Article

Unveiling the Complex Facets of Poverty: Unidimensional and Multidimensional Insights from Rural Areas of Suri Sadar Sub-Division, Birbhum District, Eastern India

Ranajit Ghosh [1] and **Prolay Mondal** [2,*]

[1] Department of Geography, Suri Vidyasagar College, Suri 731101, West Bengal, India; ranajit0369@gmail.com
[2] Department of Geography, Raiganj University, Raiganj 733134, West Bengal, India
* Correspondence: mon.prolay@gmail.com

Abstract: Poverty, particularly in developing regions, is a complex, multifaceted issue deeply embedded in various interrelated factors. It extends beyond mere financial insufficiency, encompassing limited access to essential services such as healthcare, education, and overall living standards. This study examines both the unidimensional and multidimensional aspects of rural poverty in Suri Sadar Sub-Division, located in Eastern India. For the unidimensional aspect, this study employs the poverty headcount ratio and the Poverty Gap Index to gauge the incidence and intensity of poverty. In contrast, the multidimensional approach utilized three dimensions and 12 indicators to assess the incidence, severity, and multidimensional poverty index utilizing the Alkire–Foster (AF) methodology. The unidimensional analysis, focusing on income and consumption, highlights significant economic disparities, particularly in the western Community Development Blocks, namely, Khoyrasole, Md. Bazar, and Rajnagar. The highest levels of multidimensional poverty are generally consistent with the unidimensional findings, particularly in the western blocks. These results underscore the need for comprehensive poverty reduction strategies that address both economic and broader aspects of poverty. In areas like the western blocks, where both income-based and multidimensional poverty rates are high, strategies should integrate economic development, improved healthcare access, enhanced educational quality, and living standards improvement. Therefore, this study serves not only as an academic endeavor but also as a vital tool for informed policymaking in poverty alleviation, providing planners, administrative officials, and researchers with essential insights to develop effective, localized, and sustainable poverty reduction strategies.

Keywords: multidimensional poverty index; poverty gap index; poverty headcount index; Suri Sadar sub-division; unidimensional approaches

1. Introduction

The quantification and analysis of well-being and poverty have long challenged scholars, policymakers, and social planners, with no consensus on a definitive measurement approach [1]. Contemporary perspectives on poverty have evolved and are now broadly defined by many experts, including sociologists, psychologists, economists, and politicians, as social exclusion, a concept that extends beyond mere income or wealth considerations [2–5]. This modern interpretation recognizes poverty as a complex phenomenon, leading to an increasing focus in the academic literature on multidimensional measurement approaches. Researchers have criticized traditional methods for their disconnect from the real-life experiences of households, as these methods primarily view poverty as a lack of sufficient economic resources or income to meet basic living needs [5,6]. These conventional approaches, emphasizing monetary values and consumption or income data, have guided poverty alleviation efforts towards providing necessary resources [7,8]. However, critics argue that this resource-centric metric fails to adequately reveal the specific ways poverty manifests and accurately represents broader societal challenges, skills, processes, and income distribution [9].

Moreover, there's a growing academic interest in exploring the disparities in achievements among households through various indicators and addressing wealth disparities. Despite this, the issue of multidimensional inequality has not received sufficient attention.

Sen [10] (1976) talks about two important issues in measuring poverty: first, how to find the economically disadvantaged people in the population (this includes setting a poverty threshold to tell them apart), and second, how to use the different characteristics of these people to make broad indicators. Sen's critique of the prevalent one-dimensional measures of well-being and poverty and his advocacy for an axiomatic approach to poverty measurement have significantly influenced research in this area. This has led to the development of various multidimensional indices [11,12]. Sen argues for a poverty measure that transcends mere evaluation of income or expenditure for basic needs, emphasizing the importance of considering resource accessibility and opportunities for improving living conditions [10,13,14]. This comprehensive approach to poverty measurement is crucial for accurately depicting and monitoring the multifaceted nature of poverty, a perspective increasingly adopted in empirical poverty research [15,16].

Poverty and inequality are particularly critical issues in developing countries, with India exemplifying these challenges in a unique and complex manner [17]. As one of the world's most populous nations, India's struggle against poverty is not just a fight against economic deprivation but also against entrenched social inequalities [18]. The country's poverty is multifaceted, involving not only low income but also a lack of access to essential services such as healthcare, education, and clean water [19]. Inequality in India is stark, characterized by wide gaps between the rich and poor, urban and rural populations, and among different social groups, including caste and gender divisions [20]. These disparities are often perpetuated by historical and structural factors, limiting opportunities for large sections of society [20]. While India has experienced significant economic growth, this has not uniformly translated into poverty reduction, with the benefits of development often not reaching marginalized communities [21]. Moreover, rapid urbanization has led to the proliferation of urban slums, where residents face dire living conditions and limited employment prospects [22]. Thus, poverty and inequality in India present not just an economic challenge but also a societal one, requiring holistic and inclusive policy interventions to ensure equitable growth and progress [23].

The study of both unidimensional and multidimensional aspects of poverty by contemporary scholars and academicians is of paramount importance in understanding and addressing the complex nature of poverty in the modern world [24,25]. Unidimensional approaches, typically focusing on income or consumption, provide valuable insights into the economic aspects of poverty, enabling the assessment of living standards and the effectiveness of economic policies [7]. However, these measures often overlook other critical dimensions of poverty, such as access to education, healthcare, housing, and social inclusion, which are essential for a comprehensive understanding of an individual's or community's well-being [26]. The multidimensional approach, advocated by scholars and reflected in frameworks like the Human Development Index and the Multidimensional Poverty Index, broadens this perspective by incorporating various indicators that affect people's quality of life [27]. This approach acknowledges that poverty is not merely a lack of income but also includes deprivation in several aspects of life that are crucial for human development [28]. By studying poverty in multiple dimensions, scholars can identify and analyze the interlinkages between different forms of deprivation, leading to more effective and targeted policy interventions [29]. Furthermore, this holistic view is crucial for understanding the differential impacts of poverty across various groups, regions, and countries, thus aiding in the formulation of strategies for inclusive and sustainable development [30]. In today's globalized world, where inequalities are rising and new forms of poverty are emerging, the study of both unidimensional and multidimensional poverty provides essential insights for policymakers, international organizations, and development practitioners to tackle poverty in all its forms [31].

