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Multiple Statistical Approaches to Multi-Dimensional Issues; the Examples of Inequality and Poverty

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Multiple Statistical Approaches to Multi-Dimensional Issues: The Examples of Poverty and Inequality

By Michael Ward

Summary

Much important economic and social information relating to the human condition is derived from surveys, both cross-sectional and longitudinal. The former tend to inform well on the nature and status of individuals and the households they belong to whilst the latter reveal how people are affected by, and adjust to, changing circumstances over time. But conventional household surveys are imperfect instruments of enquiry, not least because they suffer from varying and often indeterminate non-response and tend, by design and frame limitations, to exclude important sections of the population, particularly at the ends of the distribution. The data collected in surveys are subject to both unavoidable as well as deliberate observation and measurement errors and, importantly, they sometimes fail to pick up key information about groups at the extremes. For some 'central averaging' purposes such as average household consumption and the derivation of representative CPI weights, this may be acceptable but, for poverty and inequality analysis, it usually means such surveys miss out collecting relevant and very distinct information about the very poor, who are most vulnerable to policy change, and very rich households who underpin inequality.

1. Introduction

Apart from improvements to survey methodology and significant and increasingly expensive extensions to standard survey techniques [many of which involve the implementation of a broader and more complex multi-topic approach], the only way to expand the scope of information obtained through a household survey is to amplify and strengthen current survey findings. This requires gathering data from other similar investigations and related benchmark sources. A combination of administrative records and non-conventional survey sources is required to complement conventional household survey data to throw light on a problem with multiple dimensions. Introducing official data from regularly produced reports provides the important capability, rarely integral to a household survey, of monitoring what is going on from one period to another. In the case of poverty analysis, the use of additional sources may be especially relevant if the nature of the poorest households, such as their size, age and sex composition and type of habitation or its location, is markedly different from the majority of households covered in the traditional household survey. It is becoming quite accepted, although still not yet common, therefore, to supplement in a form of 'mapping' exercise the results derived from an official national household survey with other useful information that is often available 'off-the peg' or derived from special searches of other sources. Administrative files that, by fiat, are updated on a regular and standard basis, provide a first line of information in this connection, especially where the attention of policymakers is directed towards disadvantaged groups and officials monitor actions taken in these areas.

2. Outline and Objectives

This paper is thus concerned with providing an overview of the wide range of non-household survey and administrative data sources potentially on hand to amplify the understanding of poverty and conditions of poor living within a systemic socioeconomic

structure of inequality. Suitably mined and filtered, much of this information can be brought to bear to describe the social context and type of society that preserves these conditions. It can also reveal the multi-dimensional nature of poverty and inequality. The following discussion explores the possibilities of supplementing the deductive analysis permitted by scientifically designed household sample surveys, where the conditions observed are formally extrapolated to a predefined universe in order to provide a greater understanding of the population under investigation, and complementing this traditional source with related official indicators and some softer, less formal but often subject specific inductive survey techniques.

The adoption, in particular, of qualitative survey methods offers scope for a deeper and more penetrating insight into how certain groups of people behave and respond to different socioeconomic stimuli and policy initiatives. With inductive approaches, the primary problem is to identify the appropriate universe to which the observed characteristics of the selected sample apply. In effect, the procedure recognises the advantages of advancing non-scientific methods to reduce the non-sampling errors [at the expense of introducing an unknown sampling error]. It is able to amplify the underlying nature of a problem and provide greater in-depth knowledge about an observed situation. Researchers thus relinquish some of the benefits of using a standard survey based on recognized probability sampling methods that generate known means and standard errors of the estimates, in order to trade them off against the value of more qualitative procedures that touch on inter-personal relationships and identify the purpose behind different actions. The desire to explain people's behaviour patterns and to see if these conform with perceived socio-economic inter-linkages and hypothesized theory is important to policy formulation. In determining how people will react, the fact that the extent of the measurement error remains unknown may be of little consequence. Indeed, the intrinsic nature of many issues under investigation often means that the exact measurement of phenomena is not feasible nor especially relevant.

3. Traditional Sources of Household Information

3.1 Limitations of Household Surveys for Poverty and Inequality Assessment

The presence of intangible factors and cultural influences underlines some of the difficulties limiting any complete reliance on conventional household surveys to provide the data required to understand the nature of poverty and inequality. Indeed, some observers have questioned whether the unitary household, as defined by the census and thus applied in most associated surveys, is entirely appropriate for all kinds of poverty research. For some purposes, the extended family may be more relevant, particularly when interpreting the production, consumption and social protection activities of nuclear units and how they function. Understanding the nature of the unit is important to a proper interpretation of the nature of intra-household transfers and sharing mechanisms. In other circumstances, it is the individual who should be the main focus of attention. In the OECD, for example, there is considerable policy interest in child poverty. Low wage employment and the relationship of household well-being to the unemployment of the head of the household or to his or her disability, permanent or otherwise, are equally matters of social concern.

An important limitation of the standard survey approach in connection with poverty and inequality enquiries is that it is not a very refined instrument for analyzing regional variations in the problems under investigation. If, with given resources and an expected error acceptance tolerance level, the size of the survey has been already predetermined to serve some more general purpose and if, too, the number of households thought to be poor represents, say, 20% of the total population, then the survey will not be optimally designed to generate sufficient information to provide robust estimates of poverty. Nor will good quality representative data covering different areas of enquiry and locations be produced.

Another significant limitation to the standard household survey is that it provides only a single [but admittedly important] snapshot of the problem as it pertains to a well-defined period. However, what most policy analysts are interested in is how poverty and inequality change over time, particularly in response to various policy initiatives and a general increase [or decrease] in household incomes. Tracking such changes means depending on more regular reporting methods that arise as a by-product of routine administrative processes. The problem in this respect is choosing the most relevant official indicator to proxy changes in the substantive variable under investigation.

It has been suggested that the use of a master sample with a defined frame that permits a number of related enquiries to be undertaken simultaneously or sequentially is an alternative way of circumventing the difficulty of handling some of the above issues. While such an approach retains the overall integrity of the survey methodology and preserves some consistency of the estimates, it poses its own set of problems. In particular, it ignores the difficulties of maintaining a comprehensive listing and of correctly and efficiently updating the required frame to achieve the desired level of coherence in the benchmark reference.

3.2 The Benefits of Integrating Different Data Techniques and Sources

For all of the above technical and practical reasons, delving into other official sources that tend to concentrate on the conditions and status of individuals [perhaps rather more so than on the households they belong to] and how these change, and bringing in other ‘topic specific’ survey approaches, is clearly important to an improved perception.

