



HOW MULTIDIMENSIONAL POVERTY INDEX APPROACH NUDGING INDIA TO ACHIEVE SUSTAINABLE DEVELOPMENT GOALS (SDGS) FASTER?

Dr. S.K. PRAKASH¹

“Like slavery and apartheid, poverty is not natural. It is man-made and it can be overcome and eradicated by the action of human beings.” - Nelson Mandela

Abstract

In the past, poverty estimation was mainly based on income as the only indicator. The human poverty index is defined as the percentage of people in a population who are deprived in at least one of the three dimensions of poverty - longevity, knowledge, and standard of living. This means that even if a person has a decent income, they can still be considered impoverished if they lack access to education or healthcare. The HPI also takes into account the severity of deprivation, meaning that those who are deprived in multiple dimensions are considered to be more impoverished than those who are only deprived in one. The MPI, based on the AF methodology, captures overlapping poverty in health, education and living standards. The MPI complements income poverty measurement by directly measuring and comparing deprivations. The MPI measures the type and intensity of poverty on an individual level. Poor people are defined as people who are multiply deprived, and the level of their poverty is measured by the level of their deprivation. The MPI gives a clear view of people living poverty in different countries, regions and around the world. As the first international measure, the MPI is an important complement to income poverty measurement because it directly measures deprivations. It can be used as a tool for analysis, highlighting the most vulnerable, showing the areas where they are deprived and helping to connect the dots between deprivations. This can help policy makers to better target resources and better design policies. Government of India has acknowledged the significance of the global MPI under the mandate of the Global Indices for Reform and Action (GIRG) initiative. The emphasis of the

¹ Assistant Professor-in-Economics, P.G. & Research Department of Economics, Ramakrishna Mission Vivekananda College, Mylapore, Chennai-600 004. , E-Mail:skmrnprakash@gmail.com, Mobile:9444880253



GIRG initiative is not only to improve the country's performance and ranking in the global indices, but also to leverage the indices as tools for driving systemic reforms and growth. In this context, NITI Aayog, as the nodal agency for MPI, has been responsible for constructing an indigenized index for monitoring the performance of States and Union Territories in addressing multidimensional poverty in India. In order to institutionalize this, NITI Aayog constituted an inter-ministerial MPI Coordination Committee (MPICC) including Ministries and departments pertaining to areas such as health, education, nutrition, rural development, drinking water, sanitation, electricity and urban development, among others.

In 2023, NITI Aayog has published "National Multidimensional Poverty Index: A Progress Review". This report offers a detailed analysis of the headcount ratio and intensity of multidimensional poverty as the State/UT and district levels. It has also highlighted India's achievements in reducing multidimensional poverty between the years 2015-16 and 2019-21.

This paper is a review paper which focuses on the 2023 NITI Aayog's "National Multidimensional Poverty Index: A Progress Review" report and others. This research paper identifies the Methodology involved in MPI its advantages, challenges in India and progress towards achieving SDGs.

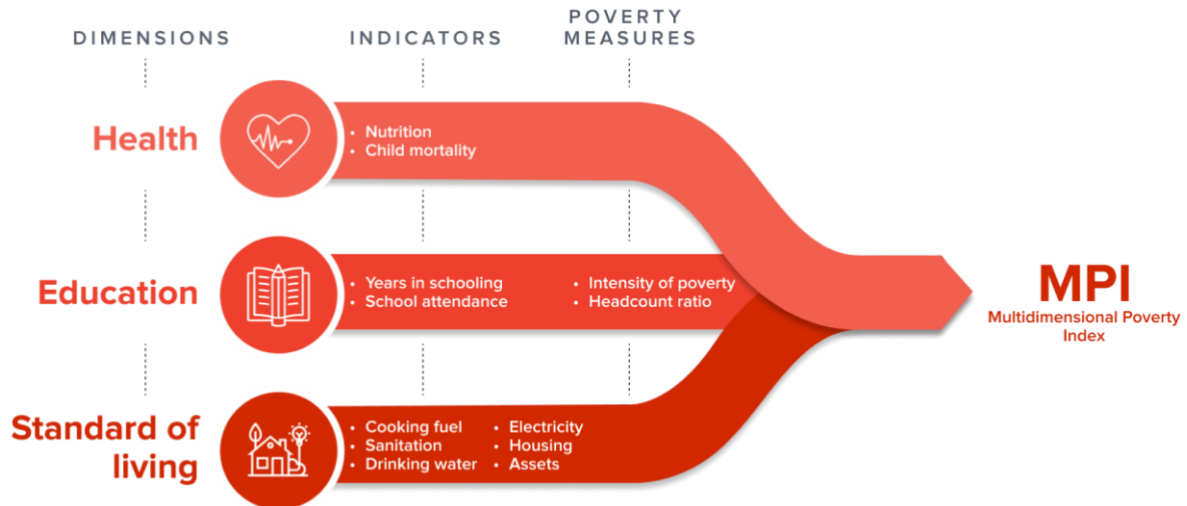
Keywords: GIRG, Human Poverty Index, NITI Aayog, MPI, SDG