The present study investigates the complexities of both unidimensional and multidimensional poverty within the Suri Sadar Sub-division of Eastern India, with a particular emphasis on conducting a comparative analysis of these two dimensions. This research aims to answer pivotal questions such as which areas exhibit greater severity in terms of both unidimensional and multidimensional poverty and whether regions characterized by unidimensional poverty coincide with those marked by multidimensional poverty. By exploring unidimensional poverty, this study will assess traditional economic indicators such as income and consumption levels, offering insights into the basic economic status of the population [32]. Simultaneously, the multidimensional approach will delve into broader aspects, including access to education, healthcare, housing, and social inclusion, painting a more comprehensive picture of the deprivation faced by individuals and communities [33]. This comparative analysis is crucial for identifying the unique challenges and deprivations specific to the Suri Sadar Sub-division. The findings of this research are expected to be of paramount importance for policymakers, government officials, and management officials, enabling them to design and implement more targeted and effective poverty reduction strategies. By tailoring interventions to the specific needs identified through this study, there is a potential to make significant strides in alleviating both economic hardship and broader aspects of poverty, ultimately contributing to the sustainable development of the region.

2. Materials and Methods

2.1. Study Area

In order to accomplish the goals of the study, the Suri Sadar Sub-Division of Birbhum District, West Bengal, located in the impoverished eastern region of India, has been selected as a testing site. This sub-division, located in the western part of Birbhum district, encompasses diverse physiographical features, with its western section extending from the Chota Nagpur Plateau. Agricultural activities in this region are constrained by agroecological conditions, resulting in heightened poverty levels compared to the eastern part of the district [34]. Hence, this specific area has been selected as the research site. As per the 2011 census, it had a population of 112,871, with approximately 32.71% of households living below the poverty line [35]. Geographically, the area extends from 23°07′40″ N to 23°41′30″ N in latitude and from 87°05′20″ E to 87°46′20″ E in longitude (Figure 1).

The research encompasses C.D. blocks, namely Mohammad Bazar, Sainthia, Dubrajpur, Rajnagar, Suri-I, Suri-II, and Khoyrasole, within the specified region. This region is characterized by its diverse physiographic conditions, which notably influence the levels of poverty. The community development blocks of Mohammad Bazar, Dubrajpur, Rajnagar, and Khoyrasole are distinguished by their plateau fringe landscapes, while the remaining areas feature plain topography.

2.2. Data Source

The current study utilized both secondary and primary data. The secondary data were collected from many published studies, such as the Mission Antyodaya report, the Statistical Handbook, the Census of India, and the Agricultural Statistics. The primary data were collected from the selected households using a probability-proportional-to-size sampling approach. Probability-proportional-to-size (PPS) sampling is a crucial sampling approach that selects a sample in which the probability of selecting each unit is directly proportional to its size [36]. This technique has gained significant importance in recent times [37]. The sample size was determined using the Cochran Formula [38].

$$n = \frac{n_o}{1 + \frac{n_o}{N}} \tag{1}$$

$$n_o = \frac{Z^2 p(1-p)}{e^2} \tag{2}$$

where n = sample size, N = population size, e = acceptable sampling error, p = the proportions of the population, and Z = Z value at reliability level or significance level.
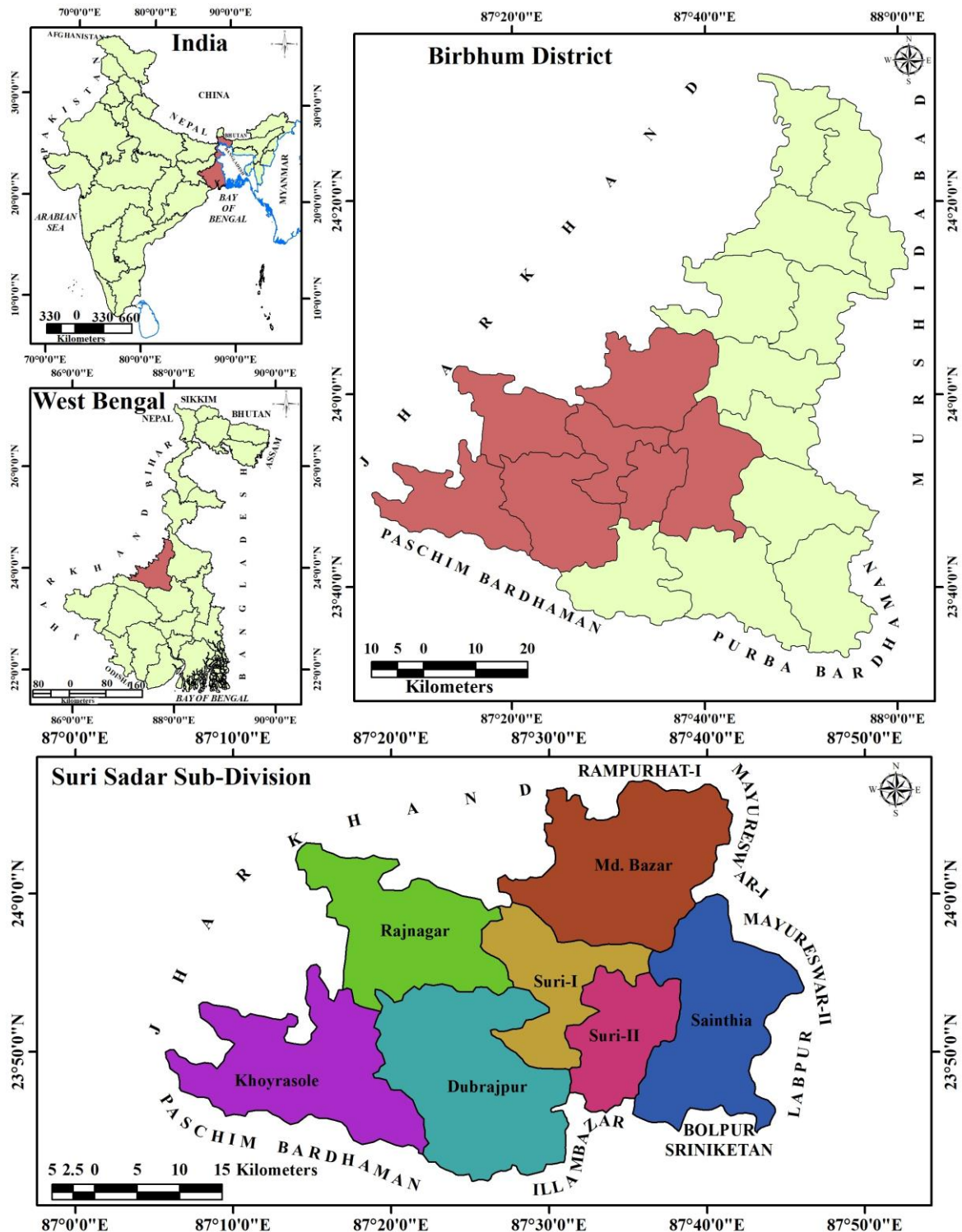

Figure 1. Location map of the study area.

