% households	35	12	30	28
Of these: % contribute cash	70	39	45	21
% income contributed[a]	12	2	3	8
% contribute labour	15	0	19	1
Who?	Children	Sons	Children (1/2) Other relatives (1/3)	Children (1/2) Other relatives (1/3)
Others who regularly make contributions to the household:				
% households	31	0	15	85
Who they are	Unrelated others (2/3) Relatives Children	0	Unrelated others (40%) Other relatives (24%) Parent (13%) Child (13%)	Unrelated others (4/5)
What they mainly contribute	Agricultural – weeding, ploughing, harvest Food/cash 23% cases	0	Agricultural labour (49%) Cash (22%) Food (20%) Medication (7%)	57% both cash and labour; 31% cash only; remainder labour, rarely in kind
Others outside the household for whom the household is responsible:				
% households	56	5	51	83
Who they are	Relatives Unrelated (1/3)	Parent (1/2) Son (1/4)	Parent (34%) Other relative (31%) Unrelated others (11%)	Unrelated others (3/4)
What is contributed to them	Agricultural labour Cash/food 23% cases	Food (50%) Cash (25%) Labour (8%)	Cash (39%) Food (31%) Medication (24%) Farm labour (4%)	59% cash and labour 24% cash only Remainder labour, rarely in kind

Notes
a averaged across all households

household and opportunities for migration may dominate other, local income-generating activities.

As an alternative to cash in some cases people away from the household returned to contribute labour to the household at particular times of year and, in Zimbabwe, might typically contribute five days labour per annum to the household's agriculture. In Uganda, the other relatives tend to be needy aunts, uncles and cousins who, in return for a meal, help out on the farm. In India children and other relatives living away from home but still considered part of the household are also reasonably common, but these people are much less likely to be returning cash or labour to the household so may not form such an integral part of the household's economic decisions.

In addition to those away from home who were considered part of the household, respondents were asked about others who regularly made contributions to the household. Again, such contributions, often from unrelated others, were commonplace and tended to take the form of agricultural labour for weeding, ploughing and harvest and, less frequently, cash or food. Similarly for more than half of our households there were people outside the household for whom the household held some responsibility. These could be related or, very frequently, unrelated others and again they were often supplied with agricultural labour, food and medication by the household.

The diversification of activities

We have noted the limited extent to which many households have diversified their activities. This concentration will increase the household's vulnerability to the effects of, for instance, inclement weather or price fluctuations. The extent to which households diversify is related to the resources at their disposal; their income and assets. Ellis and Freeman (2004) have demonstrated the importance of accumulation and diversification in achieving better living standards in Africa and have highlighted the crucial role played by cash-generating activities in enabling this ascent.

Here we explore the links between indicators that measure the extent to which the household has diversified and spread risk (Box 3.1) and the household's poverty profile (see Chapter 2). It is assumed that greater diversity allows more risk spreading and so lowers the household's vulnerability to the consequences of adverse shocks. This strengthens the household's ability to survive and protect itself from states such as chronic poverty. However, it ignores the benefits that may derive from greater specialization. It also ignores the effect of synchronicity of activities. Engaging in paid labour alongside own agriculture may achieve benefits of diversification if paid work is available in agricultural slack seasons and the income can be used to purchase more or better quality inputs. However, if the work is only offered at a time of peak activity on one's own farm the consequence of engaging in paid work may be a neglect of one's own crop at a crucial time and a consequent loss of yield and income. The importance of timing for effective diversification is explored in Chapter 8 where possible routes out of poverty are considered.

Box 3.1

Indicators of diversification

Activities
Remunerated activities were asked about as either a main or secondary activity for each member of the household. These were classified into seven areas ranging from farming own land to waged work to running own business. A score of one was given for anyone in the household being engaged in each of the activities, either as a main or secondary activity, giving a possible range of 0–14 for the degree of diversity of activities for the household

Ever do paid work
The number of people who were recorded as ever doing paid work gives an indication of diversity of wage earning possibilities

Income sources
Any income to the household from each of the following: value of crops grown, wages, from outside the household, from livestock, from the rental of equipment, from the produce of livestock, from crop sales, and other sources, was given a value of 1 to represent the diversity of income sources available to the household.

Crops grown
Households were asked to list the crops that were grown on different household members' land. Up to 21 different crops were mentioned in each country. The number of different crops grown by each household was taken to indicate the household's reliance on a limited number of crops.

Livestock kept
This variable counts the number of different types of livestock kept by the household.

In general, being income- and asset-rich was associated with greater diversification (Table 3.5). The exception was the number of members of the household who ever worked. In Africa there is some suggestion that being income- and asset-rich might protect household members from having to join the labour market. Being asset-poor encouraged this participation and labour market activity was, unsurprisingly, particularly evident in those households that were asset-poor but income-rich. In India being income-poor was related to labour market participation, although the reasonably high levels of work also found amongst the asset-rich is possibly a reflection of both relatively developed labour markets and greater educational attainment. For the other diversity indicators, it was generally being asset-rich, rather than income-rich, which was correlated with diversification in India. In Zimbabwe, both income and assets were importantly related to the extent to which the household diversified. Similar pictures emerged for Ethiopia and Uganda, although in these countries there was slightly more evidence of the importance of being income-rich in achieving diversification. This evidence on risk-spreading suggests no uniform pattern between diversification and the resources of the household. However, there is a general suggestion that poorer and therefore

Table 3.5 Poverty profiles and diversification (mean values of diversity indicators, male-headed households only)[a]

	Income-poor Asset-poor	*Income-poor Asset-rich*	*Income-rich Asset-poor*	*Income-rich Asset-rich*
Activities				
Zimbabwe	2.9	2.6	3.0	3.1
Ethiopia	1.8	1.8	1.9	2.1
Uganda	6.5	5.0	7.1	5.7
India	3.2	3.4	2.8	3.5
Ever do paid work				
Zimbabwe	0.8	0.6	1.5	0.8
Ethiopia	0.4	0.3	0.2	0.6
Uganda	0.4	0.4	0.5	0.4
India	2.0	2.4	1.7	1.7
Income sources				
Zimbabwe	2.7	3.2	2.9	3.7
Ethiopia	2.1	2.8	2.7	3.2
Uganda	4.2	4.4	5.3	5.1
India	4.2	4.6	4.8	5.2
Crops grown				
Zimbabwe	3.2	3.3	3.4	3.9
Ethiopia	1.4	1.8	2.4	1.7
Uganda	2.7	2.4	2.5	2.6
India	1.9	2.5	2.0	2.8
Livestock varieties				
Zimbabwe	1.9	1.9	2.4	2.8
Ethiopia	0.0	0.3	0.3	0.5
Uganda	1.6	1.8	2.1	2.5
India	1.2	1.6	1.3	2.0

Note

a χ^2 tests for the distribution of the diversity indicators varying with poverty profile showed all to be significantly different at the 1% level for Ethiopia and all except the diversity of activities undertaken to be significant at the 1% level in Zimbabwe. In Uganda, only the diversity of activities, income sources and livestock varieties differed significantly by the poverty profile of the household. All except the number of people who ever did paid work were significant at the 1% level in India.

more vulnerable households are the ones that have least means to diversify the activities they engage in and that, in Africa, labour market solutions do not seem to correlate with wealth of the household. Instead they seem to be more the last resort of the poor rather than the preserve of the rich.[7]

Gendered differences in activities

Any consideration of the profitable reallocation of time must take into account barriers to change created by customary uses of time and gendered division of tasks. Already it has been noted that women have little involvement in livestock keeping and are largely responsible for domestic work; it may also be the case that

certain agricultural tasks are only undertaken by men and certain crops grown either by men or women. A number of questions asked in the surveys allow us to investigate this directly. In particular, respondents were asked what crops were grown on land belonging to various people in the household, who did various tasks associated with growing these crops, and who had responsibility for the crop, who owned different types of livestock and who cared for them on a day-to-day basis and who carried out some specified domestic tasks. The responses are summarized in Table 3.6.

Table 3.6 Gendered divisions of labour

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Agricultural activities				
Crops grown on whose land?	Most main crops grown on male and female land, including cotton	All main crops grown on joint family farm land, spouses don't cultivate separate plots. Most women have control over small garden plot used to grow vegetables	Male land – maize, coffee, beans as second crop; female land – maize, beans as second crop	Most main crops, paddy and jowar, grown on male and female land, groundnuts less likely on female land. Overall only 4% land owned by women
Specific male/ female tasks	All do weeding, men do more ploughing, but planting manuring and even clearing land done by men and women	Resurvey: clearing land, ploughing and planting predominantly male tasks, weeding and harvesting done by all. Women responsible for vegetables	Clearing land, planting, weeding and harvesting are female tasks for most crops apart from maize where both men and women do these tasks	Men – ploughing, applying fertilizers and pesticides, watering. Women – weeding and transplanting. Harvesting, threshing both but more female
Responsibility for crop?	Maize – men and women grow and most are responsible for whole process	Coffee – men more responsibility, men and women grow teff and maize, women and children responsible for vegetables	Coffee – men more responsibility, men and women grow maize and beans	No specific male or female crops. Shared responsibility although tasks differentiated and men may assume sole responsibility if wives work for wages

Ctd overleaf

Table 3.6 ctd

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Keeping livestock				
Ownership of livestock	Men own sheep, both men and women own cattle and goats, women more likely to own chickens		In more than 80% cases men own cattle and goats, women rarely own these. 75% cases men own chickens	Cattle, chickens and some goats owned. Male respondents tend to say they own each type of livestock, female respondents that they own them.
Care of livestock	Cattle, sheep, goats, mainly men. Chickens, mainly women	Children primarily responsible for cattle, sheep and goats, women for poultry	Cattle, men. Goats, men and women. Chickens, women	Cattle and goats, men or others in the household, rarely women. Chickens, mainly women, rarely men
Domestic responsibilities				
Housework	Men do not do housework, female responsibility, and few ever cook	Food preparation and cooking always done by women	Cooking and washing clothes primarily done by woman, a very few share with man	Cooking and washing clothes primarily done by woman, may share with others but rarely done by men
Fuel collection	65% cases woman, 16% cases share, 10% other household member, 10% cases man	Usually done by woman (90% cases), alternatively daughter	55% woman alone, 24% man, otherwise someone else, rarely shared	Both male and female responsibility, often shared
Water collection	77% cases woman, 6% share, 11% other household member, 6% man	Usually collected by woman (86% cases), alternatively daughter	69% woman, 20% someone else, rarely male or shared responsibility	62% cases woman, rarely a male responsibility

Most crops tend to be grown on male and female land, few crops are reserved specifically for male or female land alone. Coffee in Uganda is an exception as this tends only to be grown on men's land. However, the tasks associated with crop growing are often specific both to gender and to crop. Men tend to be more responsible for land clearing and ploughing, the heavy tasks, whereas both men and women weed, plant and harvest. Tasks are more differentiated by gender in India

than in Africa. Generally men are unlikely to have any involvement in crops seen as women's crops and may devote more of their energies to cash crops. Even where women provide much of the labour for cash crop growing men tend to oversee the growing process and to control the sale of the crop. Women's control largely extends to crops grown for the household and local sale. Livestock keeping, as already noted, is a largely male preserve, and women are confined to the ownership and care of chickens. Domestic duties are almost exclusively 'women's work': women cook, clean and launder, and usually collect water but they may receive some help from men in collecting fuel. This stylized synthesis demonstrates the pervasive influence of gender and suggests that options to change time allocation may be limited by existing patterns of labour usage.

However, there is some suggestion that structural adjustment and crisis may have been accompanied by a changed demarcation in activities in recent years. To address this possibility respondents in the African resurveys were asked about who did various tasks in their parent's household when they were a child, 5–10 years ago and now. If who did the task had changed over time, respondents were asked when it changed and why. In all countries it is notable that there has been little change in the gendered ownership of and responsibility for livestock, nor have men taken on any substantial portion of the domestic chores. The exception is fuel collection in Zimbabwe where men have become more involved in fetching wood as the task has got harder and heavier. Within agriculture there is more variation. While crops and tasks remain rigidly gendered in Ethiopia and women there have little control over or access to the proceeds of their labour, except for the vegetables they grow in small garden plots, Zimbabwe and Uganda have exhibited more change. In Zimbabwe, while a general demarcation of men being responsible for maize and cotton production and women being responsible for roundnut and groundnut production still exists, it was perceived that there had been some shift towards women in maize production in the 1980s. Also women's crops, groundnuts and roundnuts, were traditionally produced for domestic consumption but had recently realized cash incomes by being processed as peanut butter and boiled roundnuts and sold in urban areas. These crops require few purchased inputs, such as seed and fertilizer, and can be grown using only cattle manure. However, they are labour intensive and suffer from having only small amounts of land allocated for their cultivation: land allocation is still the domain of men. Due to the small amount of land put under cultivation (0.2 to 0.5 acres), there is stiff competition between meeting household food needs and generating a cash income. Where change had occurred in the gendering of tasks it largely resulted from changed personal circumstances, often brought about by widowhood, rather than a general shift in responsibilities. In Uganda there is more evidence of change with women becoming burdened with increasing numbers of tasks and responsibilities. In agricultural work, groundnut and bean production have traditionally been female domains and remain so. Matooke was a crop where men helped clear the land and plant; now these tasks are predominantly female. Maize was largely a male crop with clearing, planting, weeding and harvesting done by men; more recently it has shifted towards shared male and female responsibility. There are some indications in the survey as to why this change might have

occurred. Respondents suggested that as modern agricultural techniques requiring high yielding varieties (HYV) and fertilizers have been introduced more cash is required for agricultural inputs. 'Investment good' expenditure has typically been a male responsibility and it is also easier for men to earn income from non-agricultural sources than women, so men substitute their own farm labour for time in their own business or in waged work, leaving women to do more own farm work. It may also be the case that women have more time available as firewood collection is being replaced by purchased wood or charcoal and newly dug bore wells mean that water can be found closer to home.

The shift in involvement in paid work is even more notable. In Zimbabwe, paid work in agriculture has shifted from being a largely male activity to one also done by women and children, explained as being because women 'need to work too' (cluster interview, Mutoko), although other paid work seemed to remain predominantly male. The change may have been brought about by shifts in attitudes and increased education: 'women do this work now', 'now educated women can do work'. However there were also indications that women were being forced into the labour market by straitened personal circumstances: 'since my husband died no-one can do this for me' (also about paid work in agriculture). In Uganda waged work in agriculture was done and continues to be done by both men and women but there is some evidence of a recent change towards women as well as men doing other waged work. The implications of this development are explored further in Chapter 6. In Ethiopia things remain more static and waged work continues to be primarily a male task. While most respondents stated that 'women have to stay at home to do the housework and care for children', several respondents commented that it was 'culturally unacceptable for women to do paid work'. But there was some suggestion of an increased acceptability of women doing waged work, although the work was generally associated with hardship and seen by community members as 'inferior' to farming. In contrast, in India there has been a feminization of the labour market and this is analysed in detail in Chapter 5.

Time use: summary

For most of our African rural households agricultural activities on their own land take by far the largest portion of household labour time. Although this may not result in commensurate proportions of income, for instance remittances may be equally important, it often provides vital food for the household and is the lynchpin of the family's subsistence. Traditional crops are typically cited as the most important ones grown because they form the staple of the household's diet, and much of the labour of men, women and children will be devoted to growing these crops. Only in India are households commonly diversifying their activities across farming and waged work and even here the importance of the crops grown by the household still remains.

Local labour markets are underdeveloped in the African countries studied and this may be why they form such a small part of household labour allocation. In general, waged work is not viewed by our respondents as a preferred option, and most would

prefer to devote their energies to more profitable agriculture on their own land. This response may in part be influenced by national efforts to promote widespread land-ownership and small-scale agriculture but is also a response to the chaos and uncertainty brought about by rampant inflation and disrupted markets, as in Zimbabwe. Survival depends on food security which is best achieved by growing one's own food. Additionally, the types of job on offer are not generally conducive to making them the mainstay of household resources. However, although local labour markets feature little in the labour strategies of our households, migration and the return of remittances from migration makes extensive use of more developed and distant labour markets and this strategy is common to many of our households. Indeed, in India too migration features as an income-smoothing strategy for the households surveyed even though local labour markets, at least for female labour, are quite well developed.

This feature of resources flowing into and out of the household from related and unrelated others is one aspect of the complexity of the rural households studied. Others are the multiple productive uses of time which individuals can engage in and the number of different household members who may be engaged in various forms of work. The analysis has also highlighted the apparent rigidity of current divisions of labour by gender. While the divisions are not totally immutable and may be changed by outside stimuli, such as higher female wages, responses are unlikely to be instantaneous and may engender disadvantage and losses in welfare for those pioneers taking up the challenge. Such scenarios are evident in some of countries studied and are developed in the chapters on India and Uganda (5 and 6), the countries from our sample with the most developed local labour markets. Any model of labour supply and recommendations to reallocate time between activities needs to take account of these complexities.

These findings carry some implications for policy. First, there is no obvious source of untapped labour that can be costlessly put to an alternative use. Second, there may be more productive and lucrative combinations of household members' time use available but there are constraints on how easily these changes could be effected. For, instance, the introduction of green revolution technologies and new crops might increase yields and incomes but, with no evidence of a clear erosion of the gender demarcation in tasks and crop responsibilities, a more efficient allocation may be difficult to achieve. Even where women are able to generate income through cash sales of traditional female crops, such as roundnuts and groundnuts, they are constrained in achieving this by male decisions over land allocation and the use of labour resources for other crops. An alternative use of time is labour market participation but here again established views on the appropriate role for women will hamper uptake of job opportunities. Third, local labour market participation is viewed as a second-best option by most of the surveyed households. Waged work is confined to lower caste households in India, is perceived as inferior to farming the household's own land in Ethiopia and nearly all respondents would prefer to generate better incomes through their agriculture than from a reasonably paid job in Zimbabwe and Uganda. These views are bolstered by the poor quality jobs currently available. To be attractive as a way of generating cash income better

quality jobs are needed, otherwise generating income from agriculture-related activities will be preferred. But even if better quality jobs are on offer their uptake will depend on how the work meshes with the demands for time to be spent in own agriculture. Having one's farm, even if it only forms part of the household income, is often an essential ingredient of the multiple sources of income realized by people with close ties to rural areas. It is also an aspiration and something to be achieved rather than eschewed in favour of other forms of income generation. Activities which are complementary rather than competing and match people's aspirations and needs for food security offer the most promising routes out of poverty. Examples of such routes are discussed in Chapter 8. Furthermore, a stable macroeconomic environment which allows the rewards from work to be predictable and the risks minimized is essential to making waged work appealing.

Household labour supply

One focus of this research is to understand the potential for people to work their way out of poverty if labour markets are sufficiently developed to offer suitable opportunities for work. Key to this understanding is, first, to identify routes through which the demand for labour might be increased, for instance, growing more labour-intensive hybrid crop varieties or extending the availability of credit, and, second, to know how individuals might respond to the opportunities offered. For example, will higher yielding crops encourage more time spent in own agriculture or, if own agriculture is primarily used to reach subsistence targets, will it encourage the substitution of labour out of own agriculture into other activities? If so, which activities? People may engage in waged work on large farms or elsewhere, they may undertake education or training, use time and resources to set up a small business or even take some leisure. The response might differ by gender and circumstance. For example, women may feel that time released from agriculture is best utilized in activities that maintain the household, such as childcare and cooking, whereas men may wish to reallocate their time to wage earning. Such responses may not be solely generated by economic considerations but also could be strongly influenced by prevailing attitudes about appropriate work for men and women and notions of suitable behaviour given the status of the household.

Here we try to determine some of these labour supply responses. We start with a variant of the standard model of labour supply where hours worked are responsive to the wage offered and other income available to the household; the impact of bargained outcomes on labour supply is considered in a subsequent section. The preceding discussion highlighted a number of factors likely to be important in determining the amount of time the household allocates to agricultural work on its own land. The amounts of labour and land available to the household and the effective wage the household can expect for each hour spent in agricultural activities emerged as crucial. In addition, the types of crops grown, the amount of production used for subsistence, and livestock and draught animal ownership affect both income and 'discretionary' time that might be allocated elsewhere. Income from other sources also will be an important influence on the time spent in agriculture.

Initially, the investigation uses the household as a single unit of analysis. We know the hours of work put in by each individual if work on own-farm is their main activity but we cannot accurately determine the proportion of revenue that they are individually responsible for earning. Instead we can compute the average hourly wage earned from agriculture by the family. This is done by computing the total value of output and calculating a measure of total hours worked which looks at the labour input of household members and includes additional sources of labour such as the hours contributed by others outside the household and number of people bought in as paid labour.[8] We describe this as the effective wage.[9] Thus we can determine household labour supply responsiveness to a change in the 'wage', brought about by things such as a change in the market price of a crop. Subsequent analysis of the time budget data allows further investigation of the choices made between alternative activities for men and women separately.

Responsiveness to the productivity of own agriculture: households

If households are primarily engaged in agriculture we hypothesize that the amount of time they allocate to farming their own land will be affected by the income they can generate from that land. The effective wage measures the value of output per hour worked. An increase in the effective wage could be brought about by higher product prices, higher yields through improved technology or a switch to higher value crops. The responsiveness of household labour supply to such a change is a matter for empirical investigation.

For male-headed households in the African countries studied the responsiveness to a change in the 'wage' was significant and negative in all countries (Table 3.7). That is an increase in the hourly wage earned from agricultural activities reduces the number of hours supplied to own farm as a main activity by the household, implying that greater productivity in agriculture would not encourage more time in agriculture.[10] However, greater productivity may encourage substitution out of agriculture into other remunerated activities or allow more leisure or unremunerated activities; responses we cannot directly test for with this household level data but which we consider using individual level data below.

In no country was there a significant effect of the amount of income earned by the household from non-agricultural sources on the hours spent in agricultural activities. It is probable that income from alternative sources is used to improve the inputs and technology used in agriculture and thus the yields and resultant income, rather than affecting the hours worked. Additionally, much of this alternative income generation arises from work done as a by-product of agriculture, for instance, making and selling peanut butter, and therefore will still require time spent in agriculture to enable the secondary activity rather than substitute for it.

Only in Ethiopia did the amount of maize retained for the household's own consumption have an effect on hours worked and here it operated to reduce hours spent in farming, possibly suggestive of reaching target yields or outputs for subsistence. This possibility was investigated qualitatively in the resurvey. Here most households had managed to produce around three months' food supply from

Table 3.7 Determinants of household hours spent in farming own land (male-headed African households where man has main activity in agriculture, all male-headed households in India irrespective of head of household's main job)

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Constant	11.509 (6.43)*	6.752 (5.46)*	7.331 (4.12)*	3.618 (1.11)
Effective wage (household only)	–0.178 (–3.37)*	–0.504 (–8.28)*	–0.023 (–9.06)*	–0.241 (–2.90)*
Non-agricultural income	0.00001 (0.86)		0.0000 (0.46)	
Livestock Y as % household income				–0.051 (–1.42)
Waged Y as % household income				–0.079 (–2.59)*
Business Y as % household income				–0.093 (–2.87)*
Remittances as % household income				–0.063 (–1.10)
Number of people in household	1.635 (6.48)*	0.182 (3.05)*	0.893 (4.51)*	1.057 (5.27)*
Number of labourers employed[a]		–0.031 (–0.51)	–0.161 (–0.99)	0.0006 (2.21)*
Costs of renting draught power				–0.001 (–2.35)*
Acreage of land owned/farmed	0.139 (2.42)*		1.566 (11.02)*	0.345 (2.00)*
Acreage of maize grown		0.277 (3.76)*		
Acreage of coffee grown		0.241 (3.37)*		
% maize for own consumption		–0.200 (2.86)*		
Progressive farmer (rank)				0.838 (1.53)
Region: Makoni	–0.401 (–0.30)			–0.862 (–0.42)
Region: Mutoko	–4.311 (–3.12)*			0.007 (0.00)
Region: Bufumbo			1.171 (0.91)	
Region: Vepur				–1.651 (–1.54)
F	13.76*		31.96*	15.1*
R^2	0.29	0.36	0.45	0.41
Sample size	190	205	239	255

Notes
a labour costs incurred, in India
t-statistics in parentheses, * = significant at 10% level or more

their own production last season. Normally they would have expected to produce around six months' food supply. The main reasons for the shortfall were shortages of oxen and land but a few households also couldn't afford to buy fertilizer. Nearly half of the respondents reported that they could grow more on their land and 72 per cent said that, if they had the time available, they would prefer to spend more time in agricultural production on their own land. Similarly, in Zimbabwe few families had been able to satisfy their household's food needs through growing their own food on the household's land in the last season and large shortfalls were observed for most crops. These were generally attributed to the lack of rain and other inputs. However, most households felt they could grow more than they would normally expect to produce for the food needs of their own household and some had done so in the past and, when asked 'If you had the time available would you prefer to spend more time in agricultural production or would you use the time for something else?', all but one respondent said that they would use the time for more agriculture. This qualitative information indicates that far from any unwillingness of the surveyed households to devote further labour time to the land they were in fact keen to devote their energies to improving their agriculture and usually would do this in preference to earning a good wage. Constraints in improving productivity arose because of lack of access to inputs, brought about either because of insufficient income and assets or the collapse and hijacking of input markets. These could not be compensated for by putting additional time into working the land.

The number of people in the household significantly increased the number of hours spent in agriculture by the household, reflecting the high commitment of all household members to working on their own farm as the main activity and the lack of diversity of activities within these households. Greater amounts of land available for the family to farm also induced more hours of work from the household, emphasizing the reliance on household labour for farming activities and suggesting little substitution of outside labour for family labour.

The time use regressions for India included all households with land, whether or not their main activity was agriculture. Additionally the income variables were subdivided, and variables reflecting whether the farmer was deemed progressive (using modern inputs, for example, irrigation, HYV seeds, fertilizers and pesticides), the cost of outside labour to the household and the cost of renting draught power were included. Some results showed similarities to those found for Africa. In particular, a significant, negative response of hours worked in agriculture to increases in the effective hourly wage was again observed. Hours worked also increased the greater the acreage of land owned and the more people there were in the household. However, in contrast to the African countries, income from other sources was an important determinant of hours worked in agriculture and operated to reduce agricultural work time. Wages and incomes from business were the main sources of this effect and suggest substitution occurring between farm and labour market work for the household. The greater development of the Indian labour market means that work is more available and that sources of waged work may be less correlated with own farm work. This possibility is explored in detail in Chapter 5. Employing more outside labourers required more time from the

household, possibly for supervisory activities, and the less reliant the household was on renting in draught power to work the land the more time it spent in agriculture. Although insignificant, the more progressive the farmer the more hours the household put into agricultural work. The Indian evidence suggests that households find it lucrative to devote more time to agricultural work if the technology used can be raised and the activity conducted on a larger scale, despite the negative responsiveness to the effective wage.

All countries demonstrate a negative relationship between the effective wage earned in agriculture and the time the household puts into farming its own land. This indicates diversification occurring but does not demonstrate the direction of causation. It is possible but, on the basis of the qualitative evidence, unlikely that households work to meet subsistence levels of agricultural production and, once these are achieved, labour hours are devoted to other activities. Higher productivity in agriculture allows this to be achieved with fewer labour inputs. Alternatively, greater diversification into other activities, such as income earning from waged work or from one's own small business, could supply the cash with which to improve technologies and yields thus resulting in higher 'effective wages' for the time put into own agriculture. This type of route out of poverty has been identified in other work (see, for example, Ellis and Freeman 2004). In the African cases the relationship with other income is not evident because this other income is itself a by-product of and highly correlated with own farm activities. Under this scenario we hypothesize a sequence of events occurring which are related to the household's resources and the local labour market opportunities available. For poor households, with access to few resources and surrounded by underdeveloped local labour markets, opportunities to diversify are limited and confined to agriculture-related activities. The cash generated is used to improve agricultural productivity that can then reduce the hours spent in agriculture. As income earning opportunities and local labour markets develop, cash generation is less dependent on own agriculture, and more diversification of income earning activities is evident but the proceeds again may be used to improve own agriculture. Finally, at a higher resource level, the household is not so dependent on diversifying activities and can instead spend more time on profitable own agriculture. Access to modern technologies, diversification of crops, plentiful draught power and ability to employ labour when required reduces the risks attendant on reliance on one activity, agriculture, and, instead, allows gains from specialization to be realized. Using cash incomes to improve own agriculture through the purchase of inputs and ability to hire labour at key cultivation times generates higher yields and incomes and using this income to purchase assets, such as livestock and land, is a typical route out of poverty found across a range of African countries (see Ellis and Freeman 2004). The very poor are outside this framework. They have few productive assets and are dependent on selling labour for both survival and any chance of improving their position.

Male and female responsiveness to the productivity of own agriculture

So far we have considered the relationship of household time use to productivity in agriculture. Here we use the more detailed information on individual time use from the time budget data to consider whether differences exist by gender or for alternative time uses. We examine male respondents whose main activity is working on their own land and female respondents whose husband's main activity is working on their own land.[11] To allocate the effective wage in agriculture to the men and women under consideration we assume that men have a higher effective wage from agriculture than women and children. Women and children's wages are assumed to be 65 per cent of that of a man per hour. Household income net of the individual's earnings from agriculture is taken as the prime income variable.

In Ethiopia and Uganda male partners' work in agriculture showed the already established negative relationship with the effective wage rate (Table 3.8). Little responsiveness to other sources of income in the household was evident, with the exception of India where more non-agricultural income reduced the man's hours in agriculture.[12] Greater land ownership increased men's hours worked in agriculture, while more land left fallow, predictably, reduced hours.

Men's time spent in other work suggested very different patterns in Zimbabwe, Uganda and India.[13] In Zimbabwe, there was a negative relationship between the wage that could be earned in agriculture and the number of hours devoted to other work. Thus as the agricultural 'wage' decreased men were more likely to spend hours working outside the family farm, a position which may suggest that outside work is undertaken as a response to poor agriculture.[14] In Uganda and India the reverse was true. In these countries the better the productivity in agriculture the more non-agricultural work the man was likely to be engaged in. This is supportive of the earlier hypothesis that non-agricultural incomes are being used to increase agricultural productivity and thus release some labour from agricultural activities. We observe the retrenchment in Zimbabwe and the possibility of expanding beyond the domestic economy in Uganda and India. The differing responses will in part relate to the job opportunities available in the locality and the wages and conditions these offer but they also relate to the macro-environment. Uncertainty surrounding the value of wages in the context of high inflation and disrupted markets will make ensuring adequate consumption through own production more attractive than dependency on purchasing food.[15]

In some respects, female partner's time use differed from men's (Table 3.9). Women again showed a reduction in hours in agriculture in response to an increase in their effective agricultural wage but there was little evidence of them substituting into other remunerated work. Instead housework emerged as an alternative. In both Zimbabwe and Uganda women were likely to spend more hours attending to household needs the higher their effective wage in agriculture.[16]

Further support for the time allocation substitutions and compatibility of income earning and high-productivity agricultural activities outlined above is found when households classified as either low wage or high wage are compared.[17] In

Table 3.8 Time budget time uses: male partners whose main activity is agriculture or other work

	Zimbabwe		*Ethiopia*	*Uganda*		*India*	
Time spent in:	*Agriculture*	*Other work*	*Agriculture*	*Agriculture*	*Other work*	*Agriculture*	*Waged work*
Constant	9.433	0.129	6.881	5.742	1.834	3.862	–0.243
	(17.57)*	(0.39)	(34.25)*	(17.12)*	(2.44)*	(3.17)*	(–0.24)
Hourly wage in agriculture	0.003	–0.019	–0.390	–0.002	0.004	–0.058	0.525
	(0.86)	(–1.74)*	(–2.88)*	(–1.69)*	(1.95)*	(–0.31)	(3.26)*
Total income excl. man's earnings	-7×10^{-6}	1×10^{-5}	–0.779	-2×10^{-7}	-1×10^{-7}	7×10^{-6}	1×10^{-4}
	(–1.09)	(3.07)*	(–5.31)*	(–1.05)	(–0.14)	(0.31)	(–2.84)*
Waged income			0.362				
			(4.36)*				
Remittances			0.40				
			(3.69)*				
Income from non-agricultural sources				1×10^{-7}	4×10^{-8}	–0.027	0.018
				(0.80)	(0.12)	(–1.84)*	(1.48)
Acres of land owned	0.017	–0.004	0.210	0.032	–0.110	0.317	–0.056
	(0.68)	(–0.28)	(1.96)*	(0.99)	(–1.49)	(1.30)	(–0.27)
Land left fallow	–0.963	–0.004				–0.422	0.060
	(–2.28)*	(0.54)				(–1.59)	(0.27)
Number in household	0.063	0.020		–0.091	0.014	0.288	–0.078
	(0.73)	(0.38)		(–2.33)*	(0.16)	(1.72)*	(–0.55)
Other household members' input into agriculture				0.061	–0.030	–0.100	0.079
				(4.92)*	(–1.09)	(–2.34)*	(2.19)*
Outside labour employed			0.171			–0.077	–0.010
			(2.26)*			(–2.22)*	(–0.34)
Number of chickens	–0.031	0.011					
	(–2.46)*	(1.39)					
F	2.08*	2.49*		10.00*	2.46*	2.41*	1.85*
R^2	0.04	0.06	0.22	0.35	0.12	0.21	0.17
Sample size	145	145	166	127	127	82	82

Table 3.9 Time budget time use: female partner where main activity of man is agricultural work on own farm in African countries

	Zimbabwe			*Ethiopia*[a]	*Uganda*[b]		
Time spent on:	*Agriculture*	*Housework*	*Other work*	*Agriculture*	*Agriculture*	*Housework*	*Other work*
Constant	9.627	1.257	–0.555	4.523	5.072	5.653	0.021
	(7.57)*	(1.75)*	(–2.16)*	(22.44)*	(16.58)*	(14.05)*	(–0.06)
Woman's wage in agriculture	–0.189	0.148	–0.012		–0.002	0.002	0.001
	(–2.25)*	(3.12)*	(–0.68)		(–3.80)*	(2.27)*	(0.90)
Total income excl. female income	6×10^{-6}	-1×10^{-5}	1×10^{-6}	1.227	-2×10^{-7}	–0.000	4×10^{-8}
	(1.36)	(–2.80)*	(0.76)	(3.99)*	(–1.48)	(–0.24)	(2.33)*
Non-agricultural income					8×10^{-8}	1×10^{-7}	-9×10^{-9}
					(0.54)	(0.33)	(–0.44)
Remittances				4.038			
				(4.28)*			
Waged income				–1.250			
				(–4.91)*			
% income outside household				–3.813			
				(–4.24)*			
Acres land owned	-6×10^{-6}	0.008	–0.003		0.271	–0.215	–0.094
	(–0.20)	(0.50)	(–0.49)		(3.41)*	(–2.04)*	(–0.93)
Number in household	–0.020	–0.039	0.125		–0.072	–0.008	0.122
	(–0.10)	(–0.33)	(2.97)*		(–1.72)*	(–0.15)	(2.28)*
Other household members' inputs into agriculture					0.051	–0.008	–0.033
					(3.10)*	(–0.36)	(–1.59)
Outside labour employed				–0.471			
				(–2.40)*			
Number oxen kept				–1.229			
				(–4.68)*			
F	1.78	3.79*	2.64*		6.42*	2.00*	5.27*
R^2	0.07	0.20	0.13	0.81	0.24	0.09	0.21
Sample size	45	45	45	18	135	135	135

Notes

a No significant variables were found in regressions of women's time use in housework or other work

b Females working in agriculture. No significant variables were found in regressions of women's time use in livestock

Zimbabwe both men and women in 'high wage' households spend slightly less of their daily time in agricultural activities. Men spend some of this saved time in other remunerated activities, female partners are more likely to spend considerable additional time in housework activities (Table 3.10). The correlation of high effective wages in agriculture, high agricultural incomes and high levels of income generated through other activities is also evident. These households also have higher asset levels. The cumulative benefits of diversification are evident.

Waged labour in India

Improved productivity in own-farm work is associated with, and may result from, decreased family labour requirements and time being allocated to other remunerated activities for men, and unremunerated work for women. We now investigate this responsiveness to labour market opportunities. The determinants of waged labour supplied to the market are only considered for India where such work is

Table 3.10 Daily time spent in various activities and income and asset position according to whether the household earns a high or low effective wage from agriculture: Zimbabwe (24-hour time budget data)

	Low wage			*High wage*		
	Household	*Male*	*Female*	*Household*	*Male*	*Female*
Time spent in:						
Agricultural activities		9.1	9.0		8.8	8.7
Housework		0.2	1.4		0.3	1.9
Other work		0.46	0.4		0.54	0.2
Income from (Z$ p.a.):						
Own-farm	2,544			26,191		
Waged work	1,705			2,586		
Remittances	3,768			3,925		
Other income	6,725			16,708		
Total non-agricultural income	12,948			25,651		
Net income per capita (including value of own production)	4,308			14,953		
Household asset index	206			285		
Hours spent in agricultural activities by household per annum	5,306			3,971		
Sample size		69	43		83	36

prevalent. Around half of the household's total work hours in a main activity are spent in waged work in India compared with 5 to 29 per cent in the African countries.[18] The re-survey collected detailed information on individual wages and hours of work. These are combined with the time budget data to establish the effect of market wages on various uses of time. For men whose main activity is waged work there is a negative effect of the wage on hours worked (Table 3.11). The results again imply a backward-sloping supply curve of labour, but this time for waged work. Income from non-waged sources reduces participation, as would be expected. Similarly the amount of time spent in waged work by other family members also reduces the hours supplied to the market by the man. Substitution between male and other earners in the household is evident. There is little responsiveness of the time spent in agriculture to the wage earned by the man but the amount of livestock tending increases.

Discussion with the survey respondents yielded some insights into the underlying relationships. Waged work is viewed as the least desirable income-earning option and so it is usually undertaken only by the poorest, hence those with substantial amounts of land rarely work for wages. However, waged work is compatible with both livestock ownership and seasonal migration. The poor work for wages as well as keeping sheep and goats and they will migrate in lean periods when waged labour is not available locally. Some of the money earned by migrant labourers is invested in productive assets like land and livestock, thus it is used to diversify and achieve higher living standards.

Table 3.11 Time budget time uses: male partner's work in India where his main activity is waged work

	Agriculture	*Waged work*	*Tending livestock*
Constant	–2.634	15.152	–4.667
	(–1.49)	(6.46)*	(–2.75)*
Hourly wage in waged work	0.198	–1.834	0.867
	(0.43)	(–3.04)*	(1.98)*
Total income excluding	–0.0003	0.0003	–0.00003
man's earnings	(–3.59)*	(2.39)*	(–0.34)
Income from non-waged	0.096	–0.117	0.081
sources	(3.07)*	(–2.81)*	(2.70)*
Acres of land owned	–0.748	0.031	0.396
	(–1.51)	(0.05)	(0.83)
Land left fallow	0.638	0.034	–0.297
	(1.06)	(0.04)	(–0.51)
Number in household	0.381	–0.015	–0.094
	(1.67)	(–0.05)	(–0.43)
Other household members'	0.129	–0.329	0.117
time in waged work	(1.65)	(–3.18)*	(1.57)
Outside labour employed	–0.042	0.044	–0.063
	(–0.97)	(0.76)	(–1.50)
F	2.90*	4.16*	3.77*
R^2	0.51	0.60	0.58
Sample size	31	31	31

We observed earlier that for men primarily engaged in agriculture in India greater involvement in other forms of work was positively related to the productivity achieved in own agriculture. Conversely, the result here suggests, for men primarily engaged in waged work, that they will reduce the hours they work in response to a higher wage. The results can be reconciled by the recognition that we are considering two distinct groups, those with assets (who have agriculture as their main activity) and those without (who have wage earning as their main activity). Those who engage primarily in agriculture also have assets, possibly including better human capital, that allow them to access better and more desirable jobs or to set up their own businesses. Those who have to accept waged work as their main activity are amongst the poorest and face a different range of options.[19] The implication is that labour supply responsiveness may vary with the type of job available to the individual. Thus waged work is used as a stepping stone out of poverty for the poor, the intention being to use any money saved to diversify into agricultural or livestock activities and thus reduce the time spent earning wages. For those with limited amounts of land and assets, diversification into paid labour activities also may occur to achieve further accumulation but here the work may be of a self-employed nature. Survival strategies and routes out of poverty are dependent on the starting point and the available resources, but accumulation of assets is fundamental to the process.

For the wives of men in waged work (Table 3.12) we again find that women work fewer hours in waged work in response to an increase in their own market

Table 3.12 Time budget time use: female partner's time use where main activity of man is waged work in India

Time spent in:	*Agriculture*	*Waged work*	*Housework*
Constant	–4.138	12.155	9.181
	(–1.51)	(5.55)*	(4.03)*
Women's wage in waged work	2.366	–4.493	0.628
	(2.92)*	(–6.95)*	(0.94)
Total income excluding women's earnings	–0.0002	0.0002	0.0002
	(–1.99)*	(2.21)*	(2.38)*
Income from non-waged sources	0.071	–0.037	–0.093
	(1.80)*	(–1.18)	(–2.85)*
Acres of land owned	0.975	–0.531	–0.387
	(1.77)*	(–1.21)	(–0.85)
Acres of land left fallow	–1.772	1.247	0.323
	(–2.40)*	(2.11)*	(0.53)
Number in household	–0.214	0.367	–0.652
	(–0.60)	(1.28)	(–2.18)*
Other household members' time in waged work	0.234	–0.414	0.114
	(1.76)*	(–3.89)*	(1.03)
Outside labour employed	0.001	0.028	0.045
	(0.03)	(0.86)	(1.32)
F	1.67	7.32*	1.60
R^2	0.47	0.80	0.46
Sample size	24	24	24

wage.[20] There is also substitution between other household members and these women in the labour market. Acres of land left fallow are highly significant in occasioning work which is suggestive of women having to engage in waged work where their own agriculture is poor. Indeed, these women do more agricultural work in response to a better wage offered outside the household, indicating that agricultural work is preferred if the household can afford the woman to be so engaged.

Labour supply: summary

The analysis of time use and labour supply in the surveyed households has pointed up similarities and differences across the countries considered (see table 3.13). Women, children and other relatives vary in the extent to which they contribute productive labour in male-headed households. There is also variety in the importance of income from outside sources, the amount of agricultural work performed to meet subsistence needs, the degree of demarcation by gender in agricultural activities and the degree of diversification into waged work activities, which not only relates to the availability of work in local labour markets but also to the prevailing views of the desirability of waged work. However, despite these very individual country pictures of household time allocation some strong similarities emerge from the labour supply regressions. Most striking is that having controlled for the variable influence of the above mentioned factors we find that the households in all four countries show a significant, negative relationship between the household time spent working own land to the effective hourly wage the household earns from this land. The same response is observed for men and women individually in all cases where coefficients on the effective wage are significant. However, although meeting subsistence needs is seen as very important, especially in countries witnessing recent upheaval and uncertainty, there is no evidence that our respondents only want to work until target production levels are met. Respondents showed a desire to grow more and would do so if technologies increased productivity and if there are markets for the surplus. Instead this result is reflective of a diversification strategy. Where households can release labour to other uses they can use the proceeds to increase their productivity in agriculture. Achieving this labour release may be the first step out of poverty for these agricultural households. However, to enable this any constraints on achieving sufficient productivity to allow a labour surplus for use in other activities need to be overcome. In particular, access to agricultural inputs and efficient, functioning markets emerge as crucial.

Labour markets for waged work do not emerge as an option clearly preferred over any other in any of the countries studied. There is evidence that women would choose to spend any time they can retrieve from agricultural work in household work, thereby possibly improving the family's welfare. Waged work is undertaken by men in those locations where labour markets are more fully developed and reliable, Uganda and India. There is some substitution into other paid work from farming for men in Uganda, suggesting that they are able to take up alternative

Table 3.13 Time use and labour supply – summary table

	Zimbabwe	*Ethiopia*	*Uganda*	*India*
Major participants in remunerated activities:				
Men	✓	✓	✓	✓
Women	✓		✓	✓
Children	✓	✓		✓
Other relatives			✓	✓
Importance of agriculture:				
Proportion of households where man is primarily employed in own agriculture	82%	88%	92%	52%
Importance for subsistence	9.5 months food supply	4.3 months food supply	5.7 months food supply	5.5 months food supply for those with land
Diversification of activities	Concentration on farming	Concentration on farming ***or*** waged work	Limited diversification into waged work	Mix farming and waged work or do waged work exclusively
Extent of waged labour market	Few local jobs but migrants go to other areas	Limited local waged work	Some local waged work particularly in Sironko	Local opportunities, particularly for women. Some migration
Gendered differences in agricultural activities	Some demarcation – not rigid	Fairly rigid division of activities by crop and task	Quite distinct demarcation	Distinct demarcation by activity, not crop
Responsiveness of household agricultural work to 'wage'	–0.178	–0.504	–0.023	–0.241
Responsiveness of waged work to wage	–	–	–	–1.834 male –4.493 female
Substitutions:				
Men: Agriculture → other work	Other work ↑ as 'wage' ↓ Poor agriculture?		Other work ↑ as 'wage' ↑, released from subsistence?	Other work ↑ as 'wage' ↑
Women: Agriculture → housework	'wage' ↑ housework ↑	No significant effect	'wage'↑ housework↑	No significant effect

options and may be moving out of exclusive reliance on own agriculture to satisfy household needs for food and income. Similar substitutions are observed in Zimbabwe and Ethiopia, but here the motivations appear different. In Zimbabwe there is an indication that the labour market option is only taken if own agriculture is very poor and in Ethiopia it is only taken if the household is landless so has no alternative. Even in India where the waged labour market is considerably more established it is those who lack assets who engage in this as their prime occupation. Both men and women reduce the hours they work in response to an increase in the wage, which accords with a view of waged work as inferior and only to be undertaken by lower castes. However, the income earned may be used to acquire assets and diversify into areas such as livestock keeping and, for those better placed to choose how they utilize their labour, can also improve agricultural activities. Overall though, the evidence presented here is somewhat pessimistic about the immediate potential for local labour markets to offer a reliable escape route out of poverty. Most of our respondents prefer the autonomy and certainty offered by working the household's own land and tend to view waged work with suspicion, seeing it as potentially exploitative and sometimes degrading. Changing attitudes to paid work, improving the desirability of the jobs on offer and ensuring economic stability are all important in trying to achieve a greater role for paid work in household livelihood strategies.

While respondents may have had mixed feelings about waged work, land and livestock ownership aspirations were general and cash generation is essential to achieving this. Self-employed and small business income-earning activities were viewed much more favourably and could offer important diversification and improvement strategies. For those who owned some assets, improved agricultural productivity and income earning went hand-in-hand. However, households were faced with constraints in achieving these gains. Lack of access to resources and inputs, vulnerability to climatic conditions, health risks and macroeconomic instability all worked against anything the household tried to achieve. Developing local labour markets and a monetized rural economy is only a small part of creating the enabling environment needed for the reduction of poverty.

Female empowerment and intra-household bargaining processes

So far we have viewed the supply of labour by men and women in an orthodox way: wages and access to other income determine the hours of labour supplied to remunerated activities by individuals. However, it has been suggested that the standard neoclassical labour supply model[21] is a poor approximation to reality because it uses an illusory picture of the household in which intra-household conflict is invisible and so has no influence on outcomes. An alternative view of the household allows an individual's bargaining power to influence household decisions. On this view, factors such as earnings, social norms and legal codes, access to various kinds of asset, as well as perceptions of self, determine the threat points that underpin bargaining positions and these have an independent effect on

the outcomes realized. Empirical evidence is supportive of such an interpretation. For instance, a bargaining approach can help explain observed marital instability and fertility behaviour in Western societies and can demonstrate how the household might gravitate towards sub-optimal outcomes (Ott 1995; Humphries 1998). Other work has shown how expenditure patterns and demand outcomes under bargaining may differ from their neoclassical counterparts (McElroy and Horney 1981; Woolley 1988). Bargaining models also offer a closer description than the orthodox model of the working of the household in many developing countries. It has been observed, for example, that in African households decisions are the outcome of bargaining between partners; in particular women may be deterred by intra-family pressures from applying their labour where its productivity is highest (Jones 1983; Elson 1995, 1999). The allocation of expenditure has also been seen to be influenced by female bargaining power. For instance, Hoddinott and Haddad (1995) find the percentage of income contributed by women significantly affected the share of expenditure for a number of goods in Cote d'Ivoire. Quisumbing and Maluccio (2000) find that assets controlled by women increase expenditure on education and children's clothing in Asia and Africa. Similarly female asset ownership resulted in a greater proportion of household expenditure on food and education and lower proportions spent on typically male goods such as alcohol, tobacco and recreation in Ghana (Doss 2003).

If bargaining models are more appropriate to understanding household behaviour then this has important implications for policy-making. For instance, land reform and reallocation measures that put property into the hands of males will improve their bargaining positions relative to their wives and could reduce women's welfare, even if the household is better off. Similar effects can result from livestock restocking programmes where these are simply provided to the household head (Doss 2003). By contrast, agricultural extension provided to women can increase the crop yields they achieve on their plots, provide them with a source of cash income from these crops and in this way influence both their bargaining position and, very possibly, their labour supply also. There is no doubt that policy-makers need to be aware of the impact of policies on the allocation of resources within the household to ensure that policies have the desired effects for all individuals.

However, in practice, the bargaining approach still relies largely on information about observed inputs and outputs while making assumptions about the nature of the intra-household bargaining processes themselves. To go further requires opening up the household and tracing through the implications of external factors underpinning threat points to their influence on the way decisions are negotiated within the household to the final effect on observable outcomes. Here we do this for the households in our survey countries. We start by reviewing some of the economic and sociological literature on bargaining and intra-household processes. Then, using Uganda and Zimbabwe as illustrations, we use the survey material to examine the relationship between the determinants of threat points, power within the household and outcomes, such as women's labour supply and productivity in agriculture.

The basic principles of a bargaining model can be described diagrammatically (Figure 3.1). The individuals have separate utility functions defined over goods, x,

$$U^i(x) \text{ where } i = m,f \quad (1)$$

And they also have fallback positions, or threat points; their utility outcome in the case of disagreement, D^i. Utility is then maximized subject to a budget constraint

$$Y = xp \quad (2)$$

Within the utility possibility frontier AB only the set of points within the segment CDE are feasible outcomes. Neither party will accept an outcome within the partnership below their threat point. Typically the actual outcome is determined by an assumed bargaining rule. The Nash solution is often used, where

$$\text{Max } N = [\, U^m(x) - D^m \,] * [\, U^f(x) - D^f \,] \quad (3)$$

subject to the budget constraint. This yields an outcome, N, on the utility possibility frontier. The Nash solution is Pareto-efficient (no individual can be made better off without making another worse off) and lies at the greatest possible distance from the conflict point, D. Thus the conflict point determines the distribution within the household. Clearly a change in, say, one individual's wages will affect not just the location of the utility possibility frontier but also the threat point of that individual and thus the final outcome. This outcome may differ from that obtained under the consensus model of joint utility maximization. Key here is

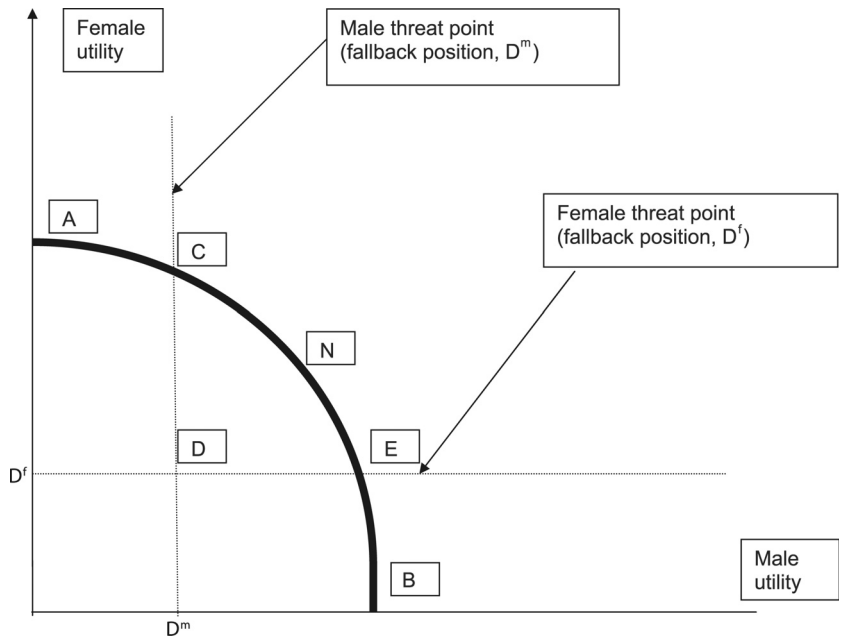

Figure 3.1 The Nash equilibrium and male and female fallback positions

understanding what factors underpin the threat points. Typically income from paid work is given considerable emphasis. However, the beneficial effects of income earning for women's bargaining position may be mitigated by associated shifts in power within the household (see, for example, Sen 1990a). More generally, family behaviour may be guided by non-market rules and norms of correctness. This is graphically illustrated by the systematic discrimination against girls in India (Kynch and Sen 1983; Sen 1990b). In a review of the bargaining literature Bina Agarwal (1997) also emphasizes that much bargaining is implicit, consisting not of an explicit negotiating process but rather of a conditioning environment which determines the course of the decision-making process. Social norms and perceptions, interactions over time and the possibility that women might be less motivated by self-interest than men can all influence bargaining positions.

