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**INCIDENCE OF INCOME
POVERTY IN PAKISTAN**

SOCIAL POLICY AND DEVELOPMENT CENTRE

**INCIDENCE OF INCOME POVERTY
IN PAKISTAN**

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Knowledge about the poor is essential if the government is to adopt sound development strategies and more effective policies for alleviating poverty. How many poor are there? Where do they live? What are their socio-economic circumstances? Answering these questions is a necessary first step towards understanding the impact of policies on the poor. This paper presents the facts and figures about the extent, nature, and depth of the poor in Pakistan using the latest HIES data. The paper concludes that income poverty is pervasive in Pakistan, encompassing approximately one-third of the country's population. Bulk of these are chronically poor. Also, there exist significant regional differences in the severity of the poverty problem in the country. A number of important implications for the design of the poverty alleviation program emanate from the findings such as the need for spatial targeting of poverty alleviation funds and the emphasis on skill/education enhancement and income support schemes in the poverty alleviation package.

INCIDENCE OF INCOME POVERTY IN PAKISTAN

1. INTRODUCTION

After more than a decade of pre-occupation with macroeconomic stabilization, poverty alleviation is currently the buzz word among the upper echelons of policy makers in Pakistan. Concern for poverty has been heightened by a general consensus among researchers and policy makers that poverty has returned to Pakistan in the 90s. This recognition is largely based on a deterioration in key macro determinants of poverty like growth in per capita income, unemployment and food prices.¹ Contemporary micro household level data is generally not available and, therefore, key facts which are crucial for the formulation of a meaningful and effective poverty alleviation strategy still remain largely unknown.

The release of the Household Integrated Economic Survey (HIES) data for 1996-97 has made it possible to address this problem to some extent. This paper, using results from the survey, attempts to answer a number of important questions related to poverty: What is the incidence and extent of poverty in the country? What is its regional and urban/rural profile? What are the economic circumstances of the poor? and finally what are the implications of the above for the poverty alleviation strategy?

The paper is organised as follows. Section two discusses the key methodological issues in the estimation of poverty. Section three gives the estimation of poverty line while incidence of poverty is presented in section four. Section five presents the determinants of the extent and depth of poverty in Pakistan. Finally, conclusions and policy implications are presented in section six.

2. ESTIMATION OF POVERTY: METHODOLOGICAL ISSUES

Poverty is a multidimensional concept involving not only economic but also social deprivation. Sen's (1987) capability concept proposes that in addition to requiring certain goods and services for oneself one may also value one's capability to be socially useful. This approach emphasizes not only delivery of a certain quantity of food, but also access to complementary inputs such as

¹See Sayeed and Ghaus-Pasha [1996], Akhtar and Ahmed [1999].

health care, drinking water, sanitary facilities and education. However, for operational purposes at the household level, income poverty is generally emphasised. The focus of this paper is, therefore, on income poverty.

Estimation of income poverty may be undertaken using two alternative approaches: absolute and relative. The choice essentially depends on whether the focus is on the analysis of the extent of shortfall in the standard of living or of inequality as a source of poverty. Absolute poverty is an aspect of the former, while relative poverty is an aspect of the latter. In less developing countries (LDC) where average levels of income are low, the latter approach is less common and less preferred. However, the advocates of this approach indicate that most apparent advantage is that it does not require any a priori specification of 'needs' of minimal consumption. It simply focuses on the relative condition of poorest.

The emphasis on the extent of absolute poverty or consideration of absolute welfare is no less important. Most, if not all, studies for LDCs argue that poverty alleviation efforts need to be judged by their success not just in reducing inequality per se, but also in their impact upon absolute levels of welfare. This paper focuses on absolute and not relative poverty.

It is, however difficult to translate absolute needs into a poverty criterion. Defining the scope of basic needs and its minimum level remains an area of controversy. Most of the studies for LDCs use food adequacy or nutritional (calorie) requirement to define poverty level. Giving the highest priority to food adequacy among basic needs, this approach is useful for an aggregate criterion for absolute welfare standard. The exponents of this approach also argue that consumption pattern of the sample itself are used to determine the level of total expenditure which is consistent with achieving caloric norms.

