



# Pakistan Poverty Assessment Update

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## Background Paper: 2 The Reliability and Credibility of Statistical Data for Poverty Analysis in Pakistan

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## Foreword

The Asian Development Bank (ADB) and Pakistan have been development partners for almost 38 years. ADB's Poverty Reduction Strategy, approved in November 1999, articulates poverty reduction as its overarching goal. ADB is committed to supporting poverty reduction efforts in member developing countries, and has supported poverty reduction efforts in Pakistan through enhanced levels of assistance and targeted investment projects with the objective of reducing poverty and generating employment. Over the last 3 years, assistance has averaged about \$907 million a year. This high level of assistance focuses specifically on supporting poverty reduction through interventions in the areas of good governance, sustained pro-poor growth, and inclusive social development.

ADB also has an active research agenda on poverty and economic and social development issues. As part of this agenda, work on a comprehensive poverty analysis for Pakistan was initiated in 2000, and a report titled *Poverty in Pakistan: Issues, Causes, and Institutional Responses* was subsequently released in 2002. The report is a detailed poverty profile of the country and analyzes the main causes of poverty, along with institutional responses to poverty reduction.

This poverty analysis is now being updated in the form of ADB's Pakistan Poverty Assessment Update. A series of draft background papers have been prepared on crosscutting poverty issues. Given the importance of the topic, ADB's Pakistan Resident Mission (PRM) feels that it would be useful to circulate these draft papers among a wide audience to solicit feedback that may help widen the analytical perspectives presented. We hope that the Background Paper Series will not only contribute to the debate on these key issues in Pakistan but prove useful to scholars, development practitioners, and policy analysts interested in poverty reduction issues.

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## Preface

Under ADB's Country Strategy and Program for 2002–06, poverty reduction has been the overall objective of ADB's development assistance to Pakistan. A new Country Strategy and Program will be prepared to cover the period 2007–11. As input to this, the preparation of ADB's Pakistan Poverty Assessment Update started in 2005. Part of this process has been the commissioning (both in-house and from external consultants) of a number of draft background papers on specific topics for in-depth examination. In particular, crosscutting themes such as poverty definitions, income and nonincome poverty, gender and poverty, and issues such as the protection of the chronically poor, food security, and the social sector, have been the subject of research by the Poverty Group of the Country Policy Operations Unit at ADB.

This Background Paper Series aims to share these draft papers with a select audience of interested interlocutors, with the objective of supporting the debate on poverty reduction and economic growth. Comments and inputs received on these papers will be most appreciated and will be given full consideration in preparation for the Pakistan Poverty Assessment.

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## Abbreviations and Notes

ADB	—	Asian Development Bank
CNG	—	compressed natural gas
CPI	—	consumer price index
FBS	—	Federal Bureau of Statistics
GDP	—	gross domestic product
GoP	—	Government of Pakistan
HCES	—	Household Consumption Expenditure Survey
HIES	—	Household Integrated Economic Survey
IFPRI	—	International Food Policy Research Institute
LFS	—	Labour Force Survey
MDG	—	Millennium Development Goal
MICS	—	Multiple Indicator Cluster Survey
NIPS	—	National Institute of Population Studies
NWFP	—	North-West Frontier Province
PDS	—	Pakistan Demographic Survey
PES	—	post-enumeration survey
PIDE	—	Pakistan Institute of Development Economics
PIHS	—	Pakistan Integrated Household Survey
PRHS	—	Pakistan Rural Household Survey
PRM	—	Pakistan Resident Mission
PRSP	—	Poverty Reduction Strategy Paper
PSES	—	Pakistan Socio-economic Survey
PSLM	—	Pakistan Social and Living Standards Measurement (survey)
PSU	—	primary sampling unit
SAP	—	Social Action Programme
SPDC	—	Social Policy Development Centre
UNDP	—	United Nations Development Programme
UNFPA	—	United Nations Population Fund
UNICEF	—	United Nations Children's Fund
USAID	—	United States Agency for International Development

## NOTES

Currency Equivalents (as of 1 November 2005)		
Currency Unit	–	Pakistan rupee (PRe/PRs)
PRe/PRs1.00	=	\$0.0168
\$1.00	=	PRe/PRs59.68

The household/demographic surveys carried out in Pakistan to date do not necessarily correspond to a survey/census year with fixed start and end dates. For example, the survey/census year 2001/02 begins at an unspecified point in 2001 and ends at an unspecified point in 2002.

In this paper, "\$" refers to US dollars.

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## Summary

The reliability and credibility of Pakistan's poverty database, which is generated primarily through household surveys, has been debated for a long time. Issues of concern include the updating of the sampling frame; survey comparability; availability when needed; frequent changes in field methodology; and the quality of questionnaires used. This background paper assesses the reliability and credibility of the household surveys that generate data for poverty analysis in Pakistan.

Pakistan's endorsement of the Millennium Development Goals (MDGs) implies that the data requirements for poverty analysis need to be judged in terms of income as well as nonincome poverty. This paper focuses on the data generated by four household surveys: the Household Integrated Economic Survey (HIES), Pakistan Integrated Household Survey (PIHS), Pakistan Demographic Survey (PDS), and Labour Force Survey (LFS). All four are carried out by the Federal Bureau of Statistics (FBS).

The HIES and PIHS are widely used in income and nonincome poverty analysis. The two independent surveys were combined in 1998/99 and 2001/02, and this has caused changes in their household expenditure module, the main source of information on income poverty estimates. Expenditures are also reported in less detail, with some minor categories grouped together. Nonetheless, these changes apply to minor categories of consumption and should not substantially affect comparability with HIES data generated before 1998/99.

The reference period used in the expenditure module has also changed. The HIES reported monthly consumption figures for all food items, but the combined PIHS/HIES reports a large proportion of the food items consumed by households as fortnightly figures. This may affect the comparability of the combined PIHS/HIES with previous rounds of the HIES. However, the expenditure modules used in two rounds of the combined series (1998/99 and 2001/02) are still comparable. More importantly, combining the socioeconomic data from the PIHS with expenditure data from the HIES opens up new avenues of investigation.

In order to estimate the incidence of poverty, it is necessary to adjust household expenditure by household size. The HIES and PIHS in the 1990s followed different trends in household size. Since the definition of household members in the two surveys is the same, the main reason for the substantial differences in results may lie in data collection techniques. The HIES used only male enumerators, while the PIHS and the combined rounds in 1998/99 and 2001/02 used female enumerators to administer the survey questionnaire for women.

It is strange that the combined PIHS/HIES series for 1998/99 and 2001/02 show an increase in household size, one that is particularly substantial in rural and urban Sindh. In the current demographic situation where fertility has declined considerably, it is hard to explain this increase, particularly when the increase is evident only in Sindh.

A common observation on large surveys such as the HIES and PIHS is that the income accruing to the highest income group is seriously understated, and that the poorest are inadequately represented. This issue of the representation of high-income groups

surfaced more seriously in the 2001/02 PIHS/HIES, where low- or middle-income group primary sampling units (PSUs) were enumerated against high-income PSUs. The FBS report that was published subsequently blamed its field supervisors for the negligence. This is a poor defense—this is a serious sampling task and should be managed regularly well before a survey is started.

The PDS is not accorded the place it deserves in monitoring nonincome MDG/Poverty Reduction Strategy Paper (PRSP) indicators. Given that all four rounds of the PIHS are now complete, and that the Pakistan Reproductive Health and Family Planning Survey is not a regular survey, it is difficult to see how demographic and health indicators will be monitored. The FBS has initiated a new survey, the Pakistan Social and Living Standards Measurement (PSLM) survey, but it does not contain a module on birth history to estimate fertility and child mortality rates. The PDS remains the main data source for these indicators.

Although a reliable data source, the PDS also faces certain concerns: recent changes in methodology may have affected fertility and mortality rates, but this impact has not been evaluated. In addition, data on children's height and weight is not regularly available to monitor child malnutrition. This information could be obtained through the PDS if female enumerators were inducted into the survey. It would be worth investing in the PDS for reliable demographic and health data.

In general, labor data remains inadequate; it would be worth investing more in the LFS to make it an annual survey.

There is considerable debate on the urban sampling frame used by the FBS. Using the 1998 population and housing census data, the FBS revised its rural sampling frame, which was then used in the two combined rounds of the PIHS/HIES. However, the FBS's urban frame was last updated in 1995, and this may affect the rural and urban distribution of a sample. It also affects overall estimates of poverty, as well as comparability across years, and thus, needs to be updated urgently.

Frequent changes in data collection methodology also affect the reliability and comparability of survey data. Such changes include changes in the reference period for reporting births and deaths (the PDS) and for the expenditure module of the HIES/PIHS. Such changes may be required to improve data quality, but the frequency of changes in reference period may affect reporting quality and data comparability across surveys.

The quality of data produced by the household surveys so far implies that the quality of training and supervision that surveyors receive, needs to be improved. One reason for the recent controversy over household size, which is an important variable in estimating poverty, was that ill-trained enumerators did not enlist household members properly. The supervision system should be changed to allow supervisors to manage their field teams for the whole survey period, as was done by the FBS in the PIHS rounds. Household survey monitoring teams consisting of regular field staff posted to national, regional, and field offices across the country could also monitor surveys more effectively.

The validation of survey data enhances data quality considerably. This is usually done through a post-enumeration survey, which is not common practice in Pakistan. There is need to introduce a reliable and independent internal mechanism for validation.

It is illegitimate to compare poverty estimates based on different surveys that are not comparable in terms of sample design, seasonality, and data collection methodology. Similarly, poverty estimates that use the same data sets but are based on different methodologies should not be used to determine poverty trends, which require the use of a consistent poverty line.

