Living Standards Measurement Study

Abstracts of Working Papers 1–59

Brenda Rosa, editor
LSMS Working Papers

No. 1  Living Standards Surveys in Developing Countries
No. 2  Poverty and Living Standards in Asia: An Overview of the Main Results and Lessons of Selected Household Surveys
No. 3  Measuring Levels of Living in Latin America: An Overview of Main Problems
No. 5  Conducting Surveys in Developing Countries: Practical Problems and Experience in Brazil, Malaysia, and the Philippines
No. 6  Household Survey Experience in Africa
No. 7  Measurement of Welfare: Theory and Practical Guidelines
No. 8  Employment Data for the Measurement of Living Standards
No. 9  Income and Expenditure Surveys in Developing Countries: Sample Design and Execution
No. 10  Reflections on the LSMS Group Meeting
No. 11  Three Essays on a Sri Lanka Household Survey
No. 12  The ECIEL Study of Household Income and Consumption in Urban Latin America: An Analytical History
No. 13  Nutrition and Health Status Indicators: Suggestions for Surveys of the Standard of Living in Developing Countries
No. 14  Child Schooling and the Measurement of Living Standards
No. 15  Measuring Health as a Component of Living Standards
No. 16  Procedures for Collecting and Analyzing Mortality Data in LSMS
No. 17  The Labor Market and Social Accounting: A Framework of Data Presentation
No. 18  Time Use Data and the Living Standards Measurement Study
No. 19  The Conceptual Basis of Measures of Household Welfare and Their Implied Survey Data Requirements
No. 20  Statistical Experimentation for Household Surveys: Two Case Studies of Hong Kong
No. 21  The Collection of Price Data for the Measurement of Living Standards
No. 22  Household Expenditure Surveys: Some Methodological Issues
No. 23  Collecting Panel Data in Developing Countries: Does It Make Sense?
No. 24  Measuring and Analyzing Levels of Living in Developing Countries: An Annotated Questionnaire
No. 25  The Demand for Urban Housing in the Ivory Coast
No. 26  The Côte d'Ivoire Living Standards Survey: Design and Implementation
No. 27  The Role of Employment and Earnings in Analyzing Levels of Living: A General Methodology with Applications to Malaysia and Thailand
No. 28  Analysis of Household Expenditures
No. 29  The Distribution of Welfare in Côte d'Ivoire in 1985
No. 30  Quality, Quantity, and Spatial Variation of Price: Estimating Price Elasticities from Cross-Sectional Data
No. 31  Financing the Health Sector in Peru
No. 32  Informal Sector, Labor Markets, and Returns to Education in Peru
No. 33  Wage Determinants in Côte d'Ivoire
No. 34  Guidelines for Adapting the LSMS Living Standards Questionnaires to Local Conditions

(List continues on the inside back cover)
Living Standards Measurement Study

Abstracts of Working Papers 1–59
The Living Standards Measurement Study

The Living Standards Measurement Study (LSMS) was established by the World Bank in 1980 to explore ways of improving the type and quality of household data collected by statistical offices in developing countries. Its goal is to foster increased use of household data as a basis for policy decisionmaking. Specifically, the LSMS is working to develop new methods to monitor progress in raising levels of living, to identify the consequences for households of past and proposed government policies, and to improve communications between survey statisticians, analysts, and policymakers.

The LSMS Working Paper series was started to disseminate intermediate products from the LSMS. Publications in the series include critical surveys covering different aspects of the LSMS data collection program and reports on improved methodologies for using Living Standards Survey (LSS) data. More recent publications recommend specific survey, questionnaire, and data processing designs, and demonstrate the breadth of policy analysis that can be carried out using LSS data.
Living Standards Measurement Study
Abstracts of Working Papers 1–59

Brenda Rosa, editor

The World Bank
Washington, D.C.
Copyright © 1989
The International Bank for Reconstruction
and Development/THE WORLD BANK
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

All rights reserved
Manufactured in the United States of America
First printing October 1989

This is a working paper published informally by the World Bank. To present the results of research with the least possible delay, the typescript has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors.

The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. Any maps that accompany the text have been prepared solely for the convenience of readers; the designations and presentation of material in them do not imply the expression of any opinion whatsoever on the part of the World Bank, its affiliates, or its Board or member countries concerning the legal status of any country, territory, city, or area or of the authorities thereof or concerning the delimitation of its boundaries or its national affiliation.

The material in this publication is copyrighted. Requests for permission to reproduce portions of it should be sent to Director, Publications Department, at the address shown in the copyright notice above. The World Bank encourages dissemination of its work and will normally give permission promptly and, when the reproduction is for noncommercial purposes, without asking a fee. Permission to photocopy portions for classroom use is not required, though notification of such use having been made will be appreciated.

The complete backlist of publications from the World Bank is shown in the annual Index of Publications, which contains an alphabetical title list and indexes of subjects, authors, and countries and regions; it is of value principally to libraries and institutional purchasers. The latest edition is available free of charge from the Publications Sales Unit, Department F, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A., or from Publications, The World Bank, 66, avenue d'Iéna, 75116 Paris, France.

Brenda Rosa is administrative secretary in the Welfare and Human Resources Division of the World Bank's Population and Human Resources Department.

ISBN 0-8213-1277-4
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>vi</td>
</tr>
<tr>
<td>The Abstracts</td>
<td>1</td>
</tr>
<tr>
<td>Index of Subjects</td>
<td>57</td>
</tr>
<tr>
<td>Index of Authors</td>
<td>61</td>
</tr>
</tbody>
</table>
PREFACE

This compilation of abstracts of the first fifty nine LSMS Working Papers has been prepared to show the evolution of the project from its inception in 1980. The first twenty-three LSMS Working Papers deal mostly with conceptual issues regarding the collection of information relevant to the measurement of living conditions of households in the developing world. Previous experience with household surveys conducted in LDCs is also documented, as are examples of the use of such data for policy analysis.

From LSMS Working Paper No. 24, onward, the series has mostly presented actual experience with LSMS surveys, the first of which was implemented in 1985 in Côte d'Ivoire. Some papers contain information on the technical aspects of the LSMS surveys (sample design, adaptation of the questionnaire to local conditions, training of interviewers, and so on). Others report on analysis in such areas as poverty, consumption, productivity, education, and health.

From this work it will become clear that many of the early ideas that led to the design of the LSMS have stood the test of time. It is also evident, however, that the more recent analytical work puts greater emphasis on the study of household behavior, that is, the analysis of how households and individuals respond to changes in their economic environment, than previously envisioned.

The LSMS survey has proved to be a powerful tool for the measurement of living conditions in LDCs and the analysis of events and policies that have an impact on these conditions. LSMS activities are currently going on in Côte d'Ivoire, Ghana, Mauritania, Jamaica, Bolivia and Morocco. A one-time LSMS survey was conducted in Peru in 1985. About a dozen other countries are actively considering the implementation of LSMS surveys.

Jacques van der Gaag
Chief, Welfare & Human Resources Division
Population and Human Resources Department
THE ABSTRACTS

LSMS WORKING PAPER NO. 1

Living Standards Surveys in Developing Countries
Ramesh Chander, Christiaan Grootaert and Graham Pyatt
1980

The Living Standards Measurement Study (LSMS) was established in 1980 to explore ways of improving the type and quality of household data collected by Third World statistical offices. In this first LSMS working paper the original ideas of the project are presented. The work program is envisioned to consist of three stages broadly corresponding to the sequence: design, implementation and analysis. The paper ends with some thoughts about useful further (that is, post-LSMS) initiatives. Among other things it calls attention to the potential usefulness of community data to supplement household surveys.

This publication is out of print. It is available on microfiche or as a full-size photocopy from the U.S. National Technical Information Service. To order, contact NTIS, 5285 Port Royal Road, Springfield, Virginia 22161, U.S.A. Telephone (703) 487-4650

LSMS WORKING PAPER NO. 2

Poverty and Living Standards in Asia: An Overview of the Main Results and Lessons of Selected Household Surveys
Pravin Visaria
1980

This paper summarizes the main findings of a study on selected household surveys from Asia undertaken by the joint ESCAP (Economic and Social Commission for Asia and the Pacific) - World Bank Project on Income Distribution in Asia. It examines surveys implemented from 1968 to 1974 in India (Gujurat and
Maharashtra), Nepal (18 towns/development centers), Peninsular Malaysia, Sri Lanka and Taiwan. Lessons are drawn for the planning of future surveys in Asia, with specific attention to measuring the living standards of the population. Among the conclusions drawn are: (1) Measurement of living standards requires an integrated survey that collects data on consumption, employment, housing and access to various amenities. (2) Data on consumption should receive first priority in studies of living standards.

248 pages, Stock Number 10030, PC 012

LSMS WORKING PAPER NO. 3
Measuring Levels of Living in Latin America:
An Overview of Main Problems
Oscar Altimir and Juan Sourrouille
1980

Requirements and uses for data on levels of living are manifold. This paper discusses some salient problems about the measurement of levels of living and poverty with particular reference to Latin American concerns, practices and experience. Both conceptual and data problems in the measurement of levels of living and of poverty are illustrated with quantitative evidence from the data base accumulated by the Joint ECLA-World Bank Project on the Measurement and Analysis of Income Distribution. The paper concludes with a discussion of the data problems encountered when measuring income and expenditures and the problems that arise when comparing levels of living or inequality measures.

90 pages, Stock Number 10031, PC 006
LSMS WORKING PAPER NO. 4

United Nations Statistical Office
1980

First an historical background and perspective for reviewing the measurement of levels of living from the vantage point of ongoing work of the United Nations Statistical Office (UNSO) is provided. The National Household Survey Capability Programme (NHSCP) is introduced. Second, the UNSO work as it relates to measuring levels of living is reviewed. The United Nations work in this field dates back to the 1950s. The review is grouped under four headings: (1) Methodological work on improving data collection programs; (2) Methodological work on concepts, classifications and definitions; (3) Technical Cooperation; and (4) International Reporting of Statistics.

74 pages, Stock Number 10044, PC 006

LSMS WORKING PAPER NO. 5

Conducting Surveys in Developing Countries: Practical Problems and Experience in Brazil, Malaysia and the Philippines
Christopher Scott, Paulo T.A. de Andre and Ramesh Chander
1980

The first section of the paper presents an overview of the difficulties associated with the design and implementation of living standards surveys. It discusses problems related to matching the conceptual framework of the survey to the real world; matching the survey design to the survey objectives; and operational problems in the field, in data processing and in
data analysis. The remaining sections of the paper review the practical experience of Brazil, Philippines, and Malaysia with household surveys.

