

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 6; June 2025; Page No. 13-16

Received: 11-03-2025
Accepted: 13-04-2025

Indexed Journal
Peer Reviewed Journal

Determinants of women's participation in MGNREGS: A comparative study of Uttar Pradesh and Madhya Pradesh

¹Arihant Singh, ²KM Singh, ²Shripati Dwivedi, ¹Ankit Yadav, ¹Anand Pratap Singh and ³Waris Ali

¹Department of Agricultural Economics, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

²Department of Agricultural Economics, Post Graduate College of Agriculture, Dr. Rajendra Prasad Central Agricultural University, Pusa, Bihar, India

³Department of Agricultural Extension and Communication, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

DOI: <https://www.doi.org/10.33545/26180723.2025.v8.i6a.1988>

Corresponding Author: Ankit Yadav

Abstract

Mahatma Gandhi National Rural Employment Guarantee Scheme is considered as 'silver bullet' in eradicating rural poverty and creating employment. The Act was enacted in parliament in September 2005 and was implemented by February 2006. On 2nd October 2009, the scheme was devoted to the father of the nation Mahatma Gandhi. Since then, it is known as Mahatma Gandhi National Rural Employment Guarantee Act. The scheme provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do unskilled manual work at the statutory minimum wages. The participation of women in MGNREGS is influenced by various socio-economic factors. The objective of the current study was to identify the determinants of women's participation under MGNREGS. The study was conducted in Uttar Pradesh and Madhya Pradesh in year 2024. A multi-stage sampling method was used to collect primary data from 240 women respondents. Logistic regression was employed to analyze the socio-economic factors that affect participation and non-participation of women in the MGNREGS within the study region. Results revealed that in case of Uttar Pradesh, education, house type, family type and land holding were the major determinants of women's participation under MGNREGS. While in Madhya Pradesh education, house type and land holding were significant determinants of women getting job under MGNREGS. These findings underscore the need for region-specific strategies to enhance women's access to employment opportunities under the scheme.

Keywords: MGNREGS, logistic regression, socio-economic determinants, women's participation, employment

Introduction

Mahatma Gandhi National Rural Employment Guarantee Scheme is considered as 'silver bullet' in eradicating rural poverty and creating employment (Majumdar & Yadav, 2015) ^[6]. The Act was enacted in parliament on 7th September 2005 and implemented by February 2006. From 2nd October 2009, the scheme was devoted to the father of the nation. Since then, it is known as Mahatma Gandhi National Rural Employment Guarantee Act. The program was initially launched in Bandlapalli village in Anantapur district of Andhra Pradesh. The scheme was gradually expanded throughout the country in a phased manner. It is the largest public employment programme in the world, which was started with an initial outlay of Rs. 11,300 crores in the year 2006-07 and now with the budget of Rs. 86,000 crores 2024-25 (Ministry of rural development, 2025) ^[8]. The scheme provides a legal guarantee for one hundred days of employment in every fiscal year to adult members of any rural household willing to do unskilled manual work at the statutory minimum wages. The basic aim of MGNREGA is demand driven and right based approach to work payment of minimum wages irrespective of gender, productive asset

creation through wage employment. The scheme promotes the women participation by ensuring that its one-third of the beneficiaries must be women, provision of equal wage for men and women, onsite child care facilities, safe working site, works near the residence of beneficiaries and within 15 days of enrollment. However, the participation of women in the scheme is determined by various socio-economic factors such as age, marital status, religion, caste, education, house type, family type and land holding. The religion, family income from other sources and profession of the respondents had significant impact on women participation (Farooqi and Saleem, 2015) ^[4]. The age, gender, caste, education, family type, occupation were significant determinants of participation in MGNREGS (Ahemad and Sharma, 2023) ^[1]. The education, family size, primary occupation, women headed family and possession of livestock are found to be the major determinants of participation (Harini *et al.*, 2022) ^[5]. Age, education, and occupation of the household head was significant factors influencing the participation of a household in the scheme (Bose *et al.*, 2020) ^[3]. Education, land holding, family income, house type were significant factors to influence the

participation in MGNREGS Work (Maruthi and Peter, 2018) [7]. Gender, education and family size of the workers significantly influence the worker's employment under the program (Ramesh and Raheem, 2019) [9]. Hence, the current study aimed at determining various socio-economic factors which affect the women participation in MGNREGA scheme.