In 2004, the FBS launched a new survey series, the PSLM survey, to collect socioeconomic data that was representative at the province and district level. In 2004, the district- and province-level PSLM survey rounds were launched simultaneously: a break from the previous plan of generating survey data in alternate years. There are three main differences between the district- and province-level rounds of this survey. First, the sample size of the district-level PSLM survey is quite large—almost five times that of the province-level PSLM survey. This credible initiative on the part of the FBS helps meet district-level data requirements for planning in the context of decentralization. Second, while the district- and province-level surveys use the same questionnaire, the latter includes an expenditure module to help estimate poverty at the national and provincial level. Third, the province-level PSLM survey seems to have been designed as a subset of the district-level PSLM survey. If so, there may be serious problems of comparability between the PSLM survey (province-level) and previous household surveys.

The expenditure module used in the PSLM survey (province-level only) is similar to that in the PIHS/HIES. The addition of an employment module that is comparable with that in the LFS, is a welcome step, and will help generate district-level baseline data.

The PSLM survey does not, however, adequately monitor all MDG and PRSP indicators. Fertility and child mortality rates, for instance, cannot be estimated from this new survey. One important MDG indicator is the ‘proportion of children starting Grade 1 who reach Grade 5.’ This indicator requires data on school dropouts, which the PSLM does not provide. Like the PIHS, the PSLM survey also fails to monitor several other MDG/PRSP indicators, such as maternal mortality and malnutrition (underweight children). The new survey is therefore inadequate for the purposes of monitoring all the MDG/PRSP indicators.

## 1 Introduction

The rise in poverty since the mid-1990s has emerged as the central challenge of development in Pakistan. Taking a serious view of this, the Government of Pakistan (GoP) launched its poverty reduction strategy in 2001 (GoP 2001). Pakistan is also signatory to the Millennium Development Goals (MDGs), which cover many dimensions of income and nonincome poverty. The country's MDGs reports for 2004 and 2005 have linked every MDG target with some measurable indicators (GoP 2004 and 2005). These reports also shows the GoP's Poverty Reduction Strategy Papers (PRSP) targets set against each indicator for 2005/06, and the MDG targets set for 2015. These indicators need to be monitored regularly, and this monitoring requires the availability of credible and reliable data. Household surveys, conducted primarily by the Federal Bureau of Statistics (FBS), are the major sources of data used to monitor most PRSP and MDG indicators (GoP 2003).

Socioeconomic data based on household surveys and population and agriculture censuses are widely available in Pakistan. However, the reliability and credibility of these data sources in providing representative and consistent estimates at the desired level, have been long debated. Updates of the sampling frame, the timeliness and comparability of surveys, and the frequent changes in field methodology and survey questionnaires used, are among the most common features of this debate. One result of such concerns in the case of the urban sample presented in the 2001/02 Pakistan Integrated Household Survey (PIHS) is that the report has not been published yet, although it is available on the FBS website (DFID 2005).

This background paper, written for the Asian Development Bank's (ADB's) Poverty Assessment Update, assesses the reliability and credibility of the household surveys that generate data for poverty analysis in Pakistan. The paper does not examine other surveys carried out by different agencies—which usually use small samples—since they are unlikely to be used to estimate income (or consumption) poverty that is representative at the national level. However, some recent panel data sets are briefly discussed in view of their importance in understanding poverty dynamics in Pakistan.

The FBS recently launched a new series of household surveys, named the Pakistan Social and Living Standards Measurement (PSLM) survey. This is discussed to determine its comparability with previous surveys as well as its adequacy in terms of monitoring MDG/PRSP indicators. In addition to data quality, the credibility of household surveys in Pakistan is commonly linked with the independence of the FBS. Several recent studies carried out by different donor agencies deal with this issue in detail, including the restructuring of the FBS (McLennan 2002). Organizational issues have, therefore, not been discussed in this paper. The main objectives of the paper are to: (i) describe the data requirements for the analysis of poverty (income and nonincome); (ii) outline the sources of household survey data by focusing on large surveys; (iii) assess the reliability of these surveys; and (iv) examine the credibility and legitimacy of poverty data sources.



## 2 Data Requirements for Poverty Analysis

Poverty studies in Pakistan are generally based on the income (or consumption) dimension of poverty—a key factor in the manifestation of poverty as well as in the effort to reduce it. However, income poverty does not adequately capture other important dimensions of poverty, such as vulnerability to unemployment and disease, or illiteracy, and children’s access to education. It is now widely recognized that poverty is a multidimensional concept; it is more than just the lack of money. Poverty is a state of deprivation of multiple needs, all of which are essential for a full and meaningful existence. Any single measure of poverty is unlikely to capture all the dimensions that poverty manifests itself in.

More importantly, as noted earlier, the GoP has endorsed the MDGs, which, in addition to the eradication of hunger and poverty, set clear targets for achieving universal primary education, promoting gender equality and women’s empowerment, reducing child mortality, and improving maternal health. In this context, data requirements for poverty analysis in Pakistan need to be judged in terms of the income and nonincome dimensions of poverty. This section reviews these requirements.

### 2.1 Income Poverty

A measure of poverty can reflect three things: (i) an indicator of wellbeing or welfare; (ii) a normative threshold representing the well-being an individual (or household) must attain to be above poverty; and (iii) an aggregate measure to assess poverty across a population. These indicators determine the nature of data required to estimate poverty. Although household income would be the obvious choice with respect to the welfare indicator, expenditure data is preferred over income because it reflects more correctly the permanent income of an individual. In order to measure people’s welfare expenditure, poverty analysis uses the quantity and value of consumed items, whether these were paid for or received as gifts or payments in kind. Aggregate household expenditure includes expenditures on food, fuel, housing, education, health, and other nondurable goods and services.

Most recent poverty studies in Pakistan have used the calorific approach to determine the poverty line, incorporating the cost of both food as well as nonfood items (Ali and Tahir 1999, Amjad and Kemal 1997, Anwar, et. al. 2005, and Malik 1994). The cost of a food basket is estimated as the average food expenditure required to achieve a minimum level of caloric requirements, e.g., 2,350 calories per day per person, as used in the Pakistan official poverty line (Hussain and Khan 2003). Ideally, one should have data on the food consumption of all members of a household because calorie requirements vary by age and sex. However, it is almost impossible to generate such data for a large sample; the common practice is to estimate the calories consumed using household-level food consumption data. In order to measure welfare at an individual level and to estimate the incidence of poverty, this data is adjusted by household size. The age structure of

household members is also taken into account. The Household Integrated Economic Survey (HIES)<sup>1</sup> (or PIHS for the more recent period) provides all the data required to estimate income (or consumption) poverty, including the quantity and value of food and nonfood items consumed during the reference period, family size, and the age and gender of household members.

## 2.2 Nonincome Poverty

There is one conceptual concern regarding the data requirements for estimating nonincome poverty: which essential indicators should be part of this dimension? This is not as straightforward a concept as that of income- or consumption-based poverty, where the focus is largely on one indicator of welfare. Recent studies have examined the nonincome dimension of poverty in different ways. For example, in *A Profile of Poverty in Pakistan*, the Mahbub ul Haq Human Development Centre (1999) examines the poverty of opportunities, focusing on health, education, and income. In nonincome rural poverty indicators, Gazdar (2000) includes a 'human development index', basic education, health, and the female-male population ratio. Jamal, et. al. (2003) have developed a 'deprivation level' by combining three indices, including education, housing, and employment. Health, education, housing, and employment seem to be the main indicators of nonincome poverty.

However, the best way of measuring nonincome poverty is to develop a set of nonincome poverty indicators based on MDG targets (see Appendix). There are several reasons for this. First, the MDG targets are comprehensive, covering many dimensions of income as well as nonincome poverty. Second, as signatory to the MDGs, the GoP has some ownership stake in the MDG targets. Third, and more importantly, the MDGs reports link every target with some measurable indicator, and against each indicator, clearly set PRSP targets for 2005/06 and MDG targets for 2015.

This makes it necessary to monitor the progress made toward attaining the MDGs, requiring that data be generated for the following indicators:<sup>2</sup>

- Incidence of poverty;
- Percentage of underweight children;
- Infant and child mortality;
- Total fertility rate;
- Contraceptive prevalence rate;
- Maternal mortality rate;
- Net primary school enrolment;

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<sup>1</sup> The acronym HIES originally stood for Household Income and Expenditure Survey. In 1990/91, it was renamed the Household Integrated Economic Survey (Tahir 2003).

<sup>2</sup> GoP targets for all these indicators are listed in the Appendix.

- School completion rate;
- Literacy;
- Gender gap in school enrolment;
- Female wage-employment in the nonfarm sector;
- Child immunization;
- Incidence of diarrhea among children;
- Coverage by lady health workers for their health services;
- Number of births attended by skilled health personnel;
- Ante-natal care consultation;
- HIV prevalence among 15–24-year-old pregnant women;
- HIV prevalence among vulnerable groups, e.g., active sex workers;
- Incidence of malaria in high-risk areas;
- Incidence of tuberculosis;
- Percentage of population with access to piped water
- Percentage of population with access to sewerage and drainage;
- Regularization of *katchi abadis* (unauthorized settlements).
- Land area covered by forest;
- Land area protected for the conservation of wildlife;
- Energy efficiency;
- Number of petrol and diesel vehicles using compressed natural gas (CNG) fuel;
- Percentage of sulfur in high-speed diesel

It is worth noting that household surveys cannot generate data for all MDG indicators, particularly the last six listed above.



### 3 Sources of Statistical Data for Poverty Analysis

The HIES is the main source of data used in estimating income (or consumption) poverty, but it contains little information on nonincome poverty indicators. To fill this gap, the PIHS series was initiated in the 1990s to monitor the progress of the GoP's Social Action Programme (SAP), particularly with regard to health, education, and water supply and sanitation indicators. The PIHS also includes data on women's birth histories, which enable the calculation of total fertility rate as well as infant and child mortality. The Pakistan Demographic Survey (PDS) generates regular data for demographic and health indicators. However, neither the HIES/PIHS nor PDS provide any data on underweight children—an MDG indicator of hunger and poverty. The main source of employment data is the Labour Force Survey (LFS). This section discusses the following data sources: the HIES/PIHS, PDS, LFS, certain specialized surveys, and the agriculture and population censuses.

