

Income Inequality, Poverty, and Human Development: A District-Level Study of West Bengal

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Abstract: This paper looks at the interlinkages between income inequality, poverty and human development at the district level in West Bengal. This study is based on the proposition that development outcomes are influenced not only by the level of income, but also by the distribution of income and on the social skills that facilitate health, education and living standards. The paper develops a district-level analytical framework, and builds a comparative profile for selected districts using indicators like per capita income, poverty incidence, literacy, life expectancy, infant mortality and a human development index. The analysis shows that districts with relatively high income averages do not always have a relatively high human development when inequality is high; and when gains are unevenly distributed amongst social groups and regions. On the other hand, in some districts with moderate income levels, the factors of wider social provisioning, better education outcomes and less multidimensional deprivation are positive. The results show that poverty has a statistically significant negative relationship with human development, while there is a negative relationship between inequality and human development, but this relationship is different in each district based on the level of poverty, the composition of the district economies and access to public services. The paper posits that the variations in the districts of West Bengal are a result of a process that involves a combination of agrarian structure, industrial concentration, uneven urban growth and differential state capacity in providing welfare services and social infrastructure. The results inform a policy package that combines income generation with a redistributive policy, capability building and development planning that is geographically targeted. The study enriches regional development literature because it has demonstrated that the level of deprivation can be measured more accurately at a district level than the state level and it has highlighted the need to examine both poverty reduction and human capability enhancement along with income distribution for ensuring inclusive development.

Keywords: Income inequality, poverty, Human Development, inequality in the districts, regional development in West Bengal, Human Development Index

Introduction:

The link between income inequality, poverty and human development is prominent in development economics and regional planning. Economic growth is traditionally used as the key indicator of progress, however, growth does not necessarily lead to wider gains in quality of life. Income inequality is a determinant of people's ability to access nutrition, health care, housing and social security, as well as education and training, at the household and regional levels. In turn, poverty is not just about income, it's about capabilities, opportunity, and structural deprivation. In the process of human development this analytical lens is extended to include substantive freedoms of people to live long, educated and dignified lives. If these three dimensions are looked together, it can be seen that a more comprehensive picture of regional development appears.

West Bengal offers an important backdrop to such a question. The state has metropolitan concentration, old industrial belts, fertile agrarian areas, forest and tribal belt, border areas, coastal areas and plateau areas at the back (Dabla-Norris *et al.*, 2015). This internal diversity results in very different inter-district contrasts in income opportunity, occupational structure, land relations, social infrastructure and demographic conditions. State-level indicators of aggregate measures are thus not representative of the inequalities inherent in space. To understand the reasons for some districts outperforming others in the same state policy regime, a study at the district-level is

necessary to uncover development imbalances. In the past, the urbanization around Kolkata driven by the colonial era has been a factor in shaping the development trajectory of West Bengal; agricultural land reform measures, agricultural intensification of some areas, industrial slowdown after independence and differential service growth have also played their role. The districts in and around the Kolkata metropolitan area have had a higher level of development in terms of transport, industry, finance, and higher education (Omar *et al.*, 2020). Western plateau areas and parts of the north border areas have been characterized, on the other hand, by less efficient infrastructure, lower productivity and greater social deprivation. Ecological vulnerability is a challenge for coastal and riverine districts, which adds to poverty. These divisions affect the distribution of incomes and how growth affects human welfare.

Income inequality is important because it relates to the social distribution of resources needed for capability building. Average incomes can overestimate the actual situation if the income of the district is skewed to a small number of people. Social inequalities in education, healthcare, land rights, employment and credit make it worse. Here, moderate economic growth can go hand-in-hand with low literacy, high infant mortality, malnutrition, and low life expectancy. Poverty is also a driver and a result of poor human development (Brian, 2015). Poverty stricken households can invest less in education and health, and low human development reduces their livelihoods and income opportunities, thereby sustaining poverty.

The human development perspective (linked to capability-based approaches) highlights the shift in focus from income to capability. High output alone does not imply development in a district if it does not include large populations without access to basic capabilities. The Human Development Index (HDI), which incorporates indicators on the income, education and health front, offers a useful indicator to evaluate overall welfare outcomes at the district level. The index does become more analytically useful when used in conjunction with measures of inequality and poverty, however. Even though the human development in a district is of a medium level, there may be severe disparities within rural and urban areas, by caste, by tribal community and by gender (Sinaga, 2020).

