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Chandan Roy and Susmita Chatterjee and Sangita Dutta
Gupta

Kaliyaganj College, West Bengal, India, Maharaja Manindra
Chandra College, Kolkata, India, IFIM Business School, Bangalore,
India

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WOMEN EMPOWERMENT INDEX: CONSTRUCTION OF A TOOL TO MEASURE RURAL WOMEN EMPOWERMENT LEVEL IN INDIA

Dr. Chandan Roy¹, Dr. Susmita Chatterjee², Dr. Sangita Dutta Gupta³

¹Assistant Professor & Head, Department of Economics, Kaliyaganj College, (Corresponding Author)
Kaliyaganj, Uttar Dinajpur, West Bengal - Pin-733129
Email [id-chandanroy70@gmail.com](mailto:chandanroy70@gmail.com)

²Assistant Professor- Maharaja Manindra Chandra College, Kolkata
[Email-susmita.cb@gmail.com](mailto:susmita.cb@gmail.com)

³Assistant Professor-IFIM Business School, Bangalore
Email-sangitadgpt@gmail.com

Abstract:

Poverty ignites the societal gap between men and women, while economic development narrows it down through its gender promotional activities. There is bidirectional relationship between economic development and empowerment of women. Women empowerment, being dependent on complex sociological and economic issues, needs to be measured in terms of specific parameters like 'access to resources', 'decision making capability' and 'ability to take a stand'. This particular study develops an Index based on few sector-specific parameters to measure empowerment level of women engaged in Self Help Groups. Both 'individual empowerment index' and 'group empowerment indices' have been constructed, where 'financial liberty', 'ability to take decisions', 'health condition of the women and 'ability to stand up against the evils of the society' have been considered as her empowerment parameters. The index was applied on 300 SHG Group members of rural West Bengal, which provided us an idea about the existing level of rural women empowerment in West Bengal.

Key Words: Women, Empowerment Index, Economic Development, Self Help Group, Economic Development

JEL Classification: B54, O16, I15, I25

I. Introduction:

“Nothing, arguably, is as important today in the political economy of development as an adequate recognition of political, economic, and social participation and leadership of women”

(AmartyaSen, 1999).

Women empowerment is a much-debated issue. Empowerment in true sense means that women can realize their dreams, can take decisions and have access to the resources of the country. Bennet(2002) defines empowerment as “the enhancement of assets and capabilities of diverse individuals and groups to engage, influence and hold accountable the institutions which affect them” .Women’s empowerment can lead to Economic development and there exists a bi-directional relationship between the two. Women’s empowerment means women have equal earning opportunities, political participation and access to other constituents of development like health and Education (Duflo, 2011). Women empowerment leads to economic development. Expenditures on children go up when transfer payments are given to women and not their husbands. Higher spending on education promotes human capital accumulation which in turn leads to economic growth (Doepke and Tertilt, 2011). India is the largest democratic country in the world with women constituting significant proportion of the population. Among them, majority lives in the rural areas. So empowerment of women can lead to economic development of the country. Self-Help Groups (SHGs) are effective tools in social upliftment of women as well as eradication of poverty. SHGs are usually associations of 10-20 members of rural women who come together to find solution for their common problems. The main objective of the group is to support their own community members through developing habits of small savings. This ultimately facilitates access to credit. SHGs act as a catalyst for social and financial inclusion of women. It is important to note that the effectiveness and future of self-help groups depend upon the role played by the women who have been empowered by self-help groups to take the movement forward. For eradicating gender inequality in all aspects, active participation of women in the society is required for bigger decision making process. This will eventually increase their participatory role in labour force as well as easy access of public goods.

The very existence of SHGs is highly relevant in this context to make the people below poverty line self-aspired and self-reliant. SHGs enable them to increase their income, improve their standard of living and status in society. It acts as a catalyst for bringing this marginal section of society to the mainstream. SHG is a homogeneous group of poor, women, users etc. This group is a voluntary one formed on areas of common interest so that they can think, organize and operate for their own development. SHG functions on the basis of cooperative principles and provides a forum for members to extend their line of co-operation. It is considered as a means of sustainable development.

