Determinants of rural occupational choice in the North-Eastern Region of India

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***Abstract*—** The rural non-farm sector (RNFS) has transitioned from a residual to a major employment generating sector which is pursued invariably by every rural household. Its growing significance can be seen in a country like India where majority of the population resides in rural regions which has high incidence of poverty. Although the RNFS was initially considered as a residual sector, its crucial role in generating in-situ employment opportunities and reducing inequality has been found in rural India. The North-Eastern region of India has also witnessed this transition where significance of industrial and tertiary sectors as a livelihood option has gained importance in recent years. Focusing on this geographical region is crucial as the significance of industrial and tertiary sectors as a livelihood option has gained importance in recent years. Also, 80 percent of this region is rural and increased mechanization in agriculture and issue of insurgency has led to fall in employment generation and discouraged private investment in the primary sector. Despite the growing importance of the RNFS North-East India, no studies have been extensively undertaken to understand the type of non-farm activities prevalent in this region and what factors encourage workers to join here. Therefore, the objective of this paper is to analyses the trend in the participation of workers in different non-farm activities and examine the different factors that influence rural workers to choose between farm and non-farm sector in North-East India. Applying a binary logistic regression model, we found that participation in non-farm employment is among females compared to males. However, this pattern changes for females who are educated above the higher secondary level. Similarly, their participation increases if they belong to high income class. Further participation is also high among Hindus and Muslims. Our findings demonstrate the favourable impact of education in enabling them to compete for jobs outside agriculture. From a policy perspective, emphasis should be place on the expansion of non-farm opportunities suitable for females. Also, educational facilities should be made more accessible which will encourage greater participation of individuals from NE India to work in high remunerative non-farm jobs.

Keywords: *Rural Non-Farm Employment, Occupational Choice, Education, Household Economic Status, North-Eastern Region of India, Rural Development.*

XXIII. Introduction

In many developing countries, employment diversification from farm to the rural non-farm sector (RNFS) has emerged as a critical livelihood strategy, particularly where farm income is inadequate for a decent living (Haggblade et al., 2010; Nakajima et al., 2017; Barrett et al., 2001; Lanjouw & Lanjouw 2001). While it was anticipated that RNFS would gradually decline with economic growth, this sector instead became a significant contributor to employment and income. Its share in total rural employment is 32 percent in Asia, 40 percent in Latin America and 42 percent in Africa (Reardon, 1997) and contributes about 35–50 percent of rural household income (Haggblade et. al., 2010).

In India, growth of the RNFS became more pronounced after the reforms period and its expansion is important as majority of the population resides in rural areas. The availability of non-farm employment has, in addition to generating employment opportunities, also resulted in a positive indirect spillover effect through a reduction in poverty and food insecurity, rural to urban migration and availability of in-situ jobs, thereby facilitating equal employment opportunities for both male and female workers (Jatav & Sen 2013; Haggblade et al., 2010). The importance of the RNFS is no less significant in India's North-Eastern (NE) region. The NE region which consists of mostly hilly areas have witnessed a change in the livelihood from agriculture to industrial and tertiary sectors (Bora & Mahanta, 2022). Although shifting cultivation is mostly the way of livelihood, its damaging impact on land and other resources is found to be immense (Bora & Mahanta, 2022). Also, the share of income from agriculture has declined from 36.3% in 1990-91 to 17.7% in 2012-13 (ibid). The importance of the non-farm sector in this region stems from the fact that not only 80% of the region is characterised as rural but increased mechanisation in agriculture and issue of insurgency has led to fall in employment generation in agriculture and low private sector investment (Panda, 2017). Moreover, the share of RNFS employment is found to be 34.9% in this region which is higher than the all-India average of 32.1%. This states the growing significance of rural non-farm employment in NE India. Despite this transition in employment in this region, no comprehensive study is undertaken so far. This paper therefore, contributes to the extant literatures by focusing on the various individual, household and regional factors that affect rural workers to choose RNFS employment over agriculture. Further, it is stated in the literature that female's economic participation is driven by several socio-economic and cultural factors while male's participation in purely economic (Srivastava & Srivastava, 2010). However, the NE region is considerably more egalitarian compared to rest of India and as such, female's labour market participation is likely to be more or at

