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Differences in Household Characteristics by Income Distribution in Pakistan

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The main purpose of this paper is to identify variations in demographic and economic characteristics of households by income groups. For almost two decades now development planners have been concerned with the issue of income disparities and poverty. Whereas previous studies in this area for Pakistan [2;9] have focused mainly on quantifying the extent of poverty in the country, the present work investigates the qualitative aspects of poorer households. It aims at providing some empirical insight into the distinctive socio-economic and demographic circumstances of the poor.

Similar work has been done for a number of developing countries including India, Sri Lanka, Malaysia, etc. [11; 12; 13]. In the case of Pakistan, adequate data were not available to permit such an analysis till recently. However, the Population Labour Force and Migration Survey of 1979 provides, for the first time, national level data on both demographic and socio-economic aspects of households.

Before we proceed to the main findings of the study, it is necessary to justify the choice of the index used for measuring living standards. It has been convincingly argued that any measure of economic well-being should be in per capita terms [4]. In cases where there is considerable variation in household size, the use of total income would be especially misleading as large households with low living standards can be ranked higher on the scale than small well-off units. The present study classifies households into deciles by household expenditure per capita rather than by household income per capita. Household data on expenditure are generally considered more accurate than income data. They are also presumed to be a closer proximate to the permanent income of households as household decisions on expenditure are less likely to be affected by transitory fluctuations in the income stream. Finally, use of per capita expenditure deciles facilitates comparison with findings for other less developed countries where, in most cases, households have been ranked by this index.

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DEMOGRAPHIC CHARACTERISTICS

The data show that demographic features vary quite systematically by expenditure deciles. Poorer households are on average larger and contain a greater proportion of dependants (Table 1). The strong inverse relationship between mean household size and household expenditure per capita has also been observed in earlier empirical studies for a wide range of developed and developing countries like the U.S.A., Germany, Taiwan, India, Sri Lanka, etc. [5; 11]. The child dependency ratio also increases dramatically for lower expenditure groups. As can be seen in Table 2, the ratio for the lowest decile is more than three times that for the highest decile. Differences in this ratio are comparable to those observed for Sri Lanka and India [11].

Another feature of interest in the demographic characteristics is the urban-rural difference in household size. Contrary to the findings for developed countries and similar to those for most of the developing countries, mean household size was greater in urban areas. This differential was explained by a larger number of children as well as adults in almost all deciles in the urban than in the rural households (Table 3). The finding of a larger number of children for urban households is in accordance with information on higher fertility and lower infant mortality rate for urban areas [1; 3]. The greater number of adults in urban households in developing countries has been attributed by Kuznets to the "jointness of adults" factor due to which migrants, instead of setting up separate households, prefer to become members of a larger household [6]. This explanation seems to be relevant in the Pakistani context as there is a greater proportion of non-nuclear households in the urban sector than in the rural sector.

Since women in South Asian and other culturally similar societies are known to have lower economic and social status than men, it was expected that this fact would be reflected in an over-representation of women in the poorer strata. Table 4 presents the breakdown of the average proportion of female household members by deciles for urban and rural areas in Pakistan. No systematic pattern is visible in this table and the percentage of females in the households is mostly a little less than half, reflecting the higher mortality of females. The proportion of females is also quite similar in urban and rural areas except in the four highest deciles, in which case the proportion of females is higher in the rural sector. Also for these very deciles there seems to be a noticeable excess of males in the urban areas. This may be partially due to rural-to-urban migration where the higher deciles in urban areas are more likely to comprise joint households with several male earning members, some of whom may be rural migrants. However, the hypothesis needs further investigation.

