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Comparative role of income and social inequality in migration decision making: a household level analysis of India

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Abstract: This paper tries to analyse the relative role played by income and social inequality in rural-urban migration decision-making, exploring household level primary data of India. The study has used various income and social inequality indices, namely, economic well-being, Gini coefficient, multidimensional poverty index (MPI), etc. Results show that income factors, specifically absolute income differences rather than relative income inequalities, are the most dominant reason. Rural people are least bothered about multi-dimensional deprivation as results shows that fewer multi-dimensionally poor are migrating in higher numbers. While comparing the pre- and post-migration scenario, it has been found that the rural out-migrants have become more multi-dimensionally poor once they migrate into urban areas. Hence rural-urban migration is found to be welfare reducing. The logistic regression results show that families from scheduled castes and scheduled tribes are more multi-dimensionally poor and distance from nearby market is one of the key determinants of multidimensional poverty.

Keywords: migration; income inequality; social inequality; deprivation; multidimensional poverty index; MPI; India.

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Biographical notes: Debasis Chakraborty is presently working as an Assistant Professor in National Institute of Technology Durgapur, India. Prior to this, he acted as an Assistant Professor of Economics in Durgapur Government College under West Bengal Education Service from 2010–2018. He is involved in undergraduate, postgraduate as well as in doctoral level teaching. He teaches papers on economics, statistics, social work and research methodology. His areas of interests are labour economics, development economics, migration studies and urban economics. He has published several research papers in different international and national journals of repute. Apart from this, he has published two books on migration studies in India.

1 Introduction

Migration in general and rural-urban migration, in particular, is inevitable in the process of economic development. In fact, out of four streams of migration, rural-urban migration has specific distinct characteristics that affect the developmental aspect of both the place of origin and the location of destination significantly. From the very beginning of migration studies, starting with the famous Harris-Todaro (H-T) model (Harris and Todaro, 1970), there is an increasing concern related to this rural-urban migration stream and problems associated with it. There are several factors that prompt rural-urban migration but developmental disparities between the two places involved are significant causes that result in this migration flow. Undoubtedly, poverty is one of the most eliciting factors among these economic disparities. People generally migrate from a relatively distressing place to a more economically sound area. This distressed migration has various welfare, social and economic impacts at both micro and macro level. For example, remittances sent by the urban migrants to their native villages help them evade poverty; increase consumption; invest more in agriculture, education, health; reduce the burden of debt, etc. Remittances have macroeconomic impacts too, as it often acts as an alternative to foreign direct investment (FDI) and accelerates economic growth process specifically for developing countries (Ali et al., 2018). Remittances have specific social impacts as they help reduce economic inequality among the social groups in the area of origin (Richard and Page, 2003). One of the pioneering works (Adams, 1991) showed that remittances do affect rural asset accumulation. The number of poor households declines severely if home income is coupled with remittances. Evidence from countries like Mexico, Burkina Faso show that remittances can raise productivity in rural areas through increased investment (Taylor and Lopez-Feldman, 2007; Wouterse and Taylor, 2006). On the other hand, skilled migrants can contribute to the development of the urban sector faster through their active participation in the urban labour market. This involves setting up new industries and running them more efficiently (Fang and Dewen, 2008). It is not the case that all the impacts of rural-urban migration are positive. There are specific retarding effects on economic development as well. Migration can also have negative effects on the areas of origin and thus triggering poverty. Due to the exodus of unskilled labour out of the rural economy, there has been stagnation in agriculture, which results in food shortages bringing the poverty estimates of agrarian society further down (Russell and Stanley, 1990). At the country level too, there is evidence of a negative relationship between migration and poverty (Adams and Page, 2003). There is intensive competition in the urban job market, which is basically due to the influx of rural migrants into urban areas (Raimondos, 1993). The scenario becomes more adverse when there is an economic slowdown as migration movement is heavily dependent on economic cycles (Ruhs and Vargas-Silva, 2020). Moreover, migration has significant implications for social development and environmental sustainability (Qin, 2010; Poston et al., 2009).

Undisputedly, there is an intense relationship between poverty and migration through inequality. Inequality, whether income or/and social, does give rise to rural out-migration; hence migration may be inequality-driven (Matallah, 2020; Black et al., 2005). On the other hand, while migration can reduce inequality in the area of origin through redistribution of income (Eastwood and Lipton, 1999), it can also reduce wage inequality in the destination (Girsberger et al., 2020). Inequality in the post-migration situation in the urban area does make the migrants aware of the fact that they are marginalised. This can trigger various anti-social activities in urban areas reducing the

quality of life (Xu, 2013). Remittances are one of the most crucial factors which are often used to reduce inequalities and deprivation in rural regions. It can enhance the livelihood of the receiving families by enhancing their capabilities of spending more on social factors like health, education, and sanitation apart from increasing their expenditure on farm activities (Stark et al., 1986). On the other hand, evidence from Mexican countries shows that remittances can widen the inequality gap between migrating and non-migrating families at the area of origin through its income redistribution effect (Möllers and Meyer, 2014), especially if those are received through repeat migration (Garip, 2012). There are avenues in which this rural-urban migration can increase urban income inequality. As most of the migrants are low skilled their inclusion in city population reduces relative share of skilled workers and this increases skill premium resulting increase in within-city income inequality (Chen et al., 2018). The societal network plays a decisive role in reducing inequality and increasing rural-urban migration (Foltz et al., 2020). Reduction in relative and/or absolute deprivation in the rural area not only reduce the out-migration rate but it also reduces further dependency on the remittances (Czaika and de Hass, 2012). So, there is a both-way and multifaceted causal relationship between rural-urban migration and inequality.