The greater integration of quantitative and qualitative approaches through the selective combination of various survey methods and administrative data sources is thus intended to give a better and more comprehensive perspective on the scope of the whole problem. While no specific course of action is advocated, the potential of matching the in-depth analysis and results offered by small well-focused samples and mapping them on to large scientifically designed surveys and benchmark reference databases represents one of the more promising ways to strengthen existing knowledge. Such information helps to enhance policy makers’ understanding of the varied and wide ranging issues involved in tackling poverty and inequality. It allows them to refine their level of analysis and to place the required emphasis on those specific regions and target groups at risk.

The adoption of mixed-method techniques usually means having to resort to different institutional sources and quite independent enquiry methods. This implies a reliance on a wide variety of data sources when bringing relevant information to bear on problems like poverty. Many of these sources, because they observe different mandates, will probably not have the issue of poverty or inequality as their main focus. In part because of the difficulties of balancing the conflicting demands of sample size, survey costs and information requirements but more because the institutions concerned are not basically statistical agencies, these sources do not necessarily compile good quality data. Nevertheless, provided care is taken to identify any potential biases, researchers should not pass up the opportunity of making selective use of already available information, much of it from official sources, related to the problem on hand.

Basic household survey data tend to be generated at rather infrequent [and usually irregular] intervals, whereas the administrative data on official files is usually reported annually for audit purposes and may even be compiled at more frequent intervals. An important part of this official story will relate to the non-market activities of the household sector. These activities and their value to users are invariably less easy to quantify at either the individual or household level. The ability to draw together the micro and macro factors that impinge on complex problems like poverty, and to blend the material and non-material elements that comprise the market and non-market aspects of household consumption behaviour, forms the basis of providing a more holistic overview of the problem for potential analysis. A comprehensive database can yield insights into such intangible issues as the differential access of households with different income levels to opportunities, entitlements and various forms of public service support.

The logical starting point is to review the miscellaneous kinds of information resources already available and make an assessment of how they can be used to give greater depth and background to the core household survey information. Practical experience in the use of such material will offer some hints and suggested guidelines about how existing reporting procedures can be slightly modified and added to in the future to make them more relevant and reliable. The main non-survey [‘administrative’] sources and non-household survey methods that may be employed in these tasks and some of their limitations are described in more detail in the sections that follow.

In addition to the more variegated picture the use of related data sources lends to any status evaluation, the establishment of acknowledged benchmarks that are linked to the decennial census [and to any embedded sample census module] that can be supported in the interim by, perhaps, a quinquennial partial census, will enable analysts to obtain a reasonable idea about overall trends in poverty as they are seen to relate to social and demographic change over longer periods of time.

4. Summary Review of Sources of Data

4.1 Why Different Data Sources are Desirable

The universal political consensus achieved in agreeing the Millennium Development Goals [MDGs] determined the establishment of 48 standard indicators of poverty and vulnerability. These serve as targets to assess progress towards the accomplishment of major objectives of development policy and provide not only common direction but also greater global recognition to the diverse and multi-dimensional nature of poverty. The MDGs underline the importance of providing a combination of material and non-material goods and services to raise general living standards.[1] The indicators reflect both the outcome of sovereign choice [demand] and government effort [public success] in contributing to individual and collective needs.[2]

This section thus explores what issues and respective data sources, beyond those of household surveys with an alleged national coverage and those utilized in the broadly based national accounts, should be sought to help expand knowledge about poverty; its incidence as well as severity and extent. The relevance and reliability of a range of data sources and the techniques adopted to exploit them are discussed below. This appeal to the broader concept of data mining reflects a rapidly developing interest in this area of statistical analysis. It acknowledges that it is generally cheaper to utilize, with reservation, what is already available than to launch entirely new surveys, *ab initio*. Changes in conventional survey sources are similarly taking place as governments re-define their administrative directives and responsibilities in line with new policy objectives.

A detailed analysis of the public sector accounts that identifies the expenditures on goods and services supplied by government for direct use by the population [but does not effectively assess how fairly these are delivered to intended recipients] is a prerequisite for understanding what the government spends and how well it has been able to respond to the 'felt' [which may not necessarily be the same as 'officially perceived'] needs of households. Given the existing pattern of inequality, the ability of government to carry

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1 Restrictively, only two poverty measures are directly defined in the MDGs. These are concerned with, respectively, the scope of poverty; that is, the total number of poor people and, second, the extent or severity of their poverty. The depth of poverty reflects the degree to which poor people's incomes fall short, on average, of an 'accepted' and officially recognized minimum threshold. Even this measure does not identify all those households and families that societies normally regard as 'living in the depths of poverty' or 'on the edge of existence'. In effect, the MDGs are merely descriptive and have no core conceptual basis to their selection and construction. Traditionally, for example, certain single measures such as the extent of malnutrition or unskilled worker unemployment, have been regarded as key indicators of poverty.

[2] The MDGs, by drawing general attention to many different aspects of deprivation, underscore the wider multi-dimensional nature of the poverty problem but do not draw attention to the potential inter-connectivity between the factors identified. Yet, even the most casual empirical observation cannot escape noticing that malnutrition, inadequate shelter, filthy and unsanitary living conditions, unsatisfactory and insufficient supplies of clean water, poor solid waste disposal, low educational achievement combined with the absence of proper schooling, chronic ill health and widespread common crime are all readily recognizable features of poverty and related to each other.

out a poverty reduction policy based on the combination of a conventional economic growth approach and marginal income redistribution policy, can only be tested by seeing how far the extra resources generated in the economy are spent on improving the flow of non-market goods and services, like health and education, to the poorest households and regions.

Independent statistical information on such matters - where it exists - is available for the most part only at the overall national level; it is also usually available only from official administrative sources. To enhance their relevance, national data really need to be grouped according to socio-economic category and disaggregated by distinct locations small enough to assist in the identification of those population groups at risk. Small area sampling procedures such as might be proposed in this instance to examine these issues pose a complex range of technical, methodological and practical questions, especially in relation to the frame and universe to which the studies are intended to refer. Moreover, smaller and specifically targeted socio-economic surveys are rarely conducted directly by national statistical offices [although some studies may be outsourced] and this makes it difficult to achieve the full integration of a small sample survey's results into an established national benchmarks.

Are the identifiable features of poor living conditions and social deprivation the causes or effects of poverty and its perseverance? Or both? In the past, it was common for politicians to refer to 'the vicious circle of poverty' because it was difficult to disentangle the initial cause and effect. It is widely assumed that economic policy, and the improved efficacy of fiscal policy [that is, tax, subsidy and transfer actions as well as ministerial spending decisions] can play a crucial role in this equation and be more sustainable than a difficult to define 'pro-poor' growth policy. If it is the government's intention to conduct a fair and equitable social policy, it will be essential to maintain a consistent oversight of where the progressive incidence of taxes falls and to monitor the distribution of government expenditures destined for collective and individual household consumption purposes. National statistical offices will need to prepare, in the interests of distributive social justice, beneficiary accounts that detail the functional allocation of current expenditures, as well as the value of subsidies and transfers, going to different social groups.

