

Working Paper Series No. 119

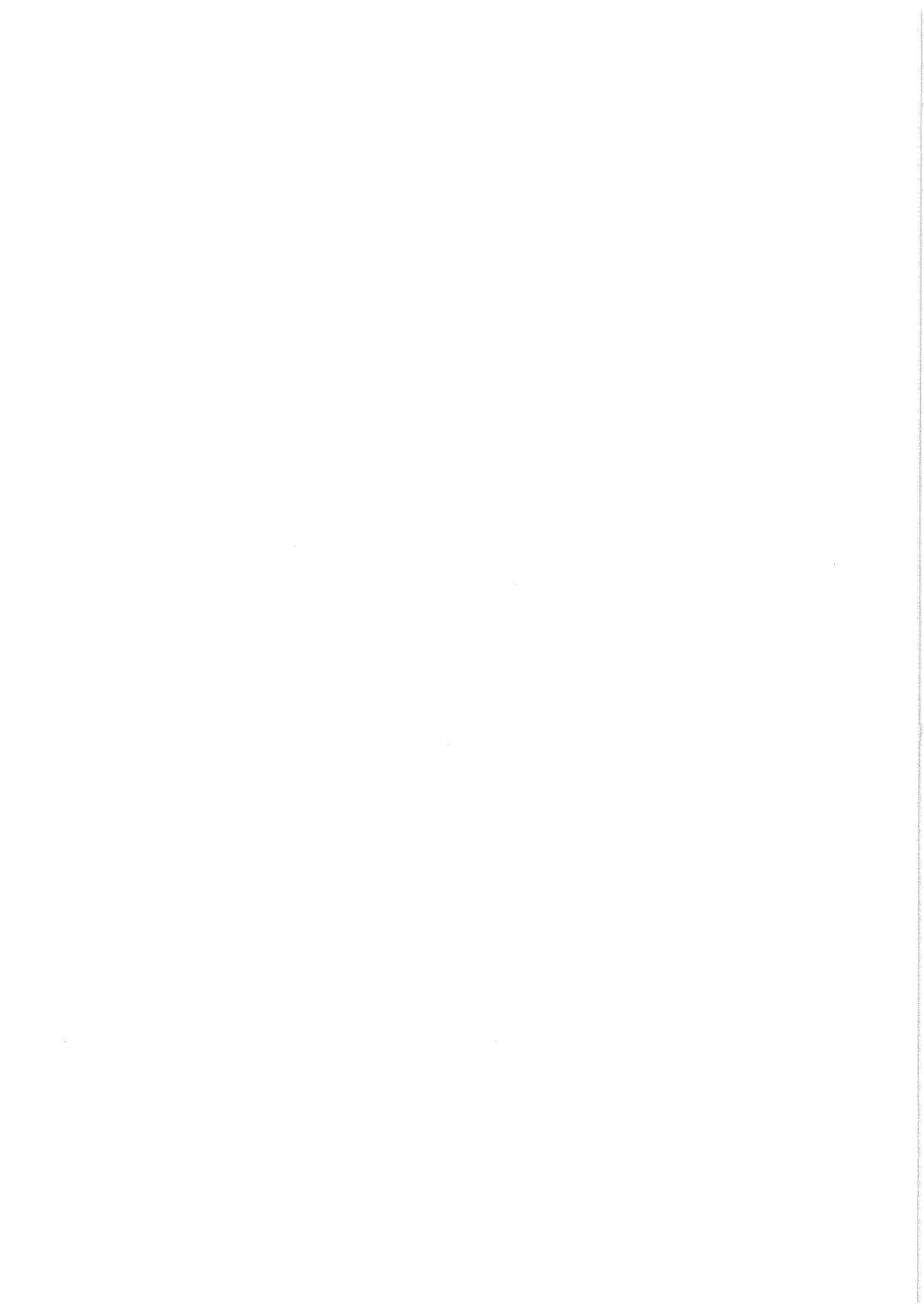
RELATIVE POVERTY IN PAKISTAN
An estimation from the Household Income and
Expenditure Survey (1984-85)

M. Asghar Zaidi

February 1992

Contents

	<u>Page</u>
Acknowledgement	
1. Introduction	1
2. Concept and measurement of poverty	2
2.1 Relative poverty	2
2.2 Methodological issues	3
3. Poverty in Pakistan: Some findings	5
4. Poverty in the four provinces of Pakistan	9
4.1 Punjab	9
4.2 Sind	10
4.3 N.W.F.P.	10
4.4 Baluchistan	11
5. Comparison of high poverty groups across provinces	11
6. Some conclusions	13
6.1 Concluding summary	13
6.2 Limitations of the study	15
Notes	17
References	18
Appendices	
Appendix A: Poverty indices	
Appendix B: Poverty indices for Pakistan and four provinces of Pakistan	
Appendix C: Some graphic illustrations	
Appendix D: Poverty indices for the poverty line fixed at 50% of the average	



Acknowledgement

I am grateful to the Federal Bureau of Statistics, Pakistan, for provision of the data and to Adri S. Louter whose help was extremely useful in processing the microdata. I would also like to thank Frits Haanappel and Rudolf Teekens of the Institute of Social Studies and Klaas De Vos of Erasmus University for their helpful comments. Thanks also go to Aldi Hagedaars for initiating inspiring discussions on the topic. Obviously, I am solely responsible for all remaining errors and the opinions expressed in this study.

Relative Poverty in Pakistan
An Estimation from the Household Income and Expenditure
Survey (1984-1985)

This study, operationalising the concept of relative poverty for Pakistan, fixes the poverty line at 75% of the national average equivalent expenditures. A single poverty line is taken for all the four provinces of Pakistan. The microdata of the Household Income and Expenditure Survey of the year 1984-85 are used. The findings are that almost 39% of the total number of households in Pakistan are poor. The province of Baluchistan has the highest poverty incidence (45.3%) whereas Punjab contains the most number of poor (more than 60%). Sind is the least poor province. The households classified as agricultural, animal husbandry, forestry and production workers, transport operators and labourers are relatively more poor. Furthermore, the large households, the households whose heads have attained primary or less education and the households whose heads are active in the mining, manufacturing and construction sectors are also identified as high poverty groups. The first modification to the definition of poverty is analyzed by using income instead of expenditures as a measure of household resources. This results in a 4% higher poverty for the country as a whole. Punjab is now considered the poorest of all provinces. The second modification is to use 50% of the average as the poverty line. The result is that now only 15% of the households is poor. In this definition of the poverty line, the poverty incidence is lower for income-based poverty line: only 11%. Notably, in all definitions of poverty, the high poverty groups remain the same. An important limitation of this study is the use of a steeper equivalence scale, i.e. the OECD equivalence scale. Some extensions of the study are in preparation to compute the group-specific poverty based on cross-classification of households and by using only one or both income- and expenditure-based poverty lines.

1. Introduction

The elimination of poverty has remained one of the main issues in which resources in development work of national governments and international agencies are concentrated. In line with this priority, the issue of conceptualization and measurement of poverty has received considerable attention in the literature. Since a direct attack on poverty vulnerable groups is perceived to be a better policy option than simply relying on the trickle down effects of high growth, the identification of poor groups is also given due importance.

This study operationalizes the concept of relative poverty in the context of Pakistan. The exercise is carried out both at the national and provincial level. Besides an estimation of the incidence of poverty at the aggregate level, the study provides a cross-sectional comparison of poverty in different socio-economic groups in the four provinces of Pakistan, namely: Punjab, Sind, North-West Frontier Post and Baluchistan.

The organization of the study is as follows. In section 2, a brief theoretical reflection on the concept and measurement of relative poverty is given. This section also describes the methodology followed in this study. Section 3 presents poverty estimates for the country

as a whole and section 4 gives the results for the four provinces of Pakistan. This section also examines the relationship between the findings at the national and provincial level. Section 5 presents a brief comparison of high poverty groups across provinces. A concluding summary and some limitations of the study are outlined at the end in section 6.

2. Concept and measurement of poverty

2.1 Relative poverty

The proponents of the concept of relative poverty assert that the position of an individual in relation to the other members of his society with regard to degree of satisfaction determines whether he is poor or not. If the average level of household resources is considered as an indicator of the standard degree of satisfaction in the society concerned, then the households whose resources are less than a specified percentage of this average can be considered poor because they do not have enough to take part in the average living experience of that society. Following this scheme to define the poverty line, this concept is thought to take account of the social and cultural needs of a household. This approach is highly significant for policy makers as it includes in the definition of the poor those who gain when resources become evenly distributed, and the non-poor are those who lose in this process. In this way, actions to alleviate poverty incorporate actions to reduce inequality. However, it is indeed the case that poverty and inequality do not subsume each other. 'The notion of poverty relates to deprivation with respect to norms that involves a great deal more than considerations of economic inequality' (Sen, 1978).

Various authors emphasize the change of stress from the absolute poverty lines to the relative poverty lines. Fuchs (1965), Rainwater (1969), Rein (1974), Lansley (1980), O'Higgins and Jenkins (1990) and Teekens and Zaidi (1990), all propose that the poverty line should be linked to an indicator of the average standard of living in the society. However, the choice of a measure of household resources, an indicator of the average and its fraction varies among the authors. For instance, views differ with respect to the choice between income and expenditures as a measure of household resources. Those using income are concerned with the right to a minimum level of resources and those who use expenditures believe that poverty should be concerned with an attained standard of living (Atkinson, 1990). Some consider that the arithmetic mean is a better indicator of the average, while others using the median argue that it is only the lower half of the income distribution that one should be concerned with in the measurement of relative poverty. Similarly, a normative scheme is followed in selecting one or the other fraction of mean (or median) as the poverty line. Townsend (1979) uses the percentages of 50 (very low poverty line) and 80 (low poverty line), and Sawyer (1975) for the OECD (1976) has chosen

a percentage of 66 (as quoted in Hagenaars, 1986).

