Spatial interlinkages of poverty determinants and social space of poverty in Hooghly District of West Bengal: A geographical perspective

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Abstract

Poverty is generally regarded as an acute and multi-dimensional deprivation. As poverty is a complex phenomenon with multiple dimensions, no unique homogeneous criterion can be used for its measurement. Researchers and policy makers, therefore, try to collect or construct geographically disaggregated indicators that provide information about the spatial distribution of inequality and poverty within a country. The present paper tries to explore and analyze spatial interlinkages of poverty in Hooghly district with the help of Twelve indicators such as distribution of SC (Schedule Caste) and ST (Schedule Tribe) population, literacy rate, gap in male-female literacy, marginal workers, agricultural labourers, availability of drinking water, availability of electricity, latrine facility, access to banking services etc. The entire study is based on the secondary sources of data obtained from District Census Handbook (2011), District Statistical Handbook (2014), District Human Development Report (2011) etc. For measuring spatial intensity of poverty among the rural blocks of Hooghly district various statistical methods like Dimension index (Di), Kendall's ranking co-efficient method, Composite Index (Ci), Standard Score (Z score) etc. have been used. As the determinants of poverty have its own linkages with evolving nature of society and space, in the second half of the paper, social location and the genesis of poverty in Hooghly district are also examined vividly. The spatial pattern of poverty and its interlinkages with poverty determinants show positive but differential impacts and it is observed that high intensity of poverty persist in three blocks namely Pandua, Goghat-I and Arambagh. The study also reveals that the severity of poverty is mostly concentrated amongst the lower strata of the society i.e. SC (Schedule Caste) and ST (Schedule Tribe) population because they have been deprived of getting different amenities to sustain their life and livelihood.

Keywords: *Poverty determinants, interlinkages of poverty, spatial pattern of poverty, social Space of poverty, Composite Index*

Rezumat. Interconectări spațiale ale factorilor ce determină sărăcia și spațiul social al sărăciei în districtul Hooghly din Bengalul de Vest: o perspectivă geografică

În general, sărăcia este privită ca o deprivare acută și multi-dimensională. Întrucât sărăcia este un fenomen complex, cu multe dimensiuni, nu există un criteriu unic pentru a fi măsurată. Prin urmare, cercetători și factori de decizie deopotrivă au încercat să colecteze și să construiască indicatori la diferite scări geografice care să ofere informații cu privire la distribuția teritorială a acestui fenomen și a inegalităților înregistrate în cadrul unei țări. Lucrarea de față își propune să analizeze legăturile teritoriale ale sărăciei din districtul Hooghly, cu ajutorul a 12 indicatori, printre care distribuția populației pe caste și triburi, rata alfabetizării, diferențele pe sexe înregistrate de această rată, lucrătorii din agricultură, disponibilitatea apei potabile, a electricității, băilor în locuință, accesul la servicii bancare etc. Întreg studiul se bazează pe datele statistice obținute de la recensământ (2011), Anuarul statistic (2014) și Raportul Dezvoltării Umane (2011) etc. Pentru măsurarea diferențelor teritoriale în ceea ce privește nivelul de sărăcie în cadrul blocurilor rurale din districtul Hooghly, am folosit diverse metode statistice precum Indicele dimensiunii (Di), metoda co-eficientului Kendall de ierarhizare, indicele compozit (Ci), scorul standard (scorul Z). A doua parte a lucrării evidențiază variațiile spațiale și cauzele sărăciei din districtul Hooghly, aceste cauze fiind interconectate cu societatea și spațiul. Tiparul spațial al sărăciei și factorii determinanți indică un impact considerabil, dar diferențiat, fiind evident că cea mai drastică situație este înregistrată în 3 blocuri, și anume Pandua, Goghat-I și Arambagh. Studiul arată, de asemenea, că nivelurile cele mai ridicate de sărăcie sunt întâlnite n cadrul păturilor sociale defavorizate – populația castelor și cea a triburilor, acestea fiind deprivate de-a lungul timpului de multe facilități necesare unui trai decent.

Cuvinte-cheie: *factori ce determină sărăcia, inter-relaționări ale sărăciei, modelul spatial al sărăciei, spațiul social al sărăciei, indice compozit*

Introduction

Poverty has been a perennial feature of human society. Varying in extent and manifestations, it has always maintained its grip on all societies, in all lands and in all times. It is a kind of man's enemy, which has so far defied all attempts by mankind to defeat it. Neither any technology nor any ideology has been able to conquer it. However, man's experiences of battle with poverty show that it can be held under control to the level of being tolerated, if not altogether eliminated. Poverty is a chronic problem that commonly exists in developing countries like India. On the issues of poverty, scholars have proposed so many ideas which are helpful for understanding poverty but have failed to explain the nature of its prevalence. In early stage, maximum study related to poverty considered it as an issue of lack of economic well-being. But later on, many scholars have tried to define poverty on the basis of basic needs, pattern of deprivation, resource accessibility and ownership, standard of living,

inequality, exclusion etc. which void the concept of poverty in a single definition and it is true, as Mollie Orshansky (1969) stated that 'poverty, like beauty, lies in the eyes of the beholder'. Baratz and Grigsby (1971) referred poverty as a severe lack of physical and mental well-being, closely associated with inadequate economic resources and consumption. Kurien (1978) in his study considered poverty as 'a socio-economic phenomenon whereby resources available to a society are used to satisfy the wants of the few, while the many do not have even their basic needs met'.