In this present study, the sample was estimated with a confidence level of 95%, a proportion of the population of 0.5, a margin of error of 0.05, and a z-score of 1.96 (at the 95% confidence level, a z-score of 1.96 would be anticipated). After determining the sample size, an additional 5% supplemental sample has been included to account for non-respondents. Table 1 presents the distribution of sampled households across various C.D. blocks.

Table 1. Community development block-wise sample size, excluding municipalities.

Serial Number	Community Development Block	Total Households	Sample Households	Non-Responded Sample (5%)	Final Sample Households
1	Md. Bazar	36,344	380	19	399
2	Rajnagar	14,875	374	19	393
3	Suri-I	22,194	378	19	397
4	Suri-II	20,808	377	19	396
5	Sainthia	44,337	381	19	400
6	Khoyrasole	34,107	380	19	399
7	Dubrajpur	40,439	381	19	400
		Total Households = 213,104			Total Sample Household = 2784

2.3. Methodology

The research aims to investigate both the unidimensional and multidimensional aspects of poverty in the study region. To achieve this objective, measures of both unidimensional and multidimensional poverty have been utilized. Various analytical methods have been employed from diverse, objective-oriented viewpoints.

2.3.1. Methodology Regarding Unidimensional Measures of Poverty

In examining the unidimensional aspect of poverty within the Suri Sadar Sub-Division for the fiscal year 2022–23, the income poverty threshold has been established based on the 2011–12 benchmarks for West Bengal, which were INR 934 (USD 11.20) and INR 1372 (USD 16.45) per capita per month for rural and urban households, respectively [39]. Considering the region's low standard of living, we have projected a modest annual inflation rate of 1.5% for essential goods and services over the subsequent eleven years [39]. This rate adjustment sets the poverty line at INR 1100 (USD 13.19) per capita per month for rural areas and INR 1600 (USD 19.18) for urban areas in 2022–23. The poverty analysis in this study utilized both the Headcount Index and the Poverty Gap Index, focusing on per-capita household expenditure to assess the singular dimension of poverty.

2.3.2. Poverty Headcount Index/Headcount Ratio (P_0)

The poverty headcount (HC) measures the proportion of the population living below the poverty threshold. It is a widely employed measure to represent the fraction of the population experiencing poverty [40]. The formula for calculating the headcount ratio (HCR) is as follows:

$$HRC = \frac{HC}{N} \tag{3}$$

where "*HRC*" indicates the headcount ratio, "*HC*" indicates the number of people who are poor, and "*N*" represents the total population.

2.3.3. Poverty Gap Index (P_1)

Nevertheless, the headcount ratio (HCR) presents notable limitations. It inaccurately assumes uniformity in the conditions of all impoverished individuals, overlooking the variations in income levels among them [41]. The HCR does not effectively reflect changes in income among those below the poverty threshold, nor does it account for the severity of poverty [42]. To counteract these shortcomings, this study focuses on the depth of poverty, aiming to gauge the gap between the impoverished population and the poverty line, essentially measuring the average shortfall in income relative to this line [43]. This approach evaluates how far a household falls below the poverty threshold. The formula used to compute the Poverty Gap Index (*PGI*) is:

$$PGI\ (P_1) = \frac{1}{N}\sum_{i=1}^{q}\left(\frac{z - y_i}{z}\right) \tag{4}$$

where "y_i" represents the income of an individual, "z" represents the poverty line, and "N" represents population size.

2.3.4. Methodology Regarding Multidimensional Measures of Poverty

This section delineates the methodology employed for measuring multidimensional poverty at the household level in Suri Sadar Sub-Division, extending beyond mere income considerations. This study adopts the Alkire–Foster (AF) method to evaluate both the incidence and intensity of multidimensional poverty [44]. The AF method has been used for a long time because it is reliable, can be adjusted to fit different situations, and follows global standards [45]. Opting for the AF approach ensures methodological coherence, facilitating cross-referencing with national and international poverty evaluations while addressing the unique socio-economic dynamics and needs of the studied region [46,47]. This transparent methodological choice bolsters the study's reliability and empowers evidence-based policymaking efforts targeted at addressing multidimensional poverty within the region. In line with the approach taken by NITI Aayog in 2021 for the National Multidimensional Poverty Index, the same dimensions and indicators are utilized for calculating the Multidimensional Poverty Index in this region [48]. Figure 2 illustrates the assigned weights for each indicator within the respective dimensions. Households are categorized as deprived in a particular indicator if they meet the specified criteria, with a '1' denoting deprivation and a '0' indicating its absence. The weighted deprivation score (WDS) over the dimensions and indicators has been taken into account for the household to calculate the incidence and degree of multidimensional deprivation in families. It is stated mathematically as:

$$WDS = \sum_{i=1}^{12} W_i D_i \tag{5}$$

where *WDS* stands for weighted deprivation score, W_i stands for the relative weight of the ith indicator, and D_i stands for the deprivation score of the ith indicator. WDS is a measure of deprivation that is between 0 and 1; therefore, when deprivation rises, so does its value, and vice versa. In order to identify the multidimensionally impoverished, we must now select a weighted score threshold. To qualify as multidimensionally poor, as defined by the United Nations Development Programme (UNDP), a household (or all members of the family) must have a WDS of 0.33 or higher. To investigate the multifaceted aspects of poverty in the Suri Sadar Sub-Division, this research utilizes a three-pronged measurement approach comprising the poverty headcount ratio, the intensity of poverty, and the multidimensional poverty index.

