DETERMINANTS OF WOMEN LABOUR FORCE PARTICIPATION: A STUDY OF THE TAI-TURUNGS

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Abstract: *The magnitude of workforce of an economy is an augury of the socio-economic well-being of the people. In the contemporary world, every individual irrespective of their gender has a ravenousness to participate in the workforce. Women's participation in the workforce is crucial to accord financial and social autonomy, to otherwise dominated womenfolk. The present paper is an attempt to identify the proximate determinants of women labour force participation of a small community, the Tai Turungs. A binary logistic regression analysis is used to identify the significant variables. The study finds education of women, husband's attitude towards wife's participation in the workforce, husband's occupation, husband's income and number of children as the significant predictor variables of women labour force participation of the Tai-Turungs.*

Key Words: *Socio-Economic, Workforce, Women Labour Force Participation, Tai-Turung.*

1. INTRODUCTION:

The Census of India, 2001 defines ***'work'*** as participation in any economically productive activity with or without compensation, wages or profit. The International Conference on Population and Development (ICPD), held in Cairo in 1994, reiterated the importance of economic activity among women, towards aiming the goal of gender equality and women empowerment. The conference noted that, the empowerment of women is anchored to their economic status in the society.

Women Labour Force Participation means the active women of an economy, aged 15 to 59 years, who are either employed or are actively looking for work. It indicates the size of the female labour force in proportion to the size of the total female population.

India is a country with 121.06 crores of population according to census 2011. This huge population is a reason behind the unemployment problem in India. According to the 4th Annual Employment-Unemployment Survey conducted by the Labour Bureau during the period January 2014 to July 2014, the Labour force Participation Rate (LFPR) is 52.5 for all persons. The LFPR for rural areas (54.7) is greater than in the urban areas (47.2). The LFPR for women is significantly lower than that for males in both rural and urban areas.

The north-eastern state of Assam has a population of 31205576, according to 2011 census. Male population accounts to 15939443, while female population is 15266133. The female work participation rate of Assam was 20.7 according to 2001 census, this has increased to 22.3 according to 2011 census (Office of the Registrar General, India).

According to 2011 Census, total female work force was 3428130 and total male work force was 8541560. Again, out of the total female work force 28.06% are cultivators, 20.89% are agricultural labourers, 8.33% are workers of household industry and 42.72% are other workers.

2. THE TAI-TURUNGS: THE TRIBE UNDER STUDY:

'Tai' is a generic term meaning 'the free' or 'free men' that represents a major branch of the Mongoloid population of mainland Southeast Asia. In India, the Tai people live in the North East. By the term 'north-east' we mean eight states of India viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim.

According to Gait[1], (2010) the advent of the Turung people into Assam is believed to have occurred along with General Newbill, following which they started living in Toklai, Jorhat. Being a community which sustained by agriculture, they soon set in search of agricultural lands in different regions near Jorhat. A group of them is believed to have moved to 'Titabar Kosukhat', whereas another group went to 'Nogura' region located near the Jamuguri Railway Station. A third group started living in a village named 'Koliani' in Karbi- Anglong. The Turungs living in Kosukhat later moved to Pathar Shyam, Tipomia, and Pohukatia villages and also to Sorupathar, Rajapukhuri village in Golaghat district. While the Turungs residing in 'Nogura' moved to Abhongpothar and Bosapothar villages and those from 'Koliani' started living in Balipothar of Karbi Anglong.

The Turung and the Khamyang communities live adjacent to each other and also share a sacred bonding. In the district of Jorhat, 3 Turung villages,viz, Pohukatia, Patharshyam and Tipomia reside adjacent to three 'Khamyang' villages, viz, 'Nashyam, Balijan shyam and Batbari shyam. Two of the Turung villages lie in Sorupathar while another two lie in Borpathar (Boruah[2], 2003).

At present, the exact population of the Turung community cannot be estimated correctly as there has been no recent Census directed to it. According to Grierson[3], (2005) undivided Sivasagar had a Turung population of 150.