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par with males (Beniwal, 2013). On the contrary, few studies have pointed out that females in this region also face violence and marginalisation and higher incidence of diseases (Bora & Mahanta, 2022). Therefore, we further examine whether education and household economic status play any important role in enabling females to engage in non-farm employment. We focus on these two variables because studies (Srivastava & Srivastava, 2010; de Janvry & Sadoulet, 2001) have observed a favourable impact of education and economic status in female's economic participation.

XXIV. LITERATURE REVIEW

The broad motives behind diversification are classified under 'pull' and 'push' factors (Loison 2015; Jatav & Sen 2013; Ranjan 2009; Panda 2017). At the macro level, a well-developed agriculture creates favourable growth linkages along with an expansion in urbanisation, transport and communication facilities that enable growth in the RNFS. On the contrary, in regions where agriculture is unproductive and highly weather dependent along with mounting pressure of population on land and incomplete land and labour markets, rural households are pushed to join non-farm activities (Haggblade et al., 2010). The reasons behind diversification by an individual can be driven by a number of factors which includes demographic, household and locational. Rural households adopt employment diversification not only as a way to reduce poverty, food insecurity or unemployment but also to enhance their standard of living.

De Janvry and Sadoulet (2001) found a favourable effect of education in acquiring high return non-farm sector employment in rural Mexico. They also pointed out that highly educated females have greater chances of joining non-farm work compared to males but for low return activities, education does not play any significant role. The works by Chaplin et. al. (2007), Demie and Zeray (2016), Matsumoto et. al. (2006), Senadza (2012), Xia and Simmons (2006) also found a positive effect of education on diversification. On the other hand, land ownership is found to exhibit adverse effect on an individual's preference for either non-farm employment or migration activities. It indicates lower degree of involvement in non-farm work by households having land of their own (Bezu & Holden 2014; Brunjes et.al., 2016; Demeke & Zeller 2012; Demie & Zeray 2016; Matsumoto et al., 2006). Weather shock is pointed out by Demeke and Zeller (2012) as another determining factor in farm household's decision to diversification in rural Ethiopia where the likelihood of working in high return non-farm activities increases with average rainfall and declines with rainfall variability. Involvement in non-farm work has also augmented household income by 9.1per cent in Kenya, 14.6 per cent in Uganda and 12.15 per cent in Ethiopia (Matsumoto et al. 2016).

Literature on drivers of rural occupational choice in India is rather limited and amongst them, the works by Jatav and Sen (2013), Lanjouw and Shariff (2004), Mishra (2014) and Panda (2017) found that both pull and push factors simultaneously operate in rural employment diversification. Panda (2017) looked into the significance of various push and pull factors determining rural non-farm occupational choice in Assam and Meghalaya and found a strong consumption linkage between agriculture growth and non-farm diversification. As income from agriculture increases the probability of joining trade and commerce also rises. Access to credit, education of the household head are other pull factors of diversification.

Again, some other literature that have classified the non-farm sector into its different components like wage employment, self-employment, industry, construction and factory activities includes the work by Abraham (2011), Drall and Mandal (2020), Lanjouw and Shariff (2004), Mishra and Singh (2018) and Nakajima et. al. (2017). They found a greater likelihood of females working as either agricultural wage labourers or in casual non-farm activities which are low return activities and have low entry barriers. Although the effect of education and technical training in general is positive towards non-farm employment diversification but further classification of non-farm occupations shows a higher likelihood by educated people to join regular non-farm work whereas people with lesser human capital get entry in low paid jobs. Also, while Lanjouw and Shariff (2004) established that land ownership favourably affects non-farm employment, other studies found a negative impact of land ownership on employment diversification. Caste system in the Indian context has tremendous influence on employment choice which is highlighted in the works by Mishra and Singh (2018) in rural Uttar Pradesh and by Nakajima et al. (2018) in four eastern states. Their findings indicate a greater participation in low return non-farm and migration activities by SC/ST households compared to upper caste households. Also, factors like household size, access to credit, social capital, non-land assets and distance to nearest town also significantly affects rural employment diversification.

