

Measuring Social Exclusion on the Basis of Development Programmes: Construction of Scale and Exclusion Index

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Abstract: Social exclusion is one of the greatest threats of our contemporary world. It is a process that revolves around societal institutions to exclude, discriminate against, isolate and deprive groups or individuals on the basis of identities such as caste, ethnicity, religion, gender, location of residence, academic status, income etc. in various spheres of society, polity, and economy. This work evolves a measure to quantify the extent of social exclusion in the sphere of development programmes and develops an index of social exclusion from development programmes. Constructed scale is tested over a sample of households to examine its reliability and to find the nature of exclusion.

Different statistical and mathematical tools have been used to construct the measure. The constructed measure is tested on a sample of 320 households chosen through multi-stage stratified random sampling. Sample data are used to find the level of exclusion of each household within the sample on the basis of this measure. With the help of different statistical and econometric tools the scale is also used to examine the nature of social exclusion from development programmes in India. This scale can be used in a greater spectrum to quantify the qualitative concept of social exclusion.

Keywords: Social Exclusion, social characteristics, social spheres, domains of exclusion, indicators, binary dummy variables, Cartesian space, Euclidian measurement, index, stratified random sampling, OLS regression, hypothesis testing, Cronbach's Alpha.

Social exclusion is one of the greatest threats to the modern contemporary world. It is a process that revolves around societal institutions to exclude, discriminate against, isolate and deprive some groups on the basis of group identities such as caste, ethnicity, religion, gender, location of residence etc. in various spheres of society, polity, and economy. This work evolves a measure to quantify the extent of social exclusion in the sphere of development programmes and develops an index of social

exclusion from development programmes. Constructed scale is tested over a sample of households to examine its reliability and to find the nature of exclusion.

Social exclusion is a contested term. The concept can be traced to Max Weber who identified exclusion as one form of social closure (Parkin, 1979). He saw exclusionary closure as the attempt of one group to secure for itself a privileged position at the expense of some other group through a process of subordination.

Modern usage of the term 'social exclusion' appears to have originated in France, where it was used to refer primarily to those who slipped through the Bismarckian¹ social insurance system; the socially excluded were those who were administratively excluded by the state (Lenoir, 1974) (Duffy, 1997).

The United Nations Development Programme has been at the forefront of attempts to conceptualize social exclusion across the developed and developing world (Figueiredo, 1997). Social exclusion is conceptualized as lack of recognition of basic rights, or where that recognition existed, lack of access to political and legal systems necessary to make those rights a reality.

Centre for Analysis of Social Exclusion at the London School of Economics (LSE) has used the following definition of social exclusion: 'An individual is socially excluded if (a) he or she is geographically resident in a society but (b) for

¹ pertaining to, or resembling Otto Von Bismarck. Otto Von Bismarck, was a Prussian statesman who dominated German and European affairs with his conservative policies. Bismarck implemented the world's first welfare state in the 1880s. He worked closely with big industry and aimed to stimulate German economic growth by giving workers greater social securities.(Source: http://en.wikipedia.org/wiki/Otto_von_Bismarck)

reasons beyond his or her control, he or she can not participate in the normal activities of citizens in that society, and (c) he or she would like to so participate' (Burchardt, 1999).

The outcome of social exclusion among the excluded groups depends crucially on the functioning of social and economic institutions through a network of social relations and the degree to which they are exclusionary and discriminatory in their outcomes. Social exclusion has a sizeable impact on an individual's access to equal opportunities, if social interactions occur between groups in power-subordinate relationships. The groups' focus on social exclusion recognizes that people are excluded because of ascribed rather than achieved features beyond individual agency or responsibility (Buvinic, 2005).

The consequences of social and economic exclusion not only are confined on the well being of the excluded groups, inter-group inequalities and inter-group conflicts, but also affect the performance of the economy. The standard economic theory of discrimination implies that market discrimination will generate consequences that adversely affect overall economic efficiency and lead to lower economic growth. Factor immobility also brings in segmentation in the markets. The societal norms of fixed occupations – by not permitting mobility of human labour, land, capital and entrepreneurship across strata – create segmented markets and bring imperfections in each of these markets. Factor immobility brings gross inefficiency in resource allocation and economic outcome (Thorat & Newman, 2010).