2.2 Methodological issues

For the measurement of poverty one may use at least two distinct methods. One method is to check whether the actual consumption basket of people leaves some needs unsatisfied. This is the direct method to measure poverty and it does not involve quantification of a monetary poverty line. An individual is considered poor if one of his basic needs is not satisfied. In contrast, we have the indirect method whose first step is to calculate a single monetary poverty line at which all basic needs are said to be sufficiently satisfied. The direct method is adopted only when one takes the standard of living conception of poverty and the indirect method, in principle, refers to both (i.e. standard of living and the minimum rights) conceptions of poverty.

In this paper, the indirect method will be used to operationalize the concept of poverty. Three main arguments are noted in support of this method. First, it is easy to work with due to its monetary and one-dimensional character. Second, it provides a numerical measure of intensity of poverty in monetary terms. Third, it provides a measure of the opportunities open to an individual or family and is not influenced by the consumption decisions made (Barreiros, 1988). The last argument is true only when income is taken as a measure of resources. The major limitations of this method concern the complications involved in the determination of a uniform monetary poverty line in a society with diverse behaviours and tastes.

Three steps may be distinguished in poverty measurement:

- a. selection of the variable by which resources of a household/person are to be measured,
- b. determination of the poverty line below which people are considered poor, and
- c. specification of poverty indices which could adequately aggregate the extent of poverty.

Since the needs of different members of a household are not identical and there exist economies of scale within a household, it is appropriate to assign a different weight to each member of the household. By this procedure household size is replaced by equivalent household size, and the resources of the households are compared on the basis of resources per equivalent adult. The equivalence scale recommended by OECD (OECD, 1982) will be used in this study. This scale assigns a weight of one to the first adult, 0.7 to every other adult and 0.5 to children aged 13 years and younger.¹ It should be noted here that this scale implies rather high estimates of the requirements of large households in order to reach the

same welfare level as small households. A natural consequence of this choice would be a higher concentration of poverty in large families.

In this study, expenditures will be preferred to income for several conceptual and practical reasons. First, income seems to be less reliably recorded in the household budget surveys, the major objective of these surveys being the computation of Consumer Price Indices. Underestimation of income in these surveys is believed to be more pronounced in low income groups than in high income groups. Second, expenditures reflect both declared and undeclared resources of low income households better than income, because this group has a propensity to save close to zero. Another compelling argument to prefer expenditures above present income is its relative stability over time as a reflection of long run or permanent income. This will be true particularly for households with irregular incomes, such as those of agricultural workers. There are also notable weaknesses of expenditures as a measure of household resources. First, voluntary under-consumption of households should not be viewed as poverty. Second, expenditures may give only a short term picture of household resources since it is possible that payments are made by dissaving or by borrowing, a process which cannot be continued in the long run. Fourth, the fact that all expenditures may not be identified with consumption in the same period emphasizes that current expenditures do not necessarily reveal the present welfare position of a household. Since the choice between income and expenditures carries considerable importance, this study will also provide the sensitivity of the poverty statistics by using income as a representative of household resources.

Determination of the poverty line is an important step in poverty measurement because the various ways in which a poverty line may be defined reveal different concepts of poverty. This study, operationalizing the concept of relative poverty, takes 75% of the national average as the poverty line. The monthly average equivalent expenditures are calculated as Rs. 340, which means that the poverty line will be Rs. 255 (expenditures per equivalent adult). The monthly average equivalent income, on the other hand, is calculated as Rs. 369 and the poverty line associated to it is Rs. 276 (income per equivalent adult). The poverty line is taken as identical for all provinces which implies that differences in the cost of living across the provinces are negligible: a strong assumption which may not be true in reality. However, this assumption is useful in the comparison of poverty across the provinces since in this way the poor in four different provinces will have the same welfare situation. This is due to the mere fact that the poverty rate in each province will be computed on the basis of a single poverty line set at the national level. Furthermore, the sensitivity of the extent of poverty for the choice of a fraction of the average to define the poverty line should not be overlooked. This sensitivity is briefly discussed by presenting the results for the poverty line fixed at 50% of the average equivalent expenditures (and income).

The next crucial step is the selection of the statistical indices which could adequately aggregate poverty for a specific group of households. Six statistical indices are estimated in this study, each reflecting a different aspect of poverty. Appendix A briefly describes the selected indices. The most notable of them is the 'Sen poverty index' which not only gives the product of poverty incidence and poverty intensity but also takes account of inequality among the poor.

Poverty is estimated for the socio-economic groups classified according to the characteristics of the head and the members of the household. In this way, we are able to see who the poor are. However, poverty in any group will not show whether the households in that group are permanent or transitory poor. If the persistence of poverty is to be analysed, then the dynamics of poverty must also be considered. The important question whether poverty is a persistent or a transitory phenomenon, cannot be answered unless panel data are available. However, in comparison over time of group-specific poverty, the characteristics of poor groups may not change over the years. Furthermore, certain characteristics of poor groups may reflect whether poverty is permanent or not. For example elderly and disabled poor persons may be regarded as permanently poor in a given system of social provisions.

 Table 1: Percentage and absolute number of poor households and persons in Pakistan

- column 1 & 2: percentage and absolute number of poor households (expenditure-based poverty line)
- column 3 & 4: percentage and absolute number of poor households (income-based poverty line)
- column 5: absolute number of poor persons (expenditure-based poverty line)
- column 6: absolute number of poor persons (income-based poverty line)

	1	2	3	4	5	6
Total	38.7	5,746	43.0	6,385	36,543	40,685
1. Punjab	42.9	3,567	46.4	3,858	22,722	24,576
2. Sind	29.8	1,066	36.0	1,288	6,729	8,128
3. N.W.F.P	34.5	743	40.4	870	5,036	5,897
4. Baluchistan	45.3	363	45.9	368	2,056	2,083

3. Poverty in Pakistan: some findings

This section presents the findings of the exercise carried out for the measurement of poverty in Pakistan. The poor groups, commonly called the 'high poverty groups', are identified on the basis of the poverty incidence within the group. The other indices

indicate almost the same trend; nonetheless, any significant differences will also be mentioned.

It is found that at the national level almost 39% of all households are poor when the poverty line is taken as 75% of the national average of equivalent expenditures. This amounts to 5.7 million poor households which is equal to almost 36.5 million poor persons. Poverty incidence is higher for the income-based poverty line: 43% of households are below this poverty line. The income measure shows that there are 6.4 million households living in poverty, equal to around 40.7 million poor persons (see table 1). The fact that all the points are above the 45^o line in the three boxes of figure C.1 (see appendix C) shows that the other two indices, namely poverty intensity and Sen's poverty index, also give a higher poverty for the income-based poverty line. The probable explanations of this finding are:

- a. Expenditure distribution, in general, is expected to be less unequal than income distribution.
- b. Income may be more underestimated for low income groups compared to high income groups. The average national income (and the poverty line associated with it) is not much affected by this pattern of underestimation. The consequence is that the poverty rates are overestimated when income is taken as the instrumental variable.

Poverty intensity, which gives the average shortfall in equivalent expenditures of the poor from the poverty line, is 24% (see table B.1, appendix B). This finding can also be described by stating that the average equivalent expenditures of the poor constitute only 76% of the poverty line expenditures.

Taking the expenditure-based poverty line, the following paragraphs present a breakdown of poverty according to the characteristics of the households. The first three classifications are based on the overall characteristics of the households, namely their occupational group, size and the economic situation of the members. The last two classifications are based on the characteristics of the heads of the households pertaining to their educational attainment and the sector of economic activity. Table B.1 in appendix B presents all the results which are analyzed below.

The first classification, the occupational group of the household, is obtained by aggregating the International Standard Classification of Occupation (ISCO) given at one-digit level. It is found that the group of agricultural, animal husbandry and forest workers is the poorest of all: 45% of the households in this group are poor. The other group with significantly high poverty is the households occupied as production workers, transport operators and labourers: almost 43% of these households are poor. This group also shows the

highest poverty intensity (almost 26%). The composition of the poor population is such that almost 65% of the poor households are in these two groups.

The size of the households, the second classification, shows that the poverty incidence increases with the size of the household. Almost half the families with six or more members are poor, while all other groups show a poverty rate below the average (i.e. the national poverty rate). This phenomenon becomes more obvious by looking at the composition of the poor population: more than 85% of the poor are found in households with five or more members. However, one should not lose sight of the fact that these findings may be closely linked to the choice of equivalence scale.

The third classification, economic situation of the household, shows the activity status of the members of the household. In almost half of the total number of households only the head is active. This group has a poverty rate slightly less than the average. The last category of this classification (namely: others) contains several types of households: households in which only the spouse is active, households in which neither head nor spouse but another member is active and households in which all members are inactive. This group accounts for 46% of the total number of households, having a poverty rate slightly above the average. The small group of households where both head and spouse and other members of the household are active is the poorest group in this classification: slightly over half the households in this group are poor. This may be a consequence of poverty which forces more members of the household into the labour market or it may be a phenomenon linked to the large family size. To obtain a more useful analysis concerning the relationship between poverty and the economic situation of the households, a further disaggregation of the data would be required.

