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Analysis of Poverty Status among Female Headed Tribal Households: Role of Public Distribution System

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ABSTRACT- Reports have highlighted that the number of female-headed households in India are rising, however it has also been reported that these households are poorer than their male headed counterparts. The present paper has tried to explore this nexus between female headed households and poverty, and the role of public distribution system in alleviating poverty, in a tribal setting. The study is based on primary data which has been collected from 170 tribal households in Purulia district of West Bengal. We have specifically focussed on tribal households as they have a more egalitarian society and follow their own distinct traditions and customs. We have also tried to identify the determinants of poverty using a logistic regression model. Results of the study indicate that the incidence of poverty in male headed tribal households was 63.53 percent while it was only 10.59 percent in female headed tribal households. Female headed tribal households were found to receive a larger amount of benefit from PDS compared to their male counterparts. Family size and percent of children had positive impact, whereas percent of elderly had negative impact on poverty. The study concludes that there is no immediate need for introducing anti-poverty policies specifically focused on female-headed tribal households.

KEYWORDS- Female-Headed Households, Poverty, Tribal, Public Distribution System, Logistic Regression

I. INTRODUCTION

It is undeniable that there are wide spread disparities between people belonging to different regions, states or countries, however, these differences are more pronounced when viewed through gender lens. Some of the developmental efforts have brought about regressive rather than progressive changes in the lives of the people and women in particular. Women in rural areas are many a times over burdened with household works together with income earning activities. Yet, they are economically poorer than their male counterparts and own few economic assets. The situation is same for female headed households as they are found to be economically weaker than households headed by male counterpart. According to census 2011, roughly 10.9% households in India were female headed and 24% among them were living below the poverty line. However, while reports suggest that the proportion of female headed households is increasing and has increased to 15% in 2015 [NFHS-4], the same progress cannot be said about their poverty status.

There are myriad reasons for this disparity in poverty levels, some of which are deeply rooted in the patriarchal structure of Indian society. However, three principal reasons have been pointed out for female headed households being poorer – firstly, there are more dependents, i.e. non-earning members in female-headed households. Secondly, women are paid less compared to men and relatively have lesser access to productive resources and assets such as land, capital, labour, credit and insurance. Thirdly, the work domains of women are more restricted due to household managing responsibilities and they often face both time and mobility constraints [1]. According to Hyde, Greene and Darmstadt [2] the disproportionate burden of unpaid domestic labour that women and girls bear globally, contributes to their time poverty, which limits their economic and health opportunities. Time poverty is a manifestation of systemic gender inequality, restricting women's access to paid employment, resources, and decision-making power. Thus, any attempt to address this gender poverty nexus must focus on removing these barriers and cultural norms. For the holistic development of the country, India has adopted a multifaceted approach towards combating poverty that incorporates introduction of various government schemes of job creation, financial inclusion, affordable housing, food security etc, such as Mahatma Gandhi national rural employment guarantee act MGNREGA, Pradhan Mantri Jan Dhan Yojana, Pradhan Mantri Awas Yojana, Public Distribution System (PDS). Further, the attainment of Sustainable Development Goals (SDGs) (2015) that targets elimination of extreme poverty (Goal 1), gender equality (Goal 5) and decent work for all (Goal 8) is thereby also conditioned on the implementation of progressive strategies of anti-poverty, that specifically caters the female -headed households.

But again, it has been reported by many scholars that the poverty levels among the women headed households is dependent on the way how poverty is being measured and they are not found to be poorer when assessed in terms of consumption expenditure and income levels [3]. Thus, there is ambiguity regarding the poverty status of female-headed households in comparison to male headed households [4]. The analysis becomes more complex when it is conducted specifically for tribal households. Tribal

societies are more egalitarian and less discriminating in nature. Women have significant social and economic power than their counterparts in caste society. However, their economic burden and work load is also higher than the males, while their access to education, modern occupation, food and nutrition and political participation is significantly less. Thus, the present study is an attempt to bring some clarity into this ambiguity regarding the economic status of female-headed tribal households.

