LSMS

Living Standards
Measurement Study
Working Paper No. 1

LSM- 1
OCT. 1980

Living Standards Surveys in Developing Countries

Ramesh Chander
Christiaan Grootaert
Graham Pyatt

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. 4 *Towards More Effective Measurement of Levels of Living, and Review of Work of the United Nations Statistical Office (UNSO) Related to Statistics of Levels of Living*

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*

(List continues on the inside back cover)

Living Standards Surveys in Developing Countries

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 Third World statistical offices. Its goal is to foster increased use of household data as a basis for policy decision making. 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 policy makers.

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. Future publications will recommend specific survey, questionnaire and data processing designs, and demonstrate the breadth of policy analysis that can be carried out using LSS data.

LSMS Working Papers
Number 1

Living Standards Surveys in Developing Countries

Ramesh Chander
Christiaan Grootaert
Graham Pyatt

The World Bank
Washington, D.C., U.S.A.

Manufactured in the United States of America
First printing October 1980
Third printing March 1986

This is a working document 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 publication is supplied at a token charge to defray part of the cost of manufacture and distribution.

The World Bank does not accept responsibility for the views expressed herein, which are those of the authors and should not be attributed to the World Bank or to its affiliated organizations. The findings, interpretations, and conclusions are the results of research supported by the Bank; they do not necessarily represent official policy of the Bank. The designations employed, the presentation of material, and any maps used in this document are solely for the convenience of the reader and do not imply the expression of any opinion whatsoever on the part of the World Bank or its affiliates concerning the legal status of any country, territory, city, area, or of its authorities, or concerning the delimitation of its boundaries, or national affiliation.

The most recent World Bank publications are described in the annual spring and fall lists; the continuing research program is described in the annual *Abstracts of Current Studies*. The latest edition of each is available free of charge from the Publications Sales Unit, Department T, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A., or from the European Office of the Bank, 66 avenue d'Iéna, 75116 Paris, France.

When this paper was first published Ramesh Chander was a Statistical Adviser with the Economic Analysis and Projections department. Christiaan Grootaert was an Economist, and Graham Pyatt a Senior Adviser, with the Development Research department of the World Bank.

Library of Congress Cataloging-in-Publication Data

Chander, R.
Living Standards surveys in developing countries / Ramesh Chander, statistical adviser, Christiaan Grootaert, economist, Graham Pyatt, senior adviser. — Washington, D.C., U.S.A. (1818 H St., N.W., Washington 20433): World Bank, Development Research Center, c1980.

27 p.; 28 cm. — (LSMS working paper; no. 1)

Based on a paper originally presented at an Aug. 1980 meeting of the American Statistical Association.

1. Cost and standard of living—Statistical methods. 2. Economic surveys. I. Grootaert, Christiaan, 1950- . II. Pyatt, Graham, 1936- . III. World Bank. Development Research Center. IV. Title. V. Series.
HD6978.C745 1980 82-239521
339.4'7'091724—dc19

AACR 2 MARC

Library of Congress

LIVING STANDARDS SURVEYS IN DEVELOPING COUNTRIES

TABLE OF CONTENTS

		Page No.
I.	INTRODUCTION	1-3
II.	GENERAL FRAMEWORK OF LSMS	4-7
III.	THE WORK PROGRAM IN OUTLINE: Phases I-III, The Topic Studies, Beyond LSMS	8-13
IV.	PHASE I: Evaluation of Existing Data and Methods of Collection and Analysis; Preliminary Design of Topic Studies and of New Surveys	14-24
V.	PHASE II: Preparation for Field Tests, Pilot and Full Surveys	24-27

I. INTRODUCTION

The purpose of this paper* is to introduce the Living Standards Measurement Study (LSMS), recently begun at the World Bank. The initial objective of this study is to identify the data which can most usefully be collected and the best ways of collecting it, in order to provide a description of living standards and a basis for analysis in support of policy formulation. Household surveys are seen as being the primary means of data collection for this purpose.

The LSMS has been conceived broadly as a response to needs which are widely recognized among all concerned with the issues of development. Simply put, these needs are for a better quantitative basis for the design and monitoring of development policy. Given that such policy is primarily concerned with securing and raising the living standards of people, there is a premium on the facts as they relate to living standards in general, and more specifically to poverty, basic needs, employment and income distribution. Facts in these areas are needed to complement the picture of economic activity as portrayed by data on production, accumulation, the balance of payments, etc. The emphasis of the development debate, at all levels, is focused ultimately on people and their circumstances. The LSMS is therefore intended as a contribution towards meeting the healthy appetite for information about people and their well being.