INTRODUCTION

The MPI is an important international resource that measures acute multidimensional poverty in more than 100 developing countries. It was first launched in 2010 by the Human Development Report of OPHI and UNDP. The MPI tracks deprivation with 10 indicators covering health, education and living standards, and includes both incidence and intensity of poverty.



Figure: 1 Indicators of MPI



Source: Global Multidimensional Poverty Index (MPI) 2022

If an individual lacks access to one-third (i.e., 33 per cent or more) of the 10 weighted indicators, they are considered multidimensionally poor. Individuals who exhibit deprivation in at least half of the weighted indicators are classified as experiencing extreme multidimensional poverty.

REVIEW OF LITERATURE

The last two decades have seen advances in the measurement of poverty as the simultaneous deprivations in multiple outcomes. These advances have led to a number of methodological approaches to estimating an index of multiple deprivations such as Atkinson (2003), Chakravarty and D’Ambrosio (2013), Alkire and Foster (2011a, 2011b), and de Neubourg et al. (2012). Multidimensional child poverty in this study is measured based on the methodology proposed by Alkire and Foster (2011a). The unit of analysis of poverty in

this study is the child. The Alkire-Foster (AF) measurement of multidimensional poverty is rooted in the Sen's capabilities approach to poverty and based on a dual cut-off procedure.

The AF approach measures the breadth, depth and severity of multidimensional deprivation, similar to the traditional poverty measurement techniques that are based on income or consumption expenditures. The approach is also applicable to indicators that are binary or ordinal. The methodology involves two steps – identification and aggregation. Identification involves two sequential steps. First, we identify who is deprived on each of the indicators, defined by a deprivation cut-off. In the second step, we identify who is multidimensionally poor by comparing individual deprivation scores to a given poverty threshold. Aggregation, on the other hand, defines the overall level of poverty for the sample by summarizing the deprivation and poverty profiles of different members. The step employs the aggregation technique of unidimensional poverty measures such as the Foster-Greer-Thorbecke (FGT) methodology adjusted for multidimensionality. Aggregation focuses on only those individuals identified as poor.

The Multidimensional Poverty Index (MPI) created using the AF methodology is a product of two aspects of poverty. First is the incidence of poverty or poverty headcount, which measures the percentage of people who are multidimensionally poor and second, the intensity of poverty or severity of poverty, which indicates the average percentage of dimensions in which poor individuals are deprived. The dimensions consist of various indicators, and for each dimension and indicator deprivation cut-off is defined. A child is deemed to be deprived in a dimension if he/she falls above the cut-off. A poverty profile is generated in a deprivation matrix and aggregated to obtain the MPI. In this study, three dimensions of child wellbeing are considered – education, health and living conditions. Each



dimension is assigned a weight indicating its importance to child poverty in Ghana. In this study, the dimensions are equally weighted, with corresponding indicators also weighted equally as it is difficult to ascertain which dimension or indicator is of greater importance. In addition, Hagerty and Land (2007) have shown that the equal weighting strategy for composite indices of wellbeing is preferable in that it minimizes extreme disagreements among weights for individual indicators.

