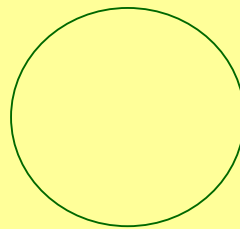


Chronic and Transitory Poverty in Pakistan: Evidence from a Longitudinal Household Survey

**G. M. ARIF
FAIZ BILQUEES**



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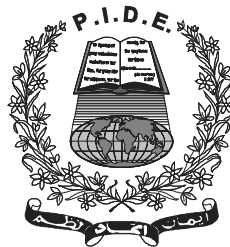
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1. INTRODUCTION

Poverty is not a static condition. Rather, poverty status of people generally changes over time—they move into and out of poverty. However, many people remain in poverty for a long period, and this extended duration of the poverty status is the distinguishing feature of ‘chronic poverty’. Chronically poor may live in poverty for ever, and their poverty may be inherited by their children. They have little access to productive assets and have low capabilities in terms of health, education, and social capital. Living in poverty for long period is not only a symptom of past deprivation, it is also the cause of future destitution. There is increasing evidence that growth and the prospects for long-term poverty reduction are held back by inequality and by the low returns that the poorest people get on their labour [CPRC¹ (2005)].

The common assumption is that the ‘chronically poor’ are much fewer than the ‘transitory poor’. However, this assumption has been challenged by the evidence presented in the Chronic Poverty Report 2004–05. By combining US\$1/day poverty figures with the available panel data, the report has estimated that out of the 1.2 billion people that are in extreme poverty in US\$1/day terms, the global number of the chronically poor is between 300 to 420 million [CPRC (2005)]. It means that approximately 25 to 33 percent of the people living on less than US\$1/day are chronically poor. The report has also estimated that about one-third of the poor population in South Asia is chronically poor—between 135 and 190 million people, of whom 110–160 million are Indians. Bangladesh and Pakistan account for the majority of the remainder.

The analysis of factors associated with the change in poverty status over time can provide useful guidelines for formulating policies to combat poverty. For example, ‘chronic poverty’ points to the need for more structural changes in existing policies such as education, health and land reforms that aim to permanently enhance the incomes and assets of the poor. ‘Transitory poverty’, on the other hand, contrast, may indicate that priority should be given to measures such as safety nets, credit and insurance schemes that are designed to smoothen the incomes (or consumption expenditures) of the poor around the poverty line.

Poverty dynamics can best be examined by the panel datasets, where same households and/or individuals are re-interviewed overtime to see changes, if any, in the indicators of interest e.g. income, poverty status, employment, and school enrolment. Poverty analyses in Pakistan have primarily been based on cross-section data generated through the Household Income Expenditure Surveys (HIES), and these analyses have mostly been undertaken at one point in time. These datasets have been the major source to determine the magnitude and trends of poverty, and their contribution in understanding poverty and designing policies for its reduction has been valuable.

Authors’ Note: We are thankful to Mr Masood Ishfaq Ahmad, Senior Systems Analyst, and Mr Kamran Khan, Systems Analyst, at PIDE for their excellent assistance in data analysis, and to Mr Mohammad Sarwar for his assistance in typing.

¹CPRC refers to Chronic Poverty Research Centre, UK.

However, because of scarcity of panel datasets, poverty dynamics have rarely been examined in Pakistan. In the recent past, IFPRI panel, which tracked about 700 households from rural Pakistan (four districts only) between 1986 and 1991², has been the single major data source for research on poverty dynamics in Pakistan. Based on this panel, Baulch and McCulloch (1999) explored the characteristics, which have the greatest influence upon a household being chronically or transitorily poor. They found that most of the characteristics that distinguish the chronically poor from the transitorily poor were similar to those that distinguish the poor from the never poor. Kurosaki (2002) employed a two period panel dataset (300 households) collected from North-West Frontier Province (NWFP) to investigate the vulnerability to risk as a characteristic of dynamic poverty. He found that sample households are subject to high transient poverty in terms of income but income variability is transferred to consumption variability only partially due to *ex post* risk-coping mechanisms. He also found that the dynamically vulnerable group includes households led by aged, with less land, and without regular remittance receipt.

The studies reviewed above provide useful information on poverty dynamics but they are based on small rural sample drawn from a few districts of the country, therefore it is hard to generalise these findings. Pakistan Institute of Development Economics generated a two period panel dataset named as the Pakistan Socio-economic Survey (PSES) based on a large sample of 3564 households carried out in 1998-99.³ These households were re-visited after two years in 2000-01. This study has used this PSES panel dataset to examine the determinants of chronic and transitory poverty in Pakistan.

The current focus of the government of Pakistan on poverty reduction opens a window of opportunity to ensure that the social and economic causes and consequences of transitory as well as chronic poverty are better understood by policy-makers. This paper is likely to contribute in this understanding; particularly what it means to be chronically or transitorily poor and what are the underlying social processes that result in poverty.

The rest of the paper is organised as follows: Section 2 defines the terms ‘chronic’ and ‘transitory’ poverty, followed a brief description of the data source and method of analysis in Section 3. The magnitude of chronic and transitory poverty has been given in Section 4. Results of the multinomial logit model showing the correlates of poverty dynamics are presented in Section 5. The final section summarises the main findings.