In supplying essential data for the determination of policy, the potential importance of LSMS is unlikely to diminish in the years to come. This is firstly because of the historical trend in most cultures towards a greater concern for equality as such. This trend is encouraged by the weight of evidence that aggregate growth is not always shared equally within countries. But such evidence is sketchy, so that conclusions are rarely indisputable. One

* An earlier version of this paper was presented at the meeting of the American Statistical Association, Houston Texas, August, 1980.

reason for wanting to undertake the LSMS is to remedy this situation. The need to do so will be of even greater importance in the future since many countries must now address the probability of having to restructure their economies in the face of slower overall growth of export demand, and a worsening of the terms of trade. Without the facts on how individual living standards are geared to the production structure, there are major difficulties in trying to formulate a policy for restructuring which is sensitive to its repercussions on different socio-economic groups. Without knowing how the living standards of such groups are in fact changing over time, it will not be possible to judge the success of any policy in protecting living standards or sharing hardships.

Following the meeting of an Expert Advisory Group held in February, the work program for the LSMS has been designed to take advantage as much as possible of the many indications of support which were offered at the meeting and, of course, to plan the program in the light of the expert comments and advice which were received. The main implications are to present a program in three phases that will spread over four years.

While the general proposal to launch the LSMS has been well received, various commentators have stressed the enormous range of topics which could potentially be addressed, and the consequent need to define a relatively narrow focus at the outset. Similarly, while the purpose of LSMS is potentially to contribute to improved practice in a wide range of countries, the study can directly concern itself with only a handful. On subject matter, therefore, it has been decided to limit attention largely to income and expenditure data, though these are to be approached in a broad framework. With respect to country coverage, the work program and our plans for the discussion and dissemination of results both reflect a concern to spread the benefits of LSMS as widely as possible,

while limiting the instances in which LSMS might have a direct involvement. In this context it is distinctly helpful that other initiatives are under way to help countries develop their capability to conduct household surveys. Notable in this regard are the U.N. Household Survey Capability Programme and the Inter-American Household Survey Programme. With their initial emphasis more on capability than on content, these programs are complementary to LSMS. Therefore, in planning the work program for LSMS, the approach has been to provide opportunity and flexibility for mutually supportive efforts. More broadly, in devising a work program to fit within our constraints the guiding principles have been (a) to define a basic core of activities which we will pursue directly; and (b) to allow flexibility to collaborate and make contributions to the work of others insofar as we are able and invited to do so.

An important task for LSMS is to identify best practice for collecting data which measure some major aspects of living standards. It is therefore intended to produce model questionnaires and supporting manuals as LSMS output. These, however, are not envisaged as the total product. Questions of "what data are to be collected, and how?" will be approached in LSMS via the data needs identified for policy formulation. The primary output will therefore be a set of studies on what data is needed and how it can be used to illuminate particular areas of policy intervention. By giving this emphasis to applications of household survey data and demonstrating their use, we hope to contribute as much to the stimulation of demand for better surveys as to their design.

The remainder of this paper is subdivided into four sections. Section II outlines the general framework of LSMS. Section III describes the work program in brief. More detail on Phase I of the work program is provided in Section IV, while Section V looks at Phase II and beyond.

II. GENERAL FRAMEWORK OF LSMS

The technical limitations of existing surveys, and the methodology on which they are based, caution against high expectations as to what can be achieved with the existing state of the art. It follows that much must be ruled out. A particular casuality is the wish to measure changes in individual living standards over time via longitudinal studies. For some this would be the highest priority for LSMS if other things were equal. While some success has previously been reported in this area, the known methods are both sophisticated and costly, while results are inevitably slow to emerge. The LSMS is concerned with methods that could be assimilated relatively smoothly across many countries; and to promote greater demand among those who make policy for the products which survey statisticians can more readily supply. In short, the need is to give focus and purpose to household surveys in line, more or less, with current capabilities and budgets.

While the possibility of undertaking longitudinal studies must be ruled out, an emphasis on what changes are taking place over time is essential to LSMS. The primary need is to know which groups in society are benefiting from development efforts, and by how much. In particular, it is important to establish whether some groups are being left out. Accordingly, the main thrust of the LSMS must be towards a set of concepts and questions which can be used repeatedly, maybe at five-year intervals, to make statements about changes over time.