XXV. METHODOLOGY

The paper is based on National Sample Survey Organisation's (NSSO) Employment and Unemployment Survey (EUS) data for the 68th (2011-12) round and the Periodic Labour Force Survey (PLFS) data from 2017-18 to 2022-23. We have extracted the rural data for the 8 North-Eastern states that comprises of – Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim for our objective. The quinquennial EUS data was discontinued after 2011-12 and in its place, the PLFS data has been implemented annually since 2017–18. The PLFS

introduced certain modifications in its sampling framework but no changes were made to the definitions of core labour market indicators, rendering these indicators broadly comparable between NSSO and PLFS datasets for the purpose of descriptive statistics.

We have applied the concept of 'Usual Principal and Subsidiary Status' (UPSS) of the population which includes persons who either worked or were available for work for a relatively long period of the year and those who are identified as non-workers by the Principal Status (PS) but had worked for at least 30 days during the reference period of 365 days, known as the Subsidiary Status (SS) workers (Bordoloi & Bedamatta, 2022). For descriptive statistics, both NSSO and PLFS data are utilised and for empirical estimation, only the latest PLFS data is used which is for the year 2023-24. The total sample size for PLFS 2023-24 comprises of 38,228 individuals among which 9,963 are farm workers and 8,590 are non-farm workers.

The empirical analysis is undertaken with the help of a binary logistic regression model because of the binary nature of the dependent variable where an individual would decide whether he/she will work in agriculture or non-agriculture activities. We take agriculture employment as the base category and therefore, the findings will explain the employment probability for rural non-farm sector. The binary logistic regression model is given below-

$$\text{logit}\,(Y) = \ln\left[\frac{p}{1-p}\right] = \beta X + \mu \qquad (1)$$

Here, Y is the dependent variable taking values 0 and 1. The expression $\ln\left[\frac{p}{1-p}\right]$ is the log of the odds ratio. The odds ratio is the ratio of the probability that an individual would diversify to the probability that he/she would specialize. β 's are the coefficients to be estimated and X is the vector of explanatory variables. The covariates used for the analysis are given below.

TABLE 1: DESCRIPTION OF EXPLANATORY VARIABLES USED IN THE ANALYSIS.

Variables	Description	Mean	SD[1]
Age	Age of working members (in years)	30.07	19.32
Gender	Male=1. Female=0	0.49	0.49
Education (Illiterate= base category)			
BP&P	below primary and primary level education=1.	0.34	0.47
M&S	middle and secondary level education=1	0.35	0.48
HS & above	higher secondary and above education=1	0.14	0.34
Vocational training	Received training=1, 0=otherwise	0.42	0.49
Marital status (Currently unmarried=0)			
Currently married	Currently married=1.	0.47	0.49
Widow/Divorced	Widow/Divorced=1.	0.05	0.22
Caste (other caste= base category)			
ST	1 if belongs to Schedule Tribe	0.52	0.49
SC	1 if belongs to Schedule Caste	0.06	0.24
OBC	1 if belongs to Other Backward Class.	0.20	0.40
Religion (Other religion= base category)			
Hindu	1 if Hindu.	0.40	0.49
Muslim	1 if Muslim	0.14	0.35
Household size	Number of household members	5.27	1.95
MPCE quantiles (1st quantile= base category)			
2nd	1 if belongs to 2nd MPCE quantile.	0.19	0.39
3rd	1 if belongs to 3rd MPCE quantile.	0.20	0.40
4th	1 if belongs to 4th MPCE quantile.	0.20	0.40
5th	1 if belongs to 5th MPCE quantile.	0.20	0.40
North Eastern States (Assam= base category)			
Sikkim	1 if belongs to Sikkim.	0.04	0.20
Arunachal Pradesh	1 if belongs to Arunachal Pradesh	0.14	0.34
Nagaland	1 if belongs to Nagaland	0.07	0.25
Manipur	1 if belongs to Manipur	0.13	0.33
Mizoram	1 if belongs to Mizoram	0.06	0.24
Tripura	1 if belongs to Tripura	0.12	0.33
Meghalaya	1 if belongs to Meghalaya	0.12	0.32