Poverty is the problem of deprivation and it may be multidimensional either economic or cultural or social or psychological or a combination of all of them. Deprivation refers to a lack of something generally held to be desirable – an adequate income, good health etc. – a lack of which is associated to a greater or lesser extent with some degree of suffering. Townsend (1987) defined deprivation as 'a state of observable and demonstrable disadvantage relative to the local community or the wider society or nation to which an individual, family or group belongs.' The idea has come to be applied to conditions i.e. physical, emotional, or social circumstances rather than resources and too specific and not only general circumstances, and therefore can be distinguished from the concept of poverty (Townsend, 1987). For the accurate measurement of poverty, resources and deprivation have the equal importance and these are also necessary for the identification of the poor. This ground reality on the issues of poverty prepared background for existing the multiple concept of poverty. Some also argued that poverty is the result of uneven distribution of resources. Lack of access to resources or uselessness is the most important characteristic of poverty. Poor ownership or access to assets such as land, water, forest, dwelling units, credit, literacy, longevity, voice and capital - both physical and social aspects have shaped the socio-economic location and the condition of the individuals in historical context.

From the ancient period of time the society has been divided into many groups on the basis of religion, caste, area etc. which are responsible for the unequal concentration of power, wealth and resources. 'Poverty is not simply the consequences of lack of resources. Some people are unable to access existing resources because of which they are what they believe or where they live. Such discrimination is a form of exclusion and a cause of poverty' (DFID, 2000).

In order to define poverty the level of living standard is an important concept widely used by the researchers and one of the most precise indicators of poverty. 'At the simplest level, individuals or families are considered poor when their level of living measured in terms of income or consumption is below a particular standard' (ILO, 1995).

The World Bank defines poverty as 'the inability to attain a minimal standard of living'. There is a strong connection between the poverty and the inequality: certain degrees or dimensions of inequality will lead people to poverty. This does not mean that there will always be poverty when there is inequality, only if the inequality implies an economic distance beyond the critical level (O'Higgins and Jenkins, 1990). Lack of basic security is also one of the most popular terms used in poverty explanation. Lack of basic security reveals the social risks that make the masses vulnerable to poverty and it is highly associated with needs. Lack of resources and lack of deprivation reveal the core idea of lack of entitlement and it is a better way to understand the concept of poverty. 'Entitlement refers to the complex ways in which individuals or households command resources' (Sen, 1981). The concept of social exclusion in some cases is used as a substitute for poverty. Townsend (1979) specifically defined the poor by reference to social exclusion. Delors (1996) argued that 'exclusion includes poverty, poverty does not include exclusion'. Thus from time to time the concept of poverty has evolved from income poverty to multi-dimensional poverty. In recent years the concept of multidimensional poverty has received a serious attention of the social scientists and policy makers across the world. Alkire and Foster (2007) have developed the methodology (AF methodology) to measure the incidence, intensity and severity of multidimensional poverty at the individual and household level which can be aggregated at the community level.

Bagli and Tewari (2019) explores the incidence and extent of multidimensional poverty for the households in Purulia district, the western most backward district of West Bengal in India across the sub-groups using twelve non income indicators under three dimensions education, health and living conditions. Thus poverty has become a complex phenomenon and is determined by various indicators.

Almost in all the developing countries, poverty persists in a more complex way because these countries are facing different basic problems, like hunger, starvation, malnutrition, unemployment, illiteracy, shortage of drinking water etc. After more than 70 years of independence, India is still facing various problems and challenges.

According to the revised World Bank methodology (setting poverty line at $1.78 per day on 2011 PPP), India had 179.6 million people below the poverty line India, sharing 20.6% of world's poor (Chandy and Kharas 2014). According to the data released by OPHI, 2017 India accounts for both the maximum and a staggering amount of multidimensional poor people among the seven South Asian countries and 84 south

Asian regions. Notably the number of poor people living in India exceeds the number of people living below poverty line in total sub-Saharan Africa. (cf. Roy et al. 2018).

Though poor people live in both urban and rural areas, it is largely a rural phenomenon (McKay and Lawson, 2003). Rural people are still suffering from the curse of poverty. India is one of these countries, carrying 301.7 million poor out of which 220.92 million reside in rural areas and 80.79 million in urban areas (Mehta and Bhide, 2010).

The government has launched various policies and programmes for the betterment of the poor, however, problem still remains. On account of this, the origin and mechanism of poverty have its multi-dimensional characteristics that are needed to be studied by researchers and social scientists.

Determinants of poverty and its linkages

A poverty profile describes the pattern of poverty, but is not principally concerned with explaining its causes. Yet, a satisfactory explanation of why some people are poor is essential if we are to be able to tackle the roots of poverty. For this to know the major determinants of poverty and their linkages is very important. Poverty may be due to national, sector-specific, community, household, or individual characteristics.

At the **regional (or countrywide) level**, numerous characteristics might be associated with poverty. The relationship of these characteristics with poverty is country specific. In general, however, poverty is high in areas characterized by geographical isolation, a low resource base, low rainfall, and other inhospitable climatic conditions. Other important regional and national characteristics that affect poverty include good governance; a sound environmental policy; economic, political, and market stability; agricultural growth; mass participation; global and regional security; intellectual expression; and a fair, functional, and effective judiciary. Palmer - Jones and Sen (2006) examines the determinants of rural poverty in India using spatial econometric methods and found that spatial correlationship exist between agricultural growth and rural poverty.

As with regional characteristics, a variety of **community-level characteristics** may be associated with poverty for households in that community. At the community level, infrastructure is a major determinant of poverty. Indicators of infrastructure development often used in econometric exercises include proximity to paved roads, availability of electricity, proximity to large markets, availability of schools and medical clinics in the area, and distance to local administrative centers. Other indicators of community-level characteristics include average human resource development, access to

employment, social mobility and representation, and land distribution. Recently, there has been more emphasis on the importance of social networks and institutions, and "social capital," which includes, for instance, the level of mutual trust in the community (Putnam 1995).

In addition to removing social barriers, effective efforts to reduce poverty require complementary initiatives to build up and extend the social institutions of the poor. Social institutions refer to the kinship systems, local organizations, and networks of the poor and can be thought of as different dimensions of social capital. An analysis of poor villages in north India, for example, shows that social groups play an important role in protecting the basic needs of the poor and in reducing risk (Kozel and Parker 2003).

