

WOMEN EMPOWERMENT AND OCCUPATION LINKAGE: A CASE STUDY OF NAGAON DISTRICT

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ABSTRACT

The authors conducted the study in the urban areas of Nagaon district of Assam with the objectives of estimating the empowerment level of women belonging to 18-60 year age group and examining the link between empowerment level and occupational status of the sample women. Fuzzy set technique is used to analyze the data. The results of the study show a low average empowerment level of urban women of the district. The percentage contribution of the attribute 'decision making within family' to the average empowerment level of women is found to be the lowest while it is highest for the attribute 'freedom of movement'. The results also show that there is a positive relationship between the occupational status (income-based) of women and their empowerment level.

Keywords: *Decision making within the family, Freedom of movement, Political participation, Fuzzy set technique.*

Introduction:

The World Bank has identified empowerment as one of the key constituent elements of poverty reduction and as a primary development assistance goal and suggested that empowerment of women should be a key aspect of all social development programs (World Bank, 2001). Therefore, since 1990's women have been identified as an important agent of sustainable development. Besides this, women's equality and empowerment are seen as central to a more holistic approach towards establishing new patterns and processes of development that are sustainable. Gender equality and women's empowerment are human rights that lie at the heart of development and the achievement of the Millennium Development Goals (Lather & et al, 2009).

Empowerment is the process by which one can gain control over her/his own resources and the circumstances of her/his life. Therefore, empowerment of women can be viewed as a way of creating social environment in which women can make decision of their own life and can make choices individually. Empowerment refers to increasing

spiritual, economic, political, social, educational and gender strength of individuals and communities. The concept of empowerment is multidimensional. Empowerment can be viewed as economic empowerment, social empowerment, political empowerment, educational empowerment, community empowerment etc. Although a considerable debate on what constitutes empowerment exists, according to Kabeer's (2001) definition empowerment implies "the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them."

Empowerment of women is a process in which women gain greater share of control over resources like material, human and intellectual viz., knowledge, information, ideas; financial resources viz., money and access to money and; control over decision-making in the home, community, society, nation, and to gain power (Bisnath and Elson, 1999).

Since women empowerment is a prerequisite for economic development, this study aims at analyzing the level of women empowerment in a remote economically backward region of Assam. The

geographical area selected for the study is urban areas of Nagaon district of Assam. The district is selected for the following reasons. It is one of the most backward districts of Assam and is thickly populated (density of population is more than 700 per square Km as per 2011 Census which is the highest in the state). As per HDR of Assam- 2003, the position of Nagaon in HDI ranking is 14 out of 23 districts of the state and its GDI rank is 22 which points towards the prevalence of high gender disparity in the society. Moreover, the female work participation rate is only 12.24 in 2001 which is the third lowest in Assam. The female literacy rate is 68.07% as per census 2011. Keeping all these points in view, a pioneering attempt is made here to study the level of women empowerment in the urban areas of Nagaon district of Assam and to examine its linkage with the occupational status of the women of the district. The second objective of examining the linkage between women empowerment and their occupation has been taken up because this area has remained largely unexplored till date in the domain of research on empowerment.

Objectives:

The study, therefore, addresses the following objectives:

- (i) To assess the level of women empowerment by constructing and estimating women empowerment index.
- (ii) To examine the linkage between women empowerment and her occupational status.

Methodology and the Design of the study:

The study is based on primary data and the target group population comprises of adult women belonging to 18-60 age group. Identification of this group is in the line of the study that focuses on empowerment and workforce participation of women. A sample of 80 households is selected for the study at random from the urban areas of the district of Nagaon. A structured interview schedule is used for collecting primary data through household survey. Direct interview method is followed for collection of data. The data are collected from both employed and unemployed women.

In most of the less developed countries women are perennially economically, socially and politically backward, battered and marginalized. At the same time in some countries like India women still occupy the centre stage in day to day family business like cooking and maintaining other household chores. She is the sole provider of care services and other unvalued works that are essential for maintaining the family. The level of women empowerment is, therefore, reflected most in her ability to take decision regarding day to day family matters. However, the conservative backward societies of less developed countries like that of India did not allow women to

venture out at will and the 'purda system' severely curtailed women's freedom of movement outside home. Although the severity of these social rigidities was more in the past, the same exist even today in different parts of India in different forms. The literature on women empowerment, therefore, put emphasis on assessing women empowerment in the light of her ability to move freely around and outside home. The third area which is basic to women empowerment is her ability to participate in political activities. In a democratic country like India, political power is supreme in bringing in social and economic changes in the country. The political power vests on people's representatives who frame rules, laws and acts to facilitate holistic development of the country. The participation of women in such an important area has always remained very low in India which hindered the development of women. The percentage of seats in parliament held by women is only 9.3 percent in India as per HDR- 2004. The higher political participation of women is essential for their emancipation from social and economic slavery. For these reasons, women's empowerment level also rests on the extent of their participation in political activities – their power to select their representatives in democratic institutions and Houses.