Empowering women, which is another result of the women entrepreneurship, involves a multi-dimensional process (Malhotra A., and Mather, M. 1997, Bali Swain and Wallentin, 2012). Most researchers argue that the economic impact of microfinance empowers a woman through boosting her income, which in turn raises her power of bargaining to allocate resources even within the households. Others emphasise on the social impact of microfinance on women’s empowerment with higher autonomy in decision-making, greater awareness and political and social inclusion. Empirical evidence from earlier research on microfinance substantiates that the economic and social impact of microfinance truly empowers women (Bali Swain and Wallentin, 2009; 2012; Malhotra and Schuler, 2005; Pitt and Khandker, 1998; Pitt, Khandker, and Cartwright, 2006; Armendáriz and Morduch, 2010; Anderson and Eswaran, 2005; Dijkstra, 2002; Beteta, 2006; Bardhan and Klasen, 1999).After experiencing

seven microfinance programmes in Cameroon, Mayoux (2001) infers that microfinance can indeed make substantial contribution to women's empowerment through building social capital and developing women's network via group activities. But serious questions, which need to be addressed are 'what sort of norms, networks and associations are to be promoted', 'in whose interest' and 'how they can best contribute to empowerment particularly for the poorest women'. Micro-credit is often projected as a painless way of attaining 'gender equity' and securing credit to improve the economic position of poor women and empower them otherwise (Rhyne and Otero, 1994; Issac et.al., 2002). These arguments raise the prospects of women's access to micro credit which in turn leads to greater well beings for the families and higher bargaining power for the women within household and then it transforms into greater empowerment in the public, as a group (Mayoux, 1998).

Devika and Thampi (2007) raised three important issues connected with empowerment generation in SHGs. Firstly, income pattern of the microcredit woman which gives her greater ability to bargain with patriarchy; closer association between women and local bodies, which must be observed to measure the balance of power and thirdly, the extent to which these gains are translated to political actions not just to appropriate patriarchal power but to challenge it in more fundamental way.

(Deininger and Lau, 2009) found that longer exposure to the program had positive impacts on asset accumulation, consumption and nutritional intake. (Swain and Wallentin, 2008) has found positive impact on empowerment on the basis of study conducted in five states. They found there is significant increase in the level of empowerment of women. No change was however observed in the case of control group. They found out that SHG participants were clearly empowered with the possibility some may have been empowered more than others.

However, a few studies find zero impact (Banerjee et al., 2013) or negative impact of microcredit on women's decision making power, especially when the loans are being controlled by the husbands and where women depend upon them for repayments (Garikipati, 2008; Goetz and Gupta, 1996; Rahman, 1999; Leach and Sitaram, 2002). Self Help Group is often seen to be built up through a combination of thick trust (personalised) within peer groups and thin trust (generalised and institutionalised) that exists between specialised elite, like banks, NGOs and other agencies and non-elites. A weak form of generalised and civic trust are often built through interactions with NGOs and bank officials, while institutionalised trust with the other organization remain at low level (Sabhlok, 2011).

Thus there is vast body of literature on the correlation between empowerment and economic development. We also find enough evidence in literature to show that SHGs result in empowerment of women. However, the level of empowerment has not been measured so far. to Our study develops the empowerment Index and also measures how far SHGs have been successful in empowering women. The index will give us clear idea about the level of empowerment and the policies that government might adopt to achieve other Millennium Development Goals (MDG).

II. Women Empowerment Indices Construction: A Review of Literature

In 1995, UNDP (United Nations Development Program) in its pioneer approach, introduced two major indices, namely Gender related Development Index (GDI) and Gender Empowerment Measure (GEM). GDI measures the gender gaps in life expectancy, education and income, which can be considered as a gender sensitive extension of HDI (Klassen, 2006).

GEM or Gender Empowerment Measure is the first constructed women empowerment index which attempts to measure the extent of gender inequality across the globe's countries based

on estimates of women's relative income, participations in high paying economic positions with the power and access to professional and parliamentary positions.