ECONOMIC CHARACTERISTICS

We now turn to investigate some economic characteristics associated with households with different levels of living. Participation in the labour force by a

Table 1

Average Household Size by Deciles of Total Income, Total Expenditure, Income per Capita and Expenditure per Capita

Deciles	Total Income		Total Expenditure		Income per Capita		Expenditure per Capita	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	3.36	3.78	3.06	3.56	7.79	7.92	7.85	8.03
2	4.37	4.75	4.26	4.81	7.24	7.74	7.19	7.82
3	4.80	5.45	4.89	5.35	6.89	7.19	6.92	7.05
4	5.28	5.86	5.34	6.07	6.63	7.10	6.45	7.33
5	5.76	6.48	5.81	6.55	6.40	6.90	6.24	6.83
6	6.09	6.97	6.36	6.99	5.98	6.63	6.00	6.41
7	6.82	7.27	6.76	7.38	5.53	6.31	5.47	6.18
8	6.98	8.23	7.04	8.02	5.22	5.59	5.26	5.80
9	7.60	8.05	7.63	8.28	4.60	5.49	4.61	5.23
10	9.06	8.70	8.96	8.52	3.88	4.62	4.15	4.80

Table 2

Dependency Ratios (Children 0–14/Adults Aged 15+) by Deciles of Total Income, Total Expenditure, Income per Capita and Expenditure per Capita

Deciles	Total Income		Total Expenditure		Income per Capita		Expenditure per Capita	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	.67	.76	.58	.66	1.38	1.48	1.39	1.49
2	.89	.95	.86	1.00	1.28	1.33	1.25	1.31
3	.92	1.04	.99	1.04	1.19	1.17	1.24	1.18
4	1.00	1.07	1.04	1.11	1.15	1.13	1.14	1.09
5	1.04	1.06	1.05	1.07	1.11	.96	1.04	.93
6	1.07	1.10	1.12	1.05	.94	.91	.94	.94
7	1.10	.92	1.03	.96	.82	.80	.84	.76
8	1.02	1.00	1.01	.97	.73	.65	.71	.72
9	.93	.80	.99	.81	.56	.58	.56	.52
10	.88	0.71	.85	.73	.39	.39	.43	.45

Table 3

Average Number of Children (0–14) and Average Number of Adults by Household Income per Capita, and Household Expenditure per Capita

Deciles	Income per Capita		Expenditure per Capita		Total Expenditure		Total Income	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
	Average Number of Children							
1	4.12	4.38	4.16	4.43	1.15	1.53	1.37	1.74
2	3.76	3.98	3.65	3.99	1.90	2.35	2.03	2.24
3	3.42	3.58	3.53	3.50	2.29	2.58	2.18	2.67
4	3.26	3.45	3.19	3.55	2.51	2.94	2.45	2.86
5	3.08	3.10	2.92	3.01	2.75	3.18	2.69	3.03
6	2.66	2.78	2.66	2.79	3.13	3.31	2.95	3.46
7	2.28	2.61	2.30	2.49	3.12	3.26	3.26	3.12
8	2.05	2.05	2.00	2.20	3.21	3.53	3.21	3.64
9	1.53	1.85	1.58	1.66	3.43	3.33	3.31	3.21
10	1.17	1.31	1.33	1.48	3.79	3.14	3.86	3.10
	Average Number of Adults							
1	3.57	3.47	3.60	3.52	1.96	2.21	2.05	2.21
2	3.44	3.64	3.48	3.73	2.40	2.51	2.40	2.50
3	3.42	3.63	3.36	3.52	2.63	2.83	2.62	2.94
4	3.34	3.66	3.22	3.86	2.80	3.14	2.84	3.02
5	3.28	3.80	3.34	3.76	3.03	3.42	2.99	3.42
6	3.32	3.82	3.34	3.64	3.24	3.69	3.15	3.58
7	3.28	3.81	3.18	3.80	3.63	4.10	3.57	4.15
8	3.19	3.57	3.27	3.60	3.81	4.42	3.78	4.46
9	3.14	3.63	3.06	3.57	4.18	4.88	4.24	4.79
10	2.84	3.47	2.98	3.47	5.14	5.27	5.19	5.40

greater proportion of household members is usually deemed necessary to supplement income and to maintain a certain standard of living in the household. Earlier we discussed the inverse association between child dependency ratios and per capita expenditure. A corollary of the finding is that labour force participation rates would be greater in poorer households where women and children, as soon as they are old enough, are "pushed" into working to supplement income. This idea is supported by the data from Pakistan. The results presented in Tables 5 and 6 show a clearly inverse relationship between labour force participation rates of children aged 5–9