This publication is out of print. It is available on microfiche or as a full-size photocopy from the U.S. National Technical Information Service. To order, contact NTIS, 5285 Port Royal Road, Springfield, Virginia 22161, U.S.A. Telephone (703) 487-4650

LSMS WORKING PAPER NO. 6

Household Survey Experience in Africa
William Booker, Parmeet Singh and Landing Savane
1980

This paper includes three reports on Household Survey Expenditure in Africa.

The first briefly examines the African household survey experience as well as the new plans for future surveys in relation to the prospects for improving the measurement of levels of living. The main instrument to this end is the African Household Survey Capability Programme (AHSCP) which constitutes a major concerted effort to ensure an adequate flow of integrated data from the household sectors of the region. AHSCP was proposed by the Conference of African Statisticians at its eighth session in 1973 as a broader-based sequel to the successful African Census Programme. The broad aims of the program are to ensure that participating countries develop permanent field survey organizations and the necessary supporting facilities to obtain continuous supplies of integrated data on employment, other productive activity, income, consumption and expenditure, and related demographic and social characteristics. The second paper describes "Living
Standards" data as they have been collected in Kenya. The final paper discusses the 1973-75 Experimental Survey of Household Budgets and Consumption in Senegal.

66 pages, Stock Number 10033, PC 006

LSMS WORKING PAPER NO. 7

Measurement of Welfare: Theory and Practical Guidelines
Angus Deaton
1980

This paper examines the relationships between income and expenditures, which are observable, and welfare levels (as represented by utility functions), which are not. Invoking duality theory, it argues that measurement of income and expenditures for the purpose of identifying welfare levels has a strong foundation in economic theory. After a thorough review of the relevant economic theory, the paper examines the implications of that theory for collecting data on income and expenditures in household surveys. Many specific suggestions are made for the design of surveys intended to measure the living standards in developing countries.

94 pages, Stock Number 10034, PC 006

LSMS WORKING PAPER NO. 8

Employment Data for the Measurement of Living Standards
Farhad Mehran
1980

The paper discusses the difficulties with the integration of income and employment surveys at the conceptual and operational levels. Section 2 highlights some aspects of the link between income and employment data
underlying these difficulties; for instance the fact that income data usually refer to households while employment data refer to individuals; the use of different reference periods for collecting the information; and problems with isolating work income from other sources of income. Section 3 examines issues which deserve consideration in survey design relevant to the collection of employment data in developing countries. These issues relate to specifying the appropriate reference period for the collection of employment data; the minimum age limit for inclusion of a period in the labor force; the meaning of work that constitutes economic activity; and the definitions of part-time and part-year workers.

28 pages, Stock Number 10035, PC 005

LSMS WORKING PAPER NO. 9

Income and Expenditure Surveys in Developing Countries:
Sample Design and Execution
Mohammed Abdul Wahab
1980

This paper reviews household income and expenditure surveys from 23 countries from 1970 to 1980. Each survey is described in detail for its purpose, coverage, sample design, definitions used, methodology, and several other aspects. It provides a good introduction to survey implementation, both in theory and in practice, to a general audience. It also makes recommendations for improving survey design and implementation. The countries covered include 7 African countries (Botswana, Kenya, Réunion, Senegal, Sudan, Swaziland and Tanzania), 10 Asian countries (Bangladesh, Fiji, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Sri Lanka and
Thailand), 3 Latin American/Caribbean countries (the Bahamas, Brazil and Colombia), and 3 Middle Eastern countries (Israel, Kuwait and Tunisia).

138 pages, Stock Number 10036, PC 010

LSMS WORKING PAPER NO. 10

Reflections on the LSMS Group Meeting
Christopher Saunders and Christiaan Grootaert
1980

The paper reports on the LSMS Expert Group Meeting of February 25-29, 1980 and gives a synopsis of the topics considered by the Group. The first section focuses on the usefulness of household surveys. The paper reviews how household surveys can be used to monitor and assess the impact of development policies on levels of living over time. It also discusses topics suggested by the Group for short-term studies aimed at demonstrating the use of household surveys to establish levels of living of interest to policy makers.

The second section highlights the key issues in five problem areas related to implementation of household surveys; which include: the concept of households, measurement of income, design of surveys, and analysis of survey results.

The final section presents the actual proceedings of the LSMS Expert Group Meeting.

86 pages, Stock Number 10037, PC 006
LSMS WORKING PAPER NO. 11

Three Essays on a Sri Lanka Household Survey
Angus Deaton
1981

This document contains three separate studies which make use of the 1969-70 Socio-Economic Survey from Sri Lanka. The first study explores how data on the percentage of household expenditures devoted to food can be used to examine issues of household welfare, noting that the size of this percentage is often used as an inverse indicator of that welfare. The second study examines the use of household equivalence scales to compare the welfare levels of different households and finds that they have little effect on aggregate measures of inequality across households. The last study examines an alternative to the Engel's (food share) technique for estimating household equivalence scales, based on dividing household goods into adult goods and children's goods. The equivalence scales estimated are much smaller, and more plausible, using this technique relative to that based on Engel's work.

This publication is out of print. It is available on microfiche or as a full-size photocopy from the U.S. National Technical Information Service. To order, contact NTIS, 5285 Port Royal Road, Springfield, Virginia 22161, U.S.A. Telephone (703) 487-4650

LSMS WORKING PAPER NO. 12

The ECIEL Study of Household Income and Consumption in Urban Latin America: An Analytical History
Philip Musgrove
1982

The ECIEL Program of Joint Studies on Latin American Economic Integration is a non-profit, a political, independent organization which
brings together a larger number of public and private research and statistical institutions to study economic issues in Latin America. The Program was founded early in 1963, with the participation of three Latin American institutions - the Instituto Torcuato Di Tella of Argentina, the Fundação Getulio Vargas of Brazil, and the Universidad de Chile - and its component studies were coordinated by the Brookings Institution. During a period of almost ten years, the ECIEL Program conducted, as one of its projects, a study of household income and consumption based on original surveys carried out during six years in eighteen cities of ten South American countries. This was the first time anywhere in the world that parallel national studies of this nature were conducted through the collaboration of several independent statistical and research institutions, with a common purpose, set of procedures and organization. Any future effort to conduct studies with similar objectives should benefit from the experience of the ECIEL project. This paper attempts to describe and evaluate that experience by providing an analytical history of the study. The paper emphasizes not what was learned substantively or methodologically, but how the project was organized, what its objectives were, how well they were met, and how a similar effort could be made more successful or efficient.

The paper is also available in Spanish.

86 pages, Stock Number 10039, PC 006
LSMS WORKING PAPER NO. 13

Nutrition and Health Status Indicators: Suggestions for Surveys of the Standard of Living in Developing Countries
Reynaldo Martorell
1982

This paper reviews the kinds of nutrition and health status indicators that would be appropriate for household surveys on the standard of living in developing countries. The data to be collected, it is assumed, would serve five broad purposes:

1. Assessment of the nature, extent and localization of nutrition and health problems in specific countries;
2. Investigation of the interrelationships between health and nutrition data and other data such as income, or access to public services;
3. Design of measures aimed at improving the quality of life;
4. Monitoring of changes in health and nutrition;
5. Comparison of health and nutrition status at one time and assessment of their relative progress through time.

The study emphasizes cross-sectional data collection at the family and individual level with only brief attention given to community variables.

110 pages, Stock Number 10040, PC 006

LSMS WORKING PAPER NO. 14

Child Schooling and the Measurement of Living Standards
Nancy Birdsall
1982

This paper presents a theoretical framework for consideration of child schooling as a component of the measurement of living standards. After reviewing three possible approaches for using child schooling to measure living standards, it discusses the difficulties encountered in trying to measure the value of children's education to households. A simple model of
the household decision to educate children is presented to clarify the issues involved. Finally, data requirements for investigating the role of education in living standards are given, with specific suggestions for questionnaire design.

This publication is out of print. It is available on microfiche or as a full-size photocopy from the U.S. National Technical Information Service. To order, contact NTIS, 5285 Port Royal Road, Springfield, Virginia 22161, U.S.A. Telephone (703) 487-4650

LSMS WORKING PAPER NO. 15

Measuring Health as a Component of Living Standards
Teresa J. Ho
1982

Differences in mortality rates among rich and poor countries are paralleled by differences in disease patterns. In the early stages of development, infectious and parasitic diseases coupled with malnutrition predominate, affecting especially infants and children. As income levels, environmental conditions and life styles change, problems of infectious disease and malnutrition are contained, and non-infectious diseases such as malignant neoplasms and diseases of the circulatory system emerge as principal causes of illness and death, affecting children less and adults more.

This paper discusses measures of health status for use in a survey whose objective is to measure and compare levels of living among different population groups. Apart from measurement issues, it discusses the relationship between health and other components of the standard of living and suggests means by which such relationships can be analyzed and interpreted for the eventual determination of policies to improve health status and related components of living standards.
Emphasis is given to general measures of health status as opposed to the identification of specific diseases, and to relating general health to the overall level of development.

70 pages, Stock Number 10042, PC 006

LSMS WORKING PAPER NO. 16

Procedures for Collecting and Analyzing Mortality Data in LSMS
Jeremiah M. Sullivan, Susan H. Cochrane, William D. Kalsbeek
1982

This paper reviews the measurement and analysis of infant and child mortality in developing countries. The paper highlights the type of data that need to be collected to enhance the policy relevance of the analysis of mortality data.

160 pages, Stock Number 10043, PC 010

LSMS WORKING PAPER NO. 17

The Labor Market and Social Accounting: A Framework of Data Presentation
Christiaan Grootaert
1982

The paper develops a system for data presentation that links demographic and labor market information in an internally consistent manner, using the framework of social accounting matrices. The paper also presents the quantitative method used in the analysis of income flows in the system and demonstrates the flexibility of the system by using alternative classification schemes.

The paper concludes that the proposed accounting is relevant for the analysis of labor market issues in a wide variety of country settings.

50 pages, Stock Number 10093, PC 006
LSMS WORKING PAPER NO. 18

Time Use Data and the Living Standards Measurement Study
Meena Acharya
1982

This paper illustrates the framework for collection and application
of time use data for the measurement and analysis of real work burden and
leisure of different population groups; employment and unemployment; division
of labor within households; and the shift of activities from non-market to
market sector in the development process.

86 pages, Stock Number 10094, PC 006

LSMS WORKING PAPER NO. 19

The Conceptual Basis of Measures of Household Welfare
and Their Implied Survey Data Requirements
Christiaan Grootaert
1982

This paper reviews the implications of economic theory for measuring
household welfare. It argues that welfare should be measured in terms of the
consumption of goods and services, leisure and access to public services.
Adjustments should also be made for differences in household composition. A
variety of issues are discussed, including the measurement of sources of
income and the dynamic aspect of household welfare. The last section
summarizes the implications for the collection of data from household surveys.