Thus bargaining approaches need to incorporate tangible assets for each partner, such as income earning, wealth and asset ownership, but also human capital, education and skills, and social capital, proxied by access to social relationships and networks external to the household. Microfinance and extension service support might be important here. The approach also needs to include less tangible brokers of power, such as social norms and customs. The norms might cover what work men and women 'normally' do, legal systems which might, for instance, determine the allocation of children and assets after divorce, and access to formal institutions such as credit organizations and marketing networks. Perceptions of the value of one's work and whether it yields a cash return should also be considered.

At this juncture it should be noted that formal bargaining models incorporate an underlying assumption about the bargaining process involved. The Nash solution can be equated to one process but another might be where one partner can offer the other all-or-nothing choices. Women have few rights in some countries, they can be ostracized after divorce and domestic violence is commonplace. In these circumstances what the husband says goes. If 'negotiation' takes this form the outcome reached would be around point E in Figure 3.1, not N as previously described. Thus, while formal bargaining models demonstrate how this framework of analysis can be superior to the unitary model, they are not necessarily accurate descriptions of actual bargaining processes and outcomes will depend on the assumptions made about the negotiating process itself. To go further requires use of the bargaining framework and the insights it provides in conjunction with explicit analysis of the negotiating process and power within the household.

Analysis of household processes has typically been the domain of sociologists. The use of money as a 'tracer' has allowed the black box of the household to be opened up and has led to the conclusion that 'who spends the money and what they buy with it reflect, not only the crude level of household income, but also who earned the money, who has overall control and who manages it on a day-to-day basis' (Pahl 1989: 168). Similar findings have been observed in the context of developing countries. For example, more money is likely to be spent on children's education and food where mothers make the expenditure decisions (Mencher 1988; Kennedy and Peters 1992; Johnson and Rogers 1993). Processes within the household can exert an independent influence on outcomes.

In the following section we detail the information available from the surveys on these different facets of bargaining, with particular reference to the Zimbabwe and Uganda data.[22]

Bargaining variables: threat points and intra-household processes

We begin by reviewing the position of males and females in Zimbabwe and Uganda in relation to some of the external factors expected to influence women's bargaining position as examined above (Table 3.14). Women in Zimbabwe are contributing very little to household income from waged work and, overall, women have few physical assets. However, women's average levels of human and social capital, in both countries, are only a little lower than for male partners. In Uganda, women have similar levels of within-group (bonding) and between-group (bridging) social capital as men but less good linking social capital, in the sense of access to government and NGOs. Women have better access to microfinance than men, but men have more access to extension than women, although women's access to extension is rising rapidly under the influence of government policy. Of these services, two fifths of households in Zimbabwe have access to extension services and support programmes. Our measures of social norms in Zimbabwe show men are deemed to have prime responsibility for producing sufficient food for the household and that women's families are less supportive of them doing paid work than they are men, although the community is more supportive. This suggests that conflict over paid work is more likely to be played out at the household level than disapproved by society generally. Perceptions of male and female contributions within the household may be proxied by the market orientation of the household. If produce is sold through the market thus achieving a recognized monetary value women's labour contribution to this output is argued to be more highly valued than if the output is for home consumption. Overall, the survey households in both countries produced between one half and three quarters of their own food supply, and they sell most of their main cash crops by value, namely cotton in Zimbabwe and coffee, together with some vanilla, in Uganda. In Zimbabwe only one fifth of the maize crop is marketed, but in Uganda it is almost half. In both countries, the proportion of the typically female subsistence crops (groundnuts and roundnuts in Zimbabwe; millet and bananas in Uganda) which is marketed is smaller. Income from livestock sales and produce is very limited and few of the households ever sell their livestock here, though chickens and goats, 'women's animals', are more likely to be sold than men's cattle. These various indicators are combined to create an index of the external factors posited to enhance women's bargaining position (EXTERNAL) for each female partner within the survey (see Box 3.2, p. 70).

Strategies and processes within the household might intervene to obscure the relationship between relative bargaining power derived from external factors and the resultant outcomes. One way to unravel these processes is to follow money through the household and to see where the locus of control lies. To achieve this the survey asked a series of questions about crop and livestock sales. For each crop

Table 3.14 External factors expected to enhance women's bargaining position: Zimbabwe and Uganda (male-headed households)

	Zimbabwe		*Uganda*	
Sample size	231		272	
Respondent	Male	Female	Male	Female
Labour market participation				
% household income from male/female wages	22.9	1.6		
Physical capital:				
Landholdings (acres)	4.3	0.6		
maize (ha)			2.81	2.10
coffee (ha)			0.44	0.17
Own livestock (%):				
Cattle	91	8		
Goats	78	20		
Chickens	38	56		
Education				
% above primary	33	27	33	20
Social capital:				
Within-group			1.03	1.06
Between-group			0.64	0.59
Negotiating with gov. and NGOs			1.11	1.02
Access to extension (%)	39 (households)		21	9
Access to support services (%)	39 (households)			
Access to microfinance (%)			21	26
Vulnerability:				
Months food from own agriculture	9.5		5.7	
Social norms				
% responsible for producing sufficient food	60	20		
If ever do paid work, % report family supportive	89	67		
If ever do paid work, % report community supportive	69	89		

that the household both grew and sold respondents were asked who decided to sell the crop, who then went to sell it, whether the seller kept the money from the sale and what the money was spent on. The same questions were asked for each type of livestock sale made. The change of role through the process was classified as follows:

Male process	male decides	→	male sells	→	male keeps money
Female switch	male decides	→	female sells	→	female keeps money

Female money	male decides	→	male sells	→	female keeps money
Male delegates	male decides	→	female sells	→	male keeps money
Female process	female decides	→	female sells	→	female keeps money
Male switch	female decides	→	male sells	→	male keeps money
Male money	female decides	→	female sells	→	male keeps money
Female delegates	female decides	→	male sells	→	female keeps money

For instance, for the 98 households who sold maize in Zimbabwe, the man made the decision to sell in 67 per cent of cases. However, in only 30 per cent of all cases did he also make the sale and keep the money. Cotton emerged more clearly as a crop where the man had control over sales and money, and groundnuts and roundnuts were more female-orientated. The wife was likely to keep the money from the things she sold whereas the husband quite often handed it over to the wife. Thus the wife ended up with the income from 60 per cent of sales of crops despite having only made 48 per cent of the decisions to sell. Table 3.15 summarizes the patterns observed across different sources of income in both Uganda and Zimbabwe.[23] A picture of male dominance in most livestock and some crop decisions emerges,

Table 3.15 Intra-household processes in male-headed households: sales and processes

	Zimbabwe	*Uganda*
Crop sales		
All crops, man takes decision to sell (% sales)	52	71
All crops, woman receives money (% sales)	51	17
Maize	Predominantly male → some female money	Predominantly male
Roundnuts	Female	–
Groundnuts	Predominantly female	Predominantly male
Coffee	–	Male
Beans	–	Predominantly male but some female
Vegetables	Predominantly female	Male
Cotton	Male	–
Livestock sales (%)		
Cattle, male decision to sell	85	96
Cattle, male money from sale	59	75
Chickens/small animals, female decision to sell	37	19
Chickens/small animals, female money from sale	52	30
Earnings: % earners keep own earnings		
Man	79	87
Woman	74	88
Children	60	100

Box 3.2

Indices reflecting women's position in the household: Zimbabwe

External factors relating to women's power in the household

Ownership of land	number of acres owned by the woman
Ownership of house	Equal 1 if owned by woman
Ownership of livestock	Equal 1 for each of cattle, goats and chickens owned by woman
Paid work	Equal 1 if woman engages in paid work
Earnings	Proportion woman contributes to household income from earnings * 10
Financial	Equal 1 if woman holds a bank account
Human capital	Equal 0 if no education, 1 if primary, 2 if secondary, 3 if higher
Social capital and networks	Access to extension service = 1 Involvement in support programmes = 1 or 2 People who are away who are considered part of the household = 1 Make contributions to other households = 1 Contributions made by others to the household = 1
Social norms	Women responsible for sufficient food supply = 2 Shared responsibility for food supply = 1 For female respondents, family supportive of paid work = 0.5, for those who ever work, community supportive = 0.5 For female partners who ever work, average value 0.78
Perceptions	Index of market orientation of household with some emphasis on 'female' crops and livestock 12 – months food supply (*10) 100 – % crops for own consumption of maize % income from livestock + produce % groundnuts and % roundnuts sold ever sell goats = 10 ever sell chickens = 10 Perceptions divided by 100 in final index
Index	EXTERNAL = sum of above Range 1.1–44.8, mean = 6.23, s.d. 4.62

Internal processes reflecting women's control

Crop sales	Equal 2 if a female process for each of three crops, Equal 1 if female switch or female money
Livestock sales	Equal 2 female process for cattle or chickens, Equal 1 if female switch or female money
Keeps earnings	Equal 1 if woman keeps her own earnings
Financial decisions	Equal 1 if both have most say in financial decisions and final say in recent financial decision was hers
Index	PROCESS = sum of above Range 0–8, mean = 1.77, s.d. = 2.02

although certain animals and crops do afford women some economic independence in both countries. Wage earning too can enhance women's financial position if she retains her earnings. Indeed, the results show the involvement of both men and women in household decision making and control over money, but this arises more because men and women control separate domains than because things are done jointly or pooled. The classification of the flow of money from sales and earnings is used to derive an index of women's control over income as defined by the intra-household processes observed (PROCESS) for each of the women (see Box 3.2). Regression analysis establishes that external components of power play a role in enhancing the likelihood of female-oriented processes being adopted within the household.[24] The household's social capital, social norms and perceptions, as measured by the market orientation of the household, all positively and significantly increased the likelihood of the woman having more control within the household. These then may enhance the effect of increased bargaining power on outcomes.

However, it cannot be assumed that women are gaining greater control across the board. The survey responses emphasized the traditional divisions of responsibility between men and women, therefore, where women have a role in decision making it tends to be in well-defined, female areas. Thus any empowerment married women achieve derives from their control over female resources and assets rather than a more egalitarian sharing of household business. Their relative power then depends on the importance these assets are perceived to have within the household. But there is some indication of change, although 'the gender division of tasks has not changed much … due to increased gender education, mostly in the late 1990s, most partner households are beginning to involve women in decision making and the allocation of tasks' (JIMAT Development Consultants 2003: 9). Interviews in Uganda also revealed some evidence of women gaining more power within the household, again through increased involvement in traditional areas. Women's control over maize production decisions often extended from buying inputs into production technology, but bargaining power had to be earned by performance:

> Women are generally the quicker to take decisions on the adoption of modern [maize] varieties, probably because of their stronger focus on family food supplies. They usually have some bargaining power over maize production decisions – but the higher the yields they achieve, and the greater their prior involvement in buying inputs, the stronger their leverage over production methods. If a woman brings back an idea which increases the family's money the husband will always respect it.
>
> (interview, extension officer, Bufumbo, 22 August 2003)

On this view, prior involvement in input purchase could provide women with an opportunity to gain subsequent bargaining power in input allocation decisions, if they played the productivity card with sufficient skill.

Bargained outcomes: labour supply

Time budget information on women's hours spent in various activities is reanalysed to see whether bargaining factors affect female time allocation. In particular, external factors which enhance female power and intra-household processes favourable to women are posited to afford more say over time allocation. These are incorporated into the regression used for modelling female labour supply both as indices and using the individual components of the external factors index.

In Zimbabwe, the female power and process variables are significant for only one use of time, time spent in agricultural activities (Table 3.16). They had no significant effect on the time spent in housework or on other work activities such as running one's own business. Nor did they affect the direction or magnitude of the variables previously found to be significant. For agricultural work, having

Table 3.16 Regression analysis of female labour supply, embodying bargaining parameters: Zimbabwe. Time budget data for women in male-headed households where man's main activity is farming own land

Time spent in:	*Agriculture*	*Agriculture*	*Housework*	*Other work*
Constant	9.794	12.083	1.404	–0.504
	(7.82)*	(9.02)*	(1.86)*	(–1.90)*
Effective female wage	–0.148	–0.169	0.152	–0.013
in agriculture	(–1.79)*	(–2.29)*	(3.04)*	(–0.74)
Total household income	0.000004	0.000006	–0.000007	0.000001
excluding women's	(0.94)	(1.44)	(–2.41)*	(1.17)
earnings from agriculture				
Acres of land owned	0.026	0.020	0.008	–0.005
	(0.84)	(0.67)	(0.45)	(–0.80)
Number in household	0.038	0.076	–0.035	0.123
	(0.19)	(0.43)	(–0.28)	(2.91)*
PROCESS index	0.080	0.007	–0.108	–0.053
	(0.38)	(0.04)	(–0.84)	(–1.17)
EXTERNAL index	–0.122	–	0.003	0.010
	(–2.45)*		(0.09)	(0.96)
Components of EXTERNAL index				
Physical capital		–0.108		
		(–2.37)*		
Human capital		–1.203		
		(–2.24)*		
Social capital		–0.961		
		(–3.71)*		
Social norms		–0.116		
		(–0.37)		
Perceptions		0.004		
		(0.62)		
Sample	45	45	45	45
F	2.34*	3.49*	2.57*	2.17*
Adjusted R^2	0.16	0.36	0.18	0.14

Note
* denotes significance at 10% level or higher

factors viewed as favourable to women's bargaining position; in particular physical, human and social capital; significantly reduced the amount of time women would spend in agriculture. However, the regressions do not give us any clear answers as to where the reduced time in agriculture might be spent: improved external factors have positive coefficients with housework time and time spent in other work activities, but in neither case are the coefficients significant. But these women are using a stronger bargaining position to allocate their time away from agricultural activities.

The negative relationship between time spent in agricultural production and the 'effective wage' in agriculture (see earlier) has been attributed to time being used in other cash-generating activities, enabling the purchase of better inputs which allows better yields to be achieved or combinations of higher value crops to be produced. Incomes are raised through this diversification and a rising spiral out of poverty can occur. Here we identify women with higher levels of human, physical and social capital as being more likely to make this substitution. This is intuitively plausible and indicates that female accumulation of assets can help achieve a more productive time allocation. This finding is supportive of the Ugandan observation cited above.[25] Where women have the wherewithal to make choices about the activities they undertake, such as sufficient money income to cultivate new crops or buy better seed varieties on their own account, they can achieve enhanced incomes and so start the ascent up a virtuous spiral involving diversification, accumulation, empowerment and income raising. We find further specific evidence for this in Chapter 6.

These data imply that women with strong bargaining positions reduce the time they spend in agriculture and may devote more time to other remunerated work. Indeed it may be that the enhanced power is partly derived from engagement in paid work, as suggested in much of the literature. But undertaking waged work may be a desperate measure that neither improves women's power or welfare and may result in the woman doing more work overall. For instance, in the Ugandan studies women were sometimes plunged into waged work after experiencing a shock to part of their livelihood, such as drought, redundancy or widowhood. But the initial shock left them vulnerable in the labour market as well as more generally, thus limiting, in several cases, the gains they achieved by working.[26] In India too the benefit to women, and even families, of women working for wages has been questioned (Sen 1990a). Few female partners in the Zimbabwe sample actually worked for wages so only limited comparisons between their position and that of women who eschewed the labour market can be made. However, comparing time use for women who reported doing any paid work on the previous day with those who did none showed no significant difference between the average time spent in housework by the two groups and that overall work activity time was also comparable (Table 3.17). These women seem able to swop farm for non-farm work, although it is notable that they are not able to reduce housework time to facilitate paid work.

We consider more explicitly the impact of bargaining variables on women's involvement in small businesses and participation in waged work for Uganda

Table 3.17 Average time spent at various activities by whether the woman works for wages: Zimbabwe.

	Women who did no paid work	*Women who did paid work*	*F-test of significance*
Sample size	70	10	
Time spent in:			
Housework	1.57	1.90	0.31
Paid work/other work	0.0	2.30	100.01*
Agriculture	9.14	6.70	9.00*
Total work time	10.71	10.90	0.08

Note
* difference significant at 1% level

(Table 3.18). Here there is greater evidence that, rather than a positive relationship between bargaining power and waged work, women with more power eschew the labour market. Large landholdings are particularly instrumental in enabling individual women to avoid being thrust into the labour market and also in reducing the time they spend in other income-generating activities. In Zimbabwe large land holdings are part of the physical capital which leads to less time being spent in agriculture so, in both cases, higher asset holdings might imply a withdrawal into housework. Inclusion of a vulnerability index indicates that women in particularly vulnerable households are more likely to be thrust into waged work as they may have few other alternatives.[27] However, high exposure to extension, which might be expected to increase expected agricultural income and hence lower labour market participation, in fact does the opposite. We explored this with an extension officer[28] and our hypothesis is that this represents a specialization effect. Households which are heavily exposed to extension are those for whom agriculture is a particularly important part of their portfolio, so they deliberately increase their paid labour-hours, even in the peak season, in order to be able to afford the productivity-increasing inputs which the extension officers are recommending. [29]

Improved bargaining positions do allow women to exercise more choice about the allocation of their labour time but where they choose to deploy this time will depend on the constraints and opportunities faced. Specific aspects of these dynamics are explored in more detail in the individual country chapters on Uganda and India.

Bargained outcomes: investment and production decisions

In addition to the supply of labour, the data here allow us to ask whether who controls the money affects how it is spent. Focussing on Zimbabwe, regression analysis of progressively greater female control over money[30] and components of bargaining power on various expenditure categories done by source of income revealed some effects (Table 3.19).[31]

'Perceptions' significantly reduced the likelihood of expenditure from maize and chicken sales being made on household items and 'social norms' significantly reduced the likelihood of money from groundnut sales being spent on household

Table 3.18 Regression analysis of female labour supply, embodying bargaining parameters: Uganda. Dependent variable: value of paid labour-hours (female)

Independent variables	*Regression coefficients on independent variables*		
Constant	-0.05	3.86	1.45
	(0.017)	(0.96)	(0.38)
Effective wage	-0.00003	0.0000009	-0.000029
	(0.44)	(0.10)	(0.77)
Total household income			0.00005
			(0.66)
Number in household	0.28	0.23	-0.04
	(0.57)	(0.48)	(0.06)
Female education			1.07
			(0.36)
PROCESS index			
EXTERNAL index	-0.16*		-0.15*
	(2.08)		(1.97)
Components of EXTERNAL index			
Landholdings		-0.50*	
(maize land only)		(1.97)	
Social capital indicator		-0.81	
		(1.31)	
Access to extension		29.3**	
		(3.41)	
Access to microfinance		-0.79	
		(0.31)	
Vulnerability index		0.10*	
		(1.90)	
Sample size	71	71	71
R^2	0.08	0.24	0.09

items. No effect was found for cotton or cattle sales. Perceptions reflect the market orientation of the household and may indicate that money from agricultural sales is reinvested in agriculture in the market-oriented household. This is true even where the income source is typically associated with female ownership and control, poultry. The ability to divert income from consumption to investment uses where the household is able to utilize more of its resources for income generation purposes is again emphasized. The effect of social norms on expenditure from groundnut sales is less straightforward. We speculate that where the household is supportive of female involvement and participation, the proceeds from a typically female crop are used to enhance the productive position of the household. This would be consistent with the relationship between women's power and productivity noted in Uganda, where 'female process' households much more often spend the proceeds of their crop sales on investment goods, such as crop-related investment, livestock and small businesses, than households characterized by other intra-household processes.[32]

A consequence of gendered spending patterns which has great importance for the pattern of poverty in all rural areas is the level of male and female agricultural

Table 3.19 Regression analysis of expenditure patterns, embodying bargaining parameters: Zimbabwe. Expenditure categories with increasing values as the use moves from day-to-day household needs to investment

Expenditure of money realized from sales of	*Maize*	*Groundnuts*	*Chickens*
Constant	22.85	23.16	13.54
	(3.34)*	(2.27)*	(3.55)*
Physical capital	–0.02	–0.62	–0.16
	(–0.06)	(–1.20)	(–0.75)
Human capital	–1.56	–3.93	–1.54
	(–0.57)	(–1.10)	(–0.92)
Social capital	0.33	–1.74	0.24
	(0.22)	(–0.95)	(0.23)
Social norms	–0.26	6.08	–1.13
	(–0.13)	(–1.73)*	(–0.73)
Perceptions	0.12	–0.03	0.04
	(2.52)*	(–0.56)	(1.79)*
Intra-household PROCESS index	–0.07	–0.11	–0.01
	(–0.94)	(0.98)	(–0.27)

Note
* indicates significance at 10% level or higher

yields. It has long been a part of the conventional wisdom that one factor depressing both women's welfare and the overall efficiency and growth of the rural economy is that men have higher crop yields than women.[33] Usually this gender bias is explained in terms of women having deficient access to inputs: seeds, fertilizer and draught power but also extension services, labour, land and credit collateralized on land. The extent to which men and women have access to many of these inputs is, of course, determined by the intra-household bargaining that we have been examining. Our data on Uganda can inform this picture. Here we can look at male- and female-managed plots within male-headed households.[34] In Uganda maize yields are slightly higher on women's plots, although not significantly so. Incorporating bargaining into a regression on yields reveals that productivity on female plots is significantly enhanced by external factors posited to enhance women's bargaining power within the household (Table 3.20).[35]

Involvement in networks, as captured by the social capital and trust coefficient variables, positively enhance female productivity, as do access to finance and extension contact.[36] These variables are insignificant to yields on male plots. Instead male productivity is more constrained by ability to hire labour and high levels of risk aversion. Use of hybrid seed is also a significant positive influence on female productivity in Uganda. This again picks up the earlier point that where women can purchase improved agricultural inputs they can improve productivity and income.

On the evidence partly of these data and partly of qualitative and anecdotal information, we believe that for the purpose of determining women's yields the really crucial interaction is that between finance and extension with social capital. These inputs were generally provided in groups, and this circumstance

Table 3.20 Regression analysis of male and female maize yields in Uganda[a,b]

	Production decisions taken by men	*Production decisions taken by women*
Dependent variable:		
Maize productivity (kg/ha)		
Average value	1,422.0	1,538.1
Standard deviation	734.6	796.3
Independent variables:		
Constant	562.6	661.5
	(2.11)*	(1.40)
Maize acreage	32.0	27.6
	(0.91)	(1.46)
Utilization of hybrid seed (%)	0.33	4.52
	(0.16)	(1.91)*
Social capital:		
Composite measure[c]	52.38	
	(0.97)	
Trust coefficient[d]		0.026
		(2.17)*
Male education	–41.5	
	(0.31)	
Male exit possibilities	–287.8	
	(2.41)*	
Household labour	16.4	–75.4
	(0.29)	(1.10)
Hired labour	9.04	41.3
	(1.97)*	(1.26)
Risk-aversion coefficient (Arrow-Pratt 9)	–23.4	–220.4
	(1.91)*	(1.73)
Access to finance[e]	67.2	117.2
	(0.51)	(2.10)*
Female education[e]		105.8
		(0.6)
Extension contact[e]	283.1	301.5
	(0.91)	(1.65)*
Sample size	110	110
R^2	0.17	0.48

Notes

a In Uganda partnership households are distinguished between male and female-controlled lands on the basis of answers to the question: 'Who controls the land used for maize production?'

b Similar regression results were obtained when a composite EXTERNAL index and PROCESS index were included in the female plots regression. The EXTERNAL index had a positive significant effect on maize yields on female plots. The PROCESS variable is defined as an index which rises with the degree of male control over processes; hence the negative coefficient obtained indicates that greater female control increases yields, but it was insignificant.

c Average of 'bonding', bridging' and 'linking' measures of social capital.

d Trust measure derived from playing the Berg, Dickhaut and McCabe (1995) game, in which members of sample reveal their measure of intra-community trust by determining the proportion of a sum of money experimentally allocated to them which they wish to invest in other members of their local community

e Also components of EXTERNAL index.

OLS analysis, t-statistics in parentheses.

provided solidarity which was crucial to women's bargaining position because it provided them with the 'insurance' of support from individuals other than their partners and external experts, which buttressed their fallback position, and by this means empowered them to influence allocation decisions within the household. The payoff to positive discrimination in extension to women in Uganda illustrates the unexploited potential in other countries. But the direct impacts of policy on overall yields are also important. They are important because they not only feed directly into the agricultural component of household incomes, but also sustain the level of demand for labour and of non-farm economic activity and thereby exercise an indirect influence on poverty levels. These implications are further explored in Chapter 8.

Empowerment implications

Understanding household bargaining is important because it does affect outcomes. But there is not always a straightforward link between factors deemed to affect women's bargaining power within the home and outcomes; the choices made will depend on the desirability of the opportunities on offer. For instance, labour market participation is something the more powerful women might avoid. Culture and tradition also emerged as important. In Zimbabwe and Uganda it is evident that there are clearly gendered loci of control. Not only are women almost exclusively responsible for domestic work but certain crops and livestock are designated female domains (groundnuts, chickens) and others male (cotton, coffee, cattle). Any recommendations for change must acknowledge these cultural positions and may need to work within rather than challenge them. Thus improving household welfare by increasing the returns to women's work would be most easily achieved by improving the productivity and profitability of those areas in which women are already engaged.

A story of untapped potential to achieve these improvements has unfolded. Analysis of time use again emphasized the role that diversification of activities might play in generating cash which can be then used to access or improve agricultural inputs and hence yields and incomes. The discussions in Uganda put some flesh on this story: where women could buy better yielding seed varieties (because they had earned more say in household production decisions) the higher incomes achieved empowered these women and a virtuous spiral of power-productivity-profit was started. The analysis is supportive of similar processes occurring in Zimbabwe. That women will use money from their activities and over which they have control for productive purposes, such as investment in crops, livestock and small businesses, is evident from the data. The higher agricultural productivity thus achievable is also apparent. In Uganda, women's access to finance and extension services and social capital are important determinants of both these bargaining positions and crop yields. Extension also emerges as important in improving women's productivity in Zimbabwe (see Chapter 7) and the relationship between microfinance and bargaining positions is discussed further in the Indian context (see Chapter 5). Opening up the household has unveiled an empowerment – productivity route out of poverty.

Notes

1 See, for example, the Gambian rice project cited in Chapter 1.
2 Work here covers work on own land, waged work elsewhere and self-employed or small business activities.
3 4 *facasas* = 1 hectare = 2.471 acres
4 The total hours of work per day spent on own farm as a main activity by the household is 19 in Zimbabwe, 15 in India, 14 in Uganda and 9 in Ethiopia.
5 Agricultural production was reported to realize 9.5 months of the households' food supplies in Zimbabwe, 4.25 months in Ethiopia, 5.7 months in Uganda and 4.2 months in India.
6 Migrant labour is another form of waged labour which is important to many of the surveyed households. See the discussion in Chapter 2.
7 These diversification indicators again emphasize the greater degree of diversification in the Andhra Pradesh sample than found in the three African countries surveyed.
8 The effective average wage per hour from agriculture is calculated as: Effective wage = value of crops / (household hours in agriculture daily as main task × 5 days per week × 50 weeks per year + additional labour inputs × 7 hours + outside labour used × 7 hours × 10 days). Value of crops grown = gross yield for each crop × price achieved (or expected to achieve in the market). This is valued at the price achieved by other households in region if none of the crop was sold by the specific household.
9 Computation of the 'wage' from gross agrarian income divided by hours supplied has the disadvantage that the dependent variable (hours supplied to agriculture by the household) will have some correspondence with the independent variable (the wage). However, any direction of bias cannot be determined a priori. Households may be working for a target income so will stop supplying hours once a certain level of wage is reached. Alternatively there may be diminishing returns to increased hours put into the land if there is no compensating change in technology. Or the prospect of higher incomes may induce more hours to be supplied. Thus, although the 'wage' is, to some extent, determined endogenously, in that it isn't offered by some exogenous outside body which is not under the influence of the specific actors, any direction of bias is uncertain. Furthermore, the main influence on the wage is probably the market price attainable for the crops sold which is exogenous to the household's labour supply decision. The price is also accompanied by a considerable degree of uncertainty, which has not been explicitly modelled here. Finally, any correlation between wage and hours for the household is partially undermined by the incorporation of labour supply of others outside the household in the computation of the effective wage.
10 In all the African countries, female-headed households exhibited the same response of reduced hours worked to an increase in the effective wage as found for male-headed households.
11 These will not be male and female couples in the same household as we only have the time use information for respondents to the survey, but it is expected that the unobserved partners would behave in much the same way as the respondents and so allow us to intimate the way in which a couple's time use might interrelate.
12 For Ethiopia a negative response to total income is found but this effect is largely cancelled out by the positive effect on hours worked of increased income from wages and remittances, therefore there is a limited overall effect.
13 In Ethiopia those who farmed their own land spent virtually no time engaging in other remunerated activities so are not considered here.
14 The positive correlation between other income and hours in other work would be expected.
15 Only in India was there any significant effect on men's time spent in livestock keeping. Here the more productive agriculture was, as measured by the effective wage, the less time the man spent tending livestock, thus substitution of male time is away from rather than towards livestock keeping where agricultural earnings are high.

16 In India none of the variables were significant for the women's time spent in agriculture and only land left fallow was significant for the time spent in waged work and housework. This remained true when alternative explanatory variables were inserted in the regressions. The insignificant results point to the possibility that women's time allocation to alternative activities in these land-owning households is not driven by an economic rationale. It is perhaps exogenously determined by factors not modelled here such as the traditional division of labour between the sexes and by what is considered appropriate work for women from families with sufficient land that the male head can afford to cultivate land as his main job.
17 This classification is made on the basis of the household's position in the bottom or top half of the 'effective wage' in agriculture distribution.
18 These regressions have not been done for Zimbabwe, Ethiopia and Uganda as only a maximum of 25 households fall into the category where the man is in waged work for his main activity in male-headed households and only in approximately half these cases will the man, rather than their wives, be the respondent to the survey so that we then have detailed information on their time use.
19 Households where the head's main activity is in agriculture have an average asset index score of 307, those where the head's main activity is in waged labour have a score of 214. Incomes also show considerable disparity at Rs3,434 and Rs2,739 per capita respectively.
20 Some 82 per cent of the female partners in the Indian survey households were doing some work for wages and women were most likely to be working in classes where their husband was also a labourer (see Chapter 5). We therefore had individual wage observations for the vast majority of these women.
21 Such an approach assumes either a joint household welfare function based on interdependent utility functions or a benevolent dictatorship, thereby implying that individuals have agreed objectives and share in the benefits of cooperation.
22 Similar exercises were also conducted for Ethiopia and India. In Ethiopia women had few of the factors expected to enhance their bargaining position. In India women were more likely to be engaged in paid work but few owned land or held a bank account.
23 In the other countries studied, Ethiopia particularly and India to a considerable extent, male domination of the process is demonstrated. Almost all sales are determined by men and little or none of the money from the sale is handed over to the woman.
24 Female process = 0.506 (1.34) + 0.044 (1.34) physical capital + 0.131 (0.72) human capital + 0.206 (2.06)* social capital + 0.423 (2.74)* social norms + 0.005 (1.70)* perceptions. Adjusted $R^2 = 0.06$. t-statistic in parentheses, * indicates significance at 10% or higher
25 Note, however, that replicating the Ugandan time-use regressions with the incorporation of EXTERNAL and PROCESS variables did not reveal these bargaining parameters to be significant for any time use.
26 In her study of Eastern Uganda, Alison Evans discusses the link between women's bargaining position and the wage they are able to obtain: 'The severe constraints on women's time and income earning frequently places them in a contractually inferior position in the village labour market. Whilst most employers argue that male and female labourers receive the same payment for the same piece of work, the fact [is] that women, especially [poor] women, do not enter the wage bargaining process on the same terms as men. So in practice a woman's offer price may be below that of a man's, or will quickly be reduced in face of an intransigent employer'(Evans 1992: para. 8.18).
27 The vulnerability index is composed of four components: memories and expectations of vulnerability; expectations of short-term income variations; perceived risks associated with entrepreneurial behaviour; self-respect and perceived own status, see Mosley and Verschoor (2004) or Mosley *et al*. (2003: 55).
28 Patrick Natanga, interview March 2004.
29 Extension forms part of the social capital component in the Zimbabwe regressions and

here higher social capital reduces women's time spent working in agriculture. Possibly the same mechanisms are at work.

30 Specifically processes were ranked according to declining female control as follows: f process (fff), f switch (mff), f delegate (fmf), f money (mmf), m money (ffm), m delegate (mfm), m switch (fmm), m process (mmm) and the expenditure categories coded as follows: food (10), schooling (20), clothing/basic goods (30), household assets (40), agricultural inputs (50), farm equipment/ livestock (60); all other expenditure was excluded. Thus lower values reflected the expenditures typically associated with women controlling money and argued to benefit the welfare of children particularly.

31 There were 87 cases of maize sales where both process and expenditure were available, 36 groundnut sales, 38 cotton sales, 32 cattle sales and 68 chicken sales.

32 Female process households put 27 per cent of their sources of income to investment expenditure uses compared with 11 per cent for each of male process and male money households and 7 per cent of female money households. Nearly two thirds of these 'female process' expenditures were crop-related investment, again a higher proportion than found for the other households.

33 One of the most rigorous studies of gender and productivity in Africa states that 'plots controlled by women are farmed much less intensively than plots controlled by men, with the consequence that about six per cent of output is lost because of inefficient factor allocation within the household' (Udry 1996: 1018).

34 In Zimbabwe and Ethiopia we have information on production in male-headed and female-headed households but this unfortunately does not allow us to look inside the household to unpack the effects of bargaining parameters. However, differences in productivity in female- and male-headed households in Zimbabwe are studied in detail in Chapter 7.

35 A formal model demonstrating the inclusion of bargaining parameters into a yields equation can be found in Mosley *et al.* (2003).

36 The greater importance of social capital to women compared with men in achieving diversification has also been noted by Ellis (2001: 158). However, note that some scepticism has been expressed about the ability of social capital alone to lift the poor out of poverty (Adato *et al*. 1996).

4 Landlessness, poverty and labour markets in south-western Ethiopia

Sara Horrell and June Rock

Introduction

Over the past decade Ethiopia's rural land tenure systems have been the subject of renewed but, as yet, unresolved debate. At its simplest the debate has been framed in terms of land privatization versus state ownership, with the former position associated with several of Ethiopia's major donors, especially the World Bank, and the latter forcefully argued by the Ethiopian government. At issue is the trade-off between economic efficiency and social equity. The Ethiopian government maintains that state ownership combined with state allocation of usufruct rights, through regular and equitable redistribution, is the only way of guaranteeing access to land for all Ethiopians. These ideological considerations notwithstanding, the government's stance also rests on fear of the alternative:

> We do not see the commoditisation of land as economically rational at this point … We do not have the necessary levels of economic growth to allow for productive peasant displacement. Major social disruption would undoubtedly occur as a result of land sales. A significant unemployed and unemployable sector would result.
>
> (Prime Minister Meles Zenawi, April 2000, cited in Devereux 2000: 11)

At the same time, there is growing recognition that landlessness, or near landlessness, is already a serious problem for many of Ethiopia's rural communities (see, for example, Benin and Pender 2001; Masefield 2001). According to the government's own estimates, by 1996/7 some 60 per cent of Ethiopian farmers lacked access to the requisite amount of land necessary for cultivating enough cereals to feed a family of five people (FDRE 1999). A more recent countrywide survey of Ethiopia's current land tenure systems found 'scarcity of cultivable land to be a serious problem' (EEA/EEPRI 2002: ii). Out of a sample of 8540 households, 48 per cent of the households were landless, or effectively landless. The implications for the livelihoods of these landless households remain a matter for further investigation.

This chapter aims to address this gap through an examination of the position of the landless in our case studies in Jimma, southwestern Ethiopia. In both the study

areas landlessness was reported to be a major problem. At the regional level there had been no land redistribution for over ten years prior to 2000 (Bezuayehu *et al*. 2000, cited in Benin and Pender 2001) and, according to informants, no redistribution in the interim between then and the timing of our survey in April 2003. In both survey sites the prevailing systems of land tenure are based on partible inheritance through subdivision of holdings with sons being the prime beneficiaries. However, scarcity of arable land together with population growth have combined to create the pitfalls commonly associated with such systems: diminishing farm sizes and increasing landlessness, especially among young, newly married men. According to PA committee informants the problem is one of land shortage, landholdings are already small and there is no new land to distribute. The small size of landholdings is supported by the household surveys, with landholdings averaging only 2.8 *facasas*,[1] slightly less than 0.75 hectares. While there is some differentiation in the size of holdings, this is not highly skewed, ranging from between 0.5 and 10 *facasas*.

In discussions PA committee members estimated some 35 per cent of households in Afeta PA and 30 per cent of households in Omo Beko PA had no access to arable land. Within the survey sample 11 per cent and 15 per cent of households were found to be landless in the two areas respectively. Overall 12 per cent of male-headed households and 14.5 per cent of female-headed households were landless. Thus the problem does not appear to be confined to those who might normally be expected to have limited rights to land or to be in a particularly impoverished position, that is, those without male household heads present. Indeed, although the tenure systems tend to favour men, widowed and divorced women do have rights to a portion of their husband's land even though as married women they have no access to land in their own right and typically work their husband's land.

Landlessness is perceived by all survey respondents as an increasing problem and likely to impact most upon young, newly formed households. The consequences for these households are uncertain. Landlessness will obviously force households to rely on sources of income other than crop growing, and it is a matter for investigation whether this then means that these households are more likely to suffer poverty and to have to enter labour market arrangements on disadvantageous terms. These households might be particularly vulnerable. Women's position within these households might also be affected. The lack of land will mean that wives cannot participate in growing crops for the household, whether for own consumption or for sale. Instead they might undertake paid work or devote their time to childcare and housework. This altered role may have consequences for women's position in the household. Gendered divisions of labour and women's influence in household decision-making may be affected. The chapter uses the survey data to explore the position of the landless and consider the effect on gender relations within the household. It focuses solely on male-headed households and does not distinguish between the two regions studied.

Landlessness and dimensions of poverty

Of the 233 male-headed households surveyed, 28 were landless.[2] Of those households with land 37 per cent had only 2 or fewer *facasas*, 43 per cent had 2.5 to 4 *facasas*, and 20 per cent had 4 or more. Using the previous poverty profile classification (see Chapter 2) shows the landless household to be much more likely to be income-poor, asset-poor and both income- and asset-poor than households with land (Table 4.1).

Indeed, nearly two thirds of landless households suffer poverty on both dimensions compared with just over one fifth of those with land. Thus landlessness is closely associated with poverty and specific poverty alleviation measures need to be devised for this type of household.

Table 4.2 explores the dimensions of this poverty. Income sources differ in some predictable ways for the two types of household. Income from crops, both from actual sales and imputed values for own consumption less the labour and draught power costs of growing these crops, constitutes some 86 per cent of total income for the household with land.[3] Landless households have no income from this source and are instead more reliant on waged income and income from running a small business than the land-owning household. Small businesses may be buying and selling coffee beans or brewing local beer. However, waged income amounts to a little less than half the income realized from crop growing. The extra the landless household earns from waged work, business and other income above that earned by the land-owning household together only amounts to 61 per cent of the average income generated by crop-growing.[4] Thus the landless household does not fully compensate for the lack of crop income through other remunerated activities.

Very few households in these Ethiopian villages own livestock, around one quarter of all male-headed households. Indeed the severe shortage of oxen and other animals in the area was noted at the time of the survey. Only 5 per cent of all the households surveyed had the requisite pair of oxen necessary for ploughing and 13 per cent had only one ox. Animals are extremely important in the rural community. They provide a source of draught power, manure and fuel, transport and trade, food, rental income and status and they can be sold in times of need. Thus they provide a source of income and are also a means of accumulating assets. Landless households are just as likely to own livestock as those with land, 25 per cent and 24 per cent respectively, and were slightly more likely to own two or more animals, 11 per cent compared with 6 per cent. This is reflected in the average

Table 4.1 Income and asset position of landless households

	Income poor (%)	*Asset poor (%)*	*Income and asset poor (%)*
Landed households	38.5	36.6	21.0
Landless households	71.4	78.6	64.3

Table 4.2 Income and asset position of landed and landless households

	Mean values:		
	Landed	*Landless*	*F-ratio*
Income components			
Crops (sales and own consumption less costs)	1,122	0	106.9*
Livestock, value of sales	29	29	0.0
Livestock, value of produce	10	7	0.4
Waged income	86	535	82.6*
Small business income	25	223	49.8*
Remittances	19	0	0.5
Other income	15	50	11.0*
Gross income	1,306	843	15.1*
Net income per capita	253	190	6.0*
Assets			
Acres of crops	3.3	0.0	125.1*
No. available for work	3.4	2.4	12.0*
Education level of household	14.3	7.0	12.1*
Ownership of property	17.5	12.6	6.2*
Value of tools	1.3	0.8	0.6
Value of livestock	15.4	16.1	0.0
Social capital	1.6	4.6	22.6*
Household assets index	203	107	19.9*
Diversification			
No. ever do paid work	0.4	1.3	33.5*
No. sources of income	2.1	2.2	0.2
No. types of livestock	0.3	0.4	0.1
No. crops grown	2.1	0.0	854.7*
Household size	5.5	4.7	3.8*
Average age, husband	45.3	34.2	
Average age, wife	34.0	26.9	

Note
* indicates significance at 10% level or more

imputed use values, based on livestock sale prices and an estimated lifetime for each animal, and imputed product values, which are similar for the two types of household. That landless households are not disadvantaged in livestock ownership by their lack of land is perhaps less surprising than would first appear. In the survey areas, as elsewhere in Ethiopia, animals are traditionally perceived as a means of saving. Animals are also grazed on communal, or common, land. Thus, households without access to cultivable land still have access to grazing areas. However, livestock income forms such a small component of most households' net resources that it can do little to mitigate the impoverished position of the landless.

Landless households have no remittances from external sources, whereas these form a small part of the income of households with land. This might suggest that the landless have fewer external contacts and could imply that the landless suffer by

being excluded from resource networks and so have lower social capital levels. However, closer examination of the data collected on links with other households reveals this impression to be erroneous. Landless households are slightly more likely to have someone living away who they consider to be part of their household than landed households (14 per cent compared with 12 per cent), most of these households have just one person away (75 per cent and 63 per cent) and the vast majority are sons (100 per cent compared with 88 per cent). None of the people away supply labour to the household but around half those away from households with land make cash contributions to the household, although in all cases this was reported to be an intermittent rather than a regular source of income. No remittances were returned to the landless household. We can only speculate at the reasons for the different behaviour. It may reflect different reasons for migrating away from the landed and landless household. For instance, those from landed households may only live away if the opportunities appear good whereas those from landless households may have a lack of alternatives which causes them to enter the migrant labour market in a weak position and thus be less able to return remittances. In terms of assistance from the households surveyed to others outside the household, the landless again have more links: 11 per cent give assistance compared with 4 per cent of households with land. Generally this assistance is given to parents or grandparents, very occasionally to sons, and it usually takes the form of labour or food. Again, only the households with land provide cash. Thus landless households have fewer extra-household financial links but they are slightly more likely than households with land to have extra-household commitments.

Overall, landless households are much poorer than the landed household. Their gross income is less than two thirds of the income of those able to grow crops. However, these households are about eight years younger, on average, and have a smaller household size.[5] But this accounts for only a little of the difference. Per capita incomes are only three quarters of those of land-owning households. The landless households' reliance on waged labour and small business income means they are more likely to suffer income poverty than those with land.

With the exceptions of livestock and social capital, the landless household is also more likely to be poor on most dimensions of asset ownership. That they have no land and a reduced level of ownership of property and tools is unsurprising as these measures largely encompass assets related to crop growing. For instance, property ownership includes houses and cattlepens but also incorporates grain-stores and ox ploughs. But the landless household also has fewer members available for work, so lacks labour resources relatively, and has a lower average education level. The former can be explained by the smaller and younger household, since there will be fewer people of working age in these households. The latter might imply that the landless household is generally disadvantaged, as landlessness is associated with the poverty of the childhood household and this is also reflected in lower educational attainment. If this were the case it could suggest that members of landless households enter the paid labour market on poorer terms than those from households with land and thus compound their disadvantage. However, more detailed analysis of the education levels of husbands and wives

reveals a different picture. Landless men are more likely to be educated and to a higher level than landed men: 43 per cent compared with 50 per cent of those with land have no education, and 15 per cent compared with 11 per cent have education at junior or secondary level or above. Thus these men should enter the labour market on slightly more favourable terms than their landed counterparts if the labour market offers a range of jobs that have varied human capital requirements. Landless women are more likely to have had education than women in households with land (39 per cent compared with 26 per cent), but none have education above primary level whereas 5 per cent of those with land have levels of education above this. The overall lower levels of education in the landless household reflect the youth of the household, as there will be more younger children in these households who have not completed or not yet started their education. Social capital in the landless household is higher mainly because of the supportiveness of family and community for their paid work which enters this measure. As already seen, numbers of extra-household links are similar for the two types of household. Overall, landless households are more likely to be asset-poor than those with land. This arises both because of lack of land and associated property and because the household is young so lacks labour and educational resources for current income generation.

Does the lack of income and assets affect the ability of the landless household to diversify and so reduce risk? Landless households are able to diversify their sources of income and the types of livestock that they keep to the same extent as those households with land, but there is more reliance on household members entering the waged labour market (more are recorded as ever doing paid work in these households despite their youth) and they are obviously unable to diversify the crops they grow.[6] Thus, on these simple measures, there is little overall difference in ability to diversify but the form this diversification takes varies between the two types of household.

The difference in income source is to some extent reflected in the activities of men and women in these households (Table 4.3). The vast majority of men farm their own land if they have land (97 per cent). Those without engage in waged work or sometimes run their own business. Waged work on other people's land is the main activity for 61 per cent of landless male heads of household. Stating a second activity is more likely for those with land. Again for most this second activity is farming their own land or keeping livestock but a few might engage in waged or other paid work (13 per cent in total). For those without land the secondary activity is usually waged work or running their own business (25 per cent). The vast majority of women state housework and childcare as their main activity: 15 per cent of those with land spend the majority of their time farming that land and 8 per cent of those with no land work for wages or run their own business. Most women state a second activity: for nearly one third of those with land this is farming their land; 5 per cent engage in some other form of remunerated work. For women without land only 4 per cent engage in paid work. Overall, women are very unlikely to be found working but they are more likely to work on their own farm than they are to engage in paid work.[7]

Table 4.3 Activities of husband and wife

	Main activity (%)				*Second activity (%)*			
	Husband		*Wife*		*Husband*		*Wife*	
	Land	*No land*	*Land*	*No land*	*Land*	*No land*	*Land*	*No land*
None	–	–	–	–	54	64	16	21
Farm own land/ livestock	95	7	15	–	18	–	31	4
Waged work on farm	1	61	0	–	5	14	1	–
Waged work off farm	1	14	–	4	5	7	2	4
Other paid work	0	4	–	–	1	–	1	–
Run own business	0	11	1	4	2	4	1	–
Housework/childcare	0	–	83	93	3	4	48	64
School	1	–	–	–	–	–	0	4
Other	1	4	–	–	12	7	4	4

The average time spent at the main activity by various household members again supports this picture (Table 4.4). Men with land spend 5.8 hours per day farming this land on average; very little time is spent by these men in paid work activities. Conversely men without land spend 6.8 hours per day on average at a remunerated main activity. Women spend very little time on average either working their own land or at paid work, but the number of hours spent at these activities are less for women in the landless households, 0.5 hours compared with 1.0 hours in the households with land. Other household members do more in the landless household than the landed, an average of 0.8 hours compared with 0.6 hours, and most of this is paid work.

Overall, then, a picture emerges of landless households being income-poor, reliant on waged labour and having more of their members engaging in this work. The household tends to be young with fewer members and of a lower education level because of its youth. Despite this, more people enter the labour market and it is more often another household member rather than the wife that is found to be working. This may imply some considerable reliance on the earnings of children and youths for these households. Men too work longer at their main activity than men in households without land. We now turn to consider the terms on which these households are entering the labour market.

Participation in waged labour

Jimma is one of Ethiopia's main coffee-growing areas. Coffee, the country's traditional and main source of foreign exchange, is grown by smallholders on what were, prior to the Mengistu regime's nationalization programme in the late 1970s, privately owned, large-scale, commercial enterprises. Following the adoption of market liberalization post-1991 these plantations are now run as private enterprises, but continue to be state-owned and continue to be an important source of employment, although mainly for migrant labourers. Falling international coffee

Table 4.4 Average time spent at main activity by household members

	Landed	*Landless*	*F-ratio*
Average time spent by husband at:			
Own farm/livestock	5.83	0.48	132.7*
Paid work/business	0.19	6.79	526.2*
Other activity	0.11	0.00	0.4
Average time spent by wife at:			
Own farm/livestock	0.91	0.00	4.0*
Paid work/business	0.07	0.53	6.4*
Housework/childcare	6.09	6.21	0.0
Other activity	0.00	0.00	–
Average time spent by others in household (per person) at:			
Own farm/livestock	0.50	0.00	5.3*
Paid work/business	0.10	0.78	16.0*
Housework/childcare	0.64	0.36	1.3

Note
* denotes significance at 5% level or more

prices have pushed the producer price of coffee to less than 50 per cent of the price commanded in 1999, eroding any initial benefits accruing to small-scale producers from the post-1991 government's liberalization policies (MOFED 2003; World Bank 2003). Virtually all of the respondents in our research sites reported low coffee prices over consecutive years as the main risk to their income.

Agriculture, and the coffee sub-sector in particular, is the main source of labour demand in Jimma zone. There are few employment opportunities outside agriculture. Jimma's two state-owned coffee plantations hire labour both on a permanent and on a temporary contractual basis, with demand for labour peaking during the harvesting season (October–January). Both male and female labourers are hired and there are rules restricting the hiring of children of less than 14 years of age. Temporary labourers are paid on a piece rate basis, with a minimum pay of five Birr per day, and can reportedly earn between 20 and 30 Eth. Birr per day. Other benefits accruing to plantation labourers are food, shelter, and health services.[8] A further source of seasonal employment in the coffee sub-sector, and one that specifically targets female labour, is coffee-shelling mills. These small- to medium-sized enterprises hire female labour during the period November to March.

In the study areas, however, the main source of employment is the relatively wealthy farmers. Distance and prohibitive transport and subsistence costs preclude men taking employment on the plantations and women are further constrained because working on state farms would entail living away from home leaving them unable to look after their spouse and children. Demand for labour by local farmers also peaks during the coffee picking season. Labourers are hired on a casual basis and are paid an average of 3 Eth. Birr per day. There are very few economic opportunities outside of this peak demand period, and an absence of capital markets, a legacy of Ethiopia's 15-year-long command economy (1975–90), with which to start small enterprise initiatives or increase labour demand through investment in

Table 4.5 Labour market participation in past year

	Landed	*Landless*
% households with members participating in the labour market	26	86
Average number of workers per working household	1.3	1.4
Composition of workers(%)		
Male head of household	53	62
Wife	4	12
Sons	34	15
Daughters	4	–
Other relatives	4	12
Type of employment (%)		
Picking coffee	74	50
Picking coffee and daily labour	13	24
Daily work on local farms	9	21
Other (often guard)	4	6
Duration of employment (%)		
1–2 months	19	3
3–4 months	46	30
5–6 months	15	15
one year	4	6
years	–	3
when find work	16	42
Average number of days worked in year by those working	84.5	133.0

agriculture hampers this situation. A few households in the survey reported having household members that did daily labouring, such as mending fences and repairing houses, throughout the year, but these are the exception.

The vast majority of landless households have someone who has participated in the labour market in the last year (Table 4.5). Around one quarter of households with land are in this situation. The average number of workers in the households who have done labour market work differs little between those with land and those without. Landless households are more likely to engage in labour market work but they do not engage any more intensively, in terms of number of workers, than other households who do paid work. The composition of labourers shows a greater reliance on the work of husbands, and, to a lesser extent, wives in the landless household. This greater reliance on the paid work of husband and wife means that sons form a smaller part of the labour force from the landless household, although they are still more likely to be working than their counterparts in landed households. In both types of household the main type of work undertaken is coffee-picking, but daily work on local farms as well as picking coffee forms a substantial proportion of the work done in landless households, 45 per cent compared with 22 per cent of the jobs taken in households with land. The greater reliance on waged work in the

Table 4.6 Income and asset situation of households with land by participation in the labour market

	Participate in labour market	*No paid work*	*F-ratio*
Gross income	1,290	1,311	0.1
Net income p.c.	226	262	3.3 (7%)
Crop acreage	2.6	3.5	14.6*
Imputed income from crops	868	1213	15.5*
Waged income	326	0	164.0*
No. sources income	2.7	1.9	26.8*
Household asset index	208	201	0.2
Household size	6.0	5.3	3.9*
% income-poor	35	40	
% asset-poor	39	36	
Sample size	54	151	

Note
* denotes significance at 5% level or more

landless household is found in the amount of work performed. Labour market work tends to be carried out for a longer duration than the one to four months typical in landed households. Indeed the average number of days worked in the year by those working is some 57 per cent greater in the landless household.