Source: Author's calculation based on PLFS data

TABLE 2: SHARE OF WORKERS IN DIFFERENT INDUSTRIAL CLASSIFICATION.

Male								
Sector	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Agriculture	56.32	47.63	40.47	40.58	37.2	38.58	45.06	34
Mining	0.55	0.44	0.56	1.16	0.77	1	0.34	0.93
Manufacturing	5.32	5.94	9.45	7.14	7.3	7.07	3.1	7.8
Construction	10.49	11.4	14.09	14.37	16.48	17.02	33.32	21.34
Services	27.32	34.59	35.43	36.76	38.26	36.32	18.19	35.93
Female								
Sector	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Agriculture	68.01	55.07	51.29	56.22	63.44	66.28	69.1	74.14
Mining	0.25	0.18	1.93	0.6	0.1	0.18	0.39	0.15
Manufacturing	4.78	5.38	7.46	5.44	6.42	9.97	9.92	9.35
Construction	12.94	3.68	4.79	5.39	4.65	3.96	2.53	2.25
Services	14.02	35.69	34.53	32.36	25.4	19.61	18.06	14.11

Source: Author's calculation based on PLFS data

If we examine the trend of agriculture employment of male and female workers, then a sharp fall in male's participation can be observed from table 2 where employment share reduced from 56.32% to 34% between 2011-12 and 2023-24. In case of females, a significant rise in farm employment is evident after the Covid-19 period, although their share reduced to 51.29% during 2018-19. Despite rising share of females in education and falling fertility, their dependence on agriculture has been surging post-Covid period. This may also be due to reverse migration that occurred during the pandemic years. Bedamatta and Bordoloi (2022) also observed a major share of females in the

[1] SD stands for Standard deviation.

primary sector of NE region. Again, in case of non-farm employment, the share of males in construction has doubled from 10.49% to 21.34% between 2011-12 and 2023-24, although their share was much higher during 2022-23. Also, their share in services sector increased from 27.32% to 35.93% during the same time period. But during 2022-23, their share in services fell drastically to 18.19% and the share of construction increased sharply at that time. Again, in the next time period, the share of services increased manifold while that in construction declined. Even their share in agriculture was higher during 2022-23 which reduced sharply in the next period. This clearly shows that whatever fall in male's employment in agriculture and construction happened was absorbed in the services and manufacturing sector in 2023-24.

For females, employment in manufacturing increased from 4.78% to 9.35% between 2011-12 and 2023-24 and their share in construction declined sharply from 12.94% to 2.25% during the same time. Their share in services increased only marginally. The study by Bordoloi and Bedamatta (2022) found education to be an emerging sector for females after agriculture. This shows that females who engaged in construction sector directly shifted towards agriculture in recent times which might reflect on the precarious nature of non-farm employment that rural females in NE region were engaged in. Next, we examine the share of workers in different activity status.