There is a spurt of literature on the discourse of migration and poverty through the lens of inequality and deprivation, taking India as a case study. In India, rural out-migration is often seen as an exodus from labour surplus agricultural economy, and the gain from migration is used to lift the rural families out of deprivation (Dodd et al., 2017). In some studies, migration is being found to help reduce poverty (Parida et al., 2020; Mohanty et al., 2015; Agrawal and Chandrasekhar 2015; Kundu and Sarangi, 2007), whereas others have pointed out this migratory movement in India is worsening her poverty estimates, especially urban poverty (Deshingkar, 2010). These studies have seen migration as a coping strategy towards evading poverty. But almost all of these studies were concerned about absolute income poverty ignoring the impact of relative income poverty in deciding migratory movement. On the other hand, inequality has also been one of the driving forces in triggering migration in India (De Haan, 2011). Inequalities existing across regions or within classes, especially in the rural areas, prompt rural-urban migration (Mosse et al., 2002). Additionally, rural-urban migration out of rural inequalities increases urban poverty too (Alkire and Seth, 2015). Increasing urban poverty again increases the living costs of migrants in urban, which reduces further urban in-migration (Wilson et al., 2019). In rural India, migration is often seen as an income diversification strategy to reduce income inequality and uncertainties arising from agriculture (Singh, 2018).

Social inequality always plays a decisive role in shaping the human migratory movement. A micro-study on Yugoslavia found that separate family members were affected separately by various dimensions of social inequalities like class, gender, and ethnicity and as a result, their response to migration also varies (Ammann Dula, 2020). There is a two-way role of social inequality and relative deprivation. They can either deter or inflate migration, depending on the reference made within or between groups (Czaika, 2013). The well-being of migrants and their dependents at the place of origin depends largely on their choice of destination (Kuschminder et al., 2018). Community-based study reveals that most deprived and multi-dimensionally weak communities experience higher migration rate (Siegel and Waidler, 2012). Therefore, the rural-urban migration is a very complex phenomenon and requires to be explored further with special emphasis on inequality originating from disparities in income and deprivation in social

dimensions. The present study thus joins very few attempts that have been made taking household level primary data in India from both rural and urban regions and addresses the comparative role of income and social inequality in migration decision making. For convenience, the study has been divided into following subsections. After a brief introduction, the study explains the data sources used and the methodology applied in Section 2. The case of migration decision-making and its relationship with absolute income disparities has been discussed in Section 3. Section 4 deals with the case of relative income inequality and its linkages with migration decision-making with the help of traditional methods like the Lorenz curve and Gini coefficient. The following section takes care of social inequality and migration decision-making under the light of the multidimensional poverty index (MPI), one of the newest indices in deprivation analysis. Section 6 explores the determinants of MPI by applying logistic regression. The final section concludes the study with some suggestions to the policymakers.

2 Data sources and methodology

The study is mainly based on a primary survey conducted during 2016–2017. The samples have been drawn from 3 villages of Burdwan district of West Bengal, namely Gunar, Kaiti, and Salgacha, using stratified purposive sampling. Gunar and Salgacha are from the Raina-I block, Kaiti is from the Raina-II block of the district (presently in Purba Barddhaman District). 150 households have been selected from these rural villages taking 50 families from each rural area. Similarly, 150 families have been chosen from three municipalities, collecting 50 households from each municipal area, namely, Durgapur, Raniganj, and Kulti (presently in Paschim Barddhaman District). The entire primary data set is of about 300 families comprising both rural and urban. Data has been collected on various socio-economic issues addressing the livelihood of both rural out-migrants and urban in-migrants.

The study analyses the role of both economic factors as well as social factors in determining the interrelationship between migration and poverty. Economic factors have been segregated in two ways: absolute income differences and relative income deprivations. For addressing the role of absolute income differences, the study has used ‘economic well-being (EWB)’ as a proxy variable. EWB is defined as the ratio between per capita family income per month and per capita monthly estimate of the poverty line for the rural people in India, which is Rs. 32 following the estimates of the Rangarajan Committee (Planning Commission, 2014). Here, the per capita monthly estimates of poverty have been arrived by converting rural poverty line estimates, which is a daily basis, into a monthly basis (mainly to make at par with income estimates). This has been done by multiplying poverty line estimates by the number of days a month.

To analyse the role of relative income differences, the study has used two well-established relative measures of income inequality, namely, the Lorenz curve and the Gini coefficient. These two measures take into account the relative strength of income differences in the region which plays a pivotal role in migration decision making. As the rule suggests, the higher the gap between the equality line and the Lorenz curve, the higher the relative inequality. The Gini coefficient is a numerical measure that gives a unit-free number ranging from 0 to 1. The higher the value of the Gini coefficient, the higher is the degree of relative income inequality.

