

A Study on Women Education, Employment and Income in Nagaland

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Abstract

Education is the most important factor that enables women to get access to employment and earn income, which in turn, help to improve her economic status. This study is based on primary data and shows that higher education has positive impact on income and employment, especially for women. There is gender disparity in income and employment of women which is lower as compared to men. The study concludes that education has an important role to play as the level of education determines the employment and income of a person.

Keywords: *Rural and urban women, education, employment, income and Nagaland.*

Introduction

The Ministry of Labor and Employment has published few facts regarding growth trends in women employment. Women form an integral part of the Indian workforce. As per Census 2011, the total number of female workers in India is 149.8 million and female workers in rural and urban areas are 121.8 and 28.0 million respectively. Out of total 149.8 million female workers, 35.9 million females are working as cultivators and another 61.5 million are agricultural laborers. Of the remaining female's workers, 8.5 million are in household Industry and 43.7 million are classified as other workers¹.

The workforce participation rate of females during 2009-10 in rural sector was 26.1% (NSS 64th Round) while that for males was 54.7%. In urban sector, it was 13.8% for females and 54.3% for males. Among the States and Union Territories, workforce participation rate of females in the rural sector was the highest in Himachal Pradesh at 46.8% and in the urban sector it was highest in Mizoram at 28.8%².

Among many socio-economic factors, female education is associated with entry by women into the formal labour market, especially into jobs in the modern sector. Education is mainly considered in relation to employment status which further influences their working life and development of individuals (Bullock, 1994)³. Education system between its potential to promote society and economy and its role as defender of prevailing norms and values extends to the labor market; it helps in supplying the skills that the market identifies as necessary, and it shapes the market to make it more efficient and more egalitarian. Education and work are strongly (positively) correlated. This correlation has important implications for models of fiscal policy and economic growth. It also has important implications for the estimation of labor supply and the rate of return to education.

Study area and sample size

The study covers two districts, *i.e.* Tuensang and Mokokchung. The respective district

¹ Census of India, 2011, Office of the Registrar General and Census Commissioner, India, Ministry of Home Affairs, Government of India.

² Women and Men in India, Ministry of Statistics Programme Implementation, GOI, 2012 (14th Issue).

³ Bullock, Susan (1994) "Women and Work", Zed Books Ltd. London and New Jersey.

headquarters are taken as urban centers and three villages from each district were covered by the survey during 2011-2012. In the sample population, 947 were workers, which comprised of 469 (49.52%) male and 478 (50.47%) female. Out of the total male workers, (307) 65.46% were in rural area and (162) 34.54% in urban area. For female, (276) 57.74% were in rural area and (202) 42.26% in urban area.

Objectives

The present study focuses on the role of education in relation to employment which further influences their working life. Further, the study explores the contribution of women on the basis of their employment to household and economic

activities. The objectives of the study are summarized as follows:

1. To analyze the impact of education on employment and income of women.
2. To assess gender differential in income distribution and employment.

Education and Employment

i) Employment by Age and Education: The general perception is that raising educational levels increase women labor participation rate. Hence, employment by educational levels such as below high school, high school, higher secondary, graduates and post-graduates and above was determined for women vis-à-vis male according to their age groups.

Table 1: Employment by Age and Educational level in sample rural areas of Mokokchung and Tuensang

Age Group	Educational Levels								
	Below High school			High School			Higher Secondary		
Mokokchung	M	F	T	M	F	T	M	F	T
16-24	-	100	1.72	40.00	60.00	5.10	42.86	57.14	10.77
25-34	75.00	25.00	7.47	43.75	56.25	16.33	55.56	44.44	27.69
35-59	45.95	54.05	68.52	52.24	47.76	68.37	63.89	36.11	55.38
60&above	33.33	66.67	22.22	80.00	20.00	10.20	100	-	6.15
Sub-Total	44.44	55.56	100	53.06	46.94	100	61.54	38.46	100
Tuensang									
16-24	50.00	50.00	1.15	100	-	1.30	-	-	-
25-34	15.38	84.62	7.47	11.11	88.89	11.69	42.86	57.14	28.00
35-59	44.90	55.10	84.48	68.75	31.25	83.12	77.78	22.22	72.00
60 & above	50.00	50.00	6.90	66.67	33.33	3.90	-	-	-
Sub-Total	43.10	56.90	100	62.34	37.66	100	68.00	32.00	100
Rural Total	43.42	56.58	100	56.82	43.18	100	62.50	37.50	100