The logic of developing new approaches to data compilation to guide these initiatives and to gain insights into the dynamics of poverty is self-evident. Most poor households possess few personal assets and enjoy only minimal and irregular income receipts. The continued low status of poor households can be viewed as an inevitable outcome of social and cultural factors and sector technological change over which few of them have any control which results in the casual and uncertain engagement of poor people in the economy.

4.2 Mining Different Sources of Information

The primary administrative and non-official sources of data survey analysts and government officials conventionally tap into to amplify their understanding of socio-economic issues and give suitable contextual relevance to sample household survey

findings are described briefly below [footnote?; for a more detailed review, readers are directed to the new UN Manual on Poverty Measurement. 2006]

4.2.1 Quantitative sources

The main quantitative sources include:

a. Census, sample census and partial censuses

Censuses of population and of housing as well as of agriculture, industry and employment are regularly conducted by most governments but usually at only infrequent ten-year intervals. A population census lays down the core benchmark providing basic information on demographic well-being. For this reason, it has been chosen as the preferred data source for defining the 'unmet basic needs' (UBN) approach to poverty measurement. Recent analytical advances in small area estimation techniques and census mapping have made it possible to overcome the limited geographical coverage of household surveys and construct meaningful poverty maps. Census data can be disaggregated to very low geographical levels, unlike those estimated from household surveys where the limitations of coverage and sample size prohibit the estimation of relevant population characteristics at this level.

The degree of geographical disaggregation possible in data generated from administrative records is also limited. Many official files refer only to highly aggregated levels of population concentration such as provinces or districts or to even broader urban and rural regional definitions. In addition, given the broad topic coverage and continuity of the population census and the sensitivity of social outcome measures (such as infant or maternal mortality and school enrolment) to specific government interventions and policy changes, population censuses are often better at gauging the overall effectiveness of poverty alleviation programmes over time. The demographic and economic geography of poverty can be related to the availability and distribution of human and physical resources, evidence of which can often be found in reports of the heath and education sectors [as, for example, in research studies in Chile, Brazil and Argentina.

b. Administrative reports and files

A wealth of information on social welfare is available from administrative sources, but such data are primarily used for administrative budgeting and program implementation purposes and less for impact analysis. The use of administrative records for poverty estimation and the analysis of the conditions of the poor is not a frequent undertaking. There are few exceptions, mostly in developed countries, where poverty is estimated from a register-based information system. For example, Denmark and the Netherlands measure poverty and its characteristics based on a variety of administrative data relating to income (gross and net) from tax records, security benefits, disposable income, education, costs of living, housing situation, net housing cost, demographic, family and household characteristics, economic and social status and expected sources of poverty such as being sick or disabled, and whether someone is in a state of long term unemployment. (See Rudolf Teekens, Bernard van Praag 1990, for more details).

A common use of administrative records in poverty related studies is to provide cross-checks of survey based analysis. Administrative records from line ministries and departments in agriculture, community services, special education and health, will usually contain relevant data for poverty analysis. Such sources can provide relevant benchmark statistics to institute checks, including assessments of the plausibility of poverty estimates and changes in poverty levels through time. An instructive example of the validation of poverty estimates using administrative data is given in Ravallion and Sen (1996) using data from Bangladesh.

The centrality of the role of human capital in the fight against poverty has been much researched and it is widely recognized that indicators of human capability achievements such as access to public health and education services are poorly reflected in the traditional per capita income poverty measure. Non-income indicators, notably life expectancy, infant mortality and primary school enrollments should be used to compensate for the analytical limitations of relying solely on the income metric as an indicator of relative deprivation (UNDP's annual Human Development Reports, 1999-2005 and the composition of the Human Development Index provide relevant case studies). Administrative records of health and education similarly provide useful material for constructing indicators of social progress. The service records of health units compiled by midwives and local nurses with direct hands-on contact with households, contain relevant information on the general health status of individuals. In particular, the characteristics of poverty are well reflected in birth weights and the nutritional and immunization status of children under-five years old who belong to particular families. Major support for these programmes in different areas comes from agencies like UNICEF, UNESCO, WHO, the World Food Programme and FAO. The involvement of these agencies in other survey activities such as the MICS and DHS enquiries helps ensure that more comprehensive and reliable data are collected from the grass roots.

There has also been increasing advocacy for using health outcomes to gauge the success of economic development policy more broadly. It has been argued, for example, that mortality data have distinctive features for understanding the interrelationship between the economic and 'capabilities' dimensions of poverty. Sen (1998) examined life expectancy in relation to GDP and income in selected countries and concluded that the links between GDP and life expectancy most likely work through the provision of public health care and poverty alleviation. (See also Anand and Ravallion, 1993 for similar findings). Sen's analysis also provided support for claims that mortality statistics most adequately depict socioeconomic inequalities, including the gender and geographical differentials in poverty outcomes. While the inter-linkage between economic and social aspects of poverty remains an observable feature in mortality data, inferential analysis based on mortality data is not straightforward. For example, both income and the availability and utilization of health care facilities are important determinants of life and death. Mortality data are established from both Vital Statistics records [civil registration data] as well as Population Censuses and using these sources to identify poverty areas might only be possible if a lower level of geographical disaggregation can be obtained. Similarly, education has long been an important component of development policy and there is solid evidence that the lack of a "critical mass" of knowledge, skill and collective

education is almost universally implicated in persistent poverty (Ref later). The highest level of education achieved by the head of the household is the single education indicator most often used in household survey-based poverty assessments and in socioeconomic profiling. This indicator does not tell analysts much about the overall education status of other members of the household or anything about the intra-household bias in access to education. Among certain ethnic and religious groups there is a bias against females and their education (ref later). Data on school drop-outs, teacher/pupil ratios and expenditures per child are readily available from the ministry, but sometimes not by gender at lower level administrative localities such as districts. Linking such data to household level data poses a major challenge to data analysts.

Censuses and, increasingly common, the technically imbedded in-depth sample census modules that generate more detailed information, provide a rich source of benchmark data. But the nature of the census organization, the extent of coverage and the timeliness with which the results are disseminated, can seriously limit the usefulness of the results for detailed socio-economic analysis, whatever the primary focus and subject of the enquiry. In this instance the term 'partial census', while generally applicable to most industrial and agricultural censuses where the proportional selection of homogeneous smaller units is common, can be used used to generate interim national data that are limited in scope and cover only certain core components of a conventional survey enquiry.