54 pages, Stock Number 10104, PC 006
LSMS WORKING PAPER NO. 20

Statistical Experimentation for Household Surveys:
Two Case Studies of Hong Kong
Christiaan Grootaert, K.F. Cheung, H.W. Fung and S.M. Tam
1982

Two papers deal with issues of accuracy in data collected from households surveys. The first paper attempts to measure sources of response error, that is, incorrect recording of data on the survey questionnaire. The difficulties inherent in such an exercise do not allow for a simple answer and point the way for future research. The second paper examines attempts to improve response and accuracy of data collected in an experimental survey in Hong Kong. Certain procedures did improve response rates and accuracy, while others seem to have had little effect.

66 pages, Stock Number 10125, PC 006

LSMS WORKING PAPER NO. 21

The Collection of Price Data for the Measurement of Living Standards
C. Donald Wood, Jr. and Jane A. Knight
1985

This paper considers ways of collecting price data in a Living Standards Survey. Its objective is to comment on the efficacy of collecting price data through household surveys and to consider alternative methods for obtaining such information. The paper provides a general overview of problems encountered in the construction of price indices over time and among different regions at a point in time and offers some practical solutions.

74 pages, Stock Number 10395, PC 006
LSMS WORKING PAPER NO. 22

Household Expenditure Surveys: Some Methodological Issues
Christiaan Grootaert and K.F. Cheung
1985

This paper (in two parts) is concerned with several methodological aspects of collecting information on household expenditures. Three issues are discussed in the first part (1) the impact of the length of survey participation on mean and variance of reported income and expenditures; (2) the determinants of survey participation, in particular the decision by household members to fill out expenditure diaries and (3) the additional reporting which results from household members keeping individual diaries, as opposed to one member keeping one household diary book. The second part compares the reliability of two alternative methods to obtain data on expenditures on durables and other infrequently purchased goods and services.

88 pages, Stock Number 10421, PC 006

LSMS WORKING PAPER NO. 23

Collecting Panel Data in Developing Countries: Does It Make Sense?
Orley Ashenfelter, Angus Deaton and Gary Solon
1986

This paper reviews several aspects of the collection and use of panel data from households in developing countries. Sampling issues are discussed in Section 1. The authors conclude that there are likely to be real, if modest, benefits from incorporating some panel element into household survey data collection in developing countries. The recognition that panel data are likely to be subject to substantial errors of measurement does not invalidate
this conclusion. Section 2 discusses the measurement of income dynamics, an issue that cannot be addressed without panel data. Recent research using U.S. data is reviewed to show that comparable work for developing countries would add an important dimension to discussions of poverty, inequality, and development. It is in the third area of review, that of econometric analysis, that the real benefits of panel data appear most fragile. These issues are discussed in Section 3. While it is true that panel data offer the unique ability to deal with the contamination of econometric relationships by unobservable fixed effects, the presence of measurement error can compromise the quality of the estimates to the point where it is unclear whether cross-section or panel estimators are superior. This situation is in sharp contrast to that for sampling where errors of measurement is in sharp contrast to that for sampling where errors of measurement typically cannot reverse the superiority of panel over cross-section estimators.

The authors conclude by arguing that panel data should be collected in both developing and developed countries. Benefits of well-designed data collection efforts are likely to outweigh the costs. However, it is easy to overstate the likely benefits of panel data. Their existence will not solve all outstanding problems of understanding poverty and household behavior in developing countries. While they will undoubtedly bring new and important insights, they will also bring new problems of interpretation and analysis.

60 pages, Stock Number 10673, PC 006
LSMS WORKING PAPER NO. 24

Measuring and Analyzing Levels of Living in Developing Countries:
An Annotated Questionnaire
Christiaan Grootaert
1986

This paper describes the main elements of the first LSMS questionnaire as it was implemented in the Côte d'Ivoire in 1985, and discusses the reasons behind specific design features. It will be essential reading to anyone interested in understanding the Côte d'Ivoire Living Standards Survey (CILSS) or in using data generated by it.

The questionnaire is a culmination of many people's efforts over several years. The version used in the Côte d'Ivoire was finalized during the summer and fall of 1984 by the staff of the then Living Standards Unit, Development Research Department (DRDLS). The draft questionnaire was pretested and further refined in the Côte d'Ivoire by the staff of the Sous-direction de la Statistique Générale, Direction de la Statistique, Government of the Côte d'Ivoire. The paper shows each section of the questionnaire and discusses the contents.

The paper is also available in French.

English: 152 pages, Stock Number 10758, PC 010
French: 152 pages, Stock Number 11067, PC 010

LSMS WORKING PAPER NO. 25

The Demand for Urban Housing in the Ivory Coast
C. Grootaert and Jean-Luc Dubois
1986

During recent years urban centers in many African countries have experienced large population growth. The satisfaction of housing needs has
therefore become a policy priority in many of these countries. Yet there is virtually no empirical work on African countries to provide estimates of the basic parameters of the demand for housing. This paper contains the first systematic estimates of the income and price elasticities of the demand for urban housing in the Ivory Coast. An integrated model of the choice of tenancy status and the demand for housing is presented and estimated. Also estimated is a multinomial logit model of the choice of accommodation.

The paper also addresses two methodological issues: (i) is there any evidence of selectivity bias in the estimation of housing demand equations, and, if so, to what extent does a correction of this bias affect estimated elasticities; and (ii) how sensitive are estimated elasticities to the functional form chosen for demand equations?

80 pages, Stock Number 10759, PC 006

LSMS WORKING PAPER NO. 26

The Côte d'Ivoire Living Standards Survey: Design and Implementation
Martha Ainsworth and Juan Muñoz
1986

The Côte d'Ivoire Living Standards Survey (CILSS) is the first survey to field test the methodology and questionnaires developed by the Living Standards Measurement Study.

The primary objectives of the survey are:

1. To provide timely cross-sectional and panel data on a permanent basis on living conditions of African households in Côte d'Ivoire.

2. To study the interrelationships between different components of living standards within the same households.
3. To develop and test methodologies for measuring living standards in developing countries.

The survey was undertaken by the Côte d'Ivoire Department of Statistics in 1600 African households per year throughout the country in communities randomly selected to be nationally representative. Every year half of the sample was replaced, thereby yielding two observations one year apart for half of the previous year's households. Data on community characteristics, including local prices, are collected on separate village and price questionnaires. Although the World Bank collaborated on this survey for only two years, the survey is expected to be continued on a permanent basis by the Department of Statistics.

This paper documents the development of the Côte d'Ivoire Living Standards Survey up to December 1985, ten months after field operations began. The sections describe:

* The sample design
* Survey instruments
* The organization of the survey
* Data management
* The first ten months of field operations

In the last section some tentative conclusions are presented about the logistical and design aspects of living standards surveys, based on experience obtained in Côte d'Ivoire.

The paper is also available in French.

English: 52 pages, Stock Number 10816, PC 006
French: 52 pages, Stock Number 11068, PC 006
The Role of Employment and Earnings in Analyzing Levels of Living: A General Methodology with Applications to Malaysia and Thailand
Christiaan Grootaert
1986

This paper is intended as a manual for the use of employment and earnings data (as collected in the Living Standards Surveys) in the context of policy analysis of levels of living. The target audience is the staff of statistical offices and user agencies in developing countries who have been charged with providing a first analysis of newly collected data. The analysis proposed in the manual takes into account the limitations of analytic and computing capabilities that typically exist in many countries. In the first part of the manual a set of tables and graphs are suggested, fewer in number than those found in a typical labor force survey report, but which are deemed to better bring out the main facts about employment and earnings, and are directly relevant for selected policy issues.

The second part of this paper follows up with a multivariate analysis of labor force participation and earnings. Relevant econometric issues are explicitly discussed.

80 pages, Stock Number 10826, PC 006

Analysis of Household Expenditures
Angus Deaton and Anne Case
1987

In any society, one of the ultimate objectives of the economic system is to deliver goods and services to its members. The success of any economy
can be measured by its ability to provide for its people, to feed them, to clothe and shelter them, and to offer them access to good health, to education and to a wide range of consumer goods. The household expenditure survey is the tool through which material welfare is measured. Its results inform about levels of living, about how these levels change over time, and about how levels of living vary among individuals and groups in the economy. Beyond this point, the wealth of data from such surveys provides an information base that, in the short run, is an essential prerequisite for the evaluation of actual or proposed policies and, in the long run, by enhancing our understanding of how the economy functions, allows the evolution of better policies for progress and development.

Using household expenditure surveys, we can explore a wide range of issues that are both of substantive interest in their own right, and that help improve our understanding of the functioning of the economy. In this paper, we devote space to three such analytical issues; the estimation of Engel curves, that is, the relationship between demand patterns, household budgets, and their demographic composition; the calculation of measures of the costs of maintaining children; and the calculation of price indices.

130 pages, Stock Number 11052, PC 010

LSMS WORKING PAPER NO. 29

The Distribution of Welfare in Côte d'Ivoire in 1985
Paul Glewwe
1987

This paper examines the distribution of welfare in Côte d'Ivoire in 1985 as measured by per capita consumption expenditures. The data employed
are from the 1985 Côte d'Ivoire Living Standards Survey. While it is meant to be primarily descriptive in nature, possible explanations of particular patterns in the distribution of welfare are offered at several points. The principal findings are: (1) The urban population in Côte d'Ivoire is substantially better off than the rural population, and the poor in Côte d'Ivoire are overwhelmingly found in agricultural pursuits in rural areas. (2) There is a strong association between education and welfare, which highlights the importance of educational policies, particularly those affecting the school attendance of children. (3) Household composition, more specifically the proportion of household members who are children or who are employed, does not explain why some households are poor - poor households have a larger proportion of working members and a lower proportion of children than do other households.

The paper is also available in French.

English: 88 pages, Stock Number 11053, PC 006
French: 88 pages, Stock Number 11054, PC 006

LSMS WORKING PAPER NO. 30

Quality, Quantity and Spatial Variation of Price:
Estimating Price Elasticities from Cross-sectional Data
Angus Deaton
1987

The paper is concerned with the development and implementation of a methodology for estimating own and cross-price elasticities of demand using cross-section household survey data. Especially in developing countries, it is difficult to obtain good estimates of price elasticities using standard time-series analysis. But many countries collect household survey data in
which respondents are asked about both expenditures and physical amounts of purchases, so that unit values can be derived. These unit values, which depend on actual market prices, suggest that there is substantial spatial sense in the presence of high transport costs. However, it is not possible to use unit values as a substitute for true market prices in the analysis of demand patterns. Consumers choose the quality of their purchases, and unit values reflect this choice. Moreover, quality choice may itself reflect the influence of prices as consumers respond to price changes by altering both quantity and quality. Measured unit values are also contaminated by errors of measurement in expenditures and in quantities and are likely to be spuriously negatively correlated with measured quantities. In the technique developed here, market prices are treated as unobservable variables that affect quantities purchased, and that determine observed unit values with both measurement error and quality effects. Since the primary sampling units in household surveys are typically clusters of households that live together in the same village and are surveyed at the same time, it is plausible that there is no genuine variation in market prices within each cluster. A within-cluster estimator can therefore treat market prices as unobservable fixed effects and estimate Engel curves and quality effects, as well as the measurement error variances and covariances. The between cluster covariance of corrected unit values and quantities can then be used to estimate the price elasticities. Once due allowance is made for the measurement error and for the effects of price variation on quality. Data from a 1979 household survey from the Côte d'Ivoire are used to estimate price elasticities for beef, meat, fish, cereals, and starches. The results suggest that the measurement error
effects are large and are variable between goods and regions, so that the
elasticities estimated by treating the unit values as if they were prices give
little guidance to the true magnitudes. By contrast, the quality effects do
not seem to very important, at least in these data.