This emphasis has various implications for what LSMS can usefully attempt and expect to achieve. First, it justifies an unusual emphasis on systematizing concepts, questionnaire design, field methods and subsequent data processing and analysis. Purpose-built software may be appropriate, for example, although probably beyond the means of LSMS itself. More generally, LSMS must be deeply

concerned with support systems for carrying through survey work at all stages. At present, many countries are able to execute surveys in the field, only to run into major problems at the various stages of editing, tabulating and analyzing the results. Such problems are a major factor in explaining why many surveys are slow to yield useful results. In turn, the lack of timeliness in obtaining results is an important reason for the low priority giv en to survey work by many governments. Thus, while statistical offices often complain about their lack of resources and the low priority accorded to their needs, it must be recognized that the output they generate is rarely exhilarating. By now there is, of course, a 'chicken-and-the-egg' problem here. If we take the more favorable interpretation of the situation from the statisticians' viewpoint, then the implication is that Prime Ministers, Finance Ministers, etc., together with their senior administrative colleagues, do not fully appreciate the opportunities that are being missed. But if this is so, then customer education via demonstration effects should be a top priority for LSMS. This means that the processing and analysis of data to draw out its policy implications deserve even greater emphasis than do the niceties of the conceptual frame or subleties of imputation. It is arguable that those things which happen, or should happen after data has been collected define the topics which deserve the most serious attention.

Second, it must be recognized that there are strong arguments against attempts to incorporate in one survey the many issues which separate surveys can address. Yet the multiple dimensions of living standards, and their recognized connections--for example, between health and housing conditions, education and fertility--cannot be captured by simple, single purpose surveys. Moreover, surveys which are focused too narrowly are potentially dangerous insofar as they draw attention to particular aspects to the exclusion of others, or to the broader issues of social and economic development. The danger here is in a

misplaced focus of attention and the literal interpretation of results. If surveys show that many households lack electricity, it is not an obvious development priority to remedy this situation. Of course, the statistician cannot be blamed for such ex post misapplications when they occur. But at the ex ante stage, participating in the debate on which data are most needed for policy purposes, the statistician cannot avoid a responsibility for the wise deployment of resources. This stricture applies equally to LSMS and the priorities and scope which are recognized by it. If its purpose is to develop concepts, methods and manuals on procedure which will make it easier for countries to collect particular types of data, then the responsibility for being selective cannot be avoided. The need, then, is to identify those central topics through which a survey, repeated at five-year intervals, can capture the main elements in the determination of living standards for different groups over time. In any particular instance, extra modules can be added to the core questionnaire, depending on data needs in particular situations. LSMS must be designed to encourage this possibility. Its primary focus, however, must be on the core of questions which permit statements about changes over time in the main elements of living standards.

Finally, the emphasis on changes over time should not be interpreted as a preoccupation with the vicissitudes of individual fortunes. There are a great many factors which play a role in determining the progress through time of individual and family circumstances. Those which are interesting from the perspective of LSMS are the ones which are amenable to being influenced by policy. They therefore relate to differences in mean values between groups and over time, when groups are defined with respect to characteristics which can be distinguished in the design of policy. By implication, there are numerous alternative groupings which are of interest, and there is no reason for LSMS to focus on any particular one. The point which has a direct bearing

on the design of LSMS is that there is a premium on measuring group means accurately as opposed to intragroup variations. The emphasis should not be on inequality per se, but on that part of inequality which can be captured between groups, however defined. This means that the measurement of income distributions should be discounted in LSMS to the extent that it calls for a different approach to that which will provide best estimates on the trends over time in mean values for different groups.

If data are to be useful, then it should be relatively straightforward to demonstrate how they are to be used, that there is a market for the product, and that it is potentially within the capacity of most countries to deliver that product in a timely fashion. The need, then, is for a relatively simple and straightforward survey, the details of which need to be 'got right', including the details of how the results obtained in the field are subsequently to be processed and analyzed.

III. THE WORK PROGRAM IN OUTLINE

The work program set out below is in three phases which broadly correspond to the sequence: design; implementation; and analysis. This order of succession, however, is not intended to delay the start of each phase until previous phases have been completed; and there will be feedbacks from later stages onto earlier work, especially the feedback from analysis onto design.

III. (i) Phase I

Phase I has three main components. These are:

1) Evaluation of existing data and methods of collection and analysis
2) The preliminary design of topic studies
3) The preliminary design of new surveys

Details for each of these components are given in the next section of this paper. Here it can be noted that upon completion of Phase I documentary material will be disseminated widely both through direct distribution to interested parties and through scientific meetings.