Population and housing censuses invariably serve as the primary source of basic reference information about a country's population, its age and sex composition, family size, migration characteristics, the locations where people live and the nature of the dwelling units they inhabit. Similarly, enterprise based industry and employment censuses [or, more usually, combined census and survey enquiries] provide evidence of the employment characteristics, skill and occupational levels and main source of income support for families, although total wage bill information in itself may be of limited helpfulness. More specific data relating to average weekly wage rates, wage earnings and hours worked in different occupations frequently obtained from enterprise surveys can go a long way to filling in the gaps in knowledge about households with a unique and clearly defined source of economic support. [footnote??; Subsequent analysis can go into how many household members provide additional income support, whether living at or near the breadline is related to reliance on a local source of employment and if this might pose a threat to the household's sustainability]. Farm and land-holding based agricultural censuses similarly produce information about the primary sources of income in cash and kind that support rural households. Information about how farm household living standards are affected by the off-farm employment of family members and how a household's status is also related to land ownership and tenure conditions is usually collected in an agricultural census.

As in most comprehensive studies of these kinds, the devil lies in the detail. Analysts are learning to utilize these massive amounts of micro data to link the same households across areas of interest or in matching them 'exactly' rather than identically. Censuses are essentially area based surveys. The survey frame is constructed using geographically

distinct enumeration areas identified in terms of population numbers, area size and housing density. This is designed to facilitate the administrative management and organization of census operations, including enumeration tasks and the actual physical collection of data. The listing of areas and households is thus not purposely defined with any specific survey objective in mind. Within the frame, housing units or farms can be identified as the basic units of enquiry and these lead the visiting enumerators to the identification of the separate households living in these units. Each household is comprised of individuals who are linked to each other in a more or less permanent social contract or in some formal economic way. Households are not necessarily families and several households may inhabit the same housing unit. Sometimes, in a socially supportive environment, this may confuse and complicate the analysis of poverty and its incidence.

Information on the quality of the housing shelter and about the available living space is usually collected independently. In the past this task was generally performed at an early stage and as much for identification as for analytical purposes. This primary listing of units provides a first indication of the level of living of those inhabiting space under different conditions of shelter.[3] Households' housing situations can be compared across the same enumeration area and also with other areas where households of the same size and with a similar age and sex composition live. Some researchers have attempted to link different types of household [income status] to a particular type of construction of housing unit [wealth asset].

Population censuses will sometimes contain information about educational status (such as enrolment, qualifications gained, and level of schooling attained) and of the number of years of education completed by different members of the household. Historically, some censuses have included individual questions about health status (physical and mental) but this is now much less common because the results have never been considered particularly trustworthy and other survey methods are considered more reliable. There is usually no way that a census enumerator untrained in health matters is able to check on the validity of the information provided about a person's state of health and medical condition, even if the question relates only to current health status and is directed to the nature of an evident complaint or permanent physical disability.

Population censuses or, more usually, the sample censuses imbedded concurrently with them, may also compile information on a person's declared occupation. This is not the same as his or her employment status, a factor clearly relevant to a poverty assessment. Occupation does not provide an unambiguous indication of the type of industry in which a person is engaged. The existence of a particular industry or factory in the same area, however, may afford some greater insight into a family's social standing and economic vulnerability. Additional data to amplify the situation, including wage and hours worked data and days off sick, can be collected from the enterprise directly, and related to certain households, if rules of anonymity and confidentiality are correctly observed.

[3] Problems arise where some sections of the population do not inhabit a defined housing unit or are sectioned, from time to time, to institutions. Some may not have any fixed abode and thus regularly sleep (or 'doss down') on the streets and in common public areas like parks and railways stations.

Most policy related data on the education and health of the population is compiled by the state through its responsible line ministries. Regular reporting systems have been set up to collect information on official actions and performance in carrying out the standard, routine administrative and supervisory functions of all bureaucracies in fulfilling their mandates and to facilitate audits of how monies have been spent. What is reported does not tie up with the data collected in the census because questions of coverage, timing, scope and content usually relate to different objectives, issues and conditions. [footnote?; The number of pupils officially reported by the education ministry as enrolled at the beginning of a particular school year or term will not tally with the numbers declared to be currently 'receiving education' at the time of the census, even allowing for cohort adjustments. There are, of course, many practical financial, psychological, social and economic reasons for this. The numbers will also rarely correspond with the scope and coverage of education data obtained from the household survey.

It is frequently difficult to account for all the observed discrepancies in data drawn from different sources. This may have something to do with the essentially unquantifiable 'motivational' and 'incentive' factors that affect how institutions report their information.

c. Civil registration systems

Civil registration lists are closely complementary to population census records and are often used to provide the annual updates of census records. Most systems now go well beyond the customary recording of births and deaths by nationality of the parents and location of the event. This information can be supplemented by migration, marriage and naturalization events and visitor data that may be compiled by a different agency. The use of such data to give more detailed small area population estimates is limited by the extent of international and internal migration movements where information about permanent place of abode may be unreliable. Nevertheless, registration data are widely used to compile the age specific mortality rates, fertility and reproduction rates and life expectancy estimates that are crucial to an understanding of population dynamics. This is essential for the effective planning of national and regional health and education programmes. In many developing countries, however, there are complaints that registration data are incomplete and reveal evidence of significant under-reporting, especially of vital statistics in the rural areas. Where countries maintain national identity systems the quality of the recorded data will be more reliable and up to date, but it may also be incomplete as a register of the total population.

Other common civil registration systems include electoral registers that provide location specific listings of adults eligible to vote. Some of the persons listed may no longer be present in that area and certain residents will not be included on it. While providing accurate address information, the list will also exclude all those under the age of entitlement to vote.

d. The Core Welfare Indicators Questionnaire [CWIQ]

The 'Core Welfare Indicators Questionnaire' or CWIQ developed in the World Bank is a good example of a now well-established standard survey procedure that began with

listing 'attributes' rather than measuring variables. The methodology represents a cross between a quantitative and qualitative survey approach. It uses electronic scanning techniques to capture information not only on the assets and background living conditions of households but also on the current availability of community services. The CWIQ was designed initially to provide a reasonably cheap, quick and comprehensive method for capturing the status and main characteristics of households and to determine their access to personal assets and physical facilities potentially available to help raise their basic living standards. The approach has obvious relevance to features of social exclusion and recent surveys have begun to draw attention to the role of 'civil society' in the maintenance of household well-being in the community. The CWIQ uniquely combines micro characteristics at the household level with the virtues of a simple 'contextual' survey, helping to provide details about those things that are important in distinguishing one community and its household living standards from another. More recently, the procedure has been expanded so that it has the capacity to capture not only the different attributes of surveyed households but also certain quantitative characteristics, such as their principal expenditures, that may aid the identification of vulnerability