In the surveys it was reported that waged labour was widely perceived to be inferior to working one's own farm and having to make the foray into the labour market was associated with hardship. Table 4.6 compares the situation of households with and without waged labourers for only those households with land. Households with land do appear to engage in labour market activity because of the inadequacy of their land to support the family. Landholdings are smaller and imputed crop incomes lower in the working household. However, labour market work goes some way to shoring up the deficiencies in crop income so that the household's gross income and poverty situation is at least as good as that of the household that focuses on farming its own land. However, slightly larger household sizes for those with labour market activity still leaves a small but significant (at 5 per cent level) deficit in net incomes per capita. Interestingly, though, these households are no more likely to be asset-poor than those who only work the land. Thus, for households with land, involvement in labour market activity appears to be an adequate way of supplementing insufficient incomes from crop growing and does not, on the face of it, suggest these households suffer exploitation and disadvantage in this market. The perception of hardship seems to be associated with lack of land but the outcome of finding an alternative means of earning an income is that the household is no more likely to be in poverty than one with more land. However, entering waged work may still have detrimental effects such as one's perceived status and the absence of labour on the home farm for periods of time.

Table 4.7 returns to considering the days worked and income yielded from waged work by different family members in landed and landless households. Few

Table 4.7 Income and days worked

	Landed			*Landless*		
	Total income from waged work (Birr)	*Imputed no. days worked*	*Cases*	*Total income from waged work (Birr)*	*Imputed no.days worked*	*Cases*
Male head	226.0	75.9	36	588.6	162.7	21
Female spouse	62.0	22.5	2	88.0	28.9	4
Son	345.2	107.1	23	330.0	103.8	5
Daughter	400.0	115.0	3	–	–	–
Other relative	75.33	25.3	3	156.3	51.8	4

respondents were able to recall the actual number of days worked, thus the number of days worked are imputed for individual household members and are based on his/her reported total income divided by the reported daily rate. It is evident that the increased commitment to the labour market of landless households occurs through the increased participation of adult men. Male heads of household work more days and consequently earn more than men who engage in any labour market activity from households with land. The few wives who work do work a few extra days in the landless household, but in both types of household they are working less than 30 days a year. Sons have similar work patterns regardless of whether the household has land. The landless household benefits from the increased participation of other relatives, but their contribution remains relatively small. Comparing hourly rates of pay reveals that men in landless households receive a slightly higher rate of pay than men with land. This may reflect their higher levels of education and/or ability to work harder as they are younger. It certainly gives no reason to suppose that men from landless households are entering the labour market on particularly disadvantaged terms relative to those with land. Indeed, the landless may more easily be able to enter into contracts of long duration or on a regular basis than those from landed households and thus gain better terms and conditions of employment.

As expected landless households are more reliant on waged work and they are particularly reliant on the work of the male head of household but the landless household does not appear to be particularly vulnerable to exploitation in their labour market participation. However, the heavy reliance on male employment to support the family and the limitations to the woman's ability to contribute through working the household's own land may impact both on the household's vulnerability to change and shocks and on gender relations within the household. Reliance on a male breadwinner may increase male dominance in household affairs. These possibilities are investigated in the subsequent sections.

Landlessness and vulnerability

The survey asked respondents about changes that have occurred to the household in the last five years and the changes that they expect in the future. It also asked about the amounts of income yielded from each of seven sources in 1997 and 2001/2. This

information is used to assess whether the landless household is more vulnerable to change and uncertainty than the household with land.

All households were asked whether there had been any changes to the time spent in waged labour or the income earned from waged labour over the last five years. Only one household, one with land, recorded a change and this was a decrease in the time spent and income earned. Households were also asked if and how they expected their livelihoods to change over the next two years. Only 3.4 per cent of landed and 3.6 per cent of landless households expected a change and the types of change expected were to buy cattle and increase production. Thus there is little evidence that landless households either experience or expect more change than the households with land.

However, landless households are clearly more vulnerable to rising prices and market disruptions than households with land as they cannot supply their food consumption needs from their own production (Table 4.8). When asked about risks to crop production the landless saw market collapse as being as important in affecting production as did households with land. Interestingly they were more likely to cite coffee disease as problematic than those with land, all of whom grew coffee. This might reflect the landless household's greater reliance on coffee as a source of waged income, since households with land would likely also have other crops, such as maize and teff, to offset some of the disastrous consequences of coffee disease. Illness and resource constraints posed more of a threat to those with land.

Although few households owned livestock, the levels of ownership were similar for households with and without land. However, landless households were less vulnerable to having to sell their livestock because the household needed the money than those with land. Because the sales were often distress sales some 36 per cent of the sales that occurred achieved less than the normal price that would be expected. This hints at less vulnerability in the landless household.

T*able 4.8* Vulnerability

	Landed	*Landless*
Months food supply	4.24	0.0
Main risks to crop production (1st or 2nd ranked risk, % cite):		
Illness	41	29
Market collapse	77	71
Resource constraints	29	14
Coffee disease	29	36
Livestock:		
Would normally sell animals when household needs money (%)	28	4
Livestock sales last year:		
Oxen sold (cases)	2	0
Cattle sold (cases)	7	0
Goats sold (cases)	2	0
% cases achieved less than price would normally expect	36	–

The estimates of income from various sources for 1997 and 2001/2 give an impression of how the situation for the landed and landless has changed over this period (Table 4.9). Although it would be unwise to assume the figures reported are necessarily accurate the direction and magnitude of change do give a valid impression of where changes have been perceived to occur. The figures reveal that for all households there has been greater variability of income from waged labour and small businesses than there has been from crop sales over this four-year period. Because earnings and small business income carry much higher weights in total income for the landless household this leads to a greater volatility of income in the landless household. The landless suffered more income uncertainty than those with land. However, it should be noted that a reasonable proportion of those engaging in waged labour and running small businesses are better off than they were a few years back (56 per cent and 36 per cent landless and 21 per cent and 10 per cent those with land) whereas very few, 12 per cent, claim to have higher crop incomes. Of course, many are worse off too, but again lower proportions than have suffered lower crop income (46 per cent waged and 87 per cent crop income). Thus some of the greater volatility is a reflection of improvement for the landless. However, it is worth noting that households with land rarely report having lower incomes from waged labour (5 per cent) suggesting that most can exercise the choice to take up alternative options for the uses of their time if waged opportunities are poor. Only those with the smallest landholdings and

Table 4.9 Income vulnerability, 2001/2 compared with 1997

	Landed				*Landless*			
	Mean 1997 (Birr)	*%*		*coeff. of variation (s.d/ mean)*	*Mean 1997 (Birr)*	*%*		*coeff. of variation (s.d/ mean)*
		better off	*worse off*			*better off*	*worse off*	
Income from								
Crop sales	1,299	12.2	87.3	126%	2	0	3.6	528%
Livestock sales	27	3.4	2.4	3736%	0	0	0	0
Livestock produce	2	5.4	1.5	638%	0	0	0	0
Waged labour	35	20.5	4.9	311%	499	55.7	46.4	953%
Small business	8	9.8	1.0	514%	126	35.7	10.7	261%
Remittances	3	6.8	0.5	780%	0	0	0	0
Other	10	22.0	3.4	1066%	2	53.6	0	146%
Total income	1,387	19.5	79.5	145%	629	53.6	42.9	266%
Overall measure (%)	211.8				810.5			

Notes:
1 Coefficient of variation measures the standard deviation of the change in income between 1997 and 2001/2 relative to the mean variation in income between the two years.
2 The overall measure of variation is calculated by weighting the coefficient of variation for each component of income by its relative importance in total income in 1997 and dividing by total income in 1997.

therefore the greatest need to supplement income will have to enter the labour market on the terms offered.

Overall, the data on vulnerability highlight the different risks faced by landed and landless households. Households with land are very reliant on crop income. Although they have some means of feeding themselves in times of market turmoil, they have suffered acute declines in income and some have had to make disadvantageous livestock sales. However, they have rarely been forced to take up waged work on reduced terms and instead may have relied on remittances from outside the household to shore up declining incomes. Conversely, landless households have been spared the immediate impact of declining coffee prices but are, of course, extremely vulnerable to anything that affects labour market opportunities, such as coffee disease. The decline in world coffee prices may also have impacted on rates of pay for labouring work and these households are obliged to undertake this work regardless. Indeed, at the time of the survey (April 2002) the daily wage for picking coffee beans as reported by respondents had fallen to an average of 3 Eth. Birr, down from an average of 5 Eth. Birr in 2000. This decline was widely perceived to be the result of the fall in coffee prices over recent years. Declining wages will have a serious impact on the household and there are few other sources which might be called upon to mitigate the loss.[9] However, large proportions of these households have managed to increase the income they receive from waged labour and running small businesses so that over half consider themselves better off than four years ago. Only one fifth of households with land can claim any such improvement. The specifics of the times clearly affect this picture and the reverse position might be observed under other circumstances but, despite higher volatility and vulnerability, waged labour does seem to offer opportunities to the landless household. The development of deeper, more reliable labour markets and the availability of secure, quality jobs can help to offer these households a route out of poverty.

Landlessness and gender relations within the household

The heavy reliance of the landless household on the earnings of the household head and the reduced economic contribution of the wife through own production possibilities may result in a worse relative income position for women in the landless compared with the landed household. This may impact adversely on any bargained outcomes for women. Against this their relative asset position may be better. Neither men nor women have land and thus have a smaller range of assets over which they can exercise control. This poorer, but more egalitarian, position might see its reflection in a more female-friendly set of outcomes. Which of these effects dominates in practice is a matter for empirical investigation. To do this we compare various measures of women's welfare and role in decision-making between the two types of household.

The time budget data collected from respondents to the survey allow us to reconstruct a typical day for men and women in households with and without land (Table 4.10). If women are relatively less powerful compared to their husbands in

Table 4.10 Time use of men and women, from time budget data for typical day

	Landed households		*Landless households*	
	Male respondent (185 cases)	*Female respondent (20 cases)*	*Male respondent (27 cases)*	*Female respondent (1 case)*
Average time spent doing				
Working on own land	7.2	3.9	0.4	3.0
Working on other's land	0.0	0.0	4.5	0.0
Small business	0.0	0.4	0.0	2.0
Housework, childcare, maintenance	1.1	6.2	3.4	5.0
Leisure	6.9	5.0	6.9	5.0
Total work hours	8.3	10.5	8.3	10.0

the landless household we might expect women to have to work longer hours and men to work fewer hours than their counterparts in the landed household. The evidence does not support this interpretation. Although women work more hours than men, the hours worked by women are similar in the two types of household, as are the hours worked by men.[10]

Ownership of property might also affect and be affected by women's position within the household. The vast majority of property is owned by men and many of the types of property asked about have agricultural uses so would not be expected to be owned by the landless household.[11] However there are a very few women who own the house that the household lives in, 7 per cent in landless households and 4 per cent in the landed households.

When asked about domestic divisions of labour and responsibilities strict gender demarcation is evident (Table 4.11). The wife almost invariably has responsibility for most domestic tasks, and where it is not done by her it will likely be delegated to a daughter or other female member of the household. Women in landed households have more ability to delegate. Only in one case does a man help with gathering fuelwood and washing clothes. One chore, buying provisions, occasionally has the involvement of the husband. Men are as likely to take on sole responsibility for buying provisions in the two types of household but it is slightly more likely to be a shared task in households with land.

Most household responsibilities fall to the male (Table 4.11). In only one case does a woman have responsibility for earning cash to pay for the children's education, and this is in a household with land. Men always have the most personal spending money and children usually have the most leisure in the household. In the landed household a very few men and women say they have the most leisure, which does not occur in the landless household.

The survey asked about the processes adopted for selling crops and livestock. In particular it wanted to know who decided to sell the item, who went to sell the item and who kept the money from the sale. Of course, crop sales only occur for households with land. In the vast majority of cases for all three crops, maize, coffee and teff, the man conducted all parts of the process (male process). In just 16 per cent of

Table 4.11 Domestic divisions of labour and responsibilities (calculated as % all households but only % for man and woman reported)

		Landed	*Landless*
Domestic divisions of labour			
Food preparation	– woman	100	100
Cooking	– woman	100	100
Gathering fuelwood	– man	1	0
	– woman	90	96
Fetching water	– man	0	0
	– woman	88	96
Buying provisions	– man	15	14
	– woman	77	82
	– share 50/50	9	4
Washing clothes	– man	1	0
	– woman	97	100
Responsibility for:			
Producing sufficient food for the household	– man	100	–
Earning cash to pay for children's education	– man	99	100
	– woman	1	0
Deciding which crops to grow	– man	100	–
Buying seeds	– man	100	–
Deciding to take a loan	– man	100	100
Who has most time for own leisure?	– man	3	0
	– woman	3	0
	– children	90	96
Who has most personal spending money?	– man	100	100

all sales, usually of maize, the woman made the sale, but the decision to sell was taken by the man and the money was kept by the man (male delegates). Most livestock and produce sales were also made by landed households. Men dominated livestock sales (usually male process), although women tended to control the process for livestock products (female process or male money). In only one landless household was a livestock sale made and this followed a male process pattern. In no cases were livestock product sales made, thus in no cases did women in landless households reap the benefits of sales from the products of their livestock, despite similar levels of ownership of livestock by the two types of household.[12]

In sum, there are few definitive indicators of the effect of reliance on men's waged labour on women's position within the household. But there are a few hints that these women are less able to delegate chores to others, which itself may be a consequence of the youth of these households, there are no instances of female responsibilities or involvement in sales, and no cases where the woman is thought to have the most leisure. Thus there is an indication that women's position within the household is adversely affected by the reliance on a male breadwinner, although further work is needed before this can be stated with any certainty.

Women and paid work

Very few married women in the survey undertook paid work outside the home. The reasons for this are many and varied. On the demand side there need to be sufficient jobs that are local, reasonably paid and compatible with childcare and housework demands. On the supply side women may be constrained by social and cultural expectations about the suitability of paid work for women and their availability for paid work given other demands on their time. We have already seen that the bulk of household tasks are seen to be women's work and are usually the sole responsibility of the wife. A wife spends 6.1 hours of a typical day in housework and childcare, some 58 per cent of her 10.5 hour working day. Most of the remainder is spent working her own land or garden with maybe a little spent running her own business (Table 4.10). Thus the capacity of female spouses to reallocate their labour in response to shifts in labour market incentives has to be seen within these wider demands on their time. Gendered conventions on doing domestic work in the survey areas, together with the time-consuming nature of women's domestic tasks, are likely to be a major constraint on female spouses entering the labour market. Both male and female respondents in the resurvey described these tasks as 'women's work', and virtually all stated that 'men would lose respect in the community' if they did this work. As one male respondent commented, 'Even my own wife would lose respect for me.' Female spouses would find it difficult, if not impossible, to switch their labour time to alternative uses and if they were to enter the labour market the likely cost would be an extension of their already long working day.

When asked who is and was in the past responsible for doing paid work the overwhelming majority of resurvey respondents stated that it continued to be primarily a male task. Most respondents stated that 'women have to stay at home to do the housework and to care for children' and several commented that it was 'culturally unacceptable for women to do paid work'.

However, cultural conventions on the gender division of labour are unlikely to be the sole conditioning influence on female spouses entering the labour market, as evidenced by the fact that some female spouses did supply labour. A further possible conditioning influence is the rewards to labour that female spouses can command. We have already seen the limited control women have over the proceeds of any sales from agriculture. Control over waged income is also uncertain. The male respondents who worked kept the income they earned from waged labour, while of the two female respondents that engaged in waged labour only one reported keeping the income for herself, the other handed the income over to her partner. With respect to the expenditures from this income, the woman that kept her income decided jointly with her partner on its usage, and the woman that handed the money over to her partner had no involvement in the decision on how this money was to be used. In contrast, in only 8 per cent of the cases where men earned income from waged labour was the decision on its usage taken jointly with wives. In the remaining 92 per cent of these cases the men took expenditure decisions without consultation. It is clear that female spouses have few or no

independent income streams, they have little or no control over the products and/or income from their own labour, and the extent of their involvement in household decision-making processes is limited. As women are unlikely to reap the rewards of their paid labour the incentive to engage in waged work must be commensurately reduced.

It is useful here to consider the findings of the follow-up qualitative survey. Of the 11 married females re-interviewed, all of whom were in households with land and were asset-rich, 91 per cent reported that they would prefer to work on and improve their own farm production rather than work for someone else that paid good wages. It may be that these women chose working on their own farm over waged labour because, as indicated above, they knew they would have little control over the income earned or because they saw little benefit to flouting cultural conventions. Certainly 60 per cent said they would prefer to work their own land because that way they were independent, and the remainder cited food and childcare needs. But the women were also asked how their families and community would feel about them taking on paid work and this highlights some different aspects of women's attitudes to work. Over half thought their husbands would be pleased if they found paid work because they would be able to help support the family, the others felt their husbands would prefer them to stay at home to do the housework and look after the children. None thought they would get any help from their husband with the housework if they did take on paid work, although a few thought children might help with some tasks. Nearly all thought coffee-picking would be the type of paid work they could do and nearly all wanted work in their community so that they could be near the family and look after the children. When asked about the control of income it seems women felt they might have more control than the earlier evidence suggested. One third felt that they would be able to keep the wages they earned themselves and a further third thought they would hand some of it over to their husband. Almost invariably the money would be spent on household needs and children's food and clothes. None thought their husbands would give them less money to spend on their household expenses if they kept some or all of the money they earned from paid work. When asked about family and community attitudes to them taking paid work, over four fifths of the women thought they would get more respect from their husbands if they did paid work because they were helping to contribute to the well-being of the family. Those that thought they would lose respect cited the attitudes of the community as influencing their husband's view of women's paid work – 'many people think that people who do paid work are inferior'. This view was endorsed by responses to the community's view: over one quarter thought the community would have less respect for them, although the majority thought they would get more respect from members of the community because they were helping their families. Thus attitudes do not appear to be perceived as rigidly against women's work as initially supposed.

From the foregoing discussion it is clear that the conditioning influences on female spouses entering the labour market are complex. They range from the burdens of women's domestic tasks and cultural conventions on the gender

division of labour to limited rewards to their labour and their lack of bargaining power to women's own preferences over the allocation of labour. Moreover, the households' perceptions of the potential benefits of participating in the rural market are influenced by the characteristics of that market, which is seasonal, incomplete and fragmented. It is important to recognize that the low rate of entry of females into the labour market is due not only to supply side factors but also to the lack of an organized labour market that would provide suitable opportunities for alternative uses of their time. Women, as well as men, in the study area may be more likely to enter the labour market if it is well functioning and offers 'good' jobs.

Conclusion

Landless households start in a weakened position. They are more likely to suffer income poverty and have many fewer physical assets than those with land. Their reliance on one source of income heightens vulnerability, but they do not seem to enter the labour market on disadvantaged terms and there are a number of cases where households have been able to earn more from waged work. For these households, ensuring quality jobs, security of employment, reasonable pay and job availability is crucial to mitigating their lack of land. Increasing the availability and acceptability of work for women too may not only help the position of these households but also might be important in improving women's position within the household.

Notes

1 *Facasa* is the local unit of land measure: 4 *facasas* = 1 hectare.
2 In a small proportion of these households there was more than one wife. Throughout, the analysis treats the first mentioned wife as the spouse and includes other wives in discussions of the activities and contributions of other family members.
3 Costs associated with agricultural production in the study areas were limited to labour hire and access to draught power (oxen). None of the respondents reported using other inputs (fertilizer, HYV seeds, pesticides). This finding was surprising – given that officials in the MOA informed us that all peasant associations had been assigned between one and two extension workers (in line with the government's proactive promotion of extension packages to smallholders) – but was confirmed in discussions with PA leaders. According to these informants the extension package did not include a credit component and was too expensive for local farmers who were obliged to take the whole package (e.g. 50 kg of Urea/Dap fertilizer with 12 kg of hybrid seed, for which they have to pay 336 Eth. Birr).
4 The other sources of income mentioned are sales of handicrafts and making and selling mats.
5 However, dependency ratios of dependents to adults in the household shows a ratio of 1.05 for both landed and landless households.
6 Of landed households 70 per cent have no one ever doing paid work; this is true for only 14 per cent of those households without land. Over a third of the landless households have two or more people doing work, which is true for only 8 per cent of households with land. Of landed households 31 per cent are reliant on just one source of income,

whereas only 14 per cent of landless households are. However, 30 per cent of landed households have three or more sources of income whereas this is true for only 21 per cent of landless households.

7 Note that at the time of the survey the main agricultural tasks were land preparation and ploughing in which there is little female involvement. Women are typically involved in weeding and harvesting and will be putting more time into agricultural activities in these seasons, although they may still record their main activity as housework.

8 Personal interviews with the Head of Labour and Social Affairs, Jimma and with the General Manager of the Coffee Plantation Development Enterprise, Jimma (April, 2002).

9 Correlations of the various types of income in 2002 show that waged income and business income are uncorrelated for the landless household. For the households with land, crop, livestock and remittance incomes are all positively correlated and crop and waged income are negatively correlated. This suggests that those who have the lowest crop income are the most likely to have to engage in waged labour.

10 Note that men appear to do quite a lot of childcare, housework and maintenance in the landless household. However, maintenance covers repair of fences and repairs of house walls which may be paid work conducted for others.

11 Note, however, one or two women own these assets in the landed household.

12 These findings confirm those of a study of gender relations that 'In rural Ethiopia, control over productive resources is centralized into the hands of the household head' (Fafchamps and Quisumbing 2000: 76).

5 Redefining gender roles and reworking gender relations

Female agricultural labour in dry regions of Andhra Pradesh

Supriya Garikipati

Introduction

This chapter examines the interactions between the rural labour market and domestic gender relations in drought-prone villages in Andhra Pradesh, India. The focus is on women's rising share of agricultural wage employment in comparison with men, a trend occurring across the Indian subcontinent although rather more emphatically in the south than in the north (Bennett 1992). The central question that this study attempts to resolve is whether the feminization of agricultural labour has been an empowering experience for the women concerned. We examine this issue by first evaluating the factors responsible for women's increased involvement in the labour market, then by comparing women's status vis-à-vis men in the labour market and, finally, by examining the repercussions of this on women's household status.

Studies concerned with the feminization of agricultural labour tend to be classified into one of two deeply polarized ideological divisions: Marxism or neo-liberalism (Brass and van der Linden 1997; Olsen 1998; da Corta and Venkateshwarlu 1999). On the one hand, the Marxist thesis of 'poverty-push' suggests that women's increased participation in agricultural labouring does not reflect enhanced status but is merely the result of an increase in pauperization of smallholders and artisans (Agarwal 1986; Duvvury 1989). Women's increased participation is, moreover, accompanied by a greater responsibility for family provisioning and debt obligations that compel them to accept much lower wages than men, greater 'unfreedom' and a general worsening of working conditions (da Corta and Venkateshwarlu 1999). The evidence provided by these studies suggests a bleak prognosis for women's status in the labour market and questions the sagacity of labour market-driven poverty-reduction programmes that do not have a specific focus on the welfare of the female agricultural workforce.

The 'demand-driven' argument of the neo-liberals, on the other hand, supports an entirely different and conflicting process of feminization. According to this the increase in demand for female labour is largely due to adoption of the 'green-revolution' package that increased the number of labour days needed in those agricultural tasks that are exclusively or primarily women's work (Chand *et al*. 1985; Gadre and Mahalle 1985; Joshi and Alshi 1985; Marothia and Sharma 1985; Ray *et al*. 1985;

Walker and Ryan 1990). That feminization is largely demand-driven is supported by evidence of falling male–female wage differentials and a general improvement of working conditions (Walker and Ryan 1990; Hazell and Ramasamy 1991; Bennett 1992). Agricultural growth, moreover, has contributed to an increase in demand for non-agricultural goods and services and resulted in, largely male, migration into non-farm work, thereby freeing up jobs for female agricultural workers (Bennet 1992). The implication for policy here is that agricultural growth will come cascading down to women and policies, on the assumption of such complementarity, need not specifically focus on female-oriented growth and women's welfare issues. Moreover, in the context of globalization, this means that it would be sufficient to focus on growth itself rather than on the gender-specific impact of policies.

In the light of such contrasting evidence and the resulting policy implications, we propose to examine afresh the debate surrounding feminization with reference to drought-prone villages of Andhra Pradesh. Despite the hugely different geophysical characteristics, all the three regions of Andhra Pradesh (Rayalaseema, Telangana and Coastal Andhra) have shown evidence of women's rising share of the agricultural labour force (Rao 1998). Furthermore, evidence on growth and real wages suggests that the neo-liberal's 'demand-driven' hypothesis and its positive consequences for women's welfare might hold in Andhra Pradesh. For instance, Deaton and Drèze (2002) have estimated that rural poverty in Andhra Pradesh declined from 35 per cent in 1987–8 to 26.2 per cent in 1999–2000. Rather more optimistically, official estimates report a decline from 20.92 per cent in 1987–88 to 11.05 per cent in 1999–2000 (Rao 2004).[1] Real agricultural wages have also witnessed a substantial increase between 1968–71 and 1988–91, with male wages increasing by 83.4 per cent and female wages by 81.0 per cent (Reddy 1991, cited in da Corta and Venkateshwarlu 1999). More recent estimates continue to report a positive trend and overall wages are estimated to have increased by 1.8 per cent between 1991–92 and 1999–2000 (Government of India 2000b).

It is commonly assumed that women's rising share of employment and better wages have translated into greater female power in domestic relations and this is reflected in the various women's movements that Andhra Pradesh has witnessed (da Corta and Venkateshwarlu 1999). Two oft-quoted examples are the success of the women-led anti-*arrack* or anti-liquor movement in Andhra Pradesh[2] and, more recently, that of the self-help-group (SHG) movement, which was initiated by women in rural Andhra Pradesh in 1993 and rapidly got transmuted into a country-wide microfinance movement (see Dadhich 2002).[3] Overall, it does seem that for Andhra Pradesh the rising female share in agricultural wage labour, accompanied by a reduction in incidence of rural poverty, rising wages and manifestations of women's empowerment, seems to corroborate the conclusions of the 'demand-driven' arguments.

Indeed, in our survey villages we found that women's share of total agricultural waged-employment was significantly more than men's. Over 66.7 per cent of those who had agricultural wage labour as their primary occupation were women. Despite this positive indicator, however, we observed three apparent paradoxes.

The first paradox, which we label as the 'Wage Paradox', is that female agricultural wages as percentage of minimum wages suffer disproportionately when compared to male wages. The second paradox is that women did not enjoy an improved domestic status, especially regarding their influence on household decisions and the various bargaining outcomes that affect their welfare. This paradox was first observed by da Corta and Venkateshwarlu (1999) for the Chitoor district in Andhra Pradesh, and was called the 'Empowerment Paradox'. We found that despite their significantly higher share of agricultural employment vis-à-vis men, women have not been able to bargain a reduction in their household chores, they play a negligible role in intra-household processes regarding crop and livestock sales and they control very little of the household's income. They could not, moreover, divert their husbands' incomes into household needs to the extent they could their own. The third paradox is that despite the dreadful conditions that female labourers typically find themselves in, we find certain groups of women who were making a difference to their situation in small but perceptible ways. We observed that some women who used their loans from the microfinance programme to invest in improving their individual asset holdings also markedly raised their intra-household positions. When compared to other women they were able to bargain for a better overall status vis-à-vis their husbands.

In the rest of this chapter we attempt to understand these paradoxes in the survey villages. The next section looks at some methodological problems with the existing studies reviewed in this section, after which we describe the survey region and the method of classifying men and women in our sample. We then examine the data collected from the survey villages with the intention of answering two questions. Why is women's involvement in wage labouring significantly higher than men's? And how has this impacted on women's status, both in the labour market and within the household?

Some methodological concerns

Owing to some methodological difficulties, the conclusions of the studies concerned with agrarian relations cannot be used to understand the nature of the feminization of agricultural labour in drought-prone regions of Andhra Pradesh. One of the fundamental problems with extending the conclusions of the reviewed studies to dry regions which depend entirely on rain-fed agriculture is that the livelihood strategies of the rural poor here are distinct from other regions. The main difference is the significant presence of migration during the dry season when the ability of the smallholders and labourers to subsist is acutely undermined (Reddy 1990; U. Rao 1994; G. B. Rao 2001; Olsen and Ramana Murthy 2000; de Haan 2002; Deshingkar and Start 2003). While survival is the prime reason for seasonal migration, recent evidence suggests that it is increasingly becoming an integral coping strategy and does not occur only during times of drought or other distressing emergencies and, in some instances, is undertaken for reasons of accumulation (Breman 1996; McDowell and de Haan 1997; Rao 2001; Mosse *et al.* 2002; Deshingkar and Start 2003). Although there are no systematic data on seasonal migration, according to the

National Commission of Rural Labour there were approximately 10 million rural seasonal migrants in 1999–2000 alone (Narayan 2004). Juxtaposing this against the 2001 census data (Government of India 2001a) suggests that approximately 9.3 per cent of rural agricultural labourers undertook seasonal migration in that year.

In the study villages, seasonal migration, in fact, was found to have been practiced for several generations and indications of an intensifying migration trajectory were apparent. Seasonal migration from the district of Mahabubnagar is in fact legendary and migrants from here are popularly referred to as 'Palamur labourers', famous for travelling to distant cities like Vadodara and Ahmedabad (see Reddy 1990; Rao 1994, Olsen and Ramana Murthy 2000). With over 32 drought years recorded since 1924, Mahabubnagar is a perennially rain-deficient district and this is indeed the main reason for migration (Government of Andhra Pradesh 2002a).[4] According to some estimates seasonal migration in certain villages of the district is as high as 60 per cent during the dry season (Sajja 2003). Such widespread prevalence suggests that seasonal migration may have a considerable influence on the local labour market and hence neglecting to study it, as studies looking at labour relations in the region tend to do (see, for example, Walker and Ryan 1990), may lead to inappropriate policy directives.

The second problem with the reviewed studies is the way in which neo-liberals tend to treat the phenomenon of 'unfree' labour relations that are observed across the subcontinent (da Corta and Venkateshwarlu 1999). These relations emerge from the debt traps that many small farmers enter into during the dry seasons when they borrow money from capitalist farmers or traders to whom they pledge or tie their labour or produce at rates that are well below those determined by market forces (Bharadwaj 1985). Although there is some debate about whether such 'tied' arrangements are conducive to capitalist development (see, for instance, Brass 1993; da Corta and Venkateshwarlu 1999; Olsen and Ramana Murthy 2000) it is well accepted that the 'tied labour' arrangement is a method by which capitalists can secure cheaper workers and re-establish profitability (Brass 1995). The 'tied harvest' arrangement can be a method by which capitalists can secure reliable supplies of produce for trade (Harriss 1992) and take advantage of the nature of the smallholders to work harder on their own land and to under-consume in order to retain land and remain independent from large landlords (da Corta and Venkateshwarlu 1999). The neo-liberals tend to either ignore such arrangements in their discussions or portray them as 'free' relationships entered by choice (Srinivasan 1989). Recent evidence suggests that although the incidence of 'permanent' or 'long-term bondage' labour is on the decline (Jodhka 1994; da Corta and Venkateshwarlu 1999), the incidence of 'non-permanent attached' contract labour is on the rise, especially in dry regions of the country (Subramaniam and Reddy 1994; da Corta and Venkateshwarlu 1999). The presence of unfree labour relations in the survey villages makes it important to integrate this phenomenon into any study on agrarian relations.

Unfree labour relations in Mahabubnagar also extend to the migratory labour relations. Smallholders and the landless are compelled to pledge their labour at well below the market price to migration contractors in return for desperately needed consumption loans during dry seasons (Olsen and Ramana Murthy 2000).

One recent estimate suggests that at least 150,000 people migrate every year from Mahabubnagar, of whom nearly a third are bonded labourers who cannot freely commoditize their labour; this constitutes 4.9 per cent of the number of main workers in the district (Olsen and Ramana Murthy 2000: 9–10). Wider structures like class, caste and gender help institutionalize and hence perpetuate the exploitation of migrants by contractors and other intermediaries (Rao 1994; Breman 1996; Olsen 1998; de Haan 1999; Olsen and Ramana Murthy 2000; Mosse *et al.* 2002). Evidence from Mahabubnagar, however, also suggests that migrants might be able to break away from such exploitative relationships over time and negotiate directly with employers, leading to positive outcomes such as better pay and conditions (Rao 1994). In fact the new thinking on migration recognizes that 'individual agency' and not just context might be more important in shaping migration outcomes (Kothari 2002; Skeldon 2002; Deshingkar and Start 2003). Migration trajectories for any individual may be determined by a complex range of economic and non-economic interactions within dynamic domains like society and household, which in turn may be affected by various factors like gender and caste (Chant and Radcliffe 1992; de Haan *et al.* 2002). It is important to understand the various factors determining migration trajectories of men and women in our survey villages and to see what, if any, implications these may have for the labour market.

The third major difficulty with the reviewed studies is that although the Marxist studies integrate the phenomenon of unfree labour relations they tend to examine these relations within the narrow confines of 'class' alone and ignore other agencies like 'patriarchy' and 'individual agency' (Bhaduri 1986; Mies 1986).[5] For instance, inequalities that predicate on gender identify most of the unpaid and low status household work as women's work and give them little in terms of power or access to household's productive resources to challenge their subordinate position (Moser 1993, da Corta and Venkateshwarlu 1999). This may result in a greater workload for women as well as their exclusion from owning and working on the household's productive assets associated with better pay and higher status. Women's lack of power within the household regarding the division of labour and claim over the household's productive assets may considerably diminish their power to bargain for better wages and conditions (Kapadia 1992, 1993, 1995; Kalpagam 1994). Poverty and responsibility for household provisioning may further erode women's bargaining position in the labour market. In this context, greater employment may not empower women but may be channelled into intensifying gender inequalities and perpetuate both the individual and systemic exploitation of women (Kabeer 1994). In this study we attempt to integrate issues surrounding women's bargaining power and understand its implications for the labour market.

The survey villages and sample classification

Covering a three-year period 2001 to 2003, we carried out interviews in two villages and seven of their surrounding hamlets in Mahabubnagar district in the Telangana region of Andhra Pradesh. Mahabubnagar is chronically drought-prone, unirrigated and unindustrialized and hence one of the most poverty-stricken

districts in Andhra Pradesh.[6] This has lead to widespread unemployment in rural Mahabubnagar and forced peasant families to consider non-farm employment and seasonal out-migration as a survival strategy. Two of the three survey years were officially declared as drought-affected and this is more of a rule than an exception for the people of this region. Mahabubnagar has benefited from anti-poverty policies that have been introduced elsewhere in the State, including land ceilings and subsidies on credit, on food, on other productive assets and on modern agricultural inputs. The latest in this series is the government-sponsored SHG programme.

In this study we wanted to use a classification that would simultaneously reflect both social and economic status. A classification that does this eloquently is the 'labour class ranks' developed by Bardhan (1984) and da Corta and Venkateshwarlu (1999), which is based on Roemer's (1982) system and identifies class position by how an individual relates to hiring out labour, to self-employment and to hiring in labour. This classification is extended to include hiring in and out of migrant labour and is illustrated in Table 5.1 below.

This classification reflects social status in a way that is deeply embedded in the Indian psyche; villagers identify themselves and others as labourers (*kulie* or *chakirigallu*), farmer (*kisan* or *raitu*), or landlord (*zamindar* or *dora*); and it also reflects economic status since labour class is firmly linked to the financial ability to withdraw from socially inferior wage labouring and, at privileged levels, to withdraw from manual work on one's own productive assets (Epstein 1973; da Corta and Venkateshwarlu 1999). Labour class closely corresponds to the wealth of a household, that is wage labouring is associated with having little or no own means

Table 5.1 Labour class ranks

Labour class	*Name*	*Primary activity*	*Secondary activity*
L	Pure labourers	Hires out labour	Negligible
L+	Labourer farmer	Hires out labour	Self-employed
SF	Small farmer	Self-employed	Hires out labour
MF	Middle farmer	Self-employed	Negligible
BF	Big farmer	Self-employed	Hires in labour or leases out land

Source: Adapted from da Corta and Venkateswarlu (1999: 81). They have an additional category 'Capitalist' which includes those who only hire in labour or lease out land. None in our sample fits this category.

Notes

1 Hires out labour: includes agricultural as well as non-agricultural paid work and migration work (both farm and off-farm).
2 Self-employed: includes working on one's own farm and/or as an artisan (e.g. tailor, barber and potter) or petty trader (e.g. running a tea shop, a grocery shop, liquor shop, selling bangles and selling utensils).
3 Hires in labour or lease out land: includes employment of agricultural labour and non-agricultural labour (e.g. construction, rice mills). It also includes liquor contractors and migrant labour contractors. This group includes all types of work that is non-manual in nature.
4 Negligible: negligible amounts of other work.

of production and an ability to withdraw from manual work is compatible with having opportunities for surplus accumulation.

Using the data collected on the time spent doing primary and secondary activities, we allocated both men and women in the sample into their 'labour class' on the basis of the time spent in selling labour, self-employment and buying labour. We classified women's work on her husband's land as 'self-employed' despite the huge methodological difficulty in so doing, since this assumes that she exerts some control over the land. Land in rural India is almost never registered in the name of women and even informally it does not constitute a part of women's threat position (Agarwal 1994). For instance, in our sample, the average agricultural landholding is 3.6 acres and women on average owned 0.1 acres or 2.8 per cent of the household land. The issue then is how to class women working on and supervising their husband's farms – do we class this as 'self-employment' or as 'hiring out labour' (for free)? If we class it as 'self-employment' we are most certainly misrepresenting issues of ownership and control and if we class it as 'hiring out' we are likely to introduce a bias against women's labour class. However, since one of the study aims is to compare the social and economic status of men and women it was thought important to set aside this methodological problem and so we identify women's work on their family farms as self-employment, with the proviso that the upward bias inherent in the classification should be taken into account in the analysis.

Those in categories L and L+ are primarily involved in hiring out their labour. Their ability to do so freely, however, is limited due to heavy indebtedness that in effect ties them to their employers and limits their bargaining power over working conditions. Since they do not generally own bulls or bullock carts, this also means they have limited access to highly-paid waged work that involves using own bullocks (transporting, ploughing and so on) and also increases their agricultural costs as they have to hire in draught power (since bullocks are not hired out without the owner this compels them to hire outside labour for ploughing). Men in this category own some dry land, but own little wetland. They own significantly less land than the amount considered economically viable, 2.58 acres for a family of five (Government of India 1997: 1–58) and hence spend negligible time in working their own land (Table 5.2). This also means that they can effectively cultivate only one crop during the four months of Kharif (August to December). The eight-month dry season, which lengthens during a drought, is usually spent away from home in migration work. Their 'unfree' status in the village is mirrored in the migration labour relationship that they enter and most migrate for extremely low wages, which, even so, are still much higher than local wages and provide insurance against dry-season unemployment.

Those in the category SF are primarily self-employed but are also heavily involved in hiring out their labour. Men in this group tend to own relatively more wetland and draught power and this is the only group in the sample that leased in land. However, land was leased under very harsh agreements that generally involved tied labour and/or tied harvest arrangements. This group is also heavily indebted and credit is often tied to their provision of labour. Once again, migration

Table 5.2 Labour class of men and women and their landholdings

Male labour class	*Average class of their wives*[a, b] *(by labour class of male) (N=250)*	*Average wet acres owned*	*Average dry acres owned*	*Average land value (Rs)*[c]	*Men in each class (%)*	*Women in each class (%)*
L = 1	1.44 (between L and L+)	0.48	1.52	42,281	16 (6.4)	51 (17.8)
L+ = 2	1.84 (nearly L+)	1.51	1.08	59,837	63 (25.2)	104 (36.2)
SF = 3	2.43 (between L+ and SF)	2.40	0.92	78,946	93 (37.2)	80 (27.9)
MF = 4	3.19 (just above SF)	2.35	1.70	100,630	55 (22.0)	43 (15.0)
BF = 5	3.65 (between SF and MF)	4.95	3.34	208,375	23 (9.2)	9 (3.1)

Notes

a As far as possible adjustments have been made to take into account greater involvement of women in reproductive work. For instance, in the households where no female productive activity was reported (17 households), wives were assumed to share husband's class.

b For the 37 households where there is no male partner the average class was 2.30 (between L+ and SF) with a corresponding amount of land.

c 2001/2002 prices

is considered a very important livelihood strategy for this group but is done more for the purpose of accumulation rather than as a pure survival strategy.

The MF class, by contrast, are primarily self-employed, but do not depend heavily on hired labour. The BF class rely heavily on hired-in labour and their secondary occupation in most cases is to supervize this labour. They have more in the way of productive assets, such as tractors, power tillers and large livestock and, when compared to other groups, this class, along with MF, is more diversified in agriculture (at times growing more than five different crops and some fruits and vegetables). They were also the only groups in the sample that leased out land. Some in these groups have become migrant labour contractors.

Despite the inherent upward bias in the way women were classified, they were seen to be lagging behind their husband's class standing, especially so in the case of SFs and MFs (Table 5.2). For example, approximately over half the male SFs had wives whose primary occupation was labouring and over two-thirds of MF men who do not hire out their labour at all have wives who are heavily involved in wage labouring as their secondary activity. Women's lower status when compared to their spouses calls into question the common belief that as household status improves women are withdrawn from manual waged work more rapidly than men. It is also worth noting here that over 80 per cent of women in the sample were labourers, compared to only 65 per cent of men. It was only men whose class standing was L who had wives with an average class higher than their own. This simply reflects the fact that men from this group are heavily involved in migration

and women, whose options to migrate are limited for gender reasons, are left behind to work family farms. We shall argue later that this does not reflect women's higher labour status but reflects another form of unfreedom that constrains the ways in which women can use their labour time.

Forty years of feminization

The census data is a good starting point with which to understand broad trends in agricultural wage labouring across the Indian subcontinent. Several studies note that the percentage of rural women workers classified as agricultural labourers almost doubled from 25.6 per cent to 49.6 per cent between 1961 and 1981; by contrast male agricultural labourers increased from 16.2 per cent to 24.3 per cent over the same period (Agarwal 1986: 203, Duvvury 1989: 101). From 1981 to 1991, the figure for women fell slightly to approximately 48.5 per cent and for men to 26.0 per cent (Government of India 1991). Da Corta and Venkateshwarlu (1999) note that the census authorities attributed this to enumerators being given special instructions to pay attention to unpaid female labourers, who were then categorized not as labourers but as cultivators. By 2001 this figure for female labourers had seen a decline to approximately 43.4 per cent and for men it registered a slight increase to 27.4 per cent (Government of India 2001a).[7] Despite difficulties in comparing the census figures, there is a clear trend of feminization over time.

According to the 1991 census female agricultural labourers were still substantially outnumbered by their male counterparts (women were merely 38.5 per cent of the agricultural labour force). But the 2001 census suggests that this gap was closing, women reached 46.9 per cent of the labour force. Moreover, between 1961 and 2001 the number of states where female agricultural labourers equalled or outnumbered their male counterparts rose. Most of these states are in south India, where women's participation in paid labour is traditionally higher than in the northern states. In Andhra Pradesh 53.5 per cent of agricultural labourers were women (Government of India 2001a).

Despite such overwhelming evidence of feminization, da Corta and Venkateshwarlu (1999: 97) believe that the census figures systematically underestimate the degree to which women dominate agricultural wage labouring. [8] First, they argue that there is a general tendency in the Indian census data to under-represent those female agricultural labourers who live in medium-sized landholding families but who are heavily involved in agricultural labouring. In their survey villages they find that 62.9 per cent of those who had agricultural wage labouring as their primary occupation were women, a rise from 55.1 per cent in 1970 (1999: 97). Second, they argue that classification by principal occupation obscures actual annual days worked. They find that women performing agricultural labour worked more days annually than men. Including paid field work and cattle-grazing but excluding unpaid field exchange labour, they find women do 2.5 times as much outside agricultural labour as men. Our findings are rather more conservative. We find that while women in our survey villages do perform more outside agricultural labour when compared to men, the difference is not as striking as that found by da

Corta and Venkateshwarlu. Women in our sample perform 1.4 times as much outside agricultural labour as men (Table 5.5). Furthermore, although women's share of agricultural waged work is considerably higher than men's for all the three main crops in the area the proportion of workdays supplied by women is comparable to the census figures: 64.7 per cent of the total labour days required for cultivating one acre of paddy, 60.5 per cent for groundnuts and 79.6 per cent for jowar (Table 5.3). However, it remains uncontested that women's wage labouring has increased over time and that women perform more agricultural waged work than men in Andhra Pradesh. It is the process of this feminization that we now consider.

Direction and causality of feminization

The demand side

In this section we investigate the reasons for women's significantly higher share of agricultural waged labour. We begin by examining demand side factors and ask the following question: 'Do employers' preferences have anything to do with women's higher share of agricultural wage employment or does higher demand for female labourers vis-à-vis men reflect exogenous influences?' For instance, do more women have to be employed if, as a result of technological improvements, the number of labour days needed in those tasks that are traditionally considered women's work increase (as argued by the neo-liberals)?

One way to approach this issue is to examine the changes in women's labour use on employer's farms for specific crops because of the 'green revolution'. In the absence of access to time series data that would facilitate such a comparison, we have devised a method that allows us to reliably conjecture how women's time use has changed because of the introduction of technology. We use da Corta and Venkateshwarlu's survey data to establish how the adoption of new methods is likely to influence the number of male and female labour days needed in each of the tasks required for the cultivation of paddy (column 2 in Table 5.4). We then

Table 5.3 Average number of male and female paid work days required for cultivation of one acre of paddy, groundnut, jowar and castor crops

Crop	*Female days*	*Male days*	*Total*	*Per cent employing women only*
Paddy	110 (64.7%)	60 (35.3%)	170	16.8
Groundnut	46 (60.5%)	30 (39.5%)	76	42.3
Jowar	90 (79.6%)	23 (20.4%)	113	27.2
Castor	84 (77.8%)	24 (22.2%)	108	23.9

Source: survey data 2001–3

Table 5.4 New technology and male and female paid work days in paddy cultivation

	Direction of change in work days due to new technology[a] *(attributed reason)*	*Male days required to cultivate one acre of paddy*	*Female days required to cultivate one acre of paddy*
Exclusively male tasks			
Ploughing	Decrease (mechanization)	9	–
Applying fertilizers and pesticides	Increase (HYV)	2	–
Watering	Decrease (mechanization)	14	–
Other tasks	–	10	–
Exclusively female tasks			
Transplanting	Increase (HYV and irrigation)	–	24
Weeding	Decrease (HYV and irrigation)	–	20
Joint tasks			
Harvesting	Increase (HYV and irrigation)	5	25
Threshing	Increase (HYV and irrigation)	7	10
Other tasks	–	13	31
Total labour days		60	110

Notes:
a As suggested by the data presented in Table B1 in da Corta and Venkateswarlu (1999).

juxtapose this against our survey data, which detail the number of male and female labour days required on each of these tasks at the present time (columns 3 and 4 in Table 5.4). The various tasks required for cultivation of paddy fall into three main categories: those culturally considered exclusively male (20.6 per cent), those considered exclusively female (25.9 per cent) and joint tasks done by both men and women (53.5 per cent). While the net effect of HYV-mechanization on labour days required in exclusively male tasks is somewhat ambiguous, it is clear that labour days required on both exclusively female and joint tasks have gone up. Evidently at least some of the feminization might be due to an increase in the number of labour days required on exclusively female tasks; indeed, these tasks require approximately 9 days more, 25.7 per cent, than exclusively male tasks. However, a large proportion of the feminization is because women dominate the joint tasks that constitute the majority of the total workdays required. While in principle there is no reason why men and women cannot benefit from the increase in days required on joint tasks, we see that 72.5 per cent of the total days required on joint work goes to women. Joint workdays in fact constitute 54.5 per cent of the total female

workdays, suggesting that feminization of agricultural labour is largely because of feminization of joint work.

Comparing the male and female labour days required for cultivating paddy in 1970 with that required in 1995, da Corta and Venkateshwarlu (1999) note that some exclusively male work has become joint work (for example, threshing) and some formerly joint work has become exclusively female work (for example, seed preparation in the case of groundnuts).[9] While we cannot corroborate this with evidence over time, it is true that in our sample threshing was done by both men and women and seed preparation was exclusively female work. Moreover, substantial numbers of employers, for each of the major crops, employ female labourers only: 16.8 per cent for paddy, 42.3 per cent for groundnuts, 27.2 per cent for jowar and 23.9 per cent for castor (Table 5.3). In most cases family members of the employers do the male tasks. This is especially true of employers from the categories L+ and SF.

Why is joint work becoming feminized and why are tasks that were either exclusively male or joint now being done increasingly by women? Our evidence suggests that men are increasingly not employed for such work and that the feminization of joint and other work is at least partly a reflection of the preference for female workers in the light of relatively higher male wages.

Several reports indicate that real wages in Andhra Pradesh began to rise in 1970 and escalated very rapidly in the 1980s (Reddy 1991; Parthasarathy 1996; Unni 1997; da Corta and Venkateshwarlu 1999).[10] According to da Corta and Venkateshwarlu's estimate, based on Reddy's (1991) data, between 1968–71 and 1978–81 real male wages rose by 18.6 per cent and female wages rose by 23.8 per cent. By 1988–91 these were up by 54.7 per cent for men and 60.6 per cent for women. Although these rapid upward movements were not sustained through the 1990s (Parthasarathy 1996) average real wages continued to increase at 2.3 per cent per annum over the period 1993–4 to 1999–2000 (Government of India 2001b). However, the wage gap between men and women has increased. Men saw a rise in money wages from Rs18.9 to Rs39.8 over this period, while women saw a much smaller increase, from Rs13.6 to Rs26.5. Indeed, when we compare male and female wages for joint work in our survey villages we see that the male wage for joint work is over 30 per cent higher than the female wage (Rs26.7 per day compared with Rs20.1 per day). This, however, is still over 35 per cent better than what women earn for exclusively female work (Rs14.7 per day). Employers preferred women for joint work because their wages were much lower, and women also preferred joint work to exclusively female tasks because of the substantially higher wage. This wage differential is indicative not only of the lower status attached to women's paid work when compared to similar work done by men but points to the possibility that households depending on wage labouring alone may be getting poorer as cheaper female labour is increasingly preferred over more expensive male labour.

Other factors reinforce employers' preferences for women workers. In detailed interviews with around 25 employers from the MF and BF classes we found women workers were preferred not only because they are much cheaper than male

workers (which was still the most important reason) but also because women are more easily disciplined, they tend to work harder than men and perform small, unpaid jobs without much fuss, such as cleaning the cattle shed and doing domestic work (box 5.1). So although the demand-driven hypothesis suggested by the neo-liberals is at work in the survey villages feminization is occurring not only because opportunities in those tasks that are deemed women's work are increasing but also from the employers' strategy of cutting labour costs whereby more expensive male labour is replaced by cheaper, more easily disciplined and more hard-working female labour. The consequences of this skewed demand-pull must be examined in the light of the implicit subservience imposed on female labourers.

Box 5.1

Stated preferences for female labourers by MF and BF employers

We don't employ any men because there are enough [male] members in the household to work on our farm. There is no point in employing men if women can do the same work – they don't ask for as much money – if we pay them 10 rupees they will take it – if we give them 8 rupees and 1 extra bottle of *kallu* [local liquor given as part of wages] they will take it. (SF 3 – employ female labourers only)

Men demand much more for the same job and women work as hard, and sometimes, if we want the work to finish soon and offer them 1 or 2 rupees more then they work better than men. If there is some work in the house or in the shop they will do it [for free] – men will ask for more money even for 15 minutes [extra off-farm work]. (MF 9 – parenthesis self)

They [women] come when we want them to come, don't take *beedi* [dry tobacco leaves rolled together to resemble a cigarette] breaks and don't fight. If we don't have enough *kallu* bottles then they will take [them] tomorrow. I don't have to stay around the whole day looking after them, giving them water and *tombacu* [tobacco], they will look after themselves and will finish the work as well. (BF 13)

Men have too much style – they only know how to behave like Shoban Babu [a regional movie superstar], grow a moustache and swing like a drunk – nothing else. We have to be very careful whom we employ. We have two permanent workers – they will bring some men they know. (BF14)

They [women] will listen to what you say – they will not leave behind the hay after threshing – if you tell them to remove it they will remove it. It's easier to manage women. Men will leave the hay – so that you will call them the next day and pay them to get it out. You cannot trust them. (MF23)

The supply side

In this section we attempt to understand the supply-side influences on the feminization of agricultural waged work. Specifically we ask the following question: 'Is feminization also the result of how men and women decide to allocate their productive work time among the various competing uses?' It is often suggested that as non-farm employment opportunities expand, men move out of agricultural work and women move in to take over both waged farm work and work on own farm. Thus the labour supply decisions that men and women take impact on observed feminization.