TABLE 3: SHARE OF WORKERS IN DIFFERENT ACTIVITY STATUS

Male								
Activity Status	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
SE2 Farm	47.39	38.68	33.26	31.64	29.31	31.71	40.63	27.37
Casual Farm	6.44	5.21	3.09	5.75	4.06	4.66	3.55	4.87
Regular	12.84	19.75	24.5	20.49	19.75	19.17	9.33	19.09
SE Non-Farm	20.88	23.29	23.62	25.81	27.88	25.41	12.53	24.97
Casual Non-Farm	12.45	13.08	15.52	16.31	19	19.04	33.97	23.71
Female								
Activity Status	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
SE Farm	53.75	32.67	29.07	33.82	49.32	51.94	59.33	62.36
Casual Farm	8.63	9.58	7.36	9.69	4.99	7.3	5.01	5.9
Regular	23.43	40.07	42.45	35.6	24.4	18.82	17.63	14.76
SE Non-Farm	10.07	11.09	12.2	12.3	15.64	16.05	14.45	13.52
Casual Non-Farm	4.13	6.59	8.92	8.58	6.65	5.9	3.59	3.43

Source: Author's calculation based on PLFS data

[2] SE stands for Self-Employed

Looking at the activity status of male workers, we see from table 3 that their share as self-employed (SE) and casual farm workers has declined to a great extent in the post-Covid period. On the other hand, their share in casual non-farm employment has increased from 12.45% to 23.71% between 2011-12 and 2023-24. Non-farm SE has also increased marginally from 20.88% to 24.97% during the same time period. Further their share in regular activities has also increased which is a positive change. But the increasing proportion of casual non-farm employment implies the precarious nature of work that rural males are engaged in. This also reflects the vulnerability of livelihoods in NE India.

As is evident from table 3, the share of females as SE farm workers is the highest and its share has increased over time from 53.75% in 2011-12 to 62.36% in 2023-24. However, their share as casual workers both in farm and non-farm sector shows that fewer females in NE region of India are engaged in casual activities that has no social security benefits. On the other hand, their increasing share in SE activities and reduction in regular employment does not necessarily imply that females are in a better position now compared to the pre-Covid period. This is because SE activities consist of both high return as well as low return activities. From table 3, it is clear that while participation of males in regular and casual employment has increased over the years, for females, their participation is dominant in SE activities followed by regular employment. We next examine the educational level of male and female non-farm workers which might shed light on the reason behind their choice of non-farm activity status.

TABLE 4: EDUCATIONAL LEVEL OF NON-FARM WORKERS.

Male								
Education level	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Illiterate	9.18	6.29	8.06	7.33	6.18	5.49	2.19	6.69
BP & P	32.78	24.46	24.77	28.24	24.2	23.2	57.37	26.67
M&S	39.87	46.42	44.9	43.53	47.22	50.68	28.28	45.4
HS & diploma	10.62	11.33	11.47	10.77	11.92	10.68	6.24	9.8
Graduate & above	7.54	11.51	10.8	10.13	10.48	9.95	5.92	11.44
Female								
Education level	2011-12	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Illiterate	23.22	8.75	8.83	14.51	8.04	10.55	6.38	7.95
BP & P	32.45	15.52	25.35	16.21	19.81	27.14	21.84	25.9
MS	27.11	42.75	37.98	35.22	46.58	39.97	48.54	39.93
HS & diploma	10.52	15.53	10.11	15.8	11.87	9.32	8.89	11.42
Graduate & above	6.69	17.45	17.74	18.27	13.69	13.02	14.35	14.8

Source: Author's calculation based on PLFS data

The educational level of non-farm workers demonstrate that compared to males, the share of females who are educated above higher secondary level is greater. Also, looking at the trend, the share of illiterate female workers has reduced to a considerable extent while their share in graduate level education has increased sharply. This clearly indicates a mismatch between the educational qualification of female non-farm workers and the type of activities they are engaged in. This situation might arise due to a non-availability of adequate women centric non-farm activities or it might be due to other demographic and socio-economic factors. In order to have an in-depth account of the factors that affect the occupational choice of males and females, we run a logistic regression model.