Therefore, the basic segments which constitute the level of women empowerment are her ability to take decision within family, her freedom of movement and her political participation. The variables which are used in this study to measure women empowerment in its above mentioned three constituent parts are defined below.

Decision making within family:

The decision making ability of women within the family is judged by her decision making power in regard to Family Health Care,

Larger household purchases, Routine household purchases, Family size, Family planning, Job of woman, Going outside home by any member, Family day to day expenditure and Spending personal income. In regard to each of these variables, value assigned is 1 if woman is found to be able to take decision independently; 0.5 if she takes decision after discussion with other family member(s) and; 0 if she has no role to play in decision making.

Freedom of movement:

The variables representing freedom of movement are women's ability to move freely for Local market for purchase, Local health centre/clinic, Gossiping in the neighbourhood, Visiting home of relatives/friends, Visiting other city or village, Recreation in cinema hall, club, festival or village fair etc., Visiting parental home, Participating in cultural programmes of village/town, Participating in religious programmes

of village /town , Participating in the meeting of women organizations, Doing job/work outside home for self-earnings.

As like previous case, each of the said variables are quantified as 1 if woman has full freedom of movement; 0.5 if woman moves out after having discussion with other member(s) of the family and; 0 if woman has no freedom of movement.

Political Participation:

The following variables define the constituent part Political Participation of women empowerment. Ability to - cast vote in election, Vote to a candidate of choice, Attend the speeches of the election candidates, Update self about the political system and, Talk to political leaders/representatives in need. The values assigned to each of these variables are as follows – 1 if woman enjoy full freedom of political participation; 0.5 if she has partial freedom; and 0 if the woman has no freedom of participation.

Thus applying this method of quantification of variables, representing the constituent parts of empowerment, in fuzzy set analysis the women empowerment is measured.

Fuzzy set technique is used to analyze and interpret the data in the study. The notion of fuzzy set was first introduced by Zadeh in 1965 when he defined fuzzy set as “a class of objects with a continuum of grades of membership”. The fuzzy set theory have been applied in different frameworks, for example to measure poverty [Cerioli, Zani, (1990); Lemmi, Betti, (2006)]; well-being [(Chiappero, Martinetti,(2000); Balamoune-Lutz, (2004)]; quality of life (Lazim, Osman, (2009)); customer satisfaction for a service [Zani, Milioli, Morlini, (2012)], or satisfaction of graduates with the suitability of university education for working purposes (Crocetta, Del Vecchio, 2007)).

The fuzzy set approach in this paper is applied to analyze the empowerment of women in urban areas of Nagaon district. The mathematical framework of the same is presented below.

Let X be a set and x some elements of X and E is the fuzzy subset which represents the set of empowered women. The degree of membership to the fuzzy set E of the i -th individual ($i=1, \dots, n$) with respect to the j -th attribute ($j=1, \dots, m$) is defined as

$$\mu_E \left(X_j \left(a_i \right) \right) = x_{ij}$$

$$0 \leq x_{ij} \leq 1$$

Where

- i. $x_{ij} = 1$ iff the i -th individual is fully empowered with respect to the j -th attribute;
- ii. $x_{ij} = 0$ iff the i -th individual is not empowered with respect to the j -th attribute

iii. $0 \leq x_{ij} \leq 1$ iff the i -th individual is partially empowered with respect to the j -th attribute with an intensity belonging to the open interval (0,1).

The empowerment index of the i -th individual $\mu_E(a_i)$ i.e. the degree of membership of i -th individual to the fuzzy set E is defined as the weighted average of x_{ij} ,

$$\mu_E(a_i) = \sum_{j=1}^m x_{ij} w_j / \sum_{j=1}^m w_j$$

Where w_j the weight attached to the j -th attribute.