2. DEFINING CHRONIC AND TRANSITORY POVERTY

The way poverty is conceptualised is inherently about value preferences that vary between individuals, organisations and societies. Nevertheless, poverty occurs when someone experiences a fundamental deprivation in well-being. Until recently, poverty was considered mainly in ‘material’ terms such as low income or low levels of material wealth. More recently, vulnerability and deprivation of basic capabilities such as health

²IFPRI stands for International Food Policy Research Institute. The four districts covered by the IFPRI panel were: Attock and Faisalabad in Punjab, Badin in Sindh and Dir in NWFP.

³The 1998-99 PSES was representative at the national level.

and education have been emphasised as key aspects of poverty. Combinations of, and interactions between, material poverty, capability deprivation and vulnerability often characterise the poor [CPRC (2005)]. Thus poverty is not the outcome of a single factor, it is indeed a multi-dimensional phenomenon.

The study of poverty dynamics focuses on the ways in which people's poverty status changes, or does not change, over time. Panel household dataset, where same households are re-interviewed in two or more rounds (periods) of the survey are commonly used to assess the changes in poverty status over time. According to the Chronic Poverty Report 2004-05, the recognised five main poverty categories of change in the poverty status are:

- (1) The always poor, whose poverty score in each period is below a defined poverty line.
- (2) The usually poor, whose mean poverty score over all periods is less than the poverty line, but who are not poor in every period, if the survey covers several rounds.
- (3) The fluctuating poor, who are poor in some periods but not in others, and have a mean poverty score around the poverty line.
- (4) The occasionally poor, who have experienced at least one period in poverty; although their mean poverty score is above the poverty line.
- (5) The non-poor with poverty scores in all periods above the poverty line.

This categorisation provides the basis for defining the 'chronic' and 'transitory poverty'. For example, 'chronic poverty', according to the Chronic Poverty Report 2004-05, includes the first and second categories (always poor and usually poor), while 'transitory poverty' consists of the third and fourth categories (fluctuating poor and occasionally poor). This study has followed this categorisation. However, since the study is based on the two rounds of the PSES (1998-99 and 2000-01), four categories of change in the poverty status are possible between these two rounds: (i) poor in both rounds of the PSES or 'always poor', (ii) poor in round-I and non-poor in round-II (moved out of poverty), (iii) non-poor in round-I and poor in round-II (moved into poverty), and (iv) non-poor in both rounds. In the present study, the first category, 'always poor' is considered as the 'chronic poverty' or 'chronically poor', while movement into or out of poverty between the two rounds is considered as the 'transitory poverty' or 'transitorily poor'. Thus three broad categories—'chronically poor', 'transitory poor' and 'always non-poor'—have been used in this study in a dynamic sense to describe change in the poverty status between the two rounds of PSES (1998-99 and 2000-01).

There is also a need to make a distinction between the concepts of 'severity of poverty' and 'chronic poverty'. The former is a static concept and refers to the shortfall below the poverty line. Poverty severity therefore captures the fact that the poor are not equally poor to the same level: some people are slightly below the poverty line, while others are far below it. The latter captures the change, if any, in poverty status over time.

Some of the poor are poor for a short period of time (the transitory poor) while others are poor for long periods (the chronically poor). Poverty ‘chronicity’ is therefore a longitudinal concept, referring to persistence in poverty. However, it is intuitively plausible that it is much harder for someone who is well below a poverty line to advance far above it than for someone who is closer to it [CPRC (2005)].

3. DATA SOURCE AND METHODS OF ANALYSIS

3.1. Data Source

The data for this study comes from the PSES, a panel survey of individuals and households. It has been designed to document Pakistan’s social and economic transformation through the combination of retrospective data collection and prospective panel. The baseline of the PSES or its Round I was fielded in 1998-99 to 3564 households in rural as well as urban areas. The second round of PSES was fielded approximately two years later in 2000-01; the same households/individuals who were interviewed in the PSES-I of 1998-99 were traced and re-interviewed in 2000-01.⁴ The overall attrition rate between the two rounds was 22.2 percent, leaving the panel sample of 2774 in 2000-01 (Table 1).

There is no major difference between rural and urban sub-samples in terms of attrition rate, although it is slightly higher in the latter. However, it varies considerably across the provinces, being lowest, only 15.5 percent in Punjab and highest in NWFP, 33 percent. In other two provinces, Sindh and Balochistan, attrition rates were also high, around 29 percent. Arif and Bilquees (2006) have shown four main reasons for the attrition of households; migration of entire households from their original places of residence, refusal of the respondents to be part of the panel, exclusion of PSUs from the sample because of unrest in the NWFP and Balochistan after September 11, 2001 and deterioration of law and order situation in Sindh. In a comprehensive analysis, they also show that the attrition in PSES was to some extent selective on many attributes of respondents. Factors associated with mobility such as small family size, non-ownership of dwelling units were associated with households which either moved out of the original place of residence or could not be tracked in PSES-II. Attrition was also highest among the lowest resource households, as measured in per capita expenditure. However, Arif and Bilquees could not find significant differences between the set of coefficients for attritors versus non-attritors for indicators of interest, particularly consumption and poverty; the coefficient estimates of standard background variables are not affected by sample attrition. They have concluded that, like many other panel datasets in developed and developing countries, attrition of more than 20 percent sample of the PSES is not a pervasive problem for obtaining consistent estimates.⁵

⁴For details on the sample designs of PSES-I and PSES-II, see Arif, *et al.* (2001) and Arif and Bilquees (2006), respectively.