Classification according to the educational attainment of the head shows that households whose heads have primary education or lower have the highest poverty rate (almost 42%). This group contains around 86% of the total number of poor households. A notable observation is that poverty falls as the educational attainment of the head increases. Households in which the head has attained a higher education show both the highest Gini-index for the poor population and poverty intensity, which indicates a greater diversity among the poor in this group.

According to the fifth classification, economic activity of the head, household groups whose heads are working in the agriculture, hunting, forestry and fishing sectors are the poorest. This confirms the finding of the first classification. This finding implies that more interesting analyses could be obtained by using household-data on the rural-urban distinction. Households whose heads are active in the mining, manufacturing and construction sector also have the highest poverty rate (44.8%, the same poverty rate as the group mentioned first). This group also scores the highest for the other indices: poverty

intensity, the Gini-index for the poor population and Sen's poverty index. The differences are not very large, though.

In conclusion, the households categorized as agricultural, animal husbandry and forest workers and production workers, transport operators and labourers are relatively poorer. Furthermore, large households (six or more members), households whose heads have attained primary education or lower and households whose heads are active in the agricultural, mining, manufacturing and construction sectors are also identified as high poverty groups.

It is highly likely that the groups identified as poor from the classifications based on different characteristics of households will contain the same households. For example, agricultural workers may have larger families and may also be the least educated groups. Hence, cross-classification is necessary to locate more specific characteristics of the poor groups.

A comparison with the poverty rates for the income-based poverty line shows that the poverty position of the groups is independent of the choice of income or expenditures as the representative of the household resources (see table B.2, appendix B). The only exception is that household groups active in the agricultural sector are poorer than those active in the mining, manufacturing and construction sectors. An interesting extension of the present exercise would be to locate households which are poor by both income- and expenditure-based poverty lines or poor only by one of the two poverty lines. This and other extensions of this study mentioned here could not be finished because of the time constraint.

One modification of the definition of poverty so far used is to fix the poverty line at 50% of the average. The results presented in tables D.1 and D.2 (see appendix D) show that the poverty incidence is highly sensitive to this change. Poverty falls to 15% of the total number of households for the expenditure-based poverty line. Quite notably, poverty is lower for the income-based poverty line, only 11% are poor. This means an 8% greater reduction in poverty than that suggested by the expenditure-based poverty line. Obviously, it is per definition equivalent to the fact that a greater number of households have incomes between the two income cut-off points than have expenditures between the two expenditures cut-off points. No conclusive reasons for this finding are suggested by the dataset. The household groups which show relatively higher poverty remain those which are categorized as agricultural, animal husbandry, forest and production workers, transport operators and labourers, which have the least educated heads of household (primary or less), which live in a large family and of which the heads are occupied in the mining, manufacturing and construction sectors.

4. Poverty in the four provinces of Pakistan

The average equivalent expenditures of a province may reflect the resources of an average household in that province. It is shown in table C.1 and figure C.2 (see appendix C) that Sind has the highest equivalent expenditures (Rs. 379 per month) and Punjab the lowest (Rs. 319 per month).

The welfare ranking as observed by the average equivalent expenditures is confirmed by the poverty indices estimated in this study. It is found that Sind and N.W.F.P are the least poor and Punjab and Baluchistan the most poor provinces in Pakistan. Analysis at the provincial level shows that the distribution of poor households is such that slightly more than 60% of the poor live in Punjab (see figure C.3, appendix C), as opposed to 56% of the total number of households. Figure C.4 gives the distribution of poor, assuming that all provinces have the same population (equal to 100). This figure reveals that Punjab has a slightly lower proportion of poor households (28.1%) compared to the highest proportion in Baluchistan (29.4%).

In the following sub-sections the main findings measured for the four provinces of Pakistan will be explained by a set of selected poverty indices. The results will be analysed only for the expenditure-based poverty line. However, some results of the income-based poverty line will also be mentioned. More importantly, the relationship between the findings at the national level and the provincial level will also be examined. Appendix B provides all the poverty statistics.

4.1 Punjab

In Punjab, 43% of households have expenditures below the poverty line. This amounts to 3.6 million poor households, equal to 22.7 million poor persons. For the income-based poverty line, this province is the poorest in Pakistan (see table 1). The Sen poverty index also ranks this province as the poorest province along with Baluchistan. High poverty intensity and relatively greater inequality among the poor reflected by the 'Gini Index of poor households' are also found in this province. The poverty intensity is 25%, which shows that the average expenditures of the poor Punjabi makes up only 75% of poverty line expenditures.

The composition of poor groups as identified at the national level remains unchanged. However, the increase in poverty in this province as compared to the national poverty rate is not the same for all groups. The groups of households which are categorized as clerical, sales, service and related workers and those as production workers, transport operators and labourers show a relatively higher increase in their poverty. Other important differences in the group-specific poverty are observed for the households whose heads are active in the

mining, manufacturing, construction and distributive trades sectors: the poverty rate is almost 7% higher in each of these two groups (see table B.3, appendix B).

4.2 Sind

In the province of Sind, the poverty rate is around 10% lower than the national poverty rate: almost 30% of the households in this province are poor. This index along with the indices of poverty intensity and the Sen poverty index marks this province as the least poor province in Pakistan during the year 1984/85.

As in Punjab, the differences in group-specific poverty compared to the estimates for the whole country are not alike, even to the extent that they are in opposite directions. For instance, the group of households in which both head and spouse and others are economically active observes a 10% higher poverty rate. Poverty is also higher for those households where both head and spouse are active. This results in ranking this group as the second poorest in the classification based on the economic situation of the household, instead of the group of "others". The other notable difference is lower poverty for those two groups which had higher poverty in Punjab compared to the national estimates: production workers, transport operators and labourers and those whose heads are active in the mining, manufacturing and construction sectors, the poverty rate is more than 16% lower than the national figure for each of these two groups. On the whole, the high poverty groups as identified for the whole country remain unchanged.

4.3 N.W.F.P

The poverty incidence in the North-West Frontier Post (N.W.F.P) is 34.5% of the total number of households, which is slightly more than 4% less than the national poverty rate. This amounts to almost 700 thousand poor households or 5 million poor persons. The poverty intensity is 22% which is not as high as for the entire country or as for Punjab. Tables B.7 and B.8 of appendix B give the poverty statistics for this province.

Group-specific poverty in this province is also considerably different from the national estimates. The households whose heads are highly educated have more poverty in this province (31%) compared to the national average (22%). The agricultural worker is no longer the poorest group in the first classification based on the occupational group of household. A significantly greater decline in poverty is seen for two and three members households and for those households in which both head and spouse are active.

4.4 Baluchistan

Baluchistan has the highest poverty incidence within a province. This finding demands a brief description of this province which is given as follows. Baluchistan covers an area of almost 350 thousand Sq.Km and has a population of about 4 million. The province has a large land mass (44% of the total area of Pakistan) and a small population (only 5% of the total), scattered in small villages and towns. The area consists of barren mountains and deserts. The climate is arid with low a rainfall and wide variations in temperature. The literacy rate in the province is only 12% as against 26% for the entire country.² Almost 45% of households in this province are calculated as poor. In absolute terms, there are almost 400,000 poor households, equal to 2 million poor persons. The Sen poverty index ranks this province along with Punjab as the poorest of all the provinces. The poverty intensity in this province is the same as for the entire country (see table B.9 and B.10 of appendix B).

Despite somewhat higher poverty in the province, the group of households headed by highly-educated persons is less poor in this province (by almost 13%). Furthermore, the groups of households classified as professional, technical and administrative workers and those whose heads are active in the mining, manufacturing and construction sectors have a poverty rate 15% higher than the national average compared to a poverty rate of only 6% higher for the province as a whole. The composition of the population is significantly different with respect to the classification based on the economic situation of the household. In this province there are almost 14% more households in which only the head is active and this group now contains more than 67% of the total number of poor households compared to almost 48% for the entire country. Similarly, there is a notable difference in the composition of the poor households according to household size: almost 59% of the poor have six or more members compared to 74% for the entire country.

5. Comparison of high poverty groups across provinces

This section provides a brief comparison of group-specific poverty across provinces. Table 2 puts together the high poverty groups in the four provinces. This table is based on two criteria: the single asterisk above the poverty percentage indicates those groups which have a poverty rate between 100 and 125% of the provincial poverty rate and the double asterisk those with a poverty rate above 125% of the provincial poverty.