There is a growing literature that focuses on the domain, reasons and appropriate measures of social exclusion and in the identification of who is socially excluded today. Research on domain and measure of social exclusion has actually taken two branches. The first branch of literature is focused on developing measurable indicators of exclusion. The second branch concentrated on the construction of appropriate measure. Here some of the literature tried to develop an axiomatic approach to the measure of social exclusion. While the other branch of literature is focused on the empirical analysis of social exclusion without developing an appropriate theoretical background. Bhalla, Lapeyre, Bradshaw, Payne, Pantazis, Levitas, Gordon, Lessof, Jowell,

Clert, Saunders, Flotten, Scutella, Wilkins, Horn and Fischer (Bhalla & Lapeyre, *Social Exclusion: Towards an Analytical and Operational Framework*, 1997) (Bradshaw, et al., 1998) (Payne & Pantazis, 1998) (Levitas, *Social Exclusion in the New Breadline Britain Survey*, 1998) (Gordon & Pantazis, *Report on the MORI Omnibus Survey Test of New Questions*, 1998) (Lessof & Jowell, 2000) (Clert, Gacitua-Mario, & Wodon, 2001) (Gordon, 2002) (Saunders, *Can Social Exclusion Provide a New Framework for Measuring Poverty?*, 2003) (Flotten, 2006) (Scutella, Wilkins, & Horn, *Measuring poverty and social exclusion in Australia: A proposed multi-dimensional framework for identifying socio-economic disadvantage*, 2009) (Scutella & Wilkins, 2010) (Fischer, 2011) tried to find the domains and indicators of social exclusion. But they could not come to unanimity about the meaning of social exclusion. Naturally their indicators and domains varied substantially and sometimes appeared to be self-contradictory. Some of them even concluded that well-accepted true indicators of social exclusion are not available. The core issues in measurement of social exclusion in all this studies are very close to capability building and personal freedom. Enlarging the capability set and personal freedom has an inverse relationship with social exclusion. On parallel Brandolini, D'Alessio, McCrystal, Chakraborty, D'Ambrosio, Camara, Poggi, Bosset, Peragine, Australian Social Inclusion Board Annual Report 2010, Bayram, Saunders and Wong (Brandolini & D'Alessio, 1998) (McCrystal, Higgins, & Percy, 2001) (Chakraborty & D'Ambrosio, 2002) (Camara, Monteiro, Ramos, Sposati, & Koga, 2002) (Poggi, 2003) (Bossert, D'Ambrosio, & Peragine, 2004) (Australian Social Inclusion Board, 2011) (Bayram, Aytac, Aytac, Sam, & Bilgel, 2011) (Saunders & Wong, *Measuring and Change in Deprivation and Exclusion in Australia: A report on research in progress*, 2012) have tried to develop particular measures to capture the extent of social exclusion. Borooah, Acharya, Desai, Bordia Das, Das, Madheswaran and Attewell, (Borooah V. K., 2010) (Acharya, 2010) (Desai, Adams, & Dubey, 2010) (Das, 2010) (Das S. , 2010) (Madheswaran & Attewell, 2010) tried to identify the domains and indicators of social exclusion in Indian context. They have also tried to quantify the degree of social

exclusion. Except Acharya here all the works are based on secondary level information.

