Poverty Dynamics of Female headed Households in Pakistan: Evidence from PIHS 2000-01 & PSLM 2004-05

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Objectives of Study

- To estimate and compare the poverty headcount of female headed households in Pakistan between 2000-01 and 2004-05.

- To model likelihood of finding the FHHs below or above poverty levels, on basis of selected socio-economic and demographic characteristics.

Review of Literature

- Seminal work by Pearce 1978

  Increase in proportion of female headed households among the poor households over time in United States.

  Phenomenon referred to as "feminization of poverty".

Evidence from South Asia

- Dreze and Srinavasan (1995) find that FHHs are less poor than MHHs in rural India.
- Gangopadhyay and Wadhwa (2004) using data from three rounds of the National Sample Survey (NSS) find FHHs in India to be less poor than MHHs at the national level and in the rural areas, but find higher incidence of poverty among FHHs residing in urban areas.
- Using data from the Pakistan Integrated Household Survey (PIHS) 2001-02, Cheema (2005) finds FHHs to be less poor than their male counterparts (22 percent vs. 35 percent). However, the finding is reversed for cases where the female head was the main earner.

Major issues with empirical testing

- Females defined as head of household in developed countries are usually those who are economically/socially empowered to make decisions about the household spending decisions. This may not be the case in traditional societies like Pakistan, where a surveyor may find that an eldest widow is assigned as HOH out of respect by her adult extended family. She may be socially empowered but may lack economic empowerment.

- In developing countries, temporary internal or international migration of a male, may *de facto* render the spouse as HOH, with total dependence on remittances.

- Documentation of Intra-household command over resources in household surveys is still in infancy, particularly for self-employed, household enterprises in urban areas and in nearly all of rural areas

Use of Simulations

- Medeiros and Costa (2007) investigate feminization of poverty in eight Latin American countries during 1990-2004 by employing simulations of income proportions retained by all earning individuals within a household.

  They found no significant difference in the incidence, intensity or severity of poverty among men and women, when intra-household inequalities are not taken into consideration.

  When intra-household inequalities were simulated,

    All measures of poverty for women increased, with the incidence of poverty among women increasing by 4-10 percentage points, if individuals retained 25 percent of their income and distributed the remaining 75 percent.

    When individuals retained 75 percent of their income distributing only 25 percent, the incidence of poverty was seen to be 11-22 percentage points higher for women.

Data and Sample

- Data obtained from the nationally representative Pakistan Integrated Household Survey (PIHS) 2000-01 and Pakistan Social and Living Standards Measurement Survey 2004-05

- FHHs with age of head between 15-60 years are picked for analysis from both rounds of surveys.

Measurement of Poverty

The official poverty line as adopted by Government of Pakistan has been used for the analysis.

Consumption expenditure needed to attain 2350 calories per adult equivalent per day

See Cheema (2005) for details

Proportion of households living below poverty line

		2000-01	2004-05
All households	Overall	28.1	19.1
	Urban	17.3	10.1
	Rural	32.6	23.0
FHHs	Overall	17.4	14.4
	Urban	9.7	9.6
	Rural	22.3	17.5

Comparative Profile of FHHs Socio-Economic Status

- Percentage of FHHs below poverty line is smaller than mixed households at the national, urban and rural level and for both years.

- Incidence of poverty at the national and urban/ regional level is nearly twice and fifty percent higher than observed for FHH sub-sample in 2000-01. This difference narrowed in 2004-05, indicating that the improvement in poverty incidence was not as rapid among FHHs as it was for all the households in national, urban and rural areas.

- Poverty incidence among FHHs residing in urban areas did not improve at all during the 2002-05 period.