NEED FOR THE STUDY

The vital need of the study is to enlighten the common man on the comparative approaches to address the multidimensional poverty challenges. Since very little studies are found in this angle I have undertaken this study. This kind of approach also has good future scope in talking poverty in developing countries.

THEORITICAL FRAMEWORK

Figure 2. The Sida Multidimensional Poverty Analysis model



Source: Sida (2017), Sida's Conceptual Framework: Dimensions of Poverty

The 2030 Agenda pledges to “leave no one behind” and recognises that poverty is multidimensional. The Swedish International Development Agency (Sida) has developed a framework for multidimensional poverty analysis (MDPA). Analysis is based on three entry points: Who is poor? How does poverty manifest itself? And why?

Who: The key to MDPA is characterising the different groups of poor, where they live, their income-generating activities, gender and skills. MDPA assesses constraints in the development context for the country in general, but in particular for specific groups of poor people.

How: Sida defines poverty through four dimensions: resources, opportunities and choice, power and voice, and human security. Multiple causes interact to keep people in poverty or push those who have escaped poverty back into it.

Why: The framework analyses country-specific contexts, opportunities and constraints to inclusive, sustainable development and poverty reduction. It also includes indirect constraints, or constraints at the national or global level – how they affect the ability of people to move out of and stay out of poverty or affect the risk of falling into poverty in the first place.

RESEARCH OBJECTIVES

- To understand Multidimensional Poverty in the Global and Indian Contexts;
- To cull out Multidimensional Poverty measurement in India and its outcome at various levels and also to compare it with Swedish International Development Agency (Sida) Multidimensional Poverty Analysis Model;
- To explain the indicators in MPI and
- To discuss the Methodological limitations.

METHODOLOGY

A thorough theoretical review was carried out towards identifying justifiable and relevant comparative models. Content analysis is done.

DISCUSSION

What is the Global Multidimensional Poverty Index?

The Index is an important international resource that measures acute multidimensional poverty in more than 100 developing countries. It was first launched in 2010 by the Human Development Report of OPHI and UNDP. The MPI tracks deprivation with 10 indicators covering health, education and living standards, and includes both incidence and intensity of poverty.

The indices of the national MPI comprise of :

i) Headcount ratio (H): How many are poor? Proportion of multidimensionally poor in the population, which is arrived at by dividing number of multidimensionally poor persons by total population.

ii) Intensity of poverty (A): How poor are the poor? Average proportion of deprivations which is experienced by multidimensionally poor individuals. To compute intensity, the weighted deprivation scores of all poor people are summed and then divided by the total number of poor people.

MPI value is arrived at by multiplying the headcount ratio (H) and the intensity of poverty (A), reflecting both the share of people in poverty and the degree to which they are deprived.

$$\text{MPI} = \text{H} \times \text{A}$$

Indicators:

1. Health:

- Nutrition
- Child & Adolescent Mortality
- Maternal Health

2. Education:

- Years of Schooling
- School Attendance

3. Standard of Living:

- Cooking Fuel
- Sanitation



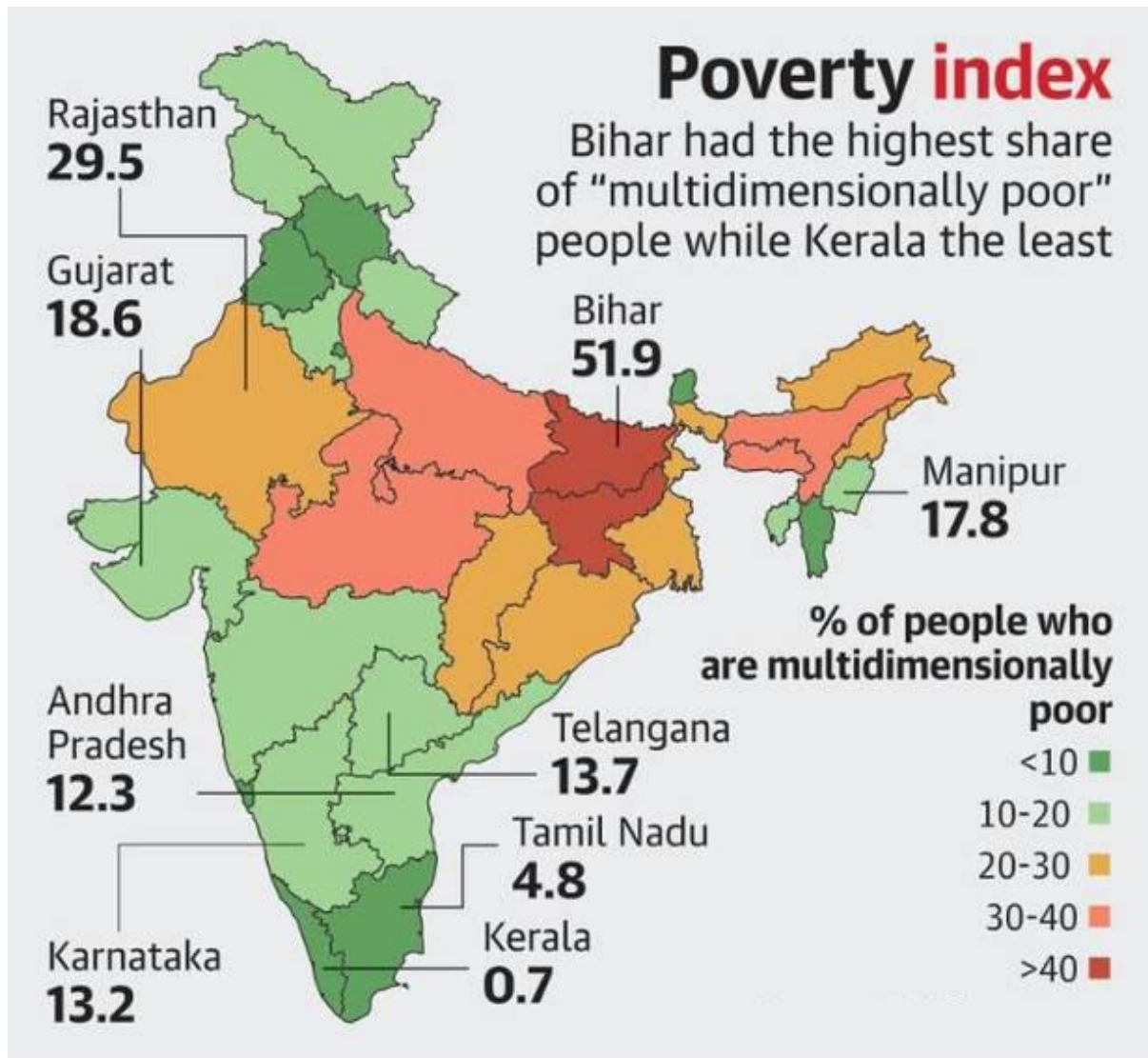
- Drinking Water
- Housing
- Electricity
- Assets
- Bank Account

Table A: Snapshot of Multidimensional Poverty in India

Year	Headcount Ratio (H)	Intensity of Poverty (A)	MPI (H x A)
2019-21	14.96%	44.39%	0.066
2015-16	24.85%	47.14%	0.117

Source: India Multidimensional Poverty Index – A Progress Review, Niti Aayog, 2023