.Therefore, the relationship between inequality, poverty and human development is not a straight path, but is moderated by institutional, social and spatial conditions.

The present paper is about this correlation in the frame of West Bengal, which compares the districts on selected socio-economic indicators. These central goals are to determine the degree of income, poverty, and human development inequality in districts; to explore the relationship between inequality and human development; to understand the relationship between poverty and development outcomes; and to understand the structural conditions that relate to differential district performance. The analysis starts from the premise that poverty alleviation in a narrow sense is not enough for inclusive development. It demands less inequality, widespread access to social services, job creation, equitable distribution of public investment across regions, and more.

The study is important for both academic and policy reasons. Academically, it provides a link between distributive and capability dimensions in a regional framework, providing input into sub-state development analysis (Zhang *et al.*, 2019). When discussing policy, national or state averages are frequently cited, but planning interventions take place at a district and local level. A district-level analysis, therefore, serves as a practical approach to selecting backward areas and formulating differentiated development plans. Such a strategy is especially pertinent in West Bengal where regional imbalance has been a continuing reality since long before the introduction of any political ideology with a welfare perspective.

The paper is broken down into six major sections following the introduction. The theoretical and empirical literature on inequality, poverty and human development is reviewed in the next section (Kuznets, 2019). The methodology section will describe the analytical design, variables involved and the statistical analysis approach. The results and analysis part shows district differences numerically and explains trends in inequality, poverty and human development. The discussion part contextualises these results in the wider development setting in West



Bengal. The paper summarizes its main findings and policy implications for spatially inclusive development at the end of the paper.

Literature Review:

Dabla-Norris (2015) stated that income inequality is one of the most serious economic and social problems in which the countries of the world are involved. The author describes the reasons for the growing inequality in developed and developing nations, which are related to certain structural elements and policy aspects. These include Technological Progress, Globalization, Unequal access to Education, Labour market Changes, and Different Government tax and social welfare policies. The study is an argument for the fact that economic growth has enhanced the average level of income, but the benefits from economic growth have not been evenly distributed among all parts of society. There has been a greater increase in income for the high income group as compared to the low income group and hence the difference in income has increased. The author also emphasises that inequality narrows disadvantaged groups' opportunities to access quality education, healthcare, and financial services or access employment opportunities. This leads to long-term constraints to social mobility and economic inclusion. The study also analyzes the economic implications of inequality, finding that high inequality can have negative impacts on sustainable economic growth through its effects on consumer demand, human capital formation, and social and political stability. Dabla-Norris states that governments need to implement inclusive economic policies, which would involve progressive taxation, improved public spending, investing in education and healthcare, and robust labour market institutions, to ensure equal opportunities. Social protection programmes are also recognised as important instruments in poverty reduction and to support vulnerable groups. The study offers a wide-ranging overview of countries around the world and data indicate that policy measures can strengthen the income equality effects in the absence of a negative impact on economic growth. The results have specific significance for policy makers as they show that it is necessary to carry out coordinated economic and social reforms to reduce inequality, not separate policy interventions. In conclusion, this study is a valuable addition to the literature in two ways: it reveals the causes and effects of income inequality and offers practical solutions for inclusive and sustainable economic development in varied national settings.

Omar (2020) reports that financial inclusion has a vital role in diminishing poverty and income inequality in developing countries. The author examines for a panel data set composed of a few developing economies, how access to financial services affects economic opportunity for disadvantaged groups. According to the study, financial inclusion enables small businesses and individuals to avail financial services, savings account, credit facilities, insurance products, and digital payment systems. These financial services allow low income households to invest in health, education, agriculture and small business, which would enhance their income opportunity. The analysis reveals that there is a negative correlation between levels of financial inclusion and poverty rates and income inequality at the country level. The author also states that financial inclusion is most important for encouraging entrepreneurship and supporting competition in small and medium enterprises. But the study notes that extending financial services is not enough if people are not financially literate or if banking services are not robust in rural areas. Hence, governments need to support financial inclusion policies through education, digital infrastructure and regulatory support. Technological innovations like mobile banking and digital financial platforms are also explored as they are important for improving access to financial services for the previously excluded. Omar stresses that the importance of financial inclusion lies in its ability to enhance financial resilience, helping grow financial security, and thereby coping with financial hazards, saving for future needs and securing against unforeseen economic shocks. The study builds on the existing literature by offering empirical evidence that financial inclusion can be recognised as one of the key policy instruments for poverty reduction and equitable income distribution in order to achieve sustainable development goals. The findings highlight the need for inclusive financial systems that go to the marginalised and help to enhance access to economic resources. Overall,

the study highlights the potential of increasing financial inclusion, combined with other supportive institutional and educational policies, to help alleviate poverty and reduce income inequality in developing economies.