III. (ii) Phase II

The purpose of Phase II will be to carry out fieldwork in selected countries, both of small-scale experiments or pilot surveys and, in some instances, of full national surveys. These surveys will be based on the proposals generated in Phase I. In any one instance, the detailed content of the survey work will be based on a range of considerations, including the particular interests of the country in question, while staying within the overall conceptual framework of LSMS. Beyond this, the arrangements will have to reflect the local capability in a country. In some cases it will be necessary for LSMS to directly provide inputs beyond those obtained from Phase I of the study. In others, these additional inputs - covering local adaptation of manuals and questionnaires, sample

design, training and management of field staff, data editing and processing - will be provided locally or through technical assistance programs such as the UN National Household Survey Capability Programme.

The work on Phase II will cover both small-scale, experimental surveys and full national surveys. Some of the former will normally be necessary as a preliminary to the latter, but it will not be useful or necessary in all cases to proceed from small-scale experiments to full national surveys within the framework of LSMS since the results of experiments will be of value in themselves. Equally, it will be necessary to limit the amount of experimental work within LSMS to allow full weights to be given to the national surveys which are potentially the primary focus. Further details on the nature and range of potential experimentation are given in Section V below. These cover both subject-treatment experiments and experiments of a purely statistical character.

III. (iii) Phase III

Phase III is the final phase of LSMS and therefore covers the documentation of results and recommendations. These are to fall under the following three headings:

1) Manuals and questionnaires
2) Topic studies
3) Scientific papers

The need for documentation on the questionnaires which LSMS will recommend as a basis for national practice is self-evident. However, there are two features of LSMS which will particularly influence the documentation to be prepared. One is the emphasis to be put on measuring changes in living standards over time. The other is the recognition that no one questionnaire is appropriate for all national and cultural situations. Both considerations argue for the basic emphasis to be on the concepts to be measured and maintained over time.

The detailed translation of these concepts into particular national/cultural situations need not be uniform; therefore, the documentation must cover the principles for such translation, with examples, as well as the concepts themselves.

The source of the concepts to be used in LSMS will be the topic studies which show what data is needed, why, and how it should be tabulated and analyzed to yield policy inferences. These studies will therefore be the main component of LSMS. They are not intended to be advanced treatises on particular topics, but general guides on how to use results from household surveys to inform a broad audience about living standards and to analyze and explain their determinants.

To set these topic studies in context, survey results can be considered at four levels at least. First, there are the crude numbers obtained from field work, edited for quality control and made accessible in data files. This product is the primary goal, since it provides a micro-data set which should be accessible in response to whatever specific questions might be addressed to it, or whatever working files might be needed for particular applications and analyses. Second, results take the form of derived statistics which can usefully complement the basic data, such as subtotals, ratios, and imputed values for particular variables. Again, there seems to be no substitute for direct recommendations in this area, and for some worked-through examples which can provide a ready checklist for others to follow up. The third level of results comprises the graphs, tabulations, and standard formats for presentation (and publication) of what has been revealed by the survey. Some countries are well able to carry through this stage of a survey without any such guidance. But there are a great many which are not. A significant amount of the current frustration with the "state of the art" is due to the fact that the processing of results at this stage is ill-designed regarding both scope and content. There seems to be an

unsatisfied demand for detailed recommendations in this area. Moreover, it is the results obtained at this level which are of the greatest potential interest for public debate. Comparing such results over time will define the changes which have taken place, and hence the evolution of living standards which is our primary concern. Therefore, such results merit the closest consideration.

Finally, results take the form of in-depth investigations, typically involving multivariate analysis, hypothesis testing, etc. There is a great shortage of individuals who can design and execute studies at this level, e.g., studies on Engel curves; hedonic studies of housing conditions; measures of poverty and inequality; and earnings functions. Such studies can add depth to the understanding obtained from simple, tabular results, and hence be of value to the policy-making process. Accordingly, they should be a part of the LSMS, in the spirit that prototype studies might usefully be replicated in countries where the necessary skills are available.

III (iv) The Topic Studies

The list of topic studies for LSMS is not final. So far we have

Poverty and inequality;

Manpower, employment, and earnings;

Income distribution and national accounts;

Demand analysis;

Economic influences on demography;

Access to public services.

In each case, these studies will discuss basic concepts; corresponding data requirements and how they relate to the data collection recommended by LSMS; recommended methods of tabulation and analysis, with illustrations based on country examples; and finally, but not least, how to interpret the results and extract their policy implications.

Since these studies largely define the data that LSMS needs to collect, it is important at the outset to develop an outline of each study, including the concepts to be measured and the tabulations, etc., which are required.

The list of studies given above is open-ended as previously noted, and there may be some deletions. The data which LSMS collects will potentially permit a wide range of studies which would serve the basic concern to demonstrate how to tabulate and analyze data once it is collected, and how to interpret such tabulations, and extract their implications. This, then, is an area in which it is hoped to preserve some flexibility to allow new opportunities to be seized as they present themselves.