Due to different terrain in the hills and plains the Turung people are seen to build their houses in different techniques. Although, most of them live in plains, the natives used to live in two stair-case bamboo houses known as the 'Sang-ghar'. They follow Buddhist and are chiefly farmers living in clean, beautiful thatched bamboo huts 'Sang-ghar' (Boruah, 2003).

The Turung people are generally bilingual. When these people are among households or among community people they speak the 'Tai Turung' language, while when conversing with people outside the community they use the 'Assamese' language. Though the Turung people are a part of the Tai-community, the 'Tai-Turung' language has vast differences from rest of the 'Tai' dialect spoken in Assam.

This agricultural based community though small in size, has their own identity among the other Tai-Buddhist communities.

Gender equality is one of the sustainable development goals of United Nations. Women Labour Force Participation Rate (WLFP) is critical in bridge the gap between male and the female. There is prevalence of lower level of women's participation in the labour force worldwide, as well as in our country, India. There are variations in women labour force participation in the rural and urban areas. The north-eastern region of India has the existence of many tribal communities. It is therefore important to study the various social, economic, cultural, demographic and psychological aspects of these tribes. One such valued socio-economic aspect is to know the significant determinants of women labour force participation of these tribes. The tribe under study has received little importance, therefore demands ample research.

3. CONCEPTUAL FRAMEWORK:

Women Labour force participation is affected by various social, cultural, demographic and economic factors. From these dimensions, some of the social, economic and demographic factors have been taken in the present study, based on review of previous research.

One of the social factors is education of the female respondent which is considered as a determinant of women labour force participation. According to Joumotte[4], (2004) education is a major determinant of female participation. Again, earlier research explains that increased schooling has a powerful positive impact on labour force participation (Eckstein and Wolpin[5], 1989; Chaudhury[6] 1978). In the binary logistic model below, education is taken as a dummy variable, coding 1 as educational level more than 10th standard and 0 coded as educational level less than 10th standard.

A social factor used in the model is the type of family, which is nuclear or joint. According to Mandelbaum[7] (1974) in joint families women perform the roles of a wife to a mother only. This is so because there is enough income earners in the family and so are deprived of participation in the workforce. Women labour force participation affects fertility positively in extended families and negatively in nuclear families (Chaudhury[8], 1979). Den Dulk[9], (2001) in his cross-national study of Netherland, Italy, United Kingdom and Sweden explains that higher level of childcare will increase female labour supply, as the conditions of work and family will become easier. It is used as a categorical variable in the model with code 1 as nuclear and 0 as joint.

Another social factor is the size of family, which is taken as a criterion variable in the present model. Baridam[10] (1996), studies the impact of family size on female labour force participation in Nizeria, he finds that female participation in the labour force is less in order to take care of family and children in some developing countries. The larger the size of family less will be the WLFP. Shah[11] (1975) finds proximate variables affecting female labour force, 'pull' and 'push' variables. He considers availability of jobs as an important 'pull' factor and the size of family as a 'push' factor. In the model it is taken as a continuous variable.

A social factor responsible for women's participation in the workforce is husband's attitude towards wives participation in the workforce. It had been explained by previous literature that if husband's attitude is in favour of wives work, than wives participation tends to increase. Shah[11] (1975), finds an increase in female labour force participation when husband's attitude is in favour of wives work. In the present study husband's attitude is taken as a dichotomous variable with codes 1 for unfavourable and 0 otherwise.

An economic factor that influences women labour force participation is husband's occupation. According to some previous researchers husband's occupation has a negative impact on women participation in workforce. An opposing view was put forward by Shah[11] (1975), to him husband's occupation is a factor which is related positively with wife's occupation status. In the model, husband's occupation is taken as a categorical variable, coding 1 as occupied in the organized sector and 0 as otherwise.