The alternative option is to take the poverty line as the cost of achieving a minimum bundle of basic needs. The first attempt to estimate this in the context of Pakistan was made by Ahmad (1993). With the help of a consultative exercise and opinion surveys, he arrived at the quantum and value of various components of basic needs separately for urban and rural areas. This approach is also used by Gazdar et al (1994) after some modification. The approach, which is

based on express evaluations of social status, is criticized on the ground that it is arbitrary and subjective. Therefore, the approach which shows the revealed behavior (based on actual consumption) is preferred for this paper.

Specification of calorie requirement is also problematic. It is well known that calorie requirement vary between people not only by sex and age, but also with climatic, work and living environment. Except for age and sex, the data is not rich to provide detailed information about a person's precise physiological condition or quantify normal level of physical exertion. The conclusion, therefore one may draw is that nutritional standards are vague and may depict only partial rather than complete picture of poverty.

For estimation purposes poverty may be defined as the suitable ability to obtain calorie requirements. One approach derives the food expenditure from the calorie-expenditure relationship. But ignoring non-food expenditure is not justified on various grounds. A very low non-food consumption, for instance, means that food expenditure could become highly vulnerable to, even small decrease in income. Therefore, a safety-margin in the poverty criterion is necessary to get a cut-off point, necessary to acquire the usual means of subsistence. Following Ercelawn (1992), this paper uses overall expenditure in calorie-expenditure relationship for an upward adjustment to minimum food expenditure.

The next issue is to relate poverty standards in term of overall expenditure with observed income or expenditure. Most studies on poverty in Pakistan have used total expenditure as the capacity to meet the poverty standard. The authors usually cite data consideration such as understatement of income or prefer expenditure; since its relative stability over time is considered as a reflection of 'permanent' income. However, Ercelawn (1992) argued that similar understatements in expenditure are also possible and more importantly, subsistence expenditure may well involve quasi-permanent indebtedness. Therefore, income as primary poverty criterion is preferred in this paper.

3. ESTIMATION OF POVERTY LINE

3.1 Characteristics of Data Source

The analysis in this paper is based on disaggregated HIES data. The data was collected during 1996-97 by Federal Bureau of Statistics, Government of Pakistan. The universe consists of all urban and rural areas of the four provinces of Pakistan, defined as such by Population Census 1981. The survey excludes some areas due to administrative difficulties. The excluded areas constitute about 4% of total population.

Table 1 highlights important characteristics of HIES. It also gives an idea of under coverage as compared with the Population Census 1998.

TABLE 1
CHARACTERISTICS OF HIES 1996-97

	HIES		1998 POPULATION CENSUS	
	Urban	Rural	Urban	Rural
Sample Size	5447	8814))
Universe - Population (Million)	30.11	68.12	42.46	88.12
Universe - Household (Million)	4.71	11.05	6.15	13.06
Average Family Size	6.41	6.17	6.90	6.74
Sex Ratio	109	105	112	106
Adult Equivalent Scale	5.31	5.02))
Sample (for this analysis) ²	5424	8804))
Mean Expenditure Per Capita (Rs.)	1219	790))
Mean Income Per Capita (Rs.)	1270	921))
Gini - Household Expenditure Per Capita (%)	34.88	25.07))
Gini - Household Income Per Capita (%)	38.35	41.39))

² For the purpose of this analysis, households which had a food share below 5 and greater than 90 percent of total consumption as well as those which had no household size reported, have been dropped.

3.2 *Approaches to Determination of Poverty Line*

The calorie-based approach, as discussed above, is dominant in studies of poverty throughout the developing world, including Pakistan. Various variants of this approach have been applied in the Pakistani context. There are discussed below.³

Havinga et al (1989) set the poverty line, as the average food expenditure of those households who consume in the region of the minimum required calorific intake. Malik (1988) and Amjad and Kamal (1997) modified this method by adjusting for non-food expenditure. To allow non-food expenditure in the estimation of poverty line, the distribution of total expenditure between food and non-food categories has been utilized. To be more specific, food expenditure needed for the required amount of calories has been multiplied by the reciprocal of the food expenditure share in total expenditure of the relevant lower income group.