Given our intention to make the topic studies practical and basically simple, there will be a separate need to communicate some of the more sophisticated research findings of LSMS to the professional audience. This will be done through scientific journals in the usual manner.

Scientific publications are only one way in which we propose to keep the profession informed of progress and results of LSMS as it proceeds. A second, which will provide the primary vehicle, is to be a special series of working papers, to be advertised and available on request. This series will begin with the papers presented to the Expert Group Meeting in February, a list of which is attached as Annex I.

III. (v) Beyond LSMS

To conclude this overview of the work program and before coming to the more detailed discussion of content which follows, it is appropriate to say something about the future after LSMS is completed. This future must be uncertain, of course, not least because the outcome of the study is itself uncertain. LSMS is a research study. Some of its experiments or findings will be discouraging, no doubt, and there will be a need at the end of the study to undertake a major evaluation. This should not involve too many surprises, however, insofar as contacts with both professional opinion and government statisticians will be established and maintained throughout. Also, the success of the study will depend, in the first instance, on the extent to which national statistical authorities choose to adopt the proposals which emerge from Phase I of the study without necessarily waiting for all phases to be completed. Within this, the LSMS recommendations on how to tabulate and present household survey information may have far-reaching and more immediate consequences than full adoption of the LSMS proposals.

In view of the range of possibilities as to how LSMS might influence future work on living standard measurement, the study will not be directed to any fixed ends beyond those described in this work program. By maintaining the close cooperation there has been with the UN National Household Survey Capability Program through the early stages of defining the LSMS and by keeping the Statistical Commission informed of progress on the study, it it hoped that the LSMS research study will lead to a set of results which might eventually be commended as guidelines for national practice.

IV. PHASE I

IV. (i) Evaluation of Existing Data and Methods of Collection and Analysis

This activity has already begun, and papers presented to the Expert Group Meeting held in February 1980, document much of the experience to date (see Annex 1 for a list of Working Papers derived from this meeting). This documentation will now be extended by further papers on specific investigations of survey methodology which might be set up as new experiments within LSMS--focusing on such technical details as recall periods, use of diaries, reinterviews, nonresponse, etc.--or as tests on existing data sets where such experimental information has already been collected.

While there is enormous scope for further analysis of existing data, the general position is that enough has been learned to date to suggest that this will be a less productive activity than working on fresh, newly designed information. Accordingly, such analysis will be restricted to situations which are exceptional either in terms of the richness of the information source and prospects for local collaboration, or because such work will provide the additional opportunity to become familiar with the situation in a country which is likely to be involved in subsequent stages of the LSMS. So far, five countries have been identified which are exceptional in these terms.

These investigations of existing data follow detailed work on the analysis of surveys already undertaken in the Bank, much of which is briefly reported on by Altimir and Visaria in their respective papers to the February meeting. Otherwise, the literature on existing surveys provides a resource on which we will draw freely, as with the general professional experience in this area which is known to us or becomes available.

IV. (ii) Preliminary Design of Topic Studies

Work on the preliminary design of four of the six proposed topic studies will commence this summer. It will focus on the specification of concepts, *pro forma* tabulations, and the analyses which we would like to carry out with Phase II results as available. The general form of each study will be:

(1) Concepts to be measured and their theoretical basis;

(2) Questionnaire modules to measure the concepts and experience of their use;

(3) Numerical results, with special emphasis on tabular and graphical presentation and interpretation;

(4) Derived statistics and their interpretation;

(5) More advanced analysis, hypothesis testing and interpretation;

(6) Policy implications.

For the first four of the provisional studies, items (1) and (3) *pro forma* are to be completed by December 1980 together with outlines of the full study in each case. To the extent possible, results from previous studies and new results from surveys available to us will be used to test out concepts and to illustrate the *pro forma*. This work will continue over succeeding periods, pending the availability of fresh material from Phase II of LSMS. Meanwhile, the early results at the *pro forma* stage will provide material for dissemination and professional discussion. The following notes are a preliminary guide as to possible content.

Income Distribution and National Accounts: This study will show how household survey data can be used as a micro-data base for national accounts. The emphasis will be on national accounts in the expanded social accounting matrix (SAM) format in which the household sector is subdivided into socio-economic groups, analogous to the subdivision of production in input-output analysis. This study

will define the overall framework, not least with respect to concepts and definitions, which will be carried forward in other studies. It will build on the work on SAM's which has already been undertaken in various countries.