From the first classification based on the occupational group of the household, it can be seen that the households categorized as agricultural, animal husbandry and forest workers are poor in all provinces. The highest poverty percentage is found in Baluchistan (54% of them are poor) followed by Punjab (46.8%). Except in Sind, the production workers,

Table 2: High poverty groups in the four provinces of Pakistan
(Poverty line taken as 75% of the national average of equivalent expenditures)

Poverty incidence between 100 and 125% of the provincial poverty rate *

Poverty incidence more than 125% of the provincial poverty rate **

	Punjab	Sind	N.W.F.P.	Baluchistan
Occupational group of the household				
1. Professional, tech., admin. and managerial workers				
2. Clerical, sales, service and related workers				
3. Agricultural, animal husbandry and forest workers	46.8*	43.6**	38.5*	54.1*
4. Production workers, transp. operators and labourers	48.6*		38.8*	54.5*
5. Inactive (or no specific occupation)				
Size of the household				
1. One member				
2. Two members				
3. Three members				
4. Four members				
5. Five members				46.1*
6. Six or more members	53.2*	40.9**	44.0**	56.0*
Economic situation of the household				
1. Only head of household active				47.3*
2. Both head and spouse active		43.3**		
3. Both head and spouse and others active	53.7*	60.5**		100.0**
4. Others	43.3*	33.8*	38.5*	
Educational attainment of the head				
1. Primary or less	45.9*	33.3*	35.5*4	7.8*
2. Middle				
3. Intermediate				
4. Higher				
Economic activity of the head				
1. Agriculture, hunting, forestry & fishing	46.8*	43.3**	38.3*	53.2*
2. Mining, manufacturing and construction	51.4*		40.1*	59.8**
3. Distributive trades, catering, repairs and transport				
4. Communication, banking, finance and other services				

transport operators and labourers are the poorest group in this classification. The poverty rate in this group ranges from 54.5 and 48.6% in Baluchistan and Punjab to almost 39% in N.W.F.P and 26% in Sind. The least poor households are the professional, technical and

managerial workers with Sind scoring the lowest poverty rate in this group (see appendix B).

The second classification, size of the household, shows that in all provinces the poverty rate increases with the size of the household (see appendix B). Table 2 shows that the poverty rate for six or more member households ranges from 56% in Baluchistan to almost 41% in Sind.

From the economic situation of the household, the third classification, the poverty rate is the highest in all provinces for those households in which head, spouse and some other members are economically active, the only exception being N.W.F.P. This group is small for all the provinces, making up slightly more than 1% of the total number of households in Punjab, Sind and N.W.F.P and just 0.3% in Baluchistan. The households in the group "others" and those in which only the head is economically active together account for more than 96% of the total number of households in all provinces. The former group shows the highest poverty rate in Punjab (43%) followed by Baluchistan (41%), N.W.F.P (39%) and Sind (34%) and the latter group has the highest poverty rate in Baluchistan (47%) and the lowest in Sind (25%), see appendix B and table 2.

The classification based on the educational attainment of the head, shows that in all provinces poverty decreases as the educational attainment of the head increases (see appendix B). Table 2 shows that the households whose heads are educated to primary level or lower have high poverty rates in all four provinces. This group is the poorest in Baluchistan (almost 48%), followed by Punjab (46%).

The fifth classification, economic activity of the head, again shows that the agricultural sector contains the high poverty groups in all provinces. Sind has its poorest group in this sector. The poorest group in the other three provinces is the group of households headed by those active in the mining, manufacturing and construction sectors. In Baluchistan, the poverty rate in this group is highest: almost 60%. The group of households headed by distributive trades, catering, repairing and transport workers and communication, banking, finance and other service workers are better-off in Sind as compared to the same groups in any other province (see appendix B).

6. Some conclusions

6.1 Concluding summary

It may seem more appropriate to estimate absolute poverty in a developing country like Pakistan where average level of resources is not very high. However, relative poverty also

is of considerable importance. Among others, its most notable significance is for policy makers whose objectives include a more equal distribution of resources. The finding that poverty is associated with certain types of household characteristics may help to devise poverty elimination tools.

In this study, the poverty line is taken as 75% of the average equivalent expenditures (and income). Poverty is computed for the entire country as well as for each of the four provinces. A single poverty line set at the national level is used for all provinces, which is believed to provide a more meaningful comparison of poor groups across the provinces. As a measure of household resources, expenditures are preferred above income for several conceptual and practical reasons. This means that the main analyses are based on an expenditure-based poverty line and that the results for an income-based poverty line are only briefly mentioned. In order to account for differences in the needs of different members of the household, the OECD equivalence scale is used. The analysis makes use of various statistical indices which aggregate different aspects of poverty. These indices are decomposed to reflect the extent of poverty in different socio-economic groups. The microdata of the Household Income and Expenditure Survey for the year 1984/85 are used.

The major findings of the study are summarised as follows:

- a. Almost 39% of the total number of households in Pakistan are poor when the poverty line is fixed at 75% of the average equivalent expenditures. Poverty is higher (43%) for the income-based poverty line. One simple reason may be an under-reporting of income by low-income households and the other the difference between the spread of income- and expenditure-distribution around the average. The poverty incidence is found highly sensitive to the choice of percentage of the average to express the poverty line. The poverty incidence is only 15% when the poverty line is fixed at 50% of average equivalent expenditures. Quite contrary to the previous findings, poverty is lower for the income-based poverty line, almost 11% of the households are poor when the poverty line is fixed at 50% of the average equivalent income.
- b. The analysis of group-specific poverty shows that poverty is relatively high for household groups whose heads have little or no education and large households. The household groups which are categorized as agricultural, animal husbandry and forest workers and production workers, transport operators and labourers are also relatively often poor. Finally, the mining, manufacturing and construction sectors contain high numbers of poor. These findings remain the same for all provinces. Quite notably, for some groups poverty changes quite differently than it does for the province as whole.

- c. The province of Punjab which accounts for 56% of the total number of households and Baluchistan, the biggest in terms of area, are the poorest among the four provinces of Pakistan. The composition of poor households is such that more than 60% of the poor live in Punjab.

6.2 Limitations of the study

The study limits itself to the material aspects of poverty and is not concerned with social or cultural poverty. It chooses a narrow view of resources measured by monetary income and expenditures. An overview of the multi-dimensional resources occupied by the households would be more preferable.

The accounting period to record income and expenditures is a month, or sometime an average of the previous months, which does not take into account the seasonal fluctuations over a longer period. The use of a longer accounting period would yield a more reliable estimate of poverty.

The differences in needs due to the composition of the households are taken into account on the basis of an equivalence scale proposed by OECD. The arbitrariness of this choice is quite obvious. An extension of this study is in preparation to test the sensitivity of the equivalence scales on the poverty estimates. As mentioned before, the OECD equivalence scales are rather steep (i.e. they assign a relatively high scale to every additional adult and child in a household). The result is a lower equivalent income (or expenditures) for the large households, pushing them to the lower tail of the distribution. Hence, poverty will be highly concentrated in large households.

The unit of account is the 'household', although inequality and poverty may exist among individuals in non-poor households and some individuals in poor households may have enough resources to be above the poverty line. The distribution of resources within a household is overlooked in this study.

The limitations of the data from household budget surveys as a source of poverty estimation also pertain to the fact that income (or expenditures) may be under-reported. Another important shortcoming is the under-representation of extremely poor groups, such as homeless or illiterate people, in these surveys. These groups are located in such a way that they are rarely approached by statistical officers. Moreover, the phenomenon that the non-response rate is higher for the poor groups as compared to the non-poor groups undermines the representativity of the sample.

The poverty threshold is based on the average of the country as a whole assuming that this measure of central tendency reflects the dominant living pattern. Regional differences in

the cost of living are assumed negligible. All such suppositions are based on a value judgement and may be questioned. The study can be improved by estimating relative poverty after taking into account the variations in purchasing power of households living in different provinces.

Societal dynamics have not been considered in this study. Poverty in a specific group does not have to be a persistent attribute, it may be transitory. Moreover, there is no distinction between 'individualistic' (or micro) and 'structural' (or macro) explanations of poverty.

Furthermore, it would be interesting to see whether the composition of the poor changes if alternative approaches to measure relative poverty are adopted, such as taking some other fractions of the mean or a different measure of the average to express the dominant living standard. The composition of the poor below the first or second decile could also be analysed. Another improvement in the study may be to estimate the poverty line on the basis of an absolute criterion, and then examine the differences between the two approaches. Additionally, a time series estimation would help to find the persistent characteristics of the poor. In order to avoid under-representation of low income households, surveys specifically designed for low income households would also be desirable. The representativity of the HIES sample could be checked by comparing the frequency distribution of some of the variables with those derived from other surveys in the country.³

Notes

1. For further information on the choice made here, see Teekens and Zaidi, (1990), "Relative and Absolute Poverty in the European Community", in: Teekens and Van Praag, (1990), Analyzing poverty in the European Community, Luxembourg.
2. Planning Commission, (1988), **The Seventh Five Year Plan (1988-1993)**, Vol.1, Government of Pakistan, Islamabad.
3. See Asghar Zaidi, (1991), Comparison of Household Budget Surveys with Labour Force Surveys, Discussion Paper no. 11, Department of Economic Sociology and Psychology, Erasmus University, Rotterdam.

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Appendix A
Poverty Indices

The poverty indices estimated in this study are given as follows:

A.1 Poverty Incidence

$$INC_i = H_{p,i} / H_i * 100$$

A.2 Relative Poverty Incidence

$$REL_i = INC_i / (H_p/H) * 100$$

A.3 Poverty Intensity

$$INT_i = (Y_o - YA_{p,i}) / Y_o * 100$$

A.4 Gini Index of Poor Households

$$G_i = D / 2 u$$

Where

$$D = (\text{SUM ABS } [Y_{h,i} - Y_{k,i}])$$

$$u = (H_{p,i} (H_{p,i} - 1) YA_{p,i})$$

and

$$h = 1, H_{p,i}$$

$$k = 1, H_{p,i}$$

A.5 Sen's Poverty Index

$$S_i = INC_i [INT_i + (1 - INT_i) * G_i]$$

Where

INC_i = Poverty percentage in group i.