Instead of taking average expenditure, Ercelawn (1991) used calorie consumption function (CCF) to derive expected total expenditure of those households who consume minimum required calorific intake. This method derives expected expenditure for potential (2550) calorie intake. Lanjouw (1994) set the poverty line as the sum of (i) the food expenditure adequate to consume exactly the minimum required calorific intake and (ii) expected (regression based) non-food expenditure of these households defined in (i).

Jafri (1999) modified this approach by taking expected food expenditure (CCF) of the sample and average non-food expenditure of those household whose food expenditure is exactly equal to the minimum requirement. It is assumed that those households whose food expenditure is exactly equal to the minimum prescribed will also satisfy their other basic needs. Jafri calls this approach the "cost of basic needs" methods.

³A summary table of nearly all methods used in poverty analysis in Pakistan is given in Gazdar (1998).

By far the most common approach has been to use 2550 calories (for urban as well as rural) per day per adult as the calorific cut-off point. This calorie norm was recommended by Pakistan Planning Commission (1985) and supplemented by recommendations of FAO/WHO [cited in Mohin (1986)]. Often it is argued that "estimating the poverty line from a calorie-expenditure function using a unique caloric standard for the urban and rural sub-sample would have the effect of over-estimating urban poverty line in comparison with the rural". (Gazdar, 1998).

A Working Group on Poverty Alleviation was formed in the Planning Commission in 1997 (GOP, 1997). The Group recommended different calorie norms for urban and rural areas (2550 and 2230 for rural and urban areas, respectively). Regional difference in the caloric norms exists in other countries also. In India, the original poverty line (set in 1960-61) was referenced around a daily intake of 2100 calories per person in rural and 1900 calories per person per day in urban areas. For subsequent updating and adjustment of the poverty line, the standard price indices are used.

3.3 *The Poverty Line*

This study uses total expenditure (economic capacity) method to obtain critical expenditure for minimum calorific intake, as in Ercelawn (1991). However, the calorific cut-off points recommended by the Working Group (GOP, 1997) i.e. 2550 for rural and 2230 for urban areas are used. To facilitate comparison, the calorie norms are converted using adult equivalent scale (GOP, 1985). More specifically, per capita calorie consumption is regressed on per capita non-durable consumption expenditure to estimate expected expenditure for potential calories. Separate regressions are estimated for rural and urban areas and for each province.

Table-2 presents the average calorie consumption for different regions, while sources of calories are depicted in Table 3. The key source of calorie intake in the country is wheat (see Table 3). However, there exist some inter-regional differences in the pattern of sources also. For example, poor households in urban NWFP obtain 64 per cent of their calories from wheat, while the corresponding figure is 47 per cent for urban Sindh. These variations in the sources of calories

across regions as well as the underlying price differences and difference in overall calorie consumption explain the difference in the poverty line across regions presented in Table 4. The poverty line ranges from Rs 465 to Rs 664 per capita per month in the urban areas and Rs 390 to Rs 564 in the rural areas.

TABLE 2
CALORIE CONSUMPTION
(Calories per Month per Adult)

	Urban	Rural
Pakistan	2873	3375
Punjab	2954	3322
Sindh	2750	3319
NWFP	2914	3706
Balochistan	2726	3380

Source: Estimated from HIES, 1996-97 unit records

TABLE 3
SOURCES OF CALORIES FOR POOR HOUSEHOLD
[Percent]

	PUNJAB		SINDH		NWFP		BALOCHISTAN		PAKISTAN		Total
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	
Wheat	59	54	47	41	64	48	58	52	57	48	53
Rice	4	3	14	20	3	3	7	6	7	8	7
Maize	0	0	-	-	1	8	0	-	0	4	2
Pulses (i.e., lentils)	4	2	3	3	2	2	4	4	3	3	3
Milk and Milk Products	6	15	6	11	3	6	3	5	4	9	7
Oil and Vegetable Ghee	14	14	13	12	11	21	13	22	13	17	15
Meat, Fish, Poultry	1	1	3	1	1	1	3	2	3	1	1
Fruits and Vegetables	4	3	4	3	2	2	3	3	3	3	3
Sugar and Sugar Products	7	5	9	6	10	8	7	6	7	7	7
Others	1	3	1	3	3	1	2	1	3	1	2

Source: Estimated from HIES, 1996-97

TABLE 4
POVERTY LINE ESTIMATES
(Rs. Per Month Per Capita)

Countries	Urban	Rural
Punjab	639	485
Sindh	610	564
NWFP	465	390
Balochistan	664	551

Note: Calculations are based on regression estimates and calorific cut-off points. The population weighted average poverty lines for Pakistan are Rs.618 and Rs 484 for urban and rural areas respectively.