⁵For more details, see Arif and Bilquees (2006).

Table 1

3.2. Methods of Analysis

The poverty lines estimated by Qureshi and Arif (2001) for the 1998-99 period has been used in this study.⁶ For the 2000-01 period, these were adjusted by the Consumer Price Index (CPI). Qureshi and Arif used the Food Energy Intake (FEI) method to compute the poverty lines separately for rural and urban areas. The cost of food component of this basket was equal to the food poverty line determined by estimating the cost of food consistent with a calorie intake of 2550 per adult equivalent per day for rural areas and 2295 calories per adult equivalent for urban areas. For the cost of non-food elements of the basket, it was assumed that those households whose food expenditures were equal to the food poverty line would also satisfy their other basic needs. The average expenditure of these households on non-food components of the basket was taken as the estimated cost of non-food items. Food and non-food expenditures were added up to get the poverty lines.

The change in poverty status has been examined by grouping the PSES panel households into three categories—chronically poor, transitory poor and always non-poor—as defined earlier in Section 2. Household poverty dynamics depend on many factors—the characteristics of the household itself, trends in the economy, society and physical environment, and sudden events—both shocks and windfalls. This study, however, has associated household and individual (head of households) characteristics with poverty transition (or change in poverty status). Household is therefore the unit of analysis. First, the magnitude of chronic and transitory poverty is determined by analysing the data from two rounds of PSES. Then the multinomial logit technique has been used to examine the socio-economic factors associated with the change in poverty status between these two rounds. All regressors are measured on 1998-99 basis.

4. MAGNITUDE OF CHRONIC AND TRANSITORY POVERTY IN PAKISTAN

Table 2 presents data on the change in poverty status of panel households between 1998-99 and 2000-01 for the overall sample as well as for rural and urban areas separately. Overall more than one-fifth of the households are chronically poor since they remained below the poverty line in 1998-99 and 2000-01. There is a marked difference between urban and rural areas in terms of chronicity of poverty; compared to only 12 percent in the former, 28 percent households in the latter are chronically poor.

Similarly, there are more transitory poor in rural areas (33 percent) than in urban areas (22 percent). As defined earlier, the transitory poverty consists of households that either moved into poverty or moved out of it between the two periods. Table 2 also shows the data for these two sub-categories separately. Overall more households entered into poverty between 1998-99 and 2000-01 period than their exit from poverty, resulting in a net increase in overall poverty over time. This finding is consistent with other cross-section

⁶Poverty lines (per capita) per month in 1998-99 were: Rs 692.26 (total), Rs 672.5 (rural) and Rs 874.13 (urban).

Table 2
*Distribution (%) of Households by Change in Poverty Status between
 Two Rounds 1998-99 and 2000-01, by Place of Residence in 1998-99*⁷

Change in Poverty Status between 1998-99 and 2000-01 Rounds	Place of Residence (1998-99)		
	Urban Areas	Rural Areas	All Areas
Chronically Poor	11.9	28.2	22.4
Transitory Poor	22.0	32.5	28.8
Enter into Poverty	12.6	18.9	16.7
Exit from Poverty	9.4	13.6	12.1
Always Non-poor	66.1	39.3	48.8
All Households (%)	100	100	100
N (Households)	970	1782	2752

Source: Computed from the two rounds of the PSES (1998-99 and 2000-01).

surveys such as Pakistan Integrated Household Survey (PIHS), which has shown an increase in poverty between 1998-99 and 2001-02 period. The net movement into poverty is witnessed in rural as well as urban areas.

Table 2 shows that overall, approximately half of the households remained in the non-poor category in two periods—1998-99 and 2000-01. Rural-urban differentials are also evident in this category. Around two-third of the urban households remained in the non-poor category in two rounds of the PSES, whereas the corresponding percentage was only 39 percent for the rural households. It appears from these statistics that although in urban areas approximately one in every eighth household is chronically poor, the high percentage in non-poor status in two periods with chances of making transition from being poor to being non-poor, urban poverty in Pakistan can largely be considered as transitory in nature. Chronic poverty in Pakistan is basically a rural phenomenon.

Panel studies are rare in Pakistan, however, considerable analysis has been undertaken using the IFPRI rural panel datasets, carried out between 1986 and 1991 in four districts of the country. The Chronic Poverty Report 2004-05 has recently summarised the main findings of the IFPRI panel based studies in a table which is reproduced in Appendix Table 1. The table also shows two more studies carried out by Kurosaki (2002, 2003) based on a rural panel in NWFP. The IFPRI panel covers five years with several waves while Kurosaki's research is based on a two-wave panel, between 1996 and 1999. Table 3 shows that the use of different waves and different approaches to defining chronic poverty has led to a wide range of estimates of chronic poverty. For example, Adams and Jans (1995) used the 12 quarterly waves of the IFPRI panel spreading over three years period (1986-87–1988-89) and applied the income and expenditure of the poorest quintile as the poverty line to define the chronic poverty. They

⁷It may be noted that statistics reported in this table differ slightly from that reported in Arif (2004) because this data set is based on cleaned series.