The study has also analysed the role of social inequality as one of the determining factors of internal migration in India. Measuring social inequality is of prime importance while discussing rural-urban migration as the sense of being socially excluded is one of the influential factors in rural out-migration. Under this backdrop, the pre- and post-migration situation of the migrants has been analysed in terms of social inequality. There are various indices to measure social inequality, but the study has taken into consideration one of the most recently developed indices to measure social inequality, namely, MPI. The argument in favour of using MPI is to have a complete view of the socio-economic problems, one has to resort to some multi-dimensional inequality measure that, apart from income inequalities, also takes care of deprivations correlated with dimensions like region, consumption, assets, etc. (Hamid and Akram, 2014). Moreover, in India, MPI is considered a better measure of poverty than standard poverty line measures used by the census (Alkire and Seth, 2008). MPI measures the relative inequality or deprivation of capabilities on the basis of some social factors. It is a composite index based on three dimensions: health, education, and living standards. There are limiting values for each of these dimensions. The novelty of this approach is that it takes into account both the incidence and intensity of poverty. On the basis of these values, one can infer about ‘how many’ people and ‘how much’ they are deprived of basic social facilities in comparison to others in the society.

2.1 Empirical model

The study has also tried to identify some of the major determinants of multidimensional poverty for rural out-migrating families. For this, it has applied a logit model where the dependent variable is a binary one and measures multidimensional poverty. On the basis of some threshold value, a family is identified if it is multi-dimensionally poor or not. The binary model is such that if one family equals or crosses that limiting value, then it is identified as multi-dimensionally poor and assigned a value 1, otherwise, it is given a 0 value. The econometric model can be specified as follows:

$$L = \alpha + \beta_1 SchoolDist_i + \beta_2 HospDist_i + \beta_3 MarketDist_i + \beta_4 SC_i + \varepsilon_i$$

where dependent variable = $L_i = \ln\left(\frac{P_i}{1-P_i}\right)$ and $P_i = E(y_i = 1 \text{ if deprivation value} \geq$

threshold value and $y_i = 0$ otherwise). *SchoolDist* = distance of nearest educational institute measured in km., *HospDist* = distance of nearest medical facility (includes both government and private) measured in km., *MarketDist* = distance of nearest marketplace measured in km. To identify the impact due to inclusion of different caste, the study has identified two variables. SC stands for scheduled caste (SC) families and gets a value 1 if the family is from this group and 0 otherwise. Similarly, ST stands for scheduled tribe (ST) families and gets a value 1 if the family is from this group and 0 otherwise. The letter ‘*P*’ stands for the individual household.

3 Absolute income disparities and migration decision making:

Migration decision-making has a close interlinkage with economic factors. Among the economic factors, most important are income differences between origin and destination

place, economic status and income inequality in the area of origin, the flow of remittances, job opportunities, etc. Out of these economic factors, absolute income disparities are the most vital components determining the flow of rural out-migration. Peoples are more concerned about their absolute income differences with other families. To look into this matter, the study segregates the entire village households into four subgroups on the basis of their EWB and named as least economic status ($EWB \leq 1$), moderate economic status ($1 < EWB \leq 2$), better economic status ($2 < EWB \leq 3$), and highest economic status ($EWB > 3$).

Table 1 No. of households according to EWB

	<i>Strata of households in economic well-being</i>	<i>No. of HHs</i>
All	$EWB \leq 1$	59 (39)
	$1 < EWB \leq 2$	43 (29)
	$2 < EWB \leq 3$	18 (12)
	$EWB > 3$	30 (20)
	<i>Total</i>	<i>150</i>
Migrants	$EWB \leq 1$	39 (33)
	$1 < EWB \leq 2$	37 (31)
	$2 < EWB \leq 3$	16 (13)
	$EWB > 3$	28 (23)
	<i>Total</i>	<i>120</i>
Non-migrants	$EWB \leq 1$	20 (66)
	$1 < EWB \leq 2$	06 (20)
	$2 < EWB \leq 3$	02 (07)
	$EWB > 3$	02 (07)
	<i>Total</i>	<i>30</i>

Note: N.B.: In the parenthesis, we have percentage values.

Table 1 has classified the number of households into four strata according to their status of EWB. The result states that people in the survey area are mostly economically poor, as almost 70% are below moderate economic status. This also reveals that there are disparities in terms of absolute income. The intra-group comparison shows that out of total out-migrant families, almost 65% are from economically poorer sections while the rest are from well-off families. Hence, people are more concerned about absolute income disparities, and migration decisions are primarily influenced by this absolute income differences prevailing in the rural part of West Bengal.

