

## **INTER-HOUSEHOLD TRANSFERS AND THE POOR: Pakistan's Experience**

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Inter-household transfers are one of the major sources of income (consumption) of recipient households. The focus of the paper is to estimate the impact of these transfers on poverty alleviation in Pakistan. Basic Needs Approach has been used to estimate the poverty line. Head-count, poverty gap and FGT Poverty Indices have been used to find the extent of poverty and severity of poverty in the country. Results are derived from Household Income and Expenditure Survey (1987-88) and Household Integrated Economic Survey (1990-91). Findings show that inter-household transfers alleviated poverty by 14.0 per cent in 1987-88 and 13.56 per cent in 1990-91. Poverty gap ( $P_1$ ) and severity of poverty ( $P_2$ ) were significantly reduced due to these transfers. The effect of these transfers on poverty alleviation is stronger in the rural areas than in urban areas of Pakistan.

### **I. Introduction**

Pakistan does not have a well integrated social security system for the poor. The official system of Zakat was introduced in 1980 which is not correctly targeted and has small coverage. This system has been ineffective at providing minimum social security to the poor and the vulnerable, due to leakages in the distribution channels [Shirazi, (1996)].

A strong traditional safety net consisting of the extended family, supported in the past by transfers from abroad (foreign remittances)<sup>1</sup> and transfers within the country (domestic transfers/domestic remittances) by the individuals and households living away from their homes to individuals and households (hereafter referred to as inter-household transfers), play an important role in the Pakistani society. Cox and Eser (1994) write that "Private inter-household transfers of cash and goods are widespread

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<sup>1</sup> The relation of foreign remittances and poverty alleviation is discussed in Shirazi, et al., (1977).

in Pakistan; 40 per cent of the households in the sample participated in private-transfer networks as recipients,<sup>2</sup> donors, or both.” They further explained that in Pakistan such transfers are large. “Among recipients, for example, such transfers comprise 26 per cent of total household consumption. Private transfers help equalize the income distribution - they tend to flow from upper to lower income households.”

Our estimates show that inter-household transfers are a significant part of recipients’ total income. The following table indicates that in 1987-88 inter-household transfers contributed 43 per cent to the total recipients’ income in Pakistan, 39 per cent in the urban areas and 44 per cent in the rural areas. In 1990-91<sup>3</sup> these reduced to 23 per cent for Pakistan, 19 per cent for the urban areas and 25 per cent for the rural areas of Pakistan.

TABLE 1

Share of Inter-household Transfers in the  
Total Income of the Recipients

Region	Percentages	
	1987-88	1990-91
Pakistan		
Overall	43	23
Urban	39	19
Rural	44	25
Provinces		
Punjab	42	22
Sindh	33	22
NWFP	48	30
Baluchistan	71	35

Source: Our estimates from HIES (1987-88) and HIES (1990-91).

Despite the significant contribution of these transfers to the households’ income in Pakistan, no study has been undertaken so far, to quantify the households who could cross the threshold poverty level due to these transfers. This paper is written with the above objective. The paper is structured as follows. Section II, discusses the data set and methodology. Section III presents the results. The conclusions are presented in Section IV.

<sup>2</sup> About 13 per cent of the households were the recipients of inter-households transfers in 1990-91.

<sup>3</sup> This dramatic fall in the proportion of net inter-household transfers to the income of recipients from 43 per cent in 1987-88 to 23 per cent in 1990-91 is due to data limitations. The data set of 1990-91 is non-representative and non-comparable, due to its small sample size, with 1987-88 data set. That is why HIES 1990-91 data gives distorted results. This has been also recognized by Federal Bureau of Statistics .