Some important **household and individual characteristics** would include the age structure of household members, education, gender of the household head, and the extent of participation in the labor force. In recent times, other components under this category have included domestic violence prevention and gender-based antidiscrimination policies. Indicators of household size and structure are important as they show a possible correlation between the level of poverty and household composition.

Ogwumike (2001) defines poverty as a particular condition where a household or an individual is unable to meet the basic necessities of life required to sustain a livelihood. The size of the household and characteristics of its members (such as age) are often quite different for the poor and the non-poor households.

The Cambodia Socio-Economic Survey (CSES) of 1993–94 shows that the poor tend to live in larger households, with an average family size of 6.6 persons in the poorest quintile compared with 4.9 in the richest quintile (Gibson 1999). The dependency ratio is one of the most important determinants of poverty. It is the ratio of the number of family members not in the labor force (whether young or old) to those in the labor force in the household. This ratio allows one to measure the burden weighing on members of the labor force within the household. One might expect that a high dependency ratio will be associated with greater poverty.

Apart from income or consumption—which are typically used to define whether a household is poor—there are a number of other economic characteristics that correlate with poverty, most notably household employment and the property and other assets owned by the household. There are several indicators for determining household employment. Within this array of indicators, economists focus on whether individuals are employed, how many hours they work, whether they hold multiple jobs, and how often they

change employment. The property of a household includes its tangible goods (land, cultivated areas, livestock, agricultural equipment, machinery, buildings, household appliances, and other durable goods) and its financial assets (liquid assets, savings, and other financial assets). These indicators are vital because they represent the household's inventory of wealth and therefore affect its income flow. Furthermore, certain households, especially in rural areas, can be poor in income, but wealthy when their property is taken into consideration.

Apart from the demographic and economic indicators, several **social indicators** are correlated with poverty and household living standards. The most widely used are measures of health, education, and shelter.

Four types of indicators are normally used to characterize *health* in analyzing a household's living standards. These indicators include

• Nutritional status, for example, anthropometric indicators such as weight for age, height for age, and weight for height.

• Disease status, for example, infant and juvenile mortality and morbidity rates as related to certain diseases such as malaria, respiratory infections, diarrhea, and sometimes poliomyelitis.

• Availability of health care services such as primary health care centers, maternity facilities, hospitals and pharmacies, basic health care workers, nurses, midwives, doctors and traditional healers; and medical service such as vaccinations and access to medicines and medical information.

• The use of these services by poor and non-poor households.

Generally three types of indicators are used to characterize *education* in an analysis of household living standards. These include the level of education achieved by household members (basic literacy, years of education completed); the availability of educational services, such as proximity to primary and secondary schools; and the use of these services by the members of poor and non-poor households. For this last item, commonly used measures include children's registration in school, the dropout rate of children by age and gender and reasons for dropping out, the percentage of children who are older than the normal age for their level of education, and average spending on education per child registered. *Illiteracy* gives rise to orthodoxy in Indian society, which enhances the problems of social and cultural poverty. Besides, illiteracy produces unskilled workers or labourers who can only be engaged in primary activities. This generates economic poverty. Except these the quality of human resources can be examined through the levels of literacy and skilled training attained by the people in the given area. Thus illiteracy acts as a major determinant of poverty.

Occupational structure also provides a rational view of poverty in any geographical space. 'It is necessary to define the agricultural holdings before attempting a discussion on the size pattern of agricultural holdings that imply the total area of land which is held for cultivation as a single unit by an individual, joint family or more than one farmer on a joint bases. Such land may either entirely be owned, taken on lease, or may be partly owned or partly rented' (Mamoria, 1979). The number of agricultural labourers, marginal farmers, landless and the concentration of SC (Schedule Caste) or ST (Schedule Tribe) population also determine the prevalence of poverty in any geographical region. Most of the agricultural labourers get employment opportunities at the time of sowing and harvesting which are not only seasonal but also conditioned by drought and flood. Exclusion and social marginalization are closely associated with the concentration of SC (Schedule caste) and ST (Schedule Tribe) population. Gang et al. (2008) have shown that the incidence of poverty in scheduled social groups, especially within tribals, is much higher than among non-scheduled social groups. Large family size, especially more than seven, increases the probability of a household to fall into poverty. Low caste status and gender operate as major social barriers that exclude them from many realms of social and economic opportunity and push them towards the trap of poverty.

Roy et al (2018) calculate incidence, depth, severity and identify the determinants of multidimensional poverty (MPI) among different socio-ethnic and religious groups in India by taking data from the state of West Bengal in particular. *Shelter* refers to the overall framework of personal life of the household. It is evaluated by poor and non-poor household groups, according to three components: housing, service, and the environment. *Housing* indicators include the type of building (size and type of materials), the means through which one has access to housing (renting or ownership), and household equipment. The service indicators focus on the availability and the use of drinking water, communication services, electricity, and other energy sources. Generally the lower sections of the society are mainly deprived to access these services which lead them towards poverty.

Finally, the environmental indicators concern the level of sanitation, the degree of isolation (availability of roads and paths that are usable at all times, length of time and availability of transportation to get to work), and the degree of personal safety. It is generally established that poor households live in more precarious, less sanitary environments, which contribute to the poorer health and lower productivity of household members.

Gupta (1987) has mentioned four major components to determine rural poverty: (1) economic

components – income and occupation; (2) basic needs components – food and shelter; (3) resource components – health and education; (4) socio-cultural components – demographic features, political participation and value interest. All the above mentioned components determine the root causes of poverty in any geographical space. So to understand the ground reality of poverty identification of these determinants is essential. The present paper tries to analyze the major determinants of poverty and their interlinkages in Hooghly District of West Bengal.

Mitra et al (2021) in their study identified nine determinants of socio-economic poverty such as - unemployment, low income, diminutive savings, poor conditions at workplace, lack of proper housing infrastructure, hunger and starvation, lack of access to education, high illiteracy rate and poor quality natural resources like land and water among rural people in some selected regions of Paschim Midnapore in West Bengal.