4. INCIDENCE OF POVERTY

4.1 Measures of Poverty

To monitor the extent, depth and severity of poverty the standard measures used include: (i) head count ratio; (ii) poverty gap and (iii) the FGT2 ratio. The head-count gives the proportion of individuals (or households) whose incomes are below the poverty line. It is given as:

$$\begin{aligned} \text{Head Count} &= q/n \\ q &= \text{number of poor} \\ n &= \text{total population.} \end{aligned}$$

While the head count ratio gives the proportion of poor population, it does not indicate the extent to which they are poor. The poverty gap illustrates this as it gives the extent to which average income of the poor is below the poverty line. It is estimated as follows:

$$\text{Poverty Gap} = \frac{1}{n} \sum_{i=1}^q [(PL - y_i) / PL]$$

$$\begin{aligned} \text{Poverty Gap} &= \text{the income gap ratio} \\ y_i &= \text{the income of the } i\text{th poor.} \\ PL &= \text{Poverty line} \end{aligned}$$

The above two measures are, however, not reflective of the distribution of the poor and the Foster, Greer and Thorbeck (FGT2) index provides an estimation of the severity of poverty among the poor. This is given as:

$$FGT2 = \frac{1}{n} \sum_{i=1}^q [(PL - y_i) / PL]^2$$

The FGT index is equal to 0 if the incomes of the poor are very close to the poverty line.

4.2 Estimates of Poverty

Using the poverty lines presented in section 3, incidence of poverty has been derived using the above three indicators. On the whole, 31 per cent of the people of Pakistan are in the state of poverty, having income levels below the poverty line (See Table 5). This means that out of the 128 million people living in Pakistan in 1996-97, 40 million were living in a state of poverty. The incidence of poverty is higher in the rural than urban areas, at 32 and 27 per cent respectively.

TABLE 5
INCOME POVERTY IN PAKISTAN, 1996-97
[Percent of Poor Individuals]

	Urban	Rural	Overall
PAKISTAN			
Head-Count	27	32	31
Poverty Gap	6	8	7
FGT2	2	3	3
PUNJAB			
Head-Count	33	29	30
Poverty Gap	7	7	7
FGT2	2	3	3
SINDH			
Head-Count	20	53	37
Poverty Gap	4	14	9
FGT2	1	5	3
NWFP			
Head-Count	18	24	23
Poverty Gap	3	5	4
FGT2	1	1	1
BALUCHISTAN			
Head-Count	35	54	49
Poverty Gap	8	14	12
FGT2	3	6	4

Estimated from HIES, 1996-97 unit records.

The depth of poverty, as revealed by the poverty gap, show that the average income of poor households is below the poverty line by 6 per cent in urban areas and by 8 per cent in rural areas. Overall, for the country it is 7 per cent. This implies that though pervasive, poverty is not very deep in Pakistan. The overall FGT2 index is 3, being lower in the urban areas. This indicates a lower inequality among the poor in the urban compared to the rural areas of the country.

4.3 Regional Profile of Poverty

A comparison of the incidence of poverty across provinces and regions leads to a number of interesting and crucial insights. First, Balochistan is the most poverty stricken province in the country with the highest incidence of both rural and urban poverty. More than half of the rural population (54 per cent) and more than one-third of urban (35 per cent) population is poor in the province. Poverty is not only very extensive but also very deep and sever as demonstrated by the poverty gap of 12 per cent and the FGT2 index of 4. The indicators for the rural areas are worse than the urban areas of the province.

Second, Sindh has the second highest incidence of poverty in the country, at 27 per cent. The extreme dichotomy in the provincial economy is highlighted by the large difference in the incidence of poverty between the urban and the rural areas. Only 20 per cent of the urban population lives in poverty as opposed to more than half in the rural areas. The poverty gap is also very high in the rural areas, of 14 per cent, as compared to 4 per cent in the urban areas. Also, the difference in the FGT2 index between the urban and rural areas of the province is the highest in the whole country. The indicators point to the extreme problem of poverty in rural Sindh, the situation being almost as bad as in the rural areas of Balochistan.