## II. Methodology and the Data Set

### A) *Poverty Line*

The poverty line is a measure which separates poor from non-poor. Poor are usually defined as those whose income or consumption falls below a threshold level i.e., the poverty line. Two approaches<sup>4</sup> have been widely used to estimate the poverty line in Pakistan. The first one is the Caloric-expenditure approach, used by Naseem (1977), Ercelawn (1990), Malik (1992, 1994), Havinga et al., (1990) and Shirazi (1994), which has a few shortcomings.<sup>5</sup> For example, a minimum required level of calorie intake at a certain income level does not imply that corresponding non-food basic needs are automatically achieved. The second is the basic needs approach. Researchers like Booth (1892), Rowntree (1901), and Orshansky (1965, 1968) have used the basic needs approach to determine the poverty line. Recently, in Pakistan, Ahmad (1993), Gazdar et al., (1994), Ali (1995) and, Jafri and Khattak (1995) have also used this approach. Ahmad (1993)<sup>6</sup> has estimated the poverty line for Pakistan by using the basic needs approach.

The poverty line estimated by Ahmad (1993) was accepted by the World Bank with certain adjustments [Gazdar et al., (1994)]. We have adopted the basic needs approach as given by Gazdar. However, we have deflated the poverty line to the 1990-91 and 1987-88 prices by using the GDP deflator.<sup>7</sup> Thus the adjusted per capita<sup>8</sup> per month poverty lines based on basic needs approach are Rs.213 and Rs.281 for 1987-88 and 1990-91 respectively.

### B) *Measures of Poverty*

We have used the well known and commonly used measures of poverty in this

<sup>4</sup> Methods used for poverty estimation are not free from the element of arbitrariness. However, given the data set an attempt is made to use such information which could provide better and reliable results.

<sup>5</sup> See, Hagamaars, (1986).

<sup>6</sup> The basic needs package consists of food, clothing, housing, health, education, transport, social interaction and recreational facilities. All possible componential needs were identified. Discussions were held with professional economists in the Federal Government, Provincial Governments, Research Institutions and Universities. A check list, thus prepared, was rechecked with the heads of different families. A team of economists was constituted to arrive at the quantum and values of each componential item of various basic needs separately in the rural and urban areas. These were rechecked with the consumers in different areas. The poverty line thus estimated by Ahmad was modified by Gazdar et. al., by using the prices given in HIES.

<sup>7</sup> GDP deflator has broader coverage than CPI, however, CPI is a more suitable index to adjust basic needs poverty line. Using CPI, poverty line for 1990-91 increased from Rs 281.13 to Rs 282.38 and headcount (Hc) for overall Pakistan marginally increased from 29.1 per cent to 29.2 per cent. This change is very small and does not affect overall conclusions. Hence, in this paper we have retained results based on the poverty lines adjusted by GDP deflator.

<sup>8</sup> Ahmad (1993) and Gazdar et. al., (1994) assumed a family size of 2 adults and 4 children (aged less than 18 years).

paper. These are Headcount ( $H_c$ ), poverty gap ( $P_g$ ) and Foster, Greer and Thorbecke (1984) poverty measure ( $P_2$ ) known as the FGT poverty measure. These poverty measures are calculated in the following way:

- 1) Head count ratio is the number of households which are below the poverty line.
- 2)  $H_c = q/n$ ,

where  $q$  is the number of households below the poverty line and  $n$  is the total number of households. This measure gives the proportion of the poor households in total households.

$$P_g = \frac{1}{n} \sum_{i=1}^q \frac{Z - Y_i}{Z} \quad (1)$$

where  $Z$  is the poverty line and  $Y_i$  is the income of the  $i$ th poor household,  $P_g$  is the poverty gap which gives the extent to which the incomes of the poor lie below the poverty line as a ratio of the poverty line.

- 3) The FGT poverty measure is:

$$P_2 = \frac{1}{n} \sum_{i=1}^q \left( \frac{Z - Y_i}{Z} \right)^2 \quad (2)$$

The higher the value of  $P_2$  the greater will be the income inequality among the poor and more severe it will be.

To estimate the impact of the inter-household transfers on poverty alleviation, the above mentioned poverty measures have been estimated before and after including inter-household transfers in household incomes.<sup>9</sup> The difference in the estimate of poverty indicates the impact of inter-household transfers.