The 2001 census data strongly suggests that men are moving into non-agricultural employment while women take on more labouring and self-employed work. According to the census 65 per cent of the increase in female workers since 1991 was comprised of either agricultural labourers or cultivators compared to 17 per cent of the rise among men (Government of India 1991, 2001a). Even if we concede the problem of comparability between the two censuses the overall tendency is undeniable. In Andhra Pradesh this trend is even more obvious: according to the 2001 census 56.5 per cent of the increase in female workers since 1991 was comprised of either agricultural labourers or cultivators compared to 10.8 per cent of the rise among men; and a mere 23.9 per cent of women workers were involved in non-agricultural work when compared to 46.1 per cent of male workers (Government of India 2001a).[11] Evidence from our survey villages supports this overall trend and we find that women's proportionate involvement in agriculture, both as wage labourers and on household land is more than men's. To draw more exact conclusions about the division of agricultural and non-agricultural work between men and women we examine male and female time use data for the years 2001 and 2002 (Table 5.5). Our data indicate that women spend 85 per cent of their non-domestic time on agricultural work (nearly 62 per cent in waged work, 23 per cent on the family farm and 4.4 per cent in fulfilling loan obligations or what is referred to as tied work – see later) but only about 7 per cent in non-agricultural work, whereas men spend nearly 24 per cent of their time on non-agricultural employment. In the last few years, moreover, off-farm opportunities have increased significantly due to better road and transport links into Mahabubnagar and other neighbouring villages and small towns. If this trend continues we can expect female participation in agricultural work to continue to rise.

While it is important to highlight the differences in the way men and women divide their time between agricultural and non-agricultural work, it is also equally important to see how they allocate time between self-employment and waged work. Our time-use data suggests that women spend over 66.8 per cent of their non-domestic work time on both agriculture and non-agriculture waged work, whereas nearly 53.1 per cent of male time is spent on self-employed work on own land, livestock work and non-agricultural enterprise (Figure 5.1).

Focusing solely on rural workers, the census figures for Andhra Pradesh in 2001 also suggest that men are moving into cultivation and non-agrarian work while women are taking over agricultural work. Of female rural workers, 60.7 per cent

Table 5.5 Average non-leisure hours spent on different activities in one day among male and female labour classes (L, L+, SF)[a]

Activity	*Male*	*Female*
Agricultural work		
Agricultural wage work and exchange labour	2.13 (28.8%)[b]	3.61 (61.9%)
Work on own farm	1.50 (20.3%)	1.34 (23.0%)
Tenancy	0.30 (4.0%)	0.2 (3.3%)
Non-agricultural work		
Non-agricultural wage work	0.89 (12.2%)	0.19 (3.5%)
Paid cattle grazing	0.14 (1.9%)	0.08 (1.4%)
Non-agricultural work on own assets	0.93 (12.6%)	0.23 (4.0%)
Own cattle (includes grazing)	1.50 (20.2%)	0.18 (3.0%)
Total non-domestic work hours	7.40 (100%)	5.82 (100%)
Domestic work		
Cooking	0.05	2.39
Washing clothes and utensils	0.00	0.69
Fetching water and fuel wood	0.32	0.42
Childcare and caring for others	0.21	0.47
Caring for the house	0.03	0.51
Total work hours (non-domestic + domestic)	8.01	10.30

Notes:
a An average of two typical days, one from each of the two seasons (Kharif 2001 and Rabi 2003).
b Data in parenthesis is percentage of total non-domestic work hours.

are agricultural labourers compared to only 37.9 per cent of men, and 27.3 per cent of male workers are involved in the non-agrarian sector whereas this is true of only 11.4 per cent of women (Government of India 2001).[12] Such a trend observed elsewhere in the State has been labelled a 'gender based class division' in which:

> as male labourers are moving into petty commodity production, women are replacing them as agricultural labour. Consequently, the gender divide corresponds, to some extent, to a class division between a non-propertied/waged workforce composed of women … and self-employed men … women have remained in wage employment as men … have withdrawn from agriculture employment in order to work on their own assets …
>
> (da Corta and Venkateshwarlu 1999: 104)

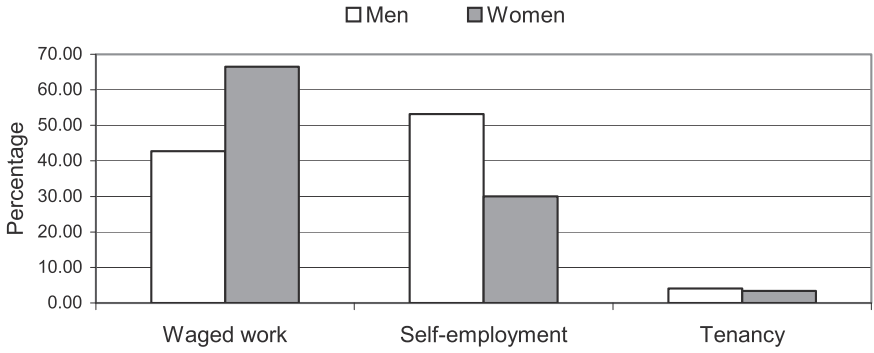

Figure 5.1 Average percentage of non-domestic work hours spent on waged and self-employed work among male and female labourers (L, L+, SP)

Such divisions, they claim, are also extended to working-age sons and daughters: where sons are trained to work on higher status non-farm waged work or on own assets and daughters are delegated to take up agricultural waged work. The class divide between men and women is not confined to villages of Andhra Pradesh but is also observed by writers studying feminization in the northern areas where 'green revolution' technology was introduced much earlier than it was in the south. For instance, Chaudhry (1994) observes that among marginal farmers in villages of Haryana women are increasingly being sent out for agricultural work as a result of land fragmentation and greater need for cash for modern agricultural inputs while men tend to work on own land and work off-farm. In her viewpoint the feminization of agricultural labour can be envisaged as a process of 'women's proletarianization'.

It has also been suggested that male labourers were the chief beneficiaries of Andhra Pradesh state government's land redistribution policies. These helped men to escape from agricultural labouring, especially from bondage relationships, and to engage in cultivation of own land (da Corta and Venkateshwarlu 1999). The Government of Andhra Pradesh periodically assigned land to male landless labourers under various schemes. One of the most effective was the 1969 policy of distribution of government wasteland. Under this scheme, some 44.5 per cent of workers were given an average of 1.7 acres of land each in Mahabubnagar district by March 2001 (estimated using data from Government of India 2001a and Government of Andhra Pradesh 2002b). The Land-Ceiling Act, despite severe enforcement problems, also accounted for an average gain of 0.4 acres of cultivable land by labourers by March 2001. Other schemes that have been more muted in their impact include the settlement of *Inam* lands, public sector unit lands, tribal lands and endowment land (Government of Andhra Pradesh 2003). However, approximations suggest that male labourers on average gained around 2.7 acres of land in total.

Seasonal migration

While the time-use data captures male movement into off-farm work as part of the explanation for feminization, it fails to highlight the true magnitude of male mobility in the survey villages. This is because it excludes time spent in migration work, a very important drought coping mechanism in the area. Data on migration not only amplifies male movement into non-farm work but gives us reason to believe that it may contribute to further intensify and perpetuate the 'gender class division' between men and women in the villages.

Our survey data suggests that although casual seasonal migration is not unknown, most migration is by a 'contract system', mainly to provide construction labour in the cities. Under this system migrants go through middlemen contractors, labelled *maistries*, who are usually influential members of the village and are either commissioned by employers or by other bigger contractors, *pedda-maistries* (*pedda* is the Telugu word for big), to mobilize labour.[13] *Maistries* are responsible for identifying potential migrants, usually landless or marginal farmers who need consumption loans during the dry season, and forward them a 'migration loan' that is considered an advance on wages. Contracts usually last for four to eight months. The terms of the contract are decided informally but normally include free food and accommodation. Absence from work due to ill health is penalized and although medical expenses may be paid these are redeemed against the migrant's or spouse's labour. The wages labourers are able to negotiate depend on the individual's situation. Wages can range from anywhere between Rs2,000 and Rs10,000 for a typical eight-month contract. Unskilled, first-time migrants, who typically migrate alone, earn the least while highest pay is reserved for male labourers skilled in certain tasks (like masonry work) accompanied by their wives, whose labour is pledged under the same contract. Accompanying wives, in addition to their contract work, work as maidservants for the *maistries* and employers and also constitute an 'insurance' in case of the husband's inability to complete the contractual labour obligations. Contracts are decided between *maistries* and male migrants, even in the few cases where women migrate alone. Migrants often renew their contracts from year to year, largely either because they need fresh consumption loans (in some cases these loans are the only source of collateral-free consumption loan) or they are unable to repay previous loans, but also because pay is relatively better than they might get locally. Alternative sources of income during dry seasons are nearly nonexistent. However, migration is not only a drought-coping strategy but is also a more general livelihood strategy. Migration income, on average, constitutes around 33.4 per cent of migrant households' incomes.

Many more men than women migrate: 135 men or 78.5 per cent of men from L, L+ and SF classes migrate, in contrast to 45 women or 19.1 per cent of women who belong to labouring classes (Table 5.6). While 52.3 per cent of the labouring households (L, L+, SF) have at least one male migrant, only 17.4 per cent have a female migrant. Also apparent is that while men migrate across the various classes, nearly all women migrants belong to the lower labouring classes. This suggests that while

Table 5.6 Seasonal migration and income among male and female labourers[a]

	Male migrants		*Female migrants*	
	No. migrating (as % of men in class)	*Average migration wage in rupees*	*No. migrating (as % of women in class)*	*Average migration wage in rupees (as % of male wage from same class)*
L	12 (75)	1,431.7	16 (31.4)	986.4 (68.9)
L+	44 (69.8)	1,785.2	25 (24)	1,430.9 (80.1)
SF	79 (84.9)	2,472.1	4 (5)	1,839.1 (74.4)

Note
a Four men from the MF labour class also migrated.

women migrate to provide for subsistence and survival of the household, men also migrate for additional incomes, that is, while women are on a 'coping migration pathway', men are on a 'positive migration pathway' (Deshingkar and Start 2003)

This is further confirmed when we examine male and female migration incomes. On average men earn Rs2,155.7 while women earn around Rs1,309.1 or 60.7 per cent of male incomes for a typical four-month contract. Despite this, evidence suggests that migrating women typically earn up to 148.4 per cent more than those who choose not to migrate, not accounting for the added insecurity of high incidence of unemployment in the dry seasons. While both men and women's incomes fall with their labour class, women from lower labour classes do worst.[14] This is largely because women are often tied to their husband's contract (54.2 per cent of cases) and women's pay and benefits are negotiated between the migrating male and the contractor. Evidence suggests that men negotiate a higher salary for themselves at the expense of lower pay for their spouses; men migrating along with their wives get significantly more per season (Rs2,538) than men migrating without (Rs1,965). In some cases the woman may be expected to work alongside her husband but may not have any wages and conditions of labour agreed upon. Her status in such instances is no more than that of an attached labourer without any right to negotiate. Even those women who have contracts of their own – and there are just six of them in our sample – see these negotiated by the non-migrating male members of their family.

Migrating men not only earn much more than their wives but the way they spend their migration incomes (usually advances as lump-sum payments prior to migration) differ in significant ways to women's (Table 5.7). Evidence suggests that while most of women's migration incomes are spent on family maintenance, men use substantial proportions to improve their own asset holdings. Thus 18.5 per cent of migrating men from L+ and SF classes spend an average of 29.3 per cent of their incomes on purchasing or improving agricultural land, while, in sharp contrast, just one woman from the L+ class spent 4.5 per cent of her migration income on a

Table 5.7 Expenditure from migration incomes by male and female labourers

	Male migrants		*Female migrants*	
How migration incomes are spent	*No. spending on household maintenance*[a] *(% income)*	*No. spending on land-related assets (% income)*	*No. spending on household maintenance (% income)*	*No. spending on non-land assets (% income)*
L	9 (68.6)	–	12 (44.3)	0
L+	29 (53.6)	8 (33.7)	9 (57.8)	1 (4.5)
SF	21 (36.3)	17 (27.8)	1 (40.0)	–

Note

a This only includes day-to-day maintenance of the household and not loans incurred to meet expenses arising out of special occasions like marriages, funerals and birth of a son.

sewing machine. Furthermore, men are more likely to use migration income to purchase assets as labour class improves. Since men use their migration incomes to consolidate their position as cultivators we argue that seasonal migration will further contribute to deepening the 'gender class division' between men as self-employed cultivators and women as wage labourers. Other studies come to a similar conclusion. G. B. Rao (2001) observes that migration trajectories in Rayadurga and Anantapur (two dry districts in Karnataka and Andhra Pradesh respectively) tend to change over time from survival to accumulative. This may result from migrants being able to pull their households beyond the survival threshold and so undertake further migration for the purpose of accumulation but it may also happen as people establish migration networks that allow them to negotiate better deals with contractors or even break free from such exploitative relationships.

One of the dilemmas of this situation is why, if migration incomes are much higher than can be earned locally, many more women do not migrate and why many more do not migrate on contracts that are independent of their husbands. Our data suggests that women cannot do so for at least two, gendered, reasons. First, women are required to stay back to fulfil the reproductive roles expected of them in a patriarchal society: to take care of their households and to increasingly take care of family farms (Table 5.5). Of the migrating men 88 per cent reported that their wives would take care of family and farm when they are away, while just 7 per cent of women migrating alone have their husbands similarly supporting them. In 91 per cent of cases women migrants left their homestead to other women in their households. Second, the majority of the women who migrate are attached to their husband's contracts, not only because they can help their husbands earn more, but also because migrating without a male member of the family is socially unacceptable unless survival is an issue or there is a special family condition that justifies it. Three women in the survey migrated alone and did so because of poverty and debt.

Not only is a migrating single woman subject to criticism in the village, she may also be more vulnerable to physical abuse at the work-site. Olsen and Ramana Murthy (2000) consider the dyadic (between people) and systemic (structural) exploitations that migrating men and women might have to endure. They conclude that migrant women face additional control and oppression relative to men both because they are physically weaker and more susceptible to abuse and because their exploitation is more accepted as an endemic component of migration. Sexual abuse and exploitation, it seems, is a professional hazard that migrating women just have to tolerate. Migration, at least in the very near future, cannot offer women the opportunity to move into non-farm work and, as migration intensifies in the region, it is likely that it will help perpetuate the 'gender class division' between men and their wives.

In summary, we have examined how both demand and supply factors contribute to the phenomenon of feminization of labour. On the one hand, women labourers are preferred because they are cheaper and more conscientious workers when compared to men, while, on the other hand, and partly because of this preference, male labourers are moving out of farm work – they are taking on more non-agrarian and migration work and tend to work more on own farms – a tendency accentuated by their migration incomes. The result is feminization of agricultural waged work, where women are taking over joint work that was traditionally done by both men and women. This also implies that while men enjoy the higher status and pay that is attached to self-employment it is women who do most of the low-status and badly-paid waged work. This evidence suggests a 'class divide' between men as self-employed cultivators and women as non-propertied waged workers. This divide, moreover, is likely to deepen overtime because of the gendered issues surrounding seasonal migration.

Consequences of feminization

In this section we analyze the impact of feminization of agricultural waged work on women's welfare, both as agricultural labourers working alongside men and as wives bargaining for better status within the household. We start by asking: 'Has the preference for women workers and male movement into non-farm and migratory work helped women negotiate better pay for agricultural waged work?'

We compare male and female actual wages with Statutory Minimum Wages (SMW) and find that men on an average earn 72.3 per cent of their SMW whereas women earn only 38.5 per cent of their SMW (Table 5.8). The wages vary with the kind of work men do: at one end of the spectrum men who work with draught power earn over 90.8 per cent of their SMW and at the other end those who do joint work earn less than 49 per cent of it. The wage variation, however, is negligible across the tasks that women do. This suggests that women are excluded from high wage earning activities while, at least in principle, men have an opportunity to improve their earnings as their asset positions improve by, for instance, investing in a pair of bulls or a bullock cart. This is further evident when we consider male and female earnings by their labour class. On average women earn a mere 40 per

Table 5.8 Male and female actual wage and statutory minimum wage (Rupees per day)

	Men's wages	*SMW*	*Actual as per cent of SMW*[b]	*Women's wages*	*SMW*	*Actual as per cent of SMW*
Exclusively male work with bulls[a]	68.1	75	91	–	–	–
Exclusively male work without bulls	45.4	65	70	–	–	–
Joint work	25.5	52	49	20.7	52	40
Exclusively female work	–	–	–	14.7	40	37
Average	46.3	64	72	17.7	46	39

Notes
a Such work includes ploughing, transporting grains, fertilizers and material for construction
b Actual wages averaged across all crops. SMW taken from Minimum Wages, Government of Andhra Pradesh (2001).

cent of men's earnings, and, moreover, women's daily earnings as a percentage of men's falls as men's labour class improves, that is, as men's involvement in self-employed work, usually involving ownership of productive assets, increases. Women's daily wages as a percentage of corresponding male wages are 56.1 per cent for L, but fall to 40.5 per cent for L+, and to 38.5 per cent for SF. This reflects the lack of female ownership of any of the family's productive assets.

At least part of the reason why women's pay has suffered in relation to male pay is because men have been withdrawing from waged labour at a faster rate than women. However, our data suggest that women's pay also suffered for two other distinct reasons: first, their greater involvement vis-à-vis men in fulfilling debt obligations; second, the domestic conditions under which women enter the labour market, especially with regard to their inability to influence household financial decisions and the lack of female ownership of household productive assets, which weakens their power to negotiate for higher wages. We consider each of these issues below.

Women's greater involvement in fulfilling debt obligations

The dry seasons, which are further intensified during drought years, erode the subsistence of smallholder tenants and agricultural labourers, many of who are induced into consumption loans at exorbitant rates. Despite the presence of formal credit, 76.2 per cent of our labourer households incurred debts in the informal sector (either from the *maistries* and/or from moneylender landlords, who usually belong to the MF and BF categories).[15] The borrowers in our survey villages are usually compelled to enter into one or both of the following arrangements: an agreement to work on the lender's farm for wages that are much lower than prevailing wages ('tied labour'), and/or an agreement to sell harvest to the lender at less than the market price ('tied harvest').

These 'unfree' or 'tied' arrangements are often viewed as capitalist strategies to reduce labour costs and increase profits (Brass 1995, da Corta and Venkateshwarlu 1999). Big farmers use their existing power in credit and land rental markets to reduce labour costs through these arrangements: directly in cases where labour is tied by tying in cheap male labour and the labour of kin and indirectly in cases where harvest is tied by taking advantage of the nature of small cultivators to work harder on their own land for lower returns when compared to hired-in workers, and to under-consume in order to remain independent of landlords. Although in our survey villages drought was largely responsible for the high incidence of indebtedness, in terms of the resulting tied arrangements the situation was much the same.

Of our labouring households 39.5 per cent had 'tied labour' arrangements with their landlord lenders (Table 5.9). Of these arrangements 92.9 per cent were in return for loans and the remainder in return for leased-in land. Where 'tied labour' is through extension of credit, big farmers advanced cash loans, typically in the range of Rs500 to Rs1000, to landless labourers or smallholders for consumption or working capital. In return the borrower and his wife and any working-age children must pledge to report to the lender's farm first and to work off the loan based on a prearranged wage that is fixed by the lender at a level that is substantially lower than the market wage. This arrangement lasts till the labourer and his family are able to repay the loan with their labour and it usually takes the entire season. Evidence suggests that larger labouring families (with more working-age members) are eligible for bigger loans. There is also some evidence of recurring tied arrangements. Arrangements that are concluded at the end of a season because loans are paid off are renewed because of fresh credit requirements of the labourer households; in this light these arrangements can be viewed as semi-permanent. Since the labourers receive a loan at the start of the arrangement they do not receive a money wage at the end of the workday but receive other entitlements like bottles of *arrack* (see later).

Where labour is tied through leased land, big farmers (MF and BF) generally lease out small plots of irrigated land to labouring classes on a 50/50 sharecropping

Table 5.9 Incidence of tied harvest and labour arrangements among labour classes[a]

Labour class	*Tied labour (%)*[b]	*Tied harvest (%)*[d]
L	41.2	–
L+	58.5	19.1
SF	26.3	30.5
MF	–	35.7
As % of total conditional population	39.5 (70 households)[c]	28.5 (61 households)

Notes

a Through leased land or loan or both.

b By labour class of male, except in 5 cases where there is no male partner.

c In the 65 male-headed households, women alone carried out tied labour in 40% of cases while men did so in 18.5% of cases.

d By labour class of male, except in 3 cases where there is no male partner.

basis. In our sample the majority of those pledging their labour in return for leased land belong to the L and L+ classes. It is these households that are most likely to accept the oppressive conditions surrounding such tenancy agreements since they have little access to cultivable land that gives them a certain degree of consumption security during the lean-season. In return for the land labourers must pledge their labour for certain tasks on the employer's farm; these usually include ploughing land using the employer's bulls and watering the employer's fields. They are also expected to pledge surplus family labour for work on the landlord's land, either for free or at a pre-arranged wage that is set far below the market wage. In certain cases families that lease in land also take working capital loans from landlords, further strengthening the landlord's claim on the leasing family's labour.

We found that 28.5 per cent of our labouring households were also involved in 'tied harvest' arrangements (Table 5.9). Again this arrangement was usually entered into against the advance of loans (usually for working capital) and occasionally in return for leased-in land. Big landlords advanced cash loans or leased out small plots of land to L+ and SF (and indeed MF) households on a share-holding basis. In return the borrower or the lessee must pledge their harvest at a price predetermined by the landlord-lender. Around 40 per cent of the paddy and over 65 per cent of the groundnut crop of the L+ and SF labourers was tied under such repayments. They received approximately Rs75 less per bag of paddy and Rs100 less per 100 kilograms of groundnuts.

Inherent to most tied arrangements is the expectation that the tied labourer, along with his family, will fulfil various unpaid labour obligations such as cleaning the employer's cowsheds and working in his household as a domestic servant. Furthermore the tied household's labour is sometimes at the disposal of the landlord-lender beyond the period of such arrangements. For instance, while tied arrangements may end with the season, the landlord has the right to call the labourer for small, unpaid tasks, which the labouring family is obliged to fulfil. One of the reasons why a labour household submits to such obligations is that it may need to secure consumption loans in the future.

Labouring households are compelled to agree to such tied conditions surrounding credit in order to meet their urgent consumption needs during the dry seasons. Such needs are intensified during drought years and leave no room for the luxury of negotiating the terms of these arrangements. In such cases necessity dictates that they cannot afford the delay associated with formal banking procedures.[16] It is usually men who negotiate arrangements with the lenders. Indeed, in 72 per cent of cases in our sample it was men who took a unilateral decision to borrow or to lease in land, and hence enter into tied arrangements. In only 3 per cent of cases did women make similar decisions, and in only 15 per cent of cases could they have any say in such matters. Our evidence, however, suggests that it is women's labour that is primarily pledged when men enter such exploitative arrangements with landlord-lenders. Below we examine how tied arrangements were allocated between men and women in the labouring households.

Let us consider the 'tied labour' arrangements first. Under these arrangements, the labouring households have to pledge their labour for a wage below the going

wage as well as carry out certain unpaid tasks for the landlord-lender. Examining the male and female time-use data earlier we see that most of the agricultural waged work in the labouring households was done by women (Table 5.5), suggesting that it is women's labour that is disproportionately pledged under 'tied labour' arrangements. The wives of the tied labourer also carry out most of the unpaid labour obligations. Our time-use data show that women from the labour classes L, L+ and SF forfeit an average of 14.8 eight-hour workdays in each season in fulfilling such unpaid obligations.[17] Multiplying this by the lowest daily wage for women of Rs14.5 (the tied wage) suggests that on average women lose at least Rs214.6 per season as a result of their husbands' tied labour arrangements.

Women are in fact much more involved in tied labour obligations than is suggested by the time-use data. In two fifths of the 65 male-headed households that entered into tied-labour arrangements it was only women who fulfilled these obligations throughout the year. This was because in all the 26 households men migrated alone during the lean periods leaving their wives to labour under the exploitative terms of the arrangements. We estimate that on an average these women perform nearly 66.8 days more of tied labour work when compared with their migrating husbands, where the migration contract lasts for eight months (14.8 days of their own labour plus 18.6 days of their husband's labour per four-month season) and forfeit an estimated income of Rs968.6 every year. This suggests that migrating men effectively shifted their loan obligations to women who were compelled to stay back because of the expectations surrounding their labour use. These women could have otherwise worked for higher wages in the open market. Moreover, men returning from migration continue to leave most of these obligations to their wives. Women are compelled to fulfil them because their husbands may need to secure consumption loans in the future; in the absence of their husbands they are also unable to protest against the exigencies of the landlord-lender.

Next we consider the allocation of 'tied harvest' obligations between labouring men and women. Our time-use data once again show that women from labouring households spend a higher proportion of their non-domestic work time in agricultural work on own farm than men (Table 5.5). This suggests that work intensity on own land falls disproportionately on women, implying that when men pledge to sell their harvest at a reduced price they pledge an inequitable amount of their wives' labour. Women seem to have little control over the allocation of their labour time. Their labour is, at least partly, pledged by their men to secure loans and lease in lands, while the men themselves choose to spend more of their time in relatively higher status and better paid non-farm work and migration work.

Comparing male and female 'tied wages' with what others earn for similar work under the existing market conditions further exposes the truly exploitative nature of such arrangements and the relatively greater disadvantage of women tied labourers. We compare male and female 'tied wages' with the wages that men and women earn for daily waged work and for contract work in the survey villages. Contract work arrangements are entered into by a group of labourers with the landlords. Under this a price is predetermined for a given piece of work to be

completed by a given time and there is no limit set on the number of workers involved. While men earn a lot less under tied wages when compared to daily and contract wages, women do far worse. While male daily wages average 36 per cent higher than their tied wages and contract wages average 72.3 per cent higher, female daily wages average 40.7 per cent higher than tied daily wages and the contract wages average an overwhelming 97.9 per cent higher. Not only is women's labour used to meet tied obligations, both paid and unpaid, but the opportunity costs they face when compared to the men's are also much higher. Women lose more not only by having their labour pledged to the landlords-lenders by their husbands but also by having to accept more unfavourable wages.

Women are obliged to service the debt that their husbands incur and have no right to refuse the terms set by the landlord-lenders. This, in concert with the fact that more women than men are involved in tied arrangements and for longer periods of time (entire year as opposed to one season), suggests that women are more unfree than their men. Da Corta and Venkateshwarlu (1999) suggest that in the presence of such unfreedom surrounding women's waged work it is more appropriate to conceptualize feminization in Andhra Pradesh not as a process of women's proletarianization (as Chaudhry (1994) observed for villages in Haryana) but as a process that closely resembles Brass's 'deproletarianization' thesis. This argues that when further accumulation is blocked by overproduction (due to new technology) capitalists may be forced to replace (convert) free labourers with (into) unfree (and cheaper) labourers. An important reason for workforce feminization in their villages is the intense 'class struggle' waged by male labourers independent of their families, where male labourers refused agricultural joint work as a protest against low wages reminiscent of bondage. Capitalists were then compelled to replace such male labour with cheaper and unfree female labourers. The process of feminization in our villages has a very different trajectory. First, male labourers in our villages were not involved in a 'class struggle'; second, drought intensified the incidence of tied arrangements; and third, the seasonal male migration hastened the process of feminization and shifting of these ties on to the women workers. Although the process of feminization in our villages differs from the one observed by da Corta and Venkateshwarlu, in terms of what they call women's decommodification of labour our conclusions are much the same. In our villages, those women expected to fulfil their husband's tied arrangements were not free to commoditize their labour and hence the process of feminization in these villages is akin to that of women's 'deproletarianization'.

Our time-use data, moreover, illustrate that nearly all domestic work, like cooking, washing, fetching, caring for children and others in the household and general maintenance, is done by women. In a patriarchal society like India women are expected to do all or nearly all of the housework and any contestation of this arrangement is entirely unacceptable. In fact women do not even consider questioning such expectations surrounding their time use. Women find their situation no different from that of their mothers and grandmothers, who worked on farms in the mornings and cooked and cleaned in the evenings and, despite their increased involvement in waged work, they do not challenge the 'non-division'

of housework. Women in our survey villages laughed at the suggestion that men should help with domestic work and one of them told us of the time she had to cook and clean even when she was extremely unwell, not because her husband refused to do so but because he simply did not know how to. Men on average devote a total of 37 minutes of their work time to housework compared to 269 minutes of women's time per day. Although the male work day excluding domestic work is 1 hour 35 minutes more than women's, once domestic work is included women on an average work 2.2 hours more per day than men; a total of 10.3 hours compared with 8.01 hours for men. The expectations surrounding women's time use further decommoditize female labour.

Domestic conditions surrounding women's entry into agricultural paid work

Our survey data suggest that women enter paid work not only under conditions of explicit duress, as in the cases of 'tied' arrangements, drought and poverty, but also under severe implicit duress that emanates from the conditions surrounding their household status. Evidence from our labouring households suggests that women's depressed domestic status is manifested in two broad ways: first, in a negligible influence on household financial decisions, especially those regarding sale of farm and livestock produce and control over household finances; and, second, in a total lack of co-ownership of the family's productive assets. In this section we discuss these issues with a view to understanding how women's domestic situation can compel them to accept oppressive wages and working conditions.

We first examine the intra-household processes in our labourer households (L, L+, SF). Since we want to understand the playing out of gender roles in household decisions we consider only male-headed households. Also, we consider only those processes that involve the use of household's productive assets and hence are likely to impinge on its economic welfare. These can be broadly grouped into processes surrounding sale of crops and sale of livestock. The framework that we use to examine intra-household processes maps gender roles at significant stages along the entire decision-making process. For this purpose each process surrounding crop or livestock sales is further split into three distinct parts: who decides to sell,[18] who goes to sell and who keeps the money from the sale. While several more combinations can be worked out based on whether the man or the woman plays a dominant role at each stage, we identified the following seven process-types in our households:

1 Female process (F–F–F): Female decides – Female sells – Female keeps money
2 Female switch (M–F–F): Male decides – Female sells – Female keeps money
3 Female money (M–M–F): Male decides – Male sells – Female keeps money
4 Female finally (M&F–M/F–F): Male and female decide – Male/female sell – Female keeps money

5 Male process (M–M–M): Male decides to sell – Male sells – Male keeps money
6 Male money (F–F–M): Female decides – Female sells – Male keeps money
7 Male/female money (M–M-M&F): Male decides – Male sells – Male and female keep money

This type of mapping allows us to identify the empowering potential of each process type, both by looking at the number of stages women dominate within a process and by the type of stage that she dominates. For instance, while participation in the decision-making stage and retaining the money from the sale can be considered empowering, in the Indian context, it is rather unlikely that being empowered has anything to do with participating in the actual selling process. In male-headed households, men typically carry out market transactions and women do this activity only in very special circumstances (in cases of husband's illness and absence of other male relatives). This is especially so for crops and bigger livestock because markets are usually far from the village and may involve staying away for a few days at a time. So while clearly the 'Female process' (F–F–F) is more empowering than the 'Male process' (M–M–M), 'Female delegates' (F–M–F) can be considered more empowering than 'Male money' (F–F–M).

We list the number of cases a process-type has been reported for household crop and livestock decisions (Table 5.10). We have not separated the intra-household processes by labour class because this would divert the focus away from gender

Table 5.10 Intra-household processes in male-headed, labour class households[a] (L, L+, SF)

	Total cases	*Female process (F–F–F)*	*Female switch (M–F–F)*	*Female money (M–M–F)*	*Female finally (M&F–M/F–F)*	*Male process (M–M–M)*	*Male money (F–F–M)*	*Male/female money (M–M–M&F)*
Crop type:								
Paddy	32			4		27		1
Jowar	6			1		5		
Groundnuts	13		1	3		9		
Castor	16			4	1	9		2
Ragi	17			4	1	11		1
Other	9			2		7		
Total	93		1	18	2	68		4
Livestock type:								
Cattle	3					3		
Sheep/goat	26			6		20		
Chicken	42	22		3		16	1	
Produce	1					1		
Total	72	22		9		40	1	

Notes
a By labour class of men.

relations to resource differences among labouring households. Most of the crop sales, however, were from the L+ and SF labour class households, and it was only the SF households that sold any cattle. The striking feature about intra-household processes regarding crop and livestock sales is women's negligible role. We find that 73.1 per cent of the crop sales in our households are controlled by men from the start to the finish; men decide to sell the crop (either individually or collectively with other male members in the household), physically carry out the sale process and also decide on how to spend the income from the sale. It was in only in 19.4 per cent of the cases that men passed on the crop sale money to the women and in 4.3 per cent of the cases that men and women together decided how to use the crop money. These figures, we argue, actually overestimate women's control over the crop money; in most cases women just retain the money but have very little say in the way it is spent (see later). Women in labourer households have not been able to take over the process surrounding crop sales despite the heavy involvement of their husbands in seasonal migration. This is mainly because crops in labourer households are sold immediately after harvest and men are yet to leave on their seasonal contracts. Women enjoy a slightly better position where livestock sales are concerned. While sale of cattle, and to a large extent sale of goats, are still dominated by male processes, women have made some inroads into processes that govern the sale of chickens. Women receive the money from the sale of goats in 23.1 per cent of the cases and control the entire process in 52.4 per cent of the chicken sales.

Our data further shows that only 48.3 per cent of the 151 women labourers in male-headed households control their own wage earnings. In 31.8 per cent of cases women's wages are controlled by men, and it is common for husbands to collect wives' wages directly from the employer especially in cases where husband and wife work for the same employer. It is also not uncommon, especially among young and newly wed women, to hand over wages to husband's parents (19.9 per cent). Overall, the data seem to reveal a material difference between the incomes controlled by men and women: men control 'big' incomes, like crop incomes and cattle incomes, while women control 'small' incomes, like income from chickens and sometimes wages. Comparing male and female expenditure patterns from these incomes shows that the material difference between male and female incomes is far more intense than suggested by the data here.

What men and women do with the incomes that they control is examined by source of income in Table 5.11.[19] Not only are women unable to exert control over much of the family income but they are also unable to channel the incomes controlled by their husbands towards family maintenance to the same extent as they do their own money. Across the income types, men and women from labouring households devote a substantial proportion of their income (between 28.3 and 53.3 per cent) to family provisioning. Women spend a far greater proportion on children when compared with men and this proportion increases as women's claim on the income they control intensifies. For instance, women spend just 17.5 per cent of the farm incomes they control on their children but spend a substantially greater proportion of livestock (24.3 per cent) and wage incomes

(36.1 per cent) on them. This hugely disparate spending pattern on children suggests that although women may retain farm incomes the resultant expenditure is not entirely controlled by them. Similar patterns are evident when we examine the proportion of male–female incomes spent on agriculture and land improvement. A greater proportion of income controlled by women is invested in agriculture and land when compared to money controlled by men, suggesting that a significant part of the incomes that women 'controlled' went into improving male-owned land and to subsidize farm profits that are largely appropriated by men. The fact that women do not demonstrate a similar propensity with their 'own' income from livestock (mostly from chickens) and wages suggests that women might agree to subsidize farm incomes and assets that are ultimately controlled by their men under some coercion, both real or perceived.

The most glaring point of departure between male and female spending patterns is the proportion they spend on themselves. Men retain between 15 to 27 per cent of the income they control for personal expenditure while women retain only up to 2.5 per cent of the income they control. Moreover, 42 per cent of men who belong to labouring classes L and L+, that is, whose primary employment is labouring, devote over about one-third of their incomes to personal expenses. Also in 92.6 per cent of the male-headed labourer households it was men who had access to the most spending money compared to just 3.5 per cent of women. Although men refer to the money retained for personal expenditure as '*chai-beedi dabbulu*' (which in

Table 5.11 Average spending pattern among men and women labourers from male-headed households by source of income (L, L+, SF)[a]

	Farm incomes		*Livestock incomes*		*Wage incomes*	
Money used for: (as % income)	*Male control*	*Female control*	*Male control*	*Female control*	*Male*	*Female*
Food	31.0	28.3	41.2	45.2	52.2	53.3
Children[b]	3.2	17.5	1.9	24.3	9.1	36.1
Medical care	2.3	1.0	1.3	0.9	1.1	2.1
Agricultural inputs	11.7	18.1	3.2	7.1	1.5	1.8
Land-buying/ improvement	4.5	6.5				
Livestock	3.1	4.3	13.1	7.8	0.3	
Loan repayment	23.1	21.9	22.3	13.5	6.3	3.1
Personal expenditure[c]	17.3	1.3	15.0	0.3	26.9	2.5
Miscellaneous[d]	3.8	1.1	2.0	0.9	2.6	1.2
Total cases (number)	68	21	41	31	61	73

Notes
a Classified by male labour class.
b Includes expenditure on children's clothes, education and cinema.
c Includes expenditure on own clothes, alcohol and cinema.
d Includes expenditure on one-off social events, travel expenses, hair oil and soap.

Telugu means money for tea and cigarettes) our evidence suggests that nearly all the male personal money is spent on alcohol. Alcoholism was rampant among our male respondents and it was not unusual to find heavily inebriated men even during our morning and afternoon visits to the village. Both our survey villages have liquor shops and these could be seen doing brisk business round the clock. Government-regulated *arrack*-licenses (which have to be bid for and sell for as much as Rs60,000) are extremely sought after and a number of rich farmers are also *arrack*-contractors. Two reasons lead us to believe that these figures actually underestimate the proportion of money men retain for personal expenses: first, these figures are self-reported and there is some notion of impiety attached to the consumption of alcohol especially if it is deemed to be money that should have been spent on family provisioning; second, these figures only account for expenditure from money wages and incomes and do not account for wages paid in *arrack*. In our survey region part of the wage is paid in bottles of liquor (two bottles for men, one for women and working-age children, especially boys). Boys as young as 11 or 12 start drinking *arrack* and it is not uncommon to find them at the *arrack* outlets drinking alongside the men. Big farmers who are either contractors or aspire to becoming one are found to promote liquor consumption by distributing samples of their product as wages. Several labourers said they would accept a rupee or two less in wages but not a bottle less of *arrack*. Several other studies have also documented very high male expenditure on *arrack* in rural Andhra Pradesh (Reddy and Patnaik 1997; Ilaiah 1997; da Corta and Venkateshwarlu 1999; Assunta 2001).[20]

One reason why men leave much of the responsibility for family maintenance to women is because of women's increasing involvement in waged labouring. As women take on more waged work, men shift more of the responsibility for family provisioning onto women by withholding a substantial proportion of their earnings for expenditure on alcohol and for meeting other personal needs. This shift in responsibility for family provisioning is further intensified by the negligible role that women have in the intra-household processes that govern family finances. Most of the family incomes that women control are also very small in comparison to the incomes that men control. As a result of greater responsibility for their families and children, women feel compelled to accept all and any offers of wage work, no matter how badly paid or how degrading (as under 'tied work'). In one sense male dominance over family incomes and their withdrawal of income within their control reduces women's wages, increases women's unfreedom and makes them more vulnerable as employees outside, and as wives inside, their homes – since, as we shall see below, not only does women's household status impact on their status as employees but how much women earn and what work they do is likely to have an impact on their relative power in the household.

Under such circumstances the question becomes why women are unable to exert control over their household incomes from sources other than their own wages? Our data suggests that intra-household processes surrounding the control and use of income from crop or livestock sales are mainly determined by the ownership of the asset in question.[21] Women in our male-headed labouring households do not

control family incomes because most of the household's productive assets are owned (or deemed to be owned) by men (Table 5.12). Of the average landownership of 2.94 acres among our labouring households, women own just 0.09 acres, and that is because of just three households where women were given land as part of their dowry. Women also do not own big livestock, on average owning just 7.6 per cent of a household's cattle and 14.6 per cent of a household's sheep and goats. Based on our time-use and our intra-household processes data, we argue that although women labour on their husband's farms and tend their husband's cattle they have little or no claim on the income from these sources. Women, however, own a substantial proportion of the household's poultry (60.9 per cent) and consequently also control most of the income from this source (Table 5.10). One finding that stands out significantly is the notable difference in the average number of chickens owned by the wives of men belonging to the SF labour class who, on average, own one chicken more than other women. As we shall argue later, this small yet significant divergence from women's general assetlessness may in fact be the starting point in redefining gender relations both within and outside the household.

Inequalities in gender relations within our labour households are manifested in women's inability (i) to use their work time on less tied, higher status work involving household productive assets, (ii) to shift some of their household work onto their husbands, (iii) to control more of the household's income, (iv) to direct more of the husband's income and wage earnings towards family maintenance and, finally, (v) to shift the ownership of some of the household's productive assets to themselves. Women's increased employment and wage contributions, it seems, do nothing to challenge the domestic inequalities that confront them; indeed, they may intensify gender inequalities by allowing men to shift family provisioning onto women and to retain greater proportions of their incomes for personal expenses. Despite the fact that women's cash contribution to the household has increased they remain more or less powerless as far as their position within the household is concerned.

Why are women, despite their increased cash contributions, unable to contest their lack of influence in household decisions? Women lack the power to protest

Table 5.12 Average ownership of household productive assets among men and women labourers in male-headed households

	Agricultural land (acres)			*Cattle (numbers)*			*Sheep/goats (numbers)*			*Chickens (numbers)*		
	N	*Men*	*Women*	*N*	*Men*	*Women*	*N*	*Men*	*Women*	*N*	*Men*	*Women*
L	12	2.00	0.0	3	1.3	0	–	–	–	11	1.6	2.3
L+	62	2.55	0.04	19	1.8	0.2	21	6.2	0.7	52	2.1	2.6
SF	89	3.19	0.13	68	2.9	0.2	14	5.8	0.3	75	2.0	3.6
Conditional average		2.85	0.09		2.6	0.2		6.0	1.0		2.0	3.1

against their inferior status in intra-household processes because of their general assetlessness. For instance, a woman may be unable to question how her husband decides to spend the household's farm income because he is the one who owns the land. She may also have to endure various male exigencies because her fallback position in case of divorce is extremely weak. Legal divorce in rural India is in fact nearly non-existent; in such cases it is common for the woman to be simply turned out of the house by her husband. A woman thus abandoned has no place in her parental home either (which may now belong to her brother). Faced with the possibility of homelessness and extreme poverty, women accept their inferior roles within the household. Gender inequalities emanate from acute inequalities in asset ownership; women across the subcontinent endure an inferior status vis-à-vis men because they lack productive assets, especially land (on this see Agarwal 1994). Moreover, any advantage that women have because of their increased cash contributions to the household is lost because of their low earnings when compared to male earnings both from farm and non-farm waged work (da Corta and Venkateshwarlu 1999). Her inferior status in the household also prevents her from contesting the social norms and expectations surrounding her labour use within the household, where she is largely responsible for domestic chores, and outside the household, where she is involved in socially debasing agricultural waged work, which not only is badly paid but also is often unfree.

Our other finding, which further substantiates the above, is that women with some productive assets to their name or those who were able to invest in improving their asset positions have started to renegotiate gender relations both within and outside their households. Other than for a handful of women who either own land as part of their dowry or have invested in assets using their migration incomes, this has been made possible largely because of the government-sponsored SHG microfinance programme that reached both the survey villages in the early 1990s. By August 2003 around 397 women from our survey villages had joined this scheme under 27 SHGs. A typical self-help group consists of 15 women, who come together from poor but similar socio-economic backgrounds. Members begin their credit activity by saving small amounts of money (one rupee per day), which may be supplemented with government grants and interest-free loans. Six months of regular saving ensure eligibility for bigger loans from NGOs, banks and other financial institutions. The usual loan amount is Rs30,000 to a group or Rs2,000 to a member. Although there are several problems with the effectiveness of this programme, the credit that women have accessed has made a perceptible difference to women's asset positions as they have invested their money either individually or jointly in various micro-projects (Garikipati 2006). Women have invested mainly in livestock, especially goats and poultry, and small businesses such as tailoring, a bangle shop, a tea shop, a small grocery shop and a fertilizer business.

One way to evaluate the difference that ownership of productive assets has made to women's status is to compare asset-owning women's status vis-à-vis their husbands with women from the same labour class who do not own any of the household's productive assets.[22] For obvious reasons we consider only partnership households. To carry out such a comparison we first construct two indices (Box

5.2). Each is an anthology of factors that impinge on the women's status within the household. The higher each component within the index and the higher the index itself the better is the prognosis for women's relative power vis-à-vis her husband. Relatively greater weight has been given to 'household outcomes' because their transformative implications for gender relations are 'real' as opposed to 'household processes' in which these are more or less hypothesized (Kabeer 2001).

Table 5.13 presents components of these indices for women who own assets and those who are assetless, by the labour class of the women concerned. We exclude women from the L class because just five of them owned any assets at all.[23] The inequalities between these groups are striking. On all indicators the asseted women are more involved or achieve better outcomes than assetless women, and in most cases the difference is significant. Asseted women have greater control over their

Box 5.2

Indices reflecting women's position in the household

Internal determinants of women's position

This reflects the intra-household processes that govern household income. Scores are based on the extent the woman (is allowed to) participates in these processes.

- Role in sale of crop: Equal 2 if woman takes the decision to sell the crop, sells it and keeps money from the sale. Equal 1 if woman does not decide and/or sell crop but keeps money from the sale.
- Role in sale of cattle and sheep/goats: as above
- Role in sale of chickens: as above.
- Female role in financial decision: Equal 2 if female has most say in financial decisions and the final say in a recent financial decision was hers. Equal 1 if she does not usually have most say in financial decision (mainly borrowing money) but the final say in a recent financial say was hers.
- Role in other household decisions: Equal 1 for each of deciding on which crops to grow, buying seeds and renting land if shared. Equal 2 if decision is by woman alone.

PROCESSES: Sum of the above.

Outcomes of position and processes

Index reflects the final outcome resulting from an interaction of external power and household processes. Scores are based on the extent these outcomes are favourable to the woman.

- Personal spending money: Equal 1 if woman spends any money that she controls on herself (these women usually tend to also keep their own wage earnings).
- Husbands' spending money: Equal 1 if husband spends approximately at least 90 percent of his earnings on household essentials.
- Role in domestic chores: Equal 1 for each of fuel and water collection, cooking and washing clothes and utensils and childcare if shared. Equal 2 if not done by woman

OUTCOMES: Sum of the above.

household processes than assetless women from the same class, denoting that ownership of assets does make a perceptible difference to the extent women influence these processes.

Asseted women also enjoy better household outcomes when compared to assetless women from the same labour class. Significantly more asseted women from both L+ and SF labour classes enjoy more personal spending money and are able to direct more of their husband's incomes into household maintenance when compared to the assetless women from the same labour class. The amount of household work that both asseted and assetless women perform, however, remains more or less equal. Women who are able to shift some of their household work burden onto other members in their household are often seen to share it with other women in their households and rarely share it with men. This to some extent denotes that the gendered norms surrounding household work have an endurance that even asset ownership cannot infringe. Women who are asseted from the L+ and SF labour classes, moreover, spend an average 0.8 hours less on waged work than their assetless counterparts and an average of 0.5 hours more on self-employed work. These results suggest that women who own assets are more able to allocate their labour time on better status and better paid self-employed work and are also significantly more empowered than those women who have no claim on the household's assets.

Greater participation in waged labour itself does not result in better household status for the women concerned. On the contrary women's inferior household

Table 5.13 Mean values of indices relating to female power and control among asset-owning and assetless women from male-headed, labour class households[a]

Empowerment indices	*L+*		*T-test*[b]	*SF*		*T-test*
	Asseted (N = 19)	*Assetless (N = 74)*		*Asseted (N = 24)*	*Assetless (N = 47)*	
Household processes						
Role in sale of crop	0.26	0.09	2.07**	0.29	0.06	2.77***
Role in sale of cattle and sheep/goats	0.11	0.03	1.50	0.14	0.00	2.59***
Role in sale of chickens	0.37	0.15	1.21	0.42	0.21	1.03
Role in financial decisions	0.16	0.03	2.37**	0.25	0.09	1.72**
Role in other household decisions	0.68	0.35	1.92**	0.92	0.36	2.91***
PROCESSES	1.58	0.65	3.04**	2.01	0.72	3.75**
Household outcomes						
Personal spending money	0.11	0.03	1.55*	0.21	0.09	1.51*
Husband's spending money	0.32	0.11	2.07**	0.25	0.13	1.35*
Household chores	5.16	4.74	1.03	5.50	5.06	1.16
OUTCOMES	5.58	4.88	1.69**	5.96	5.28	1.98**

Notes

a By labour class of women.

b The independent samples t-test denote whether the difference between the means of the study variables of the two groups is significant. * Denotes significance at 10%, ** at 5% and *** at 1%.

position and their lack of bargaining power compels them to accept very low wages and other unfair terms and conditions that go with tied labour. They have very little say in the household's financial decisions and do not control much of the household's income including their own wages. Further, while nearly all of the income they control is spent on household maintenance, the men tend to retain a substantial part of the income they control for personal expenses. In this context feminization of agricultural labour can said to be disempowering for the women concerned. Women lack the power to influence household decisions because they own very few of the household's productive assets. Indeed, women who own some assets are significantly better off than those who don't. They have a greater say in household processes and have much more favourable household outcomes. Evidence also suggests that these women are moving away from low status agricultural wage labouring into high-status self-employed work using their assets. It is these asseted women who have begun to, even if in a very limited way, renegotiate their intra- and extra-household gender-specific roles.

Conclusion and policy implications

We started this study with a brief review of the Marxist and neo-liberal debate surrounding the phenomenon of feminization of agricultural wage labour in India. The Marxists argue that feminization has occurred because poverty has pushed women into waged work and that by and large it has been a negative experience for the women concerned both because of the presence of unfree labour relations and the fact that female earnings are still small relative to male earnings. The neo-liberals on the other hand argue that feminization is the result of increased demand for female labour with the introduction of new technology and the result of male migration into non-farm work and that it has resulted in higher female wages and better working conditions for women overall.

In this study we examine these deeply divided claims with regard to the process and consequences of feminization in the drought-prone district of Mahabubnagar in Andhra Pradesh. To a certain extent the data from our survey villages corroborates the neo-liberal thesis of 'demand-pull'. We find that feminization in our survey villages was partly the result of greater demand for female labour and it was also the result of male movement into better paying and higher status off-farm work and self-employment. Demand for female labour was not, however, motivated by positive factors like 'green revolution' technology, but because of significantly lower female wages vis-à-vis male wages. Women were also considered harder working, more easily disciplined and more obliging in carrying out unpaid tasks. This trend implies that, while women are more heavily involved in low-status work on family farms (largely owned by men) and lowly paid agricultural work, men enjoy the higher status and pay attached to self-employment and off-farm work. This evidence suggests a 'class divide' between men as self-employed cultivators and women as non-propertied waged workers.

The wages earned from seasonal migration, an important drought-coping strategy in the area, moreover, are likely to deepen this class divide over time.

Men, we find, invest their migration incomes in land-based assets further strengthening their self-employed status, while women use their relatively smaller incomes for household maintenance. Men, it seems, migrate to buy or improve their lands while women migrate to feed and clothe their families.

Women's greater involvement in waged labour does not translate into better pay and working conditions. They earn a much smaller proportion of their published wages when compared with men. This is partly because men have moved out of agricultural waged work at a faster rate than women but it is also because women labourers are far more involved in fulfilling debt obligations and are unable to exert rights over the household's productive assets and work alongside their husbands. Loan obligations typically require the loanee household to enter into tied harvest and/or tied labour arrangements with the lender. Since work intensity on own farm falls disproportionately on women and since it is they who do most of the waged work we conclude that the burden of rendering loan obligations falls largely on women. Migrating men moreover shift the entire responsibility of tied arrangements onto women during the lean seasons and, in some cases, for the entire year. As indentured labourers women are hardly in a position to bargain for better wages and conditions.

This situation was aggravated by the fact that women have a negligible influence on the family's finances. It is men who control the sale of farm produce and livestock and, in one third of cases, also the wage earnings of their wives. While nearly all of the household income controlled by the women went into family provisioning, men withheld a significant proportion of the income they controlled for personal expenses. Greater responsibility for family maintenance compelled women to accept waged work in return for very low wages and tied conditions. Although actual male wages are also significantly lower than published wages they have missed the onslaught experienced by female wages mainly because of male migration into off-farm employment and into self-employment.

Our evidence also suggests that there is a significant correlation between women's intra- and extra-household status and their asset positions. Women who own assets like land, livestock or a small business are more likely to be able to exert an influence on their household's financial decisions, enjoy some personal money and divert more of their husband's incomes into household essentials. These women, moreover, spend less time in working for wages and are more involved in socially superior work on own assets when compared to those women who do not own any of the household assets. They are thus not only challenging their intra-household gendered roles but are also beginning to rework the gendered class division between men as self-employed cultivators and women as agricultural labourers. It is from the experience of these women that we can draw some transformative policy suggestions.