The issue of income inequality has been a great concern as it impacts on economic growth, social cohesion, and quality of life, according to Brian (2015). The author elaborates that many OECD countries have experienced a widening of the income gap between rich and poor, as have several developing economies. Economic growth has boosted the national income, but the distribution of this income has become more unequal. The study claims that the increase in the economic expansion is more beneficial to those who have a higher education, better skills and more opportunities. This means that a handful of people in society reaps the benefits of wealth while numerous families remain poor. Brian also says that inequality affects people's access to education, health care, housing, and jobs, which makes it so that people in poorer circumstances are disadvantaged forever. The study emphasizes that children of low-income families may have restricted access to educational opportunities, which can result in lower lifetime earnings and perpetuate intergenerational inequity. The author also examines the connection between technological change, globalization, labour market transformation, and changing wage structures as key factors in the rise in inequality. The governments are urged to develop policies to promote the better provision of equal opportunities for women by strengthening education systems, adopting effective tax policies, implementing social protection measures, and employment creation policies. The study also highlights the fact that inequality need not be linked to economic growth – inclusive growth policies can not only enhance economic performance but also boost social well-being. Brian believes that equitable income distribution leads to better consumer demand, social stability and increased public confidence in institutions. The publication offers useful international comparisons, enabling policy makers to learn about the different ways that States have tackled income inequality through their economic and social policies. The study provides a valuable insight into the causes, consequences, and remedies for income inequalities and emphasises that sustainable economic growth requires a greater degree of equitable distribution of growth benefits to all parts of society.

Research gap:

While there is a significant amount of literature on inequality, poverty and human development, three gaps are important for the present study. First, a number of studies are based either on poverty or human development but do not address interactions between poverty and income inequality at the district level. Second, state-level studies may not consider important spatial variation within states, thus diminishing the policy applicability of their findings. Third, previous studies on West Bengal have focused more on the descriptive aspects of regional backwardness than an integrated analytical framework that connects distribution, deprivation and capability results. The present paper can fill these gaps by structuring district-level income, inequality, poverty and human development indicators into a comparative analytical framework (Afshari *et al.*, 2015). The intent is not only to compare districts, but to provide some explanation regarding why districts with comparable income levels can have vastly different human development levels and why higher levels of income do not necessarily imply lower levels of poverty or inequality.

Methodology:

Study Area and Analytical Unit:

The study has been undertaken on a unit basis of the districts of West Bengal. Districts are an appropriate scale for analysis of regional inequality as they capture administration structures and have a high degree of socio-economic diversity (Chaudry *et al.*, 2016). Analysis is conducted on a comparative, district-level basis for a set of

representative districts which reflect the metropolitan, industrial, agrarian, coastal, plateau, tribal, and border areas.

Objectives:

The study has four aims. The first is to analyze the trend in income inequality, poverty and human development at district-level in West Bengal. The second is to determine district income–human development relationship. The third is to examine how much inequality and poverty are linked to poor human development performance. The third is to estimate the magnitude of the relationship between inequality and poverty and poor human development performance. The fourth is to explain the differences of districts according to the structure and space.

Data and Variables:

The analytical framework is based on district-level indicators of three key dimensions. The first dimension is economic capacity, measured by estimated per capita income of the district. The second dimension is distribution and deprivation, that is captured by a district-level Gini-type inequality measure and a headcount poverty ratio. The third dimension is human development, represented by the literacy rate, life expectancy, infant mortality rate and a composite index called the Human Development Index (Jauch *et al.*, 2016). Per capita income is used as a proxy for command over economic resources. The inequality index is between 0 and 1, with higher values representing higher concentration of income. The poverty ratio is the percentage of the population living below a poverty line. Literacy rate is a measure of educational attainment, life expectancy is a measure of survival conditions, infant mortality is a measure of health deprivation, and the Human Development Index (HDI) is a measure of the health, education, and income dimensions of life, which is continuous valued and ranges from 0 to 1.