The empowerment index $\mu_E(a_i)$ measures the degree of empowerment of the i -th individual as a weighting function of the m attributes. Hence, it measures the intensity to empowerment of the i -th individual subject to decision making, freedom of movement and political participation.

The weight w_j attached to the j -th attribute stand for the intensity of empowerment of X_j . It is an inverse function of the degree of empowerment of this attribute by the population of individuals.

A weight that fulfils the above property is proposed by Cerioli and Xani (1990) and can be represented in the following form-

$$w_j = \log \left[n / \sum_{i=1}^n x_{ij} \right] \geq 0$$

Finally, the empowerment index of the population μ_E is simply obtained as a weighted average of the empowerment index of the i -th individual $\mu_E(a_i)$

$$\mu_E = 1/n \sum_{i=1}^n \mu_E(a_i)$$

In addition to the multidimensional empowerment index of the i -th individual $\mu_E(a_i)$ and of the population μ_E , the fuzzy set theory also allows to obtain an unidimensional empowerment index for each of the j -th attributes considered.

While the multidimensional empowerment index for the i -th individual $\mu_E(a_i)$ is the weighted average of x_{ij} , with weight w_j , the unidimensional empowerment index for the j -th attribute is the average of x_{ij} :

$$\mu_E = 1/n \sum_{i=1}^n x_{ij}$$

In this way it is possible to get the multidimensional empowerment index of the population μ_E as the weighted average of $\mu_E(X_j)$ with weight w_j :

$$\mu_E = 1/n \sum_{i=1}^n \mu_E(a_i) = \sum_{j=1}^m \mu_E(X_j)w_j / \sum_{j=1}^m w_j$$

In order to define the degree of membership x_{ij} to the set E of the i -th household, $i = 1, 2, \dots, n$, with respect to the j -th indicator, $j = 1, 2, \dots, m$ it is possible to follow a three steps procedure- First, for each indicator X_j it is necessary to build a table containing the possible simple or composite outcomes of X_j .

Second, to each outcome it is associated a value, in the closed unit interval [0,1], which represents, for the j -th indicator, the degree of membership to E corresponding to the given outcome.

Third, for the i -th household, $i = 1, 2, \dots, n$, the outcome is observed with respect to the j -th indicator and it is assigned the corresponding degree of membership to E, which for the i -th household is x_{ij} .

Tables-1 represents the degrees of membership assigned to the outcomes of the $m = 3$ constituents considered.

Data analysis, Results and Discussion:

Table- 1: Degree of Empowerment & Weighted Women Empowerment Index

Attributes	$\mu_E(X_j)$	W_j	$\mu_E(X_j)W_j$
X_1 (Decision making within the family)	0.6142	0.2116	0.1299
X_2 (Freedom of movement)	0.4786	0.3200	0.1531
X_3 (political Participation)	0.6037	0.2191	0.1322

In Table-1, X_1 represents respondent's decision making power within the family. X_2 Represents respondent's freedom of movement and X_3 represents respondent's political participation. $\mu_E(X_j)$ Represents degree to empowerment

according to the attributes, w_j Indicates the weight of the attributes and $\mu_E(X_j)w_j$ represents weighted women empowerment index.

Now the overall women empowerment index (WEI) is calculated by using the following formula

$$WEI = \sum_{i=1}^n \mu_E(X_j)w_j / \sum_{j=1}^m w_j$$

$$=0.4152/0.7507$$

$$=0.5530$$

Thus we can say that the women empowerment index in urban areas of Nagaon district is only 0.5330 in the range of (0,1).

The contribution to the empowerment index of three attributes (constituents of empowerment) used in the analysis can be obtained by using the following formula

$$\mu_E(X_j)w_j / \mu_E \text{ where } j=1,2,3$$

The contribution to the empowerment index by attribute (percent values) is shown in the following Table -2.