Thus it can be stated that the geographical dimension of poverty has many linkages with the socio-economic and cultural aspects of society. Poverty in its historical, social and cultural roots is quite interesting and the landscape of poverty needs to be studied in its social and geographical dimension (Mridul and Mishra 2013). This prevailing phenomenon is related with the concept of multiple poverty in different layers of social structure. From the preceding discussions it can be said that poverty is the by-product of various socio-economic factors. Keeping this in mind, in the present study to understand the ground reality of poverty in Hooghly district of West Bengal various social and demographic indicators like – Schedule Caste (SC) population, Schedule Tribe (ST) population, number of households under BPL (Below Poverty Line) category, literacy rate, gap in male-female literacy rate; economic determinants like - percentage of marginal workers, percentage of agricultural labourers; household level indicators like - availability of drinking water, availability of power supply, availability of latrine facility, availability of kitchen facility, accessibility of banking services have been considered. Because these determinants act as the root causes of poverty in rural areas.

Study area

Hooghly district is one of the most important agro-based industrial districts situated on the west bank of Hooghly River in the state of West Bengal in India. The district extends from 22° 39' 32" N to 23° 01' 20" N and from 87° 30' 20" E to 88° 30' 15" E. The district covers an area of 3149 km2 and has a population of 5.52 million (census of India, 2011).The district comprises four subdivisions: Chinsurah (Hugli Sadar), Chandannagar, Serampore and Arambagh.

The district has 12 municipalities, 1 corporation, 18 C. D. Blocks, with 210 Gram Panchayats consisting of 1,915 villages. Population Density of the district is 1753/ Km2 and Population Growth is 9.49 % (2001 – 2011). Literacy Rate of Hooghly district is 82.55% and Sex Ratio of the district is 958 females per 1000 males. 61.4 percent population of Hooghly district live in rural areas. According to 2011 census, the district comprises 24.35 percent SC (Schedule Caste) and 4.15 percent ST (Schedule Tribe) population respectively. 30.85 percent of households come under BPL (Below Poverty Line) as per 2005 BPL census. To assess the spatial interlinkages of poverty determinants and social space of poverty all the eighteen C.D. Blocks have been considered for the present study.
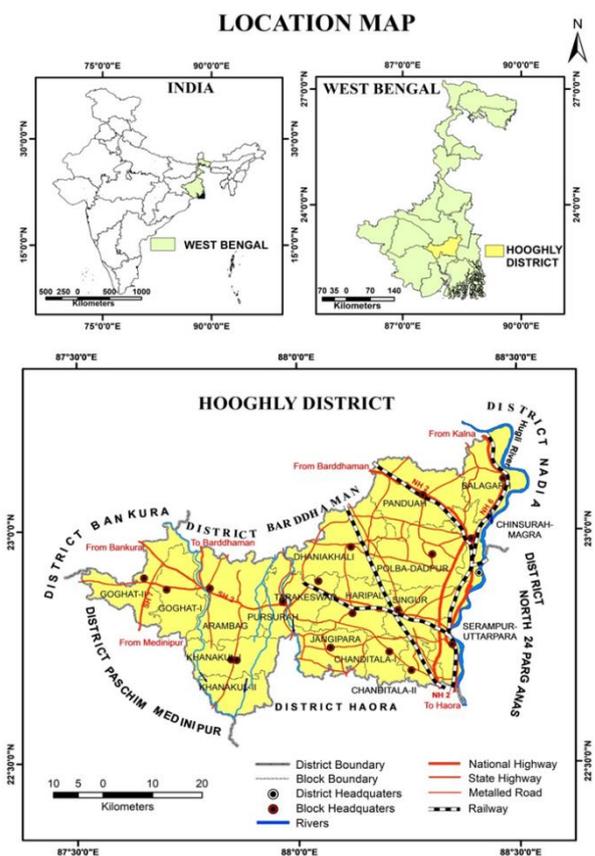

Fig. 1: Location Map of Hooghly District

Objectives

1. To analyze various determinants of poverty and their spatial interlinkages in Hooghly District.

2. To find out social location and genesis of poverty in the study area.

Database and Methodology

The present study is mainly based on secondary sources of data obtained from District census Handbook 2011, District Statistical Handbook of

Hooghly (2014), District Human Development Report of Hooghly (2011) etc. For attaining the result various qualitative and quantitative techniques have been implemented. The choice of indicators, to measure spatial interlinkages of poverty has been the most difficult task. Therefore what should be indicators to carry out such an exercise was a major question before us. After considerable discussions twelve indicators have been identified to compute the composite index to show the spatial interlinkages of poverty determinants. These are - Percentage of SC population (X1), Percentage of ST population (X2), Percentage of BPL households (X3), Literacy rate (X4), Gap in male-female literacy rate (X5), Percentage of marginal workers (X6), Percentage of agricultural labourers (X7), Percentage of household having drinking water facility (X8), Percentage of household having availability of power supply (X9), Percentage of household having latrine facility (X10), Percentage of household having kitchen facility (X11), Percentage of household having banking facilities (X12). For detailed analysis at first aggregate data have been compiled into percentage. After that to normalize the data we have used Dimension Index (DI). Dimension index (DI) is used to makes normalization of variables into a unit free form. In Human Development Report published by United Nations Development Programme (UNDP), Human Development Index (HDI) has been calculated by using this technique (Shive, 1991). Dimension Index for each indicator is calculated using the following formula:

$$\text{Dimension Index (DI)} = \frac{(\text{Actual value} - \text{Expected minimum value})}{(\text{Expected maximum value} - \text{Expected minimum value})}$$