2.3.5. Headcount Ratio

The headcount ratio, a key indicator of multidimensional poverty, also known as poverty incidence, serves to answer the question of how many individuals are in poverty [44]. The headcount ratio is technically expressed in the following manner:

$$H = \frac{q}{n} \tag{6}$$

In this context, 'q' represents the total count of households possessing a weighted deprivation score equal to or exceeding 1/3. The term 'n' denotes the size of the sample population under study. In this framework, 'H' quantifies the percentage of households experiencing multidimensional poverty.
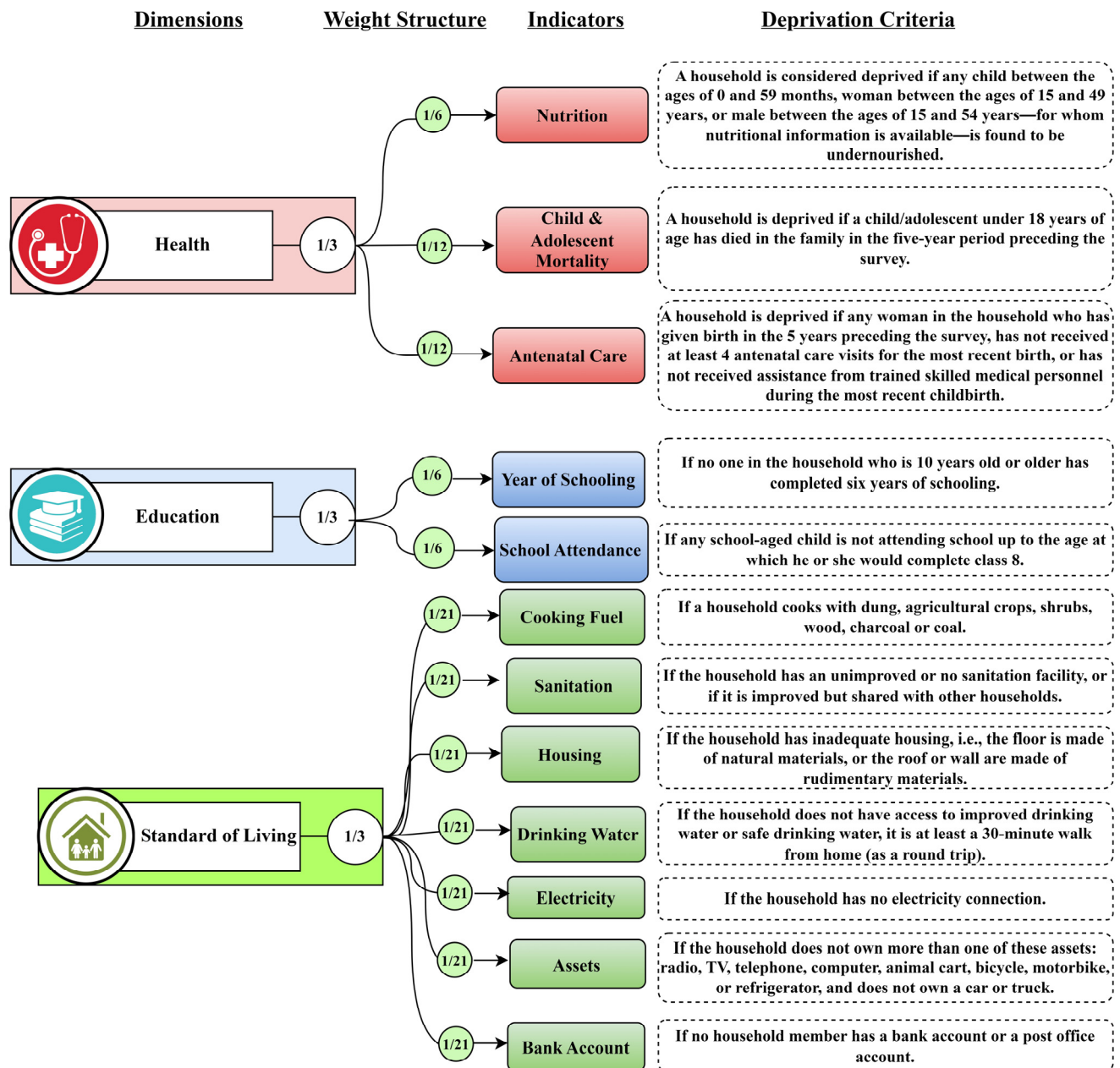
Figure 2. Dimensions, indicators, deprivation cut-offs, and weights of the indicators.

2.3.6. Intensity of Poverty

The term "intensity of multidimensional poverty" (*A*) represents the degree or severity of poverty that individuals and households experience across various dimensions of well-being [49]. The extent of this multidimensional poverty is determined by employing the following formula:

$$A = \sum_{1}^{q} \frac{WDS}{q} \tag{7}$$

where '*WDS*' signifies the overall weighted deprivation score of multidimensionally poor persons across all dimensions of deprivation, and '*q*' is the number of people who are multidimensionally poor.

2.3.7. Multidimensional Poverty Index (MPI)

The Multidimensional Poverty Index is calculated by taking the product of the headcount ratio of the multidimensionally poor (H) and the average severity of their multidimensional poverty (A) [50]. The mathematical expression of this calculation is as follows:

$$MPI = H \times A \qquad (8)$$

where '*H*' represents the multidimensional poverty headcount ratio and '*A*' represents the intensity of multidimensional poverty. This evaluates poverty across multiple dimensions like education, health, and living standards, providing a holistic view beyond the mondy metric measure.

3. Results

3.1. Overview of Unidimensional Poverty

Before examining the multidimensional poverty of households in this sub-division, it is necessary to first explain the notion of income poverty for the households that were selected for the study. As depicted in Figure 3a,b, and Table 2, there is a noticeable variation in the incidence and depth of income poverty across different C.D. blocks within the sub-division. The Headcount Ratio, which quantifies the prevalence of income poverty, demonstrates significant disparities, with rates fluctuating between 25.9% and 36.9%. The Poverty Gap Index, indicating the economic gap between those below the poverty line and the line itself, also varies, with a range from 12.9% to 17.3%. The western C.D. blocks of the sub-division, namely Khoyrasole, Md. Bazar, and Rajnagar, exhibit the highest levels of both the prevalence and intensity of income poverty, with rates recorded at 36.9%, 33.5%, and 31.2%, and intensity levels at 17.3%, 14.9%, and 15.8%, respectively. In contrast, the C.D. blocks of Sainthia, Suri-I, and Suri-II show the least incidence and severity of income poverty, with prevalence rates at 25.9%, 26.0%, and 26.5%, and intensity rates at 13.1%, 12.9%, and 14.1%, respectively. The Dubrajpur C.D. block presents a moderate level in both the incidence and intensity of income poverty, marked at 29.0% and 14.5%, respectively.

