

# An Analysis Of Occupational Disparity And Work Participation In Nagaon District, Assam

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## Abstract

Occupational structure is one of the important aspects of socio-economic development of a particular place. Occupational structure varies spatially which shows the distribution of economically active workforce among different occupations. In case of occupational structure one can see the variation in terms of male and female work participation rate in the society which depicts the participation of both the gender in economic activities. The present paper attempts to understand the spatial pattern of occupational structure along with male and work participation rate in Nagaon district with special emphases on its revenue circles for the year 2001 and 2011. The entire research work is based on secondary sources of data which include statistical handbook, Primary census abstract and census of India.

**Keywords:** occupation, occupational structure, work force, socio-economic development.

## Introduction

The growth of various occupations signifies the economic development of a region (Rani, 2016). Occupation can be defined as those activities through which people secure their livelihood (Desai, 1971). Occupational structure reflects the division of labour in modern society (Maia & Sakamoto, 2014) as well as pattern of socio-economic opportunities. The occupational structure also reflects the disparity (Prasad & Pratap, 2017) that lies in different parts of region as it divides people in different economic activities, which in some way or other reflects the social segregation of various social groups by gender, race and caste (Maia & Sakamoto, 2014, Boskin 1974, Brown et al, 1980). Gender division in different economic activities implies the degree to which men and women occupy different positions in division of labour (Jonung, 1984). The growth in the number of people irrespective of gender actively

engaged in different activities shows that occupations are spreading as well as socio-economic conditions is improving.

The inhabitants of Assam are constituted by diverse ethnic groups with varied socio-cultural attributes. In case of Assam, the economy of the state mainly depends on agriculture. Therefore most of the rural people engaged in agriculture and its allied sectors. Among the total population of the state rural population occupies 85.90% and about 14.09% constitute urban population. According to 2011 census among total workers Assam constitute 72.57% main workers and 27.42% marginal workers. If one looks at the occupational structure among total main workers 36.12% accounts for cultivators, 10.39% agricultural labourers, 2.78% household industry and 50.68% constitutes other workers. The figures indicate the work participation of people under different categories which contributes to the economic development of the state. Unlike the other districts of Assam, Nagaon district plays a significant role in case of work participation of male and female in different activities.

### **Database and methodology**

The present study is based on secondary data. Data regarding different socio economic attributes including population, literacy, and different work force has been collected through various economic survey of India, statistical handbook of Assam, Census of India, Primary census abstract etc. For the present study above mentioned secondary sources of data has been used for census year 2001 and 2011. As the present paper focus on occupational structure of the district at revenue circle level it includes 9 revenue for the analysis, as per 2001 census data base. While analysing the occupational structure of the district at its revenue circle level an emphasis has also been made to measure the disparity of the working differentiation between men and women of the district. For this purpose Duncan index has been used to measure the segregation level. The index calculates the percentage of occupational disparity of the men and women and how much percentage is required to equalize the gap between the two.

### **Study area**

Nagaon district is located in the central part of Brahmaputra Valley which constitutes population of 2823768 according to 2011 census, out of which 1439112 are male and 1384656 are female. The district is bounded by Sonitpur and Brahmaputra in North, Karbi Anglong and North Cachar hills in South, East Karbi Anglong and Golaghat district in East. The district covers an area of 2287 square kilometre. The district has a literacy rate of 87.23%.

### **Objective**

The major objective of the paper is to analyse the present pattern of occupational structure of the district including its revenue circle and to understand occupational disparity of men and women in the district.