XXVI. EMPIRICAL FINDINGS

TABLE 5: DETERMINANTS OF OCCUPATIONAL CHOICE IN NE INDIA

Variables	Coefficient	Standard Error
Age	-0.003	0.002
Gender (female= base category)	1.064*	0.036
Education (Illiterate= base category)		
BP&P	0.815*	0.08
M & S	1.184*	0.08
HS & above	2.155*	0.088
Vocational training (yes=1, No=0)	0.515*	0.039
Marital status (Currently unmarried=0)		
Currently married	-0.014	0.053
Widow/Divorced	0.574*	0.102
Caste (other caste= base category)		
ST	-0.537*	0.071
SC	0.125	0.090
OBC	-0.099	0.069
Religion (Other religion= base category)		
Hindu	0.376*	0.062
Muslim	0.410*	0.096
Household size	-0.114*	0.011
MPCE quantiles (1st quantile= base category)		
2nd	-0.0004	0.054
3rd	0.073	0.056
4th	0.358*	0.06
5th	0.700*	0.066
North Eastern States (Assam= base category)		
Sikkim	0.539*	0.09
Arunachal Pradesh	-0.340*	0.068
Nagaland	0.448*	0.093
Manipur	0.074	0.067
Mizoram	0.076	0.096
Tripura	0.201*	0.065
Meghalaya	0.439*	0.077
Constant	-1.760*	0.158

Notes: *, ** and *** indicates significant at 1 %, 5% and 10% level.

From table 5, we observe that rural males are more likely to join the RNFS compared to females. The descriptive statistics also revealed a greater participation of males in non-farm sector while female's employment in agriculture increased in the post-Covid year. Srivastava and Srivastava (2010) also pointed out that occupational diversification is increasingly becoming popular among males while majority of females are still confined to agriculture and allied activities. This is because female's participation in employment is affected by various socio-economic, religious and cultural factors in rural India.

Again, education and vocational training has a positive impact on joining non-farm employment which implies that education or any type of skills are necessary for workers to engage in non-farm compared to agriculture. Non-farm employment participation is also high among divorced and widowed individuals compared to those who are unmarried. Further, the effect of caste shows a low probability of Schedule Tribe workers to engage in occupations other than agriculture. Since most of the NE states have a dominant ST population and STs reside in remote regions where agriculture becomes their main livelihood source, therefore, their participation in non-farm employment remains limited. Even the study by Nakajima et al. (2017) found that STs belonging to eastern states of India are discouraged from participating in non-farm activity due to long travel times and a lack of public transportation. The role of SC and OBC remains insignificant. Further, non-farm employment is also preferred by Hindu and Muslim individuals compared to other religion.

Examining the impact of household size, we observe an adverse role of this variable in non-farm employment. This demonstrates that households with more members are less likely to join non-farm employment and more likely to focus on agriculture. This might also demonstrate a peer effect where other working members also choose agriculture if the household head is in this sector. The household's MPCE used as a proxy for the household's economic status shows that individuals belonging to the upper economic class are the ones who engage in non-farm occupations compared to the lowest expenditure quantile households. This shows that affluent households prefer non-farm to farm employment. States are included to control for any region-specific heterogeneity of occupational choice. Compared to Assam, all other North Eastern states have a positive probability of employment in non-farm sector expect Arunachal Pradesh. It is found that every household in Sikkim is diversified and have a high share of income from non-farm (Bora & Mahanta, 2022).

We further observe from our descriptive statistics that the share of females among highly educated non-farm workers is higher compared to males. This implies that education can facilitate rural females to move out of agriculture. De Janvry and Sadoulet (2001) also found that in rural Mexico, females participate in non-farm employment only when they are educated. We further found that workers belonging to upper economic class have a higher likelihood of engaging in non-farm employment. But some studies (Srivastava & Srivastava, 2010) demonstrate that economic factors like land

ownership and monthly per capita consumption expenditure also adversely affects a female's opportunities to work outside agriculture. Therefore, to estimate whether education and belonging to high MPCE households facilitate rural females to engage in non-farm sector employment compared to males, we have run an interaction effect between gender and education and gender and MPCE. The findings are given in table 6.