Map 1: POVERTY INDEX

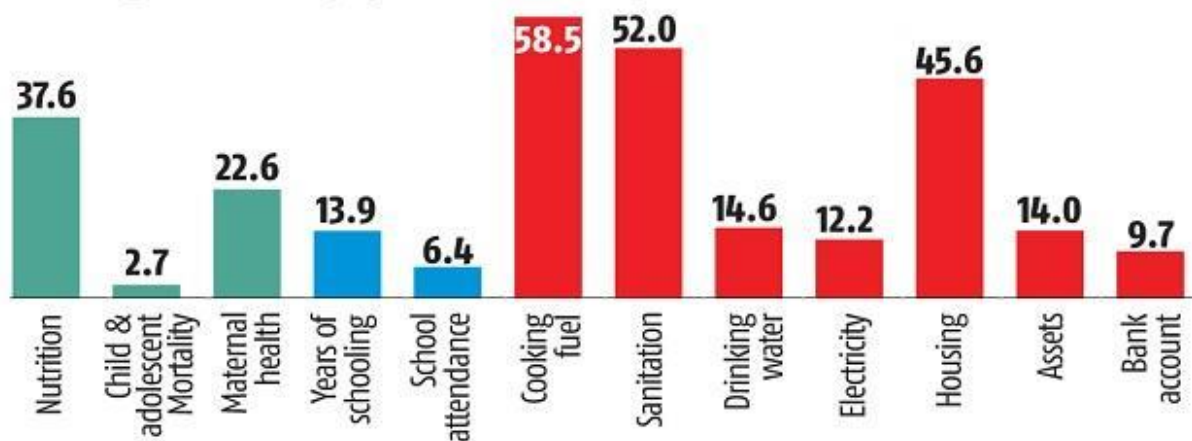


Source: NITI Aayog

Chart 1: Indicator wise deprivation

THE OTHER INDIA

Percentage of the total population that is deprived in each indicator





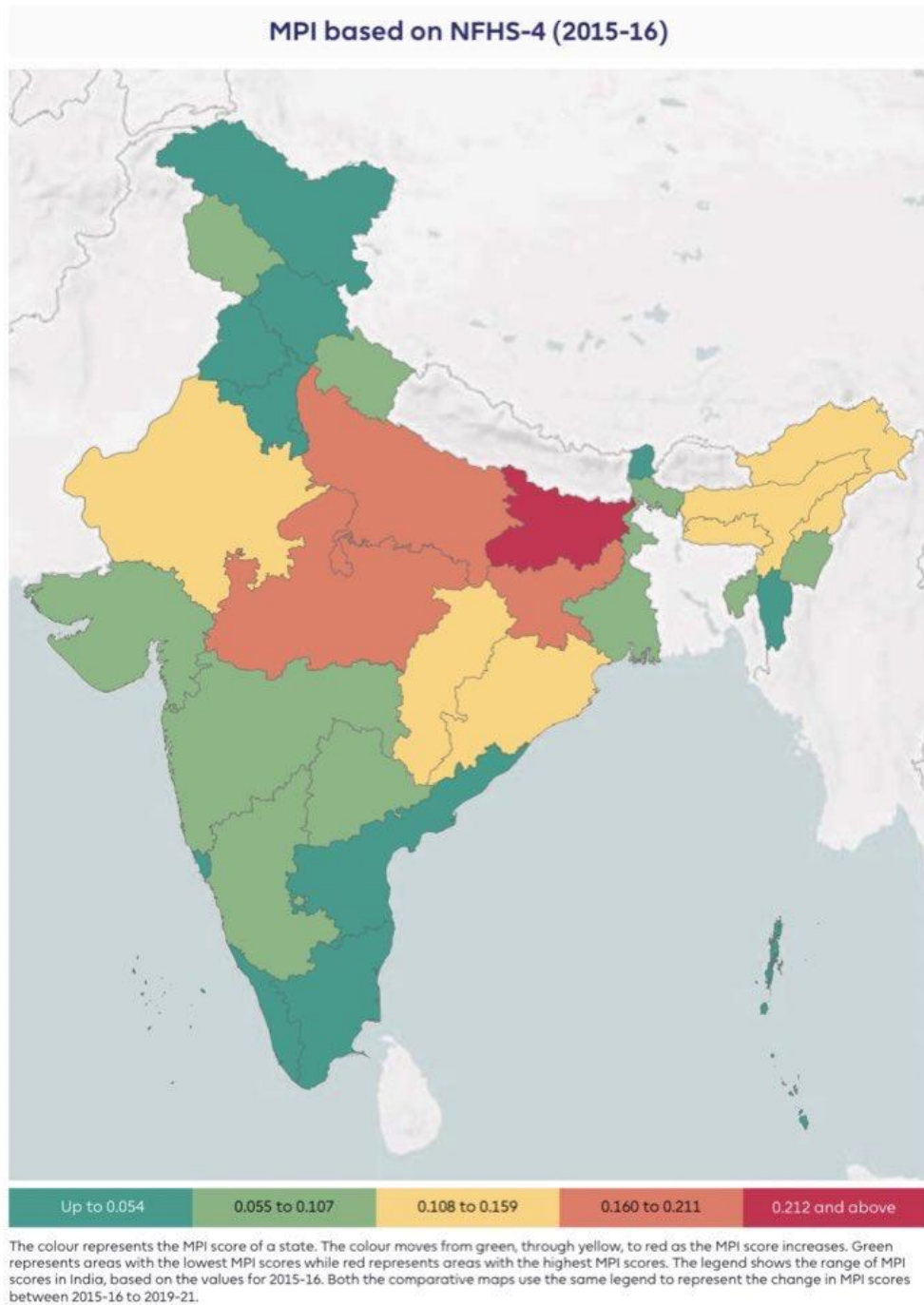
Source: NITI Aayog

Table B: Disparities across Rural and Urban Areas