Third, the incidence, depth and severity of poverty is the lowest in the NWFP, both in the urban and the rural areas. This conclusion, though consistent with the findings of earlier studies (Jaffri 1999), has not been highlighted adequately. Finally, Punjab is the only province were poverty is more pervasive in the urban as compared to the rural areas. The head count ratio in urban Punjab is 33 per cent as compared to about 29 per cent in rural Punjab. However, inequality

among poor is higher in the rural areas. There appears to be no differences in the depth of poverty across the province. Overall the low incidence of poverty in the rural Punjab (versus urban areas) can perhaps be attributed to the relatively buoyant agricultural base of the provincial economy.

In summary, significant spatial variations exist in the incidence of poverty in the country. The distribution across Pakistan is presented in Table 6. It appears that 36 per cent of the poor population resides in rural Punjab, 20 per cent in rural Sindh and 19 per cent in urban Punjab. The important question that emerges is why are there such significant differences in the regional incidence of poverty across the country? Broadly speaking, we identify three factors as important determinants of spatial variation in poverty. First, is the difference in per capita income across regions. *Ceteris paribus*, regions with higher incomes are likely to have a lower incidence of poverty. The second contributing factor is income inequality. The more unequally income is distributed, the higher the incidence of poverty is likely to be. Beyond this, since income poverty is based on the notion of a poverty line, a lower poverty line is likely to imply a lower incidence and vice versa.

TABLE 6
SPATIAL DISTRIBUTION OF POVERTY IN PAKISTAN
(%)

	Urban Areas	Rural Areas	Total
Punjab	19	36	55
Sindh	7	20	27
NWFP	1	9	10
Balochistan	1	7	8
Pakistan	28	72	100

Table 7 summarizes the relationship between incidence of poverty, per capita income, inequality and the poverty line. It seems that the low incidence of poverty in NWFP is principally the consequence of the low poverty line and the relatively uniform distribution of income (due partly

to the equalizing effect of remittances). The story of Punjab is somewhat different. Despite the high level of income inequality, the incidence of poverty in the province is relatively low largely due to the combined effect of the high level of income per capita and the relatively low poverty line.

TABLE 7
RELATIONSHIP BETWEEN INCIDENCE OF POVERTY, PER CAPITA
INCOME, INCOME INEQUALITY AND POVERTY LINE

	Per Capita Monthly Income (Rs.)	Extent of Income Inequality (Gini Coefficient)	Poverty Line (Rs. Per capita per month)	Incidence of Poverty (% of poor)
URBAN				
Punjab	1,245	0.39	639	33
Sindh	1,352	0.39	610	20
NWFP	1,101	0.39	465	18
Balochistan	1,100	0.34	664	35
Pakistan	1,270	0.38	618	27
RURAL				
Punjab	1,052	0.45	485	29
Sindh	745	0.33	564	53
NWFP	686	0.30	390	24
Balochistan	681	0.28	551	54
Pakistan	921	0.41	484	32
TOTAL				
Punjab	1,105	0.44	527	30
Sindh	1,036	0.36	586	37
NWFP	746	0.33	401	23
Balochistan	762	0.31	573	49
Pakistan	1,025	0.40	523	31

Source: Estimated from HIES, 1996-97.

Compared to NWFP and Punjab, the high incidence of poverty in Sindh is the consequence of a high poverty line reinforced by the highly unequal distribution of income which neutralizes the

poverty reducing impact of high per capita income. In the case of Balochistan, the high poverty line and low per capita income mitigate against the favourable implications of the prevailing low level of income inequality and result in a high incidence of poverty.