It is women's lack of ownership of land and other productive assets that reduces their influence in household decisions, which in turn reduces their ability to bargain for higher wages and fairer working conditions and impinges on their rights to allocate labour in response to market forces. Most of the women who own assets in the survey villages do so because of the government-initiated SHG

microfinance programme. This programme could be extended further by encouraging new members to join, by increasing the amount of credit and by encouraging women to invest in productive ventures. In addition to this the government can take a number of steps to improve the asset holdings of women from poor labouring households. For instance, although legislation regarding women's right to family land already exists very little has been done to proactively encourage or enforce it. In this regard the government can offer subsidized credit or provide free crop insurance in instances where agricultural credit is taken for the cultivation of women's land. It could further extend subsidized credit for the purchase of land and other assets to poor peasant families on condition that these will be in women's name. Although the government sponsors female literacy and social awareness through the current SHG programme, this activity has a far from adequate coverage and needs to be further accelerated. It is in strengthening women's asset position that the feminization of agriculture labour can be turned into a positive developmental experience for the women concerned.

Notes

1 However, a number of other indicators suggest that rural growth in Andhra Pradesh may have been slower than in the rest of the country. According to the National Human Development Report, Andhra Pradesh had a lower HDI when compared to the all India average in the last two decades. Moreover, its relative position has deteriorated over time. Among India's 15 major states, Andhra Pradesh ranked 8 in 1981, but this fell to 9 in 1991 and further to 10 in 2001 (Government of India 2002). Between 1993–4 and 1999–2000 mean per capita consumption increased by 57 per cent in rural Andhra Pradesh and 73 per cent in India overall (Rao 2004).
2 This movement compelled the government of Andhra Pradesh to ban the sale of *arrack* (Reddy and Patnaik 1997; Ilaiah 1997). Loss of state revenues, however, saw the prohibition repealed in 1997 (World Health Organization 2000) and *arrack* is now legally sold by government-approved contractors in every village and often in 'take-home sachets' for added convenience!
3 Andhra Pradesh has the biggest (with over half the total SHGs) and fastest growing program in the country today. By 2003 over 5.6 million women from poor households had enrolled as SHG members with a corpus fund of over Rs8 billion (Government of Andhra Pradesh 2004). SHGs not only allow women to access collateral free credit, but also promote literacy and social awareness.
4 Historical underinvestment in irrigation further amplifies the problem. Estimates suggest that of the 1.4 million hectares of cultivable land available in Mahabubnagar a mere 10.4 per cent is irrigated (Sajja 2003).
5 There are, however, important exceptions to this, see, for example, da Corta and Venkateshwarlu (1999), Kapadia (1995), Lerche (1995) and Olsen and Ramana Murthy (2000).
6 A recent survey by the government of Andhra Pradesh reveals that 45 per cent of rural households in Mahabubnagar belong to the low-income category – the largest concentration in the State (Government of India 2000c). Our own data show that 50 per cent of the survey households are below the poverty line. According to the National Human Development Report, of 23 possible ranks, Mahabubnagar was 21 in 1981 and fell to the last position in 2001 (Government of India 2002).
7 This apparent convergence in the percentage of male and female workers classified as agricultural labourers can be attributed to two distinct but associated shifts: a didactic

shift in the way census data were collated in 2001 and a structural shift in the working population.

8 In the 1991 census just 18.6 per cent of rural women were classed as main workers and in the 2001 census this figure was merely 16.8 per cent.

9 They also find that, contrary to common belief, switching from traditional to HYV crops had a negligible effect on feminization. Women's share increased mainly through 'non-technical, unexplained changes' in the balance of male and female labour in joint work. This accounted for all the working days women gained in paddy and groundnut cultivation (da Corta and Venkateshwarlu 1999).

10 This was mainly because demand for labour increased as the new technology was introduced into many more parts of the State. While some of the technological improvements lead to a fall in demand for labour (pump irrigation replacing lift irrigation), this was more than offset by increased demand due to double or triple cropping of HYV crops and by male labourers withdrawing to cultivate their own lands and to off-farm employments (da Corta and Venkateshwarlu 1999).

11 There is some evidence to suggest that both male and female participation in agricultural activities in India is declining over time. This trend is also evident in Andhra Pradesh. Here 82.7 per cent of women workers were agricultural labourers or cultivators in 1991 compared to 61.2 per cent of male workers, the corresponding figures for 2001 were 76.1 for women and 53.9 for men.

12 There are 31.8 per cent of men and 21.9 per cent of women who are cultivators; the remainder work in household industry.

13 Although their survey data is from the early 1990s, Olsen and Ramana Murthy (2000) estimate that *maistries* make a commission of Rs30,000 and group *maistries* (or *pedda-maistries* in our survey area) make a commission of Rs100,000. Bypassing *maistries* then is possible only for those with access to reliable networks – just two migrants from our survey villages, both from the MF category, were able to do so.

14 In 17 of the cases where spouses migrated together it was not clear what proportion of the migration income to attribute to the wife. In such cases it was split equally, therefore probably overestimating women's migration incomes.

15 Following the recommendations of the Narasimham Committee and in a bid to reform the rural financial sector the cost of formal credit increased enormously in the late 1990s (Patnaik 2004). This left the small and marginal farmers out of the ambit of institutional credit and increased the attractiveness of informal credit; informal credit was not only more immediately accessible but now also relatively cheaper. Heavy indebtedness to the informal sector is said to be responsible for the recently publicized 'debt-suicides' by farmers in Andhra Pradesh (Foster 2004; Patnaik 2004). Farmers felt the need to borrow because subsidies on a number of agricultural inputs like fertilizers and electricity were being phased out in line with liberalization but suffered poor returns through drought and rising input prices.

16 Our labour households, however, also used their formal credit towards meeting consumption needs. For instance, around 12 per cent of the loans taken via the SHGs were used for such purposes and over 75 per cent of these were used to meet urgent household food needs (Garikipati 2006).

17 Our time-use data suggests that 235 women spend 29.4 minutes every day in fulfilling unpaid labour obligations. This suggests that in a typical cultivating season that lasts for four months a total of 8290.8 labour hours are lost to such work. Given that 70 of our labouring families are involved in tied labour arrangements this gives us an average of 14.8 eight-hour workdays lost per woman.

18 'Who decides to sell' would include several decisions: 'whom to sell to', 'whether to sell at a given price', 'how much to sell' and 'where to sell' (within the village or in town).

19 Incomes were jointly managed in 2.4 per cent of the cases considered. These cases have been excluded from the analysis.

20 Da Corta and Venkateshwarlu (1999) argue that men are spending more on themselves now when compared to the 1970s because of the change in the way they are paid. Earlier they were paid in grain, which went directly into household consumption, whereas now they are paid in cash which is more easily squandered on liquor, tobacco and gambling.

21 Ownership may itself be either 'actual', in which case it is supported by official documents, like in the case of land *pattas* or may be 'perceived', which is common in the case of livestock. Livestock ownership is usually determined by who provided the money for purchase of the livestock.

22 We include all kinds of assets (land and cattle as well as other business assets that women might have invested in) and all kinds of ownership (both 'actual' as in the case of land and 'perceived' as in the case of livestock or small business). Although house ownership has been excluded, its inclusion would not make a perceptible difference to the results.

23 This is despite the fact that nearly half of the women from L households were SHG members. This suggests that the consumption needs of these households might be more pressing than that of other households and that woman were compelled to use their SHG-credit to meet these needs. Although nearly half of the women from L+ and SF classes are also SHG members it is for similar reasons that not many of them have been able to strengthen their asset positions (Garikipati 2006).

6 Gender relations and female labour supply in East Uganda

Arjan Verschoor

Introduction

The interface between the household and the labour market is an under-researched area despite its relevance for the distribution of economic outcomes between men and women (Polachek 1995; Humphries 1998). Here we begin to fill this gap by studying the conditioning influence of household organization, itself influenced by customary practices and legal rights, on female labour supply, as well as the way in which consequences of women selling their labour to the market feed back into intra-household dynamics. Our sample consists mainly of members of the East Ugandan Gisu. They are well-known in the anthropological literature for extreme levels of internal violence in the early 1960s and for the draconian measures they subsequently took in enforcing predictability of behaviour in order to restore a degree of interpersonal trust (Heald 1998). Echoes of these measures still resound in the daily life of the villagers in our two survey areas: Bufumbo sub-county in Mbale district and Sironko township in Sironko district.

Predicted labour supply responses vary in accordance with assumptions about the nature of relations within the household underlying the model used. In unitary household models (Becker 1965) and cooperative bargaining models in which households attain a bargained-for Nash equilibrium or some other Pareto-efficient distribution of consumables and tasks (Chiappori 1988), time-allocation and therefore labour supply decisions are based on comparative advantage, with each household member specializing accordingly. However, the *prima facie* case against assuming either a unitary model or a cooperative bargaining model as valid in the present context is quite strong (see Bird and Shinyekwa 2005). Primarily as a risk management device, African farm households, and, within this, East Ugandan Gisu farm households, tend, when they can, to diversify their income-generating activities (Collier and Gunning 1999). Livelihood strategies are characterized by several distinct production units within the household covering various plots and various types of livestock, with some managed by men, some by women and others jointly, as well as by several income-generating activities outside the household, such as petty trading and casual labour for others, that may be done either by men or by women, or by both. The likelihood that such multi-faceted livelihood strategies, which imply that any person within the household may be wearing any hat at any

time of day seemingly in disregard of household members' relative strengths and weaknesses, are based on collective optimization decisions of any sort, and are therefore optimal from a narrow economic point of view that expects maximization of the size of the household cake, does not at first sight appear to be terribly high. By contrast, in non-cooperative bargaining models, which allow for asymmetric information, individual preferences, own accounts and disparate decision-making algorithms, time-allocation and labour supply decisions need not be based on comparative advantage and may, for instance, be a manifestation of one partner's attempt to secure control over an independent income stream and/or to improve one's threat point in intra-household negotiations (Ulph 1988; Wooley 1988; Kanbur and Haddad 1994). This formulation may better represent the Ugandan households studied here.

We will argue that a diversified livelihood strategy, though in the first instance probably intended as protection against idiosyncratic price and output shocks, has the, not necessarily intended consequence, of facilitating individual household members' attempts to secure control over an independent income stream. The likelihood that a wife is successful in such an attempt is a function of her perceived threat point, which in our sample appears to be closely associated with features of the conjugal contract, land and property rights, connections to the market and her awareness of her spouse's threat point. Whereas poverty may be a driver towards diversification, at the same time it also inhibits it, with income-rich households much more diversified than income-poor ones (see Chapter 3). Poverty by inhibiting diversification, and thereby the emergence of multiple loci of semi-autonomous control within the household, may also restrict female influence in a patriarchal society: a possibility we test for and confirm in this chapter. While labour market participation does not tend to be a preferred option among our sample of households (Chapter 3), our focus on not only generating income streams but also securing control over them helps us understand why some otherwise powerless women in our sample resort to this option even when their time could be used more productively on their own farm; we will see that in a sense they artificially boost their domestic threat point through selling their labour to the market.

At the outset two provisos should be made. First, although a bargaining approach is helpful for understanding the relationship between female labour supply and intra-household dynamics in our sample, it is not possible to fit all aspects of that relationship within the straitjacket of any formal model. For example, the sources and manifestations of female power that we encounter are sometimes best modelled as cooperative, sometimes as non-cooperative, sometimes the assumption of income pooling is appropriate, and sometimes not (cf. Katz 1996: 19), with the added complication that the appropriateness of any model or individual assumption even for sub-categories of household decision-making processes is not uniform across households. This chapter could therefore be read as noting the limitations of formally modelling intra-household dynamics and as making a case for the type of 'analytical description' that Agarwal (1997: 2) says is essential in this field of study. Second, labour markets in our survey area are not well developed. The consequences of female labour market participation for women's welfare, as conditioned by

household organization, can only be examined for a small number (17) of pioneers. Having said that, the analysis of bargaining processes in the 272 male-headed households[1] that make up our sample provides important clues as to the likely consequences for women of policies that promote labour market development, which we briefly summarize in the concluding section.

Context

Uganda's economy has grown fast in the 1990s and its rate of poverty has fallen spectacularly. Approximately half of its success has been attributed to the coffee boom of the first half of the 1990s (Appleton 2001b). But pockets of persistent poverty remain, notably in the conflict-ridden North and in the parts of East Uganda where our research sites are located. Their fertile grounds on the slopes of Mount Elgon and their being coffee-growing areas notwithstanding, levels of poverty have remained at their early 1990s levels (ibid: 85). A complex of factors would explain the persistence of poverty in Mbale and Sironko. First, population pressure on land is among the highest in Uganda (284 persons per square kilometre of land). Combined with a system of early partible inheritance (Heald 1998), this leads to a fragmentation of plots and soil erosion (NARO 2001) and therefore to a secular decline in agricultural productivity per person dependent on agriculture. Second, even though Uganda's non-agricultural sector is growing fast, since it is so much smaller than the agricultural sector it cannot grow at a pace fast enough to absorb all agricultural surplus labour. Furthermore certain tribes are favoured for employment in the formal sector and the Gisu are not among them. Third, low levels of interpersonal trust hinder the formation of rural labour markets. Alison Evans (1996) traces the depletion of social capital, as well as rural labour markets remaining trapped in an embryonic state, to the appalling violence of the 'dark years' of the Amin and Mobote regimes. An alternative reading of the evidence has also been proposed. The Gisu were known for extreme internal violence in the early 1960s. They exhibited destructive patterns of accusation that often extended to their own family and drastic measures to curb that violence predate Amin and Mobote (Heald 1998).[2] Heald describes how near-anarchy followed the collapse of state authority in the immediate post-independence period. With homicide rates among the highest recorded rates in the world (ibid: 31), the Gisu formed vigilante groups in order to 'reconstitute a moral basis of community life' (back cover notes). However, these groups 'should not be seen only against a vacuum of political authority but in terms of their own distinctive ideologies of social relationship' (ibid: 1). Using violence to control violence, they 'in effect took the form of an alliance of the respectable against the unrespectable, the haves against the have-nots', with 'the poor, the failures in life […] attributed with malevolent hostility towards others' (ibid: 260):

> The most serious [of these] conflicts in Gisu life [are] generated within the family and lineage [and] membership of such groups provide no countervailing set of loyalties which operate to give protection to the individual. […]

> With the individual standing alone, there are few checks on the speed of the process whereby certain individuals lose social credibility and are in danger of being killed as a result.
>
> (ibid: 140)

The correct interpretation of the pathogenesis of the current widespread tendency to regard members of one's family, lineage and village with deep suspicion does not matter overly much for our purposes: on either view we are faced with a traumatized society that lacks the interpersonal trust basic to the formation and smooth functioning of rural labour markets. The combination of these three factors – declining agricultural productivity per person, limited employment opportunities outside the agricultural sector and structural constraints on the emergence of employment opportunities within the agricultural sector – help explain the persistence of poverty in our locations.

One of the main aims of our research was to examine the intra-household dynamics that mediate the impact of employment opportunities on women's welfare. We considered that the following institutions would have a bearing on these intra-household dynamics. First, the prevailing dowry system in which the groom's family pays bride wealth to the bride's family, after which she leaves her family, and often her village, to join his, contributes to the view that wives are property that one may acquire (Benschop 2002: 68). On the face of it, this would seem to render male power absolute, with his wife at his mercy. Indeed, as Heald (1998: 98) observes, 'All the wealth of the household, land, cattle and money income from cash-cropping or wage-employment, is at the absolute disposal of the husband.' However, there are countervailing forces. Customary practice on the one hand prescribes radical dependence, with the implied possibility of abuse, but on the other leads a wife to expect 'to share fairly in her husband's prosperity both with regard to household items and with right of usufruct over his land' (Heald 1998: 98). Moreover, marriage is a fragile state in Gisu society:

> The shadow of divorce hangs over all Gisu marriages. […] The man who loses his wife […] may have great difficulty in finding another for he is the one usually blamed for the troubles […] While jurally women have few rights in marriage, and on leaving their husband must leave all the property which has accrued to the marriage and even the crops which they have helped to cultivate […] the subservience of women is in many ways more formal than real. The authoritarian bias of marital relationships is thus often mediated in practice by a man's fear of offending his wife.
>
> (Heald 1998: 97–101)

In this society, therefore, the balance of power within the household is affected by how much a husband stands to lose when his wife leaves him: that is, by her productive capacity, by how much he values her personal properties and by the difficulty he would have in finding a new wife – aside from the emotional costs of a breakdown of marriage.

Second, although in traditional Gisu society, women did not have many positive rights, in the sense that they were in a position to eke out a living on their own terms, their well-being was protected through customs that prevented them from being evicted from land on which their livelihoods depended upon divorce or widowhood. During the colonial era these traditional social protection mechanisms were eroded as an unintended consequence of institutional developments, such as individualized tenure, and were not immediately replaced. We are now witnessing an era during which women are gradually acquiring new, formal rights as opposed to traditional, informal rights. Uganda is a signatory to the 1979 landmark Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in which women's equal rights to security of tenure are explicitly recognized, and it has subsequently adopted a new Constitution (1995) and passed new legislation (the Land Act of 1998) in both of which, as a direct result of lobbying by women's organizations, these same rights are recognized, albeit not as effectively as they might have been (Benschop 2002: 70). But the Land Act does give considerable protection to women against arbitrary eviction by in-laws upon divorce or widowhood, among other rights, and paralegal networks are successfully using the Act to achieve security of women's tenure.[3] This must start to enhance women's status relative to men.

It has been suggested in the literature on intra-household bargaining that what happens to women's access to land and property upon divorce or widowhood is too ultimate a factor to govern the outcome of daily battles about the division of tasks, spending decisions and the distribution of consumables (see, for example, Strauss and Beegle 2000: 99). This is not borne out by what women told us during focus group discussions organized at the outset of our large-scale, quantitative survey. A common argument used by men when women attempt to get a better deal is: 'Did you come here with a piece of land?' Women therefore were not prepared to invest in the long-term improvement of the land they cultivate when they could not establish a long-term interest in that land. The focus group brought to light a number of other elements that should also enter our picture of intra-household dynamics. For one thing, women's spending preferences and responsibilities are not uniform across households. Generally speaking, women are responsible for expenditures that are required for the smooth functioning of their households on a day-to-day basis, such as food, clothes and small medical items, and men for investment-type expenditures, such as agricultural inputs, school fees and larger medical bills. But when women become more solvent, for instance after acquiring a micro-loan, men expect their wives to foot some of the bills that they are ordinarily responsible for. The argument used by men to justify their predatory behaviour was: 'I allowed you to get this loan, didn't I?' By contrast, women will sometimes of their own accord supplement their husband's investment spending when they perceive that to be in their own long-term interests. Secondly, the marketing of agricultural produce, whether it comes from plots that men control or that women control, is on the whole a male prerogative. The women that participated in the focus group discussions told us that they are not informed by their husbands how much the produce is sold for (nor are they generally told how much their husbands earn). By contrast,

women are expected to tell their husbands how much they earn, an expectation they usually fulfil out of fear of displeasing their husbands. That fear is not unfounded. The same women told us that domestic violence, often connected with alcoholism, is all too common in their villages and that, moreover, displeasing one's husband once too often may result in divorce and eviction from land and property. We argue that this asymmetry of information renders a number of classes of intra-household bargaining models unsuitable for understanding welfare outcomes in our sample. On the issue of marketing produce, some women also intimated to us that their chances of taking over this traditional male function are slim. Their husbands have the right contacts and get a better deal in selling their produce than their wives would. Naturally, as a result of this, these wives are not inclined to start marketing produce, even if their husbands would let them, because of the loss in total household earnings it would entail, in the short run at least. Nor is selling crops always a strategically advantageous role. When women do sell crops, it is not necessarily a manifestation of their power, resulting in more of their spending preferences realized; instead their husbands may be in control of household spending to such an extent that they can afford to delegate the chore of selling crops to their wives.

Sources and manifestations of female power

In this and the next section, an approach to female power is developed, and female labour supply assessed both in terms of its consequences for intra-household dynamics and as arising endogenously from them. For analytical purposes, manifestations of female power will be thought of here as the ability to realize spending and time preferences: increased female power implies that a greater portion of the total household budget is spent in accordance with her wishes and/or she exhibits greater control over household labour, so that when she increases her hours of paid work or on her own business, she is able to reduce her hours of housework or on the household farm.

The balance of power within a household will be defined in the first instance as the extent to which one of the partners controls activities surrounding crop selling. Crops are the main source of livelihoods in our sample and control over crop selling would therefore be a telling indicator of relative power within the household. Selling crops themselves, that is, the physical activity of going to the market and bringing home the money, may not be a reliable indicator of intra-household relative power, since that may be a matter of one partner delegating a chore to the other. Indeed we find that, out of the 70 recorded instances in which women market crops in our sample, 34 times men have first decided that the crop should be sold and next instructed their wives to go and sell it. We therefore characterize control over crop selling in accordance with not only the identity of the person that goes and sells the crop but also the identity of the person that decides to sell it and the person that receives the money from the sale.

Table 6.1 distinguishes twelve categories of crop sales according to the principle just mentioned. We reduce this to four main categories for the purposes of the analysis that follows:

1 *Male Process* (62.8 per cent of all crop sales) stands for total male control over crop selling.
2 *Female Process* (6.4 per cent) stands for total female control.
3 *Female Money* (9.7 per cent) stands for crop-selling patterns in which either men or women are involved in deciding to sell and selling the crop, but in which women receive the money from the sale.
4 *Male Money* (12.5 per cent) stands for crop-selling patterns in which either men or women are involved in deciding to sell and selling the crop, but in which men receive the money from the sale. [4]

No crop can be labelled an exclusively female crop so we subsequently work with a classification of the household according to the pattern that emerges for the majority of crop sales within that household.[5] Livestock sales are classified according to a similar principle to that adopted for crop sales (Table 6.2) and the

Table 6.1 Crop-selling patterns in male-headed households (both areas, all instances of sales)

	Decides to sell	*Goes and sells*	*Gets money*	*No. (%)*
Male process	M	M	M	304 (62.8)
Female money	M	M	F	20 (4.1)
Female switch	M	F	F	14 (2.9)
Male delegates	M	F	M	7 (1.4)
Female process	F	F	F	31 (6.4)
Male money	F	F	M	10 (2.1)
Male switch	F	M	M	8 (1.7)
Female delegates	F	M	F	5 (1.0)
Male final	F&M or F or M	F&M	M	42 (8.7)
Female final	F&M or F or M	F&M	F	13 (2.7)
Couple final	F or M or F&M	F or M or F&M	F&M	10 (2.1)
Other[a]				20 (4.1)
Total				484 (100)

Notes
a Other household members or outsiders involved at some stage.

two classifications can be related (Table 6.3). There is a large overlap between livestock and crop selling patterns for the categories *Female Process* and *Male Process* but an ambiguous picture emerges for the other two categories. Table 6.4 explores that ambiguity by relating crop-selling patterns to female responsibility for and involvement in recent major agricultural and financial decisions. Male decision-making is very clearly associated with the category *Male Process* and female decision-making with *Female Process*. By contrast, the association between decision-making and *Male Money* and *Female Money* is less clear, although subtle and fascinating. When we compare these two categories we find that in the former category women are more involved in the preparation (putting forward the idea; doing the necessary investigation) and taking (renting land) of decisions that affect the household in the long run, whereas in the latter category women are much more involved in decisions related to running the household farm in the medium and short run (deciding which crops to grow; which seeds to buy; and whether or not to borrow money, where borrowing money is typically done for one agricultural season at a time).

Paradoxically, despite their greater involvement in major agricultural decisions, women from male-headed households belonging to the *Male Money* group spend far less time on their own farm than women from any other group and more time both on paid work and housework (Table 6.5). The *Female Process* group spends less time on housework than any other group and more time on their own business (which is distinct from their own farm). Table 6.6 shows that the only group that is

Table 6.2 Livestock-selling patterns in male-headed households (both areas, all instances of sales)

	Decides to sell	*Goes and sells*	*Gets money*	*Cattle (no./%)*	*Small animals (no./%)*	*Produce (no./%)*
Male process	M	M	M	18 (75.0)	24 (64.9)	34 (72.3)
Female money	M	M	F	4 (16.7)	6 (16.2)	–
Female switch	M	F	F	1 (4.2)	–	2 (4.3)
Male delegates	M	F	M	–	–	1 (2.1)
Female process	F	F	F	–	5 (13.5)	10 (21.3)
Male money	F	F	M	–	1 (2.7)	–
Male switch	F	M	M	–	1 (2.7)	–
Female delegates	F	M	F	1 (4.2)	–	–
Total				24 (100)	37 (100)	47 (100)

Table 6.3 Crop-selling patterns and livestock-selling patterns (as % of relevant categories)

Crop-selling pattern	*Male process*	*Female money*[a]	*Female process*	*Male money*[b]
Cattle sales[d]				
Male process	92.3	–	–	33.3
Female money[e]	7.7	–	–	33.3
Female process	–	–	–	–
Male money[f]	–	–	–	–
Small animal sales[d]				
Male process	76.2	50.0	–	33.3
Female money[e]	14.3	–	–	33.3
Female process	4.8	50.0	100.0	–
Male money[f]	4.8	–	–	33.3
Produce sales[d]				
Male process	92.6	100.0	–	33.3
Female money[e]	7.4	–	–	–
Female process	–	–	100.0	66.7
Male money[f]	–	–	–	–
No. households[c]	140	18	15	29

Notes
a Including Female Switch and Female Final
b Including Male Switch and Male Final
c Households for which the majority of crop sales follow this pattern
d Percentage of households in which the majority of crop sales follow the stated pattern and that sell cattle (small animals, produce)
e Including Female Switch
f Including Male Switch

Table 6.4 Crop-selling patterns and female responsibility for major decisions (% households)

Crop-selling pattern	*Male process*	*Female money*[a]	*Female process*	*Male money*[b]
Final say in big financial decisions?	4.3	11.1	66.7	10.3
For a recent major financial decision:				
First put forward the idea?	5.7	11.1	46.7	25.9
Necessary investigations?	4.3	11.1	46.7	29.6
Final decision?	7.1	16.7	46.7	10.3
Ultimate responsibility for:				
Deciding what crop to grow	21.4	33.3	80.0	17.2
Deciding which seeds to buy	12.9	27.8	66.7	13.8
Deciding whether to rent land	9.3	11.1	46.7	20.7
Deciding whether to borrow money	10.0	27.8	53.3	10.3
No. of households[c]	140	18	15	29

Notes
a Including Female Switch and Female Final
b Including Male Switch and Male Final
c Households for which the majority of crop sales follow this pattern

markedly different in terms of its household budget allocation is the *Female Process* group. When women control all stages of crop selling, a larger proportion of household budget decisions are allocated to investment goods. Part of this greater investment spending is on the business that these women are involved in, part is crop-related investment, which in our sample typically represents a move away from cultivating maize and towards more lucrative crops that require more expensive inputs.

Table 6.5 Manifestation of female power: realizing time preferences[d] (mean number of hours by category that main female works)

Crop-selling pattern:	*Male process*	*Female money*[a]	*Female process*	*Male money*[b]
Hours per typical day spent on:				
Own farm	5.27	4.45	4.87	2.73
Own livestock	0.29	0.27	0.13	0.13
Paid farm work	0.12	0.00	0.00	0.00
Paid non-farm work	0.00	0.00	0.20	1.00
Own business (other than farm)	0.54	1.09	2.20	0.67
Housework	5.66	6.27	4.33	6.60
No. of households[c]	140	18	15	29

Notes
a Including Female Switch and Female Final
b Including Male Switch and Male Final
c Households for which the majority of crop sales follow this pattern
d Based on the number of hours that respondents say they (if female) or their spouse (if male) spend on their major activities

Table 6. 6 Manifestation of female power: realizing spending preferences (all households)

Crop-selling pattern:	*Male process*	*Female money*[a]	*Female process*	*Male money*[b]
Money used to buy (% of usages):				
Food and basic household goods	38.9	36.4	31.3	41.3
Clothes	14.5	12.9	10.4	6.7
Schooling	16.4	25.9	18.8	23.1
Medical	16.9	15.3	10.4	16.3
Crop-related investment	7.3	–	16.7	4.8
Livestock	1.6	3.5	2.1	1.9
Own business	1.8	3.5	8.3	2.9
Other	2.4	2.4	2.1	2.9
% spent on investment goods	10.7	7.0	27.1	9.6
No. of usages[c]	491	85	48	104

Notes
a Including Female Switch and Female Final
b Including Male Switch and Male Final
c Households for which the majority of crop sales follow this pattern times up to three recorded crop sales per household times up to two usages per crop sale

Although very impressionistic at this stage, tables 6.2 to 6.6 combined suggest a picture in which the category *Male Money* consists of households in which women exercise considerable power, but operating from the *domestic* sphere, whereas the category *Female Process* consists of households in which women exercise their power in the *public* sphere. By contrast, we speculate that the category *Female Money* represents women who at first sight appear to exercise considerable power as they are the recipients of crop money and take decisions related to operating the household farm but who, in reality, are delegated by their husbands to do chores such as spending household money and running the household farm.[6] This delegation suggests that these women are less rather than more powerful. To the extent that this speculation is justified, *Female Money* women are less powerful than their *Male Process* counterparts.

Table 6.7 provides further confirmation of both the extent and the nature of female power associated with each category of crop-selling pattern and starts the search for factors from which what power the women in our sample have may be derived. A number of points are highlighted.

The number of income sources is higher for the *Female Process* group, which reflects the move away from maize and subsistence agriculture towards more lucrative crops and off-farm enterprise, as hinted at above. The relative neglect of maize is confirmed by the observation that maize yields are lower for this group than for any other group.[7] Some of our female entrepreneurs hold bank accounts, which would further enhance their ability to spend money on investment goods. Women in the *Male Money* group are not so much entrepreneurs as domestic managers who are involved in strategic and tactical decisions related to the household farm but do not spend much time on actual farm work. Their greater ability to allocate their time as they see fit appears to derive not from the greater availability of household labour but from hiring in farm labourers, which is done more in this group than in any of the others. Women in this group are better educated, which ties in with their involvement in major decisions. They also tend to come from households that are better connected, as indicated by the social capital index. A profile emerges of women with an open outlook on the world but firmly lodged at home.

Rather surprisingly, neither household access to micro-finance nor female access to micro-finance is associated with any form of female power. We need the insights from our focus group discussions in order to understand this. Husbands consider their wives' loans as household resources since they view their giving their wives permission to join a micro-finance group as the *sine qua non* of their wives' solvency. They therefore respond either by re-negotiating spending responsibilities or by demanding a share of the loan money. In fairness, they also feel partly responsible for loan repayment. This woman's story aptly illustrates the domestic difficulties female recipients of micro-finance have to battle with:

> I got a loan from [a local NGO]. My husband asked me for the money to buy tractor tyres so that we could dig our garden [their agricultural land]. This was not a viable investment because the loan period expired before the produce

would be ready for sale. Out of fear of displeasing him I gave him the money and now I am defaulting in my group. When I ask my husband for the money to repay the loan he says he doesn't have it, and sometimes gets tough with me [a euphemism for wife-battering] so that I have resorted to doing odd jobs for other households in the hope that I can pay back part of the loan. I hope that when the harvests are ready for sale, I can receive some of the money my husband owes me.

Table 6.7 Correlates of female power (mean values)

Crop-selling pattern:	*Male process*	*Female money*[a]	*Female process*	*Male money*[b]
Regional				
Sharia (Bufumbo = 1, 0 otherwise)	0.61	0.28	0.33	0.21
Household				
Income (UGS, per month per equivalent adult)	50,121	42,366	118,892	89,948
Asset index	1.02	0.90	1.20	1.30
Access to micro-finance (yes = 1, 0 otherwise)	0.28	0.28	0.33	0.21
Social capital index	2.60	2.44	2.20	3.24
Maize yield (kilos per season per acre)	666	653	471	687
No. of income sources	4.65	4.11	5.33	4.76
No. of household farm labourers	2.49	2.40	2.00	2.11
No. of hired labourers	2.84	2.56	2.73	4.34
Main female in household				
Education (1 = higher than primary, 0 otherwise)	0.15	0.33	0.20	0.45
Labour market participation (yes = 1, 0 otherwise)	0.09	0.00	0.07	0.10
She keeps wage (yes = 1, 0 otherwise)	0.91	–	1.00	1.00
Exit (own business or other paid work = 1, 0 otherwise)	0.12	0.11	0.27	0.17
Land registered in her name (yes = 1, 0 otherwise)	0.02	0.00	0.20	0.04
Size of female-owned plot	0.03	0.00	0.37	0.10
She takes majority of crop-growing decisions (1= yes, 0 otherwise)	0.57	0.39	0.40	0.52
She has access to microfinance (1 = yes, 0 otherwise)	0.20	0.17	0.20	0.21
She holds bank account (1 = yes, 0 otherwise)	0.00	0.06	0.13	0.00
No. of households[c]	140	18	15	29

Notes
a Including Female Switch and Female Final
b Including Male Switch and Male Final
c Households for which the majority of crop sales follow this pattern

Note too in this story, for powerless women supplying labour can be a distress sale, a desperate means of obtaining money that she has some control over. Women are almost always allowed to keep earnings from paid work (Table 6.7), in marked contrast to money that they obtain in the form of a loan. Labour market participation is low for any category of women and, as noted above, labour markets are in an embryonic state. The only group that differs markedly from the others in terms of the amount of labour they supply is the *Female Money* group, who supply less. It may be inferred that the key motive for doing paid work is to obtain extra spending discretion, which women from the *Female Money* group, to the extent that they are not delegated by their husbands to do the chore of buying household necessities, already have. Women from the *Male Process* group may therefore do paid work in order to obtain some of this same discretion, whereas for women from the *Female Process* and *Male Money* groups doing paid work may actually be a source of power. Of course, all of this is very impressionistic and we need to probe further.

If any outside income is deemed to enhance the threat point in intra-household negotiation women from the *Female Process* and *Male Money* groups emerge as deriving their relative power partly from this source. Households from these groups are also much richer in terms of income than other households. Focus group participants were very eloquent on the importance of household income in giving them more freedom. The poorer the household is, they said, the more their husbands feel the need to assert themselves. When resources are few, husbands' control becomes tighter; when resources increase, they relinquish control. The explanation, according to this woman, who received warm applause from the rest of the group for her insight, is embarrassingly simple: 'He needs to drink to forget that we are poor, and he needs to grab all our money so that he can drink.'

Very importantly, women's use rights of land, in the sense of taking most of the agricultural decisions related to cultivating crops on that land, are not associated with female power (Table 6.7) thus supporting our focus on classification according to control over crop selling rather than control over crop growing. By contrast, land being registered in women's name, which may be conceived of as long-term use rights or use rights that would survive widowhood or divorce, is strongly associated with female power. This contrast suggests that women's fallback position needs to be conceptualized very carefully, avoiding variables that correspond with superficial influence. As with selling crops and spending household money, control over crop growing, which appears to be a manifestation of power, may again be a matter of one partner delegating a chore to the other. [8]

The patterns we have observed so far suggest that female power, when defined as the ability to realize time allocation and spending preferences, cannot in any straightforward way be equated with the physical activity of going to the market to sell agricultural produce, nor with control over decisions related to the daily running of the household farm, nor with spending household money, nor with a budget share allocated to certain goods, nor with the amount of time spent on any category of work. Buying and selling goods and running the farm are chores that one may be delegated to do; men are traditionally responsible for buying investment goods but some relatively powerful women supplement their husbands'

efforts in this area of their own accord; and of the two most powerful categories of women (*Female Process* and *Male Money*) one is characterized by the highest amount of time spent on housework and the other by the lowest. We have instead suggested that controlling the early stages of the crop-selling chain is particularly associated with female power, and that the nature of this female power is reflected by the identity of the person who then, after women have taken the initial decision to sell a crop and, usually, gone to the market and sold it, receives the money from the sale. The women who make the decision that then hand over the money to their husbands tend, first, to spend less time on their own farm than others do, made possible it seems by hiring in labourers; second, to spend more time than others on housework, reflective it appears of their exercising their control from the domestic sphere; and, third, to spend more time than others on labour supply, presumably not to generate an independent income stream over which they have individual control, since their control over crop selling suggests that to be superfluous, but possibly in order to supplement household income and/or to enhance their standing within the household. The women that, having control over the early stages of the crop-selling chain, also keep the money from the sale are more often than others entrepreneurs, and tend to come from more diversified households. This may both be a source of their power, since various income streams would facilitate the emergence of multiple loci of control within the household, and a manifestation of their power, since their job, their own business, or their own plot adds income streams to the household's existing ones. They also spend less time than others on housework, which suggests that they have considerable control over household labour.

Where does such female power, defined as exerting considerable control over the crop-selling chain, ultimately derive from? To determine this we present a logistic regression in which the dependent variable takes the value one if crop-selling patterns may be labelled either *Female Process* or *Male Money* and zero otherwise. Of the correlates of female power identified above we select the ones that should be exogenous to day-to-day intra-household bargaining about household budget shares and the distribution of tasks, although some, for instance control over crop production, may well be the outcome of previous strategic negotiations (Table 6.8).

Use rights of land that would survive the breakdown of marriage (proxied by the size of the plot registered in the main female's name), but not use rights as such (proxied by control over crop production), exit (earning money from extra-household sources) but not voice (education), a community's practices (Islamic law) but not involvement in the community (social capital) significantly influence a woman's ability to exert control within the household. With the simple model of sources of female power described by the regression it is possible to predict 83.1 per cent of our classification of crop-selling patterns correctly.[9] One way of interpreting the evidence is to view a household's riches as the ultimate source of female power: perhaps as the factor that would enable women to gain access to individual income-earning opportunities (start their own business, purchase their own land) that would improve their fallback position upon the breakdown of

Table 6.8 Sources of female power (logistic regression)

Dependent: Female Power (= 1 if Female Process or Male Money)	
Constant	–1.086***
	(7.793)
Size of plot registered in main woman's name	0.926**
	(6.049)
Social Capital	0.043
	(0.250)
Dummies:	
Sharia (Bufumbo = 1)	–1.086***
	(7.793)
Exit (= 1 if main woman participates in the labour market, owns her own business or does other paid work)	0.837*
	(3.061)
Control over crop production (= 1 if main woman takes majority of relevant decisions)	–0.209
	(0.347)
Education (= 1 if main woman's education level higher than primary)	–0.333
	(0.250)
Nagelkerke R^2	0.175
Model chi-square	28.831***
Percentage predicted correctly	83.1
N	261

Notes
Wald statistics in parentheses; *** significant at 1%, ** at 5%, * at 10%

marriage, therefore making them less dependent on the marriage and thereby improving their bargaining power within the marriage.

The discussion of this section suggests an approach to intra-household bargaining for the households in our sample along the following lines. Men and women both attempt to realize individual spending preferences and an allocation of time that suits them. For realizing individual spending preferences, ultimate, rather than superficial, control over an income stream may be helpful. Income streams are typically associated with one of the following categories: cultivation of crops, livestock, own business, labour supply (farm work for others, which tends to be in the form of unskilled labour, and non-farm work, which tends to be done by the better educated) and micro-finance. As we have seen, the presence of multiple lines of production and therefore various independent income streams facilitates, but does not guarantee, the emergence of multiple loci of control within the household. Outside income-earning opportunities, permanent land rights and customary practices, all three of which represent a fallback position upon widowhood or divorce, were shown to be statistically significantly associated with ultimate (rather than temporary or superficial) independent female control over income streams. Moreover, the presence of these factors would aid women's strategic negotiations with their husbands in the sense that it would enable them to encourage diversifying a household's income sources. Such strategic negotiations, if successful, would then again enable women to gain control over one or more of

these extra income sources. A decisive factor in the decision to diversify was shown to be the availability of sufficient household resources: diversification appears to be a consequence of riches rather than a cause of poverty.[10] Prior to household economic portfolio decisions, income pooling appears to take place among our respondents. This is suggested by the observation that loans obtained by individuals for a specific purpose are considered to be part of the total resources available to a household and may be diverted away from the intended purpose. Thus the picture is a complex one of competitive and cooperative gender relations. Both partners obviously have an interest in increasing the size of the household cake, but must also make sure that they have their own spoon to dig into the cake (superficial control) as well as that the content of their spoon ends up in their own or their favoured household members' mouths (ultimate control).

Intra-household dynamics and female labour supply

In this section we examine the implications of the picture of intra-household dynamics developed so far for female labour supply. We first develop a number of hypotheses and test them with the help of data on the women in our sample who have pioneered forays into the labour market. The better a woman's fallback position, the greater should be the scope for choice of control over various income streams, that is, the greater should be her ability to control one of the more lucrative income streams. We saw that, for the relatively uneducated *Female Process* women, having their own business (which is often associated with marketing produce, for which business savvy but no formal education is required) represents one such lucrative option, and we expect that for the better-educated *Male Money* women non-farm work that pays a relatively high wage will be the most lucrative option. For *Male Process* women, low-paid farm work and odd jobs may well be the only way to obtain discretion over spending: their husbands control income streams generated within the household's production unit and their bargaining position is correspondingly weak. By contrast, if these women's husbands would not allow them to keep their earnings from doing work outside the household, either by appropriating the money or by absconding from some of the traditionally male spending responsibilities, women could respond by reducing the number of hours that they work outside the household and therefore their bargaining position should be correspondingly better. The extent to which *Female Money* women have control over spending money and the extent to which this does not represent delegation to buy provisions represents the extent to which supplying labour outside the household would be less necessary for them.

Implied hypotheses in this picture of intra-household gender relations with respect to female labour supply are therefore:

1 Women from the *Male Money* group disproportionately often do high-paid non-farm work.
2 Women from the *Male Process* group disproportionately often do low-paid farm work.

3 Women from the *Female Process* group find working for their own business the most attractive outside option because their lower education levels mean that high-paid jobs are not open to them and they therefore steer away from participating in the labour market.
4 To the extent that they have discretion in spending household money, *Female Money* women avoid participating in the labour market.

The first three hypotheses can be tested directly; the fourth, however, is a composite one. By examining the *Female Money* women's participation rates in the labour market, we obtain a measure of spending discretion (the lower their participation rate the higher is spending discretion, to the extent that observed behaviour is preferred behaviour), but the validity of this measure hinges on the accuracy of our approach to gender relations, which cannot be examined directly. To the extent that we obtain confirmation for our approach from examining the first three hypotheses, we may assume the accuracy of the fourth.

As predicted, women from the *Male Money* group earn much higher wages than women from any of the other groups and only do non-farm paid work (Table 6.9, panel 1) (this confirms hypothesis 1). Women from the *Male Process* group earn lower wages and only do farm paid work (hypothesis 2). *Female Process* and *Female Money* women steer away from supplying labour (hypotheses 3 and 4).

Table 6.9, panel 2, tests for the role of supplying labour in obtaining spending discretion, which, it will be recalled, should be especially pertinent for women from the *Male Process* group. We start by noting that respondents (both men and women), when prompted to indicate uses for money obtained from various sources, never say that money from selling crops 'has no designated use': respondents are always able to definitely point to a specific category that the money will be used for. By contrast, when women are asked to choose a category of spending that their wages will be used for, the category 'no designated use' features prominently. This is not likely to be a framing effect as exactly the same prompts were used for both questions. Men do not appear to have the same need for spending discretion: money from selling cattle always has a designated use.[11] The number of women supplying labour is too small for us to be overly confident about the broader implications of this finding. Moreover, a measure of spending discretion is hard to obtain, for we saw in the previous section that spending preferences themselves are a function of bargaining power, with *Female Process* women happy to encroach on traditionally male territory when they perceive that to be in their own interests, and budget shares allocated to one or the other category of goods therefore being an unreliable indicator of the extent to which female spending preferences are realized. With the number of cases in which money has no designated use thus the best available indicator of spending discretion, we note that this figure (6 out of 12 possible cases) is significant at the 5 per cent level ($p = 0.014$) for the *Male Process* group, and for the *Male Process* group alone, exactly as hypothesized. The figure for the *Female Process* group (1 out of 1) may be a statistical fluke ($p = 0.334$): women from this group, as we have noted, do not tend to use supplying labour as a means of extending their entitlement set and we do not know the special circumstances that make this lone

woman an exception to the rule. Obtaining spending discretion does not feature, again as hypothesized, for the *Male Money* group: their ability to realize spending preferences is good for any income stream that they choose to have control over, and their choice to supply labour is inspired by its being a lucrative option rather than its being the only way to get hold of money that they can spend as they see fit.

The time budget data for female respondents that supply labour are exactly in line with this pattern (Table 6.9, panel 3). When women's intra-household bargaining position is strong, labour supply is a luxury option, whereas when their bargaining position is weak, labour supply tends to be a distress option. The working day is by

Table 6.9 Female power, labour supply, spending discretion and time allocation

Crop-selling pattern:	*Male Process*	*Female Money*	*Female Process*	*Male Money*
Overall N	140	18	15	29
% of women[a] that supply labour	8.6	0.0	6.7	10.3
No. of women[a] that supply labour	12	–	1	3
% that keep earnings	91.7	–	100.0	100.0
Number of cases in which money from source indicated has no designated use/total number of cases in which money derives from source indicated				
Crop selling	0/139	0/18	0/15	0/29
Cattle selling	0/13	–	–	0/3
Female wage	6/12*	–	1/1	0/3
Within the group of households belonging to stated crop-selling pattern, percentage of domestic chores (food collection, cooking, fuel collection, water collection, buying provisions and washing clothes) that main female usually does, without any help from others either from within or outside the household; mean values:				
	62.1	59.3	66.7	58.6
Of the female respondents that supply labour within each category of crop-selling pattern, hours spent on following categories of work (from 24-hour time budget: 5:00–24:00)				
Own farm	4.7	–	3.0	0.0
Livestock	0.0	–	0.0	0.0
Paid farm work	1.0	–	0.0	0.0
Paid non-farm work	0.0	–	3.0	3.3
Own business	0.0	–	0.0	0.3
Housework	6.3	–	3.0	6.3
Total work hours	12.0	–	9.0	9.9
Relaxation	0.0	–	1.0	1.7

Note

a Respondents or respondent's spouses

* indicates significant at 5% in a one-sample t-test, with H_0: number of cases in which money from source indicated has no designated use equals zero.

far the longest for *Male Process* women who have the least time for relaxation. The time they work outside the household (only one hour per day on average) simply adds to their already heavy workload. The *Female Process* woman managed to negotiate a much more comfortable working day than her *Male Process* counterparts, with her time supplying labour compensated for by others taking over some of her domestic tasks, notably (as compared to the *Male Money* group) housework. This confirms the pattern already observed that *Female Process* women appear to be able to persuade others within their households to take over their domestic tasks (Table 6.5). The *Male Money* women likewise manage to negotiate a comfortable working day with their time spent on paid work outside the household freed up by reducing work on their own farm, made possible by hiring in outside labour. The contrast between the way in which time is made available for our two categories of powerful women, the *Male Money* group and the *Female Process* group, confirms the suggestion made earlier that the former exercise their influence in the domestic sphere and the latter in the public sphere. The *Male Money* group stay at home more than other women, work less time on their own farm and, when they do move out of the home, it is for a well-paid job or to join a meeting of one the community associations they are members of. The *Female Process* group are, say, behind their stalls selling their produce while others within their households do the housework for them.

The *Male Process* group of women is by far the largest group in our sample. Their long working days are reflective of a historical tendency for women within our survey areas to be burdened with an increasing number of tasks and responsibilities. We interviewed a small group of respondents (34 people) about what they see as typically male, female and children's tasks, both now and in the past (ten years ago and when they were a child, which for most respondents is more than ten years ago). Table 6.10 records modal responses.

It is very clear in the table that the tendency is always in the direction of women taking on more tasks. When previously work was typically done by men, it is now done by either men or women (clearing land for maize, tending goats, selling beans); when previously work was done by either men or women, it is now often typically done only by women (clearing land for matooke, planting matooke); and when previously work was typically done either by young girls or by women, it now tends to be done exclusively by women (water collection, fuel collection) which presumably reflects the fact that more children attend school than in the past. In all cases where there is a change in the traditional division of tasks, the change is in the direction of women doing more. A couple of respondents suggested an interesting explanation for this historical tendency. The introduction of 'modern agriculture', high-yielding varieties of seeds and fertilizers, implies a need for more cash. Since investment good expenditures are normally a male responsibility and because it is easier for men to generate income outside the household than it is for women, men swap their own-farm labour time for time on their own business or waged work, saddling women with more farm work. The time budget data reflect this historical tendency.

The picture that is starting to emerge is one in which some women, constrained though they may be by limited employment opportunities, increasingly 'discover'

Table 6.10 Historical gender division of tasks[a]

Tasks:	*When you were a child*	*10 years ago*	*Now*	*When did it change?*
Clearing land				
Maize	man	man	man/woman	5 years ago
Matooke	man/woman	man/woman	woman	10 years ago
Groundnuts	woman	woman	woman	–
Beans	man/woman	woman	woman	15 years ago
Planting				
Maize	man	man/woman	man/woman	15 years ago
Matooke	man/woman	man/woman	woman	10 years ago
Groundnuts	woman	woman	woman	–
Beans	woman	woman	woman	–
Weeding				
Maize	man	man/woman	man/woman	10–15 yrs ago
Matooke	woman	woman	woman	–
Groundnuts	woman	woman	woman	–
Beans	woman	woman	woman	–
Harvesting				
Maize	man	man/woman	man/woman	5–15 years ago
Matooke	woman	woman	woman	–
Groundnuts	woman	woman	woman	–
Beans	woman	woman	woman	–
Selling				
Maize	man	man	man	–
Matooke	man/woman	man/woman	man/woman	–
Groundnuts	man	man/woman	man/woman	15 years ago
Beans	man	man	man/woman	15 years ago
Tending				
Cows	boy/man	boy/man	man	2–15 years ago
Goats	boy/man	man	man/woman	3–15 years ago
Chickens	woman	woman	woman	–
Selling				
Cows	man	man	man	–
Goats	man	man	man	–
Chickens	man	man	man/woman	10 years ago
Water collection	girl/woman	girl/woman	woman	1–10 years ago
Fuel collection	girl/woman	girl/woman	woman	1–10 years ago
Waged work in agriculture	man/woman	man/woman	man/woman	–
Other waged work	man	man	man/woman	1–10 years ago

Note:

a Based on responses to the question: 'I would like to know who has normally carried out the following tasks (a) in your parents' household when you were a child; (b)10 years ago; and (c) now.' Modal responses (N = 34)

labour market participation as a means of extending their entitlement set, whereas other women (the *Female Process* group) find working on their own business more attractive. Selling labour to the market may be considered from a comfortable position in which waged work represents the most lucrative option (the *Male Money* group), or from the unenviable position in which waged work (poorly paid and adding to one's time burden) represents a desperate means of obtaining control over the only income stream that otherwise powerless women have some chance to gain control over (the *Male Process* group). The latter's bargaining power in this area derives not from characteristics of their household (income) nor of the wider environment (customary practices) but from their willingness to work an even longer day than they already do, if their husbands allow them to retain their earnings. Corresponding as it does with some bargaining power (the threat not to supply labour if they cannot keep their earnings), control over an income stream thus secured is successful in giving women the spending discretion that they were after, but at the price of being over-burdened with work. The gradual discovery by women of the benefits labour market participation may bring is confirmed by the historical tendencies recorded in Table 6.10. Since recently it has become more normal that women do non-farm paid work (formerly exclusively a male domain): these are our relatively educated *Male Money* women. Casual farm labour, according to Table 6.10, has always been done both by men and by women. However, as Muzaki (1998: 2) notes in a case study of the rural informal labour market in Budadiri county, Mbale district, although women's participation in *kandalaasi* and *lejaleja* (two terms for casual labour) is traceable to the 1960s, when some women started selling their labour for weeding and harvesting coffee, there have not been more than a handful until recently, when women have in increasing, though still small, numbers left the domestic sphere and started to compete with men in the public sphere for employment outside their homes. Our analysis so far suggests that this increasing tendency among women to offer their services on the informal labour market is constrained by their inability to negotiate a corresponding reduction in the services they are expected to offer within the household. A necessary condition for women to benefit more substantially from an expansion of the rural labour market is for them to be able to gain more control over the allocation of their own time. We have seen that this control is greater for those women whose fallback position, as defined by the whole range of outside income-earning opportunities open to them as well as permanent land use rights and customary practices, is better.

Since female potential to benefit from labour market participation critically hinges on control over time, we explore more formally the determinants of female time allocation, with an eye on those factors that would increase control over time and with fallback positions captured by separate dummies for the crop-selling patterns *Female Process* and *Male Money* (Table 6.11). When female agricultural productivity increases (measured as yields on female-controlled plots), the number of hours women spend on own farm diminishes and the number of hours spent on housework increases. The coefficients on both types of work are strongly significant and their absolute values are of the same order of magnitude. Since most hours of

farm work are spent on the cultivation of maize, a crop which is both used for subsistence and for commercial purposes, and since the price of maize was exceptionally low at the time of survey, this finding suggests that, once enough effort has gone into cultivating maize to ensure yields sufficient for a household's consumption requirements, the opportunity cost of time spent on housework diminishes drastically, with women therefore no longer finding it worth their while to spend time on their own farm. Female agricultural productivity on its own however does not appear to be a source of time available for either own business or labour supply.