Table 2. Reports of Unidimensional Poverty for the Sample Households of Different Blocks in Suri Sadar Sub-Division, 2022–23.

Serial Number	Community Development Block	Headcount Ratio (%)	Poverty Gap Index (%)
1	Rajnagar	31.2	15.8
2	Md. Bazar	33.5	14.9
3	Suri-I	26.0	13.1
4	Sainthia	25.9	12.9
5	Suri-II	26.5	14.1
6	Khoyrasole	36.9	17.3
7	Dubrajpur	29.0	14.5
	Suri Sadar Sub-Division	27.2	11.7

3.2. Overview of Multidimensional Poverty

The presented study observes significant variations in both the incidence and depth of multidimensional poverty across various C.D. blocks within the subdivision. This is illustrated in Figure 4a,b, and Table 3. The Headcount Ratio, an indicator of the prevalence of multidimensional poverty, shows considerable disparities among the blocks, ranging from 28.2% to 39.1%. The intensity of multidimensional poverty, denoted as (A), is calculated based on the average percentage of deprivations experienced by the poor in key areas such as health, education, and standard of living. This intensity also shows variation across the subdivision, with a range between 45.1% and 46.2%.
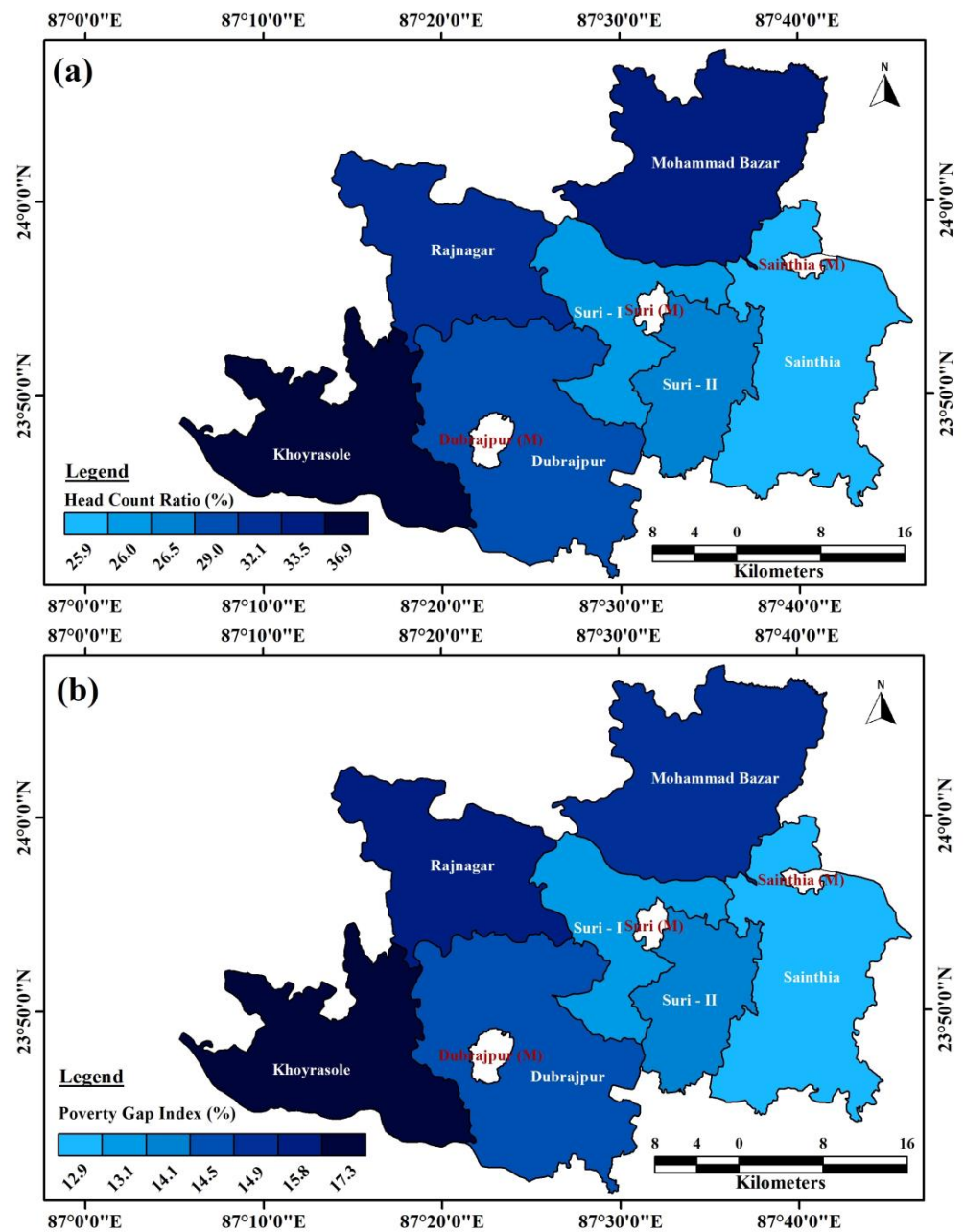
Figure 3. (**a**) Incidence of unidimensional poverty; (**b**) Intensity of unidimensional poverty.

Table 3. Reports of Multidimensional Poverty for the Sample Households of Different Blocks in Suri Sadar Sub-Division, 2022–23.