5. DETERMINANTS OF THE EXTENT AND DEPTH OF POVERTY

It is clear by now that the problem of poverty is overwhelming in Pakistan. However, before it can be addressed, it needs to be understood. First of all there is need to know what type of households are unable to generate incomes above the poverty line or what are their key socio-economic characteristics? Secondly, what determines the depth of poverty as reflected by the poverty gap. The answer to these crucial questions will throw some light on the nature of poverty in existence in Pakistan. Is poverty chronic in nature and are households under poverty likely to remain poor? Or is it largely due to inadequate asset endowment like educational and skill level, which can be enhanced; thereby, pulling the households out of poverty? Or is poverty essentially transitional; whereby, the households are under poverty conditions only temporarily, for example, due to unemployment between jobs? An understanding of this is an essential prerequisite for the formulation of an effective and meaningful poverty alleviation strategy as each type of poverty has to be tackled differently. For instance, if poverty is more or less of a permanent nature, poverty alleviation strategy should emphasize long term income supplementing scheme. If, on the other hand, inadequate skill endowment is largely a cause of poverty, then capabilities enhancing programs should be the cornerstone of the poverty alleviation strategy, and so on.

In this section we attempt to answer some of the important queries raised above. Specifically, we pose the following questions: which socio-economic attributes influence the probability of the household being below the poverty line and, if poor, what determines the depth of poverty? Table 8 portrays the incidence and depth of poverty with respected to change in various socio-economic characteristics.

TABLE 8
INCIDENCE AND DEPTH OF POVERTY BY TYPE OF HOUSEHOLD
(%)

Characteristics	INCIDENCE		DEPTH	
	Rural Areas	Urban Areas	Rural Areas	Urban Areas
Household Size				
1 - 3	13	5	3	1
4 - 6	28	15	6	3
7 and above	37	36	10	8
Dependency Ratio				
Below 20%	11	4	2	1
20 - 50%	23	17	5	7
Above 50%	41	40	11	5
Age of Head of Household				
19 - 34	34	27	9	5
35 - 49	37	29	8	7
50 and above	27	25	6	5
Number of Earners				
One	36	29	10	6
Two	32	31	8	7
Three or more	26	23	6	4
Gender				
Male-headed Household	33	28	9	6
Female-headed Household:				
- not receiving transfers	38	29	11	6
- receiving transfers	25	17	7	4
Assets Ownership				
Owning No Property	50	29	14	6
Owning Property	31	27	8	6
Owning Livestock	21	-	5	-
Educational Attainment				
Illiterate	36	40	9	9
Primary	33	34	8	7
Higher Secondary/Matric	17	17	3	3
Graduate and Postgraduate	14	4	3	1
Employment Status				
Unemployed	33	22	8	3
Underemployed Wage Earners	42	30	11	6
Self-Employed	27	25	6	5
Transfers				
Households without Transfers	34	28	8	6
Households with Transfers	26	26	6	6
Receiving Remittances	23	22	6	4
From Outside Pakistan	12	8	2	1
From Inside Pakistan	25	31	6	6
Receiving Zakat	61	49	17	13
Location				
City	-	18	-	3
Town	-	39	-	9

Demographic characteristics. Larger households tend to be poorer because of more dependents. Therefore, the behaviour whereby poor families desire to have a large number of children, either to serve as housekeepers (to release the adults from domestic chores) or to contribute to the

family income as a means for rising out of poverty, appears to be counterproductive, at least in the short to medium term. It also appears that the relationship between the age of the head of a household and poverty is of an inverted U-shape. The probability of poverty increases up to a certain age threshold, until such time as the head of the household acquires enough education/training and experience to improve his/her earnings. Thereafter, the chance of his/her being poor declines. The lower likelihood of multiple-earner families being poor is demonstrated by the findings in Table 8.

Are women poorer than men? By and large, women in Pakistan acquire the status of head of a household in two eventualities. First, when men migrate in search of better economic prospects and women temporarily take charge of the household. Such instances are particularly common in northern areas where the phenomenon of out-migration is prevalent. Second, when the male head of a household dies or permanently abandons or departs from the household, leaving the woman to provide for her family. Our findings show that in the latter case, the probability of the household being poor is high, more so in the rural than in the urban areas. Besides, the experience of developing countries shows that, as heads of households, women face all kinds of cultural, social, legal and economic obstacles that men, even poor men, do not (including, for example, longer work hours and lower wages).

Assets/endowments. The poor usually lack both income and assets. In economies in which wealth and status come from land/property, disadvantaged households are typically land-poor or landless. Both in the urban and rural areas of Pakistan, ownership of property is inversely correlated with poverty. Likewise, in rural areas, ownership of livestock contributes to lowering the chances of being poor.