Methodology

Nature and sources of data

The study was based on primary data and secondary data both. The primary data was collected by surveying MGNREGS beneficiaries and non-beneficiary's women using pre-tested structured schedules in year 2024. The Secondary data sourced from MGNREGS website, Rozgar Sewaks.

Sampling design

Multi-stage sampling technique was used to collect data from the respondents. At the first stage, Uttar Pradesh and Madhya Pradesh was selected purposively based on highest number of active women workers of MGNREGS. Further, at 2nd stage two districts from each state were purposively selected. From Uttar Pradesh, Basti and Sitapur districts were selected while from Madhya Pradesh, Balaghat and Chhindwara districts were selected. At 3rd stage one block from each district was randomly selected. From districts of

Basti and Sitapur, Vikram Jot and Biswa block were selected, respectively while from districts of Balaghat and Chhindwara, Lalbarra and Chaurai block were selected respectively. At 4th stage two villages from each block were selected randomly. From Vikram Jot block, Kawalpur and Shankarpur village were selected whereas from Biswa block, Katiya and Manpur was selected. From Lalbarra, Newargaon and Lohara was selected whereas from Chaurai, Kheri-Khurd and Gopalpur were selected. Further from each village 15 beneficiaries and 15 non-beneficiaries were selected. The total sample size was 240.

Analytical tools and techniques

Logistic regression was employed to analyze the socio-economic factors that affect participation and non-participation of women in the MGNREGS within the study region. The impact of changes in the independent variables (Age, Marital status, Religion, Caste, Education, House Type, Family Type and Land Holding) on the probability of women's participation under MGNREGS was estimated by assuming a logistic regression (Akhtar and Azeez, 2013) [2]. The dependent variable is dummy variable which takes the value of 1 for those taking job under MGNREGS and 0 for otherwise. The description of variables included in Logit Model are given in table 1. The estimated model can be expressed in the equation given below.

$$z = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + u_i$$

Where,

z is logit or log odds

p is the probability of women's participation under MGNREGA

β_0 is the intercept or constant term or bias term

$\beta_1 \dots \beta_8$ are the coefficients of independent variable

$x_1, x_2, \dots, x_8$ are independent variables,

u_i is error term,

Table 1: Description of variable included in Logit Model

S. No	Variables	Coefficients Associated	Variable Types and Assigned Values
1	Age (x_1)	β_1	Age of respondent in years
2	Marital Status (x_2)	β_2	Categorical variable: 1 for married and 2 for others
3	Religion (x_3)	β_3	Categorical variable: 1 for Hindu and 2 for Muslim
4	Caste (x_4)	β_4	Categorical variable: 1 for General, 2 for OBC, 3 for SC and 4 for ST caste
5	Education (x_5)	β_5	Education in terms of years of schooling
6	House Type (x_6)	β_6	Categorical variable: 1 for Kuccha House, 2 for Semi-Pucca, 3 for Pucca house.
7	Family Type (x_7)	β_7	Categorical variable: 1 for Nuclear and 2 for Joint Family
8	Land Holding (x_8)	β_8	Land holding in hectares

Results and Discussion

The participation of women in MGNREGS is influenced by various socio-economic factors such as age, marital status, religion, caste, education, house type, family type and land holding. The impact of changes in the socio-economic variables on the probability of women's participation under MGNREGS was estimated by logistic regression.

Determinants of women's participation under MGNREGS in Uttar Pradesh

Table 1, revealed the findings of the logistic regression analysis in case of Uttar Pradesh. The estimated value of Cox & Snell R^2 was 0.63, reflecting the good fit of the model. The findings of table 2 revealed that out of eight variables, i.e., age, marital status, religion, caste, education, house type, family type and land holding, only four

variables were found to be significant, which are education, house type, family type and land holding.