H = Total number of households.

H_i = Total number of households in group i.

H_p = Total number of poor households.

$H_{p,i}$ = Number of poor households in group i.

REL_i = Relative poverty incidence in group i.

INT_i = Poverty Intensity in group i.

Y_o = Poverty line.

$YA_{p,i}$ = Unweighted Average of equivalent household expenditure (or income) of all poor households in group i.

G_i = Gini Index of poor households in group i.

S_i = Sen's Poverty Index in group i.

Appendix B

Poverty indices for Pakistan and four provinces of Pakistan

Table B.1: (Pakistan)

Household share and poverty indices for the expenditure-based poverty line

(column 1: Household share, column 2: Poverty rate, column 3: Relative poverty rate, column 4: Share of poor population, column 5: Poverty intensity, column 6: Gini-index for poor population, column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	38.7	100	100	24.0	0.116	0.127
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.2	20.1	51.9	2.2	22.7	0.111	0.063
2. Clerical, sales, service & related workers	25.9	34.1	88.2	22.9	22.8	0.108	0.106
3. Agricultural, animal husbandry & forest workers	30.0	45.0	116.4	34.9	23.6	0.116	0.146
4. Production workers, Transp. operators and labourers	27.1	42.7	110.5	29.9	25.8	0.127	0.150
5. Inactive	12.8	30.5	79.0	10.1	24.0	0.114	0.100
Size of the household							
1. One member	2.9	4.2	10.9	0.3	19.4	0.075	0.010
2. Two members	6.4	10.5	27.2	1.7	20.3	0.112	0.030
3. Three members	7.9	20.0	51.7	4.1	19.3	0.094	0.052
4. Four members	11.6	26.7	69.0	8.0	20.7	0.103	0.075
5. Five members	13.0	35.9	93.0	12.1	22.4	0.110	0.109
6. Six or more members	58.2	49.0	126.8	73.8	26.2	0.120	0.168
Economic situation of the household							
1. Only head of household active	50.9	36.8	95.3	48.5	24.0	0.119	0.122
2. Both head and spouse active	1.9	39.3	101.7	1.9	22.7	0.106	0.122
3. Both head and spouse and others active	1.2	50.5	130.7	1.6	23.8	0.107	0.162
4. Others	46.0	40.3	104.3	48.0	24.2	0.116	0.133
Educational attainment of the head							
1. Primary or less	79.9	41.5	107.4	85.8	24.2	0.117	0.137
2. Middle	5.7	31.9	82.4	4.7	21.6	0.112	0.097
3. Intermediate	8.9	27.7	71.6	6.4	22.8	0.113	0.087
4. Higher	5.5	22.2	57.4	3.2	26.3	0.136	0.081
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	30.2	44.8	116.0	35.0	23.7	0.116	0.146
2. Mining, manufacturing and construction	18.6	44.8	116.1	21.6	26.0	0.128	0.159
3. Distributive trades, catering, repairs and transport	22.4	34.2	86.4	19.8	23.5	0.110	0.109
4. Communication, banking, finance and other services	28.8	31.6	81.8	23.5	23.5	0.114	0.102

Table B.2: (Pakistan)

Household share and poverty indices for the income-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	43.0	100	100	27.0	0.135	0.160
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.2	22.9	53.3	2.2	25.2	0.137	0.081
2. Clerical, sales, service & related workers	25.9	38.3	89.0	23.1	25.4	0.122	0.132
3. Agricultural, animal husbandry & forest workers	30.0	49.8	115.8	34.7	28.1	0.142	0.191
4. Production workers, Transp. operators and labourers	27.1	47.1	109.6	29.7	27.7	0.140	0.178
5. Inactive	12.8	34.5	80.3	10.3	27.0	0.137	0.128
Size of the household							
1. One member	2.9	5.3	12.3	0.4	20.7	0.095	0.015
2. Two members	6.4	13.6	31.6	2.0	23.2	0.140	0.046
3. Three members	7.9	23.3	54.2	4.3	21.8	0.108	0.069
4. Four members	11.6	32.1	74.6	8.7	23.0	0.117	0.102
5. Five members	13.0	40.2	93.4	12.2	25.0	0.124	0.137
6. Six or more members	58.2	53.6	124.6	72.5	29.0	0.141	0.207
Economic situation of the household							
1. Only head of household active	50.9	42.4	98.6	50.2	27.4	0.137	0.158
2. Both head and spouse active	1.9	43.4	100.9	1.9	26.4	0.124	0.154
3. Both head and spouse and others active	1.2	54.2	125.9	1.5	27.3	0.140	0.203
4. Others	46.0	43.4	100.9	46.4	27.1	0.137	0.161
Educational attainment of the head							
1. Primary or less	79.9	46.1	107.1	85.7	27.6	0.137	0.173
2. Middle	5.7	35.4	82.4	4.7	24.0	0.127	0.119
3. Intermediate	8.9	31.6	73.4	6.5	24.5	0.126	0.107
4. Higher	5.5	25.2	58.5	3.2	27.2	0.147	0.095
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	30.2	49.6	115.4	34.8	28.1	0.143	0.190
2. Mining, manufacturing and construction	18.6	49.1	114.1	21.2	28.0	0.141	0.187
3. Distributive trades, catering, repairs and transport	22.4	38.6	89.8	20.1	26.0	0.126	0.137
4. Communication, banking, finance and other services	28.8	35.5	82.6	23.8	26.2	0.131	0.127

Table B.3: (Punjab)

Household share and poverty indices for the expenditure-based poverty line

(column 1: Household share, column 2: Poverty rate, column 3: Relative poverty rate, column 4: Share of poor population, column 5: Poverty intensity, column 6: Gini-index for poor population, column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	42.9	100	100	25.5	0.123	0.150
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	3.8	23.4	54.6	2.1	23.3	0.112	0.075
2. Clerical, sales, service & related workers	24.6	40.5	94.4	23.2	24.5	0.113	0.134
3. Agricultural, animal husbandry & forest workers	28.3	46.8	108.9	30.9	25.1	0.123	0.161
4. Production workers, Transp. operators and labourers	29.4	48.6	113.0	33.3	27.3	0.134	0.180
5. Inactive	13.8	32.8	76.5	10.6	24.9	0.119	0.111
Size of the household							
1. One member	2.5	6.4	14.9	0.4	18.2	0.080	0.016
2. Two members	6.1	13.9	32.3	2.0	21.0	0.123	0.043
3. Three members	8.0	24.8	57.7	4.6	18.9	0.092	0.065
4. Four members	11.4	30.7	71.5	8.2	21.6	0.105	0.092
5. Five members	13.3	39.4	91.7	12.2	23.7	0.120	0.129
6. Six or more members	58.8	53.2	123.8	72.9	27.0	0.127	0.193
Economic situation of the household							
1. Only head of household active	49.2	42.3	98.6	48.5	25.5	0.125	0.148
2. Both head and spouse active	1.8	42.7	99.4	1.8	25.8	0.120	0.148
3. Both head and spouse and others active	1.2	53.7	125.0	1.5	24.8	0.117	0.181
4. Others	47.8	43.3	100.8	48.2	25.8	0.123	0.151
Educational attainment of the head							
1. Primary or less	79.3	45.9	106.8	84.8	25.8	0.124	0.161
2. Middle	6.5	36.0	83.9	5.5	23.0	0.119	0.116
3. Intermediate	9.3	32.1	74.6	7.0	24.0	0.113	0.105
4. Higher	4.9	25.3	59.0	2.9	28.5	0.151	0.099
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	28.5	46.8	109.0	31.1	25.3	0.124	0.162
2. Mining, manufacturing and construction	20.7	51.4	119.7	24.8	27.4	0.133	0.191
3. Distributive trades, catering, repairs and transport	22.7	40.8	94.9	21.6	25.2	0.117	0.138
4. Communication, banking, finance and other services	28.1	34.6	80.4	22.7	24.5	0.120	0.116

Table B.4: (Punjab)

Household share and poverty indices for the income-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	46.4	100	100	28.0	0.140	0.178
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	3.8	26.0	56.0	2.1	25.9	0.136	0.094
2. Clerical, sales, service & related workers	24.6	44.9	96.6	23.8	26.9	0.128	0.163
3. Agricultural, animal husbandry & forest workers	28.3	49.1	105.6	29.9	28.9	0.145	0.192
4. Production workers, Transp. operators and labourers	29.4	52.5	113.0	33.3	29.3	0.144	0.207
5. Inactive	13.8	36.7	79.0	10.9	27.4	0.141	0.138
Size of the household							
1. One member	2.5	8.1	17.4	0.4	20.5	0.094	0.023
2. Two members	6.1	16.4	35.2	2.2	20.7	0.112	0.049
3. Three members	8.0	27.1	58.3	4.7	21.8	0.107	0.082
4. Four members	11.4	35.3	75.9	8.7	24.0	0.123	0.118
5. Five members	13.3	43.4	93.4	12.4	26.0	0.129	0.154
6. Six or more members	58.8	56.7	122.1	71.8	29.9	0.145	0.227
Economic situation of the household							
1. Only head of household active	49.2	47.0	101.1	49.8	28.9	0.142	0.183
2. Both head and spouse active	1.8	47.6	102.4	1.8	28.3	0.131	0.179
3. Both head and spouse and others active	1.2	59.3	127.6	1.5	26.2	0.126	0.211
4. Others	47.8	45.5	98.1	46.9	27.8	0.139	0.172
Educational attainment of the head							
1. Primary or less	79.3	49.5	106.6	84.6	28.7	0.141	0.192
2. Middle	6.5	39.4	84.8	5.5	25.1	0.132	0.138
3. Intermediate	9.3	35.2	75.8	7.1	25.5	0.127	0.123
4. Higher	4.9	27.3	58.8	2.9	28.6	0.155	0.108
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	28.5	49.2	105.9	30.2	28.9	0.146	0.194
2. Mining, manufacturing and construction	20.7	54.9	118.3	24.5	29.6	0.144	0.218
3. Distributive trades, catering, repairs and transport	22.7	45.3	97.5	22.2	27.5	0.132	0.168
4. Communication, banking, finance and other services	28.1	38.3	82.5	23.2	26.9	0.135	0.141