Year	Rural			Urban		
	MPI	Headcount Ratio (H)	Intensity of Poverty (A)	MPI	Headcount Ratio (H)	Intensity of Poverty (A)
2019-21	0.086	19.28%	44.55%	0.023	5.27%	43.10%
2015-16	0.154	32.59%	47.38%	0.039	8.65%	45.27%

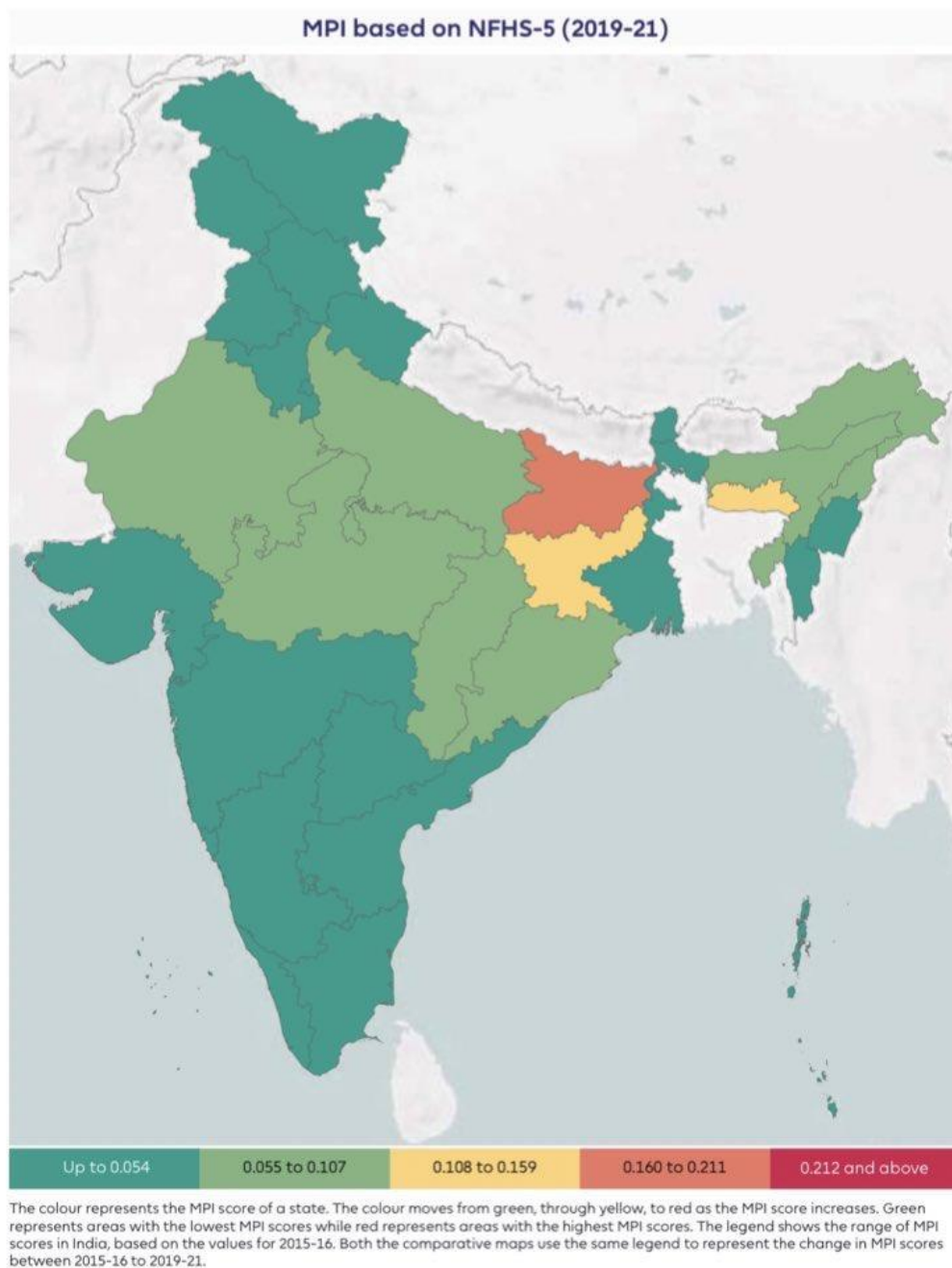
Source: India Multidimensional Poverty Index – A Progress Review, Niti Aayog, 2023