Table-2: Constituent –wise Women Empowerment Level (in %)

Attributes	Empowerment level
X_1	31.3
X_2	36.9
X_3	31.8

Sub group empowerment Decomposition:

It is possible to decompose women empowerment index by sub population. Suppose the total population is divided into K groups - S_k , of size n_k ($k=1,2,\dots,K$). The intensity of women empowerment of i -th individual of S_k is given by

$$\mu_E(a_i^k) = \sum_{j=1}^m x_{ij}^k w_j / \sum_{i=1}^m w_j$$

Where x_{ij}^k is the degree of membership related to the fuzzy sub set E of i -th individual ($i=1,2,\dots,n$) of S_k with respect to the j -th attribute ($j=1,2,\dots,m$). Hence, the fuzzy women empowerment associated with group S_k is:

$$\mu_E^k = 1/n_k \sum_{i=1}^{n_k} \mu_E(a_i^k)$$

Again we divide the total 80 respondents into four groups of occupation on the basis of their level of income. The groups are as follows-

1. Group A (Income more than Rs.40000 per month)
2. Group B (Income between Rs.10000 to Rs.40000 per month)
3. Group C (income between Rs.500 to Rs.10000 per month)
4. Group D (The unemployed and those whose income is less than Rs.500 per month)

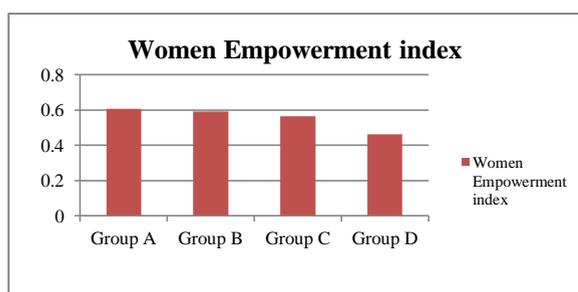
After analyzing the data according to the groups the result obtained are shown in Table-3.

Table-3: Occupation category and Empowerment

Group	WEI
Group A	0.6074
Group B	0.5917
Group C	0.5662
Group D	0.4611

The graphical representation of the result is shown in Diagram-1.

Diagram-1



From the above table and diagram it can be said that the women of group A whose income is more than Rs.40000 have higher empowerment level than the others and the women of group D who are unemployed or having income less than Rs. 500 have lowest empowerment level. Thus we can say that income-based occupational position has strong linkage with women empowerment because those women who are working as Group A workers have more decision making power within family, freedom of movement and higher political participation than those women who are unemployed or low income earner.

The overall average level of women empowerment in urban areas of Nagaon district is found to be low at 0.5530. Attribute-wise, the average empowerment of women in the area of ‘freedom of movement’ is found to be highest at 36.9 % out of the total of 100 % empowerment distributed over the attributes; the next highest is 31.8% in the area of political participation. The matter of concern is that the attribute-wise the share of empowerment is lowest in the area of ‘decision making power within family’. Besides this,

when we talk about the occupation groups the results show that higher income groups in higher occupations have higher empowerment value than lower income and unemployed groups. Therefore higher occupation implies higher empowerment of women. This is probably because of higher prerogatives and position associated with higher occupations that enable a woman to raise her voice in household decision making process, to move around with more freedom and also to participate more actively in political system. Thus we can say that there is positive correlation between income-based status of women’s occupation and women empowerment.

Conclusion:

The overall average women empowerment level is found to be low in the urban areas of Nagaon district of Assam. The contributions of three selected attributes to this average women empowerment level is a pointer towards the complex social system of the study area which is more or less similar in other parts of the backward societies of India. The contribution of attribute ‘decision making at household level’ is found to be only 31.3 percent while the contribution of other two attributes viz., ‘freedom of movement’ and ‘political participation’ is 36.9 percent and 31.8 percent each respectively. This implies that women have relatively less empowerment in decision making at household level. This shows subjugation of women at family level in a male dominated society. On the other hand, women are no longer ‘housekeeper’ only; they are bread earners for the family as well. For doing jobs and other paid works outside home, they are allowed to move out but within family their power of taking decision regarding family matter is restricted by male dominance. Similar is the case with political participation. Women are allowed to participate in political activities since their casting votes, for example, under male supervision is required for safeguarding the interest of male members of the household and their community as a whole. The higher women empowerment in the area of ‘freedom of movement’ and ‘political participation’ appears to be controlled by concealed male interest. The relatively low empowerment of women at household level, in fact, raises many questions about the actual empowerment level of women in other areas. The matter needs deeper scrutiny on the basis of a larger size of sample of heterogeneous nature.

The link observed in the study between women empowerment and their occupational status is in expected line. Women in higher occupations have higher level of empowerment. Large scale participation of women in monetarily rewarding works is necessary for Women empowerment. Policy measures are required to be taken in the direction of generating more high paid jobs for the women of Nagaon district of Assam. The result that the

unemployed including housewives has the lowest level of empowerment corroborates the fact that the occupational status of women has a direct bearing on their empowerment level.

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