Table B.5: (Sind)

Household share and poverty indices for the expenditure-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	28.8	100	100	19.8	0.088	0.083
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.4	11.9	39.9	1.8	18.0	0.105	0.032
2. Clerical, sales, service & related workers	28.2	23.2	77.8	22.0	18.0	0.092	0.059
3. Agricultural, animal husbandry & forest workers	33.4	43.6	146.6	48.9	20.9	0.100	0.126
4. Production workers, Transp. operators and labourers	24.6	25.8	86.6	21.3	19.6	0.097	0.071
5. Inactive	9.4	19.0	64.0	6.0	22.5	0.113	0.060
Size of the household							
1. One member	4.0	0.6	2.1	0.1	15.8	0.000	0.001
2. Two members	7.1	4.5	15.2	1.1	13.3	0.072	0.009
3. Three members	7.6	9.2	30.9	2.3	11.4	0.064	0.016
4. Four members	11.7	17.4	58.4	6.8	14.7	0.082	0.038
5. Five members	13.1	27.3	91.7	12.0	14.6	0.075	0.057
6. Six or more members	56.4	40.9	137.6	77.4	21.8	0.102	0.122
Economic situation of the household							
1. Only head of household active	52.5	25.1	84.4	44.2	18.8	0.093	0.066
2. Both head and spouse active	2.4	43.3	145.6	3.5	19.2	0.079	0.111
3. Both head and spouse and others active	1.1	60.5	203.3	2.2	20.1	0.078	0.159
4. Others	44.0	33.8	113.6	49.9	21.3	0.105	0.100
Educational attainment of the head							
1. Primary or less	77.6	33.3	112.1	86.7	20.3	0.098	0.094
2. Middle	5.7	22.4	75.2	4.3	18.3	0.096	0.058
3. Intermediate	9.8	17.2	57.7	5.7	17.5	0.095	0.043
4. Higher	6.9	13.3	44.6	3.1	21.3	0.109	0.040
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	33.7	43.3	145.5	49.0	20.9	0.099	0.125
2. Mining, manufacturing and construction	16.9	25.9	87.0	14.7	18.6	0.096	0.068
3. Distributive trades, catering, repairs and transport	22.7	21.9	73.7	16.7	18.4	0.091	0.056
4. Communication, banking, finance and other services	26.7	21.8	73.2	19.5	20.4	0.104	0.062

Table B.6: (Sind)

Household share and poverty indices for the income-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	36.0	100	100	23.0	0.120	0.119
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.4	14.1	39.2	1.7	22.0	0.154	0.048
2. Clerical, sales, service & related workers	28.2	28.3	78.7	22.2	21.0	0.104	0.083
3. Agricultural, animal husbandry & forest workers	33.4	52.2	144.8	48.4	25.9	0.126	0.184
4. Production workers, Transp. operators and labourers	24.6	31.3	86.9	21.4	21.8	0.118	0.087
5. Inactive	9.4	24.3	67.6	6.3	24.1	0.132	0.083
Size of the household							
1. One member	4.0	1.2	3.4	0.1	23.9	0.206	0.005
2. Two members	7.1	6.6	18.4	1.3	28.0	0.218	0.029
3. Three members	7.6	14.4	40.0	3.0	14.3	0.079	0.030
4. Four members	11.7	25.4	70.6	8.3	17.2	0.087	0.062
5. Five members	13.1	32.4	89.9	11.8	20.8	0.104	0.094
6. Six or more members	56.4	48.2	133.8	75.5	25.3	0.125	0.167
Economic situation of the household							
1. Only head of household active	52.5	31.9	88.5	46.5	21.8	0.109	0.097
2. Both head and spouse active	2.4	46.4	128.8	3.1	26.9	0.112	0.163
3. Both head and spouse and others active	1.1	65.1	180.8	2.0	28.8	0.163	0.263
4. Others	44.0	39.7	110.2	48.5	25.3	0.131	0.139
Educational attainment of the head							
1. Primary or less	77.6	40.1	111.4	86.4	24.1	0.121	0.134
2. Middle	5.7	27.6	76.7	4.4	20.9	0.109	0.082
3. Intermediate	9.8	23.0	63.8	6.3	21.1	0.120	0.070
4. Higher	6.9	15.4	42.8	3.0	24.2	0.134	0.053
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	33.7	51.7	143.4	48.4	26.0	0.126	0.182
2. Mining, manufacturing and construction	16.9	31.2	86.5	14.6	21.3	0.116	0.095
3. Distributive trades, catering, repairs and transport	22.7	27.4	76.0	17.3	21.2	0.109	0.082
4. Communication, banking, finance and other services	26.7	26.7	74.1	19.8	22.6	0.120	0.085

Table B.7: (N.W.F.P)

Household share and poverty indices for the expenditure-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	34.5	100	100	22.0	0.105	0.105
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.5	14.8	43.0	1.9	22.7	0.108	0.046
2. Clerical, sales, service & related workers	26.5	29.3	85.1	22.5	20.9	0.096	0.084
3. Agricultural, animal husbandry & forest workers	32.3	38.5	111.5	36.0	22.0	0.114	0.119
4. Production workers, Transp. operators and labourers	22.5	38.8	112.7	25.3	23.4	0.110	0.124
5. Inactive	14.2	34.3	99.5	14.1	22.2	0.095	0.102
Size of the household							
1. One member	2.4	5.3	15.3	0.4	19.4	0.096	0.014
2. Two members	6.2	5.4	15.6	1.0	17.6	0.115	0.015
3. Three members	7.0	11.9	34.5	2.4	15.7	0.086	0.027
4. Four members	10.3	18.6	54.0	5.6	17.9	0.102	0.049
5. Five members	11.3	32.1	93.1	10.5	20.6	0.098	0.091
6. Six or more members	62.8	44.0	127.7	80.1	22.9	0.108	0.137
Economic situation of the household							
1. Only head of household active	50.0	31.6	91.5	45.8	23.3	0.115	0.101
2. Both head and spouse active	2.0	19.1	55.5	1.1	17.5	0.090	0.048
3. Both head and spouse and others active	1.6	26.3	76.3	1.2	25.3	0.112	0.089
4. Others	46.5	38.5	111.8	51.9	21.2	0.099	0.112
Educational attainment of the head							
1. Primary or less	82.8	35.5	102.9	85.2	22.1	0.105	0.107
2. Middle	3.6	28.7	83.4	3.0	18.9	0.086	0.074
3. Intermediate	7.3	28.7	83.4	6.1	22.9	0.121	0.093
4. Higher	6.3	31.1	90.3	5.7	24.2	0.116	0.103
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	32.6	38.3	111.1	36.2	22.0	0.114	0.118
2. Mining, manufacturing and construction	14.7	40.1	116.2	17.1	24.5	0.115	0.133
3. Distributive trades, catering, repairs and transport	20.7	28.2	81.7	16.9	19.8	0.089	0.076
4. Communication, banking, finance and other services	32.0	32.1	93.2	29.8	22.3	0.100	0.097

Table B.8: (N.W.F.P)

Household share and poverty indices for the income-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	40.4	100	100	26.7	0.136	0.149
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	4.5	21.3	52.7	2.4	22.3	0.128	0.069
2. Clerical, sales, service & related workers	26.5	33.0	81.6	21.6	25.5	0.119	0.113
3. Agricultural, animal husbandry & forest workers	32.3	46.1	114.0	36.9	28.5	0.156	0.183
4. Production workers, Transp. operators and labourers	22.5	45.0	111.3	25.1	25.4	0.130	0.158
5. Inactive	14.2	40.2	99.4	14.1	27.9	0.129	0.149
Size of the household							
1. One member	2.4	7.0	17.4	0.4	17.8	0.107	0.019
2. Two members	6.2	12.8	31.6	2.0	21.9	0.164	0.044
3. Three members	7.0	16.7	41.3	2.9	25.8	0.135	0.060
4. Four members	10.3	25.5	63.1	6.5	23.4	0.120	0.083
5. Five members	11.3	37.6	93.2	10.5	24.3	0.127	0.128
6. Six or more members	62.8	50.0	123.8	77.7	27.7	0.139	0.189
Economic situation of the household							
1. Only head of household active	50.0	40.1	99.2	49.6	27.7	0.143	0.153
2. Both head and spouse active	2.0	23.4	57.9	1.2	13.2	0.087	0.049
3. Both head and spouse and others active	1.6	23.7	58.6	0.9	27.0	0.155	0.091
4. Others	46.5	42.0	104.1	48.3	26.3	0.131	0.151
Educational attainment of the head							
1. Primary or less	82.8	41.7	103.2	85.5	27.2	0.138	0.155
2. Middle	3.6	31.0	76.8	2.8	23.6	0.139	0.106
3. Intermediate	7.3	33.3	82.5	6.0	24.4	0.127	0.113
4. Higher	6.3	37.1	91.8	5.8	26.3	0.135	0.135
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	32.6	45.7	113.1	36.9	28.4	0.156	0.181
2. Mining, manufacturing and construction	14.7	47.7	118.1	17.4	25.4	0.131	0.168
3. Distributive trades, catering, repairs and transport	20.7	32.0	79.2	16.4	24.4	0.112	0.105
4. Communication, banking, finance and other services	32.0	37.1	91.8	29.4	27.2	0.131	0.136