Map 2: MPI based on NFHS-4 (2015-16)



Source: India Multidimensional Poverty Index – A Progress Review, Niti Aayog, 2023

Map 3: MPI based on NFHS-4 (2019-21)



Source: India Multidimensional Poverty Index – A Progress Review, Niti Aayog, 2023

❖ **MPI AND SDG:**

✓ **Contribution towards Instituting Public Policy Tool:**

The development of the Index is an important contribution towards instituting a public policy tool which monitors multidimensional poverty, informs evidence-based and focused interventions, thereby ensuring that no one is left behind.



✓ **Presents Overall Picture of Poverty:**

This presents an overall picture of poverty in the country, while also enabling closer and more in-depth analyses of areas of interest such as regions – state or districts, and specific sectors and complements the existing monetary poverty statistics.

✓ **Help Achieving SDGs Goals:**

It is a contribution towards measuring progress towards target 1.2 of the Sustainable Development Goals (SDGs) which aims at reducing “at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions.

The Multidimensional Poverty Index (MPI) is a measure that helps to monitor progress towards SDG 1. The MPI illuminates for policymakers who is poor, how they are poor. It is based on OPHI’s Alkire-Foster method for multidimensional measurement.

An MPI enables countries to support the SDG agenda because it helps countries:

- ❖ **Leave No One Behind:** MPI analysis allows policymakers to see poverty levels within different groups of a population, for example enabling them to monitor poverty in different sub-national regions, across rural and urban areas, and within groups such as children, ethnic groups and caste.
- ❖ **Monitor Progress:** The MPI can be used to track and compare multidimensional poverty over time. National MPIs can compare regions and groups within a country; a regional or global MPI can also compare countries.



- ❖ **Identify interlinkages in policy:** The MPI can be used by policymakers to coordinate policy across government and to understand and track the impact of their policies on the poor, helping to break down silos and intensify policy impact.

- ❖ **Localize action:** National and regional MPIs are all carefully tailored to their local contexts, definitions of poverty and policy priorities.

- ❖ **LIMITATIONS OF THE MULTIDIMENSIONAL POVERTY INDEX**
 - ❖ Poverty is a complex issue with many factors, making it difficult to address all aspects.

 - ❖ Gathering data for multidimensional indicators can be challenging.

- ❖ **Recommendations to overcome the Limitations are:**
 - ✓ There is a need for context-specific multidimensional poverty indices that reflect national definitions of poverty.

 - ✓ While the global MPI provides a standardized methodology, national definitions offer a comprehensive understanding of poverty specific to each country.