#### 3.1 HIES/PIHS Data: Issues and Problems

The HIES was initiated in 1963, and conducted regularly during the 1960s. No survey could be organized in the 1970s, apart from in 1979. After this, the HIES was not resumed till 1984/85; it then continued for 3 consecutive years. In the 1990s, the HIES was conducted in 1990/91, 1992/93, 1993/94, 1995/96, and 1996/97. The last two HIES, carried out in 1998/99 and 2001/02, were combined with the PIHS.

The PIHS was started independently of the HIES in 1990/91, as a separate monitoring mechanism for donor-aided programs. A new series of four rounds of the PIHS was initiated by the FBS in the mid-1990s, with financial assistance from the UK Department for International Development (DFID). These survey rounds were carried out in 1995/96, 1996/97, 1998/99, and 2001/02. The last two rounds were combined with the HIES.

The HIES was designed primarily to: (i) provide data on household income and expenditure in order to estimate income distribution, poverty, consumption patterns; (ii) estimate household savings and liabilities; and (iii) provide data on household income sources, including foreign and domestic remittances, and expenditure items by different income groups. The PIHS series started in 1995/96 was intended to monitor the impact of the GoP's SAP, focusing on education, health, sanitation, rural infrastructure, and water supply. Although limited information on income was collected in the 1995/96 and 1996/97 rounds of the PIHS, this was not as detailed as the HIES or even the 1990/91 PIHS. The data produced during the first two rounds of the PIHS could not be used to estimate poverty.

After the PIHS and HIES were combined in 1998/99, the survey's household expenditure module (the main source of information for poverty estimates) underwent some changes. First, expenditures were documented in less detail, and some relatively minor categories of expenditure combined. Since these changes are few and apply to minor categories of consumption, they should not substantially affect comparability with

previous years (FBS 2001 and the World Bank 2002). Second, the reference period used in the expenditure module was changed. In the HIES, food consumption was reported as monthly figures; in the combined PIHS/HIES, a large proportion of the food items consumed by households were reported as fortnightly figures. This change in reference period may affect comparability with previous years, since using the same statistical standards is a precondition for the comparability of statistics (Gulloy and Saebo 2003).

The expenditure modules used in the two combined series for 1998/99 and 2001/02 are still comparable. Despite some concerns regarding the comparability of expenditure data over time, combining socioeconomic data from the PIHS and expenditure data from the HIES has opened up new avenues of investigation. It allows not only the impact of SAP and PRSP initiatives to be assessed, but also a more general analysis of poverty in Pakistan.

As noted above, in order to measure individual welfare level and estimate the incidence of poverty, it is necessary to adjust household expenditure by household size. The HIES and PIHS of the 1990s indicate two different trends in household size. Since the definition of household members is the same in both surveys, the main reason for this substantial difference in trend may lie in data collection techniques. For example, only male enumerators were used in the HIES, while the PIHS series and the combined surveys for 1998/99 and 2001/02 used female enumerators to administer the questionnaire pertaining to women.

Given the differences in field methodology, it is argued that the PIHS data for 1998/99 measures household size better than the HIES conducted between 1992/93 and 1996/97. It is also argued that the HIES for the period 1992/93 to 1996/97 tend to underestimate the household size of relatively poor households more than that of richer households. In that case, the data for earlier years probably underestimates the incidence of poverty, with the data for 1998/99 yielding estimates that reflect poverty better (the World Bank 2002).

Nonetheless, it is strange that the combined PIHS/HIES series also shows an increase in household size. This increase is quite substantial in rural and urban Sindh. For example, in rural Sindh, household size increased from 6.9 members in 1998/99 to 7.9 in 2001/02. In urban Sindh, there was an increase of 0.5 members in this period. In the current demographic situation, it is hard to explain this increase, particularly when the increase is evident only in Sindh (see table below). Population census data shows a decline in household size in Sindh from 7.0 persons in 1981 to 6.1 in 1998 (Rukanuddin and Chaudhry 2004). It is difficult to conclude whether poverty was underestimated in previous HIES years or overestimated in PIHS years. However, the possibility that poverty was overestimated, particularly in rural Sindh, cannot be ruled out.

**Table: Average Household Size by Province and Rural-Urban Area**

Province	1998/99			2001/02		
	Urban	Rural	Overall	Urban	Rural	Overall
Overall	6.7	6.8	6.8	6.9	7.0	7.0
Punjab	6.5	6.5	6.5	6.6	6.5	6.5
Sindh	6.6	6.9	6.7	7.1	7.9	7.5
North West Frontier Province	7.6	7.8	7.8	7.5	7.7	7.7
Balochistan	8.1	7.4	7.5	8.0	7.6	7.6

Sources: Federal Bureau of Statistics. 1999. *1998–99 Pakistan Integrated Household Survey*; and Federal Bureau of Statistics. 2002. *2001–02 Pakistan Integrated Household Survey*.

A common observation about large surveys in general and the HIES and PIHS in particular is that the income accruing to the highest income group is seriously understated (Kemal 2003). The poorest households are also inadequately represented. Since the sample is drawn from settled households, the homeless or nomadic are systematically excluded even though they are among the poorest (Gazdar 2000). Moreover, nonresponse is generally concentrated in the highest and the lowest income groups. This issue of the representation of high-income groups surfaces more seriously in the 2001/02 PIHS/HIES, where low- or middle-income group primary sampling units (PSUs) were enumerated against high-income PSUs. Tahir (2003) justifies this enumeration and view in saying that “stratification by income groups can only be an approximation and a procedure to avoid overwhelming concentration on one or the other income area...The recommended deletion of low-income households from high-income PSUs has no basis in statistical theory and practice.”

The FBS report blames its field supervisors for this negligence. In an explanatory note in the PIHS 2001/02 report, it notes that, “...the supervisors in many cases performed their duties very poorly, especially, at the time of household listing they should have reported back that PSUs listed in high income groups are actually in the low or medium income group [*sic*]” (FBS 2002). This is a very poor defense. The classification of households into high-, middle-, or low-income groups should not be left to survey supervisors, who are primarily responsible for field supervision. This classification cannot be done properly at the time of a survey or listing: it is a serious sampling task that should be managed regularly.

### 3.2 Pakistan Demographic Survey

In a recent paper evaluating 1998 census data, Feeney and Alam (2003) show that the PDS “...seems not to have received the recognition (or the dissemination) that it merits” since it provides the most important and consistent evidence of fertility decline in Pakistan. They also note the “abysmal performance of the birth history surveys as instrument for measuring the level and trend of fertility [*sic*].” In the PRSP monitoring framework, the PDS is not ascribed the place it merits. For most health and demographic

indicators, the identified data source is either the PIHS or the Pakistan Reproductive Health and Family Planning Survey. Given that all four rounds of the former are complete, and the latter is not a regular survey, how should demographic and health indicators such as fertility, contraceptive prevalence rate, and child mortality be monitored? The new survey launched by the FBS, the PSLM survey, has no birth history module to estimate fertility and child mortality rates. The PDS remains the main data source for these indicators.

The PDS generates statistics on births and deaths in order to estimate various measures of rural and urban fertility and mortality. It also helps estimate the current rate of natural increase of population. The sample size it uses is almost double that of the HIES or PIHS—more than 30,000 households, which is sufficiently large to provide reliable estimates of key national and provincial variables. However, there have been some recent changes in methodology. In its early years, sample households were visited at quarterly intervals to record information on births and deaths that had occurred during the 6 months prior to the survey, causing an overlap of 3 months. Births and deaths during the overlapping period were matched on a case-by-case basis, and discrepancies resolved during field visits. In the PDS for 1999, 2000, and 2001, this scheme was modified. In order to minimize the time lag and release survey results well in time, a one-time survey using a slightly different methodology and a 12-month reference period, was carried out and tested for the 1999 PDS. For the 2000 PDS, the survey was conducted in two phases using the same methodology adopted in 1999. The data collected on births and deaths in these two rounds was combined. The 2001 PDS enumerated births and deaths over a 12-month reference period. However, it has not been evaluated how these changes in methodology affect the fertility and mortality rates reported in the PDS.

It is worth noting that the PDS uses a ‘birth enumeration form’ to record each live birth occurring to a ‘usual’ household member during the reference period. The form contains information on the newborn child, such as sex, date of birth; whether or not birth occurred in a medical institution, and type of medical attendant present at the time of delivery. It also records the parents’ particulars. Similarly, for each death that occurs in a sample household during the reference period, a ‘death enumeration form’ is filled in. These inputs make the PDS a rich data source monitoring the progress of demographic indicators in Pakistan.<sup>3</sup>

Data on children’s height and weight is not regularly available to monitor malnutrition (percentage underweight less MDG indicator; see Appendix). Information on

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<sup>3</sup> The PDS is supplemented by other special demographic surveys as well. For example, the Pakistan Demographic and Health Survey, funded by the United States Agency for International Development (USAID) Islamabad, was conducted in 1990/91 by the National Institute of Population Studies (NIPS) to provide national and provincial data on population and health in Pakistan (NIPS 1992). The primary emphasis was on fertility, nuptiality, family size preferences, knowledge and use of family planning, the potential demand for contraception, the level of unwanted fertility, infant and child mortality, breastfeeding and food supplementing practices, maternal care, child nutrition and health, immunizations and child morbidity. Several other demographic surveys were carried out by the NIPS and Population Council in the 1990s.

height and weight of children as well as women needs to be collected regularly through the PDS to monitor the nutritional status of both children and women. This may require inducting female enumerators, but it would be worth investing in for the generation of reliable demographic and health data.