Among the many programs and social security schemes adopted by the government for the welfare of the people, the Public Distribution System (PDS) in India has the widest reach and is directed towards alleviating poverty and ensuring food security among the vulnerable population. Under PDS essential commodities like rice, wheat, sugar, kerosene etc are supplied to the people at reasonable prices. PDS indirectly engages in transfer of income by reducing the food expenditure and releasing income which can be used by household to follow their other aspirations. The amount of income transfer depends upon PDS issue price, open market price and the quantity of concerned item being purchased from fair price shops.

Against this backdrop, the objectives of this study are – 1. to examine the poverty levels among the female-headed tribal households relative to their male counterparts based on their monthly per capita expenditure. 2. To measure the depth and severity of poverty among the two groups. 3. To measure the amount of monthly income transfer and its share in the total monthly expenditure of the tribal households. 4. To identify the determinants of poverty among the female-headed tribal households.

Rest of the paper has been arranged in the following manner – section 2 presents a brief review of the relevant literature. Material and Methods of the study has been explained in Section 3. Section 4 presents the results of the study and finally section 5 highlights the conclusion and policy recommendations.

II. LITERATURE REVIEW

The existing research works are indicative of several studies involving the impact of PDS on poverty levels and food security in various states of India. Some of the studies that are specifically addressing these issues from gender lens have been discussed in this section.

Nandi [5] highlights the role of grassroots mobilization in addressing food insecurity, poverty, and discrimination, particularly in tribal areas of Chhattisgarh. He emphasizes on empowerment of tribal women, who were traditionally excluded from political and economic decisions, in reforming the Public Distribution System (PDS). The study underscores the importance of community-based approaches to bring about lasting social change. The study provides crucial insights into how grassroots efforts can achieve inclusive, sustainable change.

Khera [6] aims to evaluate the effectiveness of the PDS and identify the problems that hinder its success. The study highlights the disproportionate impact of PDS inefficiencies on women, particularly those in rural areas, The lack of access to adequate and nutritious food through the PDS contributes to malnutrition, with women and children being disproportionately affected. Women, who are often responsible for cooking and feeding the family, are particularly burdened by the poor quality of food. The study highlights that gender plays a significant role in food distribution, with women often facing discrimination in terms of the quantity and quality of food they receive from the PDS.

Chakrabarti and Singh [7] in their study finds that women often face discrimination in the Public Distribution System (PDS), receiving smaller quantities and lower-quality grains compared to men. Even when women are responsible for cooking, men frequently control the allocation of food resources. Service delivery also tends to be biased, with women facing longer wait times and less attention from PDS workers. These issues contribute to poorer nutrition and health outcomes for women and children, exacerbating gender-based inequalities in food security. They suggest implementing gender-sensitive policies, improving quality control, and empowering women to have greater control over food resources in the PDS. They also recommend awareness campaigns, better service delivery, and training for PDS workers to address gender disparities.

Das and Sen [8] highlight the intersection of gender and poverty in the context of food security, focusing on the time constraints women face due to unpaid domestic labour. Women's responsibilities, such as cooking, childcare, and fetching water, limit their ability to access Public Distribution System (PDS) services, including traveling to shops and waiting in queues. The study highlights gender-specific barriers that contribute to unequal food access. It emphasizes that these constraints exacerbate gender inequalities in food distribution. Das and Sen argue for policies that address the gendered dimensions of food security to ensure more equitable access for women. Their study sheds light on the often-overlooked role of domestic labour in limiting women's food access.

Jaglana and Shergill [9] examine the relationship between female-headed households and urban poverty in India, with a particular focus on the role of education and policy interventions in mitigating this vulnerability. They highlight the crucial role of education in alleviating poverty among female-headed households in urban India. Tackling gender-based educational disparities and addressing the specific needs of vulnerable sub-groups within these households are essential for sustainable poverty reduction. Moreover, they opined that the long-term impact of the COVID-19 pandemic on female education calls for targeted recovery programs to prevent further widening of the gender poverty gap. The study highlights the complexities faced by female-headed households and explores how education and targeted policies can play a transformative role in reducing urban poverty.