### C) Data Sets

The data sources for this paper are Household Income and Expenditure Survey (HIES) 1987-88 and Household Integrated Economic Survey (HIES) 1990-91.<sup>10</sup>

<sup>9</sup> In this paper income is used for estimation. This is due to the fact that domestic transfers are made in terms of income. In Pakistan, expenditure and income data both are equally unreliable. However, researchers have used both the expenditure and income data as a benchmark for estimation. Chaudhary (1992) maintained that in Pakistan a large proportion of population was maintaining an artificially higher standard of consumption than current income level. Consequently, any estimation of poverty in terms of consumption expenditure will underestimate the extent of poverty. Similarly, income data is either overstated or understated. Several studies have used income data for poverty analysis for reference, see, Ahmed (1993).

<sup>10</sup> Previously this survey was the Household Income and Expenditure Survey.

The HIES is conducted on annual basis by the Federal Bureau of Statistics (FBS), Statistics Division, Government of Pakistan and provides detailed information on household income by source and expenditure by item. They cover both rural and urban areas in four provinces of Pakistan except the Federally Administered Tribal Areas (FATA), military restricted areas, district of Kohistan, Chitral and Malakand and protected areas of NWFP. HIES 1987-88 was based on a national sample of 18144 households. The sample size of HIES 1990-91 was 6516 households. The sample size of HIES 1990-91 is small as compared to the HIES of 1987-88. A major shortcoming of these surveys is the small sample size of the highest income group which leads to an understatement of the income of that group. It is pointed out by FBS that the HIES 1990-91 data are reliable with rural-urban break down only at the national level and there is no guarantee of reliability of results at the provincial levels. Therefore, the estimates derived from HIES 1987-88 are not comparable with estimates derived from HIES 1990-91 at provincial levels. However, we have extended the analysis to the provincial level to get some indicative results.<sup>11</sup>

### III. Results: Incidence of Poverty and Poverty

#### Alleviation through Inter Household Transfers

##### A) *Incidence of Poverty (headcount) before Transfers (1987-88)*

Using the basic-needs based poverty line of Rs.213 per capita per month, the incidence of poverty for the year 1987-88 has been presented in Table 2. Columns 1 to 3 of the Table reports poverty estimates excluding inter-household transfers from recipients' income. These estimates show that 29.1 per cent of the overall households, 15.3 per cent of urban and 34.4 per cent of the rural households in Pakistan were poor in 1987-88. Across the provinces, the highest incidence of poverty was found in North West Frontier Province [(NWFP), (35.6 per cent)], followed by Punjab (32.9 per cent), Sindh (18.1 per cent) and Baluchistan (13.5 per cent).

In the urban areas of the provinces, the highest incidence of poverty was reported in NWFP (24.2 per cent) followed by Punjab (19.6 per cent), Baluchistan (7.9 per cent) and the lowest in urban Sindh (7.8 per cent). Among the rural areas of the provinces, the highest incidence of poverty was found in rural NWFP (37.6 per cent) and the lowest in rural Baluchistan (14.3 per cent).

##### B) *Poverty Gap before Transfer*

The poverty gap ( $P_g$ ) was 7.8 per cent for Pakistan, 3.4 per cent for the urban areas and 9.5 per cent for the rural areas. The highest poverty gap was found for overall NWFP (11.4 per cent), followed by Punjab (9.3 per cent), Sindh (3.0 per

<sup>11</sup> Households that depend entirely on charity are excluded from these surveys.