To develop an appropriate measure of social exclusion from development programmes we have mainly followed Chakraborty & D'Ambrosio (Chakraborty & D'Ambrosio, 2002), Camara *et.al* (Camara, Monteiro, Ramos, Sposati, & Koga, 2002), Poggi (Poggi, 2003), Bosset *et.al* (Bossert, D'Ambrosio, & Peragine, 2004) and Acharya (Acharya, 2010). Chakraborty and D'Ambrosio have looked into social exclusion as functioning deprivation and tried to locate relevant functioning those have greater effect on the life. They first looked at failures from relevant functioning, the number of functioning from which the person is excluded. In this respect they marked certain indicators or variables over the said functioning. A person's exclusion in a given domain has been obtained by adding up his exclusions over the concerned variables. They referred to the number of failures as the deprivation score or the number of exclusions of the person concerned. At the same time Camara *et.al* used the term dimension for domains or functioning. Like Chakraborty and D'Ambrosio, in the study of Camera *et. al.* also each dimension is captured by a set of variables. They have put 0 for attaining the desired level, 1 for over attainment and -1 for under attainment with respect to each variable. In the same line Poggi has also tried to define the functioning failures. His paper identified the socially excluded individual using Sen's capability approach. Like Camara *et.al*, Poggi also identified certain items under each functioning and for each selected item he assigned to each individual a score of zero or one. A score of one means that the individual can afford the item, has the item or does not have the 'problem'. Instead a score equal zero means that the individual is deprived in that item. He sum up the score of each item representing the same functioning and gave equal weights to the items. Then divided each functioning score by the number of items belonging to such functioning in order to be able to compare the different functionings. Thus for each functioning, an individual receives a score between zero and one. A score equal one means that the functioning has been fully achieved. Finally he used vector analysis for measuring the appropriate level of social exclusion. Bosset *et. al* have said that Social exclusion manifests itself in the lack of an individual's access to

functionings. They have also calculated social exclusion through the number of functioning failures. Their notion of social exclusion is obtained as an aggregate of the levels of deprivation experienced by an individual in each of the functionings. In a final step, these individual indicators of exclusion are aggregated across individuals to arrive at a measure of exclusion for society as a whole. In all cases, they have used the arithmetic mean as the requisite aggregator function. Indicators of discrimination as discussed by Acharya tried to capture discrimination in different spheres, forms and personnel who may practice discrimination. Prevalence of discrimination was measured by simple percentage. Fixed scores were awarded to different levels of discrimination. The average score for each respondent was computed for sphere, form and provider separately – which may be called sectoral indexes. These average scores were used to compute a composite index of discrimination.

OBJECTIVE OF THE STUDY

This work wants to evolve a measure to quantify the extent of social exclusion from development programmes. Testing the evolved scale and construction of an index of exclusion is under the purview of this study. This work also wants to examine the nature of social exclusion from development programmes in India on the basis of the constructed scale.

METHODOLOGY

Different statistical and mathematical tools have been used to construct the measure. The constructed measure is tested on a sample of 320 households. Sample is chosen through multi-stage stratified random sampling (Appendix - I). Household level information is collected from the household head. Collected data are used to find the level of exclusion of each household within the sample on the basis of the measure developed by us. Different statistical and econometric tools are used to observe the nature of exclusion from development programmes. Perceptions of the respondents and the explanations advanced by existing literature are used to substantiate the findings.

FINDINGS

Our survey of literature within this study has found that the most of the studies tried to functionalise social exclusion through the notion of functioning or capability deprivation, such that the main domains of social exclusion according to those studies are health, education and income. The domains or aspects accepted by this work to measure social exclusion are also health, education and income. Under each of these domains certain development programmes from India have been chosen to functionalise the idea. Some questions or variables under each domain are put forwarded to capture the views of the respondents. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has been used as an indicator of government income generation programme. The variables identified to evaluate the level of exclusion from MGNREGS are -

- a) Whether the respondent has heard about the scheme ?
- b) Whether the respondent knows the scheme in details ?
- c) Whether the respondent has participated in the scheme ?
- d) Whether the participant got 100 days of work in one financial year ?
- e) Whether the respondent has not faced any sort of hindrance in getting the income ?