Table 3

Mean and Standard Deviation of Characteristics by Change in Poverty Status between Two Rounds of the PSES (1998-99 and 2000-01)

Characteristics (1998-99)	Change in Poverty Status between 1998-99 and 2001-01							
	Chronically Poor		Transitory Poor		Always Non-poor		All	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Household Size (Number)	8.42	3.12	6.98	3.15	5.97	3.14	6.81	3.28
Female Headed HHs (Female=1)	0.06	0.23	0.08	0.26	0.08	0.28	0.08	0.26
Age (Head of HHs) in Years	47.84	13.14	49.39	14.66	48.71	14.67	48.71	14.35
Literacy (Head of HHs)(Literate=1)	0.27	0.44	0.35	0.48	0.56	0.54	0.43	0.52
Employed (Head of HH) (Working=1)	0.81	0.39	0.78	0.41	0.79	0.41	0.79	0.52
Number of Earners	1.71	1.07	1.49	0.89	1.50	0.87	1.54	0.93
Farm Households (Farm=1)	0.31	0.46	0.32	0.47	0.25	0.43	0.29	0.45
Ownership of Housing Unit (No Ownership=1)	0.09	0.28	0.10	0.30	0.08	0.28	0.09	0.29
Electricity Connection (Yes=1)	0.64	0.68	0.77	0.67	0.88	0.65	0.80	0.67
Land Owned (Yes=1)	0.23	0.42	0.24	0.43	0.22	0.41	0.23	0.42
Sharecropping (Yes=1)	0.08	0.28	0.08	0.27	0.06	0.24	0.07	0.25
Livestock Ownership (Yes=1)	0.07	0.26	0.08	0.27	0.06	0.23	0.07	0.25
Zakat Received (Yes=1)	0.03	0.18	0.02	0.15	0.00*	0.09	0.02	0.13
Remittances Received (Yes=1)	0.10	0.30	0.11	0.32	0.15	0.36	0.13	0.34
Loan Obtained Last Year (Yes=1)	0.28	0.45	0.23	0.42	0.19	0.39	0.22	0.41
% Urban Residence (Urban=1)	0.19	0.39	0.27	0.44	0.48	0.50	0.35	0.48
Sindh (=1)	0.15	0.36	0.22	0.41	0.25	0.43	0.22	0.41
NWFP (=1)	0.14	0.35	0.13	0.34	0.11	0.31	0.12	0.33
Balochistan (=1)	0.04	0.19	0.08	0.27	0.07	0.25	0.06	0.25

Source: Computed from the two rounds of PSES (1998-99 and 2000-01). *Shows significance at 5 percent level.

found that the proportion of chronically poor, who remained poor in all three years, was only 6 percent. McCulloch and Baulch (1998) used the 5 annual waves of the IFPRI panel (1986-87–1990-91) and defined chronically poor as those who remained poor at least 4 out of 5 periods. Under this methodology the chronic poverty was estimated to be 7 percent. The CPRC (2005) used the two annual waves of IFPRI, 1986-87 and 1990-91, and found the proportion of chronically poor to be 10 percent. The World Bank (2002) used the similar two annual waves and defined the chronic poverty as mean expenditure level below the poverty line. The proportion of chronically poor as a result was 26 percent (Appendix Table 1). Research conducted by Kurosaki (2002, 2003) calculated a higher incidence of chronic poverty, 63 percent. When he applied the official poverty line on two waves of his panel data, the proportion of chronically poor varied between 44 and 58 percent.

It appears from this brief description of earlier studies that the choice of indicators that are used to measure poverty and number of waves of the panel data used have an important influence on the chronicity of poverty. However, the analysis of two annual waves of a panel generally suggests a high degree of chronic poverty in rural Pakistan. So the findings of this study are also in line with other studies. Thus it can be concluded that although relatively more rural poor are in transitory poverty, chronic poverty is pervasive in rural Pakistan. The

other serious issue which deserves the attention of policy makers as well as the civil society is the low retention rate of rural households in the desired status of ‘remaining non-poor’ in two periods, only 39 percent as compared to 66 percent in urban areas. It indicates the high degree of vulnerability of rural households to falling into poverty.

5. CORRELATES OF CHRONIC AND TRANSITORY POVERTY: A MULTINOMIAL LOGIT ANALYSIS

How the chronic and transitory poor households are different from the non-poor households in terms of socio-economic characteristics? This section has examined socio-economic correlates of the change in poverty status between the two waves of the PSES by using multinomial logit models. As noted earlier, household is the unit of analysis. The dependent variable is defined as one of three mutually exclusive outcomes of the change in poverty status between 1998-99 and 2000-01: chronically poor (poor in 1998-99 as well as in 2000-01), transitory poor (moved into poverty or moved out of it between 1998-99 and 2000-01) and remaining non-poor in two periods. The last category, households that were non-poor in 1998-99 and also in 2000-01, is the reference category in the multinomial logit models.