**TABLE 2**  
Incidence of Poverty  
Poverty Measures (1987-88)

Region	Before Transfer			After Transfer			Difference (Percentage)		
	(1) $H_c$	(2) $P_g$	(3) $P_2$	(4) $H_c$	(5) $P_g$	(6) $P_2$	(7) $H_c$	(8) $P_g$	(9) $P_2$
Pakistan	Overall	7.8	3.5	25.1	5.2	1.7	14.0	33.3	52.7
	Urban	15.3	3.4	1.3	13.9	2.6	0.7	9.5	24.7
	Rural	34.4	9.5	4.3	29.3	6.3	2.0	14.8	34.5
Punjab	Overall	32.9	9.3	4.0	28.1	6.2	2.0	14.7	33.2
	Urban	19.6	4.7	2.0	17.5	3.5	1.0	11.0	26.5
	Rural	37.5	10.8	4.9	31.7	7.1	2.4	15.4	34.1
Sindh	Overall	18.1	3.0	0.8	17.9	2.9	0.8	0.9	2.3
	Urban	7.2	1.2	0.3	6.9	1.1	0.3	3.8	10.3
	Rural	26.6	4.5	1.2	26.5	4.5	1.2	0.4	0.9
NWFP	Overall	35.6	11.4	6.0	27.0	5.7	1.9	24.2	49.9
	Urban	24.2	5.0	1.9	21.8	3.6	1.0	9.9	27.6
	Rural	37.6	12.5	6.7	27.9	6.1	2.0	25.9	51.5
Baluchistan	Overall	13.5	2.2	0.6	13.5	2.1	0.6	0.3	1.9
	Urban	7.9	1.1	0.4	7.5	0.9	0.2	4.7	22.3
	Rural	14.3	2.3	0.6	14.3	2.3	0.6	0.0	0.0

Source: Estimates from HIES (1987-88).  
 $H_c$  = Headcount,  $P_g$  = Poverty Gap,  $P_2$  = FGT Index.

cent) and the lowest for Baluchistan (2.2 per cent). In the urban areas, the highest poverty gap was recorded for urban NWFP (5.1 per cent) followed by Punjab (4.7 per cent) and the lowest for Baluchistan (1.1 per cent). In the rural areas of provinces, the highest poverty gap was found for NWFP and the lowest for Baluchistan.

*C) Poverty Sensitive Index ( $P_2$ )*

The same pattern was observed for  $P_2$  index and across provinces, i.e., income inequality and severity of poverty among poor was higher in the rural areas of Pakistan. Among provinces,  $P_2$  was the highest in NWFP and the lowest in Sindh (see Table 2).

*D) Impact of Income Transfers on Headcount*

Columns 4 to 6 of Table 2 report the poverty estimate after including income transfers in households' income. The percentage difference is reported in column 7 through 9. Inter-household transfers reduced incidence of poverty by 14.0 per cent overall, 9.5 per cent in the urban areas and 14.8 per cent in the rural areas of Pakistan. Across provinces, the highest impact of transfers was found in NWFP (24.2 per cent) followed by Punjab (14.7 per cent), Sindh (0.9 per cent) and Baluchistan (0.3 per cent). Among the urban areas the highest impact of transfers was in urban Punjab (11.0 per cent) followed by urban NWFP (9.9 per cent) and the lowest in urban Sindh (3.8 per cent). In the rural areas of provinces, the highest impact was found for rural NWFP (25.9 per cent) followed by Punjab (15.4 per cent). However, the impact of such transfers was negligible (0.4 per cent) in Sindh and it was nil in Baluchistan.

*E) Impact of Income Transfers on Poverty Gap ( $P_g$ )*

A look at poverty gap ( $P_g$ ), shows that transfers reduced it by 33.3 per cent, 24.7 per cent for the urban areas and by 34.5 per cent for the rural areas of Pakistan. Inter-household transfers reduced the  $P_2$  index by 52.7 per cent, 42.3 per cent for the urban areas and 53.7 per cent for the rural areas of the country. Across provinces, we observe the same pattern in  $P_g$  and  $P_2$  as in case of Headcount (see Table 2).

*F) The Impact of Income Transfers on Incidence of Poverty Using 1990-91 Data*

Table 3 reports poverty estimates for the year 1990-91. Column 1 to 3 report  $H_c$ ,  $P_g$  and  $P_2$  before transfers and columns 4 to 6 report the poverty estimates after transfers. The percentage difference between these indices due to inter-household transfers is presented in column 7 through column 9. The table shows that Headcount ( $H_c$ ) decreased by 13.6 per cent for Pakistan, 9.6 per cent in the urban areas and 14.9

TABLE 3  
Incidence of Poverty  
Poverty Measures (1990-91)