 - ✓ It is crucial to consider these context-specific indices to evaluate and address poverty effectively.

 - ✓ The large number of indicators can be overwhelming and lead to ineffective implementation.

 - ✓ MPI does not capture intra-household inequality or inequality among the poor.

 - ✓ It is also challenging to determine which dimensions are relevant and how many should be considered or prioritized.



POLICY SUGGESTIONS

- Economic reforms should synchronize with Political reforms in other words Political reforms should be followed by Economic reforms to achieve faster SDGs.
- We should initiate a large scale Constitutional reforms with reference to the current and future context.
- Our policy should follow Master Plan Model like Gati Shakti Master Plan.
- We should strengthen the Cooperative Federalism by strict compliance mechanism like penalties if it violated.

CONCLUSION

The study indicates that by studying the MPI over time, and also by evolving context-specific MPI one can identify the priorities in policy development to achieve faster the Sustainable Development Goals. We should initiate Political Reforms for the 100 per cent success of Economic Resorms.

REFERENCES

- Alkire, S., Kanagaratnam, U., and Suppa, N. (2023a). The global Multidimensional Poverty Index (MPI) 2023 country results and methodological note. OPHI MPI Methodological Note 55, Oxford Poverty and Human Development Initiative, University of Oxford.
- Alkire, S., Kanagaratnam, U., and Suppa, N. (2023b). The global Multidimensional Poverty Index (MPI) 2023 disaggregation results and methodological note. OPHI MPI Methodological Note 56, Oxford Poverty and Human Development Initiative, University of Oxford.
- Chakravarty, S. R. (2009). *Inequality, Polarization, and Poverty: Advances in Distributional Analysis*. New York: Springer.
- Dotter, C., & Klasen, S. (2020). An absolute multidimensional poverty measure in the functioning space (and relative measure in the resource space): An illustration using

- Indian data. In *Philosophy and Poverty* (pp. 225–261). doi:10.1007/978-3-030-31711-9_14
- Gaur, S., & Rao, N. S. (2020). Poverty Measurement in India: A Status Update. In *Ministry of*. New Delhi.
- Global Accelerated Action for the Health of Adolescents: Guidance to Support Country Implementation. (2017).
- Godinot, X., & Walker, R. (2020). Poverty in all its forms: Determining the dimensions of poverty through merging knowledge. In *Philosophy and Poverty* (pp. 263–279). doi:10.1007/978-3-030-31711-9_15
- Mihiretu, A., Assefa, N., & Wubet, A. (2023). Pearl millet, the hope of food security in marginal arid tropics: Implications for diversifying limited cropping systems. *Journal of Agribusiness and Rural Development*, 67(1). doi:10.17306/j.jard.2023.01670
- Niti Aayog. (n.d.). <https://www.niti.gov.in/sites/default/files/2023-08/India-National-Multidimensional-Poverty-Index-2023.pdf>
- Piyush. (2023, July 13). 2023 Global Multidimensional Poverty Index (MPI): India's Remarkable Progress in Poverty Reduction. Adda247. <https://currentaffairs.adda247.com/2023-global-multidimensional-poverty-index-mpi-indias-remarkable-progress-in-poverty-reduction/>
- Shaffer, P. (2021). Dimensions of poverty: Measurement, epistemic injustices, activism. *Journal of Human Development and Capabilities*, 22(4), 759–760. doi:10.1080/19452829.2021.1985838
- Wallis, G. (1986). Ehlotzky, F. (ed.), fundamentals of laser interactions. Proceedings, obergurgl, Austria 1985. Berlin etc., Springer-Verlag 1985. IX, 314 S., DM 45,—, ISBN 3-540-15640-2 (lecture notes in physics 229). *Zeitschrift Fur Angewandte Mathematik Und Mechanik*, 66(10), 500–500. doi:10.1002/zamm.19860661020
- What Does it Mean to Leave No One Behind? A UNDP discussion paper and framework for implementation. (2018).
- WHO, UNDP. (2014). Every Newborn Action Plan. Geneva: World Health Organization.