## Occupational structure of the district

Occupational structure shares a close relationship with the economic development of a particular region as well as educational attainment of a group of people. Occupational structure and work force participation rate of a place depend on various factor including economic, technological and geographical factors. Therefore every region exhibits different picture of work force participation. In case of Nagaon district, in 2011 it is recorded 41.45 percent of population as working population. Out of this total working population, male participation rate in the district is 63.63 per cent and female participation only 18.40 per cent. A change has also been observed in case of the percentage of total working population from 2001 to 2011 in the district. As depicted by the census data in 2001, the total working population was 38.53 percent, which has increased to 41.45 per cent during 2011. The percentage of male and female working population in 2001 was 60.15 per cent and 15.44 per cent respectively which has increased to 63.63 percent in case of male working population and 18.40 percent in female working population (table 1)

year	% of working population	% of male working population	% of female working population
2001	38.53	60.15	15.44
2011	41.45	63.63	18.40

**Source:** calculated from Primary census abstract, Nagaon 2001 and 2011.

The analysis clearly indicates that the share of total working population along with male and female working population has increased from 2001 to 2011 in the district. Though both the group of male and female showed an increasing trend, it has been seen that male workers are more than female workers. (table 2).

Revenue circle	% of male working population		% of female working population	
	2001	2011	2001	2011
Kaliabor	60.74	64.78	26.8	30.19
Samoguri	59.67	63.98	17.11	18.48
Raha	61.31	64.07	29.6	17.98
Nagaon	58.76	62.76	13.88	29.63
Rupohi	61.53	66.20	6.52	31.20
Dhing	60.23	63.87	7.15	18.11
Kampur	64.84	64.66	31.81	18.83
Hojai	59.22	63.13	10.58	8.11
Lanka	58.76	60.85	12.69	8.10

**Source:** Calculated from Primary Census Abstract, Nagaon 2001 and 2011

It has been seen that at the revenue circle level each revenue circle witnessed an increasing trend of both male and female working population. Highest percentage of male working population has been seen in Kampur revenue circle in 2001 that is 64.84% while in 2011 highest percentage of male working population has been observed in Kaliabor revenue circle

that is 64.78%. In case of female working population highest percentage has been seen in Kaliabor revenue circle in 2011 which witnessed 30.19 percent and lowest observed in Lanka revenue circle that is 8.10 per cent. An overall increase in percentage of total working population has been observed in the district from 2001 to 2011. It has been seen that participation of women in work force increased in each revenue circle of the district which can be attributed to the availability of working opportunities as well increasing educational level coupled with prevailing social system and improving position of women in the society. while looking at occupational structure of the district it has been seen that in 2011 55.33% engaged in primary, 3.89% in secondary and 40.77% in tertiary activities.

### DUNCAN INDEX

This index was proposed by Otis Dudley Duncan in 1955, a professor at University of Chicago and Beverly Duncan published the article in American sociological review “A methodological analysis of segregation indices”. Duncan segregation index is best to measure the disparity of the working differentiation between men and women of the particular region. It calculates the percentage of occupational disparity of the men and women and how much percentage is required to equalize the gap between the two.

$$\text{DUNCAN INDEX (D)} = \frac{1}{2} \sum |f_i - m_i|$$

Where  $f_i$  is the fraction of women in the  $i^{\text{th}}$  occupation and  $m_i$  is the fraction of men in the  $i^{\text{th}}$  occupation.

S	FEM	FE	MAL	MAL	FE	FE	MA	MA	$f_i - m_i$	$F_i - m_i$	Ab	Abs
L	ALE	MA	E	E	MA	MA	LE	LE	2001	2011	sol	olut
.	WOR	LE	WOR	WOR	LE	LE	FRA	FRA			ute	e
N	KING	WO	KING	KING	FRA	FRA	CTI	CTI			Val	valu
O	2001	RKI	2001	2011	CTI	CTI	ON	ON			ues	es
.		NG			ON	ON	2001	2011			200	201
		2011			2001	2011					1	1
1	26.8	7.15	60.74	64.78	0.17	0.16	0.12	0.11	0.04	-	0.0	0.0
					1	7	5	3	6	0.06	46	54
										8		
2	17.11	18.4	59.67	63.98	0.10	0.10	0.12	0.11	-	0.00	0.0	0.0
		8			9	2	3	1	0.01	7	14	09
									4			
3	13.88	17.9	58.76	64.07	0.88	0.09	0.12	0.11	0.76	0.00	0.7	0.0
		8			6	9	1	2	5	2	65	13
4	29.6	29.6	61.31	62.76	0.18	0.16	0.12	0.11	0.06	0.07	0.0	0.0
		3			9	4	6	0	3	8	63	54
5	31.81	31.2	64.84	66.20	0.20	0.17	0.13	0.11	0.07	0.07	0.0	0.0
		0			3	2	3	5		8	7	57