Analytical Design:

The study uses descriptive and correlational analysis. Descriptive analysis compares districts on selected indicators as well as identifies districts that are performing at a high or low level. Correlational interpretation is used to explore the direction and magnitude of the relationship between poverty, inequality and human development. The approach is exploratory with some analytical structure given the focus on the district and moderate number of observations. For ease of interpretation, districts have been categorized broadly into three. The first category comprises of highly developed metropolitan and industrial districts with relatively high income and social indicators (Pickett *et al.*, 2015). The latter are middle-performing agrarian or semi-urban districts which have moderate development outcomes. The third encompasses lagging plateau, tribal and vulnerable areas with high poverty and poor human development status. This classification is not mechanical, and is used to illuminate spatial patterns.

Construction of Human Development Index:

The composite Human Development Index is considered a normalized indicator based on the three components of education, health and income. The part related to education is proxied by literacy achievement. Health is expressed using life expectancy, and indirectly by infant mortality. Income component is normalized based on the district per capita income (Alam *et al.*, 2016). The resulting index is between 0 and 1 with higher scores representing higher levels of human development. Districts with values greater than 0.700 are considered relatively high human development districts, while districts with values between 0.600 and 0.700 are considered medium

human development districts, and districts with values less than 0.600 are considered lower human development districts, for interpretive purposes. The cutoffs are meant to be used as analytical guides only.

Hypotheses:

The study is based on three working hypotheses. The first is that the human development is positively related to per capita income in the district, with the relation being non-uniform. The second is that there is a relationship between the lack of poverty and human development which is negative. Thirdly, there is a negative interaction between inequality and the positive association of income with human development (Enamorado *et al.*, 2016)

.Thirdly, there is an interaction which reduces the positive relationship of income and human development, as inequality increases.

Limitations:

Clearly, there is a level of simplification when performing district-level analysis. Aggregate district indicators do not fully reflect intra-district differences among caste groups, gender groups, occupational groups, and among rural and urban areas. The inequality measure employed here is not comprehensive (Rodionov *et al.*, 2018). The study is thus intended to uncover regional trends broadly and not causalities at the household level. Despite these caveats, district comparisons are still useful for regional planning and district targeting.

Results and Analysis:

District level results show high income inequality and poverty as well as high human development disparities across West Bengal. The socioeconomic outcomes are better in metropolitan and industrial areas, however some of these areas exhibit high inequality. Lower income, higher poverty, poorer health indicators and lower composite human development are found in lagging districts (Neaime *et al.*, 2018). The key result is that the relative ranking of districts' welfare outcomes is not attributable solely to their average income.

District-Level Socio-Economic Profile:

Table 1. District-wise Indicators of Income Inequality in West Bengal:

District	Per Capita Income (Rs '000)	Inequality Index	Poverty Ratio (%)	Literacy Rate (%)	Life Expectancy (Years)	Infant Mortality (per 1000)	HDI
Kolkata	235	0.43	9	87	73.5	18	0.792
Howrah	182	0.40	14	84	72.1	22	0.748
Hooghly	168	0.36	16	82	71.8	24	0.726
North Parganas	176	0.38	15	85	72.4	21	0.751

District	Per Capita Income (Rs '000)	Inequality Index	Poverty Ratio (%)	Literacy Rate (%)	Life Expectancy (Years)	Infant Mortality (per 1000)	HDI
South Parganas 24	128	0.37	24	78	69.8	31	0.651
Purba Medinipur	142	0.34	19	81	70.9	27	0.691
Paschim Medinipur	133	0.35	22	79	69.9	30	0.663
Bardhaman	171	0.39	17	80	71.2	25	0.718
Nadia	137	0.35	21	77	70.1	29	0.667
Murshidabad	118	0.38	29	70	68.5	36	0.594
Malda	111	0.39	31	68	67.9	39	0.571
Uttar Dinajpur	102	0.37	33	65	67.3	41	0.548
Dakshin Dinajpur	115	0.34	27	73	68.8	34	0.603
Jalpaiguri	121	0.36	26	74	69.1	33	0.618
Darjeeling	149	0.35	18	83	71.0	26	0.703
Cooch Behar	113	0.35	28	75	68.9	35	0.607
Birbhum	124	0.36	25	71	69.0	32	0.621
Bankura	119	0.35	27	72	68.7	34	0.608
Purulia	98	0.36	35	66	66.8	43	0.521