We have used dummy variables to incorporate these into the model. 0 is assigned to the answer ‘yes’ for each question and 1 otherwise. The answer ‘yes’ or assigning 0 to any question means the respondent is not excluded with respect to the concerned variable. On the other hand answering ‘no’ or assigning 1 to any question means that the respondent is excluded with respect to the concerned variable. The score of each respondent for exclusion from MGNREGS is added and divided by 5 to get the average. This average value may be regarded as the measure of exclusion in the field of income delivery mechanism. Mathematically this may be presented as follows:

$$ME_j = \frac{1}{5} \sum_{i=1}^5 s_{ij}^M$$

where ME_j is the measure of exclusion in the field of income delivery programme of j th individual. s_{ij}^M , $i = 1, 2 \dots 5$ is the score on each variable under the

indicator of income delivery programme of j th individual.

The measure for exclusion in the ground of health delivery programmes has two components with equal weights. These are measure of exclusion in the field of curative health and measure of exclusion in the field of preventive health. The variables identified to evaluate the exclusion from the *curative health programmes* are -

- a) Whether the respondent has easy access to govt. health centres ?
- b) Whether the respondent knows in details about the different facilities available at govt health centres?
- c) Whether the respondent is satisfied with the service rendered by the doctor at the govt health centre?
- d) Whether the respondent is happy with the behavior of the paramedics?
- e) Whether all prescribed tests are available at govt health centres?
- f) Whether all prescribed medicines are available at govt health centres?
- g) Whether the indoor facilities are good enough for proper care?

The variables identified to evaluate the exclusion from the *preventive health programmes* are –

- a) Whether the respondent has access to government supplied purified water distribution facilities?
- b) Whether they have access to govt sponsored sanitary toilet scheme?
- c) Whether they have access to govt sponsored vaccination programme?

0 is assigned to the answer ‘yes’ for each question and 1 otherwise. The answer ‘yes’ or assigning 0 to any question means the respondent is not excluded with respect to the concerned variable. On the other hand, answering ‘no’ or assigning 1 to any question means that the respondent is excluded from the concerned variable. The score of each respondent for exclusion from different variables under curative health care is added and divided by 7 to get the average. This average value may be regarded as the measure of exclusion in the field of curative health delivery mechanism. Mathematically this may be presented as follows:

$$CHE_j = \frac{1}{7} \sum_{i=1}^7 s_{ij}^{CH}$$

where CHE_j is the measure of exclusion in the field of government sponsored curative health delivery mechanism of jth individual. s_{ij}^{CH} , $i = 1,2 \dots 7$ is the score on each variable under the indicator of curative health delivery mechanism of jth individual.

Likewise, the score of each respondent for exclusion from different variables under preventive health care is added and divided by 3 to get the average. This average value may be regarded as the measure of exclusion in the field of government sponsored preventive health delivery mechanism. Mathematically this may be presented as follows:

$$PHE_j = \frac{1}{3} \sum_{i=1}^3 s_{ij}^{PH}$$

where PHE_j is the measure of exclusion in the field of government sponsored preventive health delivery mechanism of jth individual. s_{ij}^{PH} , $i = 1 \dots 3$ is the score on each variable under the indicator of preventive health delivery mechanism of jth individual.

Thus the composite measure of exclusion from govt. sponsored health delivery programme is the average of curative health exclusion measure and preventive health exclusion measure having equal weight to each component. Mathematically,

$$HE_j = \frac{1}{2} [CHE_j + PHE_j]$$

$$\Rightarrow HE_j = \frac{1}{2} \left[\frac{1}{7} \sum_{i=1}^7 s_{ij}^{CH} + \frac{1}{3} \sum_{i=1}^3 s_{ij}^{PH} \right]$$

The basic literacy programme has been used as an indicator of government education delivery programme. The measure for exclusion under basic literacy programme may be constructed with the variables like – whether there is any illiterate person in the household ? 0 is assigned to the answer ‘no’ and 1 otherwise. The answer ‘no’ or assigning 0 to

The descriptive statistics of household level social exclusion values appearing from our sample is presented in Table 1.