6	10.58	18.1 1	59.22	63.87	0.06 8	0.10 0	0.12 2	0.11 1	- 0.05 4	0.00 4	0.0 54	0.0 11
7	12.69	18.8 3	58.76	64.66	0.08 1	0.10 4	0.12 1	0.11 3	- 0.04	0.00 6	0.0 4	0.0 09
8	6.52	8.11	61.53	63.13	0.04 2	0.04 4	0.12 7	0.11 0	- 0.08 5	- 0.05 9	0.0 85	0.0 66
9	7.15	8.10	60.23	60.85	0.04 6	0.04 5	0.12 4	0.10 6	- 0.07 8	- 0.05 5	0.0 78	0.0 55
	$\Sigma=$ 156.7	$\Sigma=$ 180. 63	$\Sigma=$ 486.3	$\Sigma=$ 574.3							$\Sigma=$ 1.2 15	$\Sigma=$ 0.3 28

$$\begin{aligned} \text{DUNCAN INDEX(D) FOR 2001} &= \frac{1}{2} \sum |f_i - m_i| \\ &= 1/2 (1.215) = 0.0675 \end{aligned}$$

$$\begin{aligned} \text{DUNCAN INDEX(D) FOR 2011} &= \frac{1}{2} \sum |f_i - m_i| \\ &= 1/2 (0.328) = 0.164 \end{aligned}$$

Gender rate means proportion of labour force participation of the population ages 15 and older that economically engage or in search of job and on the other hand, Duncan's index of dissimilarity weighs occupation of the population. A Duncan segregation index value of 0 occurs when the share of women in every occupation is the same as women's share of employment as a whole. Value of 0 indicates perfect gender integration and the value of 1 indicates complete gender segregation. In 2001, the value of D is 0.0675 which indicates that about 6.75% of women need to change their occupations to equate the occupational distribution between men and women while in the year 2011 the value of D is 0.164. which imply 16.4% of women in 2011 has need to change their occupation to make it equal in the district. If we, compare the values of 2001 with 2011 then we find that the disparity between the genders is increasing after 2001 and which implies that more women need to change their occupation to bring perfect integration in occupational distribution.

Occupational segregation by gender inclined rapidly after 2001 to 2011. It increases up to 10% within this 10 years duration. The inclining behaviour of occupation arise due to of many reasons. Some of the reasons are unequal treatment of people based on gender, height, weight etc in the workforce. Occupational disparity affects the socio-economic status of a region which is linked with their basic needs or assessment such as finding a job, buying their basic needs of living.

Segregation by gender is very common in labour force mainly in a small town like Nagaon despite of their equitable qualification. Since a female is very much associated with bearing a

child and raising her family life therefore they had less time and flexibility in taking part in other economic activities.

### **Conclusion**

Occupational structure and work force participation has significant economic and social implications. In the revenue circles of Nagaon district it has been observed that male working population is comparatively higher than female working population. Which imply more involvement of male in economic activities. In the analysis it has been seen that work force participation rate increased gradually from 2001 to 2011. The rate of Gender segregation has been increased from 2001 to 2011 which implies inequality of male and female working population occupational division. Therefore measure should be taken to bring gender wise integration in workforce who ensures proportionate participation of man and woman in economic activities.

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