Definition of independent variables used in these models, with their mean values and standard deviation are reported in Table 3. Three types of variables have been used: individual characteristics of the head of household e.g. sex, age, literacy and employment; household characteristics including family size, number of earners, farm status, ownership of housing unit, electricity connection, land and livestock ownership, tenurial status, and access to safety net (zakat and remittances—domestic and overseas) and credit; and community variables e.g. place of residence (rural or urban) and province. It is worth repeating that all these regressors are measured in 1998-99.

Table 3 shows that average household size of the chronically poor is much larger than the non-poor households. Transitory poor also live in relatively large-sized households; but the size is lower than the size of chronically poor households and higher than the size of non-poor households. These findings are consistent with those of other panel studies; for example, Reyes (2002) shows that in Philippines ‘families that are always poor over the three years period have an average size of 6.1 while those that are always non-poor have a size of 4.6.

There is no major difference among the three types of households in sex and age of the head of households. However, average literacy rate among the heads of non-poor households is more than double that of the heads of chronically poor households. This difference was also considerable between the head of non-poor and transitory poor households. There is no real difference in terms of the proportion of heads of household employed and average number of earners. More chronically poor and transitory poor households are engaged in the farm sector as compared to non-poor households (Table 3).

Relatively high proportion of transitory and chronically poor households do not own a dwelling unit; and access to electricity was particularly lower among the chronically poor households than among the non-poor households. Mean values of land ownership do not vary

among the three types of households. However, relatively more chronically and transitory poor households are sharecroppers as compared to non-poor households. Interestingly ownership of livestock is slightly higher among the poor families (Table 3).

Proportion of zakat receiving households is high among the chronically poor category while more non-poor households receive remittance either from overseas or from within the country. More poor households obtained loan compared to the non-poor households. It probably shows the inability of the former to meet their needs from the household sources. The burden of indebtedness can lead to liquidation of assets in future. Finally, the chronically poor are concentrated in rural areas while the non-poor are concentrated in urban areas. This brief description of mean values of the independent variables shows a considerable difference in these values across the three mutually exclusive categories of the dependent variable: chronically poor, transitory poor and non-poor (Table 3).

Results of the multinomial logit model for the full sample are presented in Table 4. Since poverty, particularly chronic poverty is primarily a rural phenomenon; the results of a multinomial logit model based on the rural sub-sample are presented in Table 5. Rural model appears to be the mirror view of the full model. However, similarities and differences between the two models are discussed below.

Table 4

Multinomial Logit Model: Effects of 1998-99 Socio-economic Characteristics on Change in Poverty Status between 1998-99 and 2000-01 (All Areas)

Correlates (1998-99)	Chronically Poor/Non-poor	Transitory Poor/Non-poor
Household Size	0.350*	0.182*
Female Headed Households	-0.258	0.087
Age of the Head of Households	-0.029*	-0.006
Literacy of the Head of Household	-1.401*	-0.862*
Head of Household Employed	-0.244	-0.186
Number of Earners	0.05	-0.137*
Farm Households	-0.237	0.076
Housing Unit Not-owned	0.209	0.427*
Electricity Connection	-0.804*	-0.130
Land Ownership	-1.022*	-0.693*
Sharecropping	0.612*	0.240
Livestock Ownership	-0.165	0.031
Zakat Received	1.301*	0.512
Remittances Received	-0.906*	-0.696*
Loan Obtained Last Year	0.316*	0.113
Urban Residence	-1.664*	-1.078*
Provinces		
Punjab	—	—
Sindh	-0.865*	-0.083
NWFP	-0.108	0.166
Balochistan	-1.487*	-0.116
Constant	0.537	-0.030
Log Livelihood Ratio	4368.151	
N	2489	

Source: Computed from the two rounds of PSES.

* Shows significance at 5 percent level.

Table 5

Multinomial Logit Model: Effects of 1998-99 Socio-economic Characteristics on Change in Poverty Status between 1998-99 and 2000-01 (Rural Only)

Correlates (1998-99)	Chronically Poor/Non-poor	Transitory Poor/Non-poor
Household Size	0.377*	0.208*
Female Headed Households	0.018	0.129
Age of the Head of Households	-0.026*	-0.005
Literacy of the Head of Household	-1.217*	-0.748*
Head of Household Employed	-0.214	-0.246
Number of Earners	0.088	-0.077
Farm Households	-0.276	0.0182
Housing Unit Not-owned	0.447	0.679*
Electricity Connection	-0.690*	-0.133
Land Ownership	-1.062*	-0.695*
Sharecropping	0.830*	0.346
Livestock Ownership	-0.157	0.002
Zakat Received	1.457*	0.417
Remittances Received	-1.028*	-0.669*
Loan Obtained Last Year	0.112	0.037
Provinces		
Punjab	—	—
Sindh	-1.040*	-0.201
NWFP	-0.075	0.194
Balochistan	-1.777*	-0.031
Constant	0.047	-0.242
Log Livelihood Ratio	3004.43	
N	1589	

Source: Computed from the two rounds of PSES.

* Shows significance at 5 percent level.