The poor also lack human capital. They are either illiterate or have received only a low level of formal education. Table 8 clearly demonstrates the decreased incidence of being poor with increased educational attainment, both in urban and rural areas. The decline is particularly

marked in urban areas, diminishing from 40 per cent in the case of illiterate heads of households to 4 per cent in the case of graduates.

Employment status. Besides having lower incomes and fewer assets than the non-poor, the poor are generally unemployed or underemployed, and are wage earners. The lack of employment opportunities, particularly in a period of economic recession, has dragged households into a state of acute poverty. To counter this, some opt for secondary employment (and are therefore underemployed). However, this is unlikely to fundamentally improve their status, and the probability of such households being poor is also high. Interestingly, those who manage to become small entrepreneurs (self-employed) are able to improve their standard of living and are less likely to be in a state of poverty.

In periods of low economic activity, daily wage earners are the most adversely affected. Their chances of being poor are greatest, both in the urban and the rural areas. Wage earners in the rural areas, particularly in non-farm households, are generally recognized as the most vulnerable segment of rural society. International experience and other local studies confirm this finding (Qureshi (1999); Jafri (1999)).

The role of transfers. Transfers can be an important source of income for households. In most developing countries, transfers are made by relatives and friends rather than by the government. In Pakistan, remittances, both from within and outside Pakistan, are instrumental in improving the standard of living of recipient households. Table 8 clearly shows that the likelihood of being poor is low for households receiving remittance income. In fact, informal transfers are successful in pulling a significant proportion of households out of poverty (Ghaus-Pasha (2001)).

In conclusion, it appears that being poor is not a random occurrence. There are distinct demographic, social and economic factors that can force a household into a state of poverty. These insights can potentially be very useful in the design of a poverty alleviation programme.

Chart 1 traces the incremental steps that lead to reduced poverty in urban and rural areas, respectively. Essentially, if the head of a household is both illiterate and unemployed, and also has no access to either unearned income (e.g., transfers or assets) or other modes of family support (i.e., income from other employed household members), then the household is bound to be poor.

CHART 1
THE LADDER OF POVERTY REDUCTION
Probability of being poor (%)



NOTES:

The conditional probabilities with respect to certain characteristics are calculated from the Logit analysis whereby the dependent variable takes the value one if poor and zero otherwise. The model contains a number of socio-economic characteristics. The detailed Logit results are presented for urban and rural areas separately in the appendix.

^a The head of the household is illiterate and unemployed, receives neither transfers nor assets, and has no family support

^b Primary education

If a rural household possesses physical assets (land/livestock), the incidence of poverty tends to fall by as much as 55 per cent. As such, we conclude that asset redistribution can be used as an effective tool for poverty reduction, particularly in rural Pakistan. Access to employment and informal transfers also tend to mitigate significantly against poverty. Finally, improvement in educational attainment reduces the likelihood of a household being poor by a further 8 per cent.

In contrast, employment tends to have a greater poverty-reducing impact in urban areas, the incidence of poverty being reduced by 45 per cent if the head of the household is gainfully employed. Transfers, followed by education, also play a significant poverty-reducing role.

Finally, we turn to a quantification of the extent of chronic and transitory poverty. Within poor households, the former category essentially consists of three types of households) female-headed households (Type I), male-headed households where the head of household is illiterate (Type II), and male-headed households where the head of the household is literate but old (above 60 years) (Type III). The share of such households as a percentage of poor households is given in table 9.

TABLE 9
INCIDENCE OF CHRONIC POVERTY
(% SHARE OF POOR HOUSEHOLDS)

Type	Rural Areas	Urban Areas	Total
Type I	5	4	4
Type II	69	53	65
Type III	1	2	1
Total	75	59	70

Source: SPDC estimates based on HIES (1996-97).

It is clear that much of the poverty in Pakistan, especially in the rural areas, appears to be chronic in character. This would tend to justify programmes for enhancement of skills/education and for continuing income support.