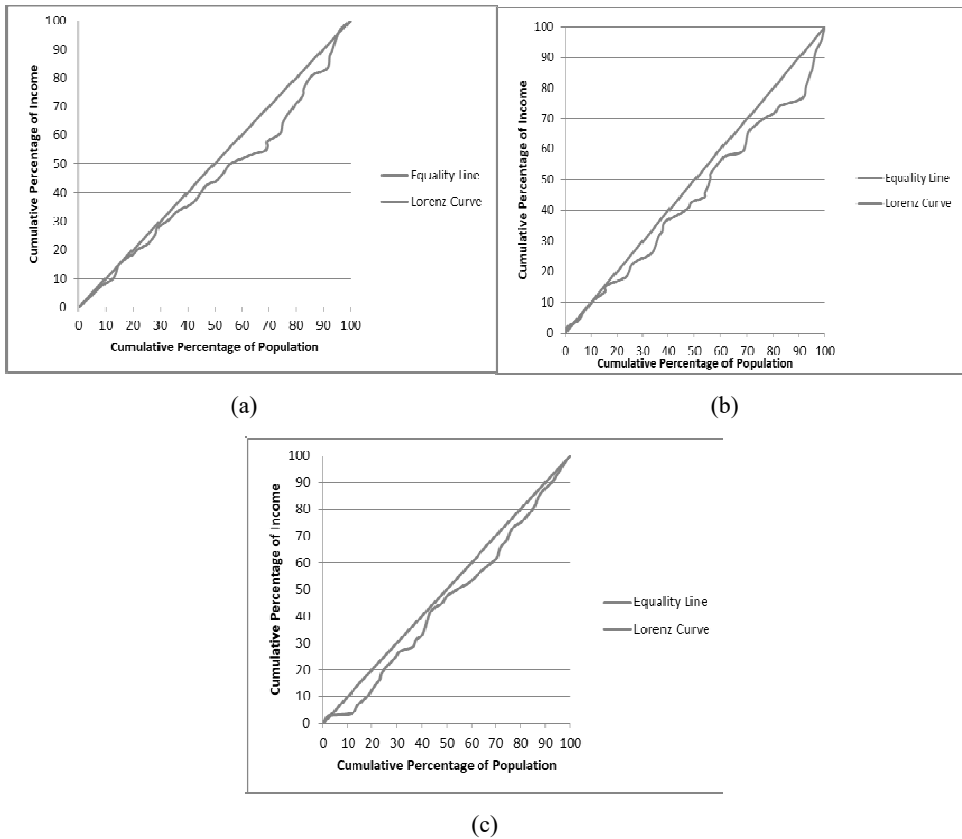
4 Relative income inequality and migration decision making

Relative income inequality has a strong interlinkage with the decision and extent of migration. With the increase in relative inequality, out-migration from rural is bound to take place. Conversely, low inequality will have a limited addition to the migration outflow as it will show lesser income discrimination. An increasing and persistent trend of income inequality escalates the pace of out-migration. A region or economy

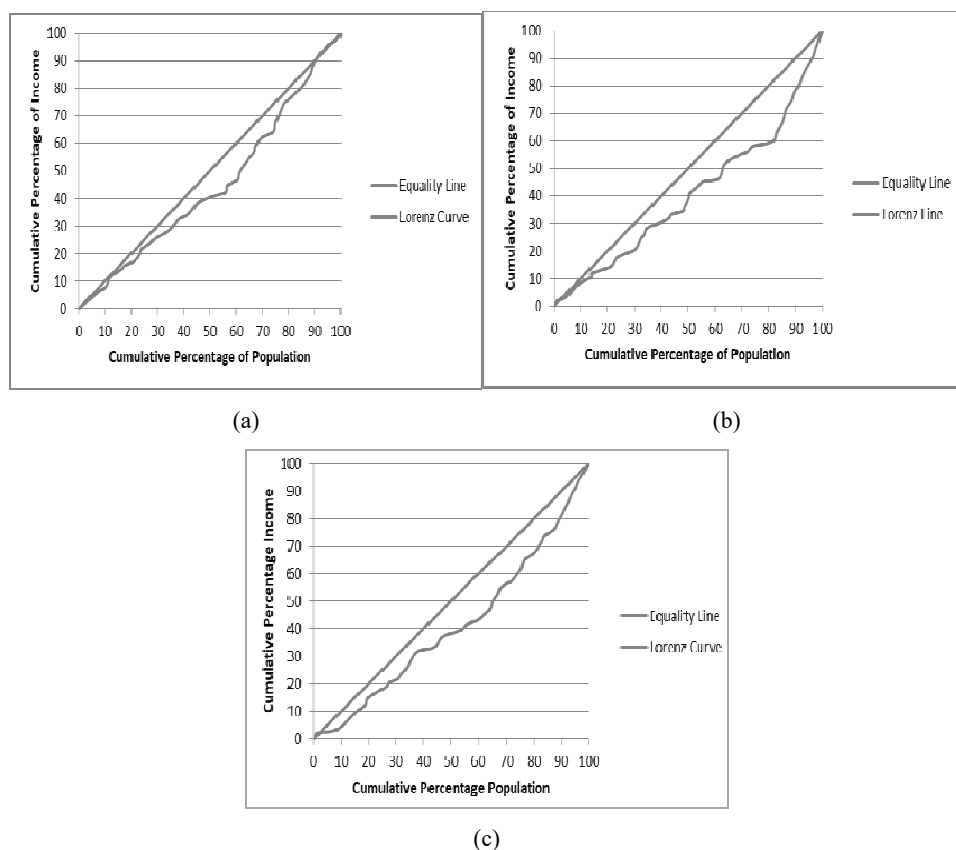
experiencing consistent and high-income inequality always had been a less attractive place for settling down. Relative income inequality always has been seen as a hindrance to economic development. Whatever be the case, income inequality in the source region plays a pivotal role in determining the migration stream.