Table 1; Descriptive Statistics of composite social exclusion index						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
social exclusion	320	.84	.16	1.00	.6757	.19994
Valid N (listwise)	320					

Source: Calculated by the author on the basis of sample data.

the question means there is not a single illiterate within the family. On the other hand, answering ‘yes’ or assigning 1 means that the respondent is excluded from the concerned variable. This value may be regarded as the measure of exclusion in the field of education delivery mechanism. Mathematically this may be presented as follows:

$$EE_j = \begin{cases} 0 & \text{if there is not a single illiterate within the family and} \\ & = 1 & \text{otherwise} \end{cases}$$

where EE_j is the measure of exclusion in the field of government sponsored literacy delivery mechanism of jth individual.

Here it is to be kept in mind that voluntary exclusion from any programme has been treated as inclusion under the said programme.

The above discussion ensures that each Sectoral Index (ME_j , HE_j and EE_j) takes the values from 0 to 1 i.e., $0 \leq \text{Sectoral Index} \leq 1$. The higher the value of the sectoral index the higher will be the level of exclusion on that particular sector. If 3 dimensions of exclusion from government programmes are considered, then a composite measure will be represented by a point $D_j = (ME_j, HE_j \text{ and } EE_j)$ on the 3 dimension Cartesian space. In the 3 dimension space, the point $O = (0,0,0)$ represents the point indicating the best situation, representing no exclusion while the point $I = (1,1,1)$ represents the highest level of exclusion. Then the measure of exclusion for jth individual is SE_j , is measured by the normalized Euclidean distance of the point D_i from the ideal point $O = (0,0,0)$. The exact formula to calculate normalized Euclidean distance in an n dimension Cartesian space (Simmons, 1963) (Malik & Arora, 2010) is

$$\frac{1}{\sqrt{n}} \sqrt{(x_1 - y_1)^2 + (x_2 - y_2)^2 + \dots + (x_n - y_n)^2}$$

In our three dimension space of ME_j , HE_j and EE_j the same can be written as

$$SE_j = \frac{1}{\sqrt{3}} \sqrt{(ME_j - 0)^2 + (HE_j - 0)^2 + (EE_j - 0)^2}$$

Table 1 illustrates that in our sample household level social exclusion varies from the minimum of 0.16 to maximum of 1. It is to be kept in mind that 0 stands for the best situation, representing no exclusion while the value 1 corresponds to the highest level of exclusion. The mean social exclusion value is 0.6757 and the range is 0.84.

We regress the values of social exclusion from development programmes (SE) of each household on the corresponding attributes like sex of household head (sex), distance of residence from urban concentration (Distance), religion of the household head (Reli), highest level of education within the family (HghES), status as schedule tribe (ST) and monthly per capita food expenditure (MPCFE) of the same household. Highest level of education within the family (HghES) is used as a proxy of the status of education of the household and monthly per capita food expenditure (MPCFE) is used as a proxy of income of each household. The explanatory variables are chosen on the basis of the findings of review of existing works. u_j is the stochastic error term. We regress SE_j on the independent variables through the method of ordinary least squares (OLS). The regression model can be written as

$$SE_j = \beta_1 + \beta_2 MPCFE_j + \beta_3 HghES_j + \beta_4 Reli_j + \beta_5 Distance_j + \beta_6 ST_j + \beta_7 sex_j + u_j$$

Testing of hypothesis presumes that the model chosen for empirical analysis is adequate in the sense that it does not violate any assumption of the classical normal linear regression model. Therefore in this study, test of hypothesis is preceded by Jerque-Bera Test of normality, White test of heteroscedasticity and Durbin-Watson Test of auto-correlation. All these tests satisfy the requirements under classical linear regression model. Also it is observed that the

multi-collinearity among the explanatory variables is also within tolerable limits.