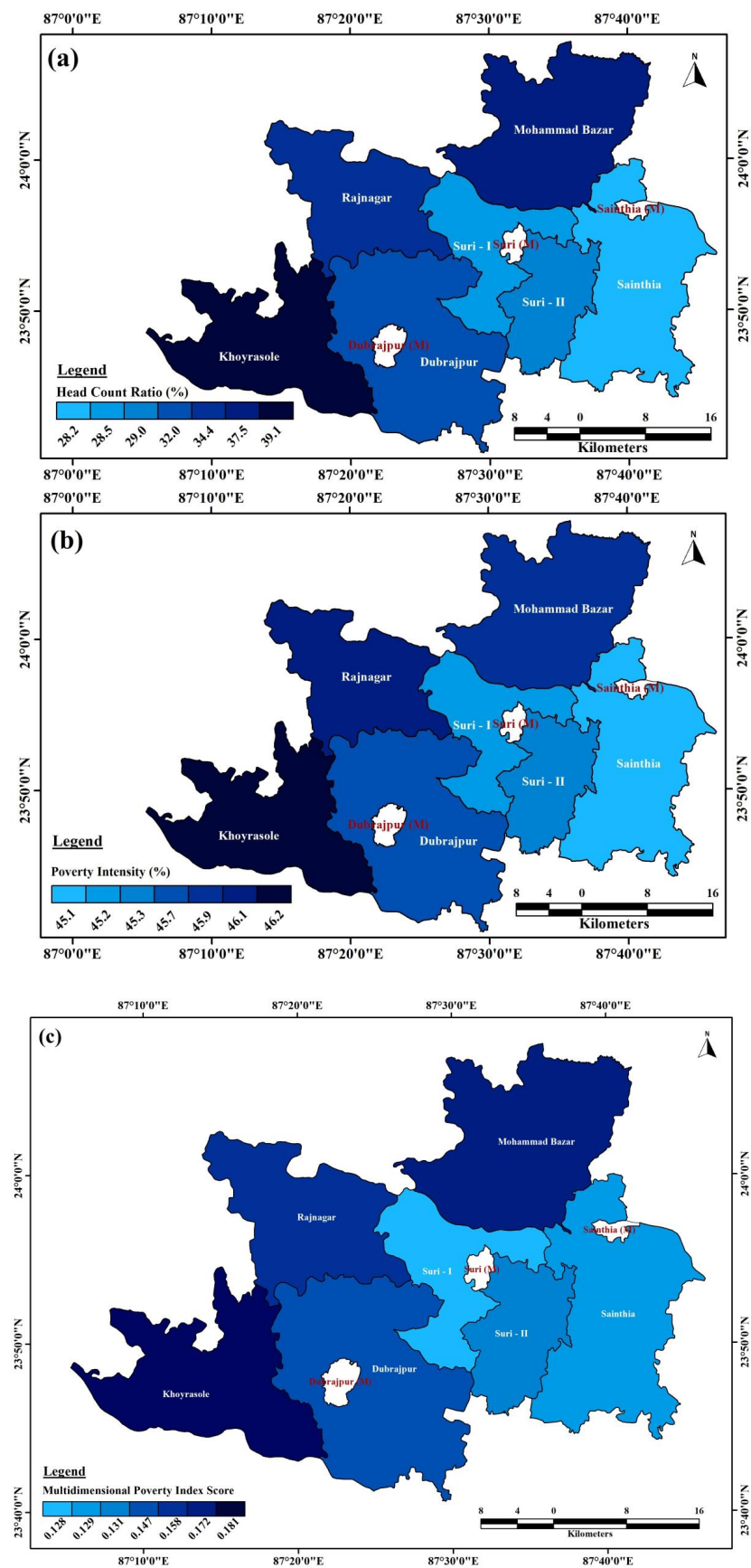| Serial Number	Community Development Block	Incidence of Multidimensional Poverty (%)	Multidimensional Poverty Intensity (%)	Multidimensional Poverty Index
1	Rajnagar	34.4	45.9	0.158
2	Md. Bazar	37.5	45.7	0.172
3	Suri-I	28.2	45.2	0.128
4	Sainthia	28.5	45.1	0.129
5	Suri-II	29.0	45.3	0.131
6	Khoyrasole	39.1	46.2	0.181
7	Dubrajpur	32.0	46.1	0.147
	Suri-Sadar Sub Division	0.26.8	45.2	0.121

Figure 4. (**a**) Incidence of multidimensional poverty; (**b**) intensity of multidimensional poverty; (**c**) Multidimensional Poverty Index (MPI).

This study identifies the blocks of Khoyrasole, Md. Bazar, and Rajnagar in the western part of the subdivision as having the highest incidence of multidimensional poverty, with Headcount Ratios of 39.1%, 37.5%, and 34.4%, respectively. In contrast, the central and eastern blocks, particularly Suri-I and Sainthia, exhibit the lowest incidence, with Headcount Ratios of 28.2% and 28.5%, respectively. The remaining blocks, namely Dubrajpur and Suri-II, are categorized as having moderate levels of multidimensional poverty, with Headcount Ratios of 32.0% and 29.0%, respectively.

Regarding the intensity of multidimensional poverty among the impoverished across the entire subdivision, the average score is 45.2%. However, this figure varies among the blocks. Khoyrasole and Dubrajpur are identified as having the highest levels of poverty intensity, with scores of 46.2% and 46.1%, respectively. Conversely, Sainthia and Suri-I are marked by the lowest levels, with intensity scores of 45.1% and 45.2%, respectively. The remaining blocks, namely Rajnagar, Md. Bazar, and Suri-II, display moderate intensity levels, with respective scores of 45.9%, 45.7%, and 45.3%.

Table 3 and Figure 4c in the study display the Multidimensional Poverty Index (MPI) scores at the C.D. block level within the Suri Sadar Sub-Division. The sub-division's overall MPI is 0.121, indicating that the multidimensionally poor in this area experience around 12.1% of the total possible deprivations across all indicators, assuming every individual was deprived in all aspects. However, this overarching figure masks significant disparities within the sub-division. In terms of specific areas, the Khoyrasole block exhibits the highest level of multidimensional poverty, with an MPI score of 0.181. The Md. Bazar and Rajnagar blocks closely follow, recording MPI scores of 0.172 and 0.158, respectively, reflecting slightly lesser but still significant levels of poverty. On the other hand, the C.D. blocks of Suri-I, Sainthia, and Suri-II demonstrate relatively lower levels of multidimensional poverty, as indicated by their MPI scores of 0.128, 0.129, and 0.131, respectively. The Dubrajpur Community Development block, with an MPI score of 0.147, falls into a moderately impoverished category. The analysis distinctly points out that the southwestern and western regions of the study area are the most affected by severe levels of multidimensional poverty.

4. Discussion

This study provides a comprehensive examination of poverty within the Suri Sadar Sub-Division of Eastern India, shedding light on significant disparities in both unidimensional and multidimensional poverty across various C.D. blocks. The analysis of unidimensional poverty, focusing on income and consumption, reveals striking economic inequalities, particularly evident in the western C.D. blocks (Khoyrasole, Md. Bazar, and Rajnagar). The region's reliance on agriculture and the diverse agroclimatic conditions prevalent across different areas primarily contribute to these disparities. The challenging terrain and soil composition in the western part, situated within the periphery of the Chotonagpur Plateau, significantly impact agricultural productivity [34], leading to heightened levels of income poverty. This emphasis on unidimensional poverty underscores its critical role in understanding the economic dimensions of deprivation and highlights its importance in crafting targeted interventions to alleviate poverty within the region.