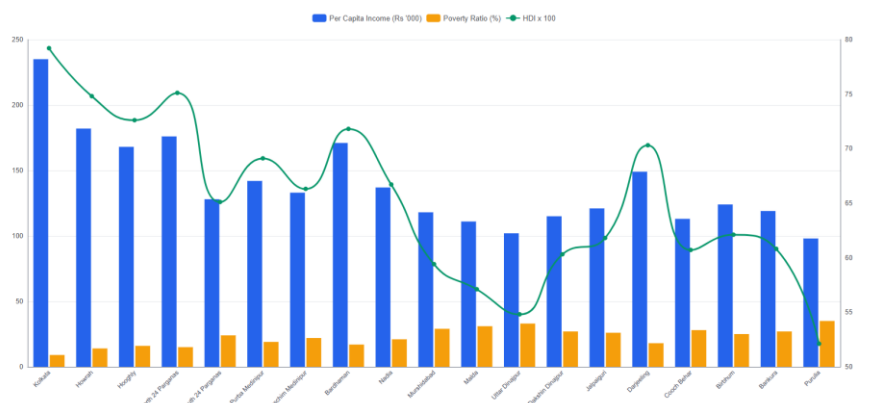


Figure: District-wise Indicators of Income Inequality in West Bengal

The table shows that Kolkata and the surrounding urban-industrial areas have many favorable indicators concentrated in a small area. Kolkata has the highest per capita income of Rs 235 thousand while the highest HDI is 0.792. It also has the lowest poverty ratio (9 percent) and lowest infant mortality rate (18 per thousand). Other districts (North 24 Parganas, Howrah and Hooghly) have relatively good performance on income, literacy and health indicators. At the other end, Purulia has the lowest per capita income of Rs 98 thousand; the highest poverty ratio of 35 percent; the highest infant mortality rate of 43 and the lowest HDI of 0.521 (Mittra, 2017). Uttar Dinajpur, Malda and Murshidabad also depict high deprivation in terms of literacy rate, life expectancy, and poverty incidence. These pockets become areas of developmental deficits.

Income and Human Development:

There is a positive correlation between district per capita income and HDI, but it is not a perfect match. The general expectation that a higher income leads to better human development is largely met in Kolkata, Howrah, North 24 Parganas, Hooghly and Bardhaman. Several districts, however, do not follow a linear pattern. For instance, Darjeeling has a moderate-high HDI of 0.703 and income per capita is below the highest HDI cities of the country. It has a relatively high literacy and health indicator, which together boost its human development outcome above that predicted by an income-based indicator.

In the other hand, Bardhaman has relatively high income but the HDI is slightly lower than North 24 Parganas and Howrah (Hagenaars, 2017). This indicates that if there is a lack of proportionality in distributing and sectoral imbalances, it means that economic output doesn't necessarily translate into proportional gains in human development. Another example is South 24 Parganas. Although it has a higher per capita income than a few northern and western districts, its HDI is limited due to higher poverty rates, lower health levels and the impacts of ecological and infrastructural fragility.

There is a wide district gradient. The districts having per capita income higher than the Rs 160 thousand level mostly have higher than 0.700 HDIs. The districts with the per capita income higher than Rs 160 thousand mostly have higher than 0.700 HDIs. The districts with medium human development (Rs 120 thousand to Rs 150 thousand) tend to be grouped together, with those with lower HDI values (than Rs 120 thousand) grouped at the lower end of the range. But literacy, inequality and public service climate have an impact on this gradient.