Due to their simplicity in application and interpretation, the study applies the conventional Lorenz curve and Gini coefficient technique to address the interrelationship between rural-urban migration and rural poverty. It is to be remembered that both the Lorenz curve and the Gini Coefficient are relative measures of inequality. The Lorenz curve describes the sharing of income in the society, i.e., distribution of income and Gini index (or coefficient) measures degree or extent of inequality. Wider the gap between the equality line and the Lorenz curve implies the existence of greater inequality. On the other hand, by convention, the Gini coefficient ranges from 0 to 1. For example, an economy or region having 0 (zero) Gini index means there is no existence of inequality of income distribution. Alternatively, an economy experiencing Gini index 1 (one) implies there exists maximum or perfect inequality in income distribution. The study has calculated the Gini coefficient for all the rural migrants as well as taking all households of each of the surveyed villages. The results are as follows.

Figure 1 Lorenz curve of migrating families, (a) Gunar (b) Kaiti (c) Salgacha



Source: Author's calculation

Figure 2 Lorenz curve of all families, (a) Gunar (b) Kaiti (c) Salgacha

Source: Author's calculation

Table 2 Values of Gini coefficient

	<i>Gunar</i>	<i>Kaiti</i>	<i>Salgacha</i>
Migrating families	0.10	0.11	0.02
All families	0.11	0.19	0.18

Source: Author's calculation

In Figure 1 and Figure 2, a narrow gap between the equalitarian line and the Lorenz curve implies less relative inequality in the surveyed villages, which means the distribution of income in these villages is relatively equal. This is precisely the case among the migrating families. For inter-group comparison, the study has also constructed the Lorenz curve taking both migrating and non-migrating families. Here too, the extent of inequality is not concerning, though the situation is worse than the earlier case. If the values of the Gini coefficients are taken into account (Table 2), then it can be seen that there is a low disparity of income distribution in all the cases as the Gini index never reaches the value of 0.20. Therefore, summarising the Lorenz curve and Gini coefficient results, it can be inferred that rural people have still migrated out of these places even if their relative poverty is low. Combining these findings with the results of the earlier section, it can be

concluded that rural out-migrants are more concerned about the absolute income differences than their relative income inequality status. Alternatively speaking, rural poor give more weightage towards absolute income disparities than the relative income inequality.

5 Social inequality and migration decision making: the case of MPI

Migration decision-making is one of the inseparable consequences of prevailing social inequality and deprivation. As various studies have pointed out over time, the extent of social inequality expedite migratory movement (Guo et al., 2018). Hence, discussing issues related to migration decision-making only in the light of income inequality and various prevailing poverty indices will give a partial view of the problem. The most argued drawback of these indices is that there is no such single poverty index that accurately takes care of various socio-economic factors and measures the extent of deprivation on each of these indicators for an economy as a whole or for a particular region (Sen and Anand, 1997). To them, poverty can best be measured by including a set of non-monetary items while examining the deprivation level of individuals (Sen, 1999; Klasen, 2000). Though the Human Poverty Index (HPI) takes care of a few non-income factors that give rise to poverty, it is still not exhaustive. So, there was always a need for a universal poverty index. Amidst this in 2010, Oxford Poverty & Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) came up with a single index called MPI, which includes various socio-economic indicators to measure poverty level. Since then, MPI has been widely used by various researchers (Alkire and Santos, 2010, 2014) to measure the extent of acute poverty. One of the significant advantages of MPI is that it goes beyond income parameters that are usually taken to identify poverty and includes various socio-demographic factors to estimate multiple deprivations (Dutta, 2021). Additionally, it shows how many people, in percentage terms (or in proportionate), is deprived of multiple indicators of development, along with the intensity and composition of poverty for the concerned group (Alkire et al., 2021).

MPI can be calculated at the country level as well as regional or micro level. The present study has used the concept of regional MPI as its main focus is to assess the regional inequalities and deprivations. MPI measures the two most important dimensions of poverty. One is the incidence of poverty, which takes care of the proportion of people belonging in any community who has been hit by multiple deprivations and the other is the intensity or extent of such deprivation. Both of them collectively measure the percentage of poor people and how far these poor are deprived of certain fundamental parameters of life. In poverty literature, it is one of the most vital pieces of information for policymakers. MPI takes care of three major dimensions in measuring poverty deprivation: health, education, and living standards. For each of these sectors, two or more indicators with various weights have been taken; for example, nutrition and child mortality constitute the health sector. Factors like years of schooling and years of attendance take care of the poverty dimension for the education sector. The aspect of living standards comprises of six indicators, e.g., electricity, drinking water, sanitation, flooring, cooking fuel, and asset ownership. Each of these sub-indicators has its weights, and together they constitute the MPI, making it a composite index. Within each sub-indicator, there are various threshold points on which poverty deprivation has been

defined. Table 3 exhaustively elaborates each of these indicators along with their limiting values or deprivation cut-offs as they are called. A household is identified to be multi-dimensionally poor if the weighted deprivation score for that household is 33.33% or more (Alkire and Santos, 2010).