### 3.3 Labour Force Survey

Most of the data on unemployment, underemployment, sectoral distribution, and occupation, is drawn from the LFS. Prior to 1990, the LFS counted as the labor force, all persons aged 10 years or above who were employed or unemployed in the week preceding the survey. The employed labor force included all persons aged 10 years or above, who worked for pay or profit in cash or kind (including family helpers) for at least one hour in the week preceding the survey. All persons aged 10 years or above, who did not work but were looking for work in the week preceding the survey, were defined as unemployed. Since 1990/91, the LFS's definition of the unemployed labor force has changed from 'looking for work' to 'available for work',<sup>4</sup> and data consistent with this definition is available for 1990/91 and onward.

Measuring female participation in the labor force is fraught with problems. One particular concern is the distinction between a housewife (or a woman identified as housekeeper), an unpaid family helper, and a woman working in agriculture. Depending on the classification, she could be counted as part of the labor force or not. According to LFS methodology, persons aged 10 years or and above who report that they are engaged in housekeeping and other related activities, are not considered part of the labor force. However, 1990/91 onward, they are identified as employed if they have spent time engaged in one or more of 14 specific agricultural and nonagricultural activities. A set of 14 questions was administered in 1990/91 and in subsequent surveys to those women who responded as 'not available for work because of household work or for other reasons'.<sup>5</sup> This improved methodology identifies the economic contribution of women usually counted in the category of 'housekeeping'.

The FBS has taken another step to improve the occupational classification of the employed labor force. Until 1993/94, the LFS used the 1968 Pakistan Standard Classification of Occupation; in 1996/97, it shifted to using the 1994 standard classifications of occupation. The two classifications are not, however, comparable.

The last LFS was carried out in 2003/04, using a sample size of 18,858 households to estimate key labor force characteristics at the national and provincial levels. As with the HIES, the sample for the year is evenly distributed for enumeration on a quarterly basis to offset any seasonal variations.

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<sup>4</sup> The use of this new definition influenced both unemployment rates and activity rates, particularly that of females. Unemployment increased from 3.6% in 1987/88 to 6.3% in 1990/91. There was also a rise in female labor force participation.

<sup>5</sup> The 14 questions concern activities related to agriculture; food processing; livestock; poultry; construction work; collecting firewood; drawing water; stitching clothes; shopping and marketing; washing, mending, and pressing clothes; caring for children; and housecleaning (FBS 2004).

It is commendable that the LFS, from its initiation in 1963/64 to 2003/04, has remained consistent in the timing and duration of its fieldwork, which always starts in July and ends the following June. This consistency is not evident in the PIHS: its first and second survey rounds were completed in October; the third round (1998/99) was completed in February 2000. It has taken more than 12 months to complete since its inception in November 1998 (FBS 2001). The last PIHS survey round (2001/02) was carried out in the calendar year 2001 (January to December). All this shows a lack of planning or unavailability of resources, and adversely affects the comparability of surveys over time.

However, labor market data remains inadequate in Pakistan. It is worth investing more in the LFS to make it an annual survey. The FBS also plans to provide labor force data for each quarter of the survey year, which will help gauge the country's employment situation. Since PSUs for the HIES and LFS are drawn randomly from the same localities within a district (or division in Balochistan), this selection procedure makes the two surveys comparable. It is beyond the scope of this paper to verify the internal and external consistencies of the survey-based data sets, but comparison between the HIES and LFS for the survey years 1990/91, 1987/88, and 1984/85, shows that most differences are small in absolute terms, although a few stand out, especially the differences of 10.1 percentage points in the reported share of workers in agricultural occupations (Arif 1998 and Zeeuw 1996).

### **3.4 Multiple Indicator Cluster Survey**

The Multiple Indicator Cluster Survey (MICS) is unique in that it provides data on income and many nonincome poverty indicators that are representative at the district level as well as provincial level. Several indicators covered by the MICS are also standard MDG indicators. Generally, the definitions of most MICS indicators are consistent with those used in the PIHS and Core Welfare Indicator Questionnaire, allowing good comparability at the provincial level.

The MICS was conducted in two phases. The first phase covered only the North West Frontier Province (NWFP) in 2000/01, and the second, the three remaining provinces in 2003/04. The second round provided the first comprehensive district-based social statistics in Pakistan. Nearly 80,000 households were sampled (13,500 in NWFP; 23,800 in Sindh; 30,900 in Punjab; and 10,700 in Balochistan). The survey was carried out by the four provincial governments through their Planning and Development Departments, their Provincial Bureaus of Statistics, and with technical support from the FBS. The United Nations Children's Fund (UNICEF) provided technical and financial support (Hennel, et. al. 2005).

Despite being a comprehensive survey, the lag between the two rounds means that the survey cannot be used in national reporting. Long-drawn-out approval processes (that were felt necessary to build stakeholder ownership and confidence) seriously delayed the release of the survey reports. The Sindh government has questioned the accuracy of the MICS report on poverty, income and expenditure, and employment in the province (Ghausi 2005).

### 3.5 Longitudinal Data

All the data sources discussed above are cross sectional, and thus, cannot be used to examine the dynamics of poverty. Much of the developing country literature suggests that, while a considerable proportion of poor households remain poor over a long period of time (the chronic poor), poverty is a seasonal phenomenon for many households. In other words, there is a movement into and out of poverty. Longitudinal or panel survey data, based on visits to the same households after an interval, can be used to examine this movement, but there is little data of this kind in Pakistan. PIDE recently conducted the Pakistan Rural Household Survey (PRHS), revisiting those households initially sampled by the International Food Policy Research Institute (IFPRI). PIDE also generated a new panel data set named the Pakistan Socio-Economic Survey (PSES). This section briefly discusses these two surveys.

#### 3.5.1 PRHS/IFPRI Panel

The IFPRI conducted a panel rural household survey in four districts: Dir in NWFP, Attock and Faisalabad in Punjab, and Badin in Sindh. The panel comprised a sample of just over 800 households. More than ten rounds of the panel were completed by visiting the same households over a 5-year period between 1986 and 1991. This panel data has been used extensively by the research community in Pakistan and abroad to examine the dynamics of different dimensions of poverty in rural Pakistan. Under the PRHS, the IFPRI panel households were revisited in 2001 after a 10-year gap, and new households were added to the sample for future rounds. The PRHS for 2001 contains information on 2,800 households across 141 villages in 14 districts of rural Pakistan. Two separate questionnaires, one for males and one for females, were developed in this round; female enumerators collected information from female respondents directly.

The PRHS 2001 focuses on agriculture, credit, employment, and several demographic events. It provides unique plot-level information on access to canal water and watercourse characteristics for over 1,000 watercourses. The PRHS also presents information on the quality of health and school facilities in rural Pakistan. Its results show that more than 50% of the households sampled in the IFPRI panel were vulnerable to falling into poverty because of weather-related shocks alone (the World Bank 2002)—evidence suggests that vulnerability prevails widely in Pakistan. The PRHS is a rich source of data, particularly for the determinants of rural poverty, but it has not been released for public use. The second round of the PRHS is still in progress.

#### 3.5.2 PSES

The main objective of the PSES is to generate data on poverty indicators (income as well as nonincome) that are monitored after a 2-year gap by revisiting the same households. The first round of the PSES was carried out in 1998/99, using a sample of 3,564 households (2,268 rural and 1,296 urban). Households covered during this round

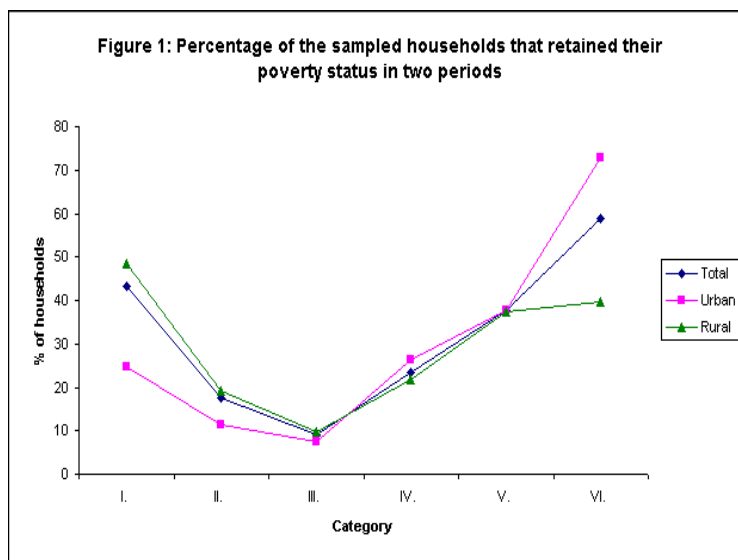
were revisited in the second round in 2000/01.<sup>6</sup> The attrition rate for the second round of the survey was 22%. To make data for the second round representative at a national and rural/urban level, new households were included in the sample by using the FBS sampling frame. The total sample for the second round of the PSES comprised 4,020 households (2,577 rural and 1,443 urban).

Two separate questionnaires—one for males and one for females—were developed in this round; female enumerators collected information from female respondents directly. The males' questionnaire was divided into 10 major sections, including household roster; education; labor and employment; income and expenditure; agricultural and nonagricultural establishments; transfer income; access to credit; and migration. The females' questionnaire included modules on household information; education; employment; income; household expenditure on food and nondurable items; household assets; birth history (for women aged 15–49 years); children's nutritional status; the health of household members; and housing conditions.

Figure 1 shows the percentage of the PSES sample households that retained their poverty status during the two rounds of the survey. Category I includes the poorest households (those at 50% or less of the poverty line) while Category VI shows the richest households. Categories III and IV lie just below and above the poverty line. Figure 1 shows that the transition into or out of poverty was relatively high among those households that were just below or above the poverty line in 1998/99. A higher percentage of richer households (Category VI) retained their status over two rounds of the survey while the corresponding percentages for Categories III and IV were small.