Table 2: Results of Logit estimates of determinants of women's participation in Uttar Pradesh

Uttar Pradesh					
Variables	β	S.E.	Wald	Sig.	Exp(β)
Age (x_1)	0.017	0.037	0.209	0.647	1.017
Marital Status (x_2)	1.642	1.356	1.467	0.226	5.166
Religion (x_3)	-2.019	1.143	3.122	0.077	0.133
Caste (x_4)	0.454	0.611	0.553	0.457	1.575
Education (x_5)	-3.268***	0.777	17.710	0.000	0.038
House Type (x_6)	-2.965***	0.877	11.433	0.001	0.052
Family Type (x_7)	-2.315***	0.878	6.945	0.008	0.099
Land Holding (x_8)	-1.247***	0.438	8.105	0.004	0.287
Constant	16.718	4.932	11.489	0.001	1.821E+7

*** significant at 1% level

Education was found to be highly statistically significant at a 1% level (p value = 0.000). However, the negative coefficient (-3.268) suggests that as the number of years of schooling increases, the odds of participation in MGNREGS decreases. The odds ratio of 0.038 suggests that, keeping other variables constant, if the respondent's education increases by 1 year, the probability of women's participation under MGNREGS will decrease by 0.038 times, as the literates seek skilled jobs. The above finding is justified by multiple studies (Ahemad and Sharma, 2023; Harini *et al.*, 2022; Bose *et al.*, 2020; Maruthi and Peter, 2018; Ramesh and Raheem, 2019) [1, 5, 3, 7, 9], where education was significant determinant.

House type was found to be statistically significant at a 1% level (p value= 0.001). The negative coefficient (-2.965) suggests that individuals living in a better house (Pucca or Semi-Pucca) are associated with lower odds of women's participation under MGNREGS than those in kuccha houses. The odds ratio of 0.052 suggests that keeping other variables constant, a unit change towards better housing type, the probability of women's participation under MGNREGS will decrease by 0.052 times. The above finding is justified by (Maruthi and Peter, 2018) [7], where house type was significant determinant.

The family type was also found to be significant at 1% level (p = 0.008). The negative coefficient (-2.315) suggests that women from joint families have lower odds (0.099 times) of participation under MGNREGS than those from nuclear families. This result indicated that family structure influences job outcomes. Joint family members may rely more on shared resources, reducing their need for employment. The above finding is justified by (Harini *et al.*, 2022) [5], where family size was significant determinant.

Landholding was also found to be statistically significant at the 1% level (p = 0.004). The negative coefficient (-1.247) suggests that as landholding increases, job odds decrease. The odds ratio of 0.287 indicates that keeping other variables constant, a unit increase in land holding, and the probability of women's participation under MGNREGS decreases by 0.287 times. This suggests that individuals with more land are more likely to be involved in agriculture or self-employment and, thus, less likely to seek external employment. The above finding is justified by (Maruthi and Peter, 2018) [7], where land holding was significant determinant.

Determinants of women's participation under MGNREGA in Madhya Pradesh

Table 3, revealed the findings of the logistic regression analysis in case of Madhya Pradesh. The estimated value of Cox & Snell R^2 was 0.65, reflecting the good fit of the model. The findings of table 3 revealed that out of eight variables, i.e., age, marital status, religion, caste, education, house type, family type and land holding, only three variables, namely education, house type and landholding, were found to be significant determinants of women's participation under MGNREGS in case of Madhya Pradesh.

Table 3: Results of Logit estimates of determinants of women's participation in Madhya Pradesh

Madhya Pradesh					
Variables	β	S.E.	Wald	Sig.	Exp(β)
Age (x_1)	0.083	0.045	3.373	0.066	1.086
Marital Status (x_2)	1.284	0.944	1.850	0.174	3.612
Religion (x_3)	-1.584	1.205	1.728	0.189	0.205
Caste (x_4)	0.361	0.443	0.662	0.416	1.434
Education (x_5)	-3.625***	1.046	12.009	0.001	0.027
House Type (x_6)	-2.522**	1.003	6.325	0.012	0.080
Family Type (x_7)	-1.426	1.078	1.749	0.186	0.240
Land Holding (x_8)	-1.431***	0.489	8.552	0.003	0.239
Constant	17.521	5.480	10.221	.001	4.065E+7

*** significant at 1% level and ** significant at 5% level

Education was found to be highly statistically significant at 1% level (p value=0.001). However, the negative coefficient (-3.625) suggests that as the number of years of schooling increases, the odds of women's participation under MGNREGS decrease. The odds ratio of 0.027 suggests that keeping other variables constant, if the women's education increases by 1 year, the probability of participation under MGNREGS under MGNREGA will decrease by 0.027 times, as the literates seek skilled jobs.