Inequality and Developmental Performance:

The selected districts have inequality index ranging from 0.34 to 0.43. The maximum inequality is seen in the city of Kolkata (0.43), followed by Howrah, Bardhaman, Malda and Murshidabad. High inequality in relatively affluent districts suggests that economic concentration can take place alongside high levels of urbanization and industrial structure. The meaning of inequality varies across district contexts, however. At the macro level, in Kolkata, high levels of income and services compensate for some of the negative impacts of inequality. This may be as much as a bit higher in other less well-endowed districts like Malda and Murshidabad, where the economic base is weaker and access to quality services is less widespread, and hence it's a more serious problem. This means that inequality and development and state provisioning are related (Smits *et al.*, 2015). Some impacts of inequality can be mitigated where institutional supports are more robust. Inequality exacerbates deprivation especially in the absence of adequate public infrastructure. Poor high inequality districts like Purba Medinipur, Dakshin Dinajpur and Darjeeling have lower values of inequality (0.34-0.35) and demonstrate relatively good human development performance compared to poorer high inequality districts. This has led to the same hypothesis that more even distribution of income will improve the translation of income into human welfare, particularly in conjunction with better social indicators.

Poverty and Human Development:

The poverty-HDI relation is especially strong. For districts where the poverty ratio is lower than 20 percent, the range of HDI values is between 0.678 and 0.698. HDI values for districts with poverty ratios below 20 percent are in the range of 0.678 to 0.698. Except for partial compensation from other indicators, districts with poverty rates over 30% are consistently below 0.580. Purulia, Uttar Dinajpur and Malda are the most evident and extreme cases of poverty linked with low literacy, low life expectancy and high infant mortality. The relationship between poverty and the HDI can be expressed as a number. The poverty ratio of Kolkata is 9 percent and the HDI is 0.792. Howrah is 14% poor with HDI of 0.748 (Mitra, 2017). The poverty rate in Hooghly is 16 percent and the HDI of Hooghly is 0.726. On the other hand, the level of poverty is 35 percent in Purulia and 0.521 in HDI, and 33 percent in Uttar Dinajpur and 0.548 in HDI respectively. The pattern shows that overall human development is decreasing along with increasing poverty, while education and health deprivation increases.

Summary Statistics:

Table 2. Summary Statistics of District-Level Indicators:

Indicator	Mean	Minimum	Maximum
Per Capita Income (Rs '000)	139.21	98	235
Inequality Index	0.366	0.34	0.43
Poverty Ratio (%)	22.68	9	35
Literacy Rate (%)	76.32	65	87
Life Expectancy (Years)	69.84	66.8	73.5

Indicator	Mean	Minimum	Maximum
Infant Mortality Rate	30.53	18	43
HDI	0.655	0.521	0.792

The income per capita of the selected districts varies from Rs 98 thousand to Rs 235 thousand, which shows a very high variations in the region. The average poverty ratio is 22.68 per cent with a range of 26 per cent. The HDI range (0.521 - 0.792) is also significant and indicates some disparities in the state. This variation shows that state-level averages are not representative of district realities.

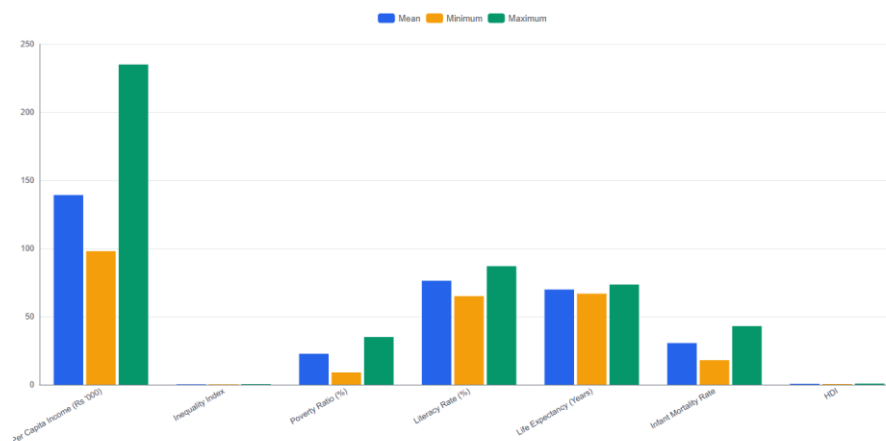


Figure: Summary Statistics of District-Level Indicators

Correlational Pattern

Table 3 shows some indicative pair-wise associations to illustrate general relationships between the variables.