Definition of variables used in analysis

Dependent Variable	
Pov (2000-01)	=1, if female headed household is below poverty line (Rs. 723.4)
Pov (2004-05)	=1, if female headed household is below poverty line (Rs. 878.64)
Independent Variables	
Age	Age of the female head of household
Married	=1, if female head is currently married
Widow	=1, if female head is widow
Illiterate	=1, if female head is illiterate
pai_emp1	=1, if female head is paid employees

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Unpaid	=1, if female head is unpaid family helpers
self_agr	=1, if female head's occupation is self-employed in agriculture
sel_nagr	=1, if female head's occupation is self-employed in non-agriculture
dum_remi	=1, if receiving remittances from home and foreign countries
Dependent	number of dependents aged less than and equal to 15 years and greater than and equal to 65 years
Rural	=1, if rural areas
Punjab	=1, if living in Punjab
Sindh	=1, if living in Sindh
NWFP	=1, if living in NWFP

FHHs: Descriptive Statistics (2000-01)

	Below Poverty		Above Poverty		t-values
	Mean	Std. Deviation	Mean	Std. Deviation	
Age	39.16	9.55	41.28	10.17	-2.45
Married	0.70	0.46	0.63	0.48	1.57
Widow	0.28	0.45	0.35	0.48	-1.60
Illiterate	0.96	0.19	0.72	0.45	6.90
pai_emp1	0.08	0.28	0.10	0.30	-0.72
Unpaid	0.04	0.19	0.04	0.20	-0.19
self_agr	0.09	0.29	0.06	0.24	1.53

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	Below Poverty		Above Poverty		t-values
	Mean	Std. Deviation	Mean	Std. Deviation	
sel_nagr	0.01	0.11	0.04	0.19	-1.69
dum_remi	0.76	0.43	0.74	0.44	0.50
Dependents	4.31	2.06	2.66	2.09	9.24
Rural	0.78	0.41	0.58	0.49	4.92
Punjab	0.41	0.49	0.56	0.50	-3.42
Sindh	0.05	0.22	0.07	0.26	-1.17
NWFP	0.52	0.50	0.32	0.47	4.78
Sample size	165		784		

Table shows that during 2000-01, a greater proportion of female heads below the poverty line is married, illiterate, residing in rural areas and in NWFP as compared to their non-poor counterparts.

The mean proportions of female heads below the poverty line are found to be statistically different from female heads above the poverty line in case of age, illiteracy, number of dependents, rural residence, Punjab and NWFP.

FHHs: Descriptive Statistics (2004-05)

	Below Poverty		Above Poverty		t-values
	Mean	Std. Deviation	Mean	Std. Deviation	
Age	39.48	9.59	41.05	9.70	-1.73
Married	0.63	0.48	0.65	0.48	-0.37
Widow	0.34	0.48	0.32	0.47	0.58
Illiterate	0.93	0.26	0.68	0.47	5.93
pai_emp1	0.09	0.29	0.09	0.28	0.16
Unpaid	0.01	0.12	0.01	0.09	0.67
self_agr	0.04	0.19	0.08	0.26	-1.60

	Below Poverty		Above Poverty		t-values
	Mean	Std. Deviation	Mean	Std. Deviation	
sel_nagr	0.06	0.24	0.03	0.18	1.54
dum_remi	0.63	0.48	0.72	0.45	-1.98
Dependents	4.33	2.08	2.76	2.09	8.02
Rural	0.74	0.44	0.59	0.49	3.30
Punjab	0.41	0.49	0.52	0.50	-2.24
Sindh	0.03	0.17	0.08	0.26	-1.93
NWFP	0.54	0.50	0.38	0.49	3.50
Sample size	**134**		**796**		

- During 2004-05, the mean proportions of female-headed households below poverty line are seen to differ statistically with those of non-poor female headed households with respect to illiteracy, receipt of remittances, number of dependents, residence in rural areas, Punjab and NWFP