Table 3 Indicators of MPI and their respective weights

<i>Broad Indicators</i>	<i>Sub-indicators</i>	<i>Limiting values</i>	<i>Weightage</i>
Education	Years of schooling	Deprived if not a single member of the household completed 05 years of schooling	1/6
	School attendance	Deprived if any school-age child is not attending school	1/6
Health	Child mortality	Deprived if any child has died in the family	1/6
	Nutrition	Deprived if any adult or child for whom there is nutritional information is malnourished	1/6
Living standards	Electricity	Deprived if the household does not have electricity	1/18
	Drinking water	Deprived if the household does not have access to clean drinking water	1/18
	Sanitation	Deprived if the household lacks adequate sanitation or if their toilet is shared	1/18
	Flooring	Deprived if the floor of the house is made of dirt, sand or dung	1/18
	Cooking fuel	Deprived if the fuel source(s) is/are wood, charcoal or dung	1/18
	Asset ownership	Deprived if the household does not own more than one of: radio, TV, telephone, bicycle, motorcycle, refrigerator; and does not own a car or tractor	1/18

Source: Alkire and Santos (2014)

Each of these threshold values is the most rudimentary indicator of human well-being. They explicitly justify the basic status of households in any locality and the extent of deprivation of the concerned family. The cut-off values conform to the millennium development goals (MDGs) standard. In constructing MPI, the Alkire-Foster (AF) methodology (Alkire and Foster, 2011) has been adopted, which has made MPI extremely flexible as its dimensions, indicators, weights, and cut-offs can be changed depending on its impact group (Alkire and Jahan, 2018).

Following is the theoretical build-up of the MPI. As has been stated earlier, it is a composite index comprising both multidimensional headcount ratio (H) and intensity of multidimensional poverty (A). The multidimensional poverty headcount ratio (H) of any region is the proportion of people of that region/economy who are multi-dimensionally poor to the total number of populations in that region/economy. Therefore, it can be written as,

$$H = p / P = \text{HCR of MDP}$$

where p is the number of multi-dimensionally poor people, and P stands for the total population. H takes care of the incidence of poverty. The intensity of multidimensional poverty (A) is the proportion of total score of weighted deprivations, in which, all the poor people of that locality are deprived of to the total number of multi-dimensionally poor people. Thus, it can be represented as,

$$A = \sum_i^p s_i / p = \text{Intensity of MDP}$$

where s denotes the total score of all weighted indicators for an individual poor. The total deprivation of a poor person is the sum of deprivations in each field j ($j = 1, 2, 3$) and can be represented as $s = s_1 + s_2 + s_3$.

Table 4 Modified Indicators of MPI and their respective weightages

<i>Broad dimensions/indicators</i>	<i>Sub-indicators</i>	<i>Limiting values</i>	<i>Weightage</i>
Education	Years of schooling	Deprived if not a single member of the household completed 05 years of schooling	1/6
	School attendance	Deprived if any school-age child is not attending school	1/6
Health	Expenditure on health	Deprived if monthly expenditure on health by the family is \leq Rs. 100	1/6
	Expenditure on addiction	Deprived if monthly expenditure on items related to addiction by the family is \geq Rs. 100	1/6
Living standards	Electricity	Deprived if the household lack electricity	1/18
	Drinking water	Deprived if the household does not have access to clean drinking water	1/18
	Sanitation (for rural)	Deprived if the household lacks adequate sanitation or if their toilet is shared	1/18
	Urban amenities index (for urban)	Deprived if the value of the index \leq 0.333	1/18
	Kutcha house	Deprived if the household has a kutcha house*	1/18
	Cooking fuel	Deprived if the fuel source(s) is/are wood, charcoal or dung	1/18
	Asset ownership	Deprived if the household does not own more than one of: radio, TV, telephone, bicycle, motorcycle, refrigerator; and does not own a car or tractor	1/18

Notes: *Buildings, the walls and/or roof of which are predominantly made of materials other than those mentioned above such as unburnt bricks, bamboos, mud, grass, reeds, thatch, plastic/polythene, loosely packed stone, etc., may be treated as Kutcha buildings (Census of India, 2011).

Finally, the MPI is the product of the multidimensional poverty headcount ratio (H) and the intensity of multidimensional poverty (A). Therefore,

$$MPI = H \times A.$$

Under this background, the present study has approximated some of the indicators and their limiting values though their weights have remained the same following the original work. The variables used in the present study have been discussed in Table 4.

The calculation of weights for the three dimensions is a crucial part of the index. In MPI, each dimension gets equal 1/3rd weight, and each sub-indicator gets equal weights. So, for education and health, each sub-indicator takes the value of 1/6 [i.e., (1/3)/2]. In the case of living standards, following the same rule, each sub-indicator gets the weight of 1/18 [i.e., (1/3)/6]. One thing to be noted here is that in MPI, weights can be changed depending on the importance of any particular indicator. But this will make the interpretation of the result complex, and hence it is generally the case that each sub-indicator is given equal weight so that all the weights add up to unity. In this study also, we have taken the same weight for each of the sub-indicators. In the present study, in the case of urban, the indicator of 'sanitation' has been approximated by a more detail indicator, i.e., 'urban amenities index'. This particular index considers a more implicit view of deprivation, specifically in urban, by taking the types of toilets, latrine, and sources of water that are being used there. Each of these factors is given dichotomous values of 0 and 1. Each household gets a value 1 if the types of toilets and latrine are privately owned and 0 otherwise. Similarly, household having sources of water from 'tap' gets value 1 and 0 otherwise. Then giving the equal weight of each of these criteria, an urban amenities index has been constructed and used as one of the sub-indicators of living standards. MPI is the product of the incidence of poverty and the intensity of poverty across the poor. The MPI value is a single number that summarises the information on multiple deprivations for any household.