A female move away from farm work is again observed when the income of other household members increases. Here, however, the move is towards more time spent on own business. This finding suggests that a household's economic portfolio decisions, including ones that confer control of an independent income stream to women, take note of all household resources. Put conversely, when a household as a whole is sufficiently wealthy to diversify its income-generating activities, female power appears to increase almost as a side-effect: diversification

Table 6.11 Determinants of female time allocation (OLS estimation)

Dependent variables: hours of work spent on (from time budget: 5.00–24.00)					
	Own farm	*Housework*	*Labour supply*	*Own business*	*Labour supply plus own business*
Constant	4.910***	5.629***	0.264	–0.363	–0.099
	(13.698)	(14.850)	(1.101)	(–1.000)	(–0.234)
Female agricultural productivity (own farm)	–0.002***	0.003***	0.000	0.000	0.000
	(–2.886)	(3.183)	(–0.782)	(0.341)	(–0.151)
Income from other household members	–5.408E–07***	5.074E–08	–2.963E–08	5.731E–07***	5.434E–07***
	(–3.931)	(0.349)	(–0.322)	(4.115)	(3.358)
Farm size (acres)	0.342***	–0.283***	0.034	–0.100	–0.066
	(3.602)	(–2.823)	(0.537)	(–1.045)	(–0.593)
Household labour under main woman's control	–0.007	0.003	–0.027	0.093*	0.066
	(–0.147)	(0.056)	(–0.859)	(1.961)	(1.199)
Dummies for Female Power (see Table 6.1)					
Female process = 1	0.223	–0.907*	0.225	0.604	0.829
	(0.455)	(–1.750)	(0.685)	(1.218)	(1.438)
Male money = 1	–1.603***	0.405	1.135***	–0.262	0.874
	(–3.133)	(0.749)	(3.315)	(–0.505)	(1.452)
R^2	0.218	0.135	0.09	0.341	0.285
F	5.010***	2.797***	1.770*	9.310***	7.185***
N	133	133	133	133	133

Notes:
t-statistics in parentheses; *** significant at 1%, ** at 5%, * at 10% levels

may well take place primarily as a risk management device but, since the likelihood of female control over at least one income stream increases with the total number of household income streams, a not necessarily intended consequence of such risk management is increased female power.

Women from households with a larger farm tend to spend more time on their own farm. Two factors are likely to increase the opportunity costs of time spent on categories other than farm work when farm size increases. First, with labour markets 'thin' and substantial supervision costs, hiring in labourers that are worth their marginal productivity is correspondingly constrained. In other words, the difficulty of obtaining information about a labourer's 'true' productivity and the corresponding need for extra supervision increase the opportunity cost of time spent on non-farm work of those women responsible for cultivating household plots: their own labour time and hired-in labour time are imperfect substitutes. Only when an outside income source is sufficiently lucrative will a woman find it worth her while to substitute hired farm labour time for her own farm labour time. We note from the significantly negative coefficient on the *Male Money* dummy that for this group, who are better educated and able to sell their labour outside the home on attractive terms, hiring in labour in order to free time for labour supply is an attractive option.[12] The second factor that increases the opportunity cost of female time spent on categories other than farm work when the farm size increases is the move towards more lucrative crops made possible by larger land holdings. Once subsistence needs are catered for the remainder of the land may be used for lucrative, but time-intensive, cash crops, such as tomatoes and cabbages.

Female control over household labour does not significantly affect time spent on her own farm but is significantly associated with more time spent on her own business. This is a difficult finding to interpret. Control over household labour is proxied with the number of people within her household that help her cultivating her plots as a proportion of total available household labour and weighted with the size of the female-controlled plots relative to the male-controlled plots. It is not terribly hard to imagine factors that limit the scope for such control to translate into spending less time on her own farm: gaining such control may come at the price of working alongside her fellow household members, or to put it differently, her fellow household members are only prepared to help her when she puts in at least the hours they put in. But it is harder to imagine why more such control leads to more time spent on own business. It may well be that the same factor that limits her scope for reducing farm hours is at work here: her ability to persuade household members to work for her if she works alongside them implies that if the same principle is applied to work on her own business, the time she spends on her own business is made more attractive to the extent that she can get other household members on board. Control over household labour that derives from working alongside them increases the return on female time for any category of time that she decides to make use of this control for. When applied to farm work, which *ceteris paribus* she wants to move away from, the effect on time allocation of the increased return on her time is offset by an income effect, which on balance, apparently, cancels out, yielding an insignificant coefficient. When applied to the

category own business, the income effect is the only factor at work, for which reason the increased return on time derived from control over household labour (insofar as this control is subject to her working alongside them) translates into a positive coefficient. To the extent that this interpretation is valid, this type of control over household labour appears to be a mixed blessing: it increases the opportunity cost of female relaxation time and would therefore tend to lengthen her working day.

We have discussed the *Male Money* dummy and the ability it represents for educated women to offer their households an addition to household income (derived from supplying labour) sufficiently high to make it worth their while to substitute hired-in time for her outside working hours. *Female Process* power, as we have noted before, bargains for less housework, but very interestingly is not significant, once income of other household members is controlled for, as a determinant of female time spent on her own business, despite the fact that we know that this group spends far more time on their own business than any other group. This suggests a direction of causation that runs from other household members' income (assuming income pooling) through increasing female income-earning opportunities (she is enabled to invest in her own business) and permanent land rights (she is allowed to purchase her own land during the course of the marriage) to female power. The final column of Table 6.11, which takes time spent on both exit options together, suggests the same point starkly: neither female power dummy is significant and income from other household members appears as the only ultimate determinant of women spending more time on outside income-earning ventures.

The discussion of these findings implies the following for women's ability to reduce their own farm and housework work hours upon entering the labour market. When household income and farm size are controlled for, spending more hours on waged work would only lead to a reduction of their other work hours if women's ability to negotiate a reduction, which itself ultimately derives from their ability to add a sufficiently attractive income stream to the household's existing ones, is sufficiently high. The point is illustrated by a further regression (Table 6.12). Hours spent on activities other than waged work do respond to labour market participation of powerful women but not to labour market participation of powerless women. For the latter group, selling their labour on the rural informal labour market represents a distress sale, a course of action inspired by hardship and the need to secure control over an income stream from outside the household, since somebody else within their households has already secured control over income generated within the household.

Synthesis

The dilemma faced by the majority of women in our sample for whom selling their labour outside their homes is not a luxury option is expressed by Joshua's (one of the interviewers) summary of his conversation with this respondent, in whose remarks we can see many of the individual threads of the story of this chapter woven together. Joshua writes:

> This woman has the opportunity to be employed on casual terms on a large farm, but her husband objected to her being away all day, because he felt she needed to look after their young children. The husband would also have objected if there had been people on those farms he is not on good terms with. 'Sometimes', she still goes and works there in spite of her husband. […] As a result, she has received mild warnings from her husband that she is becoming disobedient and sometimes he threatens her that he will look for another woman who is obedient to him and who can take care of the home. The respondent however insists that the differences brought about between them by her stubbornness in wanting to do the work do not escalate, since she discloses the amount that she earns to her husband and in any case that money helps meet household necessities. So the price she pays for taking up the job is not overly high, but she knows of other women who have lost their marriages because of taking up wages, as their husbands feel unsafe with their woman being in the hands of rich men who employ them. In the case of this respondent she usually returns in the position she was before she took the job since the quarrels do not usually last longer than a day. And even when the husband absconds from his parental responsibilities like buying necessities the respondent sometimes meets them much to the delight of the husband, though sometimes he pretends not to be happy.

We acquire from this incredibly insightful passage a feel for the way in which men and women bargain about spending responsibilities and time allocation, which in

Table 6.12 Labour supply and female power: realizing time preferences (OLS regression)

Dependent variable: Hours of work on own farm, livestock and housework (from time budget 5:00–24:00)	
Constant	10.796***
	(24.751)
Income (monthly per adult equivalent)	–8.483E–06***
	(–4.103)
Household labour under main woman's control	0.096
	(0.596)
Farm size (in acres)	0.086**
	(2.071)
Labour supply (yes = 1 for Male Process or Female Money)	–0.051
	(–1.176)
Labour supply (yes = 1 for Female Process or Male Money)	–0.829***
	(–5.064)
R^2	0.279
F	10.769***
N	144

Notes
t-statistics in parentheses; *** significant at 1%, ** at 5%, * at 10%

this case includes a woman's wish to start a job on somebody else's large farm. In this section we will attempt to summarize what we have learnt about intra-household dynamics, about how female labour supply decisions both emerge from them and feed back into them and we will indicate the likely effects on female welfare of further rural labour market formation in our survey areas.

Because of the intense population pressure on land there is a need for extra-farm income-earning opportunities, but the possibility of escape from own-account agriculture is not open to all who would want it. Furthermore we noted the paranoid aspects that characterize the Gisu universe which thwart the formation of institutions basic to the establishment of a rural labour market. There are constraints, then, both on labour demand in the formal non-agricultural sector and in the informal agricultural sector, with supply exceeding demand in both, jobs rationed and wages depressed. We also noted that there is a historical tendency for women to take on more tasks, which poses a time constraint on the supply of labour. Despite that, women are 'discovering' labour market participation as a means of extending their entitlement set.

We have developed an account of intra-household bargaining processes. Women enter the marriage with nothing and, if during the course of the marriage they do not acquire permanent land use rights and cultivate outside income-earning opportunities, they will leave the marriage with nothing should it break down. For women whose personal properties are sought after on the marriage market this is not as powerless a lot as it would at first appear, since marriage need not be a permanent state. But naturally the same fragility of the married state renders less 'desirable' women even less powerful.

A stylized picture of gender relations, intra-household bargaining processes and female labour supply, both as outcome and as determinant of these processes, would be as follows. First, imagine a relatively poor household, which owns one or two acres of land, a few chickens and a couple of goats, which cultivates maize and beans primarily for subsistence, and with their need for cash primarily fulfilled by selling some of their surplus on the local market. A woman who has left her parental home (and perhaps her own village) has entered this household with nothing but her 'human capital': her strength, her stamina, her skills, her formal education and her remarriageability – her beauty and her charm as well as her productive capacity embodied in the aspects of human capital just mentioned – and her threat point is in the first instance defined exclusively by this. In such a household, the husband will market the agricultural produce, and will not tell his wife how much he has earned. He then either hangs on to all the money and spends it as he sees fit – in the *Male Process* group of households – or will hand over (some of) this money to his wife, who he has made responsible for buying provisions – in the *Female Money* group of households. To the extent that such a procedure leaves female spending responsibilities unfulfilled, there is a need for extra, female-controlled cash. Selling her labour may meet this need. We inferred in the preceding section that *Female Money* women have sufficient control over spending decisions to steer away from selling their labour for cash; *Male Process* women, if they can, resort to labour market participation.

Phrases such as 'steer away from' and 'resort to' are not fanciful. For the reasons mentioned above, men and women scrabble for jobs on the rural informal labour market and the few that get one end up working for a pittance. Moreover, the tendency remarked on earlier for women to take on more tasks and responsibilities has made their workload heavy and we have seen that they are not in a position to persuade their husbands to relieve them of some of this load: they are frightened of what their wives' working for or with others may lead to but, on the other hand, see that the extra money would be welcome and would relieve them of their own responsibility to provide their wives with the spending money they need. It may be concluded from our time budget data that, even when women are sufficiently powerful to persuade their husbands to allow them to work for cash outside their homes, they are unable to negotiate a reduction in their domestic tasks; the time spent working for cash is simply added to their already long working day. They do however manage to obtain permanent control over at least part of the income stream generated by labour supply (Table 6.9), presumably because their husbands realize that if they were to respond by spending less on household necessities or by appropriating their wives' hard-earned cash, their wives would cease to find selling their labour attractive.

So, in this type of household, female labour supply tends to be a distress sale: this is a poor household with work time in heavy demand, in which those with the worst breakdown position are 'persuaded' to work the longest hours, with a male partner who gets out of his wife what he can, and who drinks to boot, for which habit he needs personal spending money, for which he secures access to the household's cash, partly as a result of which he leaves his wife with unfulfilled spending responsibilities (her children's food and clothes for example), who then in her turn is in desperate need of her own independent source of income, for which, if she can, she sells her labour (for a low wage) on the rural informal labour market (time spent on which adds to an already long working day).

Now imagine another type of household: richer, in a position to diversify their income sources to a greater extent than their poorer counterparts are able, which they will do, in the first instance, as a risk-management device. The male head of such a household, because of his ability to afford a higher bride wealth, is likely to have married a more desirable bride – in terms of her productive capacity and (say) personality – than his poor friend has. However, he is now, in ironic justice, frightened of losing his wife in proportion to her desirability. The presence of several lines of production facilitates women's attempt to secure control over the income stream generated by at least one of them, or to add further ones. They tend to be successful in their attempt, firstly, because of the relative abundance of household resources, out of which for example these women's business start-up expenses will be financed, and secondly, because of their superior (compared to their poorer counterparts) initial fallback position: skills, beauty and so forth. They will find the attempt worthwhile because success will further enhance their fallback position.[13] As a result, land will be purchased and registered in the female's name, the uneducated (but business savvy) female will start her own business, and the educated will try to get a job in the formal sector.

Supply also exceeds demand in the formal labour market. Some of these women will therefore not manage to get the job they are after and will remain mainly occupied as domestic manager: from the 'control room' in their home, they help take strategic decisions related to the running of the household farm, for which labour is hired in (quite possibly the women from the first type of household we have sketched). Others do manage to obtain a job and earn a wage much higher than wages earned on the rural informal labour market. Unlike their poorer counterparts, they do not require these wages in order to obtain spending discretion, because their household's spending patterns are already based on 'mutually aligned' individual preferences (these women belong to the *Male Money* group – they alone, not their husbands, take the decision to sell a crop, but then hand over the money from the sale to their husbands: with the amount of control they have over the first stage of the crop-selling chain, we do not imagine that their delegating their husbands to buy provisions is a sign of their weakness, but rather as another instance in which they exert their control from their home). Those that enter the labour market swap farm work time not housework time for their time spent on their job – another manifestation of their power: housework carries more dignity than farm work and a woman whose working day consists of either just housework or housework plus a well-paid job is the envy of all.

This is a stylized picture, and although supported in many ways by our findings, it is based on limited evidence. As we noted labour markets are in an embryonic state in our survey areas so we only observe 17 (out of a possible 272) women from male-headed households who participate in the labour market and, when they do, for only a couple of hours per day on average. We are therefore not overly confident that all of our findings and interpretations will stand the test of time, supported though they are by what we have learnt from women in focus group discussions. However, by examining tendencies in our data for all male-headed households, not just the ones in which women supply labour, our picture of intra-household dynamics is more informed and has produced findings relevant for the literature on intra-household bargaining.

We have found a number of factors to be particularly important in affecting these rural women's bargaining power: the custom of brides entering their new homes with nothing; the fragility of the married state (from which follows that remarriageability and the possibility to return to a parental home and the wealth of that home operate as threat point shifters); local inheritance customs that disadvantage women (accentuated by Islamic law for some women in our sample); legal rights to land and property (and the role of entrenched interests and stereotypes that prevent these from becoming a reality and, conversely, the attempt by paralegal networks and NGOs to turn these rights into reality); women's relation to the market for agricultural produce (with their husbands often better connected with relevant market parties); and a culture's perception of women ('they are property'). We have also noted the role of asymmetric information as a source of unequal bargaining power. Because of a cultural code that requires women but not men to share information about their earnings, husbands know their wives' threat points much more precisely than their wives do theirs.[14] The so-called 'collective

bargaining approach' to intra-household dynamics has tended to assume symmetrical information (see, for example, Strauss and Beegle 1999: 93ff), which would override an important feature of our data.

We observe that resource pooling of some sort[15] precedes most household economic portfolio decisions. Any income (including micro-finance) apart from wages is considered to be part of the household budget insofar as investment decisions are concerned. It follows that household economic portfolio decisions, with the exception of labour supply, and at least in the dimension of spending implications, should be based on an optimization principle.[16] However, this resource pooling does not extend to income generated from female labour market participation; labour supply decisions may originate in an individual woman's desire or need to obtain spending discretion. The exception is important because it implies that the more unequal the distribution of power is within the household, the less household time-allocation decisions are based on the principle of comparative advantage. The greater the discrepancy between two partners' threat points, the less appropriate it would therefore seem to assume cooperative bargaining and Pareto-efficiency for a household's *time-allocation decisions*. The assumption of cooperative bargaining is also inappropriate for *spending decisions*, but we note again that preferences are a function of threat points (some powerful women want to spend more on investment goods than their husbands want to, most powerless women want to spend less on investment goods than their husbands want to). Taken together these observations imply that if a household preference function were to be constructed, weights on individual preferences would be a function of total household income, individual contributions to household income and individual threat points.

In this chapter we have illustrated that labour market participation does not necessarily empower women if the power relationships within the household and in society at large do not permit this and stay unchanged and that labour market participation does not necessarily confer benefits (in relative terms) on women when more lucrative opportunities than labour supply are open to them. We conclude by pointing out that labour market development, although on its own not likely to immediately be an emancipating force, is nonetheless likely to confer some benefits on the majority of women in our sample. The reason is that, at present, selling labour to the market is the only feasible option for relatively powerless women to obtain control over an independent income stream and female labour supply exceeds demand. However, for most of these women the increased spending discretion bought with labour market participation comes at the price of an almost entirely uncompensated-for extra burden on their time. The efforts of paralegal networks in our survey areas that aim to turn women's considerable formal land rights into a practical reality should, as they already do for a minority of women, increase their ability to bargain for a fairer division of tasks within the household upon entering the labour market, as well as their ability to obtain spending discretion through other means.

Notes

1 Female-headed households are omitted from this analysis because of our focus on husband/wife interactions and their consequences for women's welfare.
2 Amin's style of maintaining law and order (public execution of thieves, for example) was actually welcomed by many of the Gisu because it brought relative stability to their area.
3 FIDA, a charitable association of female solicitors, is active in our survey areas.
4 Of these cases, 8.6 per cent of cases remain unclassified because they do not obviously belong to any of these four categories.
5 However, coffee is a male crop, with relatively low female involvement in each crop-selling stage and little control of the money realized despite contributing labour to its production: 'When coffee is in the garden, it belongs to two people, but when it comes home, it is the property of one person' (Kharono 2001: 7).
6 Here we take our cue from the fact that their husbands control a considerable part of the early stages of the crop-selling chain.
7 An alternative reading of this evidence would take its cue from Udry's hypothesis that the origin of more female power could be explained within a separate spheres bargaining approach; the reverse side of the coin of more female power would then be a greater departure from Pareto efficiency (Udry 1996). This reading would have to be reconciled with the observation that within our sample maize yields on female-controlled plots are higher than on male-controlled plots: see Mosley *et al*. (2003, chapter 7) for details.
8 Sharia (Islamic law) governs marriages, divorces and inheritance among Ugandan Muslims. Other things being equal, the combined influence of customary practices and Sharia is expected to give Muslim women in Uganda a less favourable fallback position than their Christian counterparts (Benschop 2002: 86) and this seems upheld by our data (Table 6.7). However, it should be noted that both Christian and Muslim women in our focus groups contended that Muslim wives' freedom in the household was greater, mainly because their husbands don't drink. As one Christian wife offered, 'A good man is a gift from Jesus, but Jesus is not generous.'
9 The performance of the model could be improved further by adding income as a regressor but we omitted it because of the problem of multicollinearity; both 'exit' and 'long-term use rights of land' are functions of income.
10 Which it is often taken to be in the African context because of the sub-optimal specialization excessive diversification implies (Collier and Gunning 1999).
11 This was chosen here because selling cattle is very much a male prerogative whatever the prevailing crop-selling pattern: see Table 6.3.
12 The reason we do not include hired labour as a separate regressor is that it is too strongly correlated with the *Male Money* dummy.
13 In the light of frequent multiple entries into the Gisu's marriage market, it should perhaps also be seen as insurance for old age.
14 Whether we should in fact assume that women obey this code is an open question, especially in the light of the elaborate ruses that members of female ROSCAs elsewhere in Africa deploy to prevent their husbands from knowing when they receive money (Niger-Thomas 1995). However, our focus group discussions suggest that generally women cannot hide their true financial position from their spouses.
15 Not in the sense of men and women having equal and joint access to all monies, but in the sense of a household's resources being considered in their entirety when economic portfolio decisions are taken.
16 Although other factors may cause a deviation from this principle.

7 Female-headed households in Zimbabwe

A different type of poverty needing a different set of solutions?

Sara Horrell

Introduction

The incidence of female headship is believed to have increased worldwide and, in both developed and developing countries, a high proportion of these households are found to suffer poverty (Chant 1997). Thus female-headed households have become an easily identifiable group on which to target poverty alleviation measures. However, the efficacy of such targeting has been widely questioned (Kennedy and Haddad 1994; Blackden and Bhanu 1999; Quisumbing *et al*. 2001, Chant 2003). Female headship results from a variety of causes – widowhood, divorce and de facto headship, arising, for instance, from the illness of a spouse or his migration to an urban area to find work – and consequently does not always map directly into poverty and deprivation. More work is needed to understand the relationship of forms of female headship to access to resources and the consequent effects on the ability to improve the household's position. Only when such links are documented can poverty alleviation measures be effectively and efficiently targeted.

Here we use data collected from a detailed survey of 300 households across three rural areas in Zimbabwe – Chivi in Masvingo province, Mutoko in Mashonaland East and Makoni in Manicaland – to explore the position of different types of female-headed household.[1] The areas offer different agricultural potential and waged labour opportunities and Mutoko is a resettlement area.[2] Female headship in Zimbabwe is commonplace. Around two thirds of the population live on and work the rural communal lands (Chipika *et al*. 1998: 25). Possibly some 40 per cent of the households located there are headed by women (AGRITEX 2002). This partly arises from labour migration. Typically men migrate to work in towns, mines or commercial farms while their wives farm the household's plots. But female headship is also becoming more frequent as the incidence of terminal diseases such as HIV/AIDS increases. Zimbabwe has an estimated 33 per cent of 15–49 year olds infected by the disease leaving grandmothers heading households for their grandchildren (ZNVAC 2002: 27). At national level around one third of households are thought to be female-headed (Chant 1997: 90).

Two aspects of female-headship are investigated: whether there is a higher incidence of poverty in households headed by women and how female headship relates to the household's productivity in agriculture. Attention is paid to the form

of female-headship. The survey recorded whether respondents were single, married, divorced or widowed. Seventeen women who stated they were heads of household were married and are thus classified as de facto female heads, 52 were widowed or divorced and so classified as de jure female heads. The remainder of the sample were households headed by males.[3]

Female headship is typically expected to increase the likelihood of the household being found amongst the poor. However, this is hard to verify in general and World Bank data have indicated that while this may be true in Asia and Latin America it is less obviously the case in Africa (Chant 2003: 49). Furthermore, it may vary by type of female headship and be evident across dimensions other than income (Quisumbing *et al*. 2001). Female-headed households are likely to have fewer income earners within the household than a comparable male-headed household, but de facto headship may be associated with high levels of remittances returned from work in urban areas, which may be crucial to lifting the family out of poverty (Ellis and Freeman 2005). Thus these households may be better off, at least in monetary terms, than the household where both partners remain engaged in rural and agricultural pursuits. But this rural–urban division of labour has required women to undertake all the agricultural tasks, thus curtailing the extent to which they can participate in the labour market (Gwaunza 1998). Migration may have constrained the ability of other family members to diversify their income-generating activities thus offsetting some of the income gain from remittances. Furthermore female heads of household carry the double burden of the household's agricultural and domestic work, potentially also leaving them time poor. Being income-poor is one dimension of poverty, being asset-poor is another.[4] Assets can cover the physical, from land and livestock to property and machinery; human capital, such as education and the number of people available to work in the household; and social capital, which enables people to engage in networks, to develop markets and mitigate risk. These assets are important in assuring the household's survival and determining its ability to improve its situation. There are also intergenerational aspects: the poverty of one generation may be transmitted to the next through poor health of children and the inadequate development of their human capital. Children in the female-headed household may be particularly vulnerable to this transmission. The household survey provides data that allow these aspects of the situation of female-headed and male-headed households to be compared.

It has been asserted that women's productivity in agriculture is hampered both by their lack of assets and access to resources and by being female (Boserup 1970), although much evidence is only weakly supportive of this latter point (Quisumbing 1996). The survey data provide the opportunity to examine whether female-headship is associated with lower crop yields, and thus a reduced impact of work effort on poverty reduction. The information on inputs for and output of each crop grown is used to examine the factors determining yields per acre. Specific factors which might underlie any disadvantages associated with female-headship, such as a lack of males to act in markets for the household and lack of access to extension services, are considered further using the evidence collected in a re-survey of 20 of the original households.

Household structure in Zimbabwe

Shona society is deeply patriarchal.[5] Traditionally bridewealth payments (*lobola*) have been paid by men to women's families on 'engagement' and the movement of the woman to the husband's home occurred after the birth of the first child, when further payments fell due. The woman became subject to supervision by older female members of the man's family and enjoyed little power within that household. Concern was to maintain land and asset holdings within the male descendant group, thus all inheritance and most power travelled through the male line.[6] However, women had some power in their own birth-family's arena. A woman's bridewealth was used to pay the *lobola* of her brother. This gave her a position of authority relative to his wife and his children. Thus, in traditional society, women were subject not only to their husband but to their husband's kin, but they did maintain some measure of influence in their brother's family. Polygamy was allowed but was not widespread. Men had to be able to support a first wife and family adequately before they could take on a second; this meant that, in rural areas at least, men with more than one wife tended to be older and to have acquired more material wealth and assets (Bourdillon 1976).

In more recent times some of the traditional arrangements have broken down. In particular, migration and the earning of cash by young men to make *lobola* payments has cut the tie to sister's bridewealth and removed her influence over his family (Bourdillon 1976). Movement into Resettlement Areas has been accompanied by the reduced influence of husband's kin on women's lives and has give the household a nuclear family form (Jacobs 2000). However, male authority remains unchallenged. Communal law upholds male authority and state law tends to give precedence to communal law. Married women are effectively treated as minors. They are not issued land in their own right in the Resettlement Areas and are unable to enter into contracts without their husband's joint involvement, thus they cannot own property independently.[7] Land in communal areas is allocated by chiefs to the male head of the household. Even when male household heads are absent women may still be subject to their authority and, in rural villages, may also have to defer to their husband's male kin who will be concerned to protect the position of male heirs.

Male migration is an entrenched feature of the Shona household. Early twentieth-century colonial policy aimed to create an available male labour force for the commercial farms and mines through the imposition of a hut tax that required cash for payment. However, the low wages paid reinforced the need for own-agricultural production for subsistence and no provision was made for cohabiting wives and families. Women remained in the rural areas to produce the necessary food and to provide a retreat for those too old or infirm to work (Bourdillon 1976, Davison 1997). This division of labour has continued. The substitution of cash for cows in *lobola* payments has made migration a typical option for many young men and many remain as migrants throughout their working years. Migration is a long-term strategy which may result in the return of remittances to the rural family. [8] However, migrants often set up second

households in urban areas leaving rural wives to largely fend for themselves until the migrant needs to return (Zimbabwe Human Development Report 2003). Furthermore, de facto female heads frequently lack control over resources and incomes. Absent husbands may appropriate money generated by wives for their own consumption. The dire consequences of such behaviour are starkly portrayed in the suicides of 153 women in Gowke in 1997 caused by the contentious disposal of cotton money (ibid: 36).

Widows often fare no better. Customary law requires inheritance to pass through the male line thus bypassing the widow and daughters. Indeed, wives are traditionally inherited by a kinsman of the husband. Under this arrangement she may be allowed to continue to farm the plots allocated to her by her husband (Bourdillon 1976). Land generally passes to the oldest son, possibly even the son of another wife, and the subsequent treatment of the widow is at his discretion. Some may manage the land on their son's behalf (Mate 2001). However, in Resettlement Areas, some widows have been allowed to inherit their husband's permit to the land and to continue farming. Whether this occurs is at the discretion of the resettlement officer (Jacobs 2000). Women married under the Marriage Act may inherit along with their children, but these form the rare minority. The Administration of Estates Amendment Act 1997 strengthens the position of widows and sons and daughters, but it is unclear how easy it will be to resolve disputes (Coldham 2000) and instances where widows have had to leave the rural home are still frequently observed (Ikdahl *et al*. 2005).

The situation of the divorced woman is usually worse than that of the widow. On divorce the woman receives no share of the household's land or assets, she may have to leave her children with her husband and she may also have to hand over her possessions, such as clothes bought during the marriage and money saved from her own income-generating ventures (Pankhurst and Jacobs 1988). She is expected to return to her own kin and to be supported by them.

The degree of autonomy experienced in female-headed households is therefore uncertain and will vary according to individual circumstances. Indeed, headship is a complex notion that can involve others outside the household and might differ according to the domain discussed (Vijfhuizen 2002). However, women make most of the production, land and labour allocation and expenditure decisions, leading to the conclusion that most households might be described as 'female-managed' (ibid: 100).

To overcome such complexities headship was self-defined in the survey analyzed here. Respondents were asked their marital status and who was head of their household. Those women who replied that they were widowed or divorced and nominated themselves as the head of household constitute the group of 52 de jure female heads studied. Married women who said they were the head of household constitute our group of 17 de facto female heads. In most of these households husbands were absent; in the two where husbands were co-resident they might have been old or ill. Correlating this self-classification with information on power and control within the household confirms the greater autonomy of those designated as female heads. For each crop grown respondents were asked

who decided to sell the crop, who made the sale and who kept the money from the sale. In male-headed households 33 per cent of women made the decision to sell maize, compared with 89 per cent of the female heads. For all crops grown, 48 per cent of sale decisions were made by wives but only in 78 per cent of cases where the wife made this decision did she keep the money. This was true for 88 per cent and 100 per cent respectively of women who headed their own households. Female heads were likely to have sole responsibility for many of the activities of the household and to have to take strategic decisions themselves. Wives rarely made these decisions or shouldered these responsibilities alone.[9] Female headship confers more power and control in the household's affairs.[10]

Poverty in female-headed households

The structures of the female-headed households surveyed differ in predictable ways from that of the male-headed household (Table 7.1). Households headed by widows have fewer people in their households. This is accounted for by the absence of a spouse and one less child, but is to some extent offset by a higher presence of other relatives. Widows are on average seven years older than male household heads. De facto female-headed households are smaller with younger heads than both the de jure female-headed and male-headed households, although they have only slightly fewer children than male-headed households. The education level of de facto female heads is similar to that of male heads of household but widows are considerably more likely to have had no education than the other two groups.

An initial indicator of the situation of these households is provided by considering their monetary income. Total money income includes income from remittances, earnings, crop and livestock sales, own business and savings. Female-headed households are considerably poorer than their male counterparts: households headed by widows have a total income just over half that of the male-headed household and de facto female-headed households have around three quarters of the income of the male-headed household. However, the difference is reduced once the smaller size of the female-headed household is taken into account. Total household income per person is higher in the de facto female-headed household than in the male-headed household. Despite earning significantly less from waged work, small businesses and livestock sales, the de facto female-headed household manages to achieve similar crop incomes to the male-headed household and is in receipt of considerably higher levels of remittances. De jure female-headed households, however, remain significantly poorer than their male-headed counterparts: per capita incomes are less than two-thirds of those found in male-headed households. The widowed households have lower levels of income from all sources except remittances and fare particularly badly on the income they receive from crop sales, waged work and business income.

Per capita measures take no account of the possible economies of scale available to the household. Using an adult equivalent measure that reflects both the lower consumption needs of children and the potential for economies of scale confirms

Table 7.1 Household structure and income

	Male–headed households	*Female-headed households*	
		Widow	*De facto*
Sample size	231	52	17
Number in household	5.55	4.31	3.88
Average number of:			
Spouses	0.86	0.00	0.12
Children	2.82	1.85	2.24
Other relatives	0.77	1.40	0.50
Unrelated	0.03	0.06	0.00
Age of respondent (mean)	44.0	51.4	38.3
Highest level of education of male / female heads (% in group):			
None	8	31	–
Primary	59	60	65
Secondary	29	10	35
Higher, formal training or vocational	3	–	–
Household income			
Total income (Z$)	32,601	17,319*	24,928
% total income from:			
Money from outside household	12	26	43
Income from crop sales	40	40*	47
Livestock, produce, equip. rental	5	6	0*
Waged income	7	2*	2*
Other income	36	26*	8*
Total household income per person (Z$)	6,784	4,395*	7,139
Adult equivalent household income (Z$)	11,536	7,103*	13,687
Gross crop income, including value of self-provisioning (Z$)	25,357	11,490	13,797
% households with someone away from home, considered to be part of household	35	46	71
Average number of people away	1.9	1.9	1.6
Relationship of those away (% of total away)			
Spouse	11	–	56
Child	66	93	39
Other relative	23	7	6
Contributions returned to the household (% of all away)			
None	14	9	22
Cash	71	76	72
Days of labouring	15	16	6
Mean amount of cash received per person away			
For those receiving cash (Z$)	8,981	3,441	13,862

Note

* t-test for equality of means of income variables (performed on absolute income levels), equal variances not assumed, significantly different from levels for male-headed households at 5% level or higher

the previous finding; widowed households are significantly poorer on a monetary income measure than their male-headed counterparts.[11]

Remittances have been identified as particularly important in assuaging female-headed households' vulnerability to poverty (Quisumbing *et al*. 2001). De facto female-headed households are more likely to have a member of their household away than male-headed households but extra-household links are common to all types of household. Similar numbers of people are away from each household type and around three quarters of these return cash to the household regardless of the form of headship. However, de facto female heads receive high levels of cash from each person away, de jure female heads particularly low levels. Cash remittances are an important mainstay in meeting de facto female-headed households' income needs, they are a less important source for the de jure female-headed household.

Consumption is a more important variable than income in assessing poverty because it smoothes fluctuations over short periods of time. This is particularly the case for agricultural societies where large seasonal variations occur. Considering consumption takes on even more importance if a large amount of agricultural produce is consumed by the household and so remains non-monetized (Deaton and Zaidi 2002). The survey did not collect comprehensive consumption data, but it did record annual income data and information on the output of each crop and the proportion retained for own consumption. Giving this self-provisioned output the same value as any that is sold, or the average value of that sold locally if none is sold by the household, allows a better estimate of the income and consumption resources available to the household to be constructed. Including a value for self-provisioning heightens the differences observed in crop incomes between household types.

A comprehensive income figure further illustrates the impoverished position of the widowed household. Combining the household's gross monetary income with a value for self-provisioned food and deducting seed, fertilizer and pesticide costs leaves a net income per capita measure that provides a reasonable proxy for consumption (Table 7.2). The widowed household is significantly poorer than the male-headed household, and the de facto female-headed household is more comparable. Income poverty is particularly prevalent amongst the de jure female-headed households. Comparing the distribution of income against an established poverty line emphasizes this point (Figure 7.1).[12]

While around three quarters of female-headed households and two thirds of male-headed households fall below the poverty line of Z$8,315, nearly two fifths of widow-headed households have incomes below Z$2,500 per annum per person whereas this is true for less than one quarter of male-headed households and one twentieth of de facto female-headed households. Widowed households are much more likely to be found amongst the very poor. The de facto female-headed household is less likely to be among either the very poor or the considerably better-off than the male-headed household.

Income provides only a limited insight into the situation of the household. A broader understanding requires consideration of its asset position and livelihood capabilities. Indicators reflecting the number of economically active workers

Table 7.2 Poverty profile and average component scores by gender of head of household

	Male–headed households	*Female-headed households:*		*t-test*	
		Widow	*De facto*	*m/w*	*m/df*
Income					
Net income per capita (Z$)[a]	9,792	6,166	9,420	–2.5*	–0.1
Adult-equivalent net income (Z$)[a]	16,411	10,109	17,349	–2.7*	0.2
Assets					
Economically active workers available to household (number of persons)	4.14	3.97	3.12	–0.6	–2.7*
Index of average education level of household	10.8	11.3	11.0	0.7	0.2
Acres of land owned by household	5.7	4.6	2.6	–1.1	–3.9*
Indices of property and financial assets:					
Property and savings	14.9	14.0	15.0	–1.3	0.1
Ownership of livestock	46.4	25.3	34.1	–4.8*	–1.9
Ownership of machinery	5.2	4.2	3.6	–1.8	–2.2*
Social capital – extra household links, special programs, extension services	1.7	1.5	1.7	–1.2	0.0
Household assets index	246.7	214.9	189.7	–2.0*	–3.0*
% in poverty profile group:					
Income-poor – asset-poor	35.1	51.9	47.0		
Income-rich – asset-poor	31.2	25.0	35.3		
Income-poor – asset-rich	13.4	7.7	11.8		
Income-rich – asset-rich	20.3	15.4	5.9		
Sample size	231	52	17		
Indicators of diversification (mean values):				*Regression of diversification indicator*[b]	
Total no. remunerated activities engaged in by household	2.9	2.6	2.6	A+ve	
No. people ever do paid work	0.8	0.5	0.6	A+ve, W–ve,Y–ve	
No. income sources available to household	3.1	2.8	2.9	A+ve, Y+ve	
No. different crops grown by household	3.4	3.4	3.3	A+ve	
No. types of livestock kept	2.2	1.6	2.1	A+ve, W–ve	

Notes:

a gross income including value of self-provisioning less costs of production per person in the household

b regression of indicator against asset index (A), net income per capita (Y) and dummy variables for de facto (D) and widow headed (W) households. Variables significant at 10% level or higher indicated.

* t-test for equality of means, equal variance not assumed, significant at 5% level or higher

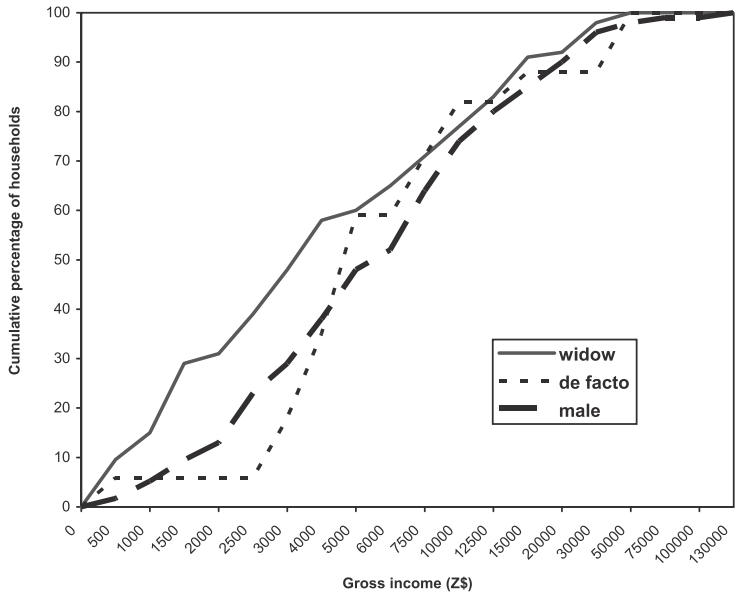

Figure 7.1 Income per capita, cumulative percentage (poverty line = Z$8315)

available to the household, the education level of the household, the land, property and financial assets owned and some indicators of social capital, such as links with others outside the household and participation in support programs and extension services, are combined to construct a household assets index. Each household is categorized in one of four spaces as income and asset rich or poor (Table 7.2).[13] Female-headed households are more likely to be asset poor than male-headed households: 76.9 per cent of de jure and 82.3 per cent of de facto female-headed households are asset-poor compared with 66.3 per cent of male-headed households: thus rendering them them more vulnerable to poverty.

Decomposition of the asset index identifies which assets female-headed households lack. With the exception of livestock, widowed households have only slightly lower levels of most assets than male-headed households. Unfortunately there is no information on whether widows have fewer livestock because they only inherited a small number, have insufficient income to accumulate more or have had to make distress sales because of a lack of income. However, when asked under what circumstances they would sell livestock, widow-headed households were more likely than male-headed households to say they would never sell cattle (88 per cent versus 74 per cent) and were equally likely to sell goats and chickens when the household needed the money. De facto female-headed households have significantly lower levels of labour available to the household, smaller land holdings and less farm machinery ownership.

Consideration of the amount of land owned by region highlights the small plot sizes held by de facto female-headed households (Table 7.3). As well as being less likely to own land at all, none own more than five acres whereas one fifth of the other

types of household own more land than this. Despite per capita income levels that compare with those of male-headed households, de facto female-headed households suffer considerable asset poverty, particularly of assets important to agricultural production. Conversely, widow-headed households are no more likely than male-headed households to own no land and they may farm quite sizeable plots. In Mutoko, the Resettlement Area, widows have the same average farm size as the male-headed household, confirming that resettlement officers are more likely to allow widows to inherit land than chiefs in the communal areas. But in Makoni and Chivi plot sizes are smaller than those observed for male-headed households.

Assets have been identified as important in allowing the household to diversify and so mitigate risk and raise living standards (Ellis 1998). Consideration of indicators of the household's ability to diversify reveals that both type of female-headed household have fewer people engaging in remunerated activities and are more constrained in the number of income-generating activities they can engage in. Widows also keep fewer varieties of livestock (Table 7.2). However after controlling for the level of income and ownership of assets through regression analysis it is apparent, first, how important assets are to all households in their ability to diversify whilst income levels play only a secondary role and, second, that de facto female-headed households are not constrained in their diversification by being female-headed, but widowed households are constrained in ability to enter the labour market and in keeping a wide variety of livestock.

Discussions of poverty measurement have pointed out that income or consumption measures neglect the contribution of time, or leisure, to welfare. This omission may be particularly acute where comparisons are being made between male- and female-headed households, where the latter will likely rely heavily on female labour, and thus understate the degree of poverty (Quisumbing *et al*. 2001). However, despite its importance, inclusion into the consumption measure is not advised because of problems of valuing leisure (Deaton and Zaidi 2002). Instead separate consideration of time use is needed. The survey collected extensive data on time use. Respondents were asked how long each member of the household spent in their main activity each day, thus allowing a picture of the time spent in the main activities of the household to be drawn up (Table 7.4).

Table 7.3 Land holding by region and gender of head of household (acres)

	Mutoko			*Makoni*			*Chivi*		
	widow	*de facto*	*male*	*widow*	*de facto*	*male*	*widow*	*de facto*	*male*
Mean acreage	7.5	2.2	7.7	3.0	2.8	3.4	2.2	2.1	3.6
Coefficient of variation	113	86	192	80	39	68	68	114	83
% no land	14	20	15	10	0	8	17	43	17
% > 5 acres	43	0	21	20	0	17	0	0	21
sample size	14	5	81	20	5	75	18	7	75

Unsurprisingly, as there are fewer people, total work hours at main activities are less in female-headed households than in male-headed households. However, per capita figures show higher hours per person in the de jure female-headed household and lower hours in the de facto female-headed household. Ages and numbers of children are probably the main explanations for these differences. Women provide a higher percentage of work hours in both types of household than either men or women in male-headed households and the reliance on the woman is particularly noticeable in the de facto female-headed household. Female-headed households are more likely to have agriculture as the main activity of the head than male-headed households. A more detailed picture of women's time use can be gained from the 24 hour time budget information. Selecting those households where the male or female head's main activity is working on their own farm, the time use of the female heads, the male heads and representative wives (where the female partner in the household was the survey respondent) on a typical day is shown. Female heads are working fewer hours on their own farm than wives and male heads of household. They do little livestock keeping but a similar amount of other remunerated work per day as the male heads and, for de facto female heads, more

Table 7.4 Time use in female-headed and male-headed households

	Male-headed households	*Female-headed households*	
		widow	*de facto*
Work hours per day in main activity, where activity is working			
Total per household	18.91	16.63	10.41
Per capita	3.68	4.11	2.84
% work hours contributed by:			
Man	33.8	1.9	7.3
Woman	36.0	44.9	64.4
Children	23.5	39.0	28.3
Relatives	6.6	14.3	–
% households where head's main activity is work on own farm only:	82.3	96.1	100.0

Time spent in work activities (survey respondents only, time budget, time spent from 0500–2400 on typical day)

	Man works on own farm		*Woman works on own farm*	
	Man	*Woman*	*Widow*	*de facto*
Sample	145	45	50	17
Hours spent on:				
Agricultural work	9.10	8.89	8.70	7.71
Livestock	0.32	–	0.08	0.00
Other work	0.44	0.13	0.34	0.47
Housework	0.28	1.45	1.36	2.12
Total work	10.14	10.47	10.48	10.30
Relaxing	9.37	8.96	9.04	9.24

housework than wives. Overall a picture emerges where female heads are working similar total hours at similar activities to wives and both female heads and wives are working slightly longer total hours than men. Thus female-heads do not seem to be particularly disadvantaged in terms of the leisure time they can enjoy.

An additional aspect of poverty is its intergenerational transmission. Any greater poverty experienced by female-headed households may impact on the human capital development, the future work potential and the ability to escape poverty of children in this type of household. Indeed, in developing countries, the increasing incidence of female-headship and its association with child poverty has led international agencies to target policies on this group (Chant 1997). In particular, children in female-headed households might be vulnerable to intergenerational poverty through lack of nutrition which undermines the physical capacity to work and leaves the individual vulnerable to persistent poor health (Dasgupta 1993, 1997) and curtailed human capital development through lack of education or training as the child is more likely to have to work earlier in life both at own farm activities and in the paid labour market. But children in female-headed households are not necessarily disadvantaged in these ways (Harper and Marcus 2003). Females are more likely to put the money they are in control of to household needs, such as nutrition and education, and this may imply a better situation for women and children in the female-headed household even if it is poorer on a monetary measure (Chant 1997 Chapter 8, Kennedy and Haddad 1994).

In the surveyed households it is noticeable that relatively few children in male-headed households are doing farm work or looking after livestock as their main activity (Table 7.5). Instead, nearly three quarters go to school and around one fifth do farm work as a second activity. Few children in male-headed households ever do paid work, although approximately one third of these children do unpaid work at various times. Most have some education if they are of school age. The position is somewhat worse in female-headed households. Here more children are working on the farm or caring for livestock as their main activity (19 per cent in total) and they are working longer hours at these jobs. More also do paid and unpaid work, 7.5 per cent and 45.3 per cent respectively. However, this is not necessarily to the detriment of these children's education and schooling as they have slightly higher proportions undertaking secondary education.[14]

The survey can also be used to consider other aspects of children's work in rural Zimbabwe.[15] Children are more likely to be cited as working on the farm growing maize in female-headed than in male-headed households, but even in male-headed households nearly three fifths of children help to grow this crop. Children in both types of household are found to be involved in growing all the other main crops: groundnuts, roundnuts and vegetables. Few children have the main responsibility for looking after livestock, although the likelihood of children from the female-headed household tending livestock is higher. In 21 per cent of cases where cattle are kept in the woman-headed household children are the main tenders of these animals. This is true for only 8 per cent of cases where male-headed households keep cattle. Less than 10 per cent of the households in the survey reported any earnings from children and, where they did, relatively small amounts were being contributed to the

household. Fewer female-headed households had children earning wages. However, where they did, they worked more days than children in male-headed households and earned less. In a maximum of 10 per cent of male-headed households were 'others', maybe a child or a young female relative, responsible for household chores such as cooking, fuel collection, water collection, buying provisions and washing

Table 7.5 Children's work in rural Zimbabwean households (all children aged 4–13 inclusive in each household)

	Male-headed households		*Female-headed households*	
Total no. of children	331		53	
	% doing activity	*Average hours at activity*	*% doing activity*	*Average hours at activity*
Main activity:				
None	11.5	0	11.3	0
Work on own farm	2.4	5.8	7.5	6.8
Livestock	2.7	3.9	11.3	4.8
Childcare	2.4	7.5	1.9	8.0
Housework	6.6	6.2	1.9	2.0
School	74.3	7.6	66.0	7.5
Second activity:				
% mention	49.2		54.7	
Of these (%):				
Own farm	22.1		34.5	
Ever do paid work?				
% yes	3.0		7.5	
Ever do unpaid work?				
% yes	32.3		45.3	
Highest level of education (%):				
None	8.3		4.8	
Primary	83.0		76.2	
Secondary	8.7		19.0	
Crops children help grow (as % households)				
Crop 1 (98% maize)	57		81	
Crop 2 (crop type: 67% groundnuts, 14% cotton, 19% other crops)	48		45	
Responsibility for livestock:				
Where have animal, % looked after by other male/female household members				
Chickens	(183 cases)	2	(46 cases)	–
Cattle	(154 cases)	8	(38 cases)	21
Children's earnings (totalled across all children):				
% households with working children	10		7	
Average earnings of children in these households (Z$)	1,881		540	
Average days worked by children	6.87		10.80	

clothes. Although the proportion was closer to 20 per cent in female-headed households, children were not the main source of domestic labour.

The survey also allows comment to be made on whether expenditures are more likely to be on nutrition and education when money is under female control (Table 7.6).[16] Expenditures as a result of a total male process (male decides, male sells, male keeps money) and a total female process (female decides, female sells, female keeps money) within the male-headed households are compared with those made from money under total female control in the female-headed household. It is apparent that female heads' expenditures follow a very similar pattern to male heads for money realized from crop sales and chicken sales. The money is less frequently spent on food and more often spent on agricultural inputs and schooling than money controlled by wives. Female heads are also more likely to spend money from earnings on schooling than the male-headed household. This offers qualified support for the beneficial effects of female control of money on children's welfare observed elsewhere.

Table 7.6 Intra-household processes: expenditure comparisons from three sources of money via three processes.

	Male-headed households		*Female-headed households (total control)*
	Male process (male decides, sells & keeps)	*Female process (female decides, sells & keeps)*	
Expenditure from crop sales, money used to buy:			
No. types expenditure cited	121	20	111
% cases:			
Food	36	47	32
Schooling	17	16	14
Other household	22	24	25
Agricultural inputs, livestock, household assets	26	13	29
Expenditure from chicken sales, money used to buy:			
No. types expenditure cited	38	18	30
% cases:			
Food	55	72	60
Schooling	18	6	17
Other household	18	22	17
Agricultural inputs, livestock, household assets	8	0	7
Expenditure from earnings, money used to buy:			
No. types expenditure cited	49	42	43
% cases:			
Food	67	60	35
Schooling	12	2	30
Other household	12	24	26
Agricultural inputs, livestock, household assets	8	14	9

Children are very involved in the rural Zimbabwean household economy, particularly through contributions to farm work. However, this work is done alongside schooling in most cases. Children in female-headed households do contribute more but the difference is one of degree rather than distinctly different patterns of behaviour. However, children's work and labour is essential to the household and clearly forms part of the household's labour strategy.

A number of features emerge concerning the position of female-headed households. A distinction has been drawn between de jure and de facto female heads and it is clear that the situation of each is very different. De facto female heads tend to have a spouse and other family members working away who contribute some two-fifths of the household income. The household is quite young, its activities are concentrated on farming the household's own land and the woman bears most of the responsibility for farming this land. The household is not especially prone to income poverty and it may avoid the poorest reaches. But it does lack assets.[17] Land, labour and farm machinery are in short supply and this constrains the ability of the household to diversify. Children are not unambiguously disadvantaged in this type of household.

The de jure female head of household is usually a widow and older. She has more labour resources to draw on within the household, although remittances from children are also important. Her family has very low levels of income and they are likely to be amongst the poorest. But, with the exception of low levels of livestock ownership, they are not particularly disadvantaged in terms of asset ownership. However they are constrained in their ability to diversify and widows again focus their labour activity on their own farms.

Gender inequality in access to productive, human and social capital assets has been implicated in low productivity, growth and output in Sub-Saharan Africa (Blackden and Bhanu 1999). The de facto female-headed households surveyed in Zimbabwe have fewer productive resources than other households. The de jure female-headed households also lack some productive, human capital and social capital assets. We use regression analysis of inputs into and outputs of agricultural activities to assess the extent to which lack of resources and being female-headed impinge on productivity.

Agricultural productivity in female-headed households

Widowed households own slightly less land than male-headed households. This results in a lower acreage of maize being grown but has little impact on other uses of the land. Similar acreages of groundnuts, roundnuts, cotton, rapoko and sweet potatoes are grown in both types of household (Table 7.7). Widows are less likely to own each type of livestock than households with male heads and, where they do, they have fewer animals. This is particularly true for cattle.[18] They are also less likely to own farm tools and equipment. The lack of these assets may constrain their crop production. Low levels of cattle and plough ownership mean reliance on other households for these inputs and widows may not be able to access them at the optimal time for planting. Indeed

widows are more likely to have to hire draught power from outside the household than male-headed households.