Table 4

Proportion of Household Members that are Females by Income per Capita, Expenditure per Capita and Total Expenditure

Deciles	Income per Capita		Expenditure per Capita		Total Expenditure	
	Rural	Urban	Rural	Urban	Rural	Urban
1	.49	.50	.49	.50	.48	.47
2	.49	.48	.49	.48	.48	.47
3	.50	.50	.50	.50	.49	.46
4	.50	.49	.49	.50	.49	.47
5	.47	.49	.49	.49	.48	.50
6	.48	.48	.48	.47	.48	.48
7	.48	.46	.48	.45	.48	.48
8	.49	.46	.48	.46	.49	.48
9	.48	.46	.50	.44	.48	.46
10	.45	.40	.44	.42	.48	.47
All	.48	.47	.48	.47	.48	.47

Table 5

Labour Force Participation Rates of 5–9 Year Olds by Household Income per Capita and by Household Expenditure per Capita

Deciles	Males				Females			
	Income per Capita		Expenditure per Capita		Income per Capita		Expenditure per Capita	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	.06	.06	.06	.06	–	–	.01	–
2	.08	.06	.07	.04	.01	–	.01	–
3	.05	.03	.03	.04	.01	–	.01	–
4	.02	.05	.05	.03	.01	–	.01	–
5	.04	.03	.03	.05	.01	–	.01	–
6	.03	.03	.04	.04	–	–	.01	–
7	.04	.03	.02	.03	–	–	.01	–
8	.02	.02	.02	.02	.01	–	–	–
9	.03	.01	.04	.01	–	–	.01	–
10	.02	.02	.02	.02	.01	–	–	–
All	.04	.03	.04	.03	.01	–	.01	–

Table 6

Labour Force Participation Rates of 10–14 Year Olds by Household Income per Capita and Household Expenditure per Capita

Deciles	per Capita Income		per Capita Expenditure	
	Rural	Urban	Rural	Urban
	Males			
1	.19	.10	.22	.10
2	.23	.10	.20	.12
3	.20	.08	.18	.06
4	.17	.08	.17	.08
5	.17	.09	.15	.08
6	.12	.07	.13	.06
7	.12	.06	.13	.07
8	.11	.05	.12	.05
9	.09	.02	.09	.02
10	.04	.01	.06	.02
All	.14	.07	.15	.07
	Females			
1	.07	.01	.05	.01
2	.05	.01	.04	.01
3	.04	–	.05	–
4	.04	–	.05	.01
5	.05	.01	.05	.01
6	.04	.01	.05	.01
7	.04	–	.04	–
8	.03	.01	.03	.01
9	.02	–	.03	–
10	.01	–	.02	–
All	.04	.01	.04	.01

years and 10–14 years by per capita expenditure deciles in both urban and rural areas. Reported labour force participation rates are generally low at ages 5–9; particularly for females these are negligible and there may be under-reporting. However, at ages 10–14 a greater proportion of children, across all deciles, work in rural areas as compared to urban areas. This corresponds with the higher school enrolment of children at those ages in urban areas and also the fact that since the majority of rural households are engaged in agriculture, additional labour is more urgently needed and therefore more easily absorbed than in urban areas. Much lower

proportions of girls work as compared with boys at the same ages but their participation rates follow the same inverse association with per capita expenditure in rural areas. In urban areas, no significant association between per capita expenditure and labour force participation emerged. Labour force participation rates of children are positively associated with measures of total income and total expenditure – this is a manifestation of the higher propensity to work amongst children of larger households.