Relevant information relating to communities has strengthened the capacity of decision-makers to allocate social funds to various community projects on a more meaningful and effective basis. Whilst both advantaged and disadvantaged households may stand to benefit, projects can nevertheless be designed specifically to help distinct population sub-groups such as women, the aged and disabled, or youth groups. Policy aims to identify those services that meet people's basic needs as well as those that are in short supply, such as ante-natal clinics, agricultural extension services, etc, can be met. The data may say little directly about people's access to different facilities and services but the actual use and frequency of utilization of a community's assets can serve as a suitable proxy for satisfaction, such as in the case of a clinic, and to assess need

Perhaps more than this, information collected in a community enhanced CWIQ will reflect the overall quality of governance and say something about the sense of belonging and the feeling of security of households have in various parts of the country. Although the links may well be intangible, the satisfaction of core needs is undoubtedly related to the presence of social capital. The careful development of this survey 'model' can help in planning public operations and in improving the delivery of government services.

e. Special enquiries, official commissions and other sources

From time to time a government may set up a special commission to investigate some identified problem in society such as the employment of child labour, prevalence of AIDS, double payment of teachers salaries, misuse of health resources, etc. These enquiries invariably call for specific evidence to be compiled in order that the commission can deliberate better on the matter under investigation. Commissions of enquiry are not specifically designed to protect the poor and vulnerable but when established to evaluate the consequences a natural disaster, rather than attribute blame, or to investigate the collapse of a major industrial or agricultural activity on which many people depend, special attention will be paid to this class of people. Wage Boards and

regular, even judicial, reviews of contractual arrangements involving employee payment relationships workers are similar.

To this list can be added police bulletins, public and 'gazetted' notices, supra national legal directives that lay down procedures with implications for data collection methods and outcomes, and a host of archival material of varying validity, some of which may be journalistic and interpretative [newspaper reports] and autobiographical – and, hence, questionable.

4.2.2 Qualitative Studies and Participatory Assessments

In a quest for evidence based information to support policy, analysts find there is a need to resort to perhaps less rigorous data sources that can be accessed relatively easily and cheaply. These are intended to provide some more direct and not derived insights into household behaviour and individual motivations. Standard poverty monitoring systems that are founded on conventional household surveys have to depend on a source that is costly and not replicated with regular frequency. The coverage of successive surveys where they are undertaken as well as their reference periods [length and timing] usually make it difficult to obtain a comprehensive and robust profile of different socioeconomic groups at various benchmark points. Sometimes the sampling methodology does not correspond with the geographical areas relevant for policymaking and for planning the delivery of the services required. Consequently, communities are themselves encouraged to be active participants in designing and developing the relevant means to monitor their own welfare and needs. This changes the priorities and objectives of measurement and shifts the focus from ex-post observation and evaluation to ex-ante needs assessment.

a. Understanding the story behind the numbers

Rich data do not necessarily have to be representative data. To gain a better understanding of the whys and wherefores that lie behind the reality and, specifically, insights into how people daily survive under adverse living conditions that are difficult to quantify, analysts may sometimes resort to qualitative studies. Many of these enquiries constitute low-cost and easy to maintain information gathering systems. They are usually non-official, one-off surveys that depend on the assessment and analysis of academic experts and chosen spokespersons in the field. Being primarily subjective studies, the information compiled reflects the personal judgements of the respondents themselves whom, it may well be argued, are the best experts of their own condition (bearing in the mind the time and location specific nature of their responses and who the focus group represents).

The qualitative approach covers important issues such as the identification of the constraints and obstacles that exist that are believed to impede the betterment of peoples' lives. Resorting to qualitative and subjective perspectives, including participatory assessments by the households themselves, helps identify the inter-linkages between many of the outward features and quantifiable aspects of life and the social and cultural environment affecting observed conditions. Subjective surveys, in particular, allow analysts to reach out and hear the 'silent voices' that enable them to gain a better insight

into why certain households engage in various activities, household behaviour and what coping strategies are adopted. Observed responses to given economic situations and strategic initiatives, or the lack of them, can be examined to guide future policy and to identify groups at risk.

It is now widely recognized that qualitative assessments are very useful survey instruments for identifying household characteristics and the extent of deprivation. In contrast with the quantitative methods and conventional monetary approaches favoured by officials and used in most household based surveys, qualitative studies are less concerned with mathematical precision. The crucial issue is not whether quantification is possible but whether the problems faced in life by poor people and the level of an individual's or household's standard of living can be reduced largely to a simple quantitative dimension (and still remain significant) (Shaffer,1996).

The theoretical underpinnings of qualitative methods rest on a belief that they can shed more light on the diverse manifestations and dynamics of poverty and that they enable analysts to explore the various elements of causality existing between the different factors that influence actual as opposed to expected poverty outcomes. Such factors include, importantly, intra-household transfers commonly linked to cultural, religious and behavioral attributes that are not captured through conventional household enquiries.

b. Participatory assessments

Rapid rural appraisal (RRA) methods, participatory rural appraisals (PRA) and participatory poverty assessment (PPA) have helped pioneer a wider acceptability of qualitative techniques by officials. They are described as a family of methods to "enable the rural people to share, enhance, and analyze their knowledge of life and conditions, to plan and to act" (Chambers, 1994). It may be argued that such a process is not, however, as democratic as alleged or hoped for because it is selective and dominated by those with influence or specific goals. Probability based surveys are, for all the underlying faults that may reside in the sampling frame are, nevertherless, basically democratic.

The fundamental distinction between RRA, PRA or PPA is that RRA is a form of data collection by outsiders who then take the data away and analyze it, whereas PRA and PPA involves a more active participatory role for respondents and, hence, an empowering component. It means that outsiders serve as conveners, catalysts and facilitators who enable people to undertake and share their own investigations and analysis" (See Chambers 1994 for a review of participatory methodologies and tools).

Participatory methods were designed initially as small-scale studies in various fields of social and economic development. Their application in poverty research has covered topics such as credit needs, service targeting for the poor, nonagricultural income-earning opportunities, women and gender and adult literacy. Participatory poverty assessments (PPA) were first undertaken in 1993 as part of World Bank supported country poverty assessments in Ghana and Zambia. [footnote; the 2000 Participatory Poverty Assessment {PPA] in Ghana was conducted in 36 communities through local workshops aimed at getting a better understanding of poverty from the perspectives of poor people.