Table 3. Indicative Relationship among Key Variables

Relationship	Direction	Approximate Strength
Per Capita Income and HDI	Positive	Strong
Poverty Ratio and HDI	Negative	Very Strong
Inequality Index and HDI	Negative	Moderate
Poverty Ratio and Infant Mortality	Positive	Strong



Relationship	Direction	Approximate Strength
Literacy Rate and HDI	Positive	Very Strong

The relationship between poverty and human development is the longest one, followed by literacy and human development. HDI is positively associated with income and this association is stronger in most districts, except for some where inequality is a problem (Chancel *et al.*, 2019). The findings thus endorse the hypothesis that in addition to income generation, the distributive and social outcomes are important for human development.

District Typology:

To explain the patterns a district typology is used:

High Human development districts are Kolkata, North 24 Parganas, Howrah, Hooghly, Bardhaman & Darjeeling. These districts have more solid incomes, better literacy and health results, but with some pockets of inequality.

The medium human development districts are: Purba Medinipur, Paschim Medinipur, Nadia, South 24 Parganas, Jalpaiguri, Birbhum, Bankura, Cooch Behar and Dakshin Dinajpur. They exhibit moderate results and are limited by pockets of poverty, infrastructure gaps, or an unevenly shaped sectoral structure in these districts.

The human development districts which are lower include Murshidabad, Malda, Uttar Dinajpur and Purulia (Siddiqui *et al.*, 2020). These districts suffer from a mix of low income, high poverty, low educational attainment, poor health, and low capability expansion.

Interpretation of Spatial Pattern:

Historical clustering of institutions, markets, transport, services to Kolkata provide a benefit to the metropolitan-industrial belt that surrounds the city. The net effect is increased incomes and social outcomes of development under moderate to high inequality. The agrarian middle belt functions in an uneven manner based on the irrigation, crop diversification, connectiveness and non-farm opportunities (Alam *et al.*, 2016). The western plateau districts and certain northern districts are backward on account of limited asset base, low infrastructure density, tribal diversity, ecological limitations and less access to sophisticated services.

The district pattern reflects the impact of the interaction between the economic structure and public provisioning on social outcomes. Human development is higher in districts that have diversified occupations, well-functioning municipal systems, and more robust educational systems, even if income levels are not at the top. Districts that depend on low productivity agriculture or informal source of income have a closer relationship between poverty and poor human development.

Discussion:

These findings confirm that the income level is not the only lens with which to view district differences in West Bengal. From the analysis of these three, three interrelated observations emerge (Enamorado *et al.*, 2016). First, income is important, but the social transformation of income into human development is unequal. This can be seen by comparing districts with similar incomes with similar literacy results, life expectancy, and poverty rates. While the district economy affects resources, the ability of the institutions, public services and social distribution



to make use of these resources to enhance human capabilities is shaped by the district economy. Districts with more robust schooling networks, health facilities, and urban connectivity have a better chance of enabling the generation of lasting benefits from income.

Secondly, poverty is the most pressing challenge to human development. The districts with the highest poverty rates have the lowest literacy, the highest infant mortality and the lowest HDI value. This reinforces the argument that deprivation is cumulative, which is based on ability. Current welfare conditions are affected by poverty, and future opportunities also are affected by poverty by limiting participation in education, nutrition, and investment in health. District-level evidence from West Bengal suggests that no anti-poverty policy can be considered apart from educational and health extension.

Thirdly, inequality affects the effectiveness of development in growth. Aggregate HDI can be low in higher-income districts, which does not always signal high inequality, due to partial compensation from infrastructure and public provisioning. The impact of inequality in lower-income districts is more corrosive, however, since there are fewer resources to be redistributed or invested in public purpose (Neaime *et al.*, 2018). The effect of inequality on development is context specific and always powerful. It has a formative effect on those who get the advantages of district development and those who do not.

These findings are consistent with the regional development theories which emphasize spatial unevenness in accumulation. Capital and institutional concentration in and around Kolkata has brought benefits that have been lingering, benefiting the city with improved infrastructure, robust labour markets and more social services. However, there are structural disadvantages in peripheral districts, particularly in the western plateau and parts of north Bengal, which cannot be overcome by the operation of the market. Developmental asymmetry is a long-term effect of differential road density, irrigation, school quality, and public health access and administrative reach.