Demand Analysis: This study will examine in depth the various issues which underlie estimates of total consumption by households. The subject matter will cover Engel curve analysis and household composition effects, together with problems of price variations between households, seasonal effects, and the need to impute values to income in kind, production for self-consumption, and various benefits provided by public services. A second dimension of this study will be the analysis of data on housing conditions and the accumulation of durable goods--bicycles, sewing machines, radios, etc.--as an additional dimension to living standards as defined by current consumption levels.

Poverty and Inequality: In the first instance, the theory of consumer behavior provides the basis for measures of living standards as set out in Deaton's contribution to the February meeting, while Visaria's contribution to the same meeting illustrates many of the tabulations and analyses that are appropriate. Difficulties remain in the treatment of imputed incomes and expenditures of various types, and it will be necessary to address issues of poverty and inequality from the perspective of societies stratified according to socio-economic groups. It will also be necessary to explore indicators of poverty and affluence, reflecting both a need for measures which are simpler than those suggested by pure theory and for measures which capture elements of living standards which complement the information in such indices as household per capita consumption. Particular emphasis will be given to identification

of the poor and the characterization of poverty, not least in terms of identification of the factor endowments of households.

Manpower, Employment and Earnings: The study will cover the sources of income for households of different types and give particular emphasis to employment income and income from household production activities. The analysis of dualities (imperfections) in labor markets will be a critical theme, based largely on the estimation of earnings functions which recognize education level as a key variable along with other household resources, such as access to land. Labor force participation and the distinction between primary and secondary workers will provide still another element of this study which will, in general, emphasize the importance of approaching sources of household incomes in relation to (a) their factor endowments (especially labor and land) and (b) the structure of production and forms of organization.

The four studies briefly outlined above will draw heavily on work previously undertaken in the Bank, the ILO, and more broadly.

The two studies previously listed but not included in the above four, viz. Economic Influences on Demography, and Access to Public Services, are less well advanced and are to be based potentially on developments beyond the core activities of LSMS. They are discussed in Section V below.

IV. (iii) Preliminary Design of New Surveys

The specifics of survey content raise a host of issues which must ultimately be resolved in relation to the details of the topic studies. Here we will make no attempt to be exhaustive, but rather to comment on some specific points which seem to be of strategic importance.

Sample Design

First, the sample frame for collecting data will necessarily be based in the first instance on geographic subdivisions. It is therefore not essential to canvass nationwide surveys in any year. However, there would seem to be a strong case for doing so, since the geographic subdivision of households is only one of several relevant groupings. The value of results will be much reduced if nationwide surveys are eschewed. Similarly, it would seem to be essential to collect data over a full annual cycle, if only because of the potentially important seasonal effects which can be captured as a result.

Second, in designing samples, the emphasis should be towards good estimates of mean values for households of a given type, rather than on variations within household types. As argued in the introduction, the objective should be to measure, first, average levels of living within groups of households, and hence the changes in them over time, and, secondly, the differences in these averages which arise between groups. The efficiency of estimation of intragroup variations is not crucial, and therefore is not an important factor in sample design as far as LSMS is concerned.

Household as a Producing and Consuming Unit

Since many households in developing countries are engaged in household and/or unincorporated business activities, it will be important to define carefully the boundaries of the household as an income earning/consuming unit. Adopting a narrow definition potentially simplifies the household survey. Equally, data which are not picked up in one inquiry must be sought in another to the extent that they are important. It can be argued that one of the key areas in which data are needed is the relationship of the household to the production structure of the economy. Such data must therefore

be collected from households to the extent that an interface is required to relate information on consumption to that which is collected from production units; and where the household is the production unit, there is obviously a strong case for incorporating information on both its production activities and consumption in the same survey. Hence the household needs to be carefully defined both as a producing and as a consuming unit.

The above is most important in relation to households engaged in subsistence agricultural production. But in fact most households provide both goods and services for themselves, if only at the level of growing a few vegetables and maintaining property. The less developed the society, the more prominent are such activities; and they are generally of greater relevance for the poor as compared to the rich. It is therefore important to measure these activities in a systematic way, as a complement to the picture of incomes and consumption which can be obtained from details of cash flows and transactions. Their valuation raises difficult questions of imputation, which cannot always be neatly resolved with reference to economic theory. Essentially there are two approaches, one based on the estimation of what it would cost to buy the goods or services which the household provides for itself, the other on income forgone by the household in choosing to supply goods or services to itself, rather than work for wages. In an ideal world these two approaches might yield essentially the same answers. But the real world is not so simple and, in particular, the opportunities to work remuneratively can be strictly limited.

Given these general considerations, some comment can be offered on the particular topics which might be covered.