De facto female-headed households are in a rather different situation. A number own no land and the others own less than half the acreage of the average male-headed household. Most of this land is devoted to the cultivation of roundnuts, groundnuts and maize. These households have less crop diversification and they concentrate on the traditional staples. Even so they have under three quarters of the maize acreage of male-headed households. De facto female-heads have similar levels of livestock ownership to the male-headed household but they are less likely to own most types of farm machinery. They are also less likely to be in receipt of any extension service, which could be either cause or consequence of the concentration on staple crops.[19]

The effects of these strategies and constraints can be observed in the average output and input usage for each of the four main crops (Table 7.7). Maize production in households headed by widows shows relatively low yields per acre. Widows use fewer inputs than the male-headed household, which may explain the lower yields. Groundnuts (used for peanut butter and often fed to children) and roundnuts require few purchased inputs for their production and households headed by widows manage to achieve reasonable yields. One fifth of the de jure female-headed households grow cotton, but here their performance is relatively poor. Yields are less per acre in the widowed household than in the male-headed household despite a similar usage of most purchased inputs. De facto female-headed households demonstrate very low yields per acre for maize despite similar input usage to the male-headed household. These women again achieve reasonable yields in groundnut and roundnut production.[20]

Some features emerge from this preliminary consideration of agricultural techniques. Female-headed households appear to be as efficient as male-headed households in growing and selling traditional female crops such as roundnuts and groundnuts where techniques have remained largely unaltered and production is dependent on labour inputs rather than purchased inputs. In areas such as maize and cotton production women-headed households appear to be at a disadvantage.

The low yields for maize achieved in widow-headed households may be due to lower levels of input usage and lack of available draught power. Even in the de facto female-headed household inputs may have a role to play. It has been observed that better-off households achieve good maize yields as they can afford to purchase certified seed whereas the poor are more likely to plant seed retained from the previous year's harvest. Quality of seed will affect yields even where similar quantities are used. However, input usage is not the only difference. Output prices achieved indicate that de facto female-headed households, particularly, are achieving lower prices for their output (Table 7.7). Women may also be facing higher input costs. These problems may arise because women are disadvantaged in selling arrangements and in procuring inputs. For instance, a lack of resources may constrain the household to buying small packets of seed and exclude them from consortia for purchasing inputs and hiring labour. Lack of

resources may also require the female-headed household to sell crops at a disadvantageous time and so realize a lower output price.

In cotton growing, widows used similar inputs but achieved lower yields and received a worse farm gate price than male-headed households. Cotton production is labour and input intensive, requiring pest and disease control and effective management. These factors determine quality and hence price. Cotton growing has traditionally been the preserve of the better-off household that has the requisite inputs, but government programs to support other producers have enabled poorer households to grow cotton. However, without the necessary experience and access to inputs low grade cotton will result. Thus input usage, the resource level of the household and, possibly, gender-based differences in access and ability all emerge as possible determinants of the lower productivity and agricultural incomes observed in female-headed households. Regression analysis allows us to disentangle these effects.

Table 7.7 Agricultural productivity, input usage and costs by gender of household head[a]

	Maize			*Groundnuts*			*Roundnuts*			*Cotton*[c]	
	male	*widow*	*de facto*	*male*	*widow*	*de facto*	*male*	*widow*	*de facto*	*male*	*widow*
% grow	97	96	94	75	71	94	35	33	71	16	19
Acreage[b]	2.02	1.78	1.48	0.52	0.43	0.43	0.20	0.22	0.37	0.37	0.32
Yield (where yield per acre >0):											
Yield (kg)	869	683	521	483	343	468	206	464	135	693	476
% use:											
Manure	57	42	67	6	4	7	5	0	0	23	11
Fertilizer	63	55	67	13	0	14	1	0	0	63	78
Seed	100	98	100	97	96	93	92	100	92	100	100
Inputs per acre (kg), where used only:											
Manure	1,380	1,014	1,094							992	3,000
Fertilizer	156	137	175	180	0	150				166	120
Seed	14.0	13.4	17.7	31.1	31.0	45.1	23.6	34.0	18.6	11.8	15.9
% sell some crop	45	40	29	24	25	27	14	19	8	100	100
Price achieved per kg output, where sold (Z$):											
Output	11.4	8.3	4.2	9.8	15.3	19.2				19.1	15.5
Price paid per kg input, where purchased (Z$):											
Fertilizer	16.8	21.3	13.7							20.5	13.6
Seed	54.9	55.2	60.8							56.4	51.0

Notes

a Input quantities and prices have only been calculated where there are a reasonable number of observations. Only 24 households bought groundnut seeds and only 8 bought roundnut seeds.

b Calculated for households with land only

c Only one de facto female-headed household grew cotton

The empirical model and results

Our interest lies in testing whether headship of the household affects agricultural productivity. We begin by assuming that the production function of the farm manager is of the Cobb-Douglas form:

$$Y = AL^{\alpha_1}K^{\alpha_2}$$

where Y is output, L is labour input and K a range of capital inputs. The empirical specification concentrates on output per unit of input, where the dependent variable is yield per acre and the input variables are expressed in terms of inputs per acre. Taking the logarithmic version of this production function and denoting the per acre transformation in lower case and further augmenting the equation to include the headship of the household (F) and other controls (a vector, Z, that includes other household characteristics) we obtain:

$$\ln y = \alpha_0 + \alpha_1 \ln l + \alpha_2 \ln k + \alpha_3 F + \beta Z + \varepsilon$$

In a world without market failures, the vector of controls, Z, and headship, F, should not matter, abstracting from unobserved heterogeneity. Any surfeit or deficit of an input could be corrected through market transactions and profit maximization thus ensured. However, in a situation where market failures exist, such as rural Zimbabwe, household characteristics and endowments will matter since returns will now depend on these.[21] The inclusion of F allows us to test whether there is an extra impact on efficiency if the household head is female, even after controlling for other household characteristics and endowments.

This is our basic estimating equation but it requires adjustment for two factors. First, for crops other than maize, only some households grow the crop. To estimate the above equation by OLS ignores the possibility of sample selection bias: certain factors may predispose the household to grow, say, cotton. To account for this potential bias a maximum likelihood Heckman selection model is used to account for selection into the group that grows the crop. The identifying variable in the selection equation (apart from the exogenous variables in the yield equation) is whether the house is legally registered in the name of someone in the household. Other variables included are the number of people in the household, the total acreage of land available, the education level of the household and gross household income per capita net of crop sales (non-agricultural income). These variables reflect the need for subsistence maize production, the ability of the household to diversify its crop production and proxy the level of risk this might entail.[22] Second, the survey sample is collected from three regions and this clustering may bias the standard errors calculated. Robust standard errors are calculated to account for this.[23]

In each case the dependent variable was the yield per acre of the specified crop. Labour inputs included both labour available to the household and hired outside labour for each crop. Capital inputs included the amounts of fertilizer, manure and

seed used per acre and the acreage devoted to the crop. The asset base of the household was reflected in the number of cattle owned and the ownership of farm machinery (which also capture inputs from these sources) and the educational level of the household. Non-agricultural income per capita was included to reflect the possibility that households with outside income might be better able to purchase quality seeds or to hire labour and draught power. Conditioning variables were region, reflecting the agro-ecological conditions, and the type of household head. The results of these regressions are reported in Table 7.8.[24]

However, a potential endogeneity issue remains. Female-headedness, particularly de facto, may itself be endogenous to yields. A household may decide to supply a migrant labourer because of low productivity in agricultural activities, maybe because of poor land quality. Thus these households are likely to have lower yields. We examine the implications of the possible endogeneity of household structure by repeating the regression analysis only for those households who are not in receipt of remittances and so confirm the robustness of the original results.[25, 26]

For all crops, inputs per acre were important in improving yields per acre (Table 7.8). The labour available to the household, manure, fertilizer and seed used per acre largely determined output. Only for maize production were the ownership of farm machinery and the amount of outside labour used significant in determining yields. The data in Table 7.7 indicated that women may be disadvantaged in cultivating maize but the regression results show that the production techniques used explain most differences. However, gender was important in the cultivation of cotton. Even after accounting for inputs and assets, female-headed households achieved lower cotton yields than male-headed ones.[27]

Repeating the Heckman selection model estimation only for those households who did not receive remittances, so abstracting from the potential endogeneity of female headedness, replicated the earlier results. Although a few variables lost their previous significance, female-headed households still achieved significantly lower cotton yields but no difference was revealed for groundnut and roundnut yields.

This analysis of agricultural productivity indicates that women-headed households are disadvantaged in producing cotton, even after accounting for differences in input usage.[28] The source of this disadvantage is unclear. It may result from insufficient experience and support, poor quality inputs or the inability to procure inputs in a timely fashion.

Certainly a lack of support has been identified elsewhere. AGRITEX[29] (2002) recently assessed whether gender barriers inhibited women from benefiting from agricultural development programs. The study found that women had limited access to many factors of production, lacked resources and found it harder to access credit, training and extension services than men. Access to land was an important factor in these other shortages, particularly credit, but women also lacked draught power and suffered marketing difficulties. The report identified the problems women faced in accessing extension services: men were wary of allowing women to attend training sessions unless they were provided in group settings, other time commitments often precluded women from attending, the

technologies being advanced required physical strength and some new technology increased the need for tasks traditionally done by women, such as weeding. Additionally de facto female heads of household might be keen to conduct on-farm trials but often have to get permission from their husbands.

Table 7.8 Regression analyses of agricultural productivity. Dependent variable: ln (yield per acre of each crop). Heckman selection model, ML (except maize, OLS), with robust standard errors.

	Maize	*Groundnuts*	*Roundnuts*	*Cotton*[a]
Constant	4.55	5.65	3.95	4.52
	(7.6)*	(42.2)*	(26.4)*	(11.6)*
Ln (labour available)	0.13	0.18	0.24	0.55
	(9.1)*	(1.5)	(5.2)*	(2.3)*
Ln (paid labour used)	0.02	0.08		0.04
	(6.3)*	(1.2)		(1.6)
Ln (manure per acre)	0.03	0.05	0.06	0.03
	(5.0)*	(1.9)*	(4.7)*	(1.3)
Ln (fertilizer per acre)	0.06	0.05		0.08
	(2.9)*	(7.1)*		(2.7)*
Ln (seeds per acre)	0.37	0.11	0.13	0.56
	(2.3)	(3.0)*	(1.6)	(2.2)*
Ln (acres of crop)	–0.26	–0.45	–0.71	–0.25
	(–2.4)	(–15.6)*	(–3.2)*	(–2.8)*
Ln (no. cattle owned)	0.03			0.05
	(2.5)			(8.7)*
Ln (farm machinery)	0.12			
	(6.3)*			
Makoni	0.33	0.11		
	(3.1)*	(3.6)*		
Mutoko	0.75	0.40		–0.28
	(3.9)*	(39.3)*		(–4.9)*
Female-headed household	0.08	–0.17	0.08	–0.63
	(0.8)	(–0.9)	(0.4)	(–6.2)*
Ln (education of household)	0.00			
	(0.0)			
Extension service	0.03			
	(0.3)			
Ln (non-crop income p.c.)	0.01	–0.02	0.01	–0.01
	(1.0)	(–3.7)*	(3.5)*	(–0.7)
Sample size	283	184	91	45
R^2	0.43			
Log pseudo likelihood		–233.8	–122.5	–37.4
Lambda (mills)		0.59	0.89	0.52
		(18.6)*	(8.7)*	(4.9)*

Notes:

a Excludes Makoni where no cotton is grown.

Robust t and z statistics in parentheses, * indicates 10% level of significance or higher

Selectivity corrected equation reported. Probit regression on whether grow crop included all variables included in the yields regression, the education level of the household, the total acreage of land owned, the number of people in the household and whether the house was legally registered in the name of someone in the household. Female-headship did not affect crop choice.

Even if granted, this could cause delays in meeting planting dates. The report concluded that extension services did not meet the needs of female farmers.

Differential yields could imply an inefficient allocation of factor inputs across household types, hence, absent or poorly functioning markets. Such misallocation can be detected by significant gender variables in input intensity analyses (Udry 1996). Consideration of inputs of household labour time and total labour time used for the production of the crop, manure, fertilizer and seed per acre both for maize production and across up to five different crops per household for which we have detailed input usage from the survey using regression analysis revealed little misallocation of resources by household type (see Horrell and Krishnan 2007).[30]

Although de facto female heads use significantly less household labour in crop production this effect disappears when total labour used is the dependent variable. Household work hours per capita are lower in the de facto female-headed household than in the male-headed household and the number and ages of children in the household lies behind this difference. However, de facto female-headed households appear to have sufficient access to labour from non-resident household members, others in the village and, possibly, hired labour to correct this imbalance. Additionally, fewer women use manure in growing cotton than do men which may reflect the limited ownership of livestock by widows. Overall though only limited inefficiencies in women's ability to access the requisite quantity of inputs for crop production are suggested. Market failures do not bite significantly harder for women. However, it remains possible that women heads of household are constrained to use poorer quality inputs, particularly seed, and that they may also pay disproportionately high prices.

We can investigate the choice to purchase and the price paid per kilogramme for fertilizer and seed for maize and cotton production. Higher prices paid by women would imply their inability to buy in large quantities or their exclusion from purchasing consortia, lower prices would imply more use of retained, poor quality inputs.[31] Regression analysis of prices paid for inputs uses variables that control for land quality, ability to purchase inputs (income), effectiveness in dealing in markets (education), information (extension service), a proxy for membership of networks (a constructed social capital variable) and economies of scale (land ownership). These regressions do not identify female headship through either the quality or cost routes as a source of disadvantage in these purchasing transactions (Table 7.9).

However, other, qualitative, evidence does suggest that women are inhibited from participating in purchasing consortia. Twenty households from the original survey were revisited to obtain information on issues such as the role of buying and selling consortia in crop production. Respondents were asked, both as individuals and through cluster interviews conducted in the villages, how they purchased their inputs, specifically seeds, fertilizer and pesticides. Most people bought individually from shops but there was an indication that female-headed and poor households were more likely to have to use credit from the Grain Marketing Board. Only one (male-headed, income-rich) household reported buying as part of a group from the ZFU. People acknowledged that group buying was preferable because it was

cheaper and discounts were available, but poor households were excluded from these consortia because of the small quantities they required and the hazard associated with delays. Often people did not have the money available until late in the cropping season which delayed group buying. The consequent delay in using the seed and fertilizer purchased reduced crop yields. 'We buy individually because

Table 7.9 Regression analysis of prices paid and received (Z$ per kg)

	Maize			*Groundnuts*	*Cotton*		
	Output sales[a]	*Input of seed*[a]	*Input of fertilizer*[a]	*Output sales*[a]	*Output sales*	*Input of seed*	*Input of fertilizer*[a]
No. grow	298	298	298	205	45	45	45
No. sell/ purchase	131	226	166	50	45	36	32
Method	Tobit	Tobit	Tobit	Tobit	OLS robust s.e.	Tobit	Tobit
Variables:							
Makoni	0.36	2.20	2.84	0.34			
	(2.33)*	(3.11)*	(7.94)*	(0.50)			
Mutoko	0.76	1.69	3.11	1.09	6.04	101.44	1.46
	(4.81)*	(2.33)*	(8.56)*	(1.60)	(1.24)	(3.61)*	(1.99)*
Land good	0.17	0.27	–0.01	–0.86	–1.44	–21.40	–0.06
	(1.13)	(0.41)	(–0.02)	(–1.37)	(–0.56)	(–0.90)	(–0.10)
Land poor	0.11	0.41	–0.06	–0.04	17.07	–18.24	–0.86
	(0.65)	(0.55)	(–0.17)	(–0.05)	(0.80)	(–0.37)	(–0.69)
Land wet	0.09	0.81	0.18	3.34	13.92	21.12	0.38
	(0.44)	(0.89)	(0.45)	(3.72)*	(2.68)	(0.51)	(0.34)
Land dry	0.11	0.17	0.03	1.03	1.10	–18.49	0.39
	(0.67)	(0.24)	(0.09)	(1.35)	(0.32)	(–0.65)	(0.50)
Education household[a]	–0.05	–0.28	0.08	0.60	0.59	21.51	–1.77
	(–0.54)	(–0.63)	(0.44)	(0.90)	(7.70)*	(0.54)	(–1.93)*
Non-farm income pc[a]	0.01	0.10	0.04	0.02	–0.37	3.52	0.00
	(0.53)	(1.65)*	(1.22)	(0.35)	(0.63)	(1.54)	(0.05)
Extension service	0.27	0.88	0.04	0.02	–3.66	54.74	0.08
	(1.74)*	(1.23)	(0.13)	(0.03)	(–0.72)	(1.76)*	(0.10)
Social capital	–0.03	0.03	0.07	0.14	5.87	–13.88	–0.39
	(–0.39)	(0.10)	(0.50)	(0.54)	(2.14)	(–1.08)	(–1.17)
Land owned[a]	0.16	–0.06	0.12	1.12	–0.72	–37.65	0.20
	(2.08)*	(–0.16)	(0.75)	(2.74)*	(–0.57)	(–3.58)*	(0.68)
Widow	–0.11	–0.62	–0.29	0.11	–3.41	–40.38	0.62
	(–0.64)	(–0.79)	(–0.81)	(0.14)	(–13.92)*	(–1.37)	(0.82)
De facto	–0.53	0.34	0.30	1.05			
	(–1.85)*	(0.26)	(0.52)	(1.00)			
Constant	0.23	–0.60	–2.01	–6.85		10.77	4.75
	(0.75)	(–0.43)	(–3.09)*	(–3.40)*		(0.10)	(2.00)*
R^2					0.30		
LR chi^2	47.2*	18.6	108.6*	31.9*		18.9*	16.4

Notes
a logarithmic values
* significant at 10% level or more

some quickly get money to buy inputs and others do not' (cluster interview, Gurure, Mutoko). Income-poor households are at a disadvantage in buying transactions, they are unable to benefit from any discounts offered and are more likely to have to purchase on less favourable credit terms. De jure female-headed households, particularly, are likely to be income poor.

Earlier it was noted that women farmers appear to achieve lower prices for their output (Table 7.7). Regression analysis of the prices achieved for maize, groundnut and cotton sales can help identify whether there is a specific disadvantage faced by women in product markets. Again this could arise from poor quality of the crop or because women lack access to selling networks. De facto female heads selling maize achieve significantly lower prices for their crop when other influences are controlled for and widows are at a large disadvantage in cotton sales (Table 7.9). The lower usage of retained seed and greater likelihood of purchase of fertilizer by de facto female-headed households makes poor quality inputs and hence low yield, poor quality output improbable (Table 7.7 and note 31). The larger amount of non-crop income flowing into these households also suggests less need for inopportune sales. Instead selling networks are pointed up. Qualitative evidence from the resurvey supports this interpretation. People were asked how they sold their crops: directly to a trader, to neighbours, through groups formed with other farmers or to the Grain Marketing Board? Female-headed households were more likely to sell through GMB, regardless of whether they were rich or poor; 70 per cent sold this way, compared with 33 per cent of male-headed households. The income-poor, male-headed household was likely to sell to traders and the income-rich, male-headed household to sell individually. Selling to GMB had the advantages that sellers got a lump sum amount and instant payment, but there were also disadvantages: 'the people at GMB will tell you it still has high moisture content causing lots of inconveniences to my payment through delays.' The cost of transport featured as important in the most preferred selling method: 'I would prefer selling to individuals because you have no transport costs, and you get your cash there and then', a view reflected in 'now we sell to individuals at a higher price. They actually come and buy.' Women, then, were selling through the standard outlet but this was not necessarily the one that offered the best return. The resurvey indicates that female-headed households, and the poor more generally, are constrained in their selling options and so find themselves at a disadvantage when it comes to realizing the profitability of their crops.

In summary, for maize we find no difference in yields achieved or input usage by female-headed households. Allocative inefficiencies appear to be absent. However, de facto female heads of household do receive low prices for their output and a lack of access to selling consortia may be the source of this disadvantage. In cotton production de jure female-headed households achieve low yields. Manure inputs are lower and there is a hint that more fertilizer and less purchased seed are used. However extension advice and experience are also implicated. Only one third of households in the survey were in receipt of an extension service and, even then, this was often not crop-related advice. These

women achieve a low price for their output. This may reflect poor techniques being employed and, hence, a low quality crop, but lack of access to selling networks may also be a factor. A picture emerges where much might be done to improve profitability of crop production for female-headed and poor households through both higher yields and better realized prices. The terms on which households engage in markets emerge as important. Better access to group buying and provision of transport to sell produce would help the position of these households. But the disadvantaged position of women in cotton production points to the importance of access to modern techniques and knowledge of good management practices. Extension service provision is crucial.[32] Achieving higher yields is also dependent on having more and better quality inputs.

Conclusion

Female-headed households in rural Zimbabwe suffer the same problems as the poor more generally and poverty alleviation policies should benefit the female-headed household as much as the male-headed one. However, some specific disadvantages associated with female-headship have been identified. De facto female-headed households are not unusually income poor but they do lack assets, particularly those assets needed for agricultural production. This constrains their ability to diversify both in terms of the types of crops grown and in taking advantage of any local labour market options. But they don't disproportionately lack income or education. Thus with more resources and support from extension services they may be well placed to improve their position through, for instance, crop diversification. Even without additional resources, greater profitability could be achieved from their existing agricultural output through access to better selling networks and buying consortia for inputs. De jure female-headed households differ in that they lack income and are more likely to be among the very poor. However, they have similar physical asset bases to male-headed households, with the exception of livestock, and achieve similar levels of crop diversification. Lack of inputs constrains their productivity but improvements in yields given existing resources could be achieved in cotton production and better extension service availability might be key to this. The resultant higher incomes accruing to both types of female-headed household from such changes might be sufficient to allow asset accumulation and to enable them to start the climb out of poverty.

Notes

1 A hundred households were surveyed in each area in 2001. A limited, more qualitative resurvey of 10 households in each of Chivi and Mutoko in 2003 investigated some issues in greater depth, for instance, changes in divisions of labour and access to networks.
2 See Chapter 2.
3 These household types were evenly distributed across the three regions studied.
4 See, for example, World Bank 2000; Chant 2003; Ellis and Freeman 2004.
5 All three of our survey areas are in Shona-speaking parts of Zimbabwe.

6 Exceptions here are certain women's power in contacting the spirit world and in religion and medicine.
7 This has been reinforced by 'fast track' resettlement since 2000 which allows widowed, divorced and single mothers to receive resettlement land in their own right but does not allow this for married women (Hellum and Derman 2004).
8 The decision to have a member of the household as a migrant labourer will be part of the household's income-generation strategy along with crop production and other earning opportunities. In principle this would make de facto female-headship endogenous to the decisions. However, men typically migrate in youth to raise cash for bridewealth payments and may only intermittently cohabit with their wives in the rural areas. Thus migration and crop production decisions are likely to be intertemporally separate. Possible endogeneity is tested for in the analysis below.
9 For example, 90 per cent of female heads had sole responsibility for food collection, whereas this was the sole responsibility of only 47 per cent of wives. Over four fifths of female heads and less than two fifths of wives were responsible for (either solely or shared with a husband if a wife) growing sufficient food for the household, buying seeds, renting land and borrowing money. 84 per cent of female heads compared with 56 per cent of wives were responsible for deciding which crops to grow and 77 per cent compared with 22 per cent, respectively, were responsible for their children's education.
10 However, the extent to which this actually represents empowerment or the burden of managing poverty alone is debated, see Chant (1997: 64). However, using our previous categorization (see Chapter 2) to map from external factors enhancing power to power within the household to observable outcomes, such as personal spending money, leisure time and ability to share or delegate domestic tasks, we observe that, first, one quarter of women in male-headed households saw no beneficial outcomes, that is, they scored zero on this scale, whereas this was true for only 3 per cent of female heads, and, second, for de facto female heads having more control in intra-household processes resulted in a significantly higher score on the outcome measure as revealed by correlation coefficients. Thus there is support within the survey for the view that female heads of household are more empowered than wives and that they may achieve improved welfare from this empowerment.
11 The adult-equivalence scale adopted is $AE = (\text{no. adults} + \alpha \text{ no. children})^{\theta}$ where α reflects the cost of a child relative to an adult and is set at 0.33 and θ reflects the extent of economies of scale and is set at 0.9, following Deaton and Zaidi (2002:51). These values assume that children are not very costly in poor agricultural economies and that there is limited scope for economies of scale when food constitutes the main category of expenditure.
12 See Chapter 2, Box 2.2 for details of the poverty line used.
13 To classify households as asset-rich or -poor the same proportion of households as found to be income-poor were, when ranked, deemed to be asset-poor.
14 The average ages of those doing each main activity are very similar for the male-headed and female-headed households.
15 Note that these comments refer to children of any age, not just those under age 14, and, in some cases the questions ask about other male/female household members who do these tasks which, in this context, is taken to imply children but may, in some cases, actually be done by some other relative. Thus these figures are likely to overstate the involvement of children in the household economy.
16 The survey records instances of expenditure, rather than amounts.
17 It is possible that the intention of the migration strategy adopted by the household is to provide the income to accumulate assets. However, among the 20 households who participated in qualitative interviews only two were de facto female-headed and, of these, one received no remittances and the other spent the money on soap. Re-interviewed widowed households invariably spent any remittance money they received

on food (four cases). Only in two of the male-headed households who received money from outside the household was the money used for other purposes, such as fees, paying workers and paying to grind meal

18 Compared with 68 per cent of male-headed households and 71 per cent of de facto female-headed households, only 52 per cent of widows keep cattle.

19 This was particularly true in Makoni where no de facto female-headed household was in receipt of an extension service. In general, in over two thirds of cases where extension advice was given it was on crop farming techniques, but the proportion was higher (81 per cent) for widow-headed households and lower for de facto female-headed households.

20 Only one de facto female-headed household grew cotton.

21 For a theoretical derivation of this see Horrell and Krishnan (2007).

22 Regression analysis revealed that choices about whether to grow the crop were influenced by some of the additional posited variables. Groundnut and roundnut production were less likely if the household had high education or non-agricultural income respectively. These are low value crops that are largely important as nutritious supplements to diet and have limited commercial potential, although groundnuts are increasingly processed and sold as peanut butter. Households with education and/or income may opt to use labour and land resources in other, more profitable uses. Cotton production was more likely where the household was large and had more land. However, higher levels of non-agricultural income reduced the likelihood of this crop being grown, possibly because it indicated that the household had chosen alternative ways to diversify. Home ownership also reduced the likelihood of growing cotton.

23 See Quisimbing (1996) for a detailed account of the techniques appropriate for identifying gender differences in agricultural productivity.

24 Access to extension services, the price of seeds per kilogram and the number of draught power hired for each crop were also included but never proved to be significant so were dropped from most of the final regressions. The insignificance of extension services was surprising but thought to result from the small proportion of households, around one quarter, in receipt of extension services related to agricultural production and the difficulties of identifying to which, if any, of the crops analyzed the advice related.

25 Additionally, the Heckman selection procedure relies on identifying a variable exogenous to the yield equation. Legal ownership of the house is believed to be such a variable but given the difficulty of obtaining convincing exclusion restrictions, we also conducted tobit estimates of the parameters, so abstracting from the difficulty of endogenizing crop choice. These reiterate the importance of manure, fertilizer and seed inputs in achieving high yields and again find significantly lower cotton yields for female-headed households, see below.

26 In a small number of cases crop failures appear to have occurred. That is, inputs were used but no output was recorded. This was true for 4 households who grew maize, 10 households who grew roundnuts, 19 out of the 205 households who had grown groundnuts, but none of the households who grew cotton. In most cases the crop failures occurred in Chivi. The determinants of the zero yield were thought to be very different to those determining a positive yield (one respondent attributed the failure to water logging) so these cases were omitted from the main regression equations but they are included in the Tobit regressions and the results compared.

27 The significance of being female-headed was unaltered by the inclusion of separate de facto and de jure dummy variables.

28 In Burkina Faso, Udry (1996) finds yields to be lower on plots farmed by women for all crops indicating an inefficient allocation of resources within the household. Here resource allocation appears less affected by household type, although inefficiencies are clearly evident in cotton production.

29 AGRITEX was a government agency for providing training and advisory services for agricultural development and efficiency in Zimbabwe.

30 Controlling factors included the labour available to the household, the availability of draught power, manure and machinery, all of which may affect the techniques adopted and the inputs used. The amount of non-crop income reflected the ability to buy in bulk or to hire in factors of production and the acreage of land allowed for economies of scale in input usage. Education level, age of head of household and receipt of an extension service reflected knowledge of and willingness to use best practice techniques and variables were included to control for land quality. Female-headship dummy variables identified constraints in input usage faced by women.

31 Not all households that grew the crop purchased fertilizer and seed inputs; some used retained seed, others did not purchase fertilizer and may have used manure instead. Widows were slightly less likely than male heads of household to purchase seed and fertilizer for maize production and seed for cotton production (where one third appear to be using retained seed compared with one sixth of men), but they were more likely to purchase fertilizer for cotton production. De facto female heads were more likely than male household heads to purchase both seed and fertilizer for maize production, thus implying that poor quality inputs are unlikely to be the source of poor yields. Tobit analysis is used to incorporate the zero observations.

32 Improving output markets and provision of extension services has been highlighted elsewhere as crucial to improving the situation of the poor in African countries (Ellis and Freeman 2004).

8 Policies and poverty alleviation

Paul Mosley and Sara Horrell

Introduction

In the preceding chapters we have observed that the African and Indian households we surveyed fall into two broad categories: those who possess some assets, usually agricultural, pursue diversification strategies to generate cash and, often, use the proceeds to improve own agriculture; and those with few assets who are reliant on the sale of their labour for wages for survival and any hope of improvement, such as the landless in Ethiopia. A better future for this latter group is to a large extent dependent on an increase in the demand for labour of both poor women and poor men, either by the less-poor group or from elsewhere, accompanied by adequate wages. Here we identify policies which can help overcome obstacles to expansion for the less-poor and investigate whether this translates into increased demand for waged labour. We also consider the impact of increased job availability on the very poor.

Throughout we have been mindful that options and opportunities that appear beneficial at the household level may not always have an equal impact on the individual members. Opening up the household has given us information on female domains, identified how women can become more powerful actors, both within these spheres and by moving outside traditional areas, and demonstrated important correlates of female empowerment. Our emphasis is on identifying how to enable women to become effective agents of development. The generally accepted premise is that women are constrained in their activities by cultural, social and institutional factors and therefore are not able to contribute as much as they otherwise might to the most gainful activities of the household. Inefficiencies in the allocation of inputs to own agriculture so that crop yields fail to be maximized is one very obvious area in which potential remains unrealized. But access to inputs, extension advice, finance, transport and selling networks are other tangible constraints. Less tangible, but equally constraining, are the effects of traditional divisions of labour, gendered crops and livestock and prevailing views of appropriate work for women. Overcoming these barriers has the potential to release a powerful force for development and poverty alleviation.

Diversification and routes out of poverty

In what ways do the less-poor households that we surveyed diversify to achieve asset accumulation and steady income streams? There are many options but they divide into three broad groups: improvement in own agriculture; earning cash incomes from waged labour; and generating cash through small business activities. Table 8.1 details the factors which are essential to, and aid diversification, into these areas. It also summarizes the factors that have emerged as important in encouraging women to diversify their time use.

A number of factors are common to many of these diversification strategies. All require demand for the product or output. Many rely on improved agricultural technology. However, although some improvement in grain yields has been observed in some African countries, such as Uganda, the ease with which policies directed at improved agricultural technology can alleviate poverty today compared with the past is debated (Dorward *et al*. 2004): risk and uncertainty are greater – in particular, real grain prices are lower and conflict risks higher – than they were for the Asian countries who benefited from the green revolution in the 1960s and 1970s. Most diversification requires additional inputs: cash is needed for the initial purchase, of which waged labour may be one source, and microfinance another. But the inputs also need to be available at predictable prices, so macroeconomic stability is key. Extension advice and education nearly always feature. For instance, one half of the respondents in Uganda who moved over the poverty line between the initial and second surveys attributed this to extension advice.[1] A specific example is the case where 'He has no land where he could plant vanilla. On how to make manure and use fertilizer he took the advice, began using the fertilizers and got positive results because the … land became productive. The advice paid off because before applying the fertilizers I used to get 1.5 bags of maize [per acre] but now I get 3 bags' (respondent 91). Frequently access to markets and selling consortia are preconditions and reasonable certainty about the returns is also important. Microinsurance could be one way to mitigate this risk. Another might be improved technology. Of the resurveyed respondents in Zimbabwe, one had seen a transition out of poverty since the first survey by securing access to irrigation through the purchase of two pumps which enabled the household to grow crops all year round. It is not just the existence of markets that is crucial but also the social relations surrounding them. For instance, in undertaking waged labour greater trust, on the parts both of the employee and employer, was often cited as something that was needed to make working for others and employing people more desirable. Employees needed more certainty both about getting work and about the returns, many feared arbitrary fines and non-payment; employers were often concerned about the quality of work and found supervision onerous. Indeed, social capital linkages were found to be one of the key discriminators between households who emerged from poverty and who fell into poverty in Uganda. Finding activities that are compatible with both the seasonality of and surpluses generated in own-account agriculture is also fundamental to positive choices being made about these activities.

Table 8.1 Diversification for the less-poor household

Strategy	*Sub-strategy*	*Facilitating factors*	*Factors important to women achieving this diversification*
Improve own agriculture	Higher yields from existing crops	Input availability Extension advice Money to buy modern varieties Labour available for additional tasks Buying and selling outlets Storage for produce to obviate need to sell when market is saturated Transport to markets	Own money to purchase inputs (finance) Own land to farm Access to draught power Ability to command labour if needed Extension advice Risk-mitigation strategies Ability to transport and sell output Control over proceeds
	Diversify crops e.g. cash crops and high-value crops	As above, plus Compatibility with subsistence crop production Market for produce	As above, plus Crops that women see gains from and don't just provide labour to Release labour time from subsistence and domestic activities
Waged labour	Migration (male) to distant labour markets	Requisite skills Rural–urban links e.g. for food supply Reduced requirement for male labour time in own agriculture	Leaves women as de facto heads therefore limits what they can achieve. Helped by extension advice, asset ownership, access to buying and selling consortia, ability to hire labour. Time to market goods
	Waged work in local labour markets	Job availability Compatible with own-farm work Desirable jobs Interpersonal trust and certainty about returns Change in attitudes about work being inferior	Reaping benefits of waged work Education Work not viewed as demeaning, respectful employment Reduced work load in other areas Compatible with own agriculture and domestic duties
Small business activities	Farm-related, e.g. peanut butter processing and sales	Finance and capital equipment Available labour time Support services Surplus from agricultural production	Finance Extension services Access to inputs Access to transport and markets Reap benefits Time reduced in other activities
	Non-farm related e.g. baking bricks, selling clothes	Finance Business acumen (education/ training) Predictable input and output markets	Finance Education Access to inputs and markets Reap benefits Time reduced in other activities

For women, specifically, a range of additional features emerged. Women often did not have access to the finance, extension service advice, buying consortia or selling networks needed to engage in many activities. Transport to markets to sell produce also emerged as a binding constraint for many. Furthermore, women often needed their own assets or recognized control over household assets to ensure they had the ability and authority to hire draught power and labour so that tasks could be done at the appropriate time. Activities such as weeding can make large differences to crop yields but have to be done in a timely fashion. Possibly more important is the assurance that, having devoted resources to an activity, these women remained in control of a worthwhile portion of the proceeds. Women may withhold their labour from such ventures if their profits are commandeered by men. Indeed, we hypothesize that an important, but little recognized, motivation for diversification alongside the usually posited risk-spreading is the desire to gain control of an income stream. Women may engage in an additional activity where they have control of the proceeds and can utilize them in ways that are both beneficial to the household and that improve their asset base and their intra-household bargaining position. There is evidence of such outcomes in the chapters on Uganda and India.

Two other aspects are also crucial to the involvement of women in diversification. First, women are typically responsible for production for household consumption. They will therefore be likely to be more resistant to changes that put this production at risk and so may need risk-mitigation strategies, such as crop insurance, to encourage them to move away from subsistence agriculture. Equally, they may be more willing than men to try new seed varieties or production methods where these combine enhanced yields and reduce vulnerability to common risks. There is some evidence for this in the observed transitions out of poverty. Second, and relatedly, women typically have less leisure time than men and have little or no surplus labour time with which to take on additional activities. Indeed, some of the few women working for wages observed in Uganda were forced into this through insufficient household money and were having to suffer an increased burden of work. Making diversification attractive to women requires either a reduction in the time currently devoted to own-farm agriculture and domestic duties or finding activities that only utilize whatever slack time is available. This is not an impossible task. Higher yielding staple crop varieties can reduce the time, and land, devoted to meeting the household's needs and domestic technology that reduces women's housework time is available. Accessible, safe water and fuel-conserving cookers are two obvious time-saving technologies, grinding mills and soap are others.[2] Cultural views also play a role in the activities women undertake; it may be easier to work within these accepted arenas (for instance, specific crops and types of livestock such as poultry) rather than set out to challenge the divisions. Small improvements in empowerment through greater productivity in existing areas may be the catalyst to much larger changes. Overall, a power-productivity-profit nexus has been identified for women, but finance, extension services and social capital are important in achieving this. Female empowerment can allow women to become effective agents of development, and we look now at the areas in which policy might help.

Extension services

Extension services have emerged as crucial in enabling women to achieve higher yields from their existing agriculture and in allowing them to profitably diversify into other crops. In Uganda, extension has recently had a pro-female bias and this can be related to the improvements in yields and successes in vegetable growing. Two women reported the positive benefits of diversifying. 'Apart from planting maize and beans this year I plan to farm one whole acre of onions and another of cabbages. Hopefully this will increase my income … I accepted (extension) advice immediately on improved varieties, use of fertilizers and proper spacing of crops. I had not used fertilizers earlier but once I tried to do what I had been told, the yield was very good' (respondent 229). Respondent 59 stated that 'we were advised to diversify by beginning to grow vegetables like cabbages and tomatoes through coming together as a group and accessing the inputs. We accepted the advice immediately because as a group you immediately get what you want.' Here the role of buying consortia to access inputs is also emphasized. In Zimbabwe, extension has been less successful at reaching women. We have seen that female-headed households achieve significantly lower yields in cotton production and have attributed this to a lack of support and extension advice.

Microfinance

Microfinance has emerged as very important in achieving improvement in crop yields and diversification into livestock and small businesses in India and Uganda. In India microfinance is one of the few assets over which women have control and this has allowed an improvement in intra-household bargaining power and the benefits these women see from their labours. An extension of microfinance to enable land purchase by women would further its effectiveness. In Uganda, the benefits of microfinance to development are demonstrated but it tends to be seen as a household resource with men, who are typically responsible for investment expenditures, overseeing its use. It therefore offers less in terms of female empowerment, although the microfinance group itself does create social capital which is found to be significant in improving women's bargaining positions and their crop yields. Thus the overall effects are unambiguously beneficial but the route sometimes tortuous.

Marketing networks

Three aspects of marketing have emerged as important to realizing the gains of women's labour in Zimbabwe: purchasing networks, buying consortia and transport availability. Often, being too poor and too time-constrained to join buying and selling groups means that female heads of household are paying high prices for their inputs and are unable to reap the benefits of cooperative sales arrangements. It may also be the case that women per se are excluded from these, typically, male groups. To whom sales of produce were made was often determined by whether the purchaser collected the goods or not and women, having less access to other forms of transport, for instance, a scotch cart, are particularly constrained in their

options which will affect the price achieved. Similar concerns were voiced in Uganda, where it was noted that women were very unlikely to take over marketing produce as men have the right contacts and therefore achieve a better price. While the household achieves a higher income from this division of labour, women's position is undermined because women are often not told the income realized from the sale and therefore suffer asymmetric information in bargained negotiations. In India too women rarely engage in selling activities or have control over the resultant income partly because sales transactions could involve being away from the village for a number of days.

Microinsurance

Microinsurance is only at an embryonic stage but the health and climatic risks that the households studied suffer are clearly evident (Mosley *et al*. 2003). Insurance would be one way to help mitigate these risks. Risk inhibits market development but institutions to reduce risk have a pro-male bias (Elson 1999, Whitehead 2001). A strategy to address these problems might be the application of microinsurance to risks which constitute a key element in women's expenditure patterns, notably child health. An experiment in Uganda by the international NGO FINCA in providing health insurance to low-income women appears to have been successful in stabilizing their expenditure and thereby increasing their levels of investment expenditure and future income prospects (Mosley 2004). Insurance can intervene to stop a negative shock having a cumulative effect with long-term, negative consequences. Crop insurance has been advocated as a way of encouraging women to diversify into new varieties or new crops as it ameliorates the negative consequences for household consumption of any failure. It has also been suggested as an important adjunct to women taking credit to purchase land in India.

Social capital development

Social capital has been demonstrated as important in achieving higher productivity in own agriculture by women in Uganda. Social capital is also important in determining women's time allocation by feeding through into women's intra-household bargaining position in Zimbabwe. Often social capital is an element in a causal sequence that enables escape from poverty, but sometimes it can itself be an agent of change. Witness the testimony of respondent 120 in Uganda, who experienced in 2002 the worst shock possible – the loss of a child aged two. 'I spent most of my money trying to save his life', the respondent said, 'and this more than devastated me and my husband.' But the respondent's extension group was supportive, gave them 'the courage to continue', and the consequence was, in the wake of tragedy, a new investment in agricultural technology (acquisition of new Longe 1 composite seeds planted in pure-stand rather than interplanted with beans) which took the couple across the poverty line. In general, social capital builds trust, productive relationships and provides some form of social insurance. These enable diversification and risk taking. More group activities, such as microfinance, extension, health awareness and education, can help build social capital.

Asset ownership – livestock

Women generally have little ownership of productive assets, large animals particularly are male property. Ownership of cattle or oxen is essential for draught power and manure. Without these crops cannot be grown as efficiently and tasks cannot always be undertake at the appropriate time. In Zimbabwe asset ownership was particularly important for the successful production of commercial crops. But livestock confer benefits beyond the increased productivity of own agriculture. They are a store of value, an asset that can be realized or borrowed against and a provider of other services. For instance, in India the ability to earn good wages in agriculture was dependent upon owning cattle and so being able to plough for others.

Asset ownership – land

A large literature relates how crucial land ownership is to women's position and our results underline this finding. In Zimbabwe gendered tasks and crops constrain the green revolution and even when women are able to benefit from expansion in traditionally female crops, for instance growing groundnuts and processing them to sell as peanut butter, the extent of this diversification is governed by the land allocated to groundnut production, which is decided by men. It has also been identified as important in accessing extension, credit and training (AGRITEX 2002). In Uganda land ownership is strongly associated with female power but it is ownership, not use rights, that is key. Indeed, one woman who managed to briefly emerge from poverty by acquiring an all-year-round salaried job working for the Forestry Department subsequently lost her job and had to resort to casual labouring to find the money to buy essentials. Her situation was worsened by her lack of land rights: 'my hired land was taken away by my stepsons because customary land belongs to men and not women.' Similarly in India, land ownership by women is rare but where they do have land, women are more powerful in their own homes, are able to decide how best to allocate their labour time and reap the benefits from so doing. Even in Ethiopia there was a hint that lack of ownership of land by the household could translate into greater differentiation in gender roles. Land rights are crucial for welfare, efficiency and empowerment reasons; however, achieving effective rights will require far reaching changes in many areas, but the benefits and the importance of land as an asset make it a high priority: 'Land … has a strategic importance that other gender concerns … do not share in equal measure' (Agarwal 1995: 288).

Entry into non-traditional arenas

In Zimbabwe and Uganda particularly there is an indication that women are taking on some male tasks. They can be found growing 'male' crops and undertaking 'male' activities such as ploughing. In India too women have greater responsibility for farm work than in the past and in all our survey countries there is evidence of some feminization of the labour force; women were more likely to be found doing paid work than they were in the past. Women's entry into non-traditional areas is seen by some as a way to reduce inequalities between the sexes and hence to improve women's

position. Others would argue that the removal of segregation is less important than ensuring women get fair returns for the work they do and would point to resegregation occurring and reduction in wages and status accompanying feminization. Improving women's asset position, the returns they get for the work they undertake and ensuring fewer constraints on choices over where that labour should be applied may be more pressing demands than reducing segregation.

Opportunities for waged work

The evidence presented here shows that waged work can allow diversification and offer a route out of poverty for some and for others it can be a means by which women gain control over some income and so improve their position within the household. But the evidence from India suggests that waged work is not always and everywhere empowering for women and will depend on the context in which it is undertaken. If women have little power within their households and if the terms on which their labour is sold is exploitative, then the welfare benefits to women are questionable. Indeed, the benefit realized very much depends on the types of jobs on offer: the pay and the compatibility of the work with own agriculture; and the bargaining power of the employee relative to the employer. Interviewee 90 in Uganda relates that: 'Yes, I have tried to bargain my wage rate, but not with any positive results because many people are willing to work and sometimes you have no choice but to work.' We look at the role of labour markets in alleviating poverty in the next section.

Reduction in housework time

In all the survey countries women are the main providers of housework time and in no case were they able to substitute out of this by engagement in other remunerated activities. These women are not sufficiently powerful to bargain for a reduction in housework time and, even in western societies, there is little evidence that female empowerment has resulted in men doing significantly more of the chores. Instead, in the developed world, improved water supply, labour saving devices, convenience food and employment of other women has eased many women's loads. Improvements in domestic technology could reduce the demand on women's time in the countries studied and may facilitate the use of time in other productive activities.

Aiding diversification through more productive own-account agriculture, expansion into cash crops, and farm-related and non-farm-related small businesses will all be beneficial to the less-poor household when it results in a higher, steady income stream. But specific policies are needed to enable women to share in the benefits of diversification and to avoid underscoring and reinforcing existing gender inequalities. The very poor, who are dependent on the sale of their labour for survival and improvement, are largely reliant on job opportunities expanding and labour demand increasing along with the growth in activities of the less poor. We examine the potential for policies to specifically increase both the demand for and supply of labour in the next section. We pay particular attention to the effect on female labour.

Policy options that impact on labour demand and labour supply

Labour demand

For some the labour market offers one option for cash generation, for others it is essential to their survival.[3] Above we have identified a general expansion of activity as important in generating jobs, here we consider what specifically needs to be done to expand both labour demand and labour supply.

One of the fundamental components of the World Bank's wave of anti-poverty strategies announced in its 1990 World Development Report was growth in the demand for labour. The premise was that if labour was the only factor of production or 'entitlement' that poor people could exchange in the market against an improved livelihood, the first step towards reducing their poverty had to be to augment the demand for this factor. The most important precedent for large-scale poverty reduction through growth of the rural labour market is in East Asia and parts of South Asia during their green revolutions. The growth derived from two components: diversification and commercialization of crop and animal production and technical transformation in foodcrop agriculture brought about by the introduction of hybrid rice and wheat cultivation. The adoption of modern crop varieties, first among large, then among small farmers, led to more intense utilization of land, in particular through double-cropping (Singh 1990: 117) and thence to larger labour demands per acre. Modern crop varieties require larger labour demands for weeding, for harvesting and for soil preparation than the traditional varieties. Alongside this the growth of complementary 'agro-related' industries occurred. However, because there were large pools of underemployed labour in these countries the increase in demand did not immediately translate to an increase in the wage. Only after some time, when the 'unlimited supply' of farm labour began to hit its limit did rural poverty begin to fall dramatically.

Factors that are generally deemed important in governing the demand for labour are: employer income and assets, which are caused to rise by the productivity changes associated with the green revolution as well as by growth elsewhere in the economy; the availability of institutional credit which enables employers to hire labour they could not hire out of current income; changes in the wage rate; and changes in the product mix. Infrastructure also influences the attractiveness of hiring labour in particular environments. The local pattern of demand for final products and the range of technologies available to satisfy it will also affect the local demand for labour, independently of employer resources. Beyond this, a key factor influencing labour hiring is likely to be the risk attached to expectations of labour productivity and thence of profit. These risks may originate in the natural environment or in interpersonal relationships, such as lack of 'trust' or 'social capital'. Indeed, respondents in Uganda and Zimbabwe saw considerable risks associated with hiring labour. These included poor quality of work and delays in the hired labour coming to the fields which left the crop unattended at crucial times so resulting in lower yields.

We use these insights into the expansion of labour demand to review labour hiring by the households in our surveys (Table 8.2). Because of the variation between the independent variables examined in each country, there are some limits on what we can infer. However, across countries, increases in employer's income increases labour hiring, usually significantly. Labour hiring is responsive to holdings of land, to non-land assets in Zimbabwe and, in Uganda, to a composite measure of social capital. The last two provide security against risk, and social capital, in the sense of social connections, provides some ability to overcome the asymmetries of information which are present in all labour markets. But attitudes also matter: in Uganda, labour hiring is responsive to measures of willingness to take risks, although the specifications used here do not capture the same effects in India or Ethiopia. In India access to credit emerges as important. The response to the product-mix needs more investigation, but there is a response of labour demand to the intensity of hybrid-seed utilization in Uganda.

Evidence from other research has suggested an unwillingness to hire labour at low levels of income, particularly in Zimbabwe and Uganda (Mosley 2000; Mosley and Rock 2004) and it is of interest how this obstacle to labour demand may be overcome. One possibility suggested by the current work is an interaction between availability of finance and trust in potential members of the labour force. Hiring of people from outside the family is a bridge which many households which have previously being self-sufficient in labour feel severe qualms about crossing. 'I would sooner work all night', one Ugandan interviewee (case 233) told us, 'rather than hire outside the family.' In Zimbabwe, where availability of microfinance is weak and social capital has recently shrunk, borrowing and labour hiring at low levels of income is rare. In Andhra Pradesh, where availability of microfinance and social capital links, particularly among low-income female members of self-help groups, are much more readily available, labour hiring occurs right down the income scale. A combination of financial and social capital may help to extend the downward reach of the labour market and so deepen this market.

Demands for male labour and female labour may differ (Table 8.3). For our sample countries where the demand for hired labour could be differentiated, we again find that the demand for labour is influenced by employer's income, land ownership, availability of credit and risk aversion. Demand for male and female labour is differentiated by task and the demand for female labour is much more sensitive with respect to employer's income than the demand for male labour.

The incorporation of women into the labour force in these countries is a relatively recent phenomenon. Historical data indicates that female employment in agriculture fluctuates with cycles in the national economy but around an upward trend (Kazembe 1986, Evans 1996, Muzaki 1998). Women have tended to be taken on in boom conditions but retrenched in the slump and so show more volatility in employment than men. However, feminization of agricultural labour forces is occurring and women are becoming a more permanent feature. There are several tendencies occurring simultaneously. In the first place, agriculture has been intensifying over a long period in Andhra Pradesh, over a shorter period in Uganda and

Table 8.2 Labour demand equations

	Andhra Pradesh[a]	*Ethiopia*[a, b]	*Uganda*			*Zimbabwe*
% households hired labour	91	20	45			31
Dependent variable	Total number of days worked	Number of people employed for cash	Number of people employed for cash			Amount of outside labour
Constant	–126.50	0.42	0.30	1.15	2.048	1.888
	(–1.38)	(0.97)	(0.46)	(1.47)	(2.08)*	(1.80)*
Wage rate				–0.91	–1.05	
				(–1.99)*	(–2.29)*	
Credit use	132.52		1.07			
	(2.09)*		(1.40)			
Land owned	34.23	0.015	0.24	0.14	0.134	0.003
	(4.37)*	(0.13)	(2.27)*	(3.82)*	(3.61)*	(0.01)
Liquid assets						0.049
						(3.69)*
Use hybrid seed				0.28		
				(1.92)*		
Social capital[c]			0.63			
			(3.62)*			
Income	1.360	0.32	4.6E–6			2.21E–5
	(5.07)*	(2.68)*	(0.94)			(2.01)*
Income squared						–4.46E–11
						(2.50)*
Household labour usage	5.40	–0.061				–0.395
	(0.46)	(–0.51)				(–2.30)*
Locality: Makoni						–1.318
						(–1.61)
Locality: Mutoko						–1.605
						(–1.84)
Locality: village	–39.11					
	(–0.70)					
Progressive farmer	21.15					
	(1.15)					
Caste	–12.30					
	(–0.44)					
Risk aversion measure[d]	1.23	–0.004			3.09E–2	
	(0.64)	(–0.04)			(1.81)*	
R Square	0.395	0.097	0.179	0.094	0.317	0.074
N	213	85	297	297	297	300

Notes
* denotes significance at the 10% level or above.
a Other variants of the risk aversion coefficients were not significant.
b Afeta PA only
c Social capital indicator is mean of 'bonding', 'bridging' and 'linking' measures.
d Arrow–Pratt 9 formulation for India

Ethiopia, and, for the moment, it is de-intensifying in Zimbabwe. Where it is intensifying, it creates an incremental demand for labour, which it is always rational, holding constant the skill and physical strength requirements of the job, to satisfy by hiring women rather than men because they are cheaper.[4] Second, with intensification and the growth of sales comes an expansion in the non-farm sector where the physical strength constraint on hiring female labour often does not hold. Third,

Table 8.3 Demand for male and female labour

	Ethiopia		*India (Andhra Pradesh)*		*Uganda*	
Dependent variable	*Male labour*	*Female labour*	*Male labour*	*Female labour*	*Male labour*	*Female labour*
Constant	–0.36	–0.12	–46.8**	–92.6*	279.9	–17.8
	(1.25)	(2.09)	(–2.46)	(–1.65)		
Employer's annual income ($)	0.10	0.86*	0.002**	1.05**	0.002	0.014*
	(1.30)	(10.71)	(3.86)	(5.19)	(0.35)	(2.01)
Household assets					1.57	
					(0.02)	
Credit variable			28.3*	99.5**		
			(1.92)	(2.04)		
Size of landholding (acres)	0.015	–0.096	2.94**	31.16**	26.5	18.9
	(0.18)	(1.27)	(1.64)	(5.22)	(0.79)	(0.75)
Household labour	0.075	–0.23**	2.59	–5.02	–68.0	
	(0.98)	(3.14)	(0.94)	(–0.27)	(1.40)	
Ploughing	0.11	–0.013	36.24**			
	(1.45)	(–0.177)	(2.65)			
Harvesting	0.198*	0.085	19.38	115.0*		
	(2.40)	(1.07)	(1.40)	(1.88)		
Picking coffee beans	0.68*	–0.076				
	(9.20)	(–1.05)				
Risk aversion: Arrow–Pratt 9	–0.001	0.030	3.35	1.20	–3.65	29.78
	(0.016)	(0.443)	(0.077)	(0.85)	(–0.11)	(0.90)
Risk aversion: Binswanger level 5			0.158*			
			(0.298)			
Perceived vulnerability					–2.57	
					(–0.58)	
R^2	0.63	0.66	0.29	0.45	0.09	0.115
Sample	85	85	52	52	43	47

Notes
Ordinary least-squares estimation.
* denotes significance of a coefficient at the 5% level, ** denotes significance at the 1% level.

in two of the sample countries, Ethiopia and Zimbabwe, there have been land reforms and a consequent shift from large farms, which hire male, permanent staff to supervise the casual staff, to small farms where the workforce is almost entirely casualized and the female component of the workforce is thereby increased.[5] Fourth, even the conventional physical constraints on the jobs which women can do are loosening. Typically men do the ploughing and women do not, but we encountered several women ploughing in Eastern Uganda, not all of them in female-headed households.