Husband's income is considered as an economic factor influencing women's labour force participation. It is a predictor variable used in the model. It is the work of Mott and Shapiro[12], (1983) which finds work attachment to have an inverse relationship with husband's income. But, it had also been explained by previous literature that high earning men may seek out work-oriented women, thereby, generating a positive effect of husband's income on women's labour force participation (Apps[13], 1981). In the binary logistic model, husband's income is used as a continuous variable to study the impact on women labour force participation.

Another economic factor taken as an independent variable in the model is the financial autonomy of the female respondent. If a female member is the head of the household, there is a positive impact on WLFP (Baridam[10], 1996). It is usually that women do not get a chance to express their view on any subject.

A demographic factor influencing women labour force participation is the number of children born to a female respondent. Mott and Shapiro[12] (1983), found that among young American mothers labour force participation is significantly lower for women with more children. A similar result of a strong relationship of fertility on WLFP was also seen in the combined work of Keijzing, Siegers, Keilman and Groot[14] in 1988. Further, has been explained that, employment outside the home serves as an alternative to children (Berenson[15], 1969; Blake[16], 1965; Collver[17], 1968; Kasarda[18], 1971). Thus, employed mothers prefer to have fewer children. In the model of the succeeding section, number of children born to a female of the child-bearing age is taken as a continuous variable.

Another demographic factor responsible for instigating women's participation in the workforce is the present age of the female respondent. It is seen than higher the age of women (beyond 30 to 35 years) lesser will be the level of fertility. Again, at an age of 20 to 25 years women labour force participation is seen to be more. In the binary logistic regression model the variable present age of the female respondent is used as a continuous variable. According to Mahapatra[19], (2013) female labour force participation is less due to the lack of technical skills among the older cohort of women. Female labour force participation is more among the younger women due to educational efficiency.

4. OBJECTIVE AND RESEARCH QUESTION:
The basic objective of the paper is:
- To examine the determinants of women labour force participation of the Tai-Turungs.

The paper also attempts to answer the following research question:
- Do the socio-economic and demographic attributes of the Tai-Turungs affect their women's participation in the labour force?

5. METHODOLOGY:
5.1 Data Source
The study is based on primary data. Along with primary data, some amount of secondary data is also used in the study.

5.2 Analytical Framework
The primary data have been compiled through a sample survey of 136 households. Samples have been drawn by following a multi-stage sampling technique, both random and purposive. The sampling scheme involves the following stages:

The first stage involves the selection of the appropriate districts for the sample collection. The Tai-Turung is a small community with a small population. They are found in the districts of Jorhat, Golaghat and Karbi Anglong of Assam. In this study, Jorhat and Golaghat districts are considered for the survey as more number of Tai-Turung living villages are present compared to the one village of Karbi-Anglong. It is noted that the district/sub-division-wise Tai-Turung population in Assam were not found in the census of India.

In the next stage, the selected districts have been divided into sub-divisions. There are two sub-divisions of the Jorhat District, namely: Jorhat (sadar) and Titabar. From these two sub-divisions of Jorhat district, the Titabar sub-division is choosen for the survey. The Golaghat district has four sub-divisions, namely: Golaghat (sadar), Bokakhat, Dhansiri and Merapani. From these sub-divisions, Dhansiri sub-division is taken for sampling as the Tai-Turung living villages are concentrated in this sub-division.

The third stage is the selection of the sample villages from the sub-divisions. There are 3 Tai-Turung living villages in Titabar sub-division of Jorhat district. All the 3 Tai-Turung living villages are selected as sample village. In golaghat district also there are 3 Tai-Turung living villages and all the 3 are purposively selected as sample villages.

Table No.1
Sample Districts, Sample Sub-Division and Number of Sample Villages

Sample district	Sample sub-division	Total no. of Tai-Turung Living villages	No. of sample villages
Jorhat	Titabar	3	3
Golaghat	Dhansiri	3	3

Source: Man-Tai Speaking National Council, Assam, Population cum education Census (2006)

The fourth and the final stage in sampling design is the selection of sample households from the sample villages. For this purpose, 50% households from each sample village are randomly selected as sample households for primary survey. Thus, a total of 136 households are selected as sample households. The table no. 2 gives a detailed summary of the number of sample households selected from each sample villages.