Source: Sample survey 2011-12

Rural Mokokchung: In the rural sample area of Mokokchung, there were 289 workers. The employed persons were disaggregated according to their age and educational level. The total working

population in sample is comprised of 50.02% male and 44.98% female in rural Mokokchung. Out of total sample population, the highest proportion of workers had high school level qualification con

Table 1: continued:

Age Group	Educational Levels					
	Graduate			Post-graduate & above		
	M	F	T	M	F	T
16-24	-	100	4.76	-	-	-
25-34	57.69	42.31	41.27	57.14	42.86	77.78
35-59	62.50	37.50	50.79	100	-	22.22
60 & above	100	-	3.17	-	-	-
Sub-Total	58.73	41.27	100	66.67	33.33	100
Tuensang						
16-24	-	-	-	-	-	-
25-34	40.00	60.00	27.78	-	-	-
35-59	61.54	38.46	72.22	-	-	-
60 & above	-	-	-	-	-	-
Sub-Total	55.56	44.44	100	-	-	-
Rural Total	58.54	41.46	100	-	-	-

Source: Sample survey 2011-12

sisting of 98 (53.06% male and 46.94% female), followed by higher secondary 65 (61.54% male and 38.46% female), and the third were graduates 63 (58.73% male and 41.27% female), followed by below high school consisting of 54 (44.44% male and 55.56% female). On the other hand the least were post-graduates with 9 (66.67% male and 33.33% female).

The sample working population was further divided into four age groups 16-24 years, 25-34 years, 35-59 years and 60 years and above. In sample aggregate, the highest proportion of workers were in the age group 35-59 years, having high school qualification consisting of (53.06% male and 46.94% female), and the lowest proportion of workers were found among post-graduates and most of them were in the age group of 25-34 years consisting of (57.14% male and 42.86% female) in Mokokchung district.

Rural Tuensang: In rural Tuensang there were 294 workers, consisting of 51.02% male and 48.98% female. Out of the total sample population, the highest number of workers were found to have below high school qualification consisting of 174 (43.10%

male and 56.90% female), attended high school level consists of 77 (62.34% male and 37.66% female), followed by higher secondary 25 (68% male and 32% female), and the least were graduates with 18 (55.56% male and 44.44% female). There were no workers with post-graduate degree in the rural sample area.

The highest number of workers in rural Tuensang, were in the age group of 35-59 years with 82.31% of the total workers. The lowest was found in the age group of 16-24 years. The percentage of working population as well as attainment of education was lower among female than male in rural Tuensang.

Urban Mokokchung: Mokokchung consist of 209 (45.45% male and 54.07% female) workers and Tuensang 155 (42.58% male and 57.42% female) in urban area. The workers in the area were classified into four age groups. It is seen in table 2 that among urban workers the highest was in the age group of 35-59 years in both the districts similar to that of rural area, and the least workers were found in the age group of 16-24 years in Mokokchung,

Table 2: Employment by age and educational level in sample urban areas of Mokokchung and Tuensang

Age group	Educational level								
	Below high school			High School			Higher Secondary		
Mokokchung	M	F	T	M	F	T	M	F	T
16-24 yrs	100	-	10.00	-	-	-	50.00	50.00	5.00
25-34	-	-	-	50.00	50.00	5.71	20.00	80.00	25.00
35-59	44.44	55.56	90.00	36.67	63.33	85.71	44.44	55.56	67.50
60 & above	-	-	-	100	-	8.57	-	100	2.50
Sub-total	50.00	50.00	100	42.86	57.14	100	37.50	62.50	100
Tuensang									
16-24 yrs	-	-	-	-	-	-	-	-	-
25-34	-	-	-	-	100	2.33	50.00	50.00	11.11
35-59	50.00	50.00	100	26.83	73.17	95.35	45.16	54.84	86.11
60 & above	-	-	-	100	-	2.33	100	-	2.78
Sub-total	50.00	50.00	100	27.91	72.09	100	47.22	52.78	100
Urban total	50.00	50.00	100	34.62	65.38	100	42.11	57.89	100

Continued:

Age group	Educational level					
	Graduate			Post-graduate		
Mokokchung	M	F	T	M	F	T
16-24 yrs	-	-	-	-	100	2.38
25-34	38.10	61.90	26.60	66.67	33.33	14.29
35-59	52.63	47.37	69.51	45.71	54.29	83.33
60 & above	75.00	25.00	4.88	-	-	-
Sub-total	50.00	50.00	100	47.62	52.38	100
Tuensang						
16-24 yrs	-	-	-	-	-	-
25-34	52.38	47.62	43.75	50.00	50.00	12.50
35-59	55.56	44.44	56.25	23.08	10	81.25
60 & above	-	-	-	100	-	6.25
Sub-total	54.17	45.83	100	31.25	68.75	100
Urban total	51.54	48.46	100	43.10	56.90	100

Source: Sample survey 2011-12

whereas it was nil in Tuensang in this age group. For Tuensang the least number of workers were in the age group of 60 years and above.

On the other hand, employment by education reveal that, the highest number of workforce were graduates consisting of 51.54% male and 48.46%

female. The least number of workers were found to have below high school level of education consisting of 50% each for male and female in aggregate.

By gender concern, in Mokokchung among female the highest number of workers were graduates sharing the same percentage with male 50%

in their respective total. The least number of workers belong to below high school where male and female share 50% respectively. In Tuensang, highest number of female workers had high school qualification composed of 73.17% in the respective total and the least number of workers were found to have below high school level education.

Table 3: Employment by age and education in sample total of Nagaland during 2011-12

Age group	Educational level								
	Below high school			High School			Higher Secondary		
Mokokchung	M	F	T	M	F	T	M	F	T
16-24 yrs	50.50	50.50	3.13	40.00	60.00	3.73	37.50	62.50	7.77
25-34	75.00	25.00	6.25	44.44	55.56	13.43	40.74	59.26	26.21
35-59	45.65	54.35	71.88	47.42	52.58	72.39	55.56	44.44	61.17
60 & above	37.50	62.05	18.75	78.57	21.43	10.45	80.00	20.00	4.85
Sub-total	45.31	54.69	100	49.62	50.38	100	51.46	48.54	100
Tuensang									
16-24 yrs	50.00	50.00	1.08	100	-	0.83	-	-	-
25-34	15.38	84.62	6.99	10.00	90.00	8.33	45.45	54.54	18.03
35-59	45.28	54.72	85.48	52.38	47.62	87.05	57.14	42.86	80.33
60 & above	50.00	50.00	6.45	75.00	25.00	3.33	100	-	1.64
Sub-total	43.55	56.45	100	50.00	50.00	100	55.74	44.26	100
Nagaland	44.00	56.00	100	49.61	50.39	100	53.05	46.95	100

Source: Sample survey 2011-12

Table 3: continued:

Age group	Educational level					
	Graduate			Post-graduate		
Mokokchung	M	F	T	M	F	T
16-24 yrs	-	100	2.05	-	100	1.96
25-34	48.94	51.06	32.19	61.54	38.46	25.49
35-59	56.67	43.33	61.64	48.65	51.35	72.55
60 & above	83.33	16.67	4.11	-	-	-
Sub-total	54.11	45.89	100	50.98	49.02	100
Tuensang						
16-24 yrs	-	-	-	-	-	-
25-34	50.00	50.00	39.39	50.00	50.00	12.50
35-59	57.50	42.50	60.61	23.08	76.92	81.25
60 & above	-	-	-	100	-	6.25
Sub-total	54.54	45.45	100	31.25	68.75	100
Nagaland	54.25	45.75	100	46.27	53.73	100

Source: Sample survey 2011-12

As per the survey conducted during 2011-12 in Nagaland, employment in the sample area by age is shown which indicates the variation in employment in different age groups. Distribution of workers by age in sample areas show that the highest number of workers were in the age group of 35-59 years and the lowest was in the age group of 16-24 years. Employment by education show that highest number of workers fall in the category of below high school 250 (44% male and 56% fe-

male) and high school level consists of 254 (49.61% male and 50.39% female). This was followed by graduates with 212 workers, where the percentage of male and female was 54.25% and 45.75% respectively. The lowest number of workers were found in the post graduate level with 67 (46.27% male and 53.73% female). This indicates that female workers have lower levels of education than male except in post graduate level where female percentage is higher.