Despite feminization of the labour force it is still the case that female labour in particular is used as a flexible resource to meet peaks in demand. In crop production these peaks are seasonal. For this reason the variance of women's labour income is greater than men's and the female variance increasingly exceeds the male variance as intensification proceeds and women's share of total labour hours increases.[6] It is tempting on this account to argue that, even though the market for female labour may be expanding, the vulnerability of female incomes is also increasing. However, whether this is the case depends on the extent to which a household depends exclusively on labour income, or has the freedom to use it as one element in a household portfolio. In our studies this varied by country. In Ethiopia, there was a serious problem of landlessness and several households depended almost entirely on labour income to keep them afloat, with the implication that if labour income rose or fell, so did their entire household income. In the other countries fewer households depended purely on labour income. In Uganda the tendency was for people to resort to working on other people's fields primarily if forced to do so by mischance. Often this would be in the peak main-crop months and would increase instability and may lower own-account agricultural productivity. In cases where labour market participation was a positive response to the opportunities available, increased income from casual labour, if workers could get the timing right, could serve as a countercyclical, stabilizing force on income overall. This would reduce vulnerability rather than increase it. We encountered examples of both predicaments (Figure 8.1).

Our aim is to understand how interventions in the labour market might reduce poverty more effectively. An expansion of the demand for labour that exceeds any increase in supply will unambiguously raise the average wage of men and women and thereby reduce expected poverty levels. There are a number of expedients which can expected to boost the demand for low-income labour: diffusion of green revolution technology and non-traditional rural exports (cotton in Zimbabwe, spices and horticulture in Ethiopia and Uganda, handicrafts in all sample countries), support for public expenditures which directly or indirectly promote agriculture and other complementary labour-intensive sectors of the economy, technical and financial support for microenterprises, and broadening of access to public services, notably extension and other applied education. Additionally, public expenditure schemes can help reduce the cyclical and seasonal variation in demand through off-season public works. Counter-cyclical public works are currently being taken to a new pitch of sophistication in Ethiopia. These reduce two elements of instability in income: first, the seasonal

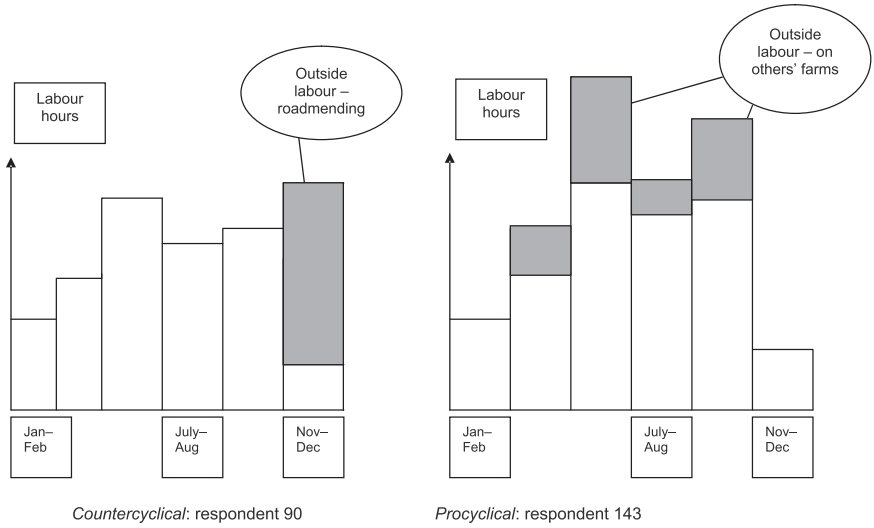

Figure 8.1 Two labour demand patterns and their impact on income stability: Uganda sample. Periods of own-account labour are shown as blank columns, and periods of paid work for others as shaded columns.

instability of income streams (since they provide work in the agricultural off-season), and second, in the case of investments such as water harvesting, the size of climatic fluctuations themselves. In one year alone $250 million was committed to water harvesting (simple, labour-intensive irrigation) in rain-deficient areas of Ethiopia (FDRE 2002b).

Many of the policy options would operate through agriculture and crop diversification. In general, the crop should have high demands for employing labour that are compatible with the demands of own-account agricultural production. However, this is obviously not relevant where there is a large landless population, such as in Ethiopia. Here year-round, stable employment is required and a crop mix which satisfies this should be aimed for. It may even be the case that, with sufficient demand and development, local labour market opportunities could provide a realistic substitute for more distant migration. Furthermore, the crops and technologies advocated should reduce or offset risk, so providing stability of income and profitability for the farmer and hence increasing the likelihood of him/her employing labour. If the mix chosen involves greater risk or volatility additional policies, such as microinsurance, will need to be developed to address these problems. However, this does not overcome the lack of trust between employer and employee which underpins much of the perceived risk to hiring labour. Development of social capital through other group interactions, such as cooperation in extension and microfinance schemes, is one way of creating the trust so essential to these market relations, but the ability to pay (through, for instance, credit availability) and the improvement of employee

attitudes to paid work (through, for instance, the creation of more desirable jobs, see later) are also important. Macroeconomic stability too is crucial. This ensures predictable rewards are available to the producer and that the value of cash wages are known with reasonable certainty.

The impact on the demand for female labour will further depend on the adoption of appropriate crops and technologies and the tasks needing to be done. As seen for India, the increase in the size of the female labour force in part arises because the demand for traditionally female jobs, such as weeding, increases but it is also related to the cheapness of female labour, the perceived malleability of female labour and its easier supervision, and the development of off-farm and own-account activities which have offered men alternative cash-generating occupations. Accepted male responsibility for investment expenditures exacerbates this tendency. As households are enabled to diversify and invest, men have taken on income-earning activities to achieve this while women take on greater responsibility for waged work in India. However, it may also act to retrench women into tending the household's farm, including taking on traditional male activities, such as ploughing. There is evidence of this effect in Uganda and among de facto female-headed households in Zimbabwe.

Labour supply

One of the most important lessons from our early chapters is that labour supply to the market, in particular by women, falls and does not increase when the wage increases: the labour supply curve is negatively sloped. Hence if overall earnings from labour are to be increased, and the average wage pulled sustainably above the poverty line, a simple increase in the average individual wage is not sufficient: the entire labour supply curve needs to be shifted outwards and demand increased at the same time. On the supply side, we have seen that attitudes to work, the quality of jobs and compatibility with own-account agriculture are all important in determining the desire to engage in waged labour.

In all our survey countries, waged work was seen as inferior to labouring in own-account agriculture. The reasons for this vary: macroeconomic instability has underlined the importance of subsistence agriculture for survival, land redistribution policies have mobilized people's aspirations for land and cultural attitudes can deem paid work demeaning. In Ethiopia there was a general view that waged work and the position of the landless was inferior, in India undertaking waged labouring was largely confined to those from lower castes and, in Zimbabwe, 'the people … avoided doing casual work … because of its low, menial status. Even the poorest households preferred to gain self-reliance through agricultural production, rather than "working for others", and only took casual work when their granaries were empty' (Bird and Shepherd 2002: 91). Additionally, levels of pay are low. For instance, in eastern Uganda, the agricultural wage is so low as to provide earnings well below the poverty line (UGS 29,000 per adult equivalent per month) except for those unusual cases who worked as full-time labourers. Throughout it has been evident that better quality jobs that offer certainty and regularity of employment

and improved pay need to be offered if working for pay is to be seen as an attractive way of generating cash incomes. In Ethiopia the landless suffered more income uncertainty and greater vulnerability than those with assets and more income streams, although waged work seemed to offer more chances for individual household improvement. In India, the poor with few assets would opt to reduce the hours they worked in response to an increase in the wage, those with land and assets were more inclined to capitalize on these and increase the hours they worked away from their own land to enable further accumulation. These different responses to waged work were attributed to the opportunities available to each; the poor only had access to poor quality, 'inferior' jobs, the less-poor had access to better quality, less demeaning work. Compatibility with own-account agriculture or other activities is also a crucial determinant of the desirability of undertaking waged work. It is not just the ability to smooth income, and hence consumption, over the year that is at issue here. Not tending to one's own crops at key times adversely affects yields, incomes and survival prospects. Recognizing people's needs for food security and how this is, in many instances, is currently best achieved through own-account agriculture is essential in any policy design.

There was abundant evidence of imperfections in local labour markets in all the countries we examined, demonstrated by large inter-regional differences in local wages and by reluctance of rural employers to hire from outside the village. Policy measures which could reduce this inter-regional, and even inter-village, fragmentation, notably improvements in infrastructure, such as feeder roads, and social capital, hold out important potential for reducing poverty by extending the capacity of the economy as a whole to hire out of regional pockets of low-income labour. Social capital is notoriously resistant to attempts to engineer it through the price mechanism – trust cannot be bought. But through non-price instruments, such as encouragement of association, decentralization of administration, reduced inequality and the institutionalization of reduced vulnerability to shocks, incentives to its accumulation can be given which might help labour markets to de-fragment, especially given the catalyst of a growing economy and improving infrastructure.[7, 8]

These issues impact even more noticeably for the supply of female labour to the market. Attitudes to female employment were negative in most countries although even in the most pronounced case, Ethiopia, there was some recognition that more women were working and that these women might gain more respect from their husbands, albeit grudging, because they were contributing to the well-being of the family. Women were particularly vulnerable to low pay and poor conditions in the labour market and food security is usually a female responsibility, making women more concerned about the compatibility of waged work with own-agriculture demands. Indeed, timely weeding is crucial to crop yields and it is this task for which there is the highest demand for labour, a demand which falls on women as they are traditionally responsible for weeding.

In addition, women's motivation for supplying their labour to the market is in part determined by processes within the household. Women may supply labour if it enables them to control an income stream and they may gain from this if they can

improve their bargaining position and reduce the time they have to spend in other remunerated activities. On the basis of our surveys, the evidence on whether women actually achieve this empowerment from paid work is mixed. Women in Uganda did seem to achieve this, whereas men retained control of women's earnings in Ethiopia and this was seen as an additional disincentive to women undertaking paid work. India presented an intermediate position where women might retain wages but where men might respond to women earning by using their money for their own personal use and shifting more of the responsibility for basic household needs onto the woman. Women's desire to move out of paid work if economically feasible may be related to the subverted control men exercise over women's income.

Ultimate control over the money earned is one aspect of the empowerment women may gain from waged work. Other aspects are whether they are able to reduce their work load in other areas and the terms on which they engage in the labour market. The evidence on how time use in other activities adjusted was varied. In Zimbabwe there was evidence that women with more bargaining power (possibly partly resulting from income-generating activities) were able to reduce the amount of time they spent in own account agriculture. In Uganda, women from better-off households who had stronger bargaining positions were able to reduce their other productive labour time where they worked, but women from poor households with little bargaining power added waged work time onto an already long work day. In India paid work was often added to own-account agricultural work, particularly when the man engaged in seasonal migration. Women's bargaining power emerges as crucial in determining the benefit they derive from paid work.

In India, women very rarely owned, or had the opportunity to accumulate, productive assets. This left them in a weak bargaining position vis-à-vis their partner and left them entering the labour market on weakened terms too. This was nowhere more visible than in the tied labour arrangements where a husband could negotiate a loan to be paid off through the labour of his wife remunerated at a wage set well below the market rate. Using the woman's labour in this way left the man free to use his time in the socially superior activities of own-farm or small business work. This arrangement was not directly empowering for the women concerned. They were unable to improve their asset base or their bargaining position by working and the whole transaction drove a wedge between the social status of husband and wife. Unsurprisingly, women here chose to move into housework activities if the household could afford it.[9] Women's bargaining power also affected the terms on which they entered the labour market in Uganda. Women with few assets and a weak bargaining position work to obtain money for household necessities, they compete for poor quality, low paid jobs and see little empowerment from their work. Women with assets and education have the option of entering better paid, formal sector, off-farm work and can use their earnings to improve their position and welfare.

Thus the benefits women see from paid work will depend on the power they have within the household and the control they retain over their wages. Assets are very important in determining women's intra-household bargaining positions and in

underpinning the terms on which they enter the labour market. Different assets have been highlighted in the different countries but land, education, social capital, access to finance and extension advice have all emerged as important. Additionally, women's position on divorce and widowhood and culturally determined gender responsibilities also play a role. From this list, we emphasize in particular microfinance and extension because they potentially catalyze female social capital, and provide rural women not only with short-term capital but with an instrument which can enhance their bargaining power over the long term.[10] Microfinance is almost everywhere strongly biased in favour of women, and so an important potential instrument for turning the parameters of household bargaining in their favour; but among our samples it was an important influence on household incomes only in India. It may have a gendered poverty impact if it is directed towards products over which women have control, for instance, chickens and smallstock.[11] Extension, by contrast, has historically been biased against women in a number of African countries (Saito 1994, AGRITEX 2002) but it appears to have lost that bias in, at any rate, Uganda, where it is an important correlate of poverty exit. These assets may be used to improve women's productivity in agriculture through, for instance, the adoption of modern seed varieties, as seen in Uganda. Higher female yields are themselves good for women's welfare but they also underpin the supply price of women's labour. Finding ways of enabling women to realize their productivity in agriculture is important in determining the terms on which women enter the labour market, as well as for satisfying food security needs.

Enhancing women's asset bases will undoubtedly see them reaping more of the benefit of waged work. This may encourage a greater involvement in the labour market, rather than a retreat into housework, in some cases. The proceeds of working are, on our evidence, likely to be used for investment purposes that can range from purchasing inputs to improve crop yields, to starting up a small business, to investing in children's education. A female empowerment-productivity route out of poverty can thus be promoted.

Conclusion

We have considered a range of policies to stimulate the diversification of households and create an increase in the demand for labour. We have been concerned to focus on those interventions that might particularly benefit women. Our reasoning for this is not just because of concerns about fairness or equality but also because women's disadvantaged position has been demonstrated to retard the development process. The survey evidence presented here has illustrated the crucial interface of female empowerment with successful poverty alleviation. To this end policies directed at microfinance, extension, purchasing and marketing consortia and land rights all have the triple advantages of improving women's asset base, increasing social capital and raising incomes. For those who already have assets these changes can serve to expand productive activities and may increase the demand for labour. For those without, the assets would allow diversification into a number of arenas, including entry into the labour market on more favourable terms so that

working women might reap the rewards of their labour. Appropriate policies can enable an empowerment–productivity–poverty-reducing virtuous circle. By so doing they loosen the constraints on women and allow them to become active agents for development.

Notes

1 In the Ugandan resurvey we established whether the household had managed to move from below to above a predefined poverty line in the period between the two surveys. Those that had made the transition were interviewed about the cause of their improved circumstances.
2 For a discussion of the benefits of improving domestic technology for women's labour time in housework see Blackden and Bhanu (1998).
3 Even though off-farm labour is close to a necessary condition for accumulating the resources required for reinvestment, it is by no means a sufficient condition. In particular, poorer, less educated households in Uganda worked for lower wages and were less likely to reinvest. In the worst case, if off-farm work crowds out on-farm work, taking outside work may depress own-farm productivity and income.
4 We here contradict Gladwin's prediction that 'however prevalent female farming was and is in African societies with shifting cultivation, it declines with agricultural intensification' (Gladwin and MacMillan 1989: 348).
5 One interpretation of this is as a form of risk-limiting behaviour, which reduces to a minimum the burden of fixed costs associated with the hiring of labour, and at the same time a form of incomplete risk-sharing, where the burden of risk is transferred to one particularly vulnerable group, namely female waged workers (Dercon and Krishnan 2000b).
6 Data for the Uganda sample:

	Mean	*Standard deviation*
Male labour hours employed for cash per household p.a.	235.9	192.8
Female labour hours employed for cash per household p.a.	189.8	278.1
Households sowing more than 50% of acreage to hybrid seed		
Male labour hours employed for cash per household p.a.	240.8	190.0
Female labour hours employed for cash per household p.a.	225.3	339.2

7 From our resurveys there is evidence of social capital falling between 2001 and 2003 in the declining macroeconomy of Zimbabwe and rising in the growing economies of Ethiopia and Uganda.
8 But note, in Zimbabwe, households heavily dependent on casual work found themselves excluded from communal activities, for example Farmer's Clubs meetings, as they took place on *chisi* (rest days). As they can't afford to miss work they lost out on the benefits to livelihood activities and the generation and maintenance of social capital such meetings aided (Bird and Shepherd 2002: 91).
9 However, the improved position of the household occasioned by this division of labour may have improved women's position through a household income effect.
10 The building and diffusion of social capital is a multiplier process which may have a number of rounds. The FINCA health microinsurance scheme in Uganda
   i brought together poor women who had previously, in most cases, been socially isolated, and helped to stabilize one of the most anxiety-causing elements of their expenditure;
   ii as a consequence, increased their intra-household bargaining power;
   iii encouraged them to talk to one another about their health;

iv as a consequence, empowered them to demand better treatment, collectively, from the hospitals which were covered by the insurance scheme;
v as a consequence of their collective experience, motivated them to start up other joint enterprises (such as restaurants) and public action initiatives (such as agitation for reduction of local taxation rates) (Mosley *et al*. (2003), chapter 4).

11 In Bangladesh the Bangladesh Rural Advancement Committee's (BRAC) concern to target the ultra-poor through its Income Generation for Vulnerable Groups Development (IGVGD) microcredit programme found success with fishponds, with sericulture, and, most of all, with the raising of chickens and smallstock. See Matin and Hulme (2003) and Halder and Mosley (2004).

Bibliography

Adato, M., M. R. Carter and J. May (2006) 'Exploring poverty traps and social exclusion in South Africa using qualitative and quantitative data', *Journal of Development Studies*, 42: 226–47.

Agarwal, B. (1986) 'Women, poverty and agricultural growth in India', *Journal of Peasant Studies*, 13: 165–220.

—— (1994) *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge: Cambridge University Press.

—— (1995) 'Gender, property and land rights', in E. Kuiper and J. Sap (eds), *Out of the Margin: Feminist Perspectives on Economics*, London: Routledge.

—— (1997) 'Bargaining and gender relations: within and beyond the household', *Feminist Economics,* 3: 1–51.

AGRITEX (2002) 'Gender issues, constraints and potentials in AGRITEX – an overview', report. Available online: www.fao.org

Appleton, S. (2001a) 'Poverty reduction during growth: the case of Uganda 1992–2000', mimeo, School of Economics, University of Nottingham.

—— (2001b) 'Changes in poverty and inequality', in P. Collier and R. Reinikka (eds), *Uganda's Recovery: The Role of Farms, Firms and Government*, Washington, D.C.: World Bank.

Ashley, C. and S. Maxwell (eds), (2001) 'Rethinking rural development', *Development Policy Review*, theme issue.

Assunta, M. (2001) 'Impact of alcohol consumption on Asia', *The Globe*. Available online: www.ias.org.uk/publications/theglobe/01issue3,4/globe0103

Bardhan, P. (1984) *Land, Labour and Rural Poverty: Essays in Development Economics*, New Delhi: Oxford University Press.

Barrett, C. B., P. P. Marenya, J. McPeak, B. Minten, F. Murithi, W. Oluoch-Kosura, F. Place, J. C. Randrianarisoa, J. Rasambainarivo and J. Wangila (2006a) 'Welfare dynamics in rural Kenya and Madagascar', *Journal of Development Studies*, 42: 248–77.

Barrett, C. B., M. R. Carter and P. D. Little (2006b) 'Understanding and reducing persistent poverty in Africa: introduction to a special issue', *Journal of Development Studies*, 42: 167–77.

Becker, G. S. (1965), 'A theory of the allocation of time,' *Economic Journal*, 75: 493–517.

—— (1971) *The Economics of Discrimination* (2nd edn), Chicago: University of Chicago Press

Benin, S. and J. Pender (2001) 'Impacts of land redistribution on land management and productivity in the Ethiopian highlands', *Land Degradation and Development,*12: 555–68.

Bennett, L. (1992) 'Women, poverty and productivity in India', Economic Development Institute Seminar Paper, No. 43, Washington, D.C.: World Bank.

Benschop, M. (2002) 'Rights and reality – are women's equal rights to land, housing and property implemented in East Africa?', UN-HABITAT, Nairobi, Kenya.

Berg, J., J. Dickhaut and K. McCabe (1995) 'Trust, reciprocity and social history', *Games and Economic Behavior*, 10: 122–42.

Bezuayehu T., A. Gezahan, A. Yigezu, D. Paulos and M.A. Jabber (2000) 'Nature and causes of land degradation in the Oromiya region: review of literature', paper presented at workshop on Policies for Sustainable Land Management in the Highlands of Ethiopia, International Livestock Research Institute, Addis Ababa, 22–23 May.

Bhaduri, A. (1986) 'Forced commerce and agrarian growth', *World Development*, 14: 267–72.

Bharadwaj, K. (1985) 'A view on commercialisation in Indian agriculture and development of capitalism', *Journal of Peasant Studies*, 12: 7–25.

Bigsten, A., B. Kebede, A. Shimeles and M. Taddesse (2003) 'Growth and poverty reduction in Ethiopia: evidence from household panel surveys', *World Development*, 31: 87–106.

Binswanger, H. and R. Townsend (2000) 'The growth performance of agriculture in sub-Saharan Africa', *American Journal of Agricultural Economics*, 82: 1075–86.

Bird, K. and A. Shepherd with A. Scott and B. Butaumocho (2002) 'Coping strategies of poor households in semi-arid Zimbabwe, vol. 2'. Report for Natural Resources System Programme, Department for International Development, London, project no. R7545.

Bird, K. and I. Shinyekwa (2005) 'Chronic poverty in rural Uganda: harsh realities and constrained choices', in F. Ellis and H. A. Freeman (eds), *Rural Livelihoods and Poverty Reduction Policies*, London: Routledge.

Blackden, C. M. and C. Bhanu (1999) *Gender, Growth and Poverty Reduction. Special Program of Assistance for Africa. 1998 status report on poverty in Sub-Saharan Africa*, Washington, D.C.: World Bank.

Boserup, E. (1970) *Woman's Role in Economic Development* (2nd edn: 1998), London: Earthscan.

Bourdillon, M. (1976) *The Shona Peoples*, Harare: Mambo Press.

Brass, T. (1993) 'Some observations on unfree labour, capitalist restructuring and deproletarianisation', in T. Brass, M. van der Linden and J. Lucassen (eds), *Free and Unfree Labour*, Amsterdam: International Institute for Social History.

—— (1995) 'Unfree labour and agrarian change: a different view', *Economic and Political Weekly*, 1 April.

Brass, T. and M. van der Linden (eds), (1997) *Free and Unfree Labour: The Debate Continues*, Bern: Peter Lang Publishing.

Breman, J. (1996) *Footloose Labour: Working in the Indian Informal Economy*, Cambridge: Cambridge University Press.

Bryceson, D. (ed.), (1995) *Women Wielding the Hoe: Lessons from Rural Africa for Feminist Theory and Development*, Oxford: Berg

—— (1999) 'African rural labour, income diversification and livelihood approaches: a long-term development perspective', mimeo, Leiden: African Studies Centre.

Carney, D. (ed.), (1998) *Sustainable Rural Livelihoods. What Contribution can we Make?*, London: Department for International Development.

Carter, M. R. and C. Barrett (2006) 'The economics of poverty traps and persistent poverty: an asset-based approach', *Journal of Development Studies*, 42: 178–99.

Chand, R., D. S. Sidhu and J. L. Kaul (1985) 'Impact of agricultural modernisation in labour use patterns in Punjab with special references to women's labour', *Indian Journal of Agricultural Economics*, 40 (3).

Chant, S. (1997) *Women-Headed Households: Diversity and Dynamics in the Developing World*, London: Macmillan.

—— (2003) 'New contributions to the analysis of poverty: methodological and conceptual challenges to understanding poverty from a gender perspective'. Report for CEPAL, U.N. Women's Development Unit, Santiago, Chile.

Chant, S. and S. Radcliffe (1992) 'Migration and development: the importance of gender', in S. Chant (ed.), *Gender and Migration in Developing Countries*, London and New York: Bellhaven Press.

Chaudhry, P. (1994) *The Veiled Woman: Shifting Gender Equations in Rural Haryana, 1880–1990*, New Delhi: Oxford University Press.

Chiappori, P. A. (1988) 'Rational household labor supply,' *Econometrica*, 56: 63–98.

Chipika, S., M. Chisvo and J. T. Chipika (1998) *Economic Reform and Smallholder Communal Agricultural Development in Zimbabwe*, Harare: Sapes Books.

Chole, E. (1990) 'The Ethiopian economy: current state, policy environment and future prospects', Report for CIDA (Canadian International Development Agency).

Christiaensen, L., L. Demery and S. Paternosto (2003) 'Reforms, remoteness and risk in Africa: understanding inequality and poverty during the 1990s', WIDER Discussion Paper, 70, Helsinki.

Coldham, S. (2000) 'Land inheritance issues in Zimbabwe today', in T. A. S. Bowyer-Bower and C. Stoneman (eds), *Land Reform in Zimbabwe: Constraints and Prospects*, Aldershot: Ashgate.

Collier, P. and J. W. Gunning (1999) 'Explaining African economic performance', *Journal of Economic Literature*, 37: 64–111.

Collier, P. and R. Reinikka (eds), (2001) *Uganda's Recovery: The Role of Farms, Firms and Government*, Washington, D.C.: World Bank.

da Corta, L. and D. Venkateshwarlu (1999) 'Unfree relations and feminization of agricultural labour in Andhra Pradesh, 1970–95', *Journal of Peasant Studies*, 26: 71–139.

Dadhich C. L. (2002) 'Microfinance movement for poverty alleviation in India'. *Financing Agriculture*, India: Agricultural Finance Corporation Limited.

Dasgupta, P. (1993) *An Inquiry into Well-Being and Destitution*, Oxford: Clarendon Press.

—— (1997) 'Nutritional status, the capacity for work, and poverty traps', *Journal of Econometrics*, 77: 5–37.

Davison, J. (1997) *Gender, Lineage and Ethnicity in Southern Africa*, Oxford: Westview Press.

Deaton, A. and J. Drèze (2002) 'Poverty and inequality in India, a re-examination', *Economic and Political Weekly*, 7 September.

Deaton, A. and S. Zaidi (2002) 'Guidelines for constructing consumption aggregates for welfare analysis', Living Standards Measurement Study WP 135, Washington, D.C.: World Bank.

de Haan, A. (1999) 'Livelihoods and poverty: the role of migration: a critical review of the migration literature', *Journal of Development Studies*, 36 (2): 1–47.

—— (2002) 'Migration and livelihoods in historical perspective: a case study of Bihar, India', *Journal of Development Studies*, 38 (5): 115–42.

de Haan, A., A. K. Brock and N. Coulibaly (2002) 'Migration, livelihoods and institutions: contrasting patterns of migration in Mali', *Journal of Development Studies*, Special Issue, 38 (5): 37–58.

Dercon, S. and P. Krishnan (1996) 'Income portfolios in rural Ethiopia and Tanzania: choices and constraints', *Journal of Development Studies*, 32: 850–75.

Dercon, S. and P. Krishnan (2000a) 'Changes in poverty in villages in rural Ethiopia; 1989–95', in A. Booth and P. Mosley (eds), *The New Poverty Strategies: What have they achieved? What have we learned?,* London: Macmillan.

—— (2000b), 'In sickness and in health: risk-sharing within households in rural Ethiopia', *Journal of Political Economy,* 108: 688–725.

Deshingkar, P. and D. Start (2003) 'Seasonal migration for livelihoods in India: coping, accumulation and exclusion', ODI Working Paper 220, London: Overseas Development Institute.

Devereux, S. (2000) 'Food insecurity in Ethiopia', Report for DFID, Sussex: Institute of Development Studies.

Dorward, A., J. Kydd, J. Morrison and I. Urey (2004) 'A policy agenda for pro-poor agricultural growth', *World Development,* 32: 73–89.

Doss, C. (2003) 'Conceptualising and measuring bargaining power within the household', in K. S. Moe (ed), *Women, Family and Work*, Oxford: Blackwell.

Duvvury, N. (1989) 'Work participation of women in India: a study with special reference to female agricultural labourers 1961–1981', in Asian Employment Programme (ARTEP) *Limited Options: Women Workers in Rural India*, New Delhi: International Labour Organization.

EEA/EEPRI (Ethiopian Economic Association / Ethiopian Economic Policy Research Institute) (2002) 'Land tenure and agricultural development in Ethiopia', Addis Ababa.

Ellis, F. (1998) 'Household strategies and rural livelihood diversification', *Journal of Development Studies*, 35: 1–38.

—— (2001) *Rural Livelihoods and Diversity in Developing Countries*, Oxford: Oxford University Press.

Ellis, F. and H. A. Freeman (2004) 'Rural livelihoods and poverty reduction strategies in four African countries', *Journal of Development Studies*, 40: 1–30.

—— (2005) *Rural Livelihoods and Poverty Reduction Policies*, London: Routledge.

Elson, D. (1990) *Male Bias in the Development Process,* Manchester: Manchester University Press.

—— (1995) 'Gender awareness in modelling structural adjustment', *World Development*, 23: 1851–68.

—— (1999) 'Labour markets as gendered institutions: equality, efficiency and empowerment issues', *World Development*, 27: 611–27.

Epstein, T. S. (1973) *South India, Yesterday, Today and Tomorrow*, London: Macmillan.

Evans, A. (1992) 'Uganda: rural labour market', unpublished report, Rome: FAO and Kampala: Bank of Uganda Agricultural Secretariat.

—— (1996) 'Agricultural development and rural labour markets in the smallholder sector of Uganda', unpublished report to DFID/ESCOR, School of African and Asian Studies, University of Sussex.

Fafchamps, M. and A. R. Quisumbing (2000), 'Control and ownership of assets within rural Ethiopian households', Washington, D.C.: IFPRI (International Food Policy Research Institute).

Federal Democratic Republic of Ethiopia (FDRE) (1999) 'Report of the multi-donor team', Addis Ababa: FDRE Food Security Programme.

—— (2002a) 'Ethiopia: household income, consumption and expenditure (HICE) survey', Addis Ababa: Ministry of Finance and Economic Development.

—— (2002b) 'Ethiopia: sustainable development and poverty reduction program', Addis Ababa: Ministry of Finance and Economic Development.

Fontana, M. (2003) 'The effects of trade on women: at work and at home', unpublished thesis, University of Sussex.

Fontana, M., S. Joekes and R. Masika (1998) 'Global trade expansion and liberalisation: gender issues and impacts', unpublished paper, Brighton: Institute of Development Studies.

Fontana, M. and A. Wood (2000) 'Modelling the effects of trade on women: at work and at home', *World Development,* 28: 1173–90.

Foster, P. (2004) 'India to aid farmers after debt suicides', *Daily Telegraph*, London, 5 July.

Gadre, N. A. and Y. P. Mahalle (1985), 'Participation of female farm labour under changing agriculture in Vidarbha', *Indian Journal of Agricultural Economics*, 40 (3).

Garikipati, S. (2006) 'The impact of lending to women on household vulnerability and women's empowerment: evidence from India', Social Science Research Network, WPS 913766.

Gladwin, C. and D. McMillan, (1989) 'Is a turnaround in Africa possible without helping African women to farm?', *Economic Development and Cultural Change,* 37: 345–69.

Government of Andhra Pradesh (2001) 'Male and female agricultural wages across type of work for the district of Mahabubnagar', Mahabubnagar: Labour Ministry.

—— (2002a) 'Rainfall data from 1924 to 2001 for the district of Mahabubnagar', Mahabubnagar: Meteorological Department of Mahabubnagar.

—— (2002b) 'Quarterly periodical report on agricultural land ceilings for quarter ending 31–03–2002', Hyderabad: Chief Commissioner Land Administration Office.

—— (2003) 'Land matters: use of Government land for poverty reduction', Hyderabad: Velugu.

—— (2004) 'Women's empowerment and self-employment: development of women and children in rural areas', Hyderabad: Department of Rural Development.

Government of Ethiopia (2000) 'Ethiopia interim poverty reduction strategy paper 2000/01–2002/03', Addis Ababa.

Government of India (1991) *Census of India*, New Delhi.

—— (1997) *Ninth Five Year Plan 1997–2002: Development Goals, Strategy and Policies, vol. I*, New Delhi: Planning Commission.

—— (2000a) 'Policies to reduce poverty and accelerate economic development', New Delhi.

—— (2000b) 'Rural labour enquiry: report on wages and earnings of rural labour households', New Delhi: Labour Bureau.

—— (2000c) 'Approach paper to the ninth Five Year Plan', New Delhi: National Development Council.

—— (2001a) *Census of India*, New Delhi.

—— (2001b) 'Economic survey 2000–2001', New Delhi: Ministry of Finance.

—— (2002) *National Human Development Report*, New Delhi: Planning Commission.

Government of Zimbabwe (1998) *Natural Regions and Provisional Farming Areas of Zimbabwe, 1:1,000,000,* 3rd edn, Surveyor-General, Harare, Zimbabwe (map).

Gwaunza, E. (1998) 'The impact of labour migration on family organisation in Zimbabwe', in L. Sachikonye (ed), *Labour Markets and Migration Policy in Southern Africa*, Harare: Sapes Books.

Haddad, L., J. Hoddinott and H. Alderman (1997) *Intrahousehold Resource Allocation in Developing Countries: Models, Methods and Policy*, Baltimore: The Johns Hopkins University Press.

Halder, S. and P. Mosley (2004) 'A review of microfinance programmes for the poorest in Bangladesh', *Journal of International Development,*16: 387–406.

Harper, C. and R. Marcus (2003) 'Enduring poverty and the conditions of childhood: life course and intergenerational poverty transmissions', *World Development*, 31: 535–54.

Harriss, J. (1992) 'Does the "depressor" still work? Agrarian structure and development in India: a review of evidence and argument', *Journal of Peasant Studies*, 19: 189–227.

Hazell, P. and C. Ramasamy (1991) *The Green Revolution Reconsidered: The Impact of High Yielding Rice Varieties in South India*, Baltimore, MD and London: The Johns Hopkins University Press.

Heald, S. (1998) *Controlling Anger: The Anthropology of Gisu Violence*, Oxford: James Currey.

Hellum, A. and B. Derman (2004) 'Land reform and human rights in contemporary Zimbabwe: balancing individual and social justice through an integrated human rights framework', *World Development*, 32: 1785–805.

Hoddinott, J. and L. Haddad (1995) 'Does female income share influence household expenditures? Evidence from Cote d'Ivoire', *Oxford Bulletin of Economics and Statistics*, 57: 77–96.

Horrell, S. and P. Krishnan (2007) 'Poverty and productivity in female-headed households in Zimbabwe', *Journal of Development Studies*, 43: 1353–82.

Humphries, J. (1998) 'Towards a family-friendly economics', *New Political Economy,* 223–40.

Ikdahl, I., A. Hellum, R. Kaarhus, T. A. Benjaminsen and P. Kamori-Mbote (2005) 'Human rights formalisation and women's land rights in Southern and Eastern Africa, *Studies in Women's Law*, 57, University of Oslo: Institute of Women's Law.

Ilaiah, K. (1997) 'AP's anti-liquor movement', in B. S. Rao and G. Parthasarathy (eds), *Anti-Arrack Movement of Women in Andhra Pradesh and Prohibition Policy*, New Delhi: Har-Anand.

IMF (2003) *Ethiopia: Fourth Review and Third Annual Program under the Three-Year Arrangement under the Poverty Reduction and Growth Facility and Requests for Extension of Arrangement and for Additional Interim Assistance under the Enhanced HIPC Initiative*, IMF Country Report 03/272, Washington, D.C.

Jacobs, S. (2000) 'The effects of land reform on gender relations in Zimbabwe', in T. A. S. Bowyer-Bower and C. Stoneman (eds), *Land Reform in Zimbabwe: Constraints and Prospects*, Aldershot: Ashgate.

JIMAT Development Consultants (2003) 'Labour markets, gender and pro-poor growth study: phase II, synthesis report from cluster surveys', April, Harare.

Jodhka, S. S. (1994) 'Agrarian change and attached labour: emerging patterns in Haryana agriculture', *Economic and Political Weekly*, 29, 24 September.

Johnson, C. and Rogers, B. (1993) 'Children's nutritional status in female-headed households in the Dominican Republic', *Social Science and Medicine*, 37: 1293–303.

Jones, C. (1983) 'The mobilisation of women's labour for cash-crop production: a game-theoretic approach', *American Journal of Agricultural Economics*, 65: 1049–54.

Joshi, C. K. and M. R. Alshi (1985), 'Impact of high yielding varieties on employment potential of female labour – a study of Akola District (Maharashtra)', *Indian Journal of Agricultural Economics*, 40 (3).

Juster, F. T. and F. P. Stafford (1991) 'The allocation of time: empirical findings, behavioural models and problems of measurement', *Journal of Economic Literature*, 29: 471–522.

Kabeer, N. (1994) *Reversed Realities: Gender Hierarchies in Development Thought*, London: Verso.

—— (2001) 'Conflicts over credit: revaluating the empowerment potential of loans to women in rural Bangladesh', *World Development,* 29: 63–84.

Kalpagam, U. (1994) *Labour and Gender: survival in urban India*, Delhi: Sage.

Kanbur, R. and L. Haddad (1994), 'Are better off households more unequal or less unequal?' *Oxford Economic Papers*, 46: 445–58.

Kapadia, K. (1992) 'Every blade of green: landless women labourers, production and reproduction in South India', *Indian Journal of Labor Economics*, 35: 266–76.

—— (1993) 'Mutuality and competition: female landless labour and wage rates in Tamil Nadu', *Journal of Peasant Studies*, 20: 296–316.

—— (1995) 'The profitability of bonded labour: the gem-cutting industry in rural South India', *Journal of Peasant Studies*, 22: 356–68.

Katz, E. (1996) 'Intra-household economics: neo-classical synthesis or feminist-institutional challenge?' mimeo, Department of Economics, Barnard College, USA.

Kazembe, J. (1986) 'The women issue', in I. Mandaza (ed), *Zimbabwe: The Political Economy of Transition 1980–1986*, Dakar: CODESRIA.

Kennedy, E. and L. Haddad (1994) 'Are pre-schoolers from female-headed households less malnourished? A comparative analysis of results from Ghana and Kenya', *Journal of Development Studies*, 30: 680–95.

Kennedy, E. and P. Peters (1992) 'Household food security and child nutrition: the interaction of income and gender of household head', *World Development*, 20: 1077–85.

Kharono, E. (2001) 'Women's land rights, agricultural productivity and food security in Uganda: a case study of Lira and Mbale districts', paper presented at the Sub-Regional Conference on Women and Land Rights, Kampala, Uganda, 29–31 October.

Kothari, U. (2002) 'Migration and chronic poverty', IDPM Working Paper 16, Chronic Poverty Research Centre, Institute of Development Policy and Management, University of Manchester.

Kynch, J. and Sen, A. (1983) 'Indian women: well-being and survival', *Cambridge Journal of Economics,* 7: 363–80.

Lerche, J. (1995) 'Is bonded labour a bound category? Reconceptualising agrarian conflict in India', *Journal of Peasant Studies*, 22: 484–515.

McDowell, C. and A. de Haan (1997) 'Migration and sustainable livelihoods: a critical review of the literature', IDS Working Paper 65, Institute of Development Studies, University of Sussex.

McElroy, M. and M. J. Horney (1981) 'Nash-bargained household decisions: toward a generalisation of the theory of demand', *International Economic Review*, 22: 333–49.

Marothia, D. K. and S. K. Sharma (1985), 'Female labour participation in rice farming system of Chattisgarh region', *Indian Journal of Agricultural Economics*, 40 (3).

Marsh, C. (1991) *Hours of Work of Men and Women in Britain*, Manchester: Equal Opportunities Commission.

Masefield, A. (2001) in Y. Amare (ed), *Food Security and Sustainable Livelihoods in Ethiopia*, FSS conference proceedings, Addis Ababa: Forum for Social Studies.

Mate, R. (2001) 'Land, women and sugar in Chipiwa', in P. Hebinck and M. Bourdillon (eds), *Women, Men and Work: Rural Livelihoods in South-eastern Zimbabwe*, Harare: Weaver Press.

Matin, I. and D. Hulme (2003) 'Programs for the poorest: learning from the IGVGD programme in Bangladesh', *World Development,* 31: 647–65.

Meinzen-Dick, R., M. Adato, L. Haddad and P. B. R. Hazell (2004) 'Science and poverty: an interdisciplinary assessment of the impact of agricultural research', Food Poverty Report 16, Washington, D.C.: International Food Policy Research Institute (IFPRI).

Meles Z. (2000) Introductory speech and responses to panel questions at IAG Ethiopian Economic Review Symposium, Addis Ababa: Ethiopian Economic Review.

Mencher, J. (1988) 'Women's work and poverty: women's contribution to household maintenance in South India', in D. Dwyer and J. Bruce (eds), *A Home Divided: Women and Income in the Third World*, California: Stanford University Press.

Mies, M. (1986) *Indian Women in Subsistence and Agricultural Labour*, New Delhi: Vistaar Publication (Sage).

MOFED (2003) 'Ethiopia: sustainable development and poverty reduction strategy programme', Addis Ababa: Ministry of Finance and Economic Development.

Moser, C. O. N. (1993) *Gender Planning and Development: Theory, Practice and Training*, London: Routledge.

Mosley, P. (2000) 'New seeds and the labour market in Africa', Gatsby Charitable Foundation working paper 4*,* University of Sheffield.

—— (2004) 'Risk, gender and smallholder agricultural productivity: three African case studies', mimeo, University of Sheffield.

Mosley, P. and J. Rock (2004) 'Microfinance, labour markets and poverty in Africa: a study of six institutions', *Journal of International Development,* 16: 467–501.

Mosley, P. and A. Suleiman (2004) 'Must the African green revolution self-destruct?', mimeo, University of Sheffield.

Mosley, P. and A. Verschoor (2004) 'The determinants of trust: experimental evidence from rural Uganda', paper presented at Royal Economic Society Conference, Swansea, Wales.

Mosley, P., J. Hudson and A. Verschoor (2004) 'Aid, poverty reduction and the "new conditionality"', *Economic Journal,* 114: 217–44.

Mosley, P., S. Garikipati, S. Horrell, H. Johnson, J. Rock and A. Verschoor (2003) 'Risk and underdevelopment – risk management options and their significance for poverty reduction', unpublished report (R7614) to Department for International Development, London.

Mosse, D., S. Gupta, M. Mehta, V. Shah, J. Rees and the KRIBF Project Team (2002) 'Brokered livelihoods: debt, labour migration and development in tribal Western India', *Journal of Development Studies*, 38: 59–88.

Muzaki, S. (1998) 'Gender in the rural informal labour market – the case of Budadiri county, Mbale district', unpublished MA dissertation, Makerere University, Kampala, Uganda.

Narayan, D., with R. Patel, K. Schafft, A. Rademacher and S. Koch-Schulte (2000) *Voices of the Poor: Can Anyone Hear Us?,* New York: Oxford University Press and Washington, D.C.: World Bank.

Narayan, S. (2004) 'Unemployment and migration', *India Together*, March.

NARO (National Agricultural Research Organisation) (2001) *Agriculture in Uganda*, Kampala: Fountain Publishers.

Niger-Thomas, M. (1995) 'Women's access to and the control of credit in Cameroon: the Mamfe case,' in S. Ardener and S. Burman (eds), *Money-go-rounds: The Importance of Rotating Savings and Credit Associations for Women*, Oxford: Berg.

Olsen, W. K. (1998) 'Marxist and neo-classical approaches to unfree labour in India', in T. Brass and M. van der Linden (eds), *Free and Unfree Labour: The Debate Continues*, Bern: Peter Lang Publishing.

Olsen, W. K. and R. R. V. Ramana Murthy (2000) 'Contract labour and bondage in Andhra Pradesh (India)', *Journal of Social and Political Thought*, 1 (2). Available online: www.yorku.ca/jspot/2/wkolsenrvramana.htm.

Ott, N. (1995) 'Fertility and division of work in the family', in E. Juiper and J. Sap (eds), *Out of the Margin: Feminist Perspectives on Economics*, London: Routledge.

Pahl, J. (1983) 'The allocation of money and structure of inequality within marriage', *Sociological Review*, 30: 237–62.

—— (1989) *Money and Marriage*, London: Macmillan.

Pankhurst, D. and S. Jacobs (1988) 'Land tenure, gender relations and agricultural production: the case of Zimbabwe's peasantry', in J. Davison (ed), *Agriculture, Women and Land: The African Experience*, London: Westview.

Parthasarathy, G. (1996) 'Recent trends in wages and employment of agricultural labourers', *Indian Journal of Agricultural Economics*, 15: 145–67.

Patnaik, U. (2004) 'It is a crisis rooted in economic reforms', an interview with Patnaik, *The Hindu*, New Delhi, 1 July.

Polachek, S. W. (1995) 'Human capital and the gender earnings gap,' in E. Kuiper and J. Sap (eds), *Out of the Margin: Feminist Perspectives on Economics*, London: Routledge.

Quisumbing, A. (1996) 'Male–female differences in agricultural productivity: methodological issues and empirical evidence', *World Development,* 24: 1579–95.

Quisumbing, A. and J. Maluccio (2000) 'Intrahousehold allocation and gender relations: new empirical evidence from four developing countries', Food Consumption and Nutritional Division discussion paper 84, IFPRI, Washington, D.C.

Quisumbing, A., L. Haddad and C. Pena (2001) 'Are women over-represented among the poor? An analysis of poverty in 10 developing countries', *Journal of Development Economics*, 66: 225–69.

Rao, G. B. (2001) 'Household coping/survival strategies in drought-prone regions: a case study of Anantapur district, AP, India', Hyderabad: SPWD–Hyderabad Centre.

Rao, K. N. (1998) 'Trends in rural female employment in Andhra Pradesh with focus on Rayalaseema region', in D. K. Das (ed), *India Economy After 50 Years of Independence: Experiences and Challenges, vol. V,* New Delhi: Deep & Deep Publications.

Rao, M. V. (2004) 'The mess in Andhra Pradesh's economy: failures in socio-economic development', *People's Democracy*, 28, 11 January. Available online: pd.cpim.org/2004/0111.

Rao, U. (1994) 'Palamoor labour: a study of migrant labour in Mahabubnagar district', Hyderabad: C. D. Deshmukh Impact Centre, Council for Social Development.

Ray, A. K., I. V. Rangarao and B. R. Attari (1985), 'Impact of technological change on economic status of female labour', *Indian Journal of Agricultural Economics*, 40 (3).

Reddy, D. N. (1990) 'Rural migrant labour in AP', report submitted to the National Commission on Rural Labour, Government of India.

Reddy, D. N. and A. Patnaik (1997) 'Anti-arrack agitation by Andhra Pradesh women: a retrospective perspective', in B. S. Rao and G. Parthasarathy (eds), *Anti-Arrack Movement of Women in Andhra Pradesh and Prohibition Policy*, New Delhi: Har-Anand.

Reddy, S. S. (1991) 'Poverty monograph no.2', Hyderabad: Centre for Economic and Social Studies.

Roemer, J. (1982) *A General Theory of Exploitation and Class*, Cambridge MA: Harvard University Press.

Sachikonye, L. M. (1999) 'Restructuring or de-industrializing? Zimbabwe's textile and metal industries under structural adjustment', Research Report 110, Nordiska Afrikainstitutet, Uppsala.

Saito, K. A. (1994) 'Raising the productivity of women farmers in sub-Saharan Africa', Discussion Paper 320, Washington, D.C.: World Bank.

Sajja, S. (2003) 'Development conflicts: a study of democratic decentralization and natural resources management in Mahabubnagar district of AP', unpublished thesis (draft), University of Hyderabad.

SAPES Trust (2001) *SADC Country Studies. Zimbabwe 2001*, Harare: SAPES Books.

Sen, A. (1990a) 'Gender and cooperative conflicts', in I. Tinker (ed.), *Persistent Inequalities: Women and World Development*, Oxford: Oxford University Press.

—— (1990b) 'More than 100 million women are missing', *New York Review,* 20 December: 61–6.

Singh, I. (1990) *The Great Ascent: The Rural Poor in South Asia*, Baltimore: The Johns Hopkins University Press.

Skeldon, R. (2002) 'Migration and poverty', *Asia-Pacific Population Journal*, 17: 67–82.

Srinivasan, T. N. (1989) 'On choice among creditors and bonded labour contracts', in P. K. Bardhan (ed), *The Economic Theory of Agrarian Institution*, Oxford: Clarendon Press.

Strauss, J. and K. Beegle (2000) 'Intrahousehold allocations: a review of theories and empirical evidence,' *Journal of African Economies*, 9: 83–143.

Subramaniam, R. R. and T. Reddy (1994) 'Bonded labour in AP: a study in Medak district', CESS Working Paper, Centre for Economic and Social Studies, Hyderabad.

Udry, C. (1996) 'Gender, agricultural production, and the theory of the household,' *Journal of Political Economy*, 104: 1010–46.

Ulph, D. (1988) 'A general non-cooperative Nash model of household consumption behavior,' mimeo, Department of Economics, Bristol University.

Unni, J. (1997) 'Employment and wages among rural labourers: some recent trends', *Indian Journal of Agricultural Economics*, 52: 59–72.

Vijfhuizen, C. (2002) *The People You Live With*, Harare: Weaver Press.

Walker, T. and J. Ryan (1990) *Village and Household Economies in India's Semi-Arid Tropics*, Baltimore, MD and London: The Johns Hopkins University Press.

Whitehead, A. (2001) 'Trade, trade liberalisation and rural poverty in low-income Africa: a gendered account', background paper for the *Least Developed Countries Report* (2001: UNCTAD), Geneva: United Nations.

—— (2006) 'Persistent poverty in north-east Ghana', *Journal of Development Studies*, 42: 278–300.

Whitehead, A. and N. Kabeer (2001) 'Living with uncertainty: gender, livelihoods and pro-poor growth in rural sub-Saharan Africa', Institute for Development Studies Working Paper 134, University of Sussex.

Woolley, F. (1988) 'A non-cooperative model of family decision making', Taxation, Incentives and the Distribution of Income ESRC programme Research Paper no. TIDI/125, London School of Economics.

World Bank (1990) *World Development Report 1990: Poverty,* Washington, D.C.

—— (2000) *World Development Report 2000/01: Attacking Poverty,* New York: Oxford University Press.

—— (2001a) *Ethiopia: Focusing Public Expenditures on Poverty Reduction, vol. II,* Washington, D.C.: World Bank.

—— (2001b) *India: Country Assistance Strategy*, Washington, D.C.: World Bank.

—— (2003) *Ethiopia: Risk and Vulnerability Assessment,* Washington, D.C.: World Bank.

World Health Organization (WHO) (2000) 'Global alcohol status report', Geneva: WHO.

Zimbabwe Human Development Report (2003) 'Redirecting our responses to HIV and AIDS', Poverty Reduction Forum, Institute of Development Studies, University of Zimbabwe.

Zimbabwe National Vulnerability Assessment Committee (ZNVAC) (2002) *Zimbabwe Emergency Food Security and Vulnerability Assessment Report*, Harare: Government of Zimbabwe.

Index