82 pages, Stock Number 11055, PC 006

LSMS WORKING PAPER NO. 31

Financing the Health Sector in Peru
Ruben M. Suarez-Berenguela
1987

This paper reviews the health status of the Peruvians and the
financing and spending patterns of Peruvian health institutions. Between
1975-85 declining income per capita of the population has been accompanied by
unsuccessful attempts to reduce total government expenditures. However,
government expenditures in social programs declined from one third of the
budget in 1973-75 to less than one fifth in 1981. Expenditures in health
programs as a proportion of the government budget declined from 6.4 percent in
1970 to around 4.5 percent in 1980-85 (to 0.6 percent of the GDP). This
amounts to approximately US$5.00 per capita. Central government revenues are
the main source of financing of public health institutions. Expenditure by
corporate health institutions and private institutions and individuals account
for approximately 90 percent of total resources spent on health related goods
and services. Corporate institutions spend between US$10 and 20 per capita.
These findings call for the need to explore the actual scope of health
government programs and the role that non-government institutions may play in
implementing health programs.
Child and infant mortality and the high incidence of environmental related diseases appear as the most critical health problems in Peru. Observed mortality and morbidity patterns and the tendency of Peruvian health institutions to concentrate on curative rather than preventive services, suggest that there might be a misallocation of resources. Analysis of health related indicators also show a high degree of inequality in the spatial distribution of health resources and sanitation services.

70 pages, Stock Number 11056, PC 006

LSMS WORKING PAPER NO. 32

Informal Sector, Labor Markets, and Returns to Education in Peru
Ruben M. Suarez-Berenguela
1987

This paper presents a review of the literature about the labor market, the informal sector of the labor market and returns to education in Peru. After summarizing some conceptual and methodological issues related to the use of the formal-informal analytical categories, estimates are presented about the importance of informal sector activities and characteristics of workers in informal economic units (IEUs). The author points out that both the magnitude of the informal sector and characteristics of informal workers are highly sensitive to the conceptual and operational criteria chosen to differentiate between formal and informal activities. Argument is made that a clear-cut approach to the underlying formal-informal issues could be obtained by identifying homogenous socioeconomic groups for which classificational criteria are directly linked to the available policy instruments. To discuss formal-informal labor markets issues data are presented on the composition and
employment levels of the Peruvian labor force, labor market structures resulting from alternative segmenting criteria and estimates of the effects of labor legislation on the demand for labor and actual levels of output and employment.

Econometric estimates, found in the literature, of the effects of labor laws on the level of output and employment are inconclusive. No serious work has been done in testing market segmentation hypothesis or the role of labor market regulations in affecting the functioning of the labor market. Further empirical work in these areas is needed. Finally, after presenting a summary of the educational composition of the Peruvian labor force, findings about the determinants of participation rates and estimates about rates of return to human capital are reported. It is pointed out that some of the issues and areas of research that can be pursued with data from the World Bank-INE Household survey recently completed in Peru.

94 pages, Stock Number 11057, PC 006

LSMS WORKING PAPER NO. 33

Wage Determinants in Côte d'Ivoire
Jacques van der Gaag and Wim Vijverberg
1987

Two papers present an analysis of wage determinants in Côte d'Ivoire, using the standard Mincerian framework. The data used are from the Côte d'Ivoire Living Standards Survey conducted in 1985. This survey collected information on 1,600 households. The sample consists of the 514 individuals in these households who reported a wage earning job during the seven days prior to the interview.
The first paper uses the total sample and addresses the issues of credentialism and returns to years of schooling, by type of school. In the regressions that do not include variables to represent school diplomas, we find an unusual result: rates of return to one year of additional schooling increase with the level of schooling: almost 12 percent for elementary education, but 20 percent for high school and 22 percent for university education. This pattern suggests a severe shortage of Ivorians with higher education. The results by age-cohort (presented in Appendix 2) seem to underscore this point: younger workers receive higher returns than their older counterparts. Apparently, the demand for better educated workers, has outpaced the supply of such workers.

When diplomas acquired are added to the equation, the high returns to an additional year of schooling decreases substantially while the diplomas show a large impact on the wage rates (40-50 percent). This suggests the existence of a certain amount of credentialism in the Ivorian wage sector. However, a pure credentialistic specification of the wage equation is rejected by the data.

Appendix 2 to the first paper reports results by cohort, sex, nationality and region.

The second paper reports the results for public and private workers separately. However, rather than relying on standard OLS results for each group, we develop a model that recognizes the endogeneity of the sector choice. We find that the OLS results are likely to be seriously biased. The overall dominance of public over private wages (indicated by the OLS results) vanishes once the selection process is taken into account. Public wages are
still somewhat higher for better educated workers, but the private sector
offers higher wages than the government to workers with little education.

We finally show the importance of school diplomas as determinants for
obtaining a job in the public sector.

64 pages, Stock Number 11058, PC 006

LSMS WORKING PAPER NO. 34

Guidelines for Adapting the LSMS Living Standards Questionnaires
to Local Conditions
Martha Ainsworth and Jacques van der Gaag
1987

These guidelines are to provide information for adapting the Living
Standards Measurement Study (LSMS) questionnaires to local conditions. LSMS
has developed three questionnaires for living standards analysis: a household
questionnaire, a community questionnaire and a price questionnaire. These
questionnaires have been used successfully in national surveys in Côte
d'Ivoire and Peru. In preparing these guidelines, we tried to benefit as much
as possible from experience in working with the Ivorian and Peruvian data.
Where useful and feasible, we use preliminary results to illustrate the policy
relevance of the data collected with the living standards questionnaires.

These guidelines contain a brief overview of the objectives of the
Living Standards Surveys, a general discussion stressing the need to derive
the questionnaire from the country specific policy context and detailed,
section-by-section discussions on the design of each questionnaire.

The paper is also available in French.

English: 186 pages, Stock Number 11059, PC 012
French: 186 pages, Stock Number 11044, PC 012
Several authors have pointed out the implications of financing medical care from general public funds. Among these are Akin (1986), Birdsall (1986), Jimenez (1986) and de Ferranti (1985). The most authoritative treatment of this issue is given in Financing Health Services in Developing Countries: An Agenda for Reform, (World Bank, 1987). A common theme in the discussion is that user fees can improve efficiency and the prospects for cost recovery, while maintaining current levels of equity. To evaluate this argument, it is necessary to assess the responsiveness of consumers to changes in the price of medical care. Little evidence from developing countries exists to date.

In this paper we attempt to fill the gap by analyzing the demand for health care in the rural Côte d'Ivoire where user fees are zero, but private access costs may be substantial. By the use of a mixed discrete choice/continuous demand analytical framework, we show that the absence of user fees per se does not guarantee equal access to all consumers. Private costs, represented by travel time, result in non-price rationing similar to the conventional money price mechanism. Our results strongly suggest that if revenues obtained from user fees are used to improve the regional distribution of services, the resulting system may actually improve equity over the long-run.
This paper presents information on labor market activity from household surveys undertaken in Côte d'Ivoire and Peru by the Living Standards Unit of the World Bank and the statistics departments of the respective countries. In addition to providing basic information on labor force participation, hours of work, type of employment, unemployment, participation in markets for second jobs, and reasons for not searching for work, the paper directs attention to symptoms of poor performance in the operation of labor markets, and identifies questions that should be considered in greater detail in subsequent work.

Nationwide unemployment rates are low in both countries, 2.94 percent in Côte d'Ivoire and 2.1 percent in Peru. Open unemployment in rural areas is virtually zero. The surveys reveal a striking difference in the search behavior in the largest cities in each country. In Abidjan, the largest city in Côte d'Ivoire, those searching for work are typically unemployed, while in Lima those searching for work have some type of job and are searching for additional and/or replacement work. As a result, the higher unemployment rates in Abidjan (20 percent) compared with Lima (5.1 percent) overstate differences in the extent of job search that takes place.
Health Care Financing and the Demand for Medical Care
Avi Dor, Luis Locay, Warren Sanderson,
Paul Gertler, Jacques van der Gaag
1987

This paper includes two reports that are part of a larger study on "Health Care Demand and Resource Mobilization".\footnote{Each report is self-contained which results in a certain amount of overlap in the exposition.} This study addresses the issue of how various financing systems for medical care influence its utilization. Emphasis is on the impact of introducing (or raising) user fees, in terms of distributional effects, welfare consequences and revenue potential.

The first paper develops a discrete choice model that allows for the quantification of the effects of price and non-price variables on a person's decision whether or not to obtain medical care, and if so, from which provider. The empirical work is based on recent data from a Peruvian health survey. The second paper estimates a variant of this model, using data from the 1985 Ivorian Living Standards Survey.

The main message of both papers is that in the absence of user fees (or at low fee levels), private costs (here represented by travel time to the nearest provider) take over the rationing role of the conventional price mechanism. The first paper shows how the quantification of this effect can be used to simulate the distributional and welfare consequences of changing the fee structure.
None of the results in these papers should be judged as final, if only because both papers focus on provider choice rather than on total medical consumption. However, the main empirical results appear to be robust, and the effect of non-price rationing is found to be much stronger than previously reported in the literature.

74 pages, Stock Number 11062, PC 006

LSMS WORKING PAPER NO. 38

Wage Determinants and School Attainment among Men in Peru
Morton Stelcner, Ana-Maria Arriagada and Peter Moock
1987

This paper assesses the impact of education on labor market outcomes in Peru using data from the Peruvian Living Standards Survey conducted between June 1985 and July 1986. The present study concentrates on facts that affect wages and school attainment of male wage and salary earners. Particular attention is given to assessing the effects of formal schooling and parental education on wages, and to the effect of primary school quality and parental education on school attainment.

The analysis (1) presents estimates of rates of return to schooling, (2) assesses the effects of parental education on wages and school attainment and (3) examines regional differences in wage structures. We also explore the impact of non-market forces on pay structures by considering sector of employment (public versus private) and the effects of firm size and unionization.