Consultations also involved local authorities, NGOs as well as religious and professional associations. The outcomes were fed into policy design and implementation]. These pioneering studies helped PPAs gain greater prominence in poverty research for conceptual reasons and empirical convenience. The value of PPA methods linked with conventional approaches to poverty measurement as manifested in monetary or capability methods lies in their ability to encapsulate a broader definition of poverty in which the constituents of well-being are seen as contextual-specific. The use of less formal and more investigative data collection tools permits a broader understanding of poverty within the local, economic and political environment. In particular, and in contrast with monetary poverty measures, PPAs enable analysts to characterize poverty differently for specifically vulnerable socio-economic classes such as women heads of households, AIDS orphans, single crop farmers and minority ethnic groups. Some of these observed social groupings result from poverty profiles compiled using conventional methods.

The centrality of own perception of poverty in the PPA is sometimes undermined by its technical practicality. Although the question of whether a quantitative enquiry or a PPA is more reliable has commanded serious attention in the literature, the empirical evidence is not conclusive. As in the case of conventional survey methods, there are a number of challenges in operationalizing the results. These include overcoming problems related to the small size of samples, unrepresentative selection, and the ability and validity of generalizing to a wider universe. Drawing useful and confident conclusions is perhaps easier in the case of identifiable common relationships and observed inter-linkages than it is for endorsing the accuracy of quantified survey findings and their comparability. But the subjectivity inherent in own perceptions of poverty intrinsically weakens the essential feature of the PPA method. People's personal assessments of their own condition will inevitably suffer from the lack of objectivity and will provide only limited information about the poor (Laderchi et al (2003), Sen(?)). A more fruitful line of analysis, however, combines both quantitative and qualitative methods rather than comparing their results.

c. Perceived validity of qualitative methods

Despite wide recognition of the relevance and usefulness of data obtained from qualitative methods for assessing individual welfare, and more broadly, for identifying aspects of welfare omitted in standard poverty measures, such techniques are still not widely accepted by officials and they are not fully integrated with the conventional income-based poverty assessments. Qualitative techniques often rely on group interviews and approach subjects in a less specific way in their use of free ranging and informal methods of questioning. Quantitative approaches, by contrast, put more emphasis on objective data collection by means of individual household interviews and written questionnaires. The latter demand a certain minimal level of literacy and numeracy in survey respondents and may unwittingly introduce a bias. Participatory techniques with their particular emphasis on personal perceptions are sometimes claimed to be incompatible with traditional poverty assessments whether qualitative or quantitative. The reliance on 'focus groups', almost by definition because they have a specific agenda, poses some interpretation questions that have to do with the basic methodology of this survey approach. Focus groups contain people with diverse points of

view that are held in varying strengths and the trick is not only to draw out the common themes and core sentiments but to look for valid and meaningful exceptions.

Given the scarcity of resources, qualitative and quantitative poverty studies are seen to compete rather than complement each other's comparative investigative value. There are a few exceptions, however, where attempts to compare inequality and construct poverty profiles combining the subjective and objective approaches have been successfully undertaken [Gustafsson and Shi, 2001]. Other studies have also been able to incorporate PPA results in traditional poverty assessments (World Bank, 1994, 1995a, 1995b) and, increasingly, World Bank poverty assessments now include a participatory component within their traditional survey-based poverty assessments.

Potentially larger gains can be made by ensuring the two methods are combined during the earlier interview phase, for example, by asking subjective and qualitative question in the same survey (as has been recently implemented in Senegal). Not only will poverty assessments be stronger, but new facets of the problem could be opened up by in-depth probing using direct enquiry. A multi-dimensional approach to poverty analysis comprising a review of expenditures on market goods, side-by-side with non-income measures of access to non-markets goods, and indicators of intra-household distribution would reveal important aspects of individual well-being. (See Ravallion, 1994; and Carvalho and White, 1996, for methods of combining qualitative and quantitative data)

Qualitative surveys are usually undertaken to detect the 'why' rather than the 'what' of human behaviour and to identify what issues matter to people. The surveys tend to be based on prescribed and pre-selected [sometimes with defined quotas] non-probability samples of particular population groups and selected 'focus' groups. Survey outcomes may then be employed to refine the sample selection and operational design and to 'filter' out those questions not considered important or worthy of further investigation in a subsequent national survey. The potential to draw conclusions from observed inter-relationships between quantitative and subjective responses, however, must be reviewed in context.

From a statistical perspective, qualitative techniques can help reduce the overall sampling error. The approach also enables survey managers to identify cost-saving strategies when planning larger enquiries. Primarily, however, qualitative methods are used to examine a more limited number of subjects in depth. They are used to explore relational patterns and identities and examine the existence of various attributes. A wide variety of survey techniques, consequently, can fall under the general description as 'qualitative'

Relevant focus groups that guide the direction of studies towards the gathering of data relating to disadvantaged sections of the population are sometimes approached. People who are 'engaged' in an issue are usually better informed about its nature and it is often possible to get a firmer consensus on problems encountered by asking them as a group, rather than taking a section of the population selected at random.

All these approaches tend to draw attention to the broad common relationships rather than measure the magnitude of any assumed effects. One of the main advantages of

qualitative surveys arises from their in-depth and open-ended probing into issues that observers fail to notice at first sight and which respondents believe really matter. This investigation procedure needs to be carried out by well-trained and qualified analysts who understand the objectives of the study and can identify the purpose of the enquiry. While the enumeration methods may be unstructured, the range of topics covered and questions to be raised should, nevertheless, conform to a predetermined list of all the key concerns on which information must be elicited. The smaller non-sampling error achieved by this approach has to be balanced against the unknown and incalculable sampling error. The engagement of high quality researchers with sound investigative techniques contributes to lower margins of error. If there is no variable that needs to be quantified, simply the recording of its presence or absence, the approach can generate robust responses. But sometimes it is desirable to have a sense of the magnitude of an issue in order to know if a problem is growing [and at what rate], and if it is important to those affected. Then there is a need for a calibrated scale or a marker against which to classify the interview outcomes. In general, survey technicians would rarely use qualitative methods to find out about actual outlays and incomes. Analysts should be aware their adoption in enquiries that require the quantification of variables and precise comparisons of magnitudes can confound an understanding of recorded outcomes