In contrast, the study's exploration of multidimensional poverty, which encompasses health, education, and living standards , paints a more intricate portrait of deprivation within the Suri Sadar Sub-Division of Eastern India. While the highest concentrations of multidimensional poverty correspond with the patterns observed in unidimensional poverty, particularly pronounced in the western blocks, the disparities in multidimensional poverty across blocks are comparatively less pronounced. This suggests that while income disparities vary significantly across the region, challenges related to health, education, and living standards are more evenly spread. This insight underscores the critical importance of considering multiple dimensions of poverty beyond income alone. By encompassing various aspects of well-being, such as access to healthcare, educational opportunities, and basic living conditions, the multidimensional poverty assessment provides a more holistic

understanding of deprivation and informs more targeted and comprehensive poverty alleviation strategies within the region [51].

These findings underscore the imperative need for a comprehensive poverty reduction strategy that encompasses both economic interventions and broader socio-economic considerations. Particularly in regions such as the western blocks, characterized by elevated levels of both income poverty and multidimensional deprivation, effective strategies must encompass a multifaceted approach. This approach should encompass not only economic empowerment but also enhancements in healthcare accessibility, improvements in educational quality, and elevations in living standards.

Moreover, the study highlights the importance of tailoring poverty alleviation efforts to the specific needs and challenges of each locality. For example, in the western blocks, initiatives could include targeted financial assistance, initiatives for agricultural development, and enhancements in infrastructure. In contrast, the central and eastern blocks might require a focus on initiatives aimed at bolstering education, healthcare provisions, and fostering social inclusion.

Overall, this comparative analysis of both unidimensional and multidimensional poverty in the Suri Sadar Sub-Division underscores the nuanced and varied nature of poverty within the area. It advocates for the adoption of comprehensive and bespoke poverty alleviation strategies that not only address economic hardships but also confront the broader spectrum of deprivation. Such strategies are indispensable for fostering sustainable development and ensuring the equitable distribution of the benefits of growth.

5. Conclusions

This comprehensive study delving into the dynamics of poverty within the Suri Sadar Sub-Division, examining both unidimensional and multidimensional perspectives, illuminates the intricate tapestry of deprivation prevalent in Eastern India. The findings unveil a multifaceted landscape of inequalities, delineating stark variations in both income-based poverty and broader multidimensional deprivation across different C.D. blocks. Such nuanced insights are indispensable for policymakers, administrators, and researchers dedicated to devising effective poverty alleviation strategies.

The pronounced divergence between the western C.D. blocks (Khoyrasole, Md. Bazar, and Rajnagar) and the central and eastern counterparts (Dubrajpur, Suri-I, Sainthia, and Suri-II) underscores the imperative for tailored interventions. For policymakers and development strategists, this study serves as a guiding beacon, underscoring the necessity for block-specific approaches rather than uniform remedies. In the western blocks, interventions must prioritize augmenting agricultural productivity, enhancing infrastructure, fostering small-scale environmentally sustainable industries, and expanding economic opportunities while concurrently addressing healthcare, education, and living standards. Conversely, in the central and eastern blocks, the focus may lean towards fortifying education, healthcare, and social inclusion initiatives.

The study's findings accentuate the significance of adopting a holistic perspective in poverty alleviation endeavors, one that not only tackles immediate economic adversities but also grapples with the broader spectrum of deprivation. This holistic approach is pivotal for administrators and development practitioners tasked with balancing short-term relief efforts with long-term, sustainable development objectives. By encompassing both unidimensional and multidimensional facets of poverty, a more comprehensive understanding of deprivation is attained, facilitating the formulation of more efficacious poverty reduction strategies.

For scholarly pursuits, this research offers a wealth of empirical insights into the intricate dynamics of poverty within the complex and diverse milieu of the Suri Sadar Sub-Division. Academic scholars can leverage the study's robust framework to dissect poverty within similarly complex socio-economic landscapes and extrapolate its applicability to other regions.

Therefore, this study transcends mere academic inquiry; it emerges as an indispensable instrument for informed decision-making in the realm of poverty alleviation. Equipping planners, administrators, and scholars with the requisite knowledge and comprehension empowers them to craft targeted, sustainable strategies for poverty reduction. By acknowledging and addressing the multifaceted nature of poverty, this work charts a course towards more equitable and inclusive development, thereby advancing the overarching objective of alleviating poverty in all its dimensions—a cornerstone of sustainable development endeavors.

