

Women Workforce Participation among the Tiwa Tribe in Assam of North East India

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Abstract: *The main objective of this study is to examine the socio-economic determinants of women working status among the Tiwa tribe in Morigaon and Nagaon districts of Assam in North East India and suggest necessary measures to the policy makers to raise women participation in labour market. This study is based on primary data collected randomly with the help of a well structured questionnaire from 442 households of selected fourteen villages of the two districts. Besides descriptive statistics, here we use the Logistic Regression in order to determine important socio-economic determinants of working status of Tiwa women. It is found that size of household, dependency ratio, occupation as agriculture and allied, education of the principal earning members, and debt burden are turned out as positive and significant impact on women working status. Land holding and problem of flood reduces the probability of women participation in economic activities. Hence it has a negative impact on women's working. It is concluded that Government and civil society must take policies that policies to accelerate agricultural growth, better education and health, infrastructural development, urgency of creating employment opportunities along with measures to control flood promise to be most effective to raise women participation in earning activities.*

Keywords: *Women workforce participation, Tiwa tribe, Assam, North East India.*

I. Introduction

Work participation rate of women greatly determines the character of socio-economic development of an area, as also the quality of life of a society [1]. The participation of the tribal women in workforce brings in two positive effects in their society –it raises the quality of living and exerts an effective control on family size [2]. Women of tribal community are very active in their household and agricultural activities. But it is seen that the process of their activities is primitive in nature due to their illiteracy, indifferent attitude in their work. Among employed women, 85 percent engage in vulnerable employment, including around two thirds who work in the agricultural sector [3]. They are drawn from the socially and economically backward classes and constitute the poorest section of rural society. They are also a less articulate section of the workers mainly due to lack of organisation and low levels of education.

Assam is a melting pot of many ethnic groups, sub-ethnic groups, castes, tribes and different communities. The Tiwas are one of the many tribes of Assam of North-east India. Ethnically they belong to the Monogloid race. The Tiwa tribe resides in the areas of Assam and Meghalaya. A remarkable peculiarity of the Tiwas is their division into two sub-groups i.e. hill Tiwas and plains dwelling Tiwas. The hill Tiwas reside in the western most area of Karbi-Anlong district (Assam) and north-eastern area of Ri-bhoi district (Meghalaya). Plain Tiwas mainly reside in the plains of southern bank of Brahmaputra Valley, in Morigaon and Nagaon districts. Tiwas constitute 5.17% to total tribal population of the state.

Nagaon district is located in the very centre of Assam. It is at the centre of the entire North-Eastern India. With headquarters at the Nagaon town, the district covers an area of 3993 square km. The district shares boundaries with Sonitpur district and the river Brahmaputra in the North, Karbi-Anlong and North-Cachar Hills in the South, east Karbi Anlong and Golaghat districts in the east and on the west it borders Morigaon district. The district lies between 25'-45" North to 26'-45" North Latitude and longitude 92'-33' to 93'-20' East. It is an old district which dates back to 1833, which is the second most populous district with 2,823,768 population (2011 census). In Nagaon district, Out of 1, 15,153 ST population, total Tiwa population is 58511 i.e. 50.81% of its total tribal population.

Morigaon is situated between 26.15 degrees North and 26.5 degrees North latitude and between 92 degree East longitude. Morigaon Town, the headquarter of the district is situated 78 Kms. from Dispur, the state capital. The district is bound by the mighty Brahmaputra River on the North, Karbi Anglong district on the South, Nagaon district on the East and Kamrup district on the West. Almost every year, Morigaon has been witnessing devastating floods causing huge loss of human lives, cattle and infrastructure. Recurring floods make the life of the rural people very difficult. The district has a population of 957,423 (2011, Census). Out of 1, 36,777 ST population in Morigaon district, total Tiwa population is 1, 09,530 i.e. 80.07% of its total tribal

population. According to 2011 census, the women workforce participation rate among the scheduled tribes of Assam is 43.99 percent as against the corresponding figure of 48.71 percent for all schedule tribe of India. The women workforce participation rate among the scheduled tribes of Morigaon is 45.17 percent as against the corresponding figure of 43.94 percent of Nagaon district of Assam.