In 2010, the Gender Inequality Index (GII) was constructed by UNDP by taking indicators both from GDI and GEM and incorporating few more indicators of women vulnerability. Health vulnerability has been incorporated in terms of reproductive health (i.e., maternal mortality rate and adolescent fertility rate) and economic vulnerability has been represented in terms of labour-force participation rate. Empowerment has been represented in terms of larger parliamentary participation and high level of educational attainment. Thus initially all these gender sensitive indices have been defined as achievement indices at macro level. No micro-level assessment has been made till 2012.

Bhattacharya and Banerjee (2012) made an attempt to focus on the latent nature of empowerment reflected through their capability enhancement. They interpret process of empowerment in terms of oppressive power, challenging to power and creative power. So at individual level, the extent of conscious participation in the decision making to protect and enhance her own well-being would be a definite measurement of empowerment.

In March 2012, Women's Empowerment in Agriculture Index has been launched by OPHI (Oxford Poverty and Human Development Index) with USAID (United States Agency for International Development) and IFPRI (International Food Policy Research Institutes), which tracks women's engagement in agriculture in five domains, e.g., production, resources, income, leadership and time-use. It measures women's empowerment relative to men within households, providing a more robust undertaking of gender dynamics within household communities. Construction of this robust WEAI has opened the options of computing sector specific Women Empowerment Index in several fields, incorporating the sector specific criteria associated with empowering women in perspective of varied socio-economic conditions.

Bhattacharya, Banerjee and Bose (2013) measured women empowerment at individual level and made an analytical exposition where 'empowerment' has been interpreted in terms of capability enhancement. In their analysis, three basic capabilities, entitled 'health', 'knowledge' and 'autonomy' have been identified and to estimate these capabilities few indicators have been chosen. 'food intake', 'anaemia' and 'BMI' are the proposed indicators of 'health'. 'educational attainment', 'functional literacy' and 'application of knowledge of family planning' have been selected as indicators of 'knowledge' and the proposed 'autonomy' indicators are 'actual decision-making', 'perceived freedom' and 'permission regarding mobility'(negative indicator). Thus the aggregate capability scores on three dimensions give the quantitative measurement of empowerment at individual level. A particular form of structural equation modelling (MMIC) has been used to estimate capabilities and the empowerment index has been constructed as weighted average of the scores of the three capabilities.

In another study, women's agency in sericulture sector has been investigated through construction of dual empowerment indices entitled 'Family Empowerment Index' (FEI) and 'Social Empowerment Index'(SEI) by Roy and Roy Mukherjee (2014). In these indices few sector sensitive variables have been chosen to determine the empowerment scores. FEI has been constituted with three factors, namely (a) production decision, (b) decision about income spending, and (c) decision of health & education. These three indicators are given equal weights to construct FEI. Similarly in computing SEI, the three chosen indicators are (a) SHG membership, (b) NGO membership and (c) Membership in Local Political Party.

III. Research Objective & Methodology

This basic objective of this study is to develop Women Empowerment Index for those women who are engaged in Self Help Groups depending upon few sector-specific parameters. We intend to determine both individual and group empowerment index. The research hypothesis of this study, which is based on the review of literature, includes 'financial liberty', 'ability to take decisions', 'health condition of the women' and 'ability to stand up against the evils of the society' as the significant determinants of women empowerment index. We intend to identify the major domains through which the power of women is achieved in the rural region. Then, relying on the adequacy of women's agency in those specific domains, composite index would be constructed. That is the precise design of our research analysis. We also intend to apply our constructed index on 300 women, who belong to several SHG from districts of North 24 Parganas and Nadia of West Bengal, India. Based on that analysis a rough estimate of the rural level of empowerment can be determined in West Bengal.

IV. Construction of Women Empowerment Index and Empirical results

In this sector specific analysis, it is imperative to contextualize the domains of empowerment in the beginning. Observing the behavioural pattern of women involvement in micro-credit activities through SHGs, we propose five gross domains through which women empowerment at individual level can be assessed. Few of these domains are empowerment boosting while others are consequences of empowerment. We classify these as 'input domain' and 'output domain'. We propose three 'input domains' as 'activity domain', 'knowledge domain' and 'health domain' and two 'output domains' as 'domestic autonomy' and 'social interaction'.