Enumeration of Household Members

The starting point is evidently with the members of the household, covering age, sex, race, education and interpersonal relationships. Next, information needs to be collected on the boundaries of the household as a producing unit, implying a designation of the occupational status of each individual.

Employment and Occupation

As a check on individual occupational status, and because the results could be of direct interest in their own right, there is a case for including questions on time use within LSMS. Not least, such data can provide a means of checking on the mixture of activities undertaken by individuals, and hence on the items of income and expenditure which need to be imputed. They can also lead naturally into details of employment status and sources of income. The technical issues of collecting time use data are considerable. This then may be an area in which LSMS should experiment.

Housing and Durables

Data on housing should include the availability of amenities such as fresh water, waste disposal, and lighting, and might potentially be extended to include household durable goods such as cooking and heating appliances. Similarly, the section on acquisition and sale of durable goods should cover other topics, such as weddings and funerals, which give rise to significant, irregular and infrequent expenditures. This category must also include data on asset accumulation and sales associated with household production activities.

Cash Transactions

Next, a full balanced statement of cash incomes and expenditures is called for, providing a consistency check on more detailed information and, at the same time, relating the household to the cash economy. In collecting data on cash expenditures, an important point is whether quantity or price data should be sought to supplement the information on financial outlays. A variant which may be of interest would be not to attempt either for individual households, but rather to seek price data independently, e.g. by having separate surveys of prices conducted among a selected group of housewives who might be interviewed individually or as a group, or alternatively by collecting data from markets or retail outlets. It can be noted that this type of price data is also needed in the International Comparisons Project work on international purchasing parities and for generating national accounts at constant prices. Furthermore, a vector of prices is always needed to impute values to those items which are not purchased for cash: the approach offers one way of obtaining these vectors. And finally, surprising variations are observed in prices for consumer goods both over time and and according to the haggles or bargaining which are a part of everyday life. This type of variation is a component of the intragroup variation which we have previously suggested is not a primary concern. Hence it may be unnecessary to pursue it.

On the income side, cash receipts derive from employment, transfers, returns to financial assets and sale of own produce. Of these, it is reasonable to anticipate better data under some heads than others. With respect to cash wages, the potentially important feature, beyond the amounts involved, is to fix the nature of employment so that the household can be linked up to the

production structure. This essentially involves a description of the type of work done and the nature of the employing agent or establishment. One possible way of fixing links to the formal sector of production arises when the latter can be identified through payment of social security contributions. This is perhaps an area for experimentation.

Data for some types of transfers are easier to collect than others. Cash transfers between households will arise both on the receipts side and as items of expenditure. Hence they can usefully be cross-checked at the aggregate level. Transfer receipts from social security, scholarships, and remittances do not present any severe problems, but the transfers which derive from corporate distributions are much more difficult to pin down, as are interest payments and receipts. There is little that can be done to improve the quality of such data obtained at the household level of inquiry.

Finally, sales of own produce are an important element of the overall picture of cash transactions. In subsistence societies such sales are likely to be irregular and subject to a marked seasonality. The reference period is therefore important. Equally, the nature of the 'own product' sold is important for relating the household to the production side of the economy.

Non-Cash Transactions

Non-cash transactions which do not add to the stock of assets are simultaneously an element both of incomes and expenditures. They can be measured in physical terms via inputs (notably labor time) or outputs (such as kilos of vegetables). But however this is done, the same physical entry appears both as an item of consumption and on the income side of the accounts; and it is a separate question to determine what value to associate with each physical magnitude.

These non-cash elements of income and expenditure which need to be imputed fall under four main headings. The first is the amount to be imputed as a result of ownership of durables, notably housing. The second is attributable to income in kind, such as meals provided by the employer at the place of work. The third category covers the goods and services which households provide for themselves via direct labor input. And finally, there are the services provided by the state which households utilize. This latter category includes household benefits from state education and health facilities, and hence is important in broadening the picture of a household's living standard as otherwise determined. Difficult questions of imputation arise in relation to such items; nevertheless, it would seem to be worth pursuing them because of the obvious links with policy and welfare.

Summary

The above discussion of survey content can be summarized by suggesting that data might be collected in six areas as follows:

(1) Enumeration of household members with details according to age, sex, race, education level, occupational status and interrelationships.

(2) Individual time use by locations, activities in each location, and mode of transport between locations in order to cover employment status and other aspects of labor force participation.

(3) Characteristics of the dwelling, including household durables, amenities, ownership, and rent paid, if any.

(4) Infrequent expenditures, i.e. acquisition of household and personal durables, home improvements, weddings, funeral expenses, etc., over the past 12 months, plus acquisition and sale of assets for use in household production activities.

(5) Full accounting of cash transactions: expenditures by item, incomes by source.