Kour and Neena [10] examine the impact of the Public Distribution System (Atta-Dal scheme) and the National Rural Livelihood Mission (NRLM) in improving the livelihoods of rural populations, particularly women, in Punjab's Majha, Malwa, and Doaba regions. Their study finds both programs significantly contribute to food security and economic empowerment. The Atta-Dal scheme ensures access to essential food grains, while NRLM boosts women's economic status through self-help groups and income-generating activities. The authors recommend involving rural women directly in managing the PDS to improve resource allocation and utilization.

They also emphasize the need for better monitoring and evaluation to enhance PDS efficiency and ensure food reaches the most vulnerable. This study advocates for inclusive governance and efficient systems to address rural poverty, particularly for women in rural Punjab.

III. MATERIAL AND METHODS

A. Study area and sample size

The study is based on Primary data and has been carried out in the Arsha and Balarampur blocks of Purulia district, West Bengal. Data has been collected from 170 tribal households, where 85 of them are female headed and male headed each, following simple random sampling technique. Data has been collected on the basis of a structured questionnaire.

IV. METHODOLOGY

A. Poverty status

To determine the poverty status, we have used monthly per capita expenditure of the households. The poverty line has been taken to be Rs.1500 following the recommendation of Tendulkar committee report [11] for rural areas and it has been adjusted according to 2022-23 prices using Consumer Price Index for Agricultural Labourers (CPIAL).

- The extent of poverty has been measured as head count ratio (HCR) in the total sample, the depth and severity of poverty is measured by the poverty gap index (PGI) which is constructed based on the following formula [12]
- PGI = $\frac{1}{N}\sum_{i}^{m}\left(\frac{z-y_i}{z}\right)^{\alpha}$ if α = 0 it measures the HCR of Poverty, if α = 1 it measures the DEPTH of Poverty, if α = 2 it measures the SEVERITY of Poverty
- Where, N is the total sample, m is the population who are living at or below the poverty line, z is the poverty line and y_i is the income of the poor individual i. PGI by definition ranges between 0 and 100 per cent and is a measure to sense how poor the poor are.

B. PDS Income transfer monthly and share of transfer income

- The fiscal transfer method has been used to assess the direct benefit impact of PDS as a distributive mechanism on poverty. It is computed as
- IT = (P_{OM}-P_{PDS}) X Q_{PDS}
- Here, IT = Income transfer monthly , P_{OM}= Open market price, P_{PDS}= PDS issue price and Q_{PDS}= Quantity purchased from PDS monthly
- Share of transfer income = total monthly income transfer / total monthly expenditure

C. Determinants of Poverty

Poverty is likely to be affected by the several factors which may be categorized as economic, demographic and social.

As our poverty status is considered as binary variable where poor households are identified by binary value 1 and non-poor households are identified by binary value 0 therefore, we have formed a logit regression model of Poverty.

$$p(P=1 \mid X) = \alpha_0 + \alpha_1 MNTRINC + \alpha_2 LH + \alpha_3 FMSZ + \alpha_4 CHLD + \alpha_5 ELDLY + \alpha_6 AGEHH + \alpha_7 SEXHH + \alpha_8 SEX * MNTRINC + \alpha_9 YRSSCH + \alpha_{10} ALLRC + \alpha_{11} O1 + \alpha_{12} O2 + \alpha_{13} AAY + Ui$$

Where,

- P is poverty status dummy where dummy value 1 for poor households and 0 for others
- MNTRINC is total monthly transfer income from PDS
- LH is land holding
- FMSZ is family size
- AGEHH is age of the household head in years
- SEXHH is sex of the household head dummy where dummy value 1 for female headed households and 0 for others
- $SEX * MNTRINC$ is the interaction term between sex of the household and monthly PDS transfer income.
- YRSSCH is years of schooling of the household head
- ALLRC is the dummy of household where all members possess PDS card (Yes-1, No-0)
- O1 is the occupation dummy where dummy value 1 for CASUAL Labour and 0 for others
- O2 is the occupation dummy where dummy value 1 for Self Employed and 0 for others.
- Here base is Migrant
- AAY is the ration card dummy where dummy value 1 for households possessing AAY cards and 0 for other cards.