There is a rich body of empirical studies analysing the determinants influencing the labour force participation decisions. Some important in this context are (Bordoloi, 2014) [4], (Bordoloi, Sharma Thakur & Saikia, 1987) [5], (Mazumdar & Guruswamy, 2006) [6], (FARIDI & BASIT, 2011) [7], (Faridi, Chaudhry & Basit, 2009) [8], (Naqvi & Shahnaz, 2002) [9], (Ghani, Kerr & O'Connell, 2012) [10].

The objective of this study is to examine the socio-economic determinants of women labour force participation among the Tiwa tribe in Morigaon and Nagaon districts of Assam in North East India and suggested necessary measures to the policy makers to increase women participation in labour market.

II. Data And Methodology

In order to identify the socio-economic determinants which influence the women workforce participation in economic activities, we have selected two districts of Assam: Morigaon and Nagaon districts. We have selected fourteen villages from Morigaon and Nagaon district, where Tiwa population is highly concentrated. The study is based on primary data collected randomly. Almost 442 in the age cohort 15-64 are interviewed purposively with the help of well structured questionnaire for the study. Besides descriptive statistics, we use Logit model to identify the main determinants of women working status in terms of some qualitative and quantitative variables. In particular, the aim of the model is to determine the impact of following twelve variables that can explain the probability of women participation in economic activities among Tiwa tribe of Assam.

1. MPCHI = Monthly Per capita household income.
2. HSIZE = Household size (no. of members in the household).
3. DEPR = Dependency ratio (no. of dependents divided by no. of earning members multiplied by 100).
4. EDUPEM = Education of principal earning member (no. of years spent in formal education).
5. Agriculture and allied sector dummy (1 if the principal earning member of the household is engaged in the agriculture and allied activities and 0 otherwise).
6. LH = Land holding by the household in bigha.
7. Household type, joint family = 1 & unitary = 0.
8. AGEPEM = Age (years) of principal earning member of the household.
9. CHILDREN = Number of children in the household aged 14 years or less.
10. REMOTENESS = Least or minimum possible time (in minute) required to reach the district headquarter.
11. FLOOD dummy, 1 if the household resides in a flood affected area and 0 otherwise.
12. DEBT= Amount of debt of the household

III. Results And Discussions

The elementary analysis of our study is concerned with establishing descriptive statistics of women working status of explanatory variables. The elementary analysis aims to give an overview of the variables and provide the behavioral patterns of variables. Table-1 presents the results of the summary statistics of the descriptive analysis.

Table-I: Descriptive statistics of selected non-categorical variables included in the Logit Model (Dependent variable: Women's Working Status = 1 for working and 0 otherwise)

Variables	For Entire Samples(N=442)				Households with Working Women (N=192)			
	Max.	Min.	Mean	SD	Max.	Min.	Mean	SD
PCHI	9550	750	2131.85	1572.77	9550	780	2983.57	1384.04
HSIZE	14	2	5.95	1.86	14	3	5.83	1.83
DEPR	75	20	39.67	11.69	75	25	46.62	11.60
EDUPEM	17	0	2.32	3.29	17	0	2.60	3.76
LH	35	0	2.84	3.58	28	0	2.15	3.36
AGEPEM	56	18	28.02	8.04	55	19	29.90	9.53
CHILDREN	5	0	1.90	1.42	5	0	1.94	1.50
REMOTE	75	10	38.47	12.76	70	16	37.60	28.68

Source: Computed on the basis of primary data collected during field survey.

For independent dummy variables used in Logit model, the summary statistics are separately presented in table-II.

Table-II: Summary statistics of independent dummy variables included in the Logit Model (Dependent variable: Women's Working Status = 1 for working and 0 otherwise)

Dummy variables	Yes	No
Agriculture and allied sector	73.09	26.91
Joint household type	39.14	60.86
Flood affected	44.12	55.88

Source: Computed on the basis of primary data collected during field survey.

The result of Logistic regression is presented in table-III, from where it is evident that the signs of the coefficients of size of household, dependency ratio, occupation as Agriculture and allied, education of the principal earning members, and debt burden are positive significant.