Table 4: Employment by educational level in sample rural areas of Mokokchung & Tuensang

Area	Educational levels														
	Below High School			High School			Higher Secondary			Graduate			Post-graduate & above		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MKG	44.44	55.56	100	53.06	46.94	100	61.54	38.46	100	58.73	41.27	100	66.67	33.33	100
TSG	43.10	56.90	100	62.34	37.66	100	68.00	32.00	100	55.56	44.44	100	-	-	-
Sub-total	43.42	56.58	100	56.82	43.18	100	62.50	37.50	100	58.54	41.46	100	-	-	-

Source: Sample survey 2011-12

MKG=Mokokchung and TSG=Tuensang

The total number of workers in rural sample areas was 583 consisting of 289 (49.57%) from Mokokchung and 294 (50.43%) from Tuensang. Employment by educational level shows that highest number of workers had only below high school level education with (43.42% for male and 56.58% for female). This was followed by high school level with 176 (56.82% male and 43.18% female). In higher secondary level it was 88 (62.50% male and 37.50% female), Graduates

composed of 82 (58.54% male and 41.46% female). The lowest was found to be in the postgraduate level with 9 (66.67% male and 33.33% female) in rural Mokokchung, it was nil in rural Tuensang.

The data indicate that female employment is lower than male at all levels of education in the rural sample areas. Lower levels of education among female comes in the way of employment and employability.

Table 5: Employment by Educational Level in sample urban areas

Area	Educational levels														
	Below High School			High School			Higher Secondary			Graduate			Post-graduate & above		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MKG	50.00	50.00	100	42.86	57.14	100	37.50	62.50	100	50.00	50.00	100	47.62	52.38	100
TSG	50.00	50.00	100	27.91	72.09	100	47.22	52.78	100	54.17	45.83	100	31.25	68.75	100
Sub-total	50.00	50.00	100	34.62	65.38	100	42.11	57.89	100	51.54	48.46	100	43.10	56.90	100

Source: Sample survey 2011-12

MKG=Mokokchung and TSG=Tuensang

In urban area of the two sample districts the working population is classified according to their educational levels. The total employed in urban sample population was 364 consists of (44.51% male and 55.49% female). Of the total workers Mokokchung consisted of 209 (57.42%) and Tuensang 155 (42.58%). Out of the total sample the highest proportion of workers was graduates in both the districts consisting of 130 (51.54% male and 48.46% female). This was followed by high school level with 78 (34.62% male and 65.38%

female), and higher secondary 76 (42.11% male and 57.89% female). There were 58 post graduates comprised of (43.10% male and 56.90% female). The lowest was found to be having below high school level qualification in both the districts with 22 workers, consist of 50% each of male and female in Mokokchung and Tuensang.

The above analysis reveal that except in the level of below high school and graduates, in all the other levels of education female employment was higher than male in the urban area.

Table 6 : Employment by educational level in sample areas of Nagaland during 2011-12

Area	Educational levels														
	Below High School			High School			Higher Secondary			Graduate			Post-graduate & above		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Mkg	45.31	54.69	100	49.62	50.38	100	51.46	48.54	100	54.11	45.89	100	50.98	49.02	100
Tsg	43.55	56.45	100	50.00	50.00	100	55.74	44.26	100	54.54	45.45	100	31.25	68.75	100
Naga-land	44.00	56.00	100	49.61	50.39	100	53.05	46.95	100	54.25	45.75	100	46.27	53.73	100

Source: Sample survey 2011-12

The estimates of Employment by education in Nagaland in the two sample districts during 2011-12 show that, the highest number of workers in Nagaland was below high school level education with 28.52% in Mokokchung and 71.48% in Tuensang. The lowest was workers having post-graduate level of education consisting of 76.12% in Mokokchung and 23.88% in Tuensang. By gender concern the highest number of female workers was below high school, followed by high school level, graduates, higher secondary and the least were the postgraduates. As compared to male employment at each level of education, female accounted a higher proportion at high school and below and post graduate levels, whereas male workers were more than the female workers with

higher secondary and graduates levels of education.