Table 2 shows that, the dependent variable is Social Exclusion from development programmes (social exclusion) – the social exclusion value of each household, which we created on the basis of our household level data. Four of the independent variables are purely qualitative in nature. They are sex, Reli, ST and Distance. Naturally dummy variables have been used to quantify their effect on household level social exclusion. If the household belongs to the ST category then the corresponding variable will take the value of the variable is 1, otherwise it is 0. In the same manner the value of the variable ‘Distance’ is 1 if the household is residing at a place with a distance of more than 5 km from the urban area; it is 0 if the distance is less than 5 km. If the household head is female then the value of the variable ‘sex’ is 1 and otherwise it is 0. If the household head is a Muslim then the value of the variable is 1, otherwise it is 0 (only Hindus and Muslims are found within our sample households). ‘HghES’ is the highest level of education within the family. The value is 0 if all are illiterate, is 10 if at least one has achieved 10th standard and is 17 if at least one has achieved the post-graduate level i.e., putting 1 for each year of schooling. MPCFE is the monthly per-capita food expenditure. The findings of the regression are presented through Table 2, Table 3, Table 4 and Table 5.

Model	Variables Entered	Variables Removed	Method
1	sex, Reli, MPCFE, ST, Distance, HghES ^b		Enter
a. Dependent Variable: socialexclusion			
b. All requested variables entered.			

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.680 ^a	.462	.452	.14792	1.871
a. Predictors: (Constant), sex, Reli, MPCFE, ST, Distance, HghES					
b. Dependent Variable: socialexclusion					

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.884	6	.981	44.817	.000 ^b
	Residual	6.849	313	.022		
	Total	12.732	319			
a. Dependent Variable: socialexclusion						
b. Predictors: (Constant), sex, Reli, MPCFE, ST, Distance, HghES						

Table 5 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.818	.027		30.861	.000		
	MPCFE	-9.236E-005	.000	-.209	-4.619	.000	.843	1.187
	HghES	-.016	.002	-.376	-8.073	.000	.792	1.262
	Reli	.069	.035	.082	1.965	.050	.984	1.016
	Distance	.080	.018	.195	4.378	.000	.869	1.151
	ST	.126	.027	.214	4.626	.000	.802	1.246
	sex	.030	.031	.040	.947	.345	.967	1.034

a. Dependent Variable: socialexclusion

It comes out from the regression analysis that the F value is significant and coefficients of MPCFE, HghES, Reli, Distance and ST including the constant term are individually significant. The coefficients of the variables MPCFE and HghES, that is the coefficients of monthly per capita food expenditure and highest level of education within the family are negative. The coefficient of Distance, Reli and ST are positive. But it also comes out that the coefficient of sex has insignificant effect on the dependent variable.

$$SE_j = 0.818 - 0.00009236 MPCFE_j - 0.016 HghES_j + 0.069 Reli_j + 0.080 Distance_j + 0.126 ST_j$$

$$t = \quad (30.861) \quad (-4.619) \quad (-8.073) \quad (1.965) \quad (4.378) \quad (4.626)$$

$$p = \quad (0.000) \quad (0.000) \quad (0.000) \quad (0.050) \quad (0.000) \quad (0.000)$$

$$+ 0.030 sex_j$$

$$(0.947)$$

$$(0.345)$$

$$R^2 = 0.462$$

$$F = 44.817 (.000)$$

Figures in parentheses below the estimated parameters stand for t value and the figures in the parentheses following the t values stand for p values. Thus it is accepted that the coefficients of MPCFE, HghES, Distance ST including the constant term are statistically significant at 1 percent level and the coefficient of Reli is significant at 5 percent level. The coefficient of sex is not statistically significant. It establishes that social exclusion has a significant relationship with monthly per capita food expenditure as a proxy of family income, highest education within the household, distance of residence from the urban concentration, religion of Muslim and the caste status as scheduled tribe. Social exclusion has a negative relationship with monthly per capita food expenditure and highest education within the household and positive relationship with distance of residence from the urban concentration, status of Muslim and the caste status as scheduled tribe. This means that level of social exclusion from government programmes