To measure the impact of domains we propose few factors under each domain which would be quantifiable to assess the level of empowerment at individual level.

For capturing the impact of 'activity domain' our proposed factors are credit access, resource utilization and repayment decision, while the 'knowledge domain' can be captured through financial literacy, educational attainment and knowledge about family planning. The 'health domain' can be captured through BMI, anaemia-free-health and sanitation & pure drinking water facility.

We propose the output domain 'domestic autonomy' to be measured through protest against domestic violence, autonomy regarding household decisions (like health & education decision and household resource utilization), purchasing & selling decision of domestic resources. On the other hand, for another output domain 'social interaction', we propose three indicators as membership in political party/NGO, Voice raised against social crimes (like dowry or women abuse etc.) and freedom of mobility to workplace and elsewhere without permission.

The weights attached for each indicator are assumed to be equal and sum up to unity. The indicators are supposed to be binary, while '1' would stand for empowerment and '0' for disempowerment. Thus the aggregate empowerment score would lie between '0' and '1'. Following the method of WEAI, we attach 0.8 as benchmark level for attaining adequate empowerment level (See Table 1).

Table 1: Composition of Empowerment Index for the SHG Women

DOMAIN	Indicator	Weight
<u>Input Domain (I_i)</u>	(I_{ij})	(w_k)
1) Activity Domain (I ₁)	credit access (I ₁₁)	w ₁
	resource utilization (I ₁₂)	w ₂
	repayment decision (I ₁₃)	w ₃
2) Knowledge Domain (I ₂)	financial literacy (I ₂₁)	w ₄
	educational attainment (I ₂₂)	w ₅
	knowledge about family planning (I ₂₃)	w ₆
3) Health Domain (I ₃)	BMI (>18.5) (I ₃₁)	w ₇
	Anaemia-free-health (Hb>11mg/dL) (I ₃₂)	w ₈
	Availability of sanitation & safe drinking water (I ₃₃)	w ₉
<u>Output Domain (O_i)</u>	(O_{ij})	
1). Domestic Autonomy (O ₁)	protest against domestic violence & alcoholism (O ₁₁)	w ₁₀
	household autonomy (O ₁₂)	w ₁₁
	autonomy in purchase and sales of household resources (O ₁₃)	w ₁₂
2). Social Interaction (O ₂)	membership in local political party / NGO (O ₂₁)	w ₁₃
	voice against social crimes (O ₂₂)	w ₁₄
	freedom of mobility without permission (O ₂₃)	w ₁₅

Note: Authors' Construction

Individual Empowerment Index:

$$IEI = \sum_{i=1, j=1, k=1}^{3,3,9} (w_k I_{ij}) + \sum_{i=1, j=1, k=10}^{3,3,15} (w_k O_{ij})$$

Where , $\sum_{i=1-15} w_i = 1$ and $w_1 = w_2 = \dots = w_{15}$

I₁₁ = 1, if the woman gets direct credit access;
= 0, otherwise;

I₁₂ = 1, if the woman takes the decision about business resource utilization;
= 0, otherwise;

I₁₃ = 1, if the woman takes repayment decision in the micro credit business;
= 0, otherwise;

I₂₁ = 1, if the woman has financial literacy;
= 0, otherwise;

I₂₂ = 1, if the woman completes her elementary education;
= 0, otherwise;

I₂₃ = 1, if the woman has knowledge about family planning;
= 0, otherwise;

I₃₁ = 1, if her BMI>18.5;