V. RESULT AND DISCUSSION

A. Socio-economic characteristics of sample households

It can be observed from Table 1 and Figure 1 that the average monthly expenditure of tribal household is Rs. 7865.29, while the per capita monthly expenditure of a female headed household is Rs.2178.04 and male headed household is Rs.1408.39. The total monthly transfer income from PDS in case of female headed household is Rs.1941.28 and is relatively higher than Rs.1233.76 of male headed households. Share of transfer income from PDS in total monthly expenditure is 22.98% in case of female headed households, whereas it is 17.21% for male headed households. 83.53% of male headed household have family members all possessing ration card, while the percentage is 75.29 in case of female headed households. Average land holding and years of schooling of the head in female headed households is 1.96 bigha and 3.09 years respectively. The average age of the head in female headed households is 57.84 years and is greater than their male counterparts which is 51.51 years

Table 1: Socio-economic characteristics of sample households

GROUP	Total Monthly Expenditure	MPCE	Total Transfer Income Monthly from PDS	Share of transfer income to total expenditure (monthly)	All family members having ration card (R.C)	Land Holding (Bigha)	Age of HH (Years)	Years of Schooling of HH
Male	8452.94	1408.39	1233.76	17.21	83.53	2.70	51.51	3.94
Female	7277.65	2178.04	1941.28	22.98	75.29	1.96	57.84	3.09
All	7865.29	1793.22	1587.52	20.10	79.41	2.33	54.67	3.52

(Source: author's own calculation based on primary data)

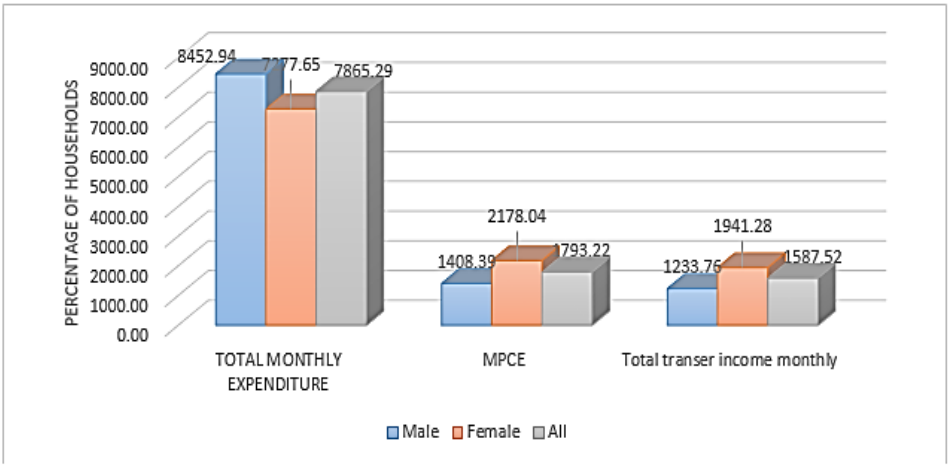

Figure 1: Monthly per capita expenditure and PDS transfer income

B. Demographic profile sample households

Table 2 and Figure 2 depict the demographic profile sample households. It can be observed that average family size is 3.59 in female headed households, while it is 6.48 in case of male headed households. The percentage of children is higher (29.25) in male headed households compared to female headed households (19.76). However, the percentage of elderly is higher (5.86) in female headed households compared to male headed households (5.21)