The decile-related differences in female participation rates (including all females aged ten and above) are strongly visible in the rural sector. As seen in Table 7, 20 percent of females in the poorest households worked as compared to half that proportion in the top deciles. Not only do much lower proportions of urban women work (around 5% as compared to about 15% in rural areas), there is also no systematic inter-decile variation in the proportions participating in the labour force. The labour force participation rate of urban women in the top decile is much higher than the average. This may contain a large proportion of highly educated women who are in professional and clerical jobs. Comparisons with Visaria's results relating to other Asian countries show that female labour force participation rates in Pakistan are extremely low [11]. This finding has been much discussed and is thought to be partially due to problems in the definition of work which may exclude many women who either do piecemeal work at home or tend to be unpaid family helpers, and partially due to real constraints that inhibit female participation in the labour force. The rural-urban differentials in labour force participation of women were also noted by Visaria and were especially marked for the two Indian States of Gujarat and Maharashtra. Furthermore, an inverse relationship of these rates with expenditure deciles was also found in all cases except that of Sri Lanka [11].

Male labour force participation rates (Table 7) do not reveal any inter-decile differences in relation to per capita income and expenditure in both urban and rural areas. The rates are slightly higher in rural areas than in urban areas. The lack of association between male labour force participation at ages above ten on the one hand and income and expenditure on the other is not surprising since almost all adult males do work in Pakistan. The more critical differences would lie in the inter-decile variation of proportions of males who are under-employed. Unfortunately data to compute such information are not available. The association between male labour force participation rates and per capita expenditure does not take into account the differences in the type of employment which may be more critical in terms of income variation.

Finally, occupational and educational backgrounds of household heads in urban areas follow the predictable pattern in which the richer household heads are more educated and belong to professional and clerical occupations. In the rural areas, although educational levels of household heads are much lower and there is far

Table 7

Labour Force Participation Rates of Persons Aged 10 and above by Household Income per Capita and Household Expenditure per Capita

Deciles	per Capita Income		per Capita Expenditure	
	Rural	Urban	Rural	Urban
	Males			
1	.74	.72	.74	.72
2	.77	.75	.78	.75
3	.77	.74	.78	.75
4	.76	.73	.76	.73
5	.77	.77	.76	.75
6	.77	.74	.77	.74
7	.78	.72	.79	.73
8	.76	.78	.77	.76
9	.78	.75	.78	.76
10	.73	.70	.72	.69
	Females			
1	.20	.05	.20	.05
2	.18	.05	.16	.04
3	.18	.05	.15	.05
4	.15	.04	.16	.05
5	.15	.04	.14	.05
6	.14	.05	.16	.05
7	.14	.08	.15	.05
8	.13	.03	.13	.05
9	.12	.04	.14	.04
10	.10	.07	.11	.07

less inter-decile variation in educational attainment, the inverse association between levels of living and education of household head is clearly noticeable.

The inter-decile occupational pattern is quite different in the two sectors (Table 8). In stark contrast to the urban areas, only a very small proportion of household heads in the rural areas are engaged in professional, administrative and clerical occupations, though the association between the proportions in this category and expenditure deciles is positive. The majority of household heads in rural areas are engaged in agriculture and related occupations and there is little systematic inter-decile variation. In fact, there is also very little variation by deciles in the

Table 8

Occupational Status of Heads of Households by per Capita Expenditure Deciles

Deciles	Professional Admin. Clerical*		Sales Workers		Service Workers		Agriculture, Animal Husbandary, Forestry		Production & Related Transport Workers		Unclassified	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	1.9	7.6	5.0	20.9	3.3	11.7	51.2	7.1	25.8	40.3	12.8	12.5
2	2.0	8.7	5.2	19.6	2.4	11.4	53.5	2.5	25.0	46.9	11.9	10.9
3	2.9	10.9	7.5	23.6	4.2	12.5	53.5	6.5	20.6	37.9	11.4	9.0
4	3.0	11.1	5.4	22.0	3.5	8.9	53.9	4.1	20.0	40.6	14.1	13.3
5	3.3	11.5	7.6	16.6	3.4	8.6	57.1	7.2	15.2	43.0	14.3	13.1
6	3.3	14.1	8.3	25.2	2.5	7.6	52.5	3.6	20.2	36.4	13.2	13.2
7	3.1	15.9	6.9	23.0	2.6	7.3	57.1	3.3	16.3	40.2	13.1	15.2
8	4.0	19.6	6.6	21.8	1.5	6.9	56.1	5.8	16.9	32.0	15.1	14.0
9	2.9	25.7	7.2	19.6	3.4	6.1	56.7	3.6	14.0	30.6	15.7	14.4
10	6.0	34.6	6.0	20.9	2.9	5.8	49.7	2.7	12.0	15.6	23.3	20.3