References

1. Sumner, A. Economic Well-Being and Non-Economic Well-Being A Review of the Meaning and Measurement of Poverty. *United Nations Res. Pap.* **2004**, *30*, 1–21.
2. Sen, A. *Social Exclusion: Concept, Application, and Scrutiny*; Asian Development Bank: Manila, Philippines, 2000; ISBN 9715612741.
3. Estivill, J. *Concepts and Strategies for Combating Social Exclusion an Overview*; International Labour Office, STEP/Portugal: Geneva, Switzerland, 2003; ISBN 9221136523.
4. Davis, E.P.; Sanchez-martinez, M. *A Review of the Economic Theories of Poverty*; National Institute of Economic and Social Research: London, UK, 2014; pp. 1–65.
5. Atkinson, A.B.; Marlier, E. *Analysing and Measuring Social Inclusion in a Global Context*; United Nations: New York, NY, USA, 2010; ISBN 9789211302868.
6. Hasan, S. *Literature Review of Poverty and Urban Development Indicators*; Homeless International: Coventry, UK, 2002; pp. 1–41.
7. Ravallion, M. *Poverty Lines in Theory and Practice: Living Standards Measurement Studty*; World Bank: Washington, DC, USA, 1998; ISBN 0821342266.
8. Krantz, L. The Sustainable Livelihood Approach to Poverty Reduction: Division for Policy and Socio-Economic Analysis. *Div. Policy Socio-Econ. Anal.* **2001**, *44*, 1–27.
9. Genevey, R.; Pachauri, R.K.; Tubiana, L. *Reducing Inequalities: A Sustainable Development Challenge*; The Energy and Resources Institute, TERI: Mithapur, India, 2013; ISBN 978-81-7993-530-9.
10. Sen, A. Poverty: An Ordinal Approach to Measurement. *Econom. Soc.* **1976**, *44*, 219–231. [CrossRef]
11. Bourguignon, F.; Chakravarty, S.R. The Measurement of Multidimensional Poverty. *J. Econ. Inequal.* **2003**, *103*, 239–248. [CrossRef]
12. Alkire, S. *Choosing Dimensions: The Capability Approach and Multidimensional Poverty*; Palgrave Macmillan: London, UK, 2012; ISBN 1904049877.
13. Sen, A. *Develeopment as Freedom*; Anchor Books: New York, NY, USA, 1999; p. 384.
14. Sen, A. *Commodities and Capabilities*; Oxford University Press: Oxford, UK, 1990; ISBN 9780195650389.
15. Wijekoon, R.; Sabri, M.F.; Paim, L. Poverty: A Literature Review of the Concept, Measurements, Causes and the Way Forward. *Int. J. Acad. Res. Bus. Soc. Sci.* **2021**, *11*, 93–111. [CrossRef] [PubMed]
16. Roshani, M.; Çamur, K.C. A Systematic Review of Multidimensional Urban Poverty and Deprivation Indicators. *Geogr. Plan. Tour. Stud.* **2023**, *3*, 50–69. [CrossRef]
17. Cornia, G.A. *Inequality Growth and Poverty in an Era of Liberalization and Globalization*; Oxford University Press: Oxford, UK, 2004; ISBN 9780191601255.
18. Arbatli-Saxegaard, E.; Coppo, M.; Khalil, N.; Kotera, S.; Unsal, D.F. Inequality and Poverty in India: Impact of COVID-19 Pandemic and Policy Response. *IMF Work. Pap.* **2023**, *2023*, 1–34. [CrossRef]
19. Hari, K.S.; Hatti, N. Poverty and Inequality in India: An Exploratory Analysis. *Soc. Sci. Spectr.* **2015**, *1*, 249–261.
20. Hnatkovska, V.; Lahiri, A. *The Rural-Urban Divide in India*; International Growth Center, London School of Economics and Political Science: London, UK, 2012; pp. 1–38.
21. Kumar, A.K.S. *Poverty and Human Development in India: Getting Priorities Right*; United Nations Development Programme: New York, NY, USA, 2007; Volume 14, pp. 713–715. [CrossRef]
22. Linn, J.F. Urban Poverty in Developing Countries: A Scoping Study for Future Research. *SSRN Electron. J.* **2012**. [CrossRef]

23. Jha, R. *Reducing Poverty and Inequality in India: Has Liberalization Helped?* World Institute for Development Economics Research: Helsinki, Finland, 2004; ISBN 9780191601255.

24. Bersisa, M.; Heshmati, A. *A Distributional Analysis of Uni- and Multidimensional Poverty and Inequalities in Ethiopia*; Springer: Heidelberg, The Netherlands, 2021; Volume 155, ISBN 0123456789.

25. Asselin, L.-M.; Ki, J.-B.; Anh, V.T. *Analysis of Multidimensional Poverty Theory and Case Studies*; Springer: New York, NY, USA, 2009; ISBN 9781552504604.

26. Costa, M. *A Comparison between Unidimensional and Multidimensional Approaches to the Measurement of Poverty*; IRISS Working Papers; CEPS/INSTEAD: Luxembourg, 2003.

27. Pomati, M.; Nandy, S. Measuring Multidimensional Poverty According to National Definitions: Operationalising Target 1.2 of the Sustainable Development Goals. *Soc. Indic. Res.* **2020**, *148*, 105–126. [CrossRef]

28. Santos, M.E. Multidimensional poverty measurement: Motivation, approaches, methodological issues and axiomatic indices. *Encycl. Life Support Syst.* **2002**, 1–46.

29. D'Attoma, I.; Matteucci, M. *Multidimensional Poverty: An Analysis of Definitions, Measurement Tools, Applications and Their Evolution over Time through a Systematic Review of the Literature up to 2019*; Springer: Heidelberg, The Netherlands, 2023; ISBN 0123456789.

30. Rakic, B.; Rakic, M. *A Holistic Approach to the Causes and Consequences of the Poverty and Wealth of Countries, Companies and Individuals in the Context of Sustainable Development and Sustainability. International Monograph of Scientific-Research Interdisciplinary Project: Comparative Analysis of Social Entrepreneurship in Serbia, Russia, Europa and in the World*; Faculty of Business Studies and Law, University "Union-Nikola Tesla": Belgrade, Serbia, 2018; pp. 257–286.

31. Mondal, S.; Kumar, S.; Mishra, A.P. Contextualizing Spatiality of Multidimensional Poverty in Rural and Urban India: A Geographical Perspective. *Belgeo* **2023**, *1*. [CrossRef]

32. Belhadj, B.; Limam, M. Unidimensional and Multidimensional Fuzzy Poverty Measures: New Approach. *Econ. Model.* **2012**, *29*, 995–1002. [CrossRef]

33. Sahoo, P.; Mondal, S.; Kumar, V. Multidimensional Deprivations among Social Groups in Rural India: A State Level Analysis. *GeoJournal* **2023**, *88*, 6137–6159. [CrossRef]

34. Ghosh, R.; Das, N.; Mondal, P. Explanation of Major Determinants of Poverty Using Multivariate Statistical Approach and Spatial Technology: A Case Study on Birbhum District, West Bengal, India. *GeoJournal* **2022**. [CrossRef] [PubMed]

35. Antyodaya, M. *Mission Antyodaya Survey Report*; Department of Rural Development, Ministry of Rural Development, Government of India: New Delhi, India, 2020.

36. Abdulla, F.; Hossain, M.M.; Rahman, M.M. On the Selection of Samples in Probability Proportional to Size Sampling: Cumulative Relative Frequency Method. *Math. Theory Model.* **2014**, *4*, 2224–5804.

37. Skinner, C.J. Probability Proportional to Size (PPS) Sampling. *Wiley StatsRef Stat. Ref. Online* **2016**, 1–5. [CrossRef]

38. Cochran, W.G. *Sampling Techniques*; John Wiley & Sons: New York, NY, USA, 1977; ISBN 0-471-16240-X.

39. Bagli, S.; Tewari, G. Multidimensional Poverty: An Exploratory Study in Purulia District, West Bengal. *Econ. Aff.* **2019**, *64*, 