(ii) Relationship between Education and Employment:

Education is vital for women work participation and to earn a decent income, which will improve their status and also enable them to improve their family welfare. Thus, in order to understand the impact of education on employment among female workers, an analysis has been done with the help of simple regression method taking levels of education as independent variable and employment as dependent variable. The result is indicated in the table as follows.

Table 7: Simple Regression Analysis of Employment on Education

	Urban			Rural		
	Mokokchung	Tuensang	Total	Mokokchung	Tuensang	Total
constant	0.485	.576	.531	.795	.853	.892
β	0.121 (5.04)*	0.089 (3.018)**	0.106 (5.642)*	-0.031 (0.951)	0.044 (1.557)	-0.039 (1.854)
R	.45	.29	.37	.08	.13	.10
R ²	.206	.085	.138	.006	.016	.011
Std. Error	.024	.030	.019	.033	.028	.021
F	25.48	9.109	31.831	.904	2.425	3.437
N	100	100	200	149	153	302

Note : *Significance at 1% and ** at 5% levels. Figures in the parentheses represents 't' values

Source: Sample Survey 2011-12

The results show that in urban area, the regression of Employment on Levels of education is significant, while the same for rural area is insignificant. Therefore, the hypothesis stating that increase in the levels of education increases women's employment may be accepted for urban female workers, while the same is rejected for rural female workers.

In urban area the result indicates that, the regression coefficient is 0.106, which is significant at 1% as its 't' value is [5.64], a unit increase in the level of education will lead to an increase in employment by 0.16 units. Its R² value is 0.138, which means that 14% of the variation in female employment is explained by attainment of educational lev-

els. For urban sample districts, similar situation is observed where the regression coefficient for Mokokchung is relatively more significant than Tuensang (at 1% and 5%, respectively as indicated by 't' values in the table).

Gender disparity in Employment and Income

For economic empowerment of women, their work participation is an important constituent towards measuring the gender equality and inequality. The per capita income continues to be an indicator of the economic well-being of the people. Hence, income of sample households and also by gender was taken in order to find out the economic well being of the people.

Table 8: Employment and income of sample areas of Mokokchung and Tuensang district

Area	Number of working population & gender composition			Monthly Per Capita Income (in rupees)		
	Male (%)	Female (%)	Total	Male	Female	Total
Mokokchung Rural	50.02	44.98	289	15413	9787	12882
Tuensang Rural	50.34	49.66	294	9730	4821	7292
Sub- total	52.66	47.34	583	12673	7160	10063
Mokokchung Urban	45.93	54.07	209	28070	24596	26191
Tuensang Urban	42.58	57.42	155	22104	20796	21353
Sub- total	44.51	55.49	364	25639	22921	24131
Total	49.52	50.48	947	17152	13821	15470

Source: Sample Survey, 2011-12

The per capita income of the working population in the sample total was estimated at Rs. 15,470 per month. The per capita monthly income was found to be higher among male (Rs.17152) than that of female (Rs.13821). Also by area, it was higher among male in both rural and urban areas than that of female.

The sample data reveals that in total women population, the proportion of workers in urban area (50.48%) was higher than that of rural area (47.34%). Similarly, the average per capita income in urban area was higher (Rs.22, 921) than that in rural area (Rs.7160). In rural area the number of female worker as well as per capita income is lower than male. In urban area, although the total female working population is more, their per capita income is lower than male; which implies that more female workers are engaged in lower paid jobs as compared to male workers.

Despite the differences, many respondents strongly felt that a woman's contribution to family income help raise the standard of living of their family. It may be meted that a significant proportion of her earning is spent for children's education and provides better food for the family

Conclusion

The study indicates that work participation in rural and urban areas has relationship between education, employment and income. It is evident from the study that higher education has positive impact on level of per capita income significantly.

Female workers are concentrated by and large at the lower spectrum of the income distribution in both rural and urban areas. The highest number of female workers had education below high school level, followed by high school level, graduates, higher secondary and the least were the postgraduates. Lower level and lack of education among women deprive them of getting employment which affects the income earning for their family.

This problem needs to be addressed by giving more attention to female education starting from primary education to provide skills and vocational trainings to advance their efficiency and enable them to enter better jobs at a later stage. It is important to address gender inequality with disaggregated data and that the policy intervention needs to be gender sensitive, which will promote gender equality in all aspects. This will enable to reduce gender disparity at the same time, it will enhance all round development of the society.

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