The main findings are as follows. Formal schooling plays an important role in explaining wage variations, and the pattern of rates of
return reflects that found in most developing countries. The estimates are similar to those found in other Latin American countries: 10% for (a year of) primary schooling, 6% for secondary schooling, and 8% for post-secondary schooling.

The analysis also suggests that there are differences in wage structures among metropolitan Lima, other urban areas, and rural areas. The impact of post-secondary schooling and vocational training are strong in Lima and rural areas, but not in other urban areas. We also find that, when parental schooling effects are excluded, having attended a public school has a significant negative impact on wages in Lima and rural areas only.

The results suggest that the effects of parental education on wages, are not as strong as may have been expected in a society that is often characterized as "socially stratified", and the effects are largely confined to other urban areas, that is, the point estimates of returns to schooling are reduced. In Lima parental schooling mitigates the negative effects of public education, but they remain strong in rural areas.

For school attainment, we find that, although parental education does have a positive and significant impact, the effects diminish as cohorts get younger and are reduced when primary school quality indicators are included among the regressors, especially in rural areas. In general, we find that the primary school quality variables contribute significantly to educational attainment and their effects are stronger as the degree of urbanization decreases.
The Allocation of Goods within the Household: 
Adults, Children, and Gender 
Angus Deaton 
1987

There has recently been considerable discussion on the role of women in economic development; among the issues is whether or not there is discrimination within the household, so that women receive less than men and girls less than boys. This paper presents an empirical procedure that uses household survey data to cast light on the allocation within the household. Allocation between children of different genders is studied by estimating the effect of additional children on household expenditures on various adult goods. Since children do not consume adult goods, additional children should reduce household expenditures on such goods as resources are diverted towards the goods required by children. The size of this effect as between boys and girls tells us whether households typically allocate more to boys than to girls. Using the data from the 1985 Living Standards Survey of the Côte d'Ivoire, it is found that additional children do indeed reduce the demand for adult goods, but that the effects are identical for boys and girls. Even so, the allocation of the adult goods themselves is heavily biased towards adult males. Old men do rather better than do adult women, and old women do worst of all. These results are shown to be robust to alternative empirical procedures as well as to disaggregation of the Côte d'Ivoire by region. Analysis of the demand for food shows that there is little evidence of and sex-bias in the allocation of food.

42 pages, Stock Number 11064, PC 005
The Effects of Household and Community Characteristics on the Nutrition of Preschool Children: Evidence from Rural Côte d'Ivoire
John Strauss
1988

This paper estimates reduced form equations, derived from an economic model of household production, to analyze the impact of household- and community-level variables on child nutrition in rural Côte d'Ivoire. Of particular concern are the contributions made by parental education, household wealth, and community characteristics - some of which are manipulable by government policy. The effects on child height and weight-for-height are estimated using a random effects approach (most households have more than one child in the sample) to account for common household-level unobserved variables.

Estimates for variables which vary within households are also obtained using household dummy variables (fixed effects) to purge possible correlation between unobserved household characteristics and community variables. The results show that the education of both mother and father has positive effects on weight-for-height, and that the mother's education has positive effects (though not precisely estimated) on height. The effect of community characteristics is strong. Of these, local wage rates, the health environment and the quality of health infrastructure matter most. Unobserved household-level factors are shown to be important, which suggests the need to account for them in an explicit way. Also, there are strong effects of intrahousehold distribution, particularly for children of household heads and their senior wives.

52 pages, Stock Number 11043, PC 006
Fiscal deficits and external debts have placed public sector employment and compensation under increased scrutiny as developing countries confront the economic crises of recent years. Although much attention has been given to the overall problem of growing public expenditures, there have been few research efforts to address the basic question: Do public sector workers with the same productivity traits earn more than their private sector counterparts? The answer to this question has important policy implications because reducing the government wage bill, which comprises a major portion of recurrent public spending, is often viewed as an attractive means to reducing budget deficits. In many countries, this is accomplished by allowing the salaries of government employees to be eroded by inflation, while maintaining the level of employment.

Surprisingly, there is little systematic empirical evidence on public-private sector pay comparability in developing countries, and most of the existing findings show mixed results in terms of both direction and size of wage differentials. Moreover, most studies are based on statistical procedures, such as ordinary least squares regression, that do not take into account the process by which the wage earners with different personal characteristics are likely to be employed in the public rather than the private sector, that is, selection bias.

This study considers how wage differentials between male wage earners in the two sectors are generated using recent (1985-86) data for Peru (The
Peru Living Standards Survey). Explicit attention is given to the endogeneity of sector choice. A switching regression model is used to consider the question of whether government workers enjoy a "pure" wage advantage or economic rent. We find that this is not the case if selectivity corrected estimates of wage functions are compared. In fact, in metropolitan Lima, public sector wages are well below those in the private sector. Although in other urban areas there is no significant wage differential. The estimation procedure and results of this study should serve as useful resources for formulating wage and employment policies in developing countries, especially reform of these policies in the public sector.

50 pages, Stock Number 11065, PC 006

LSMS WORKING PAPER NO. 42

The Distribution of Welfare in Peru in 1985-86
Paul Glewwe
1987

This paper examines the distribution of welfare in Peru in 1985-86 as measured by (adjusted) per capita consumption expenditures. The data used are from the 1985-86 Peru Living Standards Survey. The paper is primarily descriptive in nature, but possible explanations of patterns observed are given at several points. The major findings are:

1. There is a strong correlation between education and welfare, which highlights the importance of education policies.

2. The urban population is clearly better off than the rural population, and the majority of the poor are found in rural areas, most often as self-employed agriculturalists.

3. Poor households have as many, if not more, working members as a fraction of total members, as a typical Peruvian household.
4. Within urban areas, heads of poor households are primarily sales and service workers, industrial and craft workers, both self-employed and employed by private firms.

The paper is also available in Spanish.

English: 100 pages, Stock Number 11066, PC 006
Spanish: 100 pages, Stock Number 11081, PC 006

LSMS WORKING PAPER NO. 43

Profits from Self-Employment: A Case Study of Côte d'Ivoire
Wim Vijverberg
1988

Self-employment is an important mode of activity in many less developed countries. Even outside the agricultural sector, a significant portion of the labor force makes a living through self-employment. Until recently, such self-employed workers were often viewed as less productive individuals, who, rejected in their search for salaried work, are forced by poverty to do "something" to survive. Their status in the urban environment was essentially like that of the subsistence farmers in the midst of a developing agricultural economy based on cash crops: they were left behind.

Recent research has indicated that the non-agricultural self-employed fill a niche in the economy that large industry cannot fill. The goods and services that they produce are in demand. In fact, these workers may well be a necessary part of the infrastructure within which large-scale industry can flourish.

This raises many questions that were previously ignored: why do self-employed workers end up in self-employment? Do they choose to, or do they have no alternative? This paper addresses the issue that is basic to these
questions: how productive are non-agricultural enterprises? If labor and capital inputs are productive, the self-employed may well choose their mode of employment with a rational motive. If labor and capital are not productive, the older, more negative view may yet hold true.

In Côte d'Ivoire, self-employed labor is not unproductive, though marginal returns are somewhat less than the wage rate of equivalent salaried workers. Capital yields extremely high returns, possibly above 100 percent per month. Assuming that the financial market is hard to access for an Ivorian with some but only little funds, such a person may be better off to establish his own enterprise and gain the large returns to capital that offset the somewhat lower returns to labor.

This paper finds a weak positive effect for only the education component of human capital. This may be caused by the fact that the Ivorian self-employed have received much less education than the threshold level of about five years that research on agricultural production has uncovered.

74 pages, Stock Number 11050, PC 006

LSMS WORKING PAPER NO. 44
The Living Standards Survey and Price Policy Reform: A Study of Cocoa and Coffee Production in Côte d'Ivoire
Angus Deaton and Dwayne Benjamin 1988

Cocoa and coffee are the most important crops in the Côte d'Ivoire; they account for almost half of agricultural land use, for the occupation of almost 40% of Ivorian households, for some 60% of export earnings and as much as 40% of government revenue. The paper is concerned with two related
questions, first, what determines coffee and cocoa yields, and second, how should the government determine the farmgate prices for the two crops. The first is of increasing concern because further growth in output will depend more on increases in productivity. The second question is central to policy reform in the Côte d'Ivoire, and involves issues of efficiency in agricultural production, the distribution of income between farmers and others, and the legitimate needs of the government for revenue. Heavy use is made throughout the paper of the data from the 1985 Living Standards Survey of households in the Côte d'Ivoire. Agricultural data from the survey are compared with those from other sources, and while the fit is not perfect, we find no reason to be more than usually cautious in using the LSS data to look at cocoa and coffee production and the characteristics of cocoa and coffee farmers. We use the survey data to estimate yields in relation to the maturity of the tree stands, and obtain good results. It is also found that very much higher yields are associated with the use of fertilizer and insecticide inputs, and we speculate on a number of possible explanations, including the possibility that the effects are real. The LSS data are ideal for assessing the likely first round effects on the distribution of income of raising cocoa and coffee prices. Cocoa and coffee farmers are mostly smallholders, and although rarely among the poorest, are also not the richest people in the country. A large fraction of both harvests come from households in the middle of the distribution of living standards, so that price increases are not likely to have major impacts on inequality. The paper concludes with a discussion of the broader questions of price setting, including the tax differentials between the two crops, and
the degree to which the government of the Côte d'Ivoire should shield its farmers from international price fluctuations.

54 pages, Stock Number 11082, PC 006

LSMS WORKING PAPER NO. 45

Measuring the Willingness to Pay for Social Services in Developing Countries
Paul Gertler and J. van der Gaag
1988

The paper provides a methodology for the ex ante evaluation of the welfare effects of proposals to use user fees to finance improved access to social services in developing countries. The analysis requires estimation of demand functions, from which price elasticities and the willingness to pay for improved access can be obtained. The willingness to pay is the maximum price that can be charged without reducing individuals' welfare and use of medical services. The estimation is complicated by the problem that governments in developing countries often are the dominant suppliers of social services in their countries, and provide these services free of charge so that there is little price variation in the data. We show how variation in an individuals' private time prices can be used to identify all the parameters of the demand functions.

The methodology is used to evaluate the possible implementation of the user fee plan for medical care clinics in rural Côte d'Ivoire. Our results show that it is likely to have highly regressive welfare effects. Specifically, the policy is shown to increase the welfare and medical care use of individuals in the top half of the income distribution, while reducing the
welfare and medical care use of individuals in the bottom half of the income distribution.