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<sup>6</sup> The PSES sample is designed as follows: The universe for Round I of the survey consists of all urban and rural areas in the four provinces as defined in the 1981 Population Census, excluding the Federally Administered Tribal Areas, military restricted areas, the districts of Kohistan, Chitral, and Malakand, and the protected areas of NWFP. The village list published by the Population Census Organization in 1981 was used as a sampling frame to draw a sample for rural areas. For urban areas, the sampling frame developed by the FBS was used. For the rural sample, each district in Punjab, Sindh, and NWFP was grouped together as a stratum; for Balochistan, each division was treated as a stratum. A two-stage stratified sample design was adopted for the 1998/99 PSES. Enumeration blocks in urban areas and *mauzas* (smallest administrative units in a rural area)/*dehs* (villages) in rural areas were used as PSUs. Households within the sampled PSUs were treated as secondary sampling units.

**Figure 1: Sampled Households that Retained Poverty Status in Two Periods**

Source: G. M. Arif. 2003. Poverty Dynamics in Pakistan: Evidence from the Two Panel Household Survey. In *Pakistan Human Condition Report 2003*.

### 3.6 Poverty Analysis and Agriculture Census Data

Poverty in Pakistan is concentrated in rural areas where the population depends on the land for subsistence. The Agriculture Census is the main source of information on land ownership. The last census was conducted in 2000 by the Agriculture Census Organization (GoP 2000). The first four agriculture censuses were carried out in 1960, 1972, 1980, and 1990.

The Agriculture Census provides detailed information on the country's agriculture resources, their use, and the degree to which modern farming practices have been adopted by the farming community. In particular, it generates data on the number, area under cultivation, and tenure of farms; land fragmentation; land utilization; irrigation; intensity of land use and cropping; types of crops planted; use of manure, fertilizers, and insecticides; use and ownership of agriculture machines; use of hired and family workers; debt and investment for agricultural purposes; livestock; land ownership; education; sources of income; and types of houses. The potential of the census in terms of poverty analysis has not been explored properly because access to micro- (household-level) data is difficult. This also applies to the Population Census. Both these data sources need to be available in electronic form for poverty analysis.



## 4 The Reliability of Poverty Data

Since regular, nationally representative poverty data in Pakistan is generated primarily by official agencies, this and the following sections focus on FBS data sources. The range of these sources indicates that Pakistan's poverty database holds a wealth of information; the FBS has played a key role in developing it.

### 4.1 Geographical Coverage

There is much debate on the sampling frame that the FBS uses, particularly its urban frame. It is worth noting that the FBS uses the same framework when selecting samples for all household surveys it carries out, i.e., the HIES, LFS, PIHS, and PDS. This sampling frame is based on the Population Census, but only for rural areas. For urban areas, the FBS developed its own sampling frame. The 1972 Population Census was the basis for the sampling frame the HIES used in 1979. The surveys carried out between 1984/85 and 1995/96 were based on the 1981 Population Census. Using the list of villages/*mauzas/dehs*<sup>7</sup> compiled from the 1998 population and housing census, the FBS revised its rural sampling frame. This revised frame was used in the last two rounds of the PIHS.<sup>8</sup> However, the urban frame has not been updated after 1995 and may have affected the rural and urban distribution of the sample. The main problem with this is that, since only the rural sample framework changed, and assuming the Population Census represents the 'true' composition of the country's population, the household survey appears to overestimate the rural population. This affects the overall estimate of poverty as well as comparability across years (the World Bank 2002).

Updating the urban sampling frame is crucial, given Pakistan's shifting rural and urban boundaries (Arif 2003b). The recent HIES and PIHS appear to show that the percentage of households and individuals classified as urban actually declines slightly between 1995/96 and 2001/02. This may make a small difference to the sample as a whole, but it has an appreciable impact for Sindh and Balochistan. Since the weighting accorded to the urban and rural population changes between surveys, trends in each urban and rural stratum within a province may not be reflected in the aggregate trend for the province as a whole.

Urban-rural sample distribution is a serious issue, given the rising trend of urbanization. It is possible that by using the 1998 village list as a base for the rural sampling frame, the FBS's urban frame has excluded those areas that were annexed to urban localities or declared urban centers between 1995 and 1998. The urban frame urgently needs to be updated.

The larger FBS surveys, including the HIES, PIHS, PDS, and LFS have wide coverage: their sample sizes range between 14,000 and 30,000 or above households

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<sup>7</sup> A *mauza* is the smallest administrative unit in a rural areas, a *deh* refers to a village.

<sup>8</sup> The last independent HIES carried out in 1996/97 used a sample based on the 1981 Population Census.

(PDS).<sup>9</sup> The FBS considers these sample sizes reliable enough to provide estimates for key indicators at the national and provincial levels. Nonetheless, in the case of the HIES and PIHS, the reliability of provincial poverty data is debatable. For example, earlier studies based on the HIES data sets for 1990/91 and 1996/97 have produced different results. The World Bank (2002) shows that NWFP as a whole, suffers from a higher level of poverty than other provinces: in 1996/97, 38% of the NWFP population was poor. The incidence of poverty was lowest in Sindh for 3 years, 1992/93, 1993/94, and 1996/97. In these years, the incidence of poverty in Balochistan was lower than in NWFP but higher than the other larger provinces, Sindh and Punjab. Jafri (1999), however, has calculated different provincial estimates, showing that the incidence of poverty was *highest* in Sindh between 1987/88 and 1993/94, and *lowest* in NWFP. These results are completely the opposite of the World Bank's (2002) estimates. Although these differences can largely be attributed to the use of different methodologies to compute poverty lines, estimating poverty at the provincial level using the HIES data sets seems difficult to justify.

In another instance, recent poverty estimates for rural Balochistan are shown to be not only out of trend with previous years, but also inconsistent with other important indicators of wellbeing where Balochistan scores well below the national average (the World Bank 2002). Malik (2005) recently analyzed province-level data for the 1990s, including the 2001/02 HIES/PIHS. Balochistan shows increasing poverty levels until 1996/97, after which poverty levels plunge sharply, leaving them lower than the national figures for the province (Figure 2).<sup>10</sup> He concludes that poverty estimates for Balochistan are misleading particularly when the economic activity in that period does not seem to explain such a sharp decline in poverty. The FBS (2001) attributes this sudden decline to sampling and nonsampling errors. Balochistan occupies a vast area, but its population density is very low, making it difficult for a survey to be representative. Malik (2005) argues that this anomaly could also have been the result of large 'raising factors' in the survey that may have understated the actual poverty trends in the province.

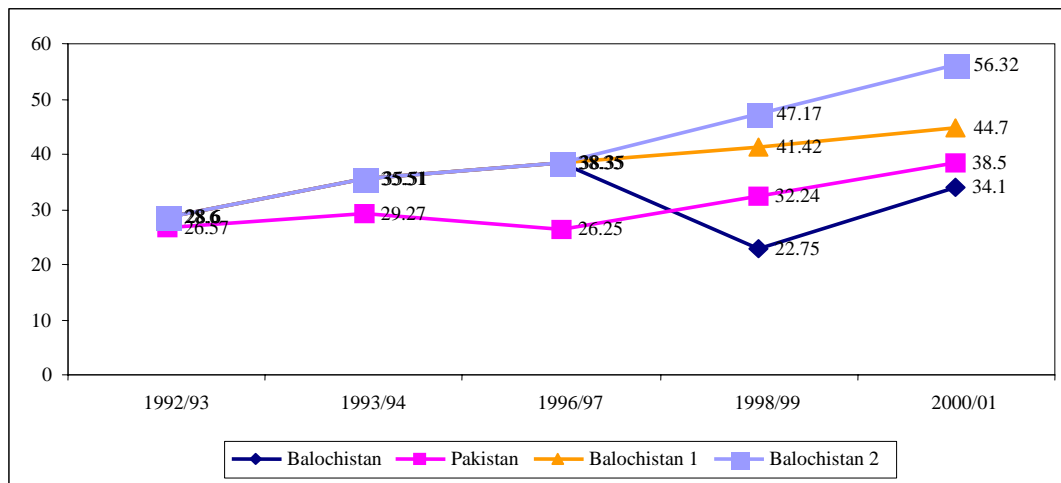
Can poverty estimates at the provincial level be considered reliable? Obviously, the answer is no. It is likely that the HIES sample size, despite the FBS's claims, is not large enough for a province-level estimate of poverty. Balochistan's highly dispersed population makes it difficult to construct representative surveys, and increases the likelihood of sampling errors for any given survey year. Expenditure-based poverty comparisons between Balochistan and the other provinces should be viewed skeptically, especially for 1998/99. The FBS has now launched a new survey based on a relatively large sample size, which should provide a better opportunity to examine provincial variations in poverty.

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<sup>9</sup> The PIHS for 1990/91, however, was based on a smaller sample of around 6,400 households.

<sup>10</sup> This paragraph draws heavily on Malik (2005).

Figure 2: Poverty Trends in Pakistan and Balochistan



Source: S. J. Malik. 2005. *Agricultural Growth and Rural Poverty: A Review of the Evidence*. Asian Development Bank Pakistan Resident Mission Working Paper No. 2.

## 4.2 Changes in Methodology

In the last decade, the FBS has frequently modified its data collection methods, and this may have affected the reliability and comparability of the survey data it produces. For example, as noted earlier, the reference period for reporting births and deaths under the PDS changed in 1999, in 2000, and again, in 2001. Similarly, the HIES expenditure module has witnessed changes in reference period. Such changes may sometimes be required to improve data quality, but frequent changes in reference period may affect reporting quality and the comparability of data across surveys. The PIHS series itself and the combined surveys for 1998/99 and 2000/01 also generate controversy. The PIHS for 1990/91 was criticized for using a small sample size of only 6,400 households. In the mid-1990s, the FBS collected data using two different field methodologies: the PIHS used mobile teams of male and female enumerators managed by a team supervisor, while the HIES, PDS, and LFS used only male enumerators. The combined HIES and PIHS also make data less comparable because the questionnaires used were different. As observed by Tahir (2003):

“An important development in the interregnum was the combining of the HIES and the PIHS Pakistan Integrated Household Survey. Started in 1991, the PIHS was the result of donors’ preference to have their own monitoring mechanisms for aided programmes rather than strengthening the nationally owned databases. Instead of investing in HIES to improve its coverage and quality, a stand-alone project was set up for carrying out the PIHS with express objective of monitoring the Social Action Programme (SAP). Both HIES and PIHS used the sampling frame of Population Census 1981, but there were key differences in questionnaires, sample size and methodology. As a matter of fact, the new series of PIHS conducted for 1995–96 and 1996–97 threw out detailed information on income and expenditure. The dichotomy

of the PIHS data and the traditionally collected and owned official data persisted throughout the SAPI-I and II periods [*sic*].”