The first factor which deserves some discussion is the household size; it has a significant and positive association with the probability of being either chronically poor or transitory poor for full sample as well as for rural sub-sample. This association suggests that large families are more likely to stay either in poverty longer or to be vulnerable to poverty than being 'always non-poor'. The usefulness of this relationship for policy is limited unless one understands the main mechanism operating behind this association. Orbeta (2005) shows that the main mechanism operating between family size and poverty and vulnerability to poverty are savings, the labour supply and earnings of parents and the investments in the education of children. The first two are known to be the primary sources for consumption smoothing of households. The last one is the main avenue of securing the future consumption of children and also of parents in their old age. Relationships between poverty dynamics, family size and per capita household expenditure are presented in Appendix Tables 2 and 3. Chronically poor have large families and their monthly per

capita expenditures are very low; around 43 percent of such households have 9 or more family members, and their per capita expenditures are Rs 514. On the other hand only 16 percent of non-poor households have 9 or more family members, and their monthly per capita expenditures are more than double of the chronically poor households. It appears that households, particularly the poor are not able to maintain expenditure per capita as household size increases. Family size is also likely to have a negative influence on health and education expenditure as well. This low investment can lead to transfer of poverty to next generation.

The working status of the head of household has no significant association with the change in the poverty status (Tables 4 and 5). It suggests that although many poor are economically active, they are unable to escape poverty probably because of the terms of their employment and their lack of access to productive assets. The statistically significant and negative association of the number of earners with the transitory poor category reinforces this argument (Table 4). Thus, getting work does not always translate into escaping poverty. Terms of employment, particularly wages matter to make transition from poverty. During the period of PSES panel (1998-99 and 2000-01), real wages in rural areas in fact declined [Malik (2005)].

Literacy of the head of household has a significant and negative association with both chronic and transitory poverty in the full as well as the rural model, suggesting that non-poor households are more likely to be headed by literate persons (Tables 4 and 5). Human capital is key in contexts where access to material assets is highly constrained [CPRC (2005)]. It improves the quality of labour as an asset. Health and education are therefore the critical pathways out of poverty. In the Pakistani context, according to the present analysis, literacy can definitely make a difference in improving the household well-being. Results of the rural model largely reflect the outcomes of the full model.

To examine the relationship between the access to assets and the change in poverty status, three dummy variables are included in the equations: ownership of dwelling unit (coded 1 if no ownership), cultivated land and livestock. Tenurial status of the household, where sharecropping is coded as 1, has also been entered into the models. Results for these relationships are very informative and interesting. As expected, land ownership is negatively associated with both chronic and transitory poverty, showing that land-owners are more likely to be in the 'always non-poor' category. Ownership of livestock did not turn out to be statistically significant. However, the non-ownership of a dwelling unit has a positive association with the probability of being transitory poor. Sharecropping has a significant and positive relationship with the probability of being chronically poor. The statistically significant associations between poverty dynamics and land ownership, non-ownership of dwelling unit and sharecropping is found in both the full as well as the rural model.

For more clarity, in Table 6 transitory poor have been divided into two mutually exclusive categories; those who entered into poverty and those who made an exit from poverty between 1998-99 and 2000-01 period. It is interesting to observe that non-ownership of the dwelling unit has a positive association with 'falling into poverty'. In the case of sharecropping households, this significant and positive association is found

Table 6

Multinomial Logit Model: Effects of 1998-99 Socio-economic Characteristics on Change in Poverty Status between 1998-99 and 2000-01 (Rural Only)

Correlates (1998-99)	Chronically Poor/Non-poor	Moved out of Poverty/Non-poor	Moved into Poverty/Non-poor
Household Size	0.383*	0.277*	0.158*
Female Headed Households	0.048	0.615	-0.345
Age of the Head of Households	-0.026*	-0.008	-0.004
Literacy of the Head of Household	-1.216*	-0.729*	-0.756*
Head of Household Employed	-0.222	-0.372	-0.152
Number of Earners	0.086	-0.065	-0.088
Farm Households	-0.271	0.067	-0.017
Housing Unit Not-owned	0.449	0.513	0.802*
Electricity Connection	-0.696*	-0.201	-0.097
Land Ownership	-1.069*	-0.745*	-0.652*
Sharecropping	0.801*	-0.403	0.622*
Livestock Ownership	-0.177	-0.416	0.201
Zakat Received	1.474*	0.731	0.094
Remittances Received	-1.038*	-0.819*	-0.575*
Loan Obtained Last Year	0.104	-0.062	0.109
Provinces			
Punjab	-	-	-
Sindh	-1.047*	-0.333	-0.124
NWFP	-0.090	-0.123	0.400
Balochistan	-1.770*	-0.023	-0.056
Constant	0.038	-1.182	-0.736
Log Livelihood Ratio	3658.751		
N	1589		

Source: Computed from the two rounds of PSES.

* Shows significance at 5 percent level.

for the chronically poor as well as for the falling into poverty category. It thus becomes clear that non-ownership of a dwelling unit in rural areas and dependency on sharecropping for the livelihood either keep the families in poverty for longer duration or push the non-poor families into poverty. These results are consistent with the findings of Arif (2004) on the rapid assessment of bonded labour in agriculture sector in two provinces, Punjab and NWFP. This study shows that the very poor economic condition of sharecroppers pursues them into bonded labour force. This worst form of poverty labour, is the direct outcome of non-implementation or gross violations of tenancy legislations. In fact there are large variations in tenancy arrangements across the country. The most disturbing aspect of these arrangements noted in the study was that the landlord takes half of the produce without sharing any cost. In one district calculations of the cost of sowing wheat for one tenant under this arrangement showed that even if he has a good wheat crop, very little will be left for his family after giving 50 percent share to the landlord and adjusting the loan. Furthermore, the study also showed that it was not uncommon among rural landless families to build a house on land given by the landlord. However these

families could not become the legal owners of these houses even though they have been living there for generations. The continuous threat of eviction from their houses also perpetuated the practice of forced labour.