Table 2: Demographic profile sample households

GROUPS	Total Family Size	Percent of Children	Percent of Elderly
Male	6.48	29.25	5.21
Female	3.59	19.76	5.86
All	5.04	24.51	5.54

(Source: author's own calculation based on primary data)

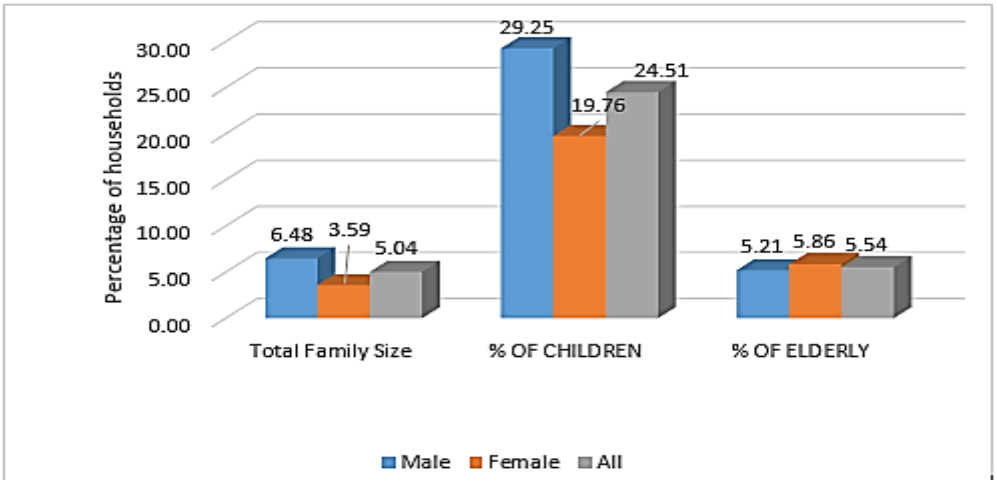

Figure 2: Family size and dependents in sample households

C. Type of ration card

It has been found that majority of the female headed households possess AAY ration card (42.35%), followed by SPHH card (32.94%). Majority of the male headed households possess SPHH ration card (43.53%), followed by PHH card (42.35%). Only 9.41% of male headed households possess AAY ration card.

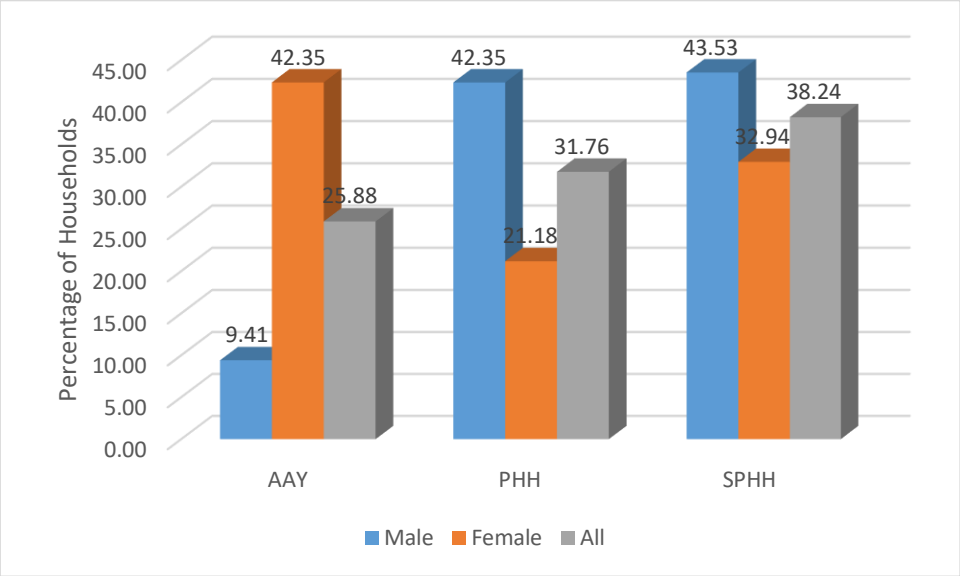

Figure 3: Type of ration card possessed by the households

D. Occupation of the head of the household

Majority of the heads of the households are employed as casual labourers, followed by self-employed and migrant labour. However, only 3.7 percent of the heads of female headed households are engaged as migrant labour compared to 12.94 percent heads in male headed households. This reflects that responsibilities of performing and managing household duties hinder females from going to different places for work.