### 4.3 Training and Supervision: Issues and Problems

The quality of data obtained through household interviews depends largely on how well trained data enumerators and supervisors are and on the level of supervision during fieldwork, including the editing of the completed questionnaires. Before starting a survey, FBS staff imparts extensive training to all its enumerators and supervisors. Field staff is trained at selected field offices: the training focuses on concepts, definitions, and procedure to be used in the enumeration. Most field enumerators and supervisors engaged in household surveys have extensive experience, but the quality of data produced by household surveys indicates that the quality of their training could be improved. For example, the controversy over household size (Section 4.1), which is an important variable in estimating poverty, arose partly because enumerators were not adequately trained to enlist all household members.

In an analysis investigating the sharp decline in literacy levels in Sindh, 42 PSUs showed a sharp fall in literacy in 2001/02 when compared to 1998/99—this is clearly questionable. There are three criteria used to determine literacy: (i) the ability to read with understanding in any language; (ii) the ability to write in that language; and (iii) the ability to solve simple mathematical problems. In many cases, respondents who satisfied only the first two criteria were treated as illiterate. This indicates either that they were not properly questioned during the interview or that the questionnaires were filled out in a hurry (FBS 2002). It also highlights the need for improved training and supervision.

Years of experience can sometimes reduce the value of training for enumerators who may consider themselves adequately trained and qualified to carry out household surveys. The FBS’s frequent changes in household questionnaires, particularly those used by the HIES and PIHS in the 1990s, require that enumerators be extensively trained irrespective of their experience.

FBS supervisors are responsible for many things: overseeing the identification of enumeration blocks (PSUs); household listing; selecting households using systematic random sampling techniques; field enumeration; editing and crosschecking data entries; and finally, ‘cleaning up’ the data collected. Supervisors cannot carry out all these assignments efficiently, and should be relieved of some of the duties. For example, as noted earlier, when the 2001/02 PIHS data was crosschecked, some low-income households were found to have been included in high-income areas. The FBS blamed its field supervisors for this negligence. However, this is a serious sampling task and should not simply be relegated to supervisors. Household survey monitoring teams consisting of regular field staff posted to national, regional, and field offices across the country could be used effectively to monitor surveys.

The concept of teamwork is largely absent in the FBS’s fieldwork strategy. One reason that nongovernment agencies produce better-quality household survey data is that their fieldwork teams are headed by supervisors who are based in the field for the entire duration of the survey. The FBS module is different: it uses mostly male enumerators who are not accompanied by supervisors on a daily basis. The PIHS series is an exception;

data was collected by mobile teams of male and female enumerators who were managed day to day by a team supervisor. It may be costly for the FBS to spare its staff as supervisors who go into the field every day with their team, but such improvements in field strategy are necessary to improve the quality of household survey data.



## 5 The Credibility and Legitimacy of Data for Poverty Analysis

The credibility of data depends largely on how independent the executing agency is, and, more importantly, on the quality of the data itself. The FBS ensures data quality by carrying out consistency checks and ‘cleaning’, but validating survey data in the field is the key to enhancing data quality. This is usually done through a post-enumeration survey (PES), which practice is not common in Pakistan. An alternative would be to validate FBS fieldwork externally, although this is not common practice among data generating agencies in the developing world. Third-party validation may in fact weaken the FBS’s fieldwork supervision ability. Rather than introducing third-party validation to verify FBS household-level data, reliable and independent internal mechanisms for fieldwork supervision and validation could be developed to address the problem. It is important that such a mechanism establish its credibility through long-term improvements in its data collection techniques. This will boost the confidence of local staff and strengthen the FBS’s ability to carry out surveys.

The limitations of data collection methodology, as discussed in the previous section, do not invalidate household survey data when used to estimate income or nonincome poverty. However, it is illegitimate to compare poverty estimates based on different surveys that are not comparable in terms of sample design, seasonality, and data collection methodology.

Two recent examples illustrate this issue. In the first case, following criticism of the PIHS 2001/02 data, the FBS instituted a PES in 2003, covering 5% of the original sample. The PES found the quality of enumeration supervision and monitoring to be poor, but Tahir (2003) points out that this 5% sample was used, quite illegitimately, to estimate poverty for the PES year, and then compared with the estimate based on the 2001/02 PIHS. Poverty estimates based on this 5% sample were also reported in the *Pakistan Economic Survey*. Estimating poverty based on a small sample of 700 households covered during the PES and comparing it with the previous large sample surveys cannot be justified.

In a second instance, the FBS conducted a special survey on the GoP’s advice, named the Household Consumption Expenditure Survey (HCES) between 19 April 2004 and 6 May 2004. The sample comprised 5,064 rural and urban households. The results of this survey were compared with the PIHS for 2001/02, and a sharp decline in poverty from 27.30% in 2001/02 to 23.10% in 2004 was estimated. The decline in urban poverty appeared remarkably high: from 23.10% in 2001/02 to 13.60% in 2004. The corresponding decline in rural areas was relatively small: from 30.60% in 2001/02 to 28.35% in 2004.

Not only was the HCES small in terms of sample size, it was also carried out over a very short period of time—only 19 days. The regular household income and expenditure surveys are generally carried out over 12 months by dividing the sample equally across the four quarters to avoid any seasonality effect on households’ consumption behavior. However, to make the results of the HCES comparable with the 2001/02 PIHS, a

subsample of the latter (completed between 19 April 2001 and 6 May 2001) was used to estimate poverty. Poverty estimates for 2001/02 were adjusted downward from 32.1%, based on the whole sample, to 27.3%, based on the subsample.

Hussain (2004) challenges the claim of poverty reduction:

“The claim is being made on the basis of a small sample survey of about 5000 households, selected without regard to provincial coverage and conducted for only one quarter, April to June, when earnings from wheat harvesting enable a larger consumption expenditure by the poor. The results of this small sample survey are being compared to sample results in the base year drawn from the standard and periodic HIES. Given the quite different design of the sample surveys in the year 2000 and the year 2004 respectively, the results are technically incomparable...In the context of the government’s poverty reduction estimate 4.2 percentage points, the issue is really one of illegitimate approximation, with respect to the principles of economic science. A poverty reduction estimate based on a such flawed comparison is misleading [*sic*].”

The Economic Adviser to the Ministry of Finance argues that using this period’s data (19 April to 6 May in 2001 for the PIHS, and 19 April to 6 May in 2004 for the HCES) make poverty estimates technically comparable (Khan 2004). He also comments that, “the government was itself very cautious in interpreting the results but is encouraged by the improving trends [*sic*].” However, the sampling strategy would have compared better if the households interviewed during the fourth quarter of the 2001/02 PIHS had been revisited in the corresponding quarter of 2004.

Poverty estimates based on different methodologies, even when using the same data sets, cannot be used to determine trends in poverty that require a consistent poverty line. For example, the *Pakistan Economic Survey 1999–2000* reported data on trends in poverty using three different sources: Amjad and Kemal (1997), Social Policy Development Centre (2001), and Qureshi and Arif (2001). The poverty lines used by these three sources are not comparable.

Amjad and Kemal (1997) provide poverty estimates for 8 years: 1963/64, 1966/67, 1969/70, 1979, 1984/85, 1987/88, 1990/91, and 1992/93. They do not define a new poverty threshold, instead using the income poverty line defined by Malik (1988) to incorporate an adult calorie requirement of 2,550, and the revealed food and nonfood expenditure pattern of the poor. Malik (1988) estimates the poverty line for 1984/85 using secondary data from the Household Income Expenditure Survey and deflating it by the consumer price index (CPI) to determine the poverty lines for 1963/64, 1966/67, 1969/70, and 1979.

Amjad and Kemal (1997) inflate the poverty line defined by Malik (1988) for 1984/85 to determine the lines for 1987/88, 1990/91, and 1992/93, using secondary HIES data sets. The poverty estimates for 1996/97, as given in the *Pakistan Economic Survey 1999–2000*, were taken from an unpublished report by the Social Policy and Development Centre (SPDC), which defined the poverty line as the minimum income required to achieve a certain level of nutrition (calorie intake) and fulfill other basic needs. Using a calorie intake norm of 2,550 per capita for rural areas and 2,230 for urban areas, the poverty lines are estimated using a calorie-total expenditure function and a primary data set from the 1996/97 HIES.

Poverty estimates for 1998/99, as given in the *Pakistan Economic Survey 1999–2000*, were taken from Qureshi and Arif (2001), who computed poverty lines using the ‘food energy intake’ method. This is based on the estimated cost of food consistent with a calorie intake of 2,550 per adult equivalent per day for rural areas. A daily intake of 2,295 calories per adult equivalent was used for urban areas. Using these calorie intake norms, poverty lines were estimated using a calorie-food expenditure function. The authors used the PSES carried out by PIDE in 1998/99, based on a relatively a small sample of 3,560 households, although it was representative at a national as well as urban/rural level.

This brief description of different poverty estimates makes it clear that only consistent poverty lines applied to one data set, e.g., the HIES/PIHS, should be used to estimate poverty trends. Poverty estimates based on the official poverty line using HIES/PIHS data will provide a better picture, but the methodology used should be more transparent—Oxford Policy Management (2003) and Anwar, et. al. (2005), for example, come up with different estimates of poverty although both use the official poverty line. One way of ensuring consistent poverty estimates would be to develop the analytical capacity of FBS staff, given that it is already responsible for generating and analyzing data on nonincome dimensions of poverty, e.g., literacy, enrolment rates, and infant and child mortality.