Direct transfers of income and/or access to safety nets are considered as the means to move the poor out of poverty. Zakat is one of the major safety net programmes in Pakistan introduced in the 1980s. Remittances from overseas or from within the country have been a major source of income transfer. Access to credit is also considered a key factor in Pakistan to assist the poor. All these variables have also been tested and once again the findings are interesting. Take first the case of Zakat, it has a significant and positive association with the probability of being chronically poor. This association is found in all models (see Tables 4–6). It conveys two messages which are very consistent with the earlier findings. First, despite all the doubts about the transparency of zakat distribution, the present analysis shows that it is not distributed randomly, rather it largely goes to the poorest of the poor. However, at the same time, it is quite clear that zakat distribution in its present format does not serve as a means to pull the recipients out of poverty. Rather receiving zakat seems to be a symbol of being chronically poor in rural areas.⁸

Remittances have a significant and negative association with the probability of being chronically poor or being transitory poor. However it is worth noting that very few poorest of the poor households have an opportunity to send a member overseas or even to cities within the country. They move from one rural area to other rural area as a survival strategy, but this movement does not help them to escape poverty. The analysis also shows that chronically poor are more likely to depend on debt than the non-poor. This dependency can impose the forced labour on the chronically poor families. Finally, as expected, chronically or transitory poor are more likely to be rural residents than the non-poor category. It also appears from the present analysis that chronic poverty is concentrated in rural Punjab, probably more so in the southern zone.

6. SUMMARY AND CONCLUSIONS

This study has grouped the PSES panel households into three categories: chronically poor, those who remained poor in both rounds of the survey; transitory poor, those who moved into or out of poverty; and those who were non-poor in both periods. The net movement into poverty was witnessed in both rural and urban areas, leading to a net increase in overall poverty between 1998-99 and 2000-01 period. Overall more than one-fifth of the households were chronically poor; much more rural households were found in this category as compared to urban households. Thus, the chronic poverty is primarily a rural phenomenon in Pakistan.

The analysis shows that household size increases the risk of falling into poverty or remaining in chronic poverty. Chronically poor have large families and their monthly per

⁸There is a considerable body of literature on the Zakat system in Pakistan. See, for example, Assad (2004), Heltberg (2004), Irfan (2003), Issues and Policies Consultants (2004), Mohammad (1991), Shirazi (1996), Arif (2006).

capita expenditures are very low. The poor are not able to maintain expenditure per capita as household size increases. Although many poor are economically active, they are unable to escape poverty mainly because of low wages and lack of access to productive assets. Thus, getting work does not always translate into escaping poverty. In the context of Pakistan, literacy can make a significant difference in improving the household well-being.

Non-ownership of a dwelling unit in rural areas and dependency on sharecropping for the livelihood either keeps the families in poverty for longer duration or pushes the non-poor families into poverty. The analysis shows that zakat is largely distributed among the poorest of the poor, however, it does not help the poor to move out of poverty. Remittances have a significant and negative association with the probability of being chronically poor or being transitory poor. The analysis also shows that chronically poor are more likely to depend on debt than the non-poor. This dependency can lead to forced labour. Chronically or transitory poor are more likely to be rural residents than the non-poor category. It also appears from the analysis that chronic poverty is concentrated in rural Punjab, probably in the southern zone.

These findings have several policy implications. First, there is a need to acknowledge that poverty dynamics are not the same as poverty trends. According to the PSES panel data, headcount poverty rate increased by 4 percentage points between 1998-99 and 2000-01. However, while about 12 percent of poor households escaped poverty, 16 percent of previously non-poor households became poor, and more than one-fifth of all households remained poor over time (the chronically poor). It suggests that poverty reduction policies may be designed on the basis of poverty dynamics. A geographical approach would be more useful for such policies.

Second, factors associated with chronic poverty in rural areas point to the need for more structural changes in existing policies. On the one hand, efforts may be made to enhance literacy and skill levels of the chronically poor to permanently increase their incomes and assets. On the other hand, the positive association between chronic poverty and sharecropping suggests that targeted interventions may be introduced for tenant families in rural areas. The existing tenancy laws may also be enforced in true spirit to protect tenants' rights. Their marketing skills may be enhanced so that they can get better prices for their agricultural products.

Third, the existing safety net programmes, including zakat and credit, are inadequate to pull households out of poverty. These programmes may be evaluated to bring changes in these programmes in order to transfer the benefits to the poor. Fourth, transitory poverty in rural as well as urban areas indicates that priority should also be given to enhance productive employment opportunities. Finally, non-ownership of housing units in rural areas is one of the major causes for poverty generation. Housing schemes targeting landless households may be introduced in rural areas. In short, only a multidimensional approach can bring down the chronic poverty in rural Pakistan. Rural housing schemes by the provincial government providing small residential plots with minimum non-interest credit to the rural landless households would go a long way in addressing the poverty of landless/assetless masses.