(6) Consumption of own produce and public services by type of goods or services, plus income in kind.

All this adds up to being an ambitious undertaking. The necessary details might well be cut back by a determined attempt to restrict information to that which can be used for checking the internal consistency of the data collected or to that which is of direct relevance for predetermined tabulations and analyses. Equally, it may be thought that some of the suggested topics could well be deleted. We fear, however, that the pressures will be in the opposite direction, i.e. to attempt more rather than less.

V. PHASE II AND BEYOND

V. (i) Preparation for Field Tests, Pilot and Full Surveys

As the topic studies are developed and their data requirements are translated into draft questionnaires, a number of technical, statistical issues will come to the fore. These include the practical problems of measurability, required accuracy, and correction procedures. There will therefore be a need to develop a series of survey documents or manuals on methods and procedures for data collection, covering questionnaire design, sampling and field methods, and guides to editing, statistical imputation and tabulations. These should be based on experimental testing to the extent that resources will allow, and add up to the documentation of recommendations on how to implement the data collection with which LSMS is concerned.

The development of this aspect of LSMS will depend on anticipated and revealed problems in implementing LSMS data collection. The core questionnaire will not only need to be translated and modified to suit local situations, but the need to have alternative versions of the questionnaire for different groups (literate vs. illiterate, those engaged in subsistance production, etc.) can be anticipated at the outset. Similarly, there is known variation in field methods, e.g., with respect to numbers of interviews, respondents and supervisors.

The identification of best practice over a range of countries through the success actually achieved and the obstacles encountered provides an initial means of identifying the extent to which modifications of the core questionnaire will be necessary and alternative formats for particular modules will be required to meet different situations. Beyond this a more detailed work program will be prepared on the range of statistical expermentation which could efficiently contribute to the technical aspects of LSMS survey implementation.

V. (ii) Further Elements of the Work Program

On the remaining items of the work program there is little to add beyond the points made in the broad outline provided in Section III above: these remaining elements will follow naturally from the foundations previously laid. Subject to the progress achieved, however, there are two additional elements to the LSMS work program which we would like to inject. These are associated with the two topic studies referred to in Section III but not developed in IV (ii) above.

The narrow focus of LSMS essentially on incomes and expenditures excludes a number of areas, such as health, nutrition, fertility and education which are important elements of living standards and potentially require the

development of quite specific survey instruments. At the same time, the usefulness of survey results on these topics is greatly increased if they are compatable with corresponding economic indicators, not least income. Accordingly, to explore the possibilities and difficulties of this type of linkage, LSMS will extend itself into the area of economic and demographic linkages because (a) the demographic component that is required has been well thought through and thoroughly tried by the World Fertility Survey; and (b) these particular types of linkage are already well researched, particularly within the Bank.

A second area for possible expansion of LSMS is in relation to community or village level surveys. These can contribute substantially for three reasons. First, the emphasis we would like to put on changes in living standards over time in LSMS is hard to capture simply through point-in-time household surveys. However, it is much easier to track fixed communities over time and hence to have longitudinal surveys of these. Secondly, the community is an interesting unit in its own right and represents the proper unit of inquiry on the availability of services, for example. Thirdly, one of the major problems with household surveys is that they can easily become too long and/or unmanageable. A potential advantage of setting household and community surveys in a common framework is, therefore, that this provides some opportunity for relieving the pressure on the household survey questionnaire and making it simpler.

Our thoughts in this area are embryonic and call for considerable development. One line of approach is to recognize that availability and access to public services is an important area which ideally should be developed within LSMS, and provides an immediate point of departure beyond household surveys. For this reason, the subject has been included as a provisional topic title among the list of six provided earlier. A second approach is based on the

view that surveys at the community level which require complementary household data are of considerable interest for project monitoring and evaluation. At this point we are at the early stages of evaluating existing surveys and gathering expert opinion. It is not clear how far LSMS can travel down this particular road. What is apparent at this stage is that the community survey is potentially the most interesting development to explore beyond household surveys and to the extent that resources allow.

LSMS Working Papers (continued)

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*

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*

The World Bank

Headquarters
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: (202) 477-1234
Telex: WUI 64145 WORLDBANK
RCA 248423 WORLDBK
Cable Address: INTBAFRAD
WASHINGTONDC

European Office
66, avenue d'Iéna
75116 Paris, France

Telephone: (1) 723-54.21
Telex: 842-620628

Tokyo Office
Kokusai Building
1-1 Marunouchi 3-chome
Chiyoda-ku, Tokyo 100, Japan

Telephone: (03) 214-5001
Telex: 781-26838