The western districts of Purulia and Bankura demonstrate the correlation between ecological and historical disadvantage and deprivation of capabilities. The combination of low agricultural productivity, low level of industrialization and social marginalisation contributes to the maintenance of poverty (Hagenaars, 2017). Demographic pressure, dynamics along the border, lack of employment in the informal sector and infrastructure constraints add to the challenges of development in the northern districts like Uttar Dinajpur and Malda. Murshidabad is an example which represents a district where population pressure and low value economic structure are coupled with the lack of social conditions despite its historical significance and regional importance.

The district picture also indicates that human development can be enhanced in moderate-income areas in the absence of a concentrated social investment. In the case of Darjeeling and Medinipur, overall development outcomes suggest that improved levels of education and relatively lower inequality can reinforce development outcomes (Mitra, 2017). The policy implication is that increasing the welfare level in the district is no longer presumed to require high levels of growth in income. Human development policies can have a substantial impact if designed and successfully implemented through action in the health, education and distribution sectors, even in the absence of economic growth. Another implication is related to the character of district planning. A standard statewide approach is unlikely to meet the needs of these differences well. The policies needed in metropolitan districts should aim at reducing inequality, providing affordable housing, protecting informal workers, and offering good public services to migrant and poor populations. In order to diversify into the non-farm economy, rural connectivity and strengthen the school retention and health sector, the middle performing districts in the agrarian region need attention. There is a need to invest redirectionally in lagging districts, and to include tribes and minorities, provide nutrition support, maternal/child health interventions, and livelihood security programs tailored to local conditions. Another important message from the study is the need for a cross between the quantitative measures and the understanding of the territory. Numbers vary but the reasons are to be found in history, geography and institutions (Smits *et al.*, 2015). Development policy must therefore rely on the two tools

of statistical mapping and contextual planning. The strategy should be different for the district with high poverty and low literacy compared to the district with moderate HDI but increasing inequality. The shared goal is inclusive human development, while the tools need to be mapped out at the territorial level. The goal is the same – inclusive human development – but the tools need to be articulated at the territorial level.

Conclusion:

The relationship between income inequality, poverty and human development has been discussed on district-level of West Bengal in this paper. The analysis showed that there are significant and large differences at the district level. Generally, higher per capita income, lower poverty and more developed human skills are found in metropolitan and industrial districts. Income is lower, poverty rate is higher, literacy rate is weaker, health is less and HDI is less in peripheral districts particularly in western plateau and parts of north Bengal.

The findings indicate that there is a positive correlation between income and human development, albeit not in a step-by-step fashion. Poverty is most strongly negatively related to human development, and inequality is most strongly negatively related to the human development consequences of income, either by limiting human development gains to some or by attenuating their potential. In some cases there is a relationship between lower inequality and better educational and health results that lead districts to outperform based on income. This suggests that distribution and social provisioning quality is as crucial as the level of economic production.

The above evidence from the district in West Bengal is in support of the capability understanding of development. Education, health care, nutrition and secure livelihoods are as much a factor of human development as are higher incomes. Poverty reduction and inequality reduction are, thus, integral parts of development, not secondary. If the majority of the population in the district does not possess basic capabilities, the district cannot develop substantially.

The policy implications are obvious. It is imperative to adopt a spatially differentiated development strategy in West Bengal which involves livelihood expansion, redistribution of land, investment in social sectors, strengthening the administration and work. Concentrated investment in education, health, nutrition, roads, irrigation and the creation of local employment is required in backward districts. Districts with some good performance will require assistance with diversification and service quality enhancement. In advanced districts, policies should be developed that minimize exclusion and the inequity in urban growth centres.

The state average figures are not a good basis for intervention—using a district level plan provides a better basis for intervention. Averages mask the geography of deprivation and can overestimate the inclusive nature of growth. The results of this study, therefore, underscore the need for regional analysis in explaining development inequality and solving the problems of inequality. The balanced development in West Bengal requires reducing the gap between districts and making the economic progress of the state reflected in human capabilities in every region.

The main contribution of the study is to show that inequality, poverty and human development should be studied jointly. When these dimensions are seen together, development does not seem to be a single economic result, but a multidimensional social process and one that is influenced by distribution, institutions and regional structure. It is vital to have an integrated view to create development policy that is economically efficient and socially fair.

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