TABLE 6: INTERACTION EFFECT OF EDUCATION, GENDER AND MPCE ON OCCUPATIONAL CHOICE OF WORKERS IN NE INDIA.

Variables	Coefficient	Standard Error
Age	-0.002	0.002
Gender	-1.335*	0.158
Education (Illiterate= base category)		
BP&P	0.799*	0.108
M & S	1.160*	0.105
HS & above	1.904*	0.114
Vocational training	0.515*	0.039
Marital status (Never married= base category)		
Currently married	0.005	0.053
Widow/Divorced	0.637*	0.103
Caste (Upper caste= Base category)		
ST	-0.531*	0.072
SC	0.132	0.09
OBC	-0.095	0.069
Religion (Other religion= Base category)		
Hindu	0.384*	0.062
Muslim	0.416*	0.096
Household size	-0.115*	0.011
MPCE quantiles (MPCE 1st quantile= Base category)		
2nd	0.012	0.068
3rd	-0.031	0.07
4th	0.212*	0.073
5th	0.738*	0.081
North Eastern States (Assam= comparison state)		
Sikkim	0.517*	0.090
Arunachal Pradesh	-0.327*	0.068
Nagaland	0.455*	0.093
Manipur	0.078	0.067
Mizoram	0.083	0.096
Tripura	0.201*	0.065
Meghalaya	0.424*	0.077
Interaction term (Illiterate= base category, male= base category)		
Below primary & primary* female	0.029	0.159
Middle & secondary*female	0.048	0.152
HS & above* female	0.673*	0.169
Interaction term (MPCE 1ST quantile= base category, Male= base category)		
2nd * female	-0.033	0.111
3rd * female	0.280**	0.111
4th * female	0.402*	0.111
5th * female	-0.056	0.116
Constant	-0.615*	0.173

Notes: *, ** and *** indicates significant at 1 %, 5% and 10% level.

Controlling for other covariates, we focus on the findings of our interaction terms. The interaction effect of gender and educational level shows that females who are educated above the Higher Secondary level has a positive probability of engaging in non-farm employment. The result is highly significant at 1% level. This clearly states the favourable role of education in facilitating females to engage in activities outside agriculture. Although females are less likely to diversify yet those who are educated are capable of working in non-farm sector employment. Also, non-farm employment is high among females who belong to the 3rd and 4th income quantiles which states that only economically stable households are able to facilitate their females to look for jobs outside farm. Since females mostly concentrate in services sector, economic stability might help them in establishing their own enterprises.

XXVII. CONCLUSION

The present study is based on the occupational choice of rural workers in the NE region of India which has witnessed a gradual transition from agriculture towards the more remunerative non-farm employment. We focused on this region of the country because most of the rural households depend on shifting cultivation which has led to gradual degradation of soil quality and at the same time, the growth of industrial and tertiary sector became evident. This led us to focus more on the type of non-farm activities that rural male and female workers are engaged in and the factors affecting their participation in this sector. From descriptive statistics, we found an increasing participation of males in construction and services while female employment increased in agriculture and manufacturing after the pandemic. This shows a sharp increase in diversification among males compared to females in this region. Empirical estimation using a binary logit model shows that while females mostly participate in agriculture, their chances of engaging in non-farm sector increases when they are educated above HS level. This demonstrates the favourable impact of education on female's economic participation. Further, participation is also high among Hindus and Muslims and those having vocational training. From a policy perspective, emphasis should be placed on the expansion of non-farm opportunities suitable for females. Also, educational facilities should be made more accessible which will encourage greater participation of individuals from NE India to work in high remunerative non-farm jobs.

DECLARATION OF CONFLICTING INTERESTS

The author(s) have no known conflict of interest.

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