Appendix Table 1

Different Approaches to Chronic Poverty in Rural Pakistan

Sample	Time-frame	Source	Poverty Line	Definition of Chronic Poverty	Proportion Chronically Poor
727 Households from IFPRI Rural Survey	1986-7-1988- (12 waves)	Adams and Jane (1995)	Poorest quintile (income) Poorest quintile (expenditure)	Poorest quintile in all 3 years	6% 10%
686 Household from IFPRI Rural Survey	1986-7-1990-1 (5 annual waves)	McCulloch and Baulch (1998)		Poor at least 4 out of 5 periods Poor in all 5 periods	7% 3%
“	“	Baulch and McCulloch (1999)	2100 Kcal/day – Rs 2000 (approximates poorest quintile); welfare measure real income per adult equivalent	Mean income over five years below poverty line	About 50% of households classified as poor in the first year About 6% of households classified as non-poor in the first year 5%
“	“	Baluch and McCulloch (2000)		Poor in all periods Mean income over five years below poverty line	26%
“	“	CPRC calculations		Poorest quintile in both 1986 and 1991	10.3%
“	1986-7-1990-1 (2 annual waves)	World Bank (2002)	Rs 2850	Mean expenditure level is below the poverty line	39.7% (northern irrigated plains 34.3%, barani plains 25.9%, dry mountains 46.7%, southern irrigated plains 46.4%) 63.2%
299 Households from Rural NWFP Survey	1996-1999 (2 waves)	Kurosaki (2002)	Rs 7,140 (WB 1995 adjusted for rural CPI) (expenditure)	Poor in both periods	43.7% – 58.3% (depending on; observed or fitted consumption values, poverty line or 90% poverty line)
		Kurosaki (2003)	Official national poverty line (expenditure)		

Source: CPRC (2005).

Appendix Table 2

Distribution (%) of Households by Family Size in 1998-99 According to Change in Poverty Status between 1998-99, and 2000-01

Change in Poverty Status between 1998-99 and 2000-01	Family Size (Members)—1998-99				
	1-4	5-6	7-8	9 and More	All
Chronically Poor	7.3	18.8	31.1	42.8	100
Transitory Poor					
Moved out of Poverty	12.9	27.8	29.9	29.3	100
Moved into Poverty	24.9	26.0	27.9	21.2	100
Non-poor	33.5	31.4	18.8	16.2	100
All Households	23.7	27.3	24.4	24.6	100

Source: Computed from the two rounds of the PSES (1998-99 and 2000-01).

Appendix Table 3

Average Household Consumption Expenditure, 1998-99, by Change in Poverty Status between 1998-99 and 2000-01

Change in Poverty Status between 1998-99 and 2000-01	Family Size (1998-99)								
	1	2	3	4	5	6	7	8	≥ 9
Chronically Poor	680	560	609	554	534	539	535	516	514
Transitory Poor	1179	1007	1048	835	822	788	765	813	734
Non-poor	1787	2005	1552	1431	1432	1332	1134	1150	1178
All	1558	1747	1394	1186	1166	1022	845	844	792

Source: Computed from the two rounds of the PSES (1998-99 and 2000-01).

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ABSTRACT

This paper analyses the incidence of chronic and transitory poverty in Pakistan in both urban and rural settings. The findings of this study are that rural poverty is more severe and also chronic as compared to transitory poverty in urban centres. The main factor behind the phenomenon is the homogeneity of the rural set-up which affects the employment and wage levels adversely. On the other hand, in the urban areas, heterogeneous population with diverse occupations provides better employment and wage opportunities. Furthermore, landlessness, lack of ownership of dwellings, and dependency on sharecropping are the three main factors accentuating rural poverty. The paper also analyses the zakat element of the safety net strategy. Contrary to the prevailing perception that zakat does not reach the actually poor, it turns out that in fact zakat has become an “identification mark” for the absolute poor. The findings of this paper have very strong implications for the poverty reduction strategy of the Government of Pakistan.

Table 1

1988 Sample of the PSES-I, Attrition Rate, Reasons for Attrition, and 2000-01 Panel Sample of PSES-II

Region/ Province	PSES-I (the 1998-99 Sample)	Attrition Rate between the 1998- 99 and 2000-01 Rounds (%)	Reasons for Attrition (only Attriting Households)				PSES-II (the 2000/01 Sample - Panel Households)	
			All	Dropped from the PSES II Sample	Moved out of the PSU	Household not Found		Others
All Sample	3564	22.2	100	21.6	26.4	22.8	29.2	2774
Rural Areas	2268	21.1	100	32.5	17.1	19.8	30.6	1789
Urban Areas	1296	24.0	100	5.0	40.6	27.4	27.0	985
Province								
Punjab	1952	15.5	100	10.3	28.6	18.0	43.1	1650
Sindh	848	28.8	100	33.1	29.3	35.1	2.5	604
NWFP	508	33.4	100	21.4	22.0	14.9	41.7	338
Balochistan	256	29.1	100	32.9	19.2	21.9	26.0	182

Source: Arif and Bilquees (2006).