Table No. 2
Total number of Tai-Turung Households and the Number of Sample Households

District	Sub-division	Sample villages	No. of total Tai-Turung households*	No. of sample Tai-Turung households
Jorhat	Titabar	Pathar Shyam	70	35
		Tipomia	34	17
		Pahukatia	52	26
Golaghat	Dhansiri	Rajapukhuri	80	40
		Bosapothar	6	3
		Abhong Pothar	30	15
Total			272	136

*Data Source: BLO and Village Head of Sample Villages.

Primary data for the study have been collected with the use of structured questionnaire. The information for female labour force participation was collected from female respondents aged 15-59 years. The study was conducted during the month of September, 2016.

In order to examine the factors influencing WLFP a binary logistic regression analysis have been carried out. A logistic regression is done as women labour force participation is taken as dichotomous, with dummy variables coded as 0 and 1. Logit analysis was used for identifying the significant determinants influencing women labour force participation (Klijzing, Siegers, Keilman and Groot[14], 1988).

6. RESULT AND DISCUSSION:

Specification of the model

As most of the previous research on labor force participation used the logistic regression technique, this study also follows the same technique. The binary logistic regression model has been constructed to examine the determinants of women labor force participation:

$$L_i = In\left(\frac{pi}{1-pi}\right) = \beta_1 + \beta_2 x_{2t} + \beta_3 x_{3t} + \beta_4 x_{4t} + \beta_5 x_{5t} + \beta_6 x_{6t} + \beta_7 x_{7t} + \beta_8 x_{8t} + \beta_9 x_{9t} + \beta_{10} x_{10t} + u_t$$

In the applied model, L_i represents the women sample population within the age group of 15-59, who are either employed or not employed, the probability that the women member is employed is represented by p_i and the probability that the women member is not employed is represented as $1 - p_i$.

β_1 Represents the constant term used in the model.
$\beta_2, \beta_3, \dots\dots\dots\dots\beta_{10}$ Stands for the coefficients of the predictor variables $x_{2t}, x_{3t,} \dots\dots\dots x_{10t}$ respectively.
x_{2t} Represents education of the female respondent
x_{3t} Represents husband's attitude towards wife's participation in the labour force
x_{4t} Represents financial autonomy of the female respondent
x_{5t} Represents husband's occupation
x_{6t} Represents type of family
x_{7t} Represents husband's income
x_{8t} Represents size of family
Represents present age of the female respondent
x_{10t} Represents number of children of the female respondent

In the above model, the predictor variables x_{2t}, x_{3t}, x_{4t}, x_{5t}, x_{6t} are the categorical variables, and constructed as dummy variables. The criterion variables x_{7t}, x_{8t}, x_{9t}, x_{10t} are taken as quantitative or measurable variables in model analysis.

Table No. 3
Description of the Explanatory Variables

Variables	Type	Definition	Value
Education	categorical	Education of the female respondent	1 if 10+, 0 otherwise
Husband's attitude	categorical	Husband's attitude towards wife's work	1 if unfavourable, 0 otherwise
Autonomy	categorical	Autonomy of the female respondent	1 if yes, 0 otherwise

Husband's occupation	categorical	Kind of husband's occupation	1 if employed in organized, 0 others
Family type	categorical	Type of family of the respondent	1 if nuclear, 0 joint
Husband's income	Quantitative	Husband's annual income	They take different quantitative or measurable values
Family Size	Quantitative	Number of members in the family	
Age	Quantitative	Present age of the female respondent	
Number of children	Quantitative	Number of children of the respondent	

The table no. 4 that follows expresses the results of the estimated binary logistic regression model. The multivariate regression analysis, explaining women's labour force participation identifies education of the female respondent, husband's attitude towards wife's participation in labour force, husband's occupation, husband's income and number of children as the significant predictor variables of the analysis.