Table 3: Occupation of the head of the household

GROUPS	CASUAL LABOUR	SELF EMPLOYED	MIGRANT
Male	63.53	23.53	12.94
Female	58.8	37.5	3.7
All	61.17	30.52	8.32

(Source: author's own calculation based on primary data)

E. Poverty status of the households

Table 4 presents the incidence, depth and severity of poverty of both male and female headed tribal households. Interesting, it was found that contrary to reports and previous studies the female headed tribal households are less poor than their male counterparts. The incidence of poverty in male headed households is 63.53 percent while it is only 10.59 percent in female headed households. Again, the depth (0.90) and severity (0.08) of poverty is also much less in female headed households compared to male headed households.

Table 4: Incidence, Depth and Severity of Poverty

GROUPS	Incidence of Poverty	Depth of Poverty	Severity of Poverty
Male	63.53	14.60	4.43
Female	10.59	0.90	0.08
All	37.06	7.76	2.26

(Source: author's own calculation based on primary data)

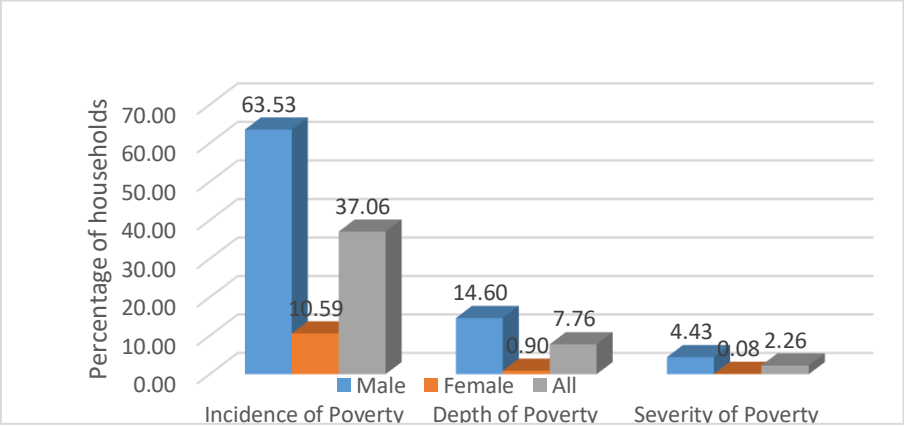

Figure 4: Incidence, Depth and Severity of Poverty

F. Determinants of Poverty

To identify the determinants of poverty we have employed a logistic regression model and the results have been reported in Table 5. We find that monthly transfer income has a negative impact on poverty and households with high levels of transfer income are less likely to be poor. However, the coefficient estimate is not statistically significant. Family size and percent of children have positive impact on poverty and as the family size and percentage of children increases chances of being poor also increases. Female headed tribal households are less likely to be poor than male headed tribal households. Similarly, the interaction term between sex of HH and transfer income also has negative impact on poverty. Household heads those are employed as casual labour and are self employed have higher chances being poor compared to those who are migrant labour. Households where every member has ration card are less likely to be poor while households with AAY ration card are more likely to be poor. However, both the coefficient estimates are not statistically significant. Age of HH, years of schooling of HH and land holding does not have any significant statistical impact on poverty.