Table B.9: (Baluchistan)

Household share and poverty indices for the expenditure-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	45.3	100	100	24.3	0.112	0.150
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	6.1	35.2	77.7	4.7	25.0	0.118	0.119
2. Clerical, sales, service & related workers	27.5	36.7	81.1	22.3	22.3	0.104	0.112
3. Agricultural, animal husbandry & forest workers	25.9	54.1	119.5	30.9	24.5	0.114	0.180
4. Production workers, Transp. operators and labourers	27.4	54.5	120.3	33.0	27.0	0.115	0.193
5. Inactive	13.2	31.4	69.2	9.1	21.8	0.115	0.097
Size of the household							
1. One member	2.0	5.6	12.3	0.2	26.0	0.000	0.014
2. Two members	7.6	19.1	42.2	3.2	19.2	0.089	0.050
3. Three members	11.7	30.8	67.9	8.0	24.1	0.112	0.100
4. Four members	16.7	40.9	90.4	15.1	20.0	0.103	0.116
5. Five members	14.3	46.1	101.8	14.6	23.7	0.099	0.144
6. Six or more members	47.6	56.0	123.6	58.8	26.4	0.118	0.196
Economic situation of the household							
1. Only head of household active	64.5	47.3	104.4	67.3	24.7	0.112	0.157
2. Both head and spouse active	1.1	40.0	88.3	1.0	17.0	0.114	0.106
3. Both head and spouse and others active	0.3	100.0	220.8	0.7	31.5	0.233	0.475
4. Others	34.1	41.1	90.8	30.9	24.7	0.112	0.136
Educational attainment of the head							
1. Primary or less	88.3	47.8	105.6	93.2	24.8	0.111	0.158
2. Middle	3.1	28.6	63.1	2.0	13.7	0.069	0.056
3. Intermediate	6.1	31.5	69.5	4.2	24.7	0.137	0.110
4. Higher	2.5	9.1	20.1	0.5	45.2	0.062	0.044
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	26.3	53.2	117.4	30.9	24.5	0.114	0.176
2. Mining, manufacturing and construction	14.8	59.8	132.1	19.5	27.2	0.124	0.217
3. Distributive trades, catering, repairs and transport	22.5	35.8	79.1	17.8	23.6	0.104	0.113
4. Communication, banking, finance and other services	36.3	39.5	87.2	31.7	23.7	0.109	0.127

Table B.10: (Baluchistan)

Household share and poverty indices for the income-based poverty line

(column 1: Household share, column 2: Poverty rate,
column 3: Relative poverty rate, column 4: Share of poor population,
column 5: Poverty intensity, column 6: Gini-index for poor population,
column 7: Sen's poverty index)

	1	2	3	4	5	6	7
Total	100	45.9	100	100	28.1	0.133	0.174
Occupational group of the household							
1. Professional, tech., admin. & managerial workers	6.1	35.2	76.7	4.7	29.3	0.120	0.133
2. Clerical, sales, service & related workers	27.5	36.3	79.2	21.7	24.7	0.109	0.119
3. Agricultural, animal husbandry & forest workers	25.9	56.7	123.7	32.0	30.7	0.161	0.237
4. Production workers, Transp. operators and labourers	27.4	56.1	122.5	33.5	28.8	0.134	0.215
5. Inactive	13.2	28.0	61.0	8.1	25.4	0.129	0.098
Size of the household							
1. One member	2.0	0.0	0.0	0.0	0.0	0.000	0.000
2. Two members	7.6	22.1	48.1	3.7	29.1	0.208	0.097
3. Three members	11.7	33.7	73.4	8.6	22.5	0.119	0.107
4. Four members	16.7	41.6	90.8	15.1	24.8	0.131	0.144
5. Five members	14.3	46.9	102.2	14.6	26.5	0.116	0.164
6. Six or more members	47.6	55.8	121.6	57.9	30.4	0.137	0.223
Economic situation of the household							
1. Only head of household active	64.5	49.6	108.1	69.7	28.4	0.133	0.188
2. Both head and spouse active	1.1	40.0	87.2	1.0	19.8	0.107	0.114
3. Both head and spouse and others active	0.3	100.0	218.1	0.7	36.9	0.289	0.551
4. Others	34.1	38.5	83.9	28.6	28.0	0.142	0.147
Educational attainment of the head							
1. Primary or less	88.3	48.1	104.9	92.5	28.6	0.136	0.184
2. Middle	3.1	28.6	62.3	1.9	19.6	0.085	0.075
3. Intermediate	6.1	31.5	68.7	4.2	24.5	0.140	0.110
4. Higher	2.5	22.7	49.6	1.2	29.2	0.201	0.099
Economic activity of the head							
1. Agriculture, hunting, forestry & fishing	26.3	55.7	121.6	31.9	30.7	0.161	0.233
2. Mining, manufacturing and construction	14.8	59.8	130.5	19.3	29.5	0.140	0.236
3. Distributive trades, catering, repairs and transport	22.5	36.3	79.2	17.8	25.8	0.119	0.126
4. Communication, banking, finance and other services	36.3	38.9	84.8	30.8	26.4	0.118	0.136

Appendix C

Some graphic illustrations

Figure C.1: Comparison of poverty estimates based on income and expenditures as a measure of household resources (picture 1 = poverty incidence, picture 2 = poverty intensity and picture 3 = Sen's poverty index)

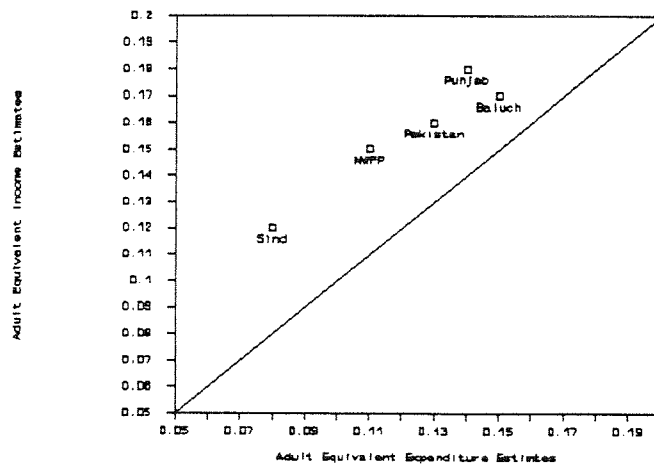
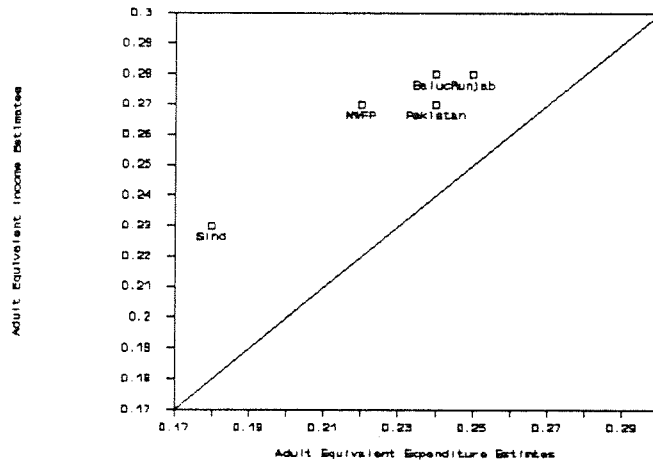
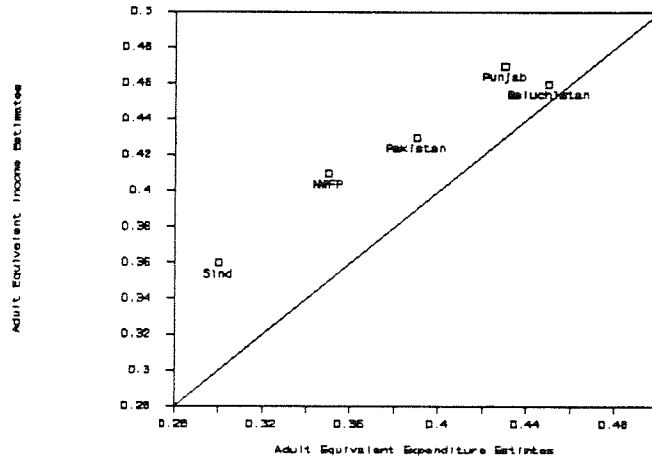


Table C.1: Basic information on average expenditures and income in four provinces of Pakistan