38 pages, Stock Number 11049, PC 005

LSMS WORKING PAPER NO. 46

Nonagricultural Family Enterprises in Côte d'Ivoire:
A Descriptive Analysis
Wim Vijverberg
1988

Nonagricultural self-employment is an important part of the economy in Côte d'Ivoire. About one third of the households, one fourth of all male workers and more than one half of all female workers are self-employed and engaged in nonagricultural self-employment. A good understanding of the effect of public policy is therefore not possible without an analysis of non-farm family enterprises.

Studies on the income generated by nonagricultural enterprises are scarce in comparison to analyses of wage earnings and farm production. Also, without sufficient empirical support, family enterprises are usually considered a part of the so-called informal sector, the lower segment of a segmented economy, where one finds undesirable jobs with low pay and little prospect of advancement.

This paper describes family enterprises in Côte d'Ivoire in the light of this issue. Family enterprises have indeed some characteristics that are usually associated with the informal sector: They are quite transitory; they are small; they use a labor-intensive mode of production; and the family workers employed by them are uneducated. However, to classify all family
enterprises as being in the informal sector does injustice to some large, productive, profitable, and capital intensive enterprises. Moreover, family enterprises are not typically operated by low-income households, and the isolation that one would associate with a segmented economy is contradicted by the fact that many self-employed workers reside in households where other members hold a wage job or operate a farm.

Further evidence suggests that capital is in short supply. In particular, few enterprises use large capital items such as vehicles and buildings. However, to subsidize these items will probably benefit only the largest enterprises.

There is a general lack of education among self-employed workers. Only one fourth is reported to be literate. Given this, even basic education is likely to be beneficial. The relative prevalence of apprenticeship training among the nonagricultural self-employed suggests a demand for vocational skills, which, if provided in conjunction with the basic curriculum, may encourage students to become entrepreneurs rather than wage employees as is the case at present.

Since low-income households are not the only ones to operate family enterprises, policies to alleviate poverty directed at family enterprises need to be especially targeted at the poor.

86 pages, Stock Number 11048, PC 006
The Poor during Adjustment: A Case Study of Côte d'Ivoire
Paul Glewwe and Dennis de Tray
1988

The effect of structural adjustment programs on the poor in developing countries has received a great deal of attention in recent years. This paper provides a general overview of the issues involved and analyzes the effect of structural adjustment on the poor in Côte d'Ivoire. Several conclusions can be drawn from the Ivorian case. Many of the poor may be little affected by structural adjustment policies because most of them are subsistence farmers in rural areas. Consequently, the cost of safeguarding the poor during structural adjustment may not be very high. In practice, however, it may be very difficult to identify the poor and to implement the needed interventions. Household survey data can be extremely useful in assessing the effects of structural adjustment on the poor and designing appropriate policies to meet their needs.

46 pages, Stock Number 11047, PC 005

Confronting Poverty in Developing Countries:
Definitions, Information, and Policies
Paul Glewwe and J. van der Gaag
1988

This paper examines several commonly used definitions of poverty. We first propose a definition based on the theory of welfare economics and contrast it with other definitions that are often used in empirical studies. We then examine household survey data from Côte d'Ivoire to see whether these
different definitions choose the same people as poor. The general finding is that they often do not choose the same people. This implies that different definitions of poverty will often lead to different policy recommendations. The paper then provides a general discussion of poverty-reducing policies, and demonstrates the use of household survey data to formulate and to evaluate specific policies.

58 pages, Stock Number 11083, PC 006

LSMS WORKING PAPER NO. 49

Sample Designs for the Living Standards Surveys in Ghana and Mauritania
Chris Scott and Ben Amenuvegbe
1989

This paper presents the recommendations for the sample designs of the LSMS surveys implemented in Ghana and Mauritania. Details are presented on the selection of enumeration areas (EAs), the household listing operations in the EAs and the distribution of team "workloads" over these EAs. The rolling panel character of the samples is also discussed.

The Ghana recommendations are in English; the Mauritania part is in French. There is some overlap in exposition between both parts.

70 pages, Stock Number 11168, PC 006

LSMS WORKING PAPER NO. 50

Food Subsidy Programs: A Case Study of Price Reform in Morocco
Karim Laraki
1989

This paper presents an analysis of the costs and benefits of food subsidies in Morocco. It focuses on ways to reduce the financial costs
without adversely affecting the standard of living and nutritional status of
the poor. Part I describes the organization of the food-subsidy program in
Morocco and presents descriptive statistics on food-consumption patterns
there. It thus provides background material for Part II, which discusses the
methodological issues involved in estimating the welfare and nutritional
effects of price and tax reforms in developing countries. A model for
estimating price elasticities from cross-sectional data is applied to results
from the 1984-85 household consumption survey to quantify the effects of
modifying the food subsidy program in Morocco. Both real income and
nutritional effects are used to evaluate the Moroccan program and, by
extension, similar ones elsewhere.

The paper is also available in French.

English: 78 pages, Stock Number 11116, PC 006
French: 90 pages, Stock Number 11243, PC 006

LSMS WORKING PAPER NO. 51

Côte d'Ivoire: Estimates for Child Anthropometry
from Two Surveys, 1985 and 1986
John Strauss and Kalpana Mehra
1989

Child heights, weights and weights given height are tabulated for the
Côte d'Ivoire using the Living Standards Survey data for 1985 and 1986. The
major finding is the low incidence of stunting (low height for age) relative
to other West African nations. Important regional variation exists, but in
the poorer Savannah region stunting is still somewhat lower than in other
rural areas of West Africa. Wasting (low weight given height) is more in line
with other West African countries, but is far lower than found in South Asia.
Several patterns become apparent in bivariate relationships between certain household and community factors and the incidence of low height or weight. Parental education and height, and relationship of the child to the household head seem especially important.

Forthcoming

LSMS Working Paper No. 52

Public-Private Sector Wage Comparisons and Moonlighting in Developing Countries: Evidence from Côte d'Ivoire and Peru
Jacques van der Gaag, Morton Stelcner and Wim Vijverberg
1989

The continuing economic crises faced by developing countries have placed public employment and compensation under increased scrutiny. Because government wage bill forms a high proportion of recurrent public spending, cutting it is often viewed as an attractive way of reducing fiscal deficits. This can be accomplished by paring employment or by reducing salaries of civil servants. Most countries have maintained employment but have allowed salaries to erode through inflation. Whether this is the best approach have allowed salaries to erode through inflation. Whether this is the best approach to reducing the wage bill depends heavily on the answer to a deceptively straightforward question: are government workers overpaid vis-a-vis wage earners in the private sector? There are surprisingly few empirical studies that deal systematically with this issue for developing countries. The small body of research that does exist uses standard Ordinary Least Squares (OLS) regression techniques and shows mixed results in terms of direction and size of wage differentials.
This study analyzes public-private sector pay differentials in two developing countries, Côte d'Ivoire and Peru, using unusually comprehensive micro data sets - the 1985 Côte d'Ivoire Living Standards Survey (CILSS) and the 1985/1986 Peru Living Standards Survey (PLSS). Explicit attention is given to the endogeneity of sector choice. We estimate switching regression models using Full Information Maximum Likelihood (FIML) and compare the results to those obtained using OLS. For both countries, we find striking differences between the OLS and FIML estimates. The OLS results suggest that public sector wages are higher than private sector wages, but the FIML estimates show that public sector wage offers are well below those in the private sector. Thus, an important methodological conclusion of our study is that standard OLS regressions on samples of public and private sector employees are likely to yield seriously biased estimates of pay structures, and hence a wrong assessment of the wage gap.

We further explore our main finding that public sector wages are "too low" by considering the commonly observed phenomenon of "moonlighting" (double jobbing). After finding that moonlighting is more prevalent among government workers than among those in the private sector, we consider whether our FIML estimates of the public-private wage gap can help explain why government workers are likely to have second jobs. Our probit analysis shows that the wage disadvantage of civil servants is an important determinant of

---

1/ The CILSS was conducted jointly by the World Bank and the Direction de la Statistique of the Ministère de l'Économie et des Finances of Côte d'Ivoire. The PLSS was sponsored by the World Bank, Instituto Nationale de Estadistica and the Central Bank of Peru.
moonlighting. We consider this also as confirmation of our main finding that public sector wages are lower than private sector wages. We conclude that a further erosion of public sector wages can be expected to result in more moonlighting by civil servants.

Our research has an important policy message: Fiscal pressures will continue to call for reductions in the government wage bill via reductions in pay or in employment. Our evidence suggests that the time has come to prescribe the latter acknowledging that, of the two approaches, it is likely to be less palatable in the short-term but more effective in the long-run.

60 pages, Stock Number 11171, PC 005

LSMS Working Paper No. 53

Socioeconomic Determinants of Fertility in Côte d'Ivoire
Martha Ainsworth
1989

This paper examines the impact of schooling and income on fertility in Côte d'Ivoire using data from the 1985 Côte d'Ivoire Living Standards Survey. The first part presents graphically the correlations between fertility and area of residence, female schooling and household income. The second part estimates a reduced form equation in which the number of children ever born is regressed on the mother's age and schooling, the location of the household and household income variables. This equation is estimated using ordinary least squares (OLS), maximum likelihood Tobit and a Poisson count model.

For the entire sample, female schooling lowers fertility, while household income raises it. Among the subsample of urban women, only the
negative effect of schooling is observed; among the subsample of rural women only the positive effect of household income is observed. The absence of a schooling effect among rural women is attributed in part to the low proportion of women with any schooling. When the sample is broken into three age cohorts, the negative effect of schooling on fertility is observed for the youngest and middle cohorts (ages 15-24 and 25-34, respectively), while the positive effect of income is observed for the middle and oldest cohorts (25-34 and 35+, respectively). This suggests that a fertility decline may be underway among young educated women. Experimentation with different specifications of the schooling variable shows that schooling has a negative effect on fertility even during the early primary years, although the negative effect of secondary schooling is even greater.

The robustness of the results to the choice of income variable is also examined. Three income measures are used: the value of household consumption per adult (a proxy for permanent income); household income per adult; and household nonlabor income per adult. Results were most robust for the permanent income measure, less so for current income and insignificant for nonlabor income. Exclusion of all income variables from the fertility regression lowers the coefficient on schooling and, for rural women, renders it insignificant.

64 pages, Stock Number 11256, PC 005
In recent years, citing the low price elasticity of demand for schooling, some economists have advocated increasing school fees to raise revenue for educational improvements in developing countries. But elasticities alone are not enough – one must estimate the willingness to pay for schooling improvements to see whether higher fees are in fact desirable. Using a rigorous theoretical model of the demand for schooling and the principle of compensating variations, we calculate the willingness to pay for new secondary schools in rural Peru. We find that rural Peruvian households are indeed willing to pay fees high enough to more than cover the operating costs of opening new secondary schools in their villages. This is even true of the poorest quarter of the income distribution.