The range of DI varies from 0 to 1. After normalization of data we have assigned rank in descending order for each parameter of the each block using Kendall's ranking co-efficient method (1955). The block having maximum score has been ranked as 1 and other blocks have been ranked as per their score. After that the aggregate of the rank of different indicators of poverty of each and every block has been calculated to retrieve composite score. After calculating composite score we have standardized the data using Standard Score (Z score) with the help of the following formula:

$$Z_i = (X - \mu) \div \sigma$$

Where
Zi = Standard Score
X = Individual observation
μ = Mean of the population
σ = Standard Deviation of the population

After calculating standard score we have categorized the blocks in three different categories i.e. high, medium and low as per their score value for easy analysis and interpretation. Highest standard score value signifies lowest intensity of poverty while lowest value denotes highest intensity of poverty. For better understanding and to portray spatial dimensions of various poverty determinants, poverty interlinkages and its social location, various maps have been prepared with the help of ArcGIS 10.5 Software. Besides for data analysis we have used SPSS version 22 and MS Excel 2010 software. The methodological framework has been given below.
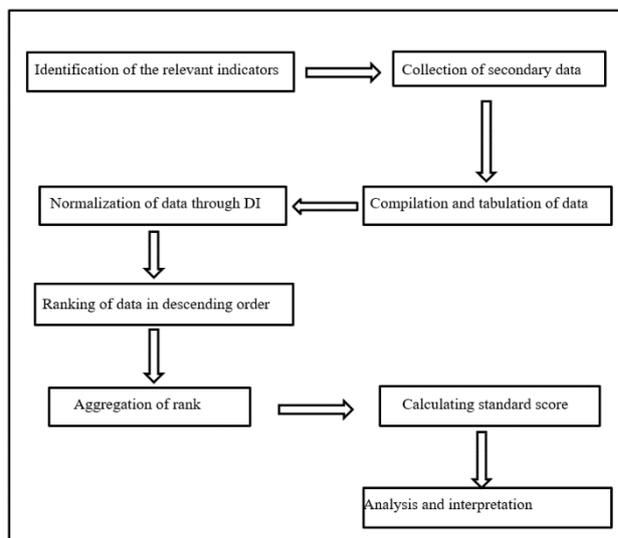

Fig. 2: Methodological Framework

Results and discussions

To understand the spatial interlinkages among the determinants of poverty and also to get a clear idea about the spatial pattern of poverty, composite index and standard score have been calculated in Table 1. For detailed analysis on the basis of standard score the whole district has been divided into three major categories in respect of the intensity of poverty – (i) area of extreme poverty (ii) area of moderate poverty and (iii) area of low poverty.

(i) *Area of extreme poverty:*

From Figure 3 it is clearly identified that among the 18 Community Development Blocks of Hooghly District three blocks are fallen under this category namely Arambagh (-1.99), Goghat-I (-1.82) and Panduah (-0.81). The situation of Arambagh block is the worst among these blocks due to various reasons like high concentration of SC population (37.57 percent), maximum number of households under BPL category (49.89 percent), higher proportion of population involved in as agricultural labourers (42.74 percent) and marginal workers (31.44 percent), huge gap in male and female literacy (10.88 percent), lower level of literacy rate (70.32 percent) etc.

Besides these, the block Arambagh also lags behind in terms of availability of drinking water (99.51 percent), availability of latrine (67.06 percent) and kitchen facility (43.77 percent), availability of power supply (99.65 percent), accessibility to banking services (41.89 percent). Except Arambagh, the condition of Goghat-I and Panduah block is also vulnerable in terms of poverty and deprivation. Goghat-I block falls under extreme poverty category because of high concentration of SC (38.79 percent) and ST population (6.01 percent), higher gap in male-female literacy (12.68 percent), vast number of population engaged as agricultural labourers (41.68

percent), lack in accessibility of latrine (59.17 percent) and banking facility (44.24 percent). The picture of Panduah block is almost similar in respect of poverty and deprivation. Various factors like highest concentration of ST population (15.36 percent), second highest concentration of BPL households (34.30 percent), highest proportion of marginal workers (32.83 percent), low literacy rate (68.22 percent), lack of accessibility in terms of power supply (98.51 percent), kitchen facility (39.51 percent) and latrine facility (51.24 percent) have contributed to generate such extreme poverty.
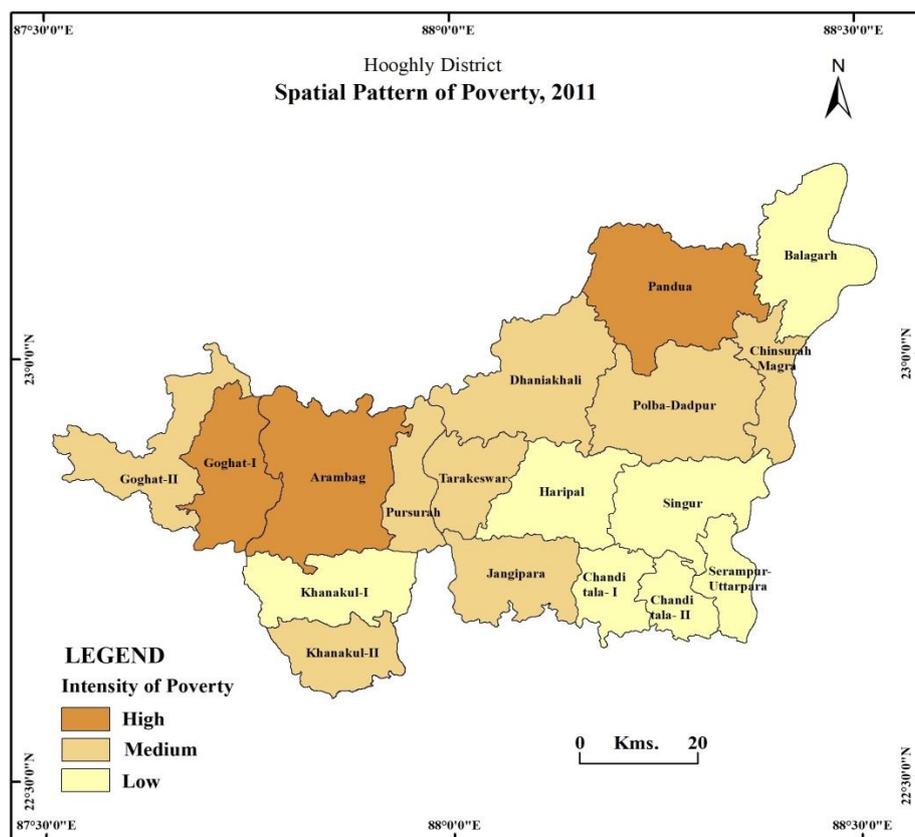