Region	Before Transfer			After Transfer			Difference (Percentage)		
	(1) H <sub>c</sub>	(2) P <sub>g</sub>	(3) P <sub>2</sub>	(4) H <sub>c</sub>	(5) P <sub>g</sub>	(6) P <sub>2</sub>	(7) H <sub>c</sub>	(8) P <sub>g</sub>	(9) P <sub>2</sub>
Pakistan	23.6	7.6	4.5	20.4	5.5	3.0	13.6	27.4	33.3
Urban	18.8	5.6	4.1	17.0	4.6	3.4	9.6	17.7	17.9
Rural	25.7	8.5	4.6	21.9	5.9	2.8	14.9	30.2	39.6
Punjab	24.0	7.9	4.3	20.0	5.4	2.5	16.7	31.8	41.4
Urban	20.0	5.4	2.7	17.3	4.2	1.8	13.4	21.8	33.2
Rural	25.6	8.8	4.8	21.0	5.8	2.7	18.0	34.2	43.4
Sindh	17.5	5.1	3.7	17.1	4.9	3.6	2.1	3.8	2.7
Urban	15.4	4.7	4.9	15.0	4.5	4.7	2.3	4.3	2.7
Rural	19.5	5.4	2.6	19.2	5.2	2.5	1.6	3.0	2.7
NWFP	36.9	12.1	7.8	31.9	8.1	4.6	13.6	32.8	39.8
Urban	30.1	11.6	12.4	26.8	7.8	9.5	11.1	32.8	23.5
Rural	38.3	12.2	6.8	32.9	8.2	3.7	14.0	32.8	46.0
Baluchistan	10.7	3.1	2.0	10.1	2.9	2.0	6.3	3.9	3.4
Urban	14.7	5.1	4.5	12.3	4.9	4.5	16.6	2.8	0.2
Rural	9.9	2.7	1.5	9.6	2.5	1.4	2.5	4.5	4.7

Source: Estimates from HIES (1990-91).  
H<sub>c</sub> = Headcount, P<sub>g</sub> = Poverty Gap, P<sub>2</sub> = FGT Index.



per cent in the rural areas. Among the provinces, the highest reduction in poverty was found in Punjab (16.7 per cent) followed by NWFP (13.6 per cent), Baluchistan (6.3 per cent) and the lowest reduction of poverty was found in Sindh (2.9 per cent).

The poverty gap ( $P_g$ ) was reduced by 27.4 per cent overall, 17.7 per cent in the urban and 30.2 per cent in the rural areas of Pakistan. The severity of poverty as shown by  $P_2$  reduced significantly due to inter-household transfers. It was reduced by 33.3 per cent for Pakistan, 17.9 per cent in the urban and 39.6 per cent in the rural areas.

Estimates given in Table 2 and 3, show that the effect of transfers on the incidence of poverty remained more or less the same over the two data periods in Pakistan, whereas the poverty gap and FGT poverty measure ( $P_2$ ) show a significant improvement in the later year 1990-91.

#### IV. Conclusion

In this paper an attempt has been made to estimate the impact of inter-household transfers on poverty alleviation in Pakistan. For this purpose, the basic needs approach has been used to determine threshold income level. Results are derived from HIES (1987-88) and HIES (1990-91) using head-count, poverty gap and FGT poverty measures.

The paper shows that inter-household transfers reduced head-count measuring poverty by 14.0 per cent in 1987-88 and 13.6 per cent in 1990-91. However, its impact on the poverty gap ( $P_g$ ) and FGT poverty measure ( $P_2$ ) is highly significant. If inter-household transfers were not there, then the incidence of poverty and its severity would have been much more.

The study has important policy implications. There is a need to introduce an effective system of social security and safety nets for the poor and the vulnerable in the society. Such transfers could generally help to reduce poverty. It is considered that only the more rich and the more educated persons migrate due to better availability of information. But our study shows that resulting transfers have helped poor migrating families to considerably reduce poverty. Another policy implication is that government should concentrate on improving literacy and education. This will encourage migration, and therefore, help reduce income inequality between the provinces as well as narrow the gap between different income strata of the population in the country.

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