56 pages, Stock Number 11170, PC 005

Aggregate data on wages and employment may provide misleading indicators of labor market conditions. They may suggest inappropriate wage policies in the face of the rising unemployment experienced in many developing countries during the 1980s. Such increases in unemployment are often attributed to wage rigidities. A cursory review of aggregate data for the
modern sector in Côte d'Ivoire would support this view, suggesting that employment declined during the 1979-84 recession due to an increase in real wages. Examination of disaggregated data from two labor force censuses of the modern sector, however, shows that real wages declined for specified classes of labor. The work force was characterized by greater education, training, and experience; workers with a given level of attributes received a lower real wage by the end of the recession than before it. Despite this drop in real wages, employment in the modern sector declined.

Forthcoming French Only

LSMS Working Paper No. 56

The Poor In Latin America During Adjustment: A Case Study of Peru
Paul Glewe and Dennis de Tray
1989

This paper provides a general overview of the effects of structural adjustment programs on the poor and then turns to a specific country setting, Peru, to illustrate the discussion. It is a companion paper to a parallel study of an African country, the Côte d'Ivoire.

The depth of Peru's economic problems makes it probable that the Peruvian economy will have to undergo major adjustments in the near future. Among the options policy makers will consider are: realignment of the various exchange rates, trade liberalization, removal of price distortions, and reduction of government expenditures. The analysis presented here shows how household level data can be used to assess the effect of various policy options on the welfare of the poor.
Several features of Peru's poor have important implications for programs designed to reduce the effect of adjustment on those groups. First, most poor households are located in rural areas; second, most subsidies that affect rural areas do not reach the rural poor; third, the rural poor often produce much of what they consume. These facts suggest that correcting many of the distortions affecting Peru's agricultural sector may not directly harm the poor. For Peru's urban poor, the case is more complicated, but the conclusions much the same. Regarding food subsidies and taxes, were all of these dropped the net (immediate) effect may well be favorable as the prices of wheat and wheat products, including those related to health and education, could be changed in ways that would benefit the poor and, in some cases, reduce overall public sector expenditures.

54 pages, Stock Number 11262, PC 005

LSMS Working Paper No. 57

The Substitutability of Public and Private Health Care
For the Treatment of Children in Pakistan
Harold Alderman and Paul Gertler
1989

Evaluation of the ex ante impact of raising health care user fees on the utilization of medical care must consider the distribution of impacts across income groups as well as the potential for substitution of alternative providers of medical care. The current study uses a nested multinomial logit model to study the substitution of care providers for the treatment of children's illnesses in urban Pakistan. While the poor are more price responsive than the general population, reductions in utilization of
government clinics following a price rise will lead to greater increases in private care utilization than to self-care. Thus, the private sector is likely to absorb much of the impact of increased user fees in urban Pakistan, provided that there is no price response in this sector resulting from the increased demand.

36 pages, Stock Number 11237, PC 005

LSMS Working Paper No. 58

Identifying the Poor: Is Headship a Useful Concept?
Sandra Rosenhouse
1989

Policy makers concerned with the amelioration of poverty have singled out female-headed households as one of the key target groups deserving intensified attention. Studies have found that households headed by women are overrepresented among the poor. However, research conducted to examine the characteristics and well-being of these households has employed a definition of headship commonly used in surveys, that is, the person other household members recognize as the head of household. This term was originally introduced in surveys to avoid double counting of household members in household rosters, and in no way reflects any of the dimensions the concept of headship assumes: regular presence in the household, overriding authority, and primary economic support. This paper examines the characteristics of households reported to be headed by women to show the limited value of reported headship to reliably identify the economic support base of the household. To be relevant for policy the concept of headship should be defined and constructed so as to reflect that aspect of the concept being
examined. This paper presents one example of an indicator of headship which reflects work effort in support of the household. The working head definition was found to discriminate more clearly women supporting households in extreme circumstances than the reported head definition because it highlights the elements that contribute to the overall disadvantage of female heads: the lower return on their market hours of work and the overall work burden they carry to attain a given level of consumption for the members of their household.

60 pages, Stock Number 11263, PC 005

LSMS Working Paper No. 59

Labor Market Performance as a Determinant of Migration
Wim P.M. Vijverberg
1989

Are migrants more productive workers than nonmigrants? It is an old question, which is further complicated by the fact that one should distinguish productivity at (rural) places of origin from that at (urban) places of destination. In principle, one would like to determine productivity of workers regardless of their migration status and then compare workers who choose to migrate with the overall population. Even recent empirical studies yield no conclusions for such unconditional comparison, since they only examine productivity of workers, given their migration status.

In a comparison of migrants with nonmigrants, both observed and unobservable productivity factors are relevant. This paper focuses more on the unobservable factors and their correlation between places of origin and destination. A human capital model of migration demonstrates that more
productive workers at the origin would choose to migrate only if the correlation between origin and destination factors is strongly positive.

Longitudinal data drawn from the Côte d'Ivoire Living Standards Survey, 1985-86, are used to examine the pattern of migration in the light of labor market performance both of wage employees and nonfarm self-employed workers. It is found that, indeed, the more productive workers migrate. Furthermore, the general direction of migration is towards cities. The conclusion is therefore that rural areas lose their productive workers and that urban areas may gain in productivity from the geographical shifts in population.

48 pages, Stock Number 11244, PC 005
<table>
<thead>
<tr>
<th>Subject</th>
<th>LSMS WP No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>6</td>
</tr>
<tr>
<td>African Household Survey Capability (AHSCP)</td>
<td>6</td>
</tr>
<tr>
<td>Asia</td>
<td>2</td>
</tr>
<tr>
<td>adjustment</td>
<td>47,56</td>
</tr>
<tr>
<td>anthropometrics</td>
<td>40,51</td>
</tr>
<tr>
<td>Brazil</td>
<td>5</td>
</tr>
<tr>
<td>consumption</td>
<td>19,29,39,42,50</td>
</tr>
<tr>
<td>Côte d'Ivoire</td>
<td>24-26,29,30,33,35-36,39,43,44,46,47,51-53,55</td>
</tr>
<tr>
<td>employment</td>
<td>8,18</td>
</tr>
<tr>
<td>Engel's Law</td>
<td>11,28</td>
</tr>
<tr>
<td>education, returns to</td>
<td>14,32,33,38</td>
</tr>
<tr>
<td>education, willingness-to-pay</td>
<td>54</td>
</tr>
<tr>
<td>expenditure measurement</td>
<td>7,9,22,28,29,31,39,42</td>
</tr>
<tr>
<td>family enterprise</td>
<td>46</td>
</tr>
<tr>
<td>female headship</td>
<td>58</td>
</tr>
<tr>
<td>fertility</td>
<td>53</td>
</tr>
<tr>
<td>food subsidies</td>
<td>50</td>
</tr>
<tr>
<td>gender issues</td>
<td>39,58</td>
</tr>
<tr>
<td>Ghana</td>
<td>49</td>
</tr>
<tr>
<td>health</td>
<td>13,15,31,35,37</td>
</tr>
<tr>
<td>health financing</td>
<td>31,37,45,57</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>20</td>
</tr>
<tr>
<td>household equivalent scales</td>
<td>11</td>
</tr>
</tbody>
</table>
Program of Joint Studies on Latin American Economic Integration, ECIEL .....................................................12
self-employment ........................................................................43
Senegal .............................................................................6
Sri Lanka ........................................................................11
social accounting matrices .................................................17
Thailand ...........................................................................27
UN Statistical Office (UNSO) ..................................................4
user fees ...........................................................................35,37,45,57
welfare ........................................................................11,19,29,42,45,48,50
wages ...........................................................................33,38,41,52
<table>
<thead>
<tr>
<th>Authors</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acharya, Meena</td>
<td>13</td>
</tr>
<tr>
<td>Ainsworth, Martha</td>
<td>18, 28, 49</td>
</tr>
<tr>
<td>Alderman, Harold</td>
<td>53</td>
</tr>
<tr>
<td>Altimir, Oscar</td>
<td>2</td>
</tr>
<tr>
<td>Amenuevgebe, Ben</td>
<td>45</td>
</tr>
<tr>
<td>Arriagada, Ana-Maria</td>
<td>32</td>
</tr>
<tr>
<td>Ashenfelter, Orley</td>
<td>15</td>
</tr>
<tr>
<td>Benjamin, Dwayne</td>
<td>39</td>
</tr>
<tr>
<td>Birdsall, Nancy</td>
<td>10</td>
</tr>
<tr>
<td>Booker, William</td>
<td>4</td>
</tr>
<tr>
<td>Case, Anne</td>
<td>20</td>
</tr>
<tr>
<td>Chander, Ramesh</td>
<td>1, 3</td>
</tr>
<tr>
<td>Cheung, K.F.</td>
<td>14, 15</td>
</tr>
<tr>
<td>Cochrane, Susan H.</td>
<td>12</td>
</tr>
<tr>
<td>de Andre, Paulo T.A.</td>
<td>3</td>
</tr>
<tr>
<td>de Tray, Dennis</td>
<td>44, 52</td>
</tr>
<tr>
<td>Deaton, Angus</td>
<td>5, 8, 15, 20, 22, 34, 39</td>
</tr>
<tr>
<td>Dor, Avi</td>
<td>29, 31</td>
</tr>
<tr>
<td>Dubois, Jean-Luc</td>
<td>17</td>
</tr>
<tr>
<td>Fung, H.W.</td>
<td>14</td>
</tr>
<tr>
<td>Gertler, Paul</td>
<td>31, 41, 51, 53</td>
</tr>
<tr>
<td>Gleewe, Paul</td>
<td>21, 37, 44, 51, 52</td>
</tr>
<tr>
<td>Grootaert, Christiaan</td>
<td>1, 7, 12, 13, 14, 15, 17, 20, 21</td>
</tr>
<tr>
<td>Ho, Teresa J.</td>
<td>11</td>
</tr>
<tr>
<td>Kalsbeek, William D.</td>
<td>12</td>
</tr>
<tr>
<td>Knight, Jane A.</td>
<td>14</td>
</tr>
<tr>
<td>Laraki, Karim</td>
<td>45</td>
</tr>
<tr>
<td>Levy, Victor</td>
<td>51</td>
</tr>
<tr>
<td>Locay, Luis</td>
<td>31</td>
</tr>
<tr>
<td>Martorell, Reynaldo</td>
<td>10</td>
</tr>
<tr>
<td>Mehra, Kalpana</td>
<td>46</td>
</tr>
</tbody>
</table>
Mehran, Farhad .................................................................5
Moock, Peter .................................................................32
Muñoz, Juan .................................................................18
Musgrove, Philip ............................................................8
Newman, John L. ...........................................................30,51
Pyatt, Graham ...............................................................1
Rosenhouse, Sandra ..........................................................54
Sanderson, Warren ..........................................................31
Saunders, Christopher .......................................................7
Savane, Landing ...............................................................4
Scott, Christopher ...........................................................3,45
Singh, Parmeet ...............................................................4
Solon, Gary .................................................................15
Sourrouille, Juan .............................................................2
Stelcner, Morton ............................................................32,36
Strauss, John ...............................................................35,46
Suarez-Berenguela, Ruben M. ...........................................24,25
Sullivan, Jeremiah M. .......................................................12
Tam, S.M. .................................................................14
United Nations Statistical Office ..........................................3
Van der Gaag, Jacques ...................................................26,28,29,31,36,41,48
Vijverberg, Wim ...........................................................26,36,38,42,47
Visaria, Pravin ...............................................................1
Wahab, Mohammed Abdul .................................................6
Wood, G. Donald, Jr. .......................................................14
How to Order World Bank Publications

Customers outside the United States: Contact your local World Bank Publications distributor. (A list of distributors is on the preceding page. Orders may be sent to the U.S. only if no distributor is listed for your country.) Prices & payment terms vary by country. Consult your local distributor before placing an order.