Fig 3: Spatial Pattern of Poverty in Hooghly District

(ii) *Area of moderate poverty:*
Figure 2 also demonstrates that most of the blocks i.e. eight blocks belong to this category – Eight blocks of the district – Pursurah (-0.73), Jangipara (-0.73), Tarakeswar (-0.64), Goghat-II (-0.48), Khanakul-II (-0.31), Dhaniakhali (-0.06), Polba-Dadpur (0.11) and Chinsurah- Magra (0.36). These blocks occupy better circumstances in terms of poverty due to moderate concentration of SC and ST population, medium literacy, lesser gap in male and female literacy, lower number of people working as agricultural labourers and marginal farmers. Besides, these areas also get better facilities considering the availability of drinking

water, power supply, kitchen facility and so on. Among these blocks, Pursurah, Jangipara and Tarakeswar lag more behind than other five blocks of this category.

(iii) *Area of low poverty:*
Low poverty is found in rest of seven blocks of the district- Chanditala-I (1.63), Haripal (1.37), Serampur-Uttarpara (1.04), Chanditala-II (1.04), Khanakul-I (0.87), Balagarh (0.62) and Singur (0.53). These blocks provide better scenario in respect of intensity of poverty. Here concentration of SC and ST population and households under BPL category is quite less. It is observed from the table 1 that the

lowest concentration of SC population is found in Chanditala-II block i.e. 15.21 percent. Similarly distribution of ST population is also less in these blocks, like Chanditala-I (0.16 percent), Khanakul-I (0.30 percent) etc. Number of BPL households is the least in Serampore-Uttarpara block (7.59 percent) followed by Chanditala-II (8.98 percent) and Chanditala-I (9.07 percent). Except the above mentioned reasons, in these areas a very small number of people are engaged as agricultural labourers and marginal workers. For example, in Serampore–Uttarpara block only 3.57 percent population work as agricultural labourers while in

Chanditala-II block only 12.46 percent people come under marginal workers. Literacy acts as an important role in eradication of poverty. Because of high literacy rate in these blocks like Serampore-Uttarpara (79.42 percent), Chanditala-II (76.92 percent) etc. poverty is much lesser than other blocks in the district. Besides, most of the people of these blocks experience better facilities like availability of drinking water, availability of power supply, availability of kitchen and latrine facility, accessibility to banking services etc. All these components together have played a vital role for the overall development of these regions.

Table 1: Spatial Interlinkages of Poverty Determinants in Hooghly district

Blocks	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	Composite Index (Ci)	Standard Score
Goghat 1	38.79	6.01	29.97	70.51	12.68	15.99	41.68	99.41	99.84	59.17	52.84	44.24	84.00	-1.82
Goghat 2	36.15	4.72	17.85	69.04	11.40	23.22	41.51	99.21	99.73	62.09	49.88	39.49	100.00	-0.48
Arambagh	37.57	1.46	49.89	70.32	10.88	31.44	42.74	99.51	99.65	67.06	43.77	41.89	82.00	-1.99
Pursurah	21.35	0.48	31.51	73.52	10.64	22.71	33.83	99.44	99.83	73.25	49.67	45.56	97.00	-0.73
Tarakeswar	23.63	5.04	18.62	72.33	10.52	30.84	38.09	99.51	99.15	67.41	40.30	54.89	98.00	-0.64
Dhaniakhali	33.01	14.26	31.85	68.29	8.22	29.64	53.71	99.18	99.27	49.57	35.78	57.68	105.00	-0.06
Panduah	32.04	15.36	34.30	68.22	9.04	32.83	51.33	99.98	98.51	51.24	39.51	51.55	96.00	-0.81
Balagarh	40.79	9.23	11.19	69.75	9.22	20.38	42.99	98.99	99.27	62.52	53.25	47.78	113.00	0.62
Chinsurah-Magra	29.51	3.64	15.99	75.06	8.58	21.60	12.70	99.32	99.02	83.48	54.91	54.61	110.00	0.36
Polba-Dadpur	35.79	11.47	28.54	67.74	9.94	24.78	54.89	99.19	99.01	48.57	43.47	56.08	107.00	0.11
Haripal	28.03	6.70	27.56	70.68	8.42	22.07	40.05	98.97	98.96	58.83	44.62	55.41	122.00	1.37
Singur	17.02	1.47	18.39	76.69	7.12	13.36	16.34	99.08	99.48	72.84	57.88	58.86	112.00	0.53
Serampur-Uttarpara	23.04	0.82	7.59	79.42	7.44	13.57	3.57	98.17	99.07	94.22	66.83	62.94	118.00	1.04
Chanditala-1	19.60	0.16	9.07	74.75	5.26	13.51	18.10	99.31	99.41	71.54	57.75	56.38	125.00	1.63
Chanditala-2	15.21	1.00	8.98	76.92	4.86	12.46	6.31	99.38	99.30	85.35	62.79	58.27	118.00	1.04
Jangipara	30.87	4.61	32.05	71.30	8.68	22.67	34.77	99.91	99.40	61.50	47.24	49.88	97.00	-0.73
Khanakul-1	28.81	0.30	11.10	68.59	11.62	25.45	34.83	99.60	99.78	53.79	51.81	35.49	116.00	0.87
Khanakul-2	30.07	0.02	16.47	69.72	10.58	25.55	29.25	99.68	99.83	60.42	59.44	46.73	102.00	-0.31