	Pakistan	Punjab	Sind	N.W.F.P	Baluchistan
1. average per capita income	302	283	326	334	292
2. average per capita expenditures	279	262	311	296	261
3. average equivalent income	369	346	398	410	358
4. average equivalent expenditures	340	319	379	363	321

Figure C.2: Average equivalent expenditures and income in four provinces of Pakistan

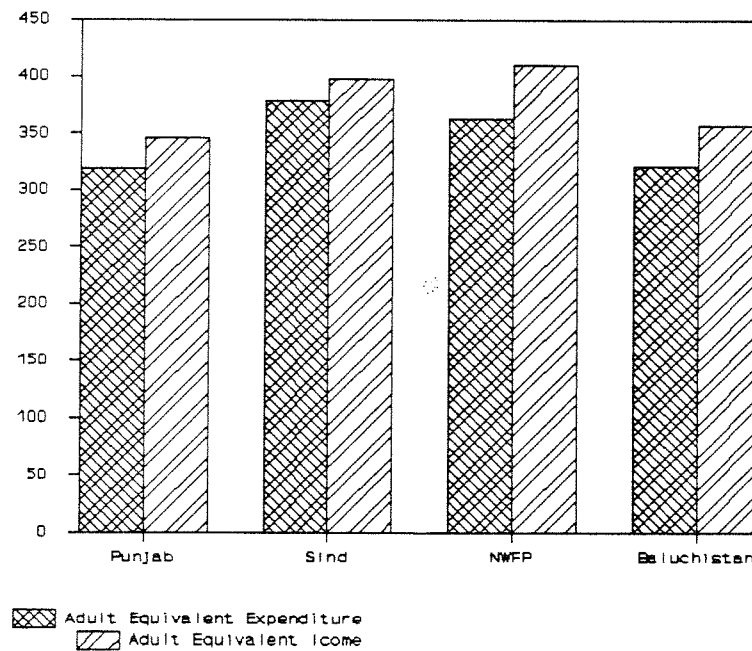


Figure C.3 Observed distribution of poor in Four Provinces

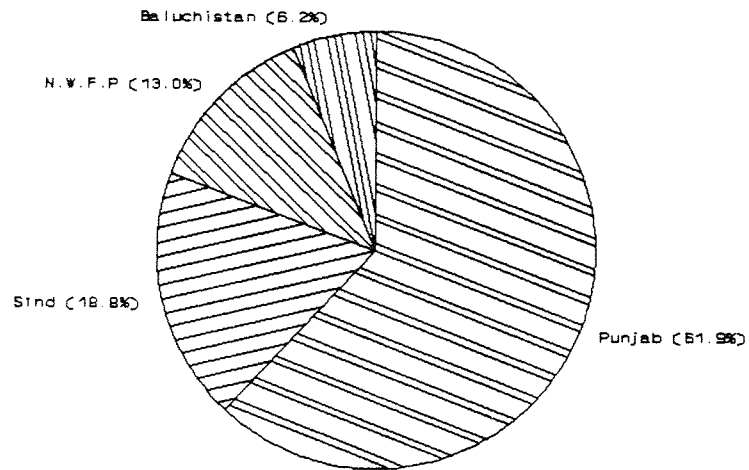
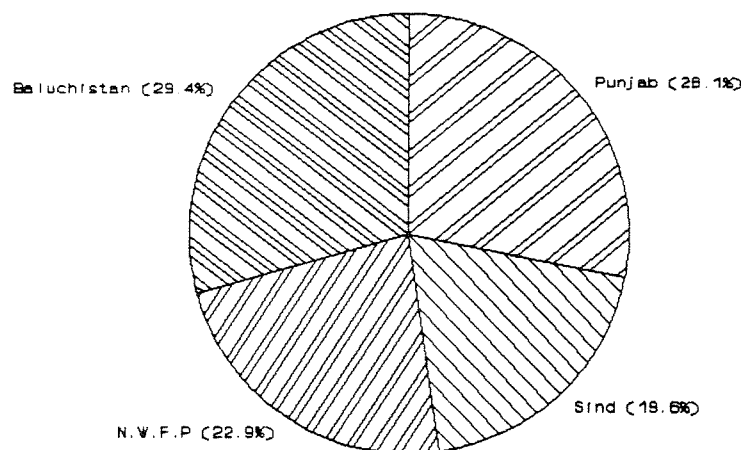


Figure C.4 Percentage of Poor assuming that all provinces have equal population size



Appendix D

Poverty indices for the poverty line fixed at 50% of the average

Table D.1: (Pakistan)

Poverty indices for the poverty line fixed at 50% of the average equivalent expenditures
(column 1: Poverty rate, column 2: Share of poor population, column 3: Relative poverty rate, column 4: Poverty intensity, column 5: Gini index for poor population, column 6: Sen's poverty index)

	1	2	3	4	5	6
Total	14.9	100	100	20.5	0.111	0.044
Occupational group of the household						
1. Professional, tech., admin. & managerial workers	6.2	1.8	41.8	24.0	0.155	0.022
2. Clerical, sales, service and related workers	11.6	20.2	78.0	17.8	0.093	0.029
3. Agricultural, animal husbandry & forest workers	18.1	36.6	122.1	21.8	0.118	0.056
4. Production workers, trans. operators and labourers	17.0	31.0	114.6	20.9	0.111	0.051
5. Inactive (or no specific category mentioned)	12.0	10.4	80.8	20.5	0.113	0.035
Size of the Household						
1. One member	0.6	0.1	4.3	11.5	0.086	0.001
2. Two members	3.1	1.3	20.8	30.6	0.22	0.014
3. Three members	5.1	2.7	34.3	16.0	0.077	0.011
4. Four members	7.7	6.0	52.2	19.1	0.116	0.022
5. Five members	11.6	10.2	78.3	18.9	0.109	0.032
6. Six or more members	20.3	79.6	136.8	21.0	0.110	0.060
Economic situation of the household						
1. Only head of household active	14.6	50.0	98.3	20.7	0.112	0.043
2. Both head and spouse active	14.8	1.9	99.5	17.1	0.084	0.036
3. Both head and spouse and others active	17.7	1.4	119.3	22.8	0.116	0.056
4. others	15.1	46.7	101.4	20.6	0.111	0.044
Educational attainment of the head						
1. Primary or less	16.3	87.5	109.5	20.6	0.110	0.048
2. Middle	9.7	3.7	65.6	21.9	0.107	0.029
3. Intermediate	9.6	5.7	65.0	18.1	0.098	0.025
4. Higher	8.1	3.0	54.8	25.9	0.152	0.030
Economic activity of the head						
1. Agriculture, hunting, forestry & fishing	18.1	36.8	122.1	21.9	0.117	0.056
2. Mining, manufacturing and construction	18.0	22.6	121.6	21.1	0.110	0.054
3. Distributive trades, catering, repairs and transport	12.4	18.7	83.2	18.3	0.097	0.032
4. Communication, banking, finance and other services	11.3	21.9	75.9	20.0	0.112	0.033

Table D.2: (Pakistan)

Poverty indices for the poverty line fixed at 50% of the average equivalent income
(column 1: Poverty rate, column 2: Share of poor population, column 3: Relative poverty rate, column 4: Poverty intensity, column 5: Gini index for poor population, column 6: Sen's poverty index)

	1	2	3	4	5	6
Total	10.6	100	100	17.1	0.090	0.026
Occupational group of the household						
1. Professional, tech., admin. & managerial workers	4.2	1.7	39.4	19.6	0.087	0.011
2. Clerical, sales, service and related workers	8.1	19.8	76.0	15.5	0.078	0.018
3. Agricultural, animal husbandry & forest workers	12.0	33.9	113.4	16.6	0.086	0.029
4. Production workers, trans. operators and labourers	13.7	35.0	129.2	18.5	0.098	0.036
5. Inactive (or no specific category mentioned)	8.0	9.7	75.2	17.3	0.091	0.020
Size of the Household						
1. One member	0.2	0.1	2.0	10.4	0.000	0.000
2. Two members	2.3	1.4	21.2	18.9	0.080	0.006
3. Three members	3.3	2.5	31.5	14.4	0.073	0.007
4. Four members	5.0	5.5	47.0	15.3	0.088	0.011
5. Five members	7.7	9.4	72.9	17.3	0.097	0.020
6. Six or more members	14.8	81.2	139.5	17.3	0.089	0.037
Economic situation of the household						
1. Only head of household active	10.1	48.4	95.0	17.7	0.094	0.026
2. Both head and spouse active	10.7	1.9	100.7	13.0	0.063	0.020
3. Both head and spouse and others active	10.9	1.2	103.0	18.1	0.098	0.029
4. others	11.2	48.5	105.5	16.7	0.086	0.027
Educational attainment of the head						
1. Primary or less	11.5	86.8	108.7	16.9	0.087	0.028
2. Middle	7.8	4.2	73.7	17.5	0.083	0.019
3. Intermediate	6.9	5.8	64.8	16.4	0.089	0.016
4. Higher	6.2	3.2	57.9	25.4	0.151	0.023
Economic activity of the head						
1. Agriculture, hunting, forestry & fishing	12.1	34.4	113.6	16.7	0.086	0.029
2. Mining, manufacturing and construction	14.6	25.5	137.6	18.7	0.097	0.039
3. Distributive trades, catering, repairs and transport	8.6	18.1	80.9	16.0	0.082	0.020
4. Communication, banking, finance and other services	8.1	21.9	76.2	17.0	0.091	0.020