Over the years, rural-urban migration has been seen as a tool to evade rural poverty where the migrants settle in the urban areas, which are relatively prosperous compared to their place of origin. There are various reasons behind this rural-urban migration flows in developing countries like India, such as less employment opportunity, debt trap, underpricing of agricultural commodities making agriculture an unattractive sector for rural youth, lesser availability of basic amenities, etc. All these, coupled with the expectation of better life in urban areas, have resulted in huge relocation of rural populations to urban India. The question that now lies to analyse is what happens to those who migrate into urban areas. Are they able to evade poverty, as various studies have pointed out so far, or they just become urban poor and added into the urban poverty estimates? For this, the present study compares the values of MPI for both rural migrating families and urban in-migrated families to investigate the status of poverty in pre-and post-migration circumstances.

Multidimensional headcount ratio shows in percentage how many people are MPI poor (Table 5). This means in Gunar, 11% of migrating families are MPI poor, whereas almost 40% of non-migrant families are multi-dimensionally poor or 'MPI poor'. This shows that families from where rural out-migration have taken place are relatively well off compared to their rural non-migrants. This is the case in all the villages where non-migrants are relatively poor in most of the social dimensions. The non-migrants of Kaiti and Salgacha are in acute poverty as their values are almost 80% and 90%, respectively. The intensity of poverty (A) shows how much these poor households (HHs)

are deprived of fundamental factors. For example, 90% of poor non-migrant families in Salgacha are deprived of almost 54% of the weighted indicators, which is a significant figure. This also means that, on average, a poor household is 54% deprived of the weighted indicators. In terms of multidimensional deprivation, it implies, it is the least deprived families that are out-migrating more from rural areas. It is in sharp contrast with earlier findings where the study came up with the observation that those families, who are economically poor in absolute terms, are migrating most. This suggests that economic reasons are still the dominant one when it comes to migration decision-making in rural West Bengal. Migrants are more concerned about absolute income disparity than social inequality.

Table 5 MPI across rural areas

<i>Area name</i>	<i>Name of the unit</i>	<i>Multidimensional headcount ratio (H)</i>	<i>Intensity of poverty (A)</i>	<i>MPI</i>
Gunar	Migrants	0.1140	0.3462	0.0395
	Non-migrants	0.3889	0.3571	0.1389
Kaiti	Migrants	0.5731	0.4274	0.2449
	Non-migrants	0.7917	0.4766	0.3098
Salgacha	Migrants	0.6716	0.4691	0.3150
	Non-migrants	0.9048	0.5380	0.4868

Source: Author's calculation

What now remains is to investigate the status of rural out-migrated people in the urban areas, i.e., the post-migration scenario. For doing this, as has been pointed out earlier, the study has collected data from three municipalities of the southern part of West Bengal. MPI has been calculated on these three urban centres to assess the status of urban in-migrated people, and the result is being shown in Table 6.

Table 6 Comparison of average scores of MPI across rural and urban areas

	<i>Multidimensional headcount ratio (H)</i>	<i>Intensity of poverty (A)</i>	<i>MPI</i>
Rural migrants	0.4069	0.4130	0.1998
Rural non-migrants	0.6951	0.4572	0.3118
Urban in-migrants	0.6923	0.5040	0.3492

Source: Author's calculation

Table 6 shows that rural people become more multi-dimensionally poor (or 'MPI poor') once they migrate into urban areas. They become even more MPI poor compare to rural non-migrants. The data shows almost 70% of the urban migrated families are hit by multidimensional poverty, and they do not have access to 50% of the weighted indicators. Alternatively, this means these 70% of urban in-migrants are under 'acute poverty'. This finding thus suggests that, once migrated, rural people are increasing the intensity of urban poverty, supporting one of the earlier findings on India (Alkire and Seth, 2015), thus deteriorating their social conditions further. This is actually one of the major findings of the study which states that post-migration situation deteriorates for the rural migrants and all migratory movements are not necessarily welfare improving.

A segregated analysis of MPI in all urban centres (Table 7) shows that migrants are relatively more MPI poor in Durgapur compare to the other two urban centres. Here, almost 80% of urban in-migrants are under acute poverty as they lack 50% of the weight indicators.

Table 7 Segregated MPI across urban areas

<i>Rural/urban</i>	<i>Area name</i>	<i>Name of the unit</i>	<i>Multidimensional headcount ratio (H)</i>	<i>Intensity of poverty (A)</i>	<i>MPI</i>
Urban	Durgapur	Migrants	0.7838	0.5070	0.3974
	Ranigunj	Migrants	0.6885	0.5046	0.3474
	Kulti	Migrants	0.6047	0.5005	0.3027

Source: Author's calculation

From Table 7 analysis, the study concludes that migration has not been a successful option for rural people to evade poverty, as many studies over the years have pointed out. Their situation has deteriorated more once they settled into an urban area. The reason may be that their expectation of urban livelihood was never fulfilled due to the existence of factors like lack of employment opportunity, low wages and job security in the urban informal sector (where the migrants are mainly absorbed at least in the initial phase), low social security and sense of exclusion, etc. This has resulted in the deprivation of these migrated people, even more compared to their pre-migration situation. These urban in-migrants have simply added themselves into urban poverty and became vulnerable labour strata. They mainly engage themselves in low-income jobs having low security, and there is always a sense of being excluded. Very few of them have access to basic urban amenities like clean water, electricity, and sanitation. Thus, it is justified to comment that rural-urban migration has not helped rural out-migrants in their expectation of a better livelihood; instead, their standard of living has declined due to this movement.