House type was found to be statistically significant at 5% level (p value= 0.012). The negative coefficient (-2.552) suggests that women living in a better house (Pucca or Semi-Pucca) are associated with lower odds of participation under MGNREGS than those in kuccha houses. The odds ratio of 0.080 suggests that keeping other variables constant, a unit change towards better housing type, the probability of women's participation under MGNREGS will decrease by 0.080 times.

Landholding was also found to be statistically significant at the 1% level (p = 0.003). The negative coefficient (-1.431) suggests that as landholding increases, job odds decrease. The odds ratio of 0.239 suggests that keeping other variables constant, a unit increase in land holding increases, and the probability of women's participation under MGNREGS decreases by 0.239 times. This suggests that individuals with more land are more likely to be involved in agriculture or self-employment and, thus, less likely to seek external employment.

The above findings are justified by Maruthi and Peter (2018) [7] which indicated that education, land holding, house type were significant factors to influence the participation in MGNREGS Work (Maruthi and Peter, 2018) [7].

Conclusion

The participation of women in MGNREGS is influenced by various socio-economic factors. In the present study, it was found that socio-economic variables such as education, house type, family type and land holding were found to be significant determinants of women's participation under MGNREGS. In case of Uttar Pradesh education, house type, family type and land holding were the major determinants of women's participation under MGNREGS. While in Madhya Pradesh education, house type and land holding were

significant determinants of women's participation under MGNREGS. This comparison suggests that while both states share common determinants such as education, house type, and land holding, family type plays a significant role in influencing women's participation only in Uttar Pradesh. This highlights the need for state-specific strategies that address the unique socio-cultural dynamics affecting women's employment under MGNREGS.

References

1. Ahemad S, Sharma P. Determinants of participation in MGNREGA: A case study of Kathua district, J&K, India. *South Asian J Soc Stud Econ*. 2023;20(3):37-47.
2. Akthar SJ, Azeez NA. An econometric analysis of determinants of employment guarantee scheme. *Int Acad J Appl Econ*. 2013;10(1):1-15.
3. Bose P, Bhowmik I, Chouhan P. Determinants of household participation in MGNREGS in Tripura. *Indian J Econ Dev*. 2020;16(2):256-63.
4. Farooqi SA, Saleem I. Mahatma Gandhi National Rural Employment Guarantee Act and empowerment of women from BPL families in rural areas: A case study of district Aligarh (India). *IOSR J Humanit Soc Sci*. 2015;20(3):7-16.
5. Harini B, Anjugam M, Palanichamy NV, Duraisamy MR. Rural households' participation in MGNREGA programme of Puducherry. *Asian J Agric Ext Econ Sociol*. 2022;40(10):986-91.
6. Majumdar M, Yadav SK. MGNREGA - Silver bullet for sustainable poverty eradication: A case study of Koraput district of Odisha. *Int J Humanit Soc Sci Stud*. 2015;2(1):134-40.
7. Maruthi I, Peter P. Factors influencing participation in MGNREGA work: A case study in Shettihalli GP in Karnataka. *J Econ Policy Res*. 2018;13(2):47-56.
8. Ministry of Rural Development. Budgetary allocations for the Mahatma Gandhi National Rural Employment Guarantee Scheme [Internet]. Government of India; 2025 [cited 2025 Jun 3]. Available from: <https://rural.gov.in/en/press-release/budgetary-allocations-mahatma-gandhi-national-rural-employment-guarantee-scheme>
9. Ramesh V, Raheem AA. Factors determining beneficiaries of MGNREGA: An application of factor analysis (A micro level study in Vilupuram district of Tamil Nadu). *Think India J*. 2019;22(14):7589-93.