Table No. 4
Binary Logistic Regression Results
Determinants of Women Labour Force Participation

DEPENDENT VARIABLE: Women Labour Force Participation			
Independent Variables	**β**	**Walt**	**Exp(β)**
Education	2.270	5.797**	9.675
Husband's Attitude	-6.498	34.509***	0.002
Autonomy	0.191	0.058	1.211
Husband's Occupation	-1.901	4.420**	0.149
Family Type	1.123	1.427	3.075
Husband's Income	0.000	10.602***	1.000
Family Size	-0.492	1.970	0.611
Age	0.021	0.314	1.021
Number of Children	-0.790	3.153*	0.454
Constant	11.061	14.976	63622.460

N= 136; Cox & Snell R^2 = 0.612; Nagelkerke R^2 = 0.816; -2log likelihood= 59.653
Hosmer and Lemeshow goodness of fit test statistics = 4. 340 (*P*: 0.825)
Convergence achieved after 7 iterations
*** Significant at 1 percent level
** Significant at 5 percent level
* Significant at 10 percent level

Education of women is an independent variable that significantly influences women labour force participation. The regression coefficient of female education dummy is found to have positive association. The exponential of regression coefficient education of women shows that, holding other factors constant, females having education more than 10th standard are about 9 times more likely to participate in workforce than the females with educational level less than 10th standard.

Husband's attitude towards wife's participation in workforce turned out to be the most significant determinant of women's labor force participation. The negative sign of the coefficient indicates that husband's unfavourable attitude acts as an obstacle to women's workforce participation. The odds ratio of the regression coefficient husband's attitude shows that holding other factors constant, an unfavourable husband's attitude reduces the odds in favour of female participation in workforce by about 98%.

Husband's occupation again turned out to be a significant determinant of women labour force participation. The negative sign of the coefficient indicated that husband's occupation is a barrier towards women labour force participation. The odds ratio of the regression coefficient husband's occupation shows that holding other factors constant, husband's occupation in the organised sector reduces the odds in favour of female participation in workforce by about 85%.

Husband's income is another determinant which turned out to be significant. A positive sign in the coefficient indicates a direct relationship between husband's income and women's labor force participation. The exponential of the coefficient indicates that, holding other factors constant, for one unit (i.e. Rs.1000) increase in husband's income, the odds in favour of participation in workforce of females increases by 1 times. If educated husband's income

increase they encourage their wives to participate in workforce. This positive relationship between husband's income and women labour force participation is similar to the finding of Apps[13] (1981).

The number of children as an independent variable also turned out to be a significant determinant to women labour force participation. The negative sign in the coefficient exhibits an inverse relationship between number of children and women labour force participation. The odds ratio of the regression coefficient number of children shows that holding other factors constant, one unit increase in the number of children reduces the odds in favour of female participation in workforce by about 54.6%. This is so, as women with more children specially less than 7 years have to spend more time in rearing them. Mott and Shapiro[12] (1983) found a consistent result among the young American mothers, that labour force participation is significantly lower for women with more children.

7. CONCLUSION:

The paper reveals that the Tai-Turung women's participation in workforce is affected significantly by education of women, husband's attitude towards wife's participation in the workforce, husband's occupation, husband's income and the number of children.

The female respondents with educational level more than 10th standard have a higher women labour force participation compared to women with educational level less than 10th standard. Husband's favourable attitude towards wife's participation in the labour force increases the women labour force participation rate. The reverse happens in case of husband's unfavourable attitude. Husband's occupation in the organized sector decreases women labour force participation and husband's occupation in the unorganized sector increases women's participation in the labour force. Again, it has been found that husband's high income encourages labour force participation among the educated females. An increase in the number of children reduces women labour force participation as women need time to rear their children. Thus, number of children acts as a barrier to WLFP.

Thus, after identifying the proximate determinants of WLFP of the Tai-Turungs, it becomes feasible to frame policies to accelerate women's participation in the workforce.

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