Probit estimates for FHHs between 2000-01 and 2004-2005

	2000-01			2004-05		
	Coef.	z-statistics	dF/dx	Coef.	z-statistics	dF/dx
AGE	-0.010	-1.56	-0.002	-0.014	-2.03**	-0.002
MARRIED	-0.512	-1.23	-0.110	-0.206	-0.54	-0.038
WIDOW	-0.296	-0.71	-0.055	0.104	0.28	0.019
ILLITERATE	1.084	5.22**	0.155	0.768	4.46**	0.110
PAID_EMP	0.114	0.57	0.024	0.100	0.49	0.019
UNPAID	-0.181	-0.69	-0.032	0.237	0.50	0.048
SELF_AGR	-0.037	-0.19	-0.007	-0.552	-2.15**	-0.070

	2000-01			2004-05		
	Coef.	z-statistics	dF/dx	Coef.	z-statistics	dF/dx
SELF_NAGR	-0.673	-1.75*	-0.089	0.411	1.56	0.090
DUM_REMI	-0.338	-1.94*	-0.074	-0.479	-3.07**	-0.095
DEPENT	0.200	7.75**	0.039	0.182	6.72**	0.032
RURAL	0.294	2.16**	0.056	0.221	1.65*	0.038
PUNJAB	0.635	2.06**	0.123	0.319	0.88	0.056
SINDH	0.479	1.24	0.118	-0.056	-0.12	-0.009
NWFP	0.785	2.54**	0.177	0.498	1.38	0.093
CONSTANT	-2.304	-3.80	-	-1.838	-2.94	-
Log likelihood = -362.39255			Log likelihood = -321.1071			

* Significant at 10% level
** Significant at 5% level

Main Findings

- The probability of FHHs to be living below the poverty line is seen to decline with age of the household head in both the years, although the finding for 2000-01 is not statistically significant.

- Illiterate female heads are significantly more likely to be poor during both the years under review.

Main Findings

- Households with a female head working as paid employee have a higher probability of being poor in 2001-02, while households where the female head is unpaid family worker or self employed in both the agricultural and non-agricultural sectors have a lower probability of being poor. However, only the finding for self employed in the non-agricultural sector is statistically significant.

- The results for 2004-05 reveal a higher probability of being below the poverty line for households where the female head is employed as paid employee, unpaid family worker and self employed in the non-agricultural sector. These results, however, are not statistically robust. Interestingly, households where the female head is self employed in the agricultural sector have a significantly lower probability (7 percent) of being poor.

Main Findings

- FHHs receiving remittances have a significantly lower probability of being below the poverty line during both the years.

- The probability of FHHs to be living below the poverty line is seen to increase with the number of dependents during both the years

- FHHs residing in the rural areas have a significantly higher probability of being poor during both 2001-02 and 2004-05, although the finding for 2004-05 is at the lower confidence level of 10 percent.

Main Findings

- FHHs located in the provinces of Punjab and NWFP have a significantly higher probability of being poor during 2001-02. On the other hand, in 2004-05 FHHs residing in Sindh are observed to have a lower probability of being below the poverty line, while those in Punjab and NWFP are more likely to be poor. However, all these results for 2004-05 are not statistically significant.

Looking forward

- Does this simple and preliminary study on dynamics of poverty among FHHs enable us to speculate on the current status of poverty among FHHs, given a regime shift in food prices as well as macro instability?

  As FHHs are heavily dependent on remittances, specifically those dependent on foreign remittance are less likely to suffer as improved Rupee exchange rate will partly offset the increase in food prices. Thus, one can safely speculate that poverty incidence of female heads receiving foreign remittance in urban or rural areas will not rise above the national level and most likely remain below it, even though the absolute poverty levels of both groups may rise.

  Similarly, FHHs self-employed in agriculture will not be worse off due to better agricultural prices but risk slipping into poverty because of poor agriculture performance, in line with poverty incidence of mixed households.

  The FHH segment that are residents in urban areas or receive domestic remittances whether in rural or urban area will be specially vulnerable in slipping into poverty due to a regime shift in food prices and reduced employment opportunities and/ or slower increase in wage earnings compared to inflation.

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