In the Table 6 we have presented the marginal change in probability of being poor with respect to explanatory variables. The coefficients of family size and percentage of children indicate that as the family size and percentage of children increases the probability of being poor also increases by 0.14% and 0.002% respectively. However, as the percentage of elderly increases the probability of being poor decreases by 0.008%. The marginal effect of female-headed tribal households indicates that a (discrete) change in the gender of the household head from male to female reduces the probability of the household being poor by 0.23%. Compared to migrants, household heads employed as casual labour and self-employed are more likely to be poor by 0.17% and 0.26% respectively. The marginal effects of other variables such as monthly transfer income, land holding, age of HH, Years of schooling of HH, all members have ration card, possessing AAY card were found to be insignificant.

Table 5: Determinants of Poverty using logit model

Iteration 0: log likelihood = -112.07556
Iteration 1: log likelihood = -33.846991
Iteration 2: log likelihood = -25.425394
Iteration 3: log likelihood = -22.395196
Iteration 4: log likelihood = -22.180101
Iteration 5: log likelihood = -22.176434
Iteration 6: log likelihood = -22.176432

Logistic regression	Number of obs	170
	LR chi2(13)	179.80
	Prob > chi2	0.0000
Log likelihood = -22.176432	Pseudo R2	0.8021

Poor (Yes =1; No = 0)	Coef.	Std. Err.	z	P>|z|
Total PDS transfer income monthly	-.0003311	.0013111	-0.25	0.801
Land holding in bigha	.5166934	.357958	1.44	0.149
Family size	3.431533	.8063724	4.26	0.000

Percent of children	.0601343	.0313015	1.92	0.055
Percent of elderly	-.195945	.0897356	-2.18	0.029
Age	.0038246	.0505044	0.08	0.940
Sex HH	-5.95169	3.568939	-1.67	0.095
Sex HH* Transfer Income	-.004082	.0021796	-1.87	0.061
Yrs of schooling of HH	.0850389	.1709181	0.50	0.619
All family members have ration card	-.4485693	1.240829	-0.36	0.718
O_1 Casual Labour	4.319607	2.190586	1.97	0.049
O_2 Self Employed	6.641902	2.837463	2.34	0.019
AAY Card	1.073028	1.538782	0.70	0.486
CONST	-24.54736	6.864879	-3.58	0.000

Table 6: Marginal Effects of Explanatory Variables on Poverty in the Logit Regression

Average marginal effects Number of obs = 170
Model VCE : OIM
Expression : Pr(Poor Yes 1 No 0), predict()
dy/dx w.r.t. : Total transer income monthly Land holding in bigha Family size Percent of children Percent of elderly Age Sex HH Sex Trans Yrs of schooling of HH All family members having ration card O_1Casual labour O_2 Self employed AAY

	dy/dx	Delta-method Std. Err.	z	P>|z|
Total PDS transfer income monthly	-.000013	.0000516	-0.25	0.800
Land holding in bigha	.0203629	.0135737	1.50	0.134
Family size	.135237	.0151045	8.95	0.000
Percent of children	.0023699	.0011217	2.11	0.035
Percent of elderly	-.0077222	.0032633	-2.37	0.018
Age	.0001507	.0019913	0.08	0.940
Sex HH	-.2345565	.1321441	-1.78	0.076
Sex HH * Transfer Income	-.0001609	.0000808	-1.99	0.047
Yrs of schooling of HH	.0033514	.0066901	0.50	0.616
All family members have ration card	-.0176782	.0488541	-0.36	0.717
O_1 Casual Labour	.170236	.0822633	2.07	0.039
O_2 Self Employed	.2617579	.1023278	2.56	0.011
AAY Card	.0422881	.0596173	0.71	0.478

(Source: author's own calculation based on primary data)

VI. CONCLUSION

The present study explored the issues of poverty of tribal households and examined the presence of gender disparity. It was found that per capita monthly expenditure of a female headed household was Rs.2178.04 and male headed household was Rs.1408.39. The total monthly transfer income from PDS in case of female headed household was Rs.1941.28 and was relatively higher than Rs.1233.76 of male headed households. Majority of the female headed households possessed AAY ration card (42.35%), followed by SPHH card (32.94%), while, only 9.41% of male headed households possessed AAY ration card. Due to this reason the transfer income from PDS in case of female headed household is also higher than their counterparts as the entitlements received under AAY card are much higher than those of PHH/SPHH cards. The share of monthly transfer income in total monthly expenditure is also considerably higher in case of female headed households about 22.98% compared to 17.21% in male headed households. Thus, it can be concluded that female headed tribal households receive a larger amount of benefit from PDS compared to their male counterparts.