## 6 The Pakistan Social and Living Standards Measurement Survey: An Assessment

As mentioned earlier, the FBS launched a new series named the Pakistan Social and Living Standards Measurement (PSLM) survey in 2004. The survey collects household data at the province and district level, useful for the assessment of social welfare in terms of poverty alleviation, health, education, family planning, rural water supply, employment, household assets, income/expenditure, household amenities, and sanitation. The new series was originally designed to provide data for province- and district-level social and economic indicators in alternate years, to help assess development programs initiated under the PRSP.<sup>11</sup> The resources required to complete five survey rounds for the period 2004/05 to 2008/09 were allocated in 2004. However, the district- and province-level PSLM survey rounds were started simultaneously in 2004—a break from the initial plan of generating survey data in alternate years.

There are three main differences between the district- and province-level rounds of the PSLM survey:

- (i) The sample used in the district-level PSLM survey is quite large, almost five times that of the province-level PSLM survey.<sup>12</sup> Obviously, such a large sample size enables policymakers as well as researchers to draw socioeconomic information that is representative at lower administrative levels. This credible initiative of the FBS will help meet district-level data requirements for planning purposes in the context of decentralization. Apart from the population and agriculture census, this is the only other source of data representative at the district level.<sup>13</sup>
- (ii) The district- and province-level surveys use the same questionnaire, but the latter includes an expenditure module to help estimate poverty. At the same time, it is important to note that poverty at the district level cannot be estimated since the district-level questionnaire does not contain an expenditure module. However, the broad categories of sources of income and household expenditures are included in the short version of the district-level questionnaire.
- (iii) The province-level PSLM survey seems to have been designed as a subset of the district-level PSLM survey. If this is the case, there will be serious problems in comparability between the PSLM survey (province-level) and previous household surveys.

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<sup>11</sup> The district-level PSLM is also known as the Core Welfare Indicator Questionnaire.

<sup>12</sup> The FBS recently published the results of the district-level PSLM survey for 2004/05 (FBS 2005). However, the report contains only national and province-level data; district-level data is to be published in its subsequent report.

<sup>13</sup> It can be argued that, prior to the PSLM survey, UNICEF generated data through the MICS that was representative at the district level. The main drawback of the MICS is that it does not use a consistent methodology for all the provinces and that its survey periods vary.

Two issues concerning the province-level PSLM survey deserve discussion: its comparability with previous surveys and its adequacy in monitoring MDG and PRSP indicators. The PSLM survey's methodology is to some extent different from the one used by the PIHS/HIES. All rounds of the PIHS used separate questionnaires for males and females that are administered in the field by a team of male and female enumerators led by a supervisor. The PSLM survey only uses one questionnaire, although female enumerators collected data on certain modules, such as food consumption. It is unclear how this was managed in the field.

The content of the two questionnaires is also different. The education module in the PSLM survey is considerably shorter. Even in the literacy section, the two separate questions concerning respondents' ability to 'read and write with understanding' were merged into one in the PSLM survey. This affects the comparability of literacy data. The new questionnaire focuses more on the use of health services than on generating data to estimate the total fertility rate or child mortality rate, while it was possible to calculate these rates using the PIHS/HIES combined series. Moreover, the reference period for documenting the incidence of diarrhea has changed from 2 weeks to 1 month in the PSLM survey. This change in the reference period is also likely to have affected the comparability between surveys.

However, the expenditure module used in the PSLM survey is similar to that in the PIHS/HIES. The additional employment module, which is comparable with the LFS, is also a welcome step, since the employment module originally included in the PIHS/HIES was not comparable with the LFS. This important addition will link employment indicators with other socioeconomic background variables that are not available in the LFS. It will also provide baseline data at the district level.

The PSLM survey still poses problems since it is inadequate for monitoring MDG and PRSP indicators. Fertility and child mortality rates, for instance, can no longer be estimated using this new survey. Another important MDG indicator is the proportion of children starting Grade 1 who reach Grade 5. This indicator requires data on school dropouts, which the PSLM survey does not provide. Several other MDG/PRSP indicators that the PIHS did not monitor, such as maternal mortality and malnutrition (underweight), have also been left out of the PSLM survey.

## References

- Ali, Salman Syed, and Sayyid Tahir. 1999. Dynamics of Growth, Poverty and Inequality in Pakistan. *Pakistan Development Review* 38 (4): 337–858.
- Amjad, Rashid, and A. R. Kemal. 1997. Macro-economic Policies and their Impact on Poverty Alleviation in Pakistan. *Pakistan Development Review* 36 (1): 39–68.
- Anwar, Talat, S. K. Qureshi, and H. Ali. 2005. Landlessness and Rural Poverty in Pakistan. Paper presented at the 20<sup>th</sup> Annual General Meeting and Conference of Pakistan Society of Development Economists, Pakistan Institute of Development Economics (PIDE), Islamabad, 10–12 January.
- Arif, G. M. 1998. Socioeconomic Database in Pakistan. EDAP Joint Policy Studies 6. United Nations Development Programme (UNDP), Islamabad.
- . 2003a. Poverty Dynamics in Pakistan: Evidence from the Two Panel Household Survey. In *Pakistan Human Condition Report 2003*. Islamabad: Centre for Research on Poverty Reduction and Income Distribution (CRPRID).
- . 2003b. Urbanization in Pakistan: Trends, Growth and Evaluation of the 1998 Census. In *An Evaluation of the 1998 Population and Housing Census*, edited by A. R. Kemal, M. Irfan, and Naushin Mahmood. Islamabad: PIDE and UNFPA.
- Federal Bureau of Statistics (FBS). 1999. *1998–99 Pakistan Integrated Household Survey*. Islamabad: Government of Pakistan.
- . 2001. *Pakistan Integrated Household Survey: Poverty in the 1990s*. Second draft (April). Government of Pakistan, Islamabad.
- . 2002. *2001–02 Pakistan Integrated Household Survey*. Islamabad: Government of Pakistan.
- . 2004. *Pakistan Labour Force Survey, 2003–04*. Islamabad: Government of Pakistan.
- . 2005. *PSLM: Pakistan Social and Living Standard Measurement Survey, 2004–05*. Islamabad: Government of Pakistan.
- Feeney, Griffith, and Iqbal Alam. 2003. Fertility, Population Growth, and Accuracy of Census Enumeration in Pakistan: 1961–98. In *Population of Pakistan: An Analysis of 1998 Population and Housing Census*, edited by A. R. Kemal, M. Irfan and Naushin Mahmood. Islamabad: PIDE and UNFPA.
- Gazdar, Haris. 2000. Poverty in Pakistan: A Review. In *Fifty Years of Pakistan's Economy*, edited by Shahrukh Rafi Khan. Islamabad: Sustainable Development Policy Institute.
- Ghausi, S. 2005. Poverty, Unemployment: Sindh Government Questions UNICEF's Survey. Dawn, February 24.
- Government of Pakistan. 2000. *Agriculture Census 2000*. Lahore: Punjab. Agriculture Census Organization.

- . 2001. *Interim Poverty Reduction Paper*. Islamabad: Ministry of Finance.
- . 2003. *Accelerating Economic Growth and Reducing Poverty: The Road Ahead, Poverty Reduction Strategy Paper*. Islamabad: Ministry of Finance.
- . 2004. *Pakistan Millennium Development Goals Report 2004*. Islamabad: Planning Commission.
- . 2005. *Pakistan Millennium Development Goals Report 2005*. Islamabad: Planning Commission.
- Gulloy, Elisabeth, and Hans Viggo Saebo. 2003. Restructuring and Reorganization Plan for Pakistan Statistical System. Statistisk Sentralbyra, Norway.
- Hennel, Sarah, Sofia Shakeel, and Nusrat Chaudhry. 2005. An Information Note on Statistics. Background paper commissioned by the Informal Donor Poverty Reduction Working Group for the Pakistan Development Forum, Islamabad.
- Hussain, Akmal. 2004. News Analysis: Poverty Reduction Figure is Fudged. *Daily Times*, 14 June.
- Hussain, Noshin, and M. A. Khan. 2003. Poverty in Pakistan: Going Beyond the Line. In *Pakistan Human Condition Report 2003*. Islamabad: CRPID and UNDP.
- Jafri, S. M. Younis. 1999. Assessing Poverty in Pakistan. In *A Profile of Poverty in Pakistan*. Islamabad: Mahbub ul Haq Centre for Human Development and UNDP.
- Jamal, Haroon, A. J. Khan, I. A. Toor, and N. Anwar. 2003. Mapping the Spatial Deprivation of Pakistan. *Pakistan Development Review* 42 (2): 91–112.
- Kemal, A. R. 2003. Income Distribution Studies in Pakistan and an Agenda for Future Direction of Research. In *Pakistan Human Condition Report 2003*. Islamabad: UNDP/UNOPS/CRPID.
- Khan, Ashfaq H. 2004. Poverty Reduction Figures are not Fudged. *Daily Times*, 15 June.
- Mahbub ul Haq Centre for Human Development. 1999. *A Profile of Poverty in Pakistan*. Islamabad: Mahbub ul Haq Centre for Human Development and UNDP.
- Malik, M. H. 1988. Some New Evidence of Poverty in Pakistan. *Pakistan Development Review* 27 (4): 509–515.
- Malik, S. J. 1994. *Poverty in Pakistan, 1984–85, 1987–88 and 1990–91*. Washington, DC: International Food Policy Research Institute.
- . 2005. *Agricultural Growth and Rural Poverty: A Review of the Evidence*. Pakistan Resident Mission Working Paper No. 2. Islamabad: Asian Development Bank.
- McLennan, W. 2002. Restructuring of the Federal Bureau of Statistics. Report commissioned by UNDP and submitted to the Secretary FBS, Islamabad.
- National Institute of Population Studies (NIPS). 1992. *Pakistan Demographic and Health Survey 1990/1991*. Islamabad: NIPS.
- Oxford Policy Management. 2003. Pakistan Integrated Household Survey: How Poverty Increased. Report commissioned by DFID, Islamabad.