- = 0, otherwise;
- $I_{32} = 1$, if she is anaemia free, i.e., her Hb > 11.0 mg/dL;
- = 0, otherwise;
- $I_{33} = 1$, if she has sanitation and safe drinking water facility;
- = 0, otherwise;
- $O_{11} = 1$, if she protests against domestic violence/ alcoholism within household;
- = 0, otherwise;
- $O_{12} = 1$, if she takes household decision about resource, health and education;
- = 0, otherwise;
- $O_{13} = 1$, if she takes purchase or sales decision about domestic resources;
- = 0, otherwise;
- $O_{21} = 1$, if she is member in local political parties/NGO;
- = 0, otherwise;
- $O_{22} = 1$, if she raises voice against social crimes (dowry, women abuse etc);
- = 0, otherwise;
- $O_{23} = 1$, if she enjoys the freedom to move safely within society without permission;
- = 0, otherwise;

Step 1: Thus based on the above method, **IEI** for each woman involved with the SHG can be assessed separately. The individual empowerment score above 0.8 would be considered as **adequate empowerment**. Thus a woman with a score of 0.8 and above will have access to resources, will have a say in family affairs and has in a position to take decisions.

Step 2: After computing individual score, 'group empowerment' needs to be calculated. In computing so, following the method of construction of WEAI (Alkire et al., 2012) we propose the following equation:

$$\text{Women Empowerment Index}_{\text{SHG}}[\text{WEI}_{\text{SHG}}] = W_e + W_n(D_a)$$

where,

W_e = % of women with adequate empowerment;

W_n = % of women without adequate empowerment = (1 - W_e)

D_a = % of domains in which disempowered women have adequate empowerment

V. Results of Application of Constructed Index

The constructed index was applied on 300 members of SHG. About 10 of them were from one SHG situated in Kolkata while rest of the SHGs were from 24 parganas district of West Bengal. The group leader of the SHG in Kolkata has a score of 0.7. Her group members have a score of 0.6 and below. Those who have education above class VIII have better score compared to those who have education less than class VIII. The main problem with the SHG in Kolkata is that their access to financial resources are limited. Government is more focused towards rural development. SHGs in urban areas do not get the same kind of help which SHGs in rural areas receive. The index was also applied on 290 SHG members situated in North 24 Praganas. The score of the group leaders are above 0.8. Educated (above class VIII) have a score of around 0.7 and others have a score of around 0.6. Empowerment in true sense can be seen among group leaders of SHGs situated in rural West Bengal. They have access to financial resources and they are standing up against the evils of the society. They now have a say in family affairs and they are in a position to take decisions about their children's

marriage or education. The empowerment gives us the tool to measure level of empowerment among women. SHGs in the rural areas get substantial assistance from rural banks. That is why in the SHGs in the rural areas do not suffer from lack of access to financial resources whereas the SHG in Kolkata is not getting such help. Only one SHG from the urban area was considered. So we cannot reach at definite conclusion regarding this. Education and empowerment show some sort of correlation. Educated SHG members seem to have better empowerment score. Thus it is seen that constructed empowerment index is an effective tool in measuring the level of empowerment. Based on the score, Government can ascertain the level of empowerment and take steps accordingly. The study also shows that SHGs have been successful in ensuring empowerment for women.

VI. Way Ahead : Implication for Theory & Practice

The constructed index would unequivocally help the policy makers to adopt new policies and restructure the dated policies making it both gender-inclusive and empowerment level boosting. Women in the rural sector who remain mostly invisible from the focus of the policy makers would get enough attention if the construction of women empowerment index could be done for each and every individual rural vocation sector.

However, our constructed empowerment index is different from International Food Policy Research Institute's WEAI (Alkire et al., 2012), as the gender gaps are not included in this model. As the SHGs are assumed to be a sole women group, the measurement of gender gap remained out of our presumption. This index would, at a time, help to ascertain whether women of a particular region are empowered or not. As pointed out by Kofi Annan, that empowerment and gender equality would be important to achieve Millennium Development Goals (MDGs). Empowerment of women is expected to reduce the level of poverty, infant mortality and will encourage education for all irrespective of their gender. But there remains one serious limitation of this constructed index. In case the SHG is a mixed combination of men and women, this index would unable to fathom right level of empowerment in the absence of assessment of gender gaps. We need to resolve that issue in our future research work.

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