6 Factors influencing multidimensional poverty for migrating families

There are various socio-ethno-demographic factors that determine the multidimensional poverty of an area. This section explores the role of these factors in explaining multidimensional poverty for the migrating families of rural area. The sample size is 120, which is the number of families that have allowed migration. Table 8 represents the descriptive statistics of the concerned regressors used.

Table 8 Descriptive statistics of the selected variables

	<i>Schooldist</i>	<i>Hospdist</i>	<i>Marketdist</i>	<i>SC</i>	<i>ST</i>
Mean	1.033333	2.883333	1.966667	0.275000	0.075000
Median	1.000000	4.000000	1.000000	0.000000	0.000000
Maximum	2.000000	4.000000	4.000000	1.000000	1.000000
Minimum	1.000000	1.000000	0.000000	0.000000	0.000000
Std. dev.	0.180258	1.366977	1.401879	0.448386	0.264496
Observations	120	120	120	120	120

The study has used logistic regression as the dependent variable is of binary in nature. The threshold value is 33.33%, i.e., $P_i = E$ ($y_i = 1$ if deprivation value $\geq 33.33\%$ and $y_i = 0$ otherwise).

Table 9 Results of logistic regression

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>z-Statistic</i>	<i>Prob.</i>
SC	1.459774***	0.516487	2.826352	0.0047
ST	2.755672***	1.128309	2.442302	0.0146
SchoolDist	0.922974	1.261470	0.731666	0.4644
HospDist	-0.458528**	0.243373	-1.884052	0.0596
MarketDist	0.721917***	0.233456	3.092309	0.0020
C	-2.075056	1.443357	-1.437659	0.1505

Notes: N.B: *, ** and *** imply 10%, 5% and 1% level of significance respectively.
McFadden R-squared 0.27.

Table 9 represents the results of logit regression. Results show that being in a separate caste (other than general and OBC) plays a significant role in deciding multidimensional poverty status of the family. Being in SC category increases the chance of being multidimensionally poor. Similar is the case for ST households. An ST category household has higher probability of being multidimensional poor compare to the General category. Similar findings can be seen in few other studies (Roy et al., 2019). A significant positive result of MarketDist variable implies as the distance from the nearest market from the household increases, the family is counted to be multi-dimensionally poor.

7 Conclusions

Human migration from one place to another, in search of better living, is a historical tradition. In the modern era of globalisation and with urban biased growth strategies, there is an increasing trend of rural-urban migration in a developing country like India. Rural people always want to escape from various distresses that hinder their aim for better livelihood. Both economic and societal factors act as the pivotal push indicators for rural-urban migration. These rural migrants expect a better living standard in their urban life as they presume that at urban destination centres, there is better employment opportunity, better amenities, better standard of living, etc. All these, coupled with an unattractive agricultural sector, lower prices of food crops, etc., have accelerated rural-urban migration in India. This paper analyses the comparative role of income and social inequality in determining migration dynamics in West Bengal with the help of primary data on households comprising both urban and rural regions. It has been seen that most migrants are from those rural families who have less monthly gross income. Almost 70% of migrants are from families having absolute monthly income of less than Rs.5,000. Using the standard Lorenz curve and Gini coefficient technique, the study has found very little relative income inequalities within the village, and still, there is a considerable flow of migration out of those villages. Results analysing the MPI prove that those migrating out are the less deprived people in terms of most of the fundamental social indicators compared to their non-migrating counterparts. The study reveals 40% of rural migrated families do not have access to 40% of weighted indicators. But in non-migrating families,

these values are almost 70% and 45%, respectively. Therefore, the study came up with two novel facts about the characteristics of rural-urban migration in West Bengal. First, people are more concerned about their absolute income differences and ignore their relative income inequalities in comparison to other groups and secondly, they are less aware of the prevalence of social inequality and give higher weightage towards absolute income disparities. Alternatively speaking, economic factors, especially absolute income gaps, are still the most dominant in deciding migratory movement compared to social determinants. The study also found that the post-migration scenario is very much depressing for the migrants. The above analysis suggests that urban in-migrants are more multi-dimensionally poor than rural non-migrants are. Alternatively speaking, their decision to migrate into urban centres has failed them, at least in multidimensional terms. At urban centres, they have become more socially deprived than they were in their rural habitat. Finally, exploring the determinants of MPI for the rural migrating families, the study found that backward classes like SC and STs are more multi-dimensionally poor compare to other categories. Along with this, distance from the readily accessible marketplace, one of the must-have social facilities, is one of the prime determining factors for MPI. Hence the role of the policymakers becomes more important as not only they need to make more pro-poor social development programs, but they also require to make rural people more aware of those programs to gain the most benefits out of these measures. This becomes more important since a rural family considers itself deprived in terms of absolute income even if it has higher accessibility to most of the necessary social facilities. Separate micro-level policies must be framed, targeting exclusively the rural part of India so that people do not have to migrate out. It is assumed that with proper monitoring, these policies would be capable of reducing social inequality viz-a-vis increasing their income which will be able to curb rural exodus. Otherwise, there will always be a sense of social exclusion among rural people, which will hinder the long-run inclusive development goal.

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