d. Sensory techniques

Sensory studies go beyond the identification of issues to an assessment of their relative importance to individuals and to have some notion of priority ranking. Their aim is to determine the strength of feeling people have about their circumstances. Sensory studies may not portray exactly what the poor themselves think This is because, in some cases, intermediaries or 'translators' are engaged to describe and interpret declared strengths of feeling about prevailing conditions and opportunities. Enumerators responsible for the actual recording of the 'voices' may not always capture the nuances of views originally and directly obtained from grass roots interviews. More often or not, this has to do with how respondents perceive the status of interviewers. Some survey intermediaries may be more concerned to test and justify preset hypotheses and to show up the conditions of poverty in a particular light, if only for the understandable purpose of provoking direct action, official or otherwise, to put things right and help alleviate what they see as evident genuine suffering. The formal investigators should have specialized knowledge and be trained to know what they should be looking for when questioning respondents who are often not well educated or informed. Some people who interview focus groups may be familiar with local problems of disadvantage, access, poverty and vulnerability and will be aware which families or groups are especially at risk. In regions where it is difficult and expensive to conduct a scientific probability based survey, or where the potential respondents are vocal but otherwise illiterate, agencies find it useful to engage trained enumerators and surveyors to give 'voice' to the unheard concerns of the poor. This usually involves meeting with local voluntary associations, women's groups, smallholders and non-tenured farmers and casual labourers. A classic study of this kind was the World Bank Report compiled by Deepa Narayan entitled 'Voices of the Poor'. Using a similar method, The UN Intellectual History Project came up with a different type of study, 'UN Voices', that interviewed leaders, decision-makers and opinion formers and took the observations and personal experiences of leading UN civil servants and consultants to

cast light on the nature of social and economic development and the international decisions made to influence it.

The 'touchy-feely' method of enquiry, as it has sometimes been irreverently referred to, is not popular with most statisticians simply because it is not robust and cannot be readily replicated to generate similar results. It is, by their technical assessment, too loose and subjective and too exposed to the varying intensity of feeling of respondents that may be time and location specific. There may be less faith in responses, for example, if all respondents belong to the same group and are interviewed together at the same time. In this situation, there will be a distinct tendency to reinforce or reiterate what others have said before to emphasize their solidarity. This has been very evident in recent surveys among Muslim communities of policing methods in Britain.

e. Related Indicator Series

In the mid-1990s, in a policy shift away from a concentration on growth that accorded greater emphasis to poverty reduction, The World Bank launched several initiatives aimed at gaining a better understanding of the nature of poverty and why it remained a problem in so many areas. Among several studies that also gave greater transparency to its policies, the Bank began regular dissemination of its Social Indicators of Development, a country based report that was later expanded into the annual World Development Indicators publication. The former took a long-term perspective of social change which, it was assumed, occurred quite slowly. Three separate periods of reference were compiled; one, an historical long term view that looked at social circumstances as they were 15-25 years ago; the second, medium term with a more recent 5-15 year past perspective; and the third, the ‘present ‘ covering the most recently reported data within the past 5 years.

Qualitative survey methods, in general, have been likened to the approach taken by a doctor who examines a child for signs of a disease like chicken pox. The doctor knows what to look for and is aware of the common characteristics of chicken pox and so, by thoroughly examining the child to see whether the symptoms are present or not, he or she can then discern whether the child is suffering from the disease and assess the possibility that others may contact it.

f. Community level studies

Studies that look at communities as a whole are varied and selective but they tend to focus on locally specific issues and are mostly micro in nature. Some will be carried out by the local community itself or by local authorities intending to introduce improvements and changes to the infrastructure, for example, the re-housing of slum dwellers or the construction of a new road or dam. Some of these will be conducted not by officials but by non-government organizations [NGOs] and academics. While a complete list of a community’s assets and range of services may be compiled, for many non-official agencies the main concern will be to gather only those data relevant to their given organizational and operational mandate. This may entail exploring the nature of the

relationships that exist between different groups in a society and noting the dependency of families on specific activities and services like a bus service or a market. As with government agencies, the objective of NGO groups in compiling such data is to understand processes and meet obligations to report on the outcome of their work. This is needed to reassure sponsors and supporters that funds allocated to the agency have been well spent on appropriate actions and that they have facilitated the distribution of goods and services, at the community level, to the specific groups and households intended.

4.3 Miscellaneous subjective survey approaches

From time to time, topical enquiries carried out using a so-called 'barometric' study, such as the 'social weather stations' approach followed in the Philippines, may be found useful. But these tend to be used in an advocacy and policy context. In a similar vein, pyschometric studies [using, for example, the 'smiley faces' technique] can be used for grading the nature and intensity of feeling in relation to particular issues and situations, such as, poor housing and public sanitation. Because this approach can help determine priorities, it has been used to ascertain, hypothetically, the amount of income poor people think is necessary to allow them to escape their state of poverty or 'homelessness'.

4.4 Mapping poverty characteristics

a. Piecing the puzzle together

A comprehensive poverty mapping, using proximate and exact matching procedures, encourages analysts to piece together all the forms of data that have been collected from different sources, taking account of the variety of definitions and classifications that apply. Overlaying the various pieces of information available and devising relevant imputation methods and estimates to fill in gaps is not that easy. The socio-economic groups to which households belong and their links to specific places of habitation and location are rarely unambiguous when it comes to putting in the pieces of the geographically related data required to paint the more comprehensive picture decision-makers seek. The approach is becoming more widely adopted by researchers but it relies heavily on a capacity to link micro household or product data obtained from surveys and small area studies to a comprehensive database developed from a census. The compilation of this 'map' invariably requires the application of 'bootstrapping' and other data mining techniques. Sound procedures for interpolating and extrapolating figures and for generating retrospective estimates of benchmark data have to be put in place. Their validity will depend on the availability of relevant proxy series and other related indicators that are available. These indicators would normally include appropriate price, output, wage and employment series and sales measures that suitably reflect the options and boundaries that constrain household decisions. The use of any series to move estimates in different directions from a given observation will suffer, however, from an element of structural fixity. They may thus not be able to capture the important impact of a change in relative prices as it affects consumption patterns.

Pioneering work in this area of social mapping was conducted by the North West Regional Health Authority in England when it linked graphically where people lived [in

urban industrial locations and rural agricultural areas] with their assumed socio-economic status, individual occupational category, industry of employment and the incidence of various diseases and health indications. Quite apart from the intention to say something about 'social class', a pattern emerged showing a clear relationships between different social groups and their exposure to environmental hazards and highlighted the individual's risk of contracting certain medical ailments that seemed conditional on his or her occupation and living conditions, such as having open hearth coal fires in the house, and type of diet.

A similar post-enumeration study in China linked the income data of from the latest household survey with data from the household based First Agricultural Census of China [1997-9] to determine levels of well-being across provinces. The aim was to see how income levels could be related to the type of economic and farming activity in those areas. The results showed that the traditional grain producers found mostly in the north and north-western provinces were especially vulnerable to low and fluctuating incomes and that they had the fewest opportunities to bring in additional income from non-farm activities located in nearby urban areas. This adversely affected the educational opportunities of their children as well as impacting on nutrition levels.