Customers in the United States: Enter the title, stock number, and quantity desired. (Enter the price from the schedule below that matches the price code [PC] given with each title in this book.)

<table>
<thead>
<tr>
<th>Title</th>
<th>Stock No.</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subtotal US$ ______

Airmail outside USA (US$6.00 per item) US$ ______

Total US$ ______

Name ________________________________
Title ________________________________
Organization _________________________
Address ______________________________

City __________________ State ______ Postal Code ______
Country ______ Telephone (______) ______

Method of payment. Note that orders from individuals must be accompanied by payment or credit card information.

Enclosed is my check.
Make check payable to World Bank Publications in U.S. dollars unless you are ordering from your local distributor.

Charge my ___ VISA ___ MasterCard ___ American Express.

Credit cards accepted only for orders addressed to World Bank Publications. Check with local distributor about acceptance of credit cards in your country.

Credit card account number __________ Expiration date ______

Signature (required to validate all orders)

Send invoice and reference my purchase order no. ___________ (institutional customers only).

Mail your order to: World Bank Publications
P.O. Box 7247-8619
Philadelphia, PA 19170-8619, U.S.A.

Order in the U.S. by telephone (202-225-2165) or by facsimile (202-417-0482).

World Bank Publications U.S. Price Schedule

Effective January 1, 1989
Subject to change without notice
PRICES VARY BY COUNTRY

Customers in the United States and in countries where there are no official World Bank publications distributors should use this price schedule to determine the costs of materials announced in this publication.

Customers in countries served by an authorized World Bank publications distributor must order locally and should contact the distributor for the local price schedule. Prices vary by country, reflecting local custom and mailing and handling costs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>Free</td>
<td>001</td>
<td>$1.95</td>
<td>002</td>
<td>2.95</td>
</tr>
<tr>
<td>003</td>
<td>3.95</td>
<td>004</td>
<td>4.95</td>
<td>005</td>
<td>5.95</td>
</tr>
<tr>
<td>006</td>
<td>6.95</td>
<td>007</td>
<td>7.95</td>
<td>008</td>
<td>8.95</td>
</tr>
<tr>
<td>009</td>
<td>9.95</td>
<td>010</td>
<td>10.95</td>
<td>011</td>
<td>11.95</td>
</tr>
<tr>
<td>012</td>
<td>12.95</td>
<td>013</td>
<td>13.95</td>
<td>014</td>
<td>14.95</td>
</tr>
<tr>
<td>015</td>
<td>15.95</td>
<td>016</td>
<td>16.95</td>
<td>017</td>
<td>17.95</td>
</tr>
<tr>
<td>018</td>
<td>18.95</td>
<td>019</td>
<td>19.95</td>
<td>020</td>
<td>20.95</td>
</tr>
<tr>
<td>021</td>
<td>21.95</td>
<td>022</td>
<td>22.95</td>
<td>023</td>
<td>23.95</td>
</tr>
<tr>
<td>024</td>
<td>24.95</td>
<td>025</td>
<td>25.95</td>
<td>026</td>
<td>26.95</td>
</tr>
<tr>
<td>027</td>
<td>27.95</td>
<td>028</td>
<td>28.95</td>
<td>029</td>
<td>29.95</td>
</tr>
</tbody>
</table>

World Bank Publications U.S. Price Schedule

Effective January 1, 1989
Subject to change without notice
PRICES VARY BY COUNTRY

Customers in the United States and in countries where there are no official World Bank publications distributors should use this price schedule to determine the costs of materials announced in this publication.

Customers in countries served by an authorized World Bank publications distributor must order locally and should contact the distributor for the local price schedule. Prices vary by country, reflecting local custom and mailing and handling costs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>Free</td>
<td>001</td>
<td>$1.95</td>
<td>002</td>
<td>2.95</td>
</tr>
<tr>
<td>003</td>
<td>3.95</td>
<td>004</td>
<td>4.95</td>
<td>005</td>
<td>5.95</td>
</tr>
<tr>
<td>006</td>
<td>6.95</td>
<td>007</td>
<td>7.95</td>
<td>008</td>
<td>8.95</td>
</tr>
<tr>
<td>009</td>
<td>9.95</td>
<td>010</td>
<td>10.95</td>
<td>011</td>
<td>11.95</td>
</tr>
<tr>
<td>012</td>
<td>12.95</td>
<td>013</td>
<td>13.95</td>
<td>014</td>
<td>14.95</td>
</tr>
<tr>
<td>015</td>
<td>15.95</td>
<td>016</td>
<td>16.95</td>
<td>017</td>
<td>17.95</td>
</tr>
<tr>
<td>018</td>
<td>18.95</td>
<td>019</td>
<td>19.95</td>
<td>020</td>
<td>20.95</td>
</tr>
<tr>
<td>021</td>
<td>21.95</td>
<td>022</td>
<td>22.95</td>
<td>023</td>
<td>23.95</td>
</tr>
<tr>
<td>024</td>
<td>24.95</td>
<td>025</td>
<td>25.95</td>
<td>026</td>
<td>26.95</td>
</tr>
<tr>
<td>027</td>
<td>27.95</td>
<td>028</td>
<td>28.95</td>
<td>029</td>
<td>29.95</td>
</tr>
</tbody>
</table>

World Bank Publications U.S. Price Schedule

Effective January 1, 1989
Subject to change without notice
PRICES VARY BY COUNTRY

Customers in the United States and in countries where there are no official World Bank publications distributors should use this price schedule to determine the costs of materials announced in this publication.

Customers in countries served by an authorized World Bank publications distributor must order locally and should contact the distributor for the local price schedule. Prices vary by country, reflecting local custom and mailing and handling costs.

<table>
<thead>
<tr>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
<th>Code</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>000</td>
<td>Free</td>
<td>001</td>
<td>$1.95</td>
<td>002</td>
<td>2.95</td>
</tr>
<tr>
<td>003</td>
<td>3.95</td>
<td>004</td>
<td>4.95</td>
<td>005</td>
<td>5.95</td>
</tr>
<tr>
<td>006</td>
<td>6.95</td>
<td>007</td>
<td>7.95</td>
<td>008</td>
<td>8.95</td>
</tr>
<tr>
<td>009</td>
<td>9.95</td>
<td>010</td>
<td>10.95</td>
<td>011</td>
<td>11.95</td>
</tr>
<tr>
<td>012</td>
<td>12.95</td>
<td>013</td>
<td>13.95</td>
<td>014</td>
<td>14.95</td>
</tr>
<tr>
<td>015</td>
<td>15.95</td>
<td>016</td>
<td>16.95</td>
<td>017</td>
<td>17.95</td>
</tr>
<tr>
<td>018</td>
<td>18.95</td>
<td>019</td>
<td>19.95</td>
<td>020</td>
<td>20.95</td>
</tr>
<tr>
<td>021</td>
<td>21.95</td>
<td>022</td>
<td>22.95</td>
<td>023</td>
<td>23.95</td>
</tr>
<tr>
<td>024</td>
<td>24.95</td>
<td>025</td>
<td>25.95</td>
<td>026</td>
<td>26.95</td>
</tr>
<tr>
<td>027</td>
<td>27.95</td>
<td>028</td>
<td>28.95</td>
<td>029</td>
<td>29.95</td>
</tr>
</tbody>
</table>
LSMS Working Papers (continued)

No. 35  The Demand for Medical Care in Developing Countries: Quantity Rationing in Rural Côte d'Ivoire
No. 36  Labor Market Activity in Côte d'Ivoire and Peru
No. 37  Health Care Financing and the Demand for Medical Care
No. 38  Wage Determinants and School Attainment among Men in Peru
No. 39  The Allocation of Goods within the Household: Adults, Children, and Gender
No. 40  The Effects of Household and Community Characteristics on the Nutrition of Preschool Children: Evidence from Rural Côte d'Ivoire
No. 41  Public-Private Sector Wage Differentials in Peru, 1985–86
No. 42  The Distribution of Welfare in Peru in 1985–86
No. 43  Profits from Self-Employment: A Case Study of Côte d'Ivoire
No. 44  The Living Standards Survey and Price Policy Reform: A Study of Cocoa and Coffee Production in Côte d'Ivoire
No. 45  Measuring the Willingness to Pay for Social Services in Developing Countries
No. 46  Nonagricultural Family Enterprises in Côte d'Ivoire: A Descriptive Analysis
No. 47  The Poor during Adjustment: A Case Study of Côte d'Ivoire
No. 48  Confronting Poverty in Developing Countries: Definitions, Information, and Policies
No. 49  Sample Designs for the Living Standards Surveys in Ghana and Mauritania/Plans de sondage pour les enquêtes sur le niveau de vie au Ghana et en Mauritanie
No. 50  Food Subsidies: A Case Study of Price Reform in Morocco (also in French, 50F)
No. 51  Côte d'Ivoire: Estimates for Child Anthropometry from Two Surveys, 1985 and 1986
No. 52  Public-Private Sector Wage Comparisons and Moonlighting in Developing Countries: Evidence from Côte d'Ivoire and Peru
No. 53  Socioeconomic Determinants of Fertility in Côte d'Ivoire
No. 54  The Willingness to Pay for Education in Developing Countries: Evidence from Rural Peru
No. 55  Rigidité des salaires: Données microéconomiques et macroéconomiques sur l'ajustement du marché du travail dans le secteur moderne (in French only)
No. 56  The Poor in Latin America during Adjustment: A Case Study of Peru
No. 57  The Substitutability of Public and Private Health Care for the Treatment of Children in Pakistan
No. 58  Identifying the Poor: Is "Headship" a Useful Concept?
No. 59  Labor Market Performance as a Determinant of Migration