Again, contrary to previous studies we found that the incidence of poverty in male headed tribal households was 63.53 percent while it was only 10.59 percent in female headed tribal households. This can be due to the reason that the tribal society is more egalitarian than caste-based society and almost every adult female member in the family

is engaged in some kind of economic activity, apart from manging household chores. Results of logistic regression indicated that female headed tribal households are less likely to be poor than male headed tribal households. Similarly, the interaction term between sex of HH and transfer income also has negative impact on poverty. Family size and percent of children have positive impact on poverty, whereas percent of elderly have negative impact. Moreover, household heads employed as casual labour and are self-employed have higher chances being poor compared to those who are migrant labour.

From the present analysis we can conclude that female-headed tribal households are economically better off than male-headed tribal households and PDS plays a significant role in it. Therefore, there is no immediate need for introducing anti-poverty policies specifically focused on female-headed tribal households.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES

[1] M. Buvinic and G. R. Gupta, "Female-headed households and female-maintained families: Are they worth targeting to reduce poverty in developing countries?" *Economic Development and Cultural Change*, vol. 45, no. 2, pp. 259–280, 1997. Available from: https://doi.org/10.1086/452273

[2] E. Hyde, M. E. Greene, and G. L. Darmstadt, "Time poverty: Obstacle to women's human rights, health and sustainable development," *Journal of Global Health*, vol. 10, no. 2, p. 020313, 2020. Available from: https://tinyurl.com/4cc963za

[3] S. Appleton, "Women-headed households and household welfare: An empirical deconstruction for Uganda," *World Development*, vol. 24, no. 12, pp. 1811–1827, 1996. Available from: https://doi.org/10.1016/S0305-750X(96)00089-7

[4] A. Marcoux, "The feminization of poverty: Claims, facts, and data needs," *Population and Development Review*, vol. 24, no. 1, pp. 131–139, 1998. Available from: https://doi.org/10.2307/2808125

[5] S. Nandi, "Tribal women's struggle to reform Public Distribution System in Chhattisgarh," presented at the 10th International Women and Health Meeting, New Delhi, 2005. Available from: https://tinyurl.com/t4rapepj

[6] S. Bhattacharya, V. L. Falcao, and R. Puri, "The public distribution system in India," *The 1.5 Billion People Question*, p. 43, 2017. Available from: https://tinyurl.com/7cxydvp7

[7] M. Pradhan and N. Rao, "Gender justice and food security: The case of public distribution system in India," *Progress in Development Studies*, vol. 18, no. 4, pp. 252–266, 2018. Available from: https://doi.org/10.1177/1464993418786795

[8] M. Pradhan and N. Rao, "Gender justice and food security: The case of public distribution system in India," *Progress in Development Studies*, vol. 18, no. 4, pp. 252–266, 2018. Available from: https://doi.org/10.1177/1464993418786795

[9] M. Jaglana and A. Shergill, "Gender and urban poverty in India," *Journal of Social and Economic Development*, vol. 18, no. 3, pp. 2462–2480, 2023. Available from: https://tinyurl.com/5b8tvvzy

[10] N. Kour and Neena, "Effectiveness of Public Distribution System (Atta-Dal Scheme) and National Rural Livelihood Mission (NRLM) in promoting sustainable livelihoods of rural poor in Punjab, India," *International Journal of Rural Development Studies*, 2025. Available from: https://doi.org/10.1177/10185291241307280

[11] Planning Commission, *Report of the Expert Group to Review the Methodology for Estimation of Poverty*, 2009. Available from: https://tinyurl.com/mwxbbfr6