Pasha, Hafiz A., and T. Palanivel. 2003. Pro-poor Growth and Policies: The Asian Experience, Part I. *Pakistan Development Review* 42 (4): 313–348.

Qureshi, S. K., and G. M. Arif. 2001. The Poverty Profile of Pakistan. Micro Impact of Macro Adjustment Policies (MIMAP) Technical Paper Series No. 5. Islamabad: PIDE.

Rukanuddin, Abdul Razzaque, and M. Aslam Chaudhry. 2004. *Socio-economic and Demographic Profile of Sind: An Analysis of 1998 Population and Housing Census*. Census Monograph Series No. 3. Islamabad: PIDE.

Social Policy Development Centre (SPDC). 2001. *Social Development in Pakistan, Annual Review 2000: Towards Poverty Reduction*. Karachi: SPDC.

Tahir, P. 2003. Poverty Data and Dynamics: Moving Beyond Controversy. In *Pakistan Human Condition Report 2003*. Islamabad: UNDP/UNOPS/CRPRID.

UK Department for International Development (DFID). 1999. FBS Outputs: Content, Weaknesses and Costs. Paper prepared for Institutional Strengthening Project for the FBS, Islamabad.

———. 2005. Evidence Based Decision Making in Pakistan, A review of DFID's support to the PIHS and PPA and forward look. Draft paper. DFID, Islamabad.

World Bank, the. 2002. Pakistan Poverty Assessment, Poverty in Pakistan: Vulnerabilities, Social Gaps and Rural Dynamics. Report No. 24296-PAK. The World Bank, Washington, DC.

Zeeuw, M. 1996. The Household Integrated Economic Survey of Pakistan 1990–91: Internal and External Consistency. *Pakistan Development Review* 35 (1): 71–84.



## APPENDIX: Millennium Development Goals and Targets for Pakistan

Broad MDG Targets/Pakistan's Indicator Status	PRSP Target (By 2005/06)	MDG Target (By 2015)
<b>MDG 1: Eradicate Extreme Poverty and Hunger</b>		
<i>Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than \$1/day.</i>		
<i>Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger.</i>		
The proportion of population below the calorie-based food-plus-nonfood poverty line was estimated to have increased from 26.1% in 1990/91 to 32.1% in 2000/01.	Reduce to 29%.	Reduce to 13%.
The proportion of underweight children under 5 years of age increased from 40% in 1990/91 to 41.5% in 2001/02.	Reduce to 34%.	Reduce to < 20%.
The proportion of population below the minimum level of dietary energy consumption (< 2,350 calories per day of food intake) increased from 25% in 1990/91 to 30% in 2001/02.		Reduce to 32%.
<b>MDG 2: Achieve Universal Primary Education</b>		
<i>Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.</i>		
The net primary enrolment rate increased from 46% in 1990/91 to 51% in 2001/02.	Increase to 58%.	Reach 100%.
The literacy rate increased from 36.3% in 1990/91 to 50.5% in 2001/02.	Increase to 59.5%.	Increase to 88%.
The proportion of children starting Grade 1 who reach Grade 5 increased from 50% in 1990/91 to 68% in 2000/01.	Increase to 79%.	Reach 100%.
<b>MDG 3: Promote Gender Equality and Empower Women</b>		
<i>Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015.</i>		
The ratio of girls to boys in primary education improved from 51% to 57% during 1990/91 and 2001/02.		Reach 100%.
The ratio of girls to boys in secondary education improved from 50% in 1990/91 to 64% in 2001/02.		Reach 100%.
The ratio of girls to boys in tertiary education increased from 46% in 1990/91 to 78% in 2001/02.		Reach 100%.

MDG = Millennium Development Goal, PRSP = Poverty Reduction Strategy Paper.

Source: Derived from Government of Pakistan. 2004. *Pakistan Millennium Development Goals Report 2004*.

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Broad MDG Targets/Pakistan's Indicator Status	PRSP Target (By 2005/06)	MDG Target (By 2015)
The ratio of literate females to males (15–24 years) improved from 51% in 1990/91 to 65% in 2001/02.	Increase to 70%.	Reach 100%.
The share of women in wage-employment in the nonagriculture sector increased slightly from 8.7% in 1990/91 to 8.9% in 2001/02.		Increase to 14%.
<b>MDG 4: Reduce Child Mortality</b>		
<i>Target 5: Reduce by two thirds, between 1990 and 2015, the under-5 mortality rate.</i>		
The under-5 mortality rate declined from 140 per 1,000 live births in 1990/91 to 105 per 1,000 in 2001/2002.	Reduce to 80 per 1,000 live births.	Reduce to 52%.
The infant mortality rate declined from 102 per 1,000 live births in 1990/91 to 77 per 1,000 in 2001/02.	Reduce to 63 per 1,000 live births.	Reduce to 40%.
The proportion of children fully immunized (12–23 months old) decreased from 75% in 1990/91 to 53% in 2000/02.	Increase to 82%.	Increase to > 90%.
The proportion of under-1 children immunized against measles also declined from 80% in 1990/91 to 57% in 2000/01.	Increase to 80%.	Increase to 90%.
The proportion of children under 5 who suffered from diarrhea in the last 30 days was 45% in 2000/01.	Reduce to 40%.	Reduce to < 20%.
In 2001/02, lady health workers reached 33.6% of households with health services.	Increase to 83%.	Reach 100%.
<b>MDG 5: Improve Maternal Health</b>		
<i>Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.</i>		
The maternal mortality ratio declined from 550 per 100,000 live births in 1990/91 to 450 per 100,000 in 2001/02.	Reduce to 350 per 100,000 live births.	Reduce to 140 per 100,000 live births.
The proportion of births attended by skilled health personnel increased from 18% in 1990/91 to 20% in 2000/01.	Increase to 75%.	Increase to > 90%.
The proportion of couples eligible for family planning programs using contraceptive methods, (i.e., indicative of the contraceptive prevalence rate) increased from 12% in 1990/91 to 30% in 2001/02.	Increase to 41.7%.	Increase to 55%.
The total fertility rate declined from 5.4% in 1990/91 to 4.1% in 2001/02.	Reduce to 3.76%.	Reduce to 2.1%.

MDG = Millennium Development Goal, PRSP = Poverty Reduction Strategy Paper.

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Broad MDG Targets/Pakistan's Indicator Status	PRSP Target (By 2005/06)	MDG Target (By 2015)
The proportion of women aged 15–49 years who had given birth during the last 3 years and had at least one antenatal care consultation, increased from 15% in 1990/91 to 31% in 2001/02.	Increase to 50%.	Reach 100%.
<b>MDG 6: Combat HIV/AIDS, Malaria, and Other Diseases</b>		
<i>Target 7: Have halted by 2015, and begin to reverse the spread of HIV/AIDS.</i>		
The target is to reduce HIV prevalence among 15–24 year old pregnant women to 50% of the baseline. However, there is currently no baseline data available.		
HIV prevalence among vulnerable groups (e.g., active sex workers) was estimated at 0.03% in 2001/02.		Reduce to 50% of the baseline. However, there is currently no baseline data available.
<i>Target 8: Have halted by 2015, and begun to reverse, the incidence of malaria and other major diseases.</i>		
The proportion of population in malaria-risk areas (19 districts) with access to effective malaria prevention and treatment measures was 20% in 2001/02.	Increase to 25%	Increase to 75%.
The incidence of tuberculosis was 177 per 100,000 in 2001/02.	Reduce to 133 per 100,000.	Reduce to 45 per 100,000.
The proportion of tuberculosis cases detected and managed through a DOTs strategy was 25% in 2001/02.	Increase to 70%	Increase to 85%.
<b>MDG 7: Ensure Environmental Sustainability</b>		
<i>Target 9: Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.</i>		
The proportion of land area covered by forest was 4.83% in 1990/91 as well as in 2001/02.	Increase to 5%.	Increase to 6%.
The land area protected for the conservation of wildlife as a percentage of total land area, increased from 9.1% in 1990/91 to 11.25% in 2001/02.	Increase to 11.3%.	Increase to 12%.
GDP (at constant factor) per unit of energy use as a proxy for energy efficiency (value-added in PRs per ton of oil equivalent) was PRs26,471 in 1990/91.	Increase to PRs27,300.	Increase to PRs28,000.
The number of petrol and diesel vehicles using CNG fuel was 280,000 in 2001/02.		Increase to 920,000.

CNG = compressed natural gas, DOTs = directly observed treatment short course, GDP = gross domestic product, MDG = Millennium Development Goal, PRSP = Poverty Reduction Strategy Paper.

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Table ... Continued

Broad MDG Targets/Pakistan's Indicator Status	PRSP Target (By 2005/06)	MDG Target (By 2015)
The percentage of sulfur (by weight) in high-speed diesel was 1% in 1990/91 and 2001/02.		Reduce to 0.5–0.25.
<i>Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water.</i>		
The percentage of population with access to piped water was 53% in 1990/91. It increased to 63% in 2001/02.	Increase to 70%.	Increase to 93%.
The percentage of population with access to sewerage and drainage was 30% in 1990/91. It increased to 40% in 2001/02.	Increase to 55%.	Increase to 90%.
<i>Target 11: By 2020, achieve a significant improvement in the lives of at least 100 million slum dwellers.</i>		
The number of <i>katchi abadis</i> (unauthorized settlements) regularized as a percentage of those identified by the cut-off date of 1985, was 50% in 2001/02.	Increase to 60%.	Increase to 95%.

MDG = Millennium Development Goal, PRSP = Poverty Reduction Strategy Paper.