It also appears from these tests that degree of social exclusion from development programmes in our sample falls with the increase in family income, acquiring of higher level of education, whereas it increases with the distance from urban concentration, status about Scheduled Tribe and Muslim. The sex (sex) of the household head does not have any effect on the degree of social exclusion from development programmes in our sample. Thus the estimated equation becomes

increases with the fall in family income, highest level of education within the family and vice versa. Likewise, level of social exclusion from government programmes increases with the increase of distance of residence from the urban concentration and with becoming members of Muslim and ST communities. We have examined the internal reliability or consistency of the composite social exclusion index as well as sectoral indexes through Cronbach's alpha (Cronbach, 1951) (Ray & Bhattacharya, 2013). It is observed that the sectoral social exclusion values along with the composite social exclusion values have a good and acceptable consistency (Cronbach's Alpha = 0.710). Also the correlation coefficients between composite social exclusion values and the sectoral social exclusion values are more than 30 percent and hence the internal consistency of the composite index is good.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
.710	.819

Source: Calculated by the author on the basis of sample data.

	SE
ME	.693
HE	.642
EE	.830

Source: Calculated by the author on the basis of sample data.

Thus our constructed measure has delivered desired results satisfying the standard statistical properties. This scale can be used in a greater spectrum to quantify the qualitative concept social exclusion. Like the existing works our work also concludes that the level of social exclusion from government programmes is related to family income, highest level of education within the family, distance of residence from the urban concentration and with becoming members of Muslim and ST communities.

Appendix I

Sample design:

The sample is chosen from the Indian state of West Bengal. The basis of strata is per capita income (Bureau of Applied Economics and Statistics, Govt. of West Bengal, 2009). Studies on development programmes of West Bengal from inclusionary point of view command greater significance as this state, in isolation to other states of India, has long been governed by a coalition whose main aim was to enhance participation in all aspects of life. West Bengal is a state where political organization of disadvantaged groups has significantly altered the balance of political power. Changes were rapid after the Left Front Coalition came to office at the state level in 1977. The main electoral base of the Left Front consisted of landless labourers, sharecroppers, slum dwellers and other disadvantaged groups. This change in the balance of power has made it possible to implement a number of far-reaching participatory social programmes that were often considered 'politically infeasible' in many other states. Since 1977 there has been a comparatively rapid decline in rural poverty in West Bengal. Among all major states, West Bengal has also achieved the fastest growth in calorie consumption between 1972 – 73

and 1993 – 94. The political empowerment of disadvantaged groups has not only helped them in economic terms but also enhanced their dignity and self confidence. Liberation from indignity, oppression and exploitation is among the basic freedoms and social opportunities. (Sen & Dreeze, *India: Development and Participation*, 2002). The successful implementation of rural development programmes through the three tiers of the panchayat system in formulating, implementing and monitoring of schemes is integral to the improvement of the status of rural poor in West Bengal. The state wants to create an enabling situation for wider participation of the people in the whole process so that the benefits of development programmes enhance the capabilities of the people along with their empowerment, particularly of the women and weaker section of the society. (Development and Planning Department, Government of West Bengal, 2011). In this respect the path of decentralized governance that the state of West Bengal has followed is an important weapon not only for reducing intra-state disparities but also improving the other elements of inclusive growth. With its positive implementation the dominance of upper castes and eliticism is slowly changing towards lower and disadvantaged classes (Mahendra Dev, 2008). Thus the existence of West Bengal as a benchmark in the discourses of inclusive development is proven within India. That is why the sample has been collected from West Bengal only. In the first stage four districts of West Bengal were randomly chosen –two from the strata of relatively higher per capita income districts and two from the strata of relatively lower per capita income districts. The four sample districts are Purba Medinipur and Howrah (also called Haora) – from the strata of relatively high per capita income districts; Cooch Behar (also called Koch Behar or Koch Bihar) and Paschim Medinipur – from the strata of relatively low per capita income districts. At the second stage, two community development blocks from each district was chosen randomly. In the third stage, two villages were selected purposively from each community development block. Ultimately, 20 households from each of the selected villages were chosen randomly. Thus the sample size is 320. The study was undertaken in 16 villages under 8 blocks of 4 districts of West Bengal. Data were collected from the households through field survey based on

questionnaire interview method. Survey was undertaken between December 2012 and March 2013.

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