*This category includes professional, technical and related workers and administration and managerial workers plus clerical and related workers.

proportion of heads who are sales workers and service workers. Only the category of production and related transport workers bears similarity with the inverse pattern of inter-decile differences found in the urban areas.

CONCLUSIONS

The findings for Pakistan generally are in consonance with those for other Third World countries and confirm that certain characteristics are associated with poverty. This paper was a preliminary investigation of some major economic and demographic features of poorer and richer households. Much more insight is needed into the three components of household size variation by income, namely fertility, mortality and migration flows, before a complete understanding of the characteristics of the poor can be reached.

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Comments on "Differences in Household Characteristics by Income Distribution in Pakistan"

The paper has all the characteristics of a high-quality professional document: it is well placed within an acceptable theoretical framework, and the hypotheses are as ambitious as such an opening enquiry can tolerate and lead to an interdisciplinary approach borrowing from demography, sociology and economics. There is a strong data base, which leads to a correct analytic presentation written in good English. One cannot ask for more.

The strong data base with its 15 tables* leads to some discomfort. Imaginative as the tables are, carefully and thoroughly prepared, they result in what is merely deadening. Maybe some of the two-way tables could be collapsed into three-way or even four-way tables. Some way of assembling the present deadening approach should be found. Possibly a multiple classification analysis would provide results easier to penetrate and analyse in a livelier manner.

The authors, following Simon Kuznets and Pravin Visaria, are using income per capita, rather than family income, as the dependent variable, family income being too highly correlated with family size. In fact they say that a single person with Rs. 300 is as well off as a two-person household with Rs. 600, a three-person household with Rs. 900 and a seven-person household with Rs. 2100. This obviously is not so, and students of poverty have worked out ratios varying with family size that could be applied to this case with advantage when the next step of this research is undertaken. A Nobel Prize winner in economics and an established writer in economic demography may get away with nonsense, but we pedestrian strugglers must try harder.

Then there is the question of the composition of income. What of rural households where one-third or a half of the income goes out in servicing debts? Short of a detailed income-expenditure and indebtedness survey, we will not know. The four characteristics of income given in the original draft are a good introduction to the problem but more is needed.

*The paper that was presented in the meeting carried 15 tables. The much-shortened version given in this issue has only eight tables. Some of the comments given here relate to the text of the original paper. (*Editor*)

Of the three questions asked, the original two are legitimate: the demographic one and the sociological one. The economic one is more doubtful and reminds one of a junior colleague some years ago, who held that the most effective way of raising the standard of living is to increase the national income per capita.

The U-shaped income is less surprising than the authors make it out to be. It was part of European folklore that when one can no longer drive fast cars, date young girls, hold down wine comfortably, that is when one can afford all three. Similarly it is not just women in South Asia who are over-represented in the poorer strata of society. In the developed countries it is the single woman, the female divorcee, and the widow who make up the majority of the poor and the desperately poor.

Now comes a surprising sentence, "It is not surprising that female mortality is higher than male mortality in Pakistan". To me it is surprising. The members of the audience who will pay me the honour of attending my invited lecture later today will listen to the continuation of my surprise. The acceptance of the fate of women also deserves attention. It should be stressed that in the world perspective it is a most unusual phenomenon. Where is the Table on marital status? And the women as rich heads of household would be quite a sensation if one did not feel like thinking that they are probably the equivalent of the rich, lonely widows on caribbean cruises.

Agreed that according to generally used definitions, the labour force participation of women in Pakistan is extremely low, but PLM Survey was working out its own rules and could have worked out a more reasonable definition in a way representing the Pakistani society in its true colour.

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