6. CONCLUSIONS AND POLICY IMPLICATION

This paper estimates the extent, depth and severity of poverty in Pakistan using the HIES, 1996-97 database. An analysis of the socio-economic characteristics of the poor is also undertaken. Results show that income poverty is pervasive in Pakistan; encompassing approximately 40 million people (about 31 per cent of the total population) in its folds in 1996-97, with almost 70 per cent chronically poor. Significant differences exist in the incidence of poverty across the

country. More severely affected areas include the province of Balochistan and rural Sindh, followed by urban Punjab.

The poor have larger families, a higher dependence ratio, a lower asset endowment and limited access to supplementary income sources. Results shows that if rural households possess physical assets (land/livestock), the incidence of poverty falls by as much as half. In contrast, employment and intellectual assets endowment (education) tend to have a greater poverty reducing impact in urban areas.

The analysis has important implications for the design of poverty alleviation program. First, with almost one-third of the country's population below the poverty line, welfare programs like *Zakat*, *Baitul Maal*, etc. can make only a minor dent in poverty. Macro policies, which focus on improving the key determinants of poverty like price stability, particularly of basic food items, and higher employment generation through economic revival are perhaps the most effective mechanisms for reducing poverty in the country. Second, there are large differences in the incidence of poverty among regions. Therefore, given limited resource availability, the poverty alleviation programmes should focus more on areas where the problem is more acute like Balochistan and rural Sindh. Any scheme which allocates funds on a per capita basis will not achieve the best results in terms of the impact on poverty.

Third, given that possession of physical assets (land/livestock) reduces the probability of poverty by as much as 55 per cent in the rural areas, a case exists for land reforms, purely on equity basis. Also there is strong justification for explicitly including livestock promotion in the poverty alleviation package.

Finally, since much of the poverty in Pakistan, especially in the rural areas, appears to be chronic in character, programmes for enhancement of skills/education and continuing income support will have to be focused on. It is important that effective and efficient poverty alleviation popograms continue to receive high priority not only in terms of higher fiscal allocations but

also through institutional reforms which improve the process of delivery of basic social services in the country. The approach must be to endow and empower people so that they can find ways to get themselves out of the vicious cycle of poverty.

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APPENDIX

TABLE A-1
RESULTS OF LOGIT ANALYSIS OF POOR HOUSEHOLDS
[URBAN AREAS]

Constant	-4.760*
<i>Demographic Variables</i>	
Household Size	0.298*
Dependency Ratio	0.036*
Age of head of Household	0.043*
Age Squared	-0.001*
Female Headed Household	0.533
Female Headed Household Receiving Transfers	-1.373*
Number of Earners	-0.286
<i>Assets / Endowments</i>	
Ownership of Property	-0.415*
Educational Attainment	
Primary	-0.391*
Middle	-1.071*
Matriculate	-1.430*
Intermediate	-2.551*
Higher	-3.153*
<i>Employment Status</i>	
Unemployed	0.405*
Self-employed	0.767
Underemployed	-0.748
<i>Transfers</i>	
Zakat and Ushr	1.217*
Remittances from within Pakistan	-0.251
Remittances from outside Pakistan	-1.782*
<i>Locational Differents</i>	
Punjab	1.690*
Sindh	1.027*
Balochistan	1.232*
City	-1.162*
Log-likelihood = -1927	
*Significant at 5% level.	

TABLE A-2
RESULTS OF LOGIT ANALYSIS OF POOR HOUSEHOLDS
[RURAL AREAS]

Constant	1.726*
<i>Demographic / Social Variables</i>	
Household Size	0.192*
Dependency Ratio	0.027*
Age of head of Household	-0.012*
Female Headed of Household	0.842*
Female Headed Household Receiving Transfers	-1.579*
<i>Assets / Endowments</i>	
Ownership of Property	-0.539*
Educational Attainment	
Primary	-0.425*
Middle	-0.762*
Matriculate	-1.371*
Intermediate	-1.130*
Higher	-1.845*
Ownership of Livestock	-1.351*
<i>Employment Status</i>	
Government Employee	-0.494*
Wage Earner	0.338*
<i>Social Safety Nets</i>	
Zakat and Ushr	1.467*
Remittances from within Pakistan	-0.039
Remittances from outside Pakistan	-1.280*
<i>Locational Differents</i>	
Balochistan	0.542*
N.W.F.P.	-0.969*
Sind Rural / Backward Areas	1.141*

*Significant at 5% level
 Log-likelihood = -4167