Theoretically, the data used to compile these more complete pictures should be based on the respective benchmark and survey information relating to the same households but this would probably yield too few matches and result in significant bias. Thus the characteristics of closely similar households engaged in different surveys or in different rounds of the same survey are usually combined to produce a more complete picture. The problems of area sampling and of following through this process to achieve higher levels of disaggregation have been described elsewhere in the Handbook. Panel studies that track the activities and characteristics of the same households over a long period of time suffer from problems related to the changing nature and composition of the household that result from individual attrition and aging. In principle, the desire to match 'like with like' and to hold certain factors constant cannot be properly observed.

b. Breaking down aggregate blocks of data

The capacity to search for meaningful and relevant disaggregations of grouped and mixed or combined data is important. The means to extract and uproot information embedded in national and other statistical aggregates like final household consumption expenditures or rural subsistence output clearly demands some prior data about target groups and those at risk [and where these people can usually be found] but the results can cast new light on old problems.

c. Drawing on appropriate indicators

Different indicators already existing in the public domain can be accessed to provide approximate information about comparative status and levels. Related structural indicators can help to monitor changes in those levels. Synthetic and composite indices of well-being including, for example, the UNDP Human Development Index, use common data and adopt recognized statistical procedures across each country to provide a wider

perspective of the relative standing of various socio-economic groups and their progress. Such index measures are not precise nor independently verifiable. They are best employed in making ordinal rather than cardinal assessments. However, given the high inter-correlation between many individual component indices depicting growth, development, levels of living and social progress, and so on, composite index numbers - although appealing to no inherent conceptual nor underlying social logic relevant to the technical scale transformations and formulaic aggregations carried out – are limited and not very robust for comparative purposes. Many composite measures, while superficially relating simultaneously to the multiplicity of dimensions implicit in the inherent individual indices, have little relevant appeal to an intrinsic social or economic body of thought. There is little rationale, other than arithmetic transparency, to support the simple weighting procedures adopted for aggregating component indices. Some carefully constructed synthetic or composite measures may provide, nevertheless, a reasonable indication as to the overall competence of governments and reflect the basic quality of governance and the efficacy of their social delivery mechanisms.

d. 'Triangulation' techniques

Triangulation is a term that can trace its origins to both land surveying and sea navigation. The method rests on the principle that a given 'point' or height [contour level] can be determined, even pinpointed, simply by reference to the directions provided by an examination of other observable positions [literally, by 'three angles'] that can be related to it. In a socio-economic context, these angles can be interpreted as being determined by indicators that can provide different 'perspectives' on a recognizable but not directly measurable situation or problem. The indicators, though reflecting different conditions, may prove useful in defining the exact points of departure for identifying the phenomenon under investigation. In practice, the actual underlying measures are usually not to the same scale of calibration as the phenomenon under investigation but, when transformed into indices, they can be more readily combined.

5. Concluding Comments

A review of different data collection techniques indicates the scope and possibility of combining various types of information from alternative sources, even if of varying accuracy, to provide more insight into people's living conditions. Relying on data compiled for different purposes to paint a broader canvas, however, does not necessarily provide the specific information required for the range of poverty and inequality analysis that many policy makers want to conduct. Apart from the difficulty of linking and cross-validating information of varying quality from different sources, the proper choice of what data to bring to bear on an issue poses questions of 'specificity versus consistency'. This is directly relevant to choice of data to satisfy the simultaneous concern to monitor as well as evaluate the nature of poverty, and to do so in a uniform and consistent manner. In this respect, when comparing values, the existence of price level differences across locations and by types of purchaes assume considerable significance.

Several general themes have run through the discussion above. First, is the awareness that selecting a large sample size for a household survey to allow for a more detailed level of

disaggregation and the simultaneous study of multiple topics adds significantly to survey costs. It also leads to potentially large non-sampling errors. Survey managers are constantly under pressure to find alternative and cheaper means 'to fill in the gaps'. If such methods also expand the state of knowledge about poverty as well as track changes in household and individual levels of living as they occur over time, so much the better. Second, a full understanding of the complexity of the poverty phenomenon has to go beyond the mere collection of income and expenditure numbers obtained from a conventional household survey and the subsequent construction of a poverty datum line. Third, within each country, it is important to strive for survey consistency across regions to allow for comparisons between different communities. This is not only a matter of following the same data collection methodology but also of ensuring that the summary measures derived are relevant and consistent. In assessing the living conditions of poor households, knowing the actual physical quantities obtained (such as how much food they get) as well as the value of outlays they have made is important. Here again, this is not easy if the prices for specific items can vary significantly over time and between different locations and types of outlets.

The desire for international consistency also requires a coherent methodological approach between countries and, ideally, one that is comprehensive. Furthermore, for long term trend analysis within a given country, it is especially important to stick with the original benchmark and survey design wherever possible unless it is clearly faulty. This implies using the same associated array of indicators for updating trends, even if the procedure is less than optimal and if later new methods are found. These can always be run in parallel and then updated with the next round of benchmark studies. Finding the appropriate balance between these several competing ends and being able to maintain the capability to undertake a robust temporal and spatial analysis will always be difficult.

In assessing household living conditions, there are certain questions that evade quick and easy resolution. A distinction cannot be readily drawn, simply from a standard cross section study, between chronic and transient poverty even with access to an array of supplementary data. While the basic conditions of poverty are a legacy handed down from one generation to the next, many households will pass through various phases of being poor during their lifetime. The availability of sequential data from longitudinal studies and time related indicators can suggest solutions to policy makers about how poor households escape from their poverty over time. Such time series data can reveal how changes in the circumstances of individual households, including changes in the actual size and composition of the household such as its age and sex profile, can affect the daily living standards of its members. Another key issue is that the record of expenditures compiled in a household survey implicitly assumes that the relative 'importance' of any item is dependent on the share of the weekly or monthly budget that households spend on it. These surveys rarely take into account the question of priorities and the need for households to meet, before any other outlays, certain mandatory obligations such as trade credit and debt repayments, local community charges, taxes, the cost of shelter and 'utilities' like water and power, etc. The importance of food, paradoxically, is frequently subsumed in this process.

The virtue of employing different methods of enquiry to present a more holistic picture to draw attention to conditions that have a distinct bearing on the question under review (but which might otherwise have been overlooked) is indisputable. The personal involvement of researchers and officials in these studies and the inferences they make may have important and desirable feedback implications for the re-design of selected administrative records. This will influence the choice of investigative approach to create a more complete picture of poverty and its relationship to other social problems such as inequality or a chronic failure in public services.

If carefully assessed and evaluated, the availability of more rather than less information must contribute, in general, to a better understanding of a problem. The key is to identify the appropriate sources to secure such information and to select, from the data available, those that can be related to the issue.

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