Table-III: Binary Logit estimates of the determinants of women working status of sample Tiwa households in Morigaon and Nagaon districts of Assam (N=442).

Explanatory Variables	Model-I			Model-II		
	Coefficient	Z-statistics	P-value	Coefficient	Z-statistics	P-value
Monthly per capita household income	0.000150	0.12	0.90	-	-	-
Size of the household	1.05	2.74	0.01	0.64	2.87	0.01
Dependency ratio	0.20	4.30	0.00	0.19	4.94	0.0000
Years of formal educational of the principal earner	3.84	2.90	0.01	3.28	2.99	0.0028
Occupation in agriculture dummy	35.20	2.69	0.01	29.96	2.65	0.0081
Land holding	-0.77	-4.56	0.00	-0.71	-4.99	0.0000
Household type	-0.01	-0.78	0.43	-	-	-
Age of the Principal Earner	0.02	0.36	0.71	-	-	-
Number of children in the household of 14 years or below	-0.65	-1.44	0.15	-	-	-
Time taken to reach the head quarter	0.10	1.01	0.31	-	-	-
Flood dummy	-4.40	-3.17	0.01	-3.41	-3.52	0.00
Amount of debt	2.75	3.14	0.001	2.49	3.39	0.01
Constant	-46.68	-3.09	0.01	-39.22	-3.12	0.01
Goodness of fit			Goodness of fit			
Log likelihood		-30.89912	Log likelihood		-33.60987	
McFadden R-squared		0.898153	McFadden R-squared		0.889218	
LR statistic		544.9757	LR statistic		539.5542	

Note: Dependent Variable-Women working status

A dash (-) refers to the situation where insignificant and multi-collinear variables are dropped

Source: Computed on the basis of primary data collected during field survey.

It signifies that these variables positively affecting the probability of women participation in economic activities. The dependency ratio and size of household are positive significant showing that the probability of women participation in economic activities is high in case of the large families with high dependents. The educated principal earning member has a positive and highly significant impact on women's participation decision. The participation in economic and business activities of educated principal earning member may be due to rising prices and high cost of living. Again the educated principal earning member is also status conscious and they want to live a better quality of life. Further they desire to educate their children in better way. Considering these facts, educated principal earning member allows women members to participate in the active labour force to raise their family income for facing the emerging economic challenges. Again, the probability of women participation in economic activities is positive and significant if the principal earning member of the household is engaged in the agriculture and allied activities. They can participate actively in all agricultural and its related operations and traditionally these are a female's job. Processing of food grain is exclusively a woman's job. In order to support financially, they help their partners in agriculture and allied

activities. Debt burden has also positive and significant impact on women participation in earning activities. To reduce and to solve the debt burden on family, women want to do economic activities. So, the probability of women participation in economic activities is positive who have the debt burden in their family.

Presence of land reduces the probability of women participation in economic activities. The coefficient of variable land holding (LH) turns out to be negative, but significant. The reason may be that more land is considered as an asset and so also the major source of income in rural area. Thus income effect is negative since as income increases, women desire to stay at home to look after domestic issues. Thus woman belongs to more rich families are less likely to participate in labour force. It is evident that the probability of women participation in economic activities is negative if the household is affected by flood. Flood damages cultivation and so all those who are engaged in cultivation they don't have any work to do in flood affected area. Hence it has a negative impact on women's working.

IV. Conclusion And Policy Implications

Most of the working women are found engaged in agriculture and allied activities. But, they are facing problems and challenges in getting a sustainable livelihood and a decent life due to unremunerative nature of their work in agriculture and related activities. So, it is urgently required that Government and civil society must take policies to accelerate agricultural growth. Policies require to address the constraints facing women's to get better education and acquire more skills. More allocation of fund on education would be a useful investment and a better mechanism to improve the human capital in the society. With an enhancement in their human capital, they will be better equipped to participate in a more productive way in the labour market. Such a step can increase their employability in the formal labour markets, with favourable impacts on the sound development of their children and of course their family. Consequently, rural infrastructure is needed to be improved and government should realise the urgency of creating employment opportunities for educated women and controlling flood situation of the state.

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