Source: District Census Handbook 2011, Hooghly and Personal computation

Social Space of Poverty

Social, cultural and psychological locations over space have many dimensions of poverty. Poverty in agrarian economy is followed in accordance with ethnic nature of social hierarchy, groups, nature of employment and participation in political and decision making processes. The geographical dimensions of poverty have various linkages with the socio-cultural aspects of a society. This prevailing phenomenon is related with the formation of multiple poverty among different layers of social structure. Haan and Dubey (2005) argued that 'the regional, social and gender disparities are more prominent factors which determine the poverty pattern'. The statement is more relevant in a country like India because Indian social structure is not homogenous. From the very ancient period of time in maximum parts of our

country the lower sections of the society have been suffering from the problem of historical exploitation, social segregation, discrimination, exclusion, social and economic inequality etc. while the upper sections have been enjoying the fruit of development and legacy. Throat (2010) stated that 'Indian society is primarily an identity-based society. This identity of an individual stems from caste, ethnicity, religion or even regional belongings amongst others'. So, though economic dimension is very useful in measurement of poverty, it is not able to explain all the facets of poverty because in India characteristics and intensity of poverty are not similar among different social groups of a society. Guchhait and Sengupta (2020) made a comprehensive study in Purulia district of west Bengal and identified scheduled social groups, especially the tribal people, engaged in daily wage casual labour followed by agricultural labourers are the most vulnerable to poverty indicators in their

respective population segments of the district. Bagli and Tewari (2019) in their study pointed out the fact that in respect to the incidence and intensity of multidimensional poverty there is a wide variation across the social castes and among the social castes tribals are the poorest preceded by scheduled castes, general castes and OBCs. Under these circumstances, in this paper an attempt has been made to explain the persistence of poverty among different social groups in various blocks of Hooghly district. Table 2 indicates caste-wise proportion of BPL households in Hooghly district to express rational view about the social location of poverty. From the table it is clearly viewed that according to 2005 BPL census, almost 30.84 percent households of this district are identified as BPL households. Among the blocks maximum assemblage of BPL household is observed in Dhaniakhali (42.20 percent) block followed by Polba-Dadpur (40.15 percent), Panduah (39.48 percent), Haripal (38.87 percent) and so on. While less concentration of BPL households is found in some urban dominated blocks like Chanditala-I (7.60 percent), Serampore-Uttarpara (17.18 percent), Singur (17.77 percent) etc. Among the total BPL households of this district maximum household i.e. almost 62.98 percent have fallen under SC category followed by general category (19.33 percent), OBC (8.95 percent) and ST category (8.74 percent). This pattern expresses the ground truth of social hierarchy of Indian society. In Hooghly district the picture is more relevant in rural blocks like Polba-Dadpur (76.41

percent), Arambagh (75.19 percent), Panduah (71.53 percent), Goghat-I (70.81 percent), Goghat-II (71.51) etc. where more than 2/3 population under BPL belong to SC category. Interestingly among the urban blocks, in Chinsurah–Magra almost 72.61 percent BPL households come under SC category. It is clearly revealed that SC group is the most deprived social group and they have faced the problem of subcultural poverty. Maximum concentration of BPL households under ST category is found in Tarakeswar block (31.31 percent) followed by Dhaniakhali block (17.48 percent), Panduah block (14.13 percent) and Haripal block (11.20 percent). This is due to the higher concentration of ST population in these areas than other parts of the district. BPL households under OBC category is significantly maximum in Chanditala-I block (36.05 percent) followed by Pursurah block (19.21 percent), Chanditala-II block (14.65 percent) and so on. However, in some developed blocks like Serampore-Uttarpara (63.80 percent), Singur (59.99 percent), Chanditala-II (44.06 percent), Chanditala-I (38.85 percent) maximum BPL households are under General category. This picture clearly illustrates that the severity of poverty is mostly concentrated among the lower strata of the society i.e. SC and ST population than the other social groups. Because these groups have been deprived of their rights that are necessary for the well-being of human life and till now continues to remain excluded from the mainstream of development processes.
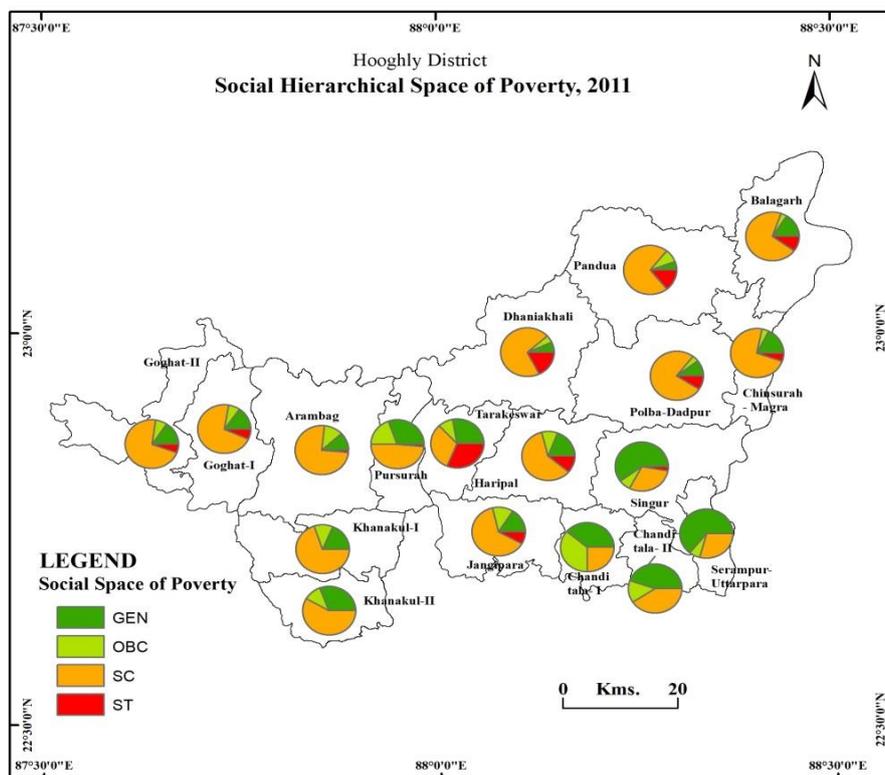

Fig. 4: Social Hierarchical Space of Poverty in Hooghly District

Conclusion

On the basis of the above discussion, it can be said that though in our country BPL is used to measure poverty, it cannot truly depict the reality of the intensity of poverty in any geographical space. Rather it is more prominent to identify the poor households on the basis of various determinants which provide better picture for understanding the reality of poverty in many aspects (Rao and Mishra, 2016).

In this paper spatial pattern of poverty in Hooghly district has been described on the basis of various determinants like – concentration of SC and ST population, amount of BPL households, literacy, gap in male-female literacy, number of marginal workers and agricultural labourers, accessibility in various services like drinking water, power supply, latrine facility, kitchen facility, banking services etc.

It has been investigated that the spatial pattern of poverty and its interlinkages with poverty determinants show positive but differential impacts. Further for better understanding about the magnitude of poverty the district has been categorized into three parts – extreme poverty, moderate poverty and low poverty on the basis of above -mentioned determinants.

Table 2: Caste Wise Distribution of BPL Households

Blocks	Total House-holds	Total BPL House-holds 2005 Census	BPL House-holds (%)	General Cate-gory BPL House-holds	%	OBC Cate-gory BPL House-hold	%	SC Cate-gory BPL House-hold	%	ST Cate-gory BPL House-hold	%
Goghat 1	29,520	10,616	35.96	1626	15.32	745	7.02	7524	70.87	721	6.79
Goghat 2	34,962	8,782	25.12	1376	15.67	624	7.11	6280	71.51	502	5.72
Arambagh	66,356	23,708	35.73	2788	11.76	2754	11.61	17826	75.19	340	1.43
Pursurah	38,099	14,235	37.36	4347	30.54	2735	19.21	6954	48.85	199	1.40
Tarakeswar	38,558	12,004	31.13	3336	27.79	1109	9.24	3801	31.66	3758	31.31
Dhaniakhali	70,472	29,741	42.20	2027	6.81	1423	4.78	21091	70.92	5200	17.48
Panduah	76,923	30,372	39.48	1707	5.62	2646	8.71	21726	71.53	4293	14.13
Balagarh	52,508	14,709	28.01	2359	16.04	544	3.70	10350	70.37	1456	9.90
Chinsurah-Magra	44,617	12,613	28.27	2240	17.77	544	4.31	9158	72.61	671	5.32
Polba-Dad-pur	64,811	26,022	40.15	2744	10.54	1019	3.92	19884	76.41	2375	9.13
Haripal	55,406	21,536	38.87	4168	19.35	2064	9.58	12893	59.87	2411	11.20
Singur	59,962	10,658	17.77	6394	59.99	792	7.43	3196	29.99	276	2.59
Serampur-Uttarpara	32,910	5,653	17.18	3594	63.80	380	6.75	1633	28.89	46	0.81
Chanditala-1	33,305	2,530	7.60	983	38.85	912	36.05	629	24.86	06	0.24
Chanditala-2	49,673	11,602	23.36	5112	44.06	1700	14.65	4674	40.29	116	1.00
Jangipara	46,044	14,757	32.05	2360	15.99	1864	12.63	9355	63.39	1178	7.98
Khanakul-1	47,049	11,020	23.42	2021	18.34	1263	11.46	7631	69.25	105	0.95
Khanakul-2	36,935	10,430	28.24	3194	30.62	1122	10.76	6071	58.21	43	0.41
Total	878,110	270,988	30.86	52,376	19.33	24,240	8.95	1,70,676	62.98	23,696	8.74

Source: Panchayat and Rural Development Department, Hooghly and Personal computation
Note: General = General Caste, SC = Schedule Caste, ST= Schedule Tribe, OBC = Other Backward Class (these are the four division of social class in Indian society)

Extreme poverty mainly persists in three blocks i.e. Arambag, Goghat-I and Pandua. While low poverty exist in several blocks like Chanditala-I Haripal, Serampur-Uttarpara, Chanditala-II, Khanakul-I, Balagarh and Singur. In rest of the blocks moderate poverty is observed.

From the study it has also been portrayed that moderate to high poverty is mainly concentrated in the western and northern blocks while southern and eastern blocks which are near to the urban centers of the district are in better position in terms of poverty.

It can also be stated that all the twelve indicators have played a crucial role to shape the spatial pattern of poverty of the district. The present paper also focuses on the nexus of poverty among the different social groups in Hooghly.

The results further suggest that the spatial pattern of poverty is mostly followed by the prevailing nature of the social hierarchy. Among the total BPL households of this district maximum household are under SC category followed by general, OBC and ST category. From the present study it has also been

observed that in rural blocks like Polba-Dadpur, Arambagh, Panduah, Goghat-I, Goghat-II etc. poverty is mainly concentrated among the Schedule Caste population while in several blocks which are nearer to the urban centres such as Chinsurah-Magra, Chanditala-II, Chanditala-I and Serampore-Uttarpara poverty is mainly concentrated among the general caste people.

The analysis also reveals that the severity of poverty is mostly concentrated amongst the lower strata of the society i.e. SC (Schedule Caste) and ST (Schedule Tribe) population because they have been deprived of getting different amenities to sustain their life and livelihood. These ground realities are serious crises that need special attention from policy makers, development planners and strategists so that in near future the inequality and intensity of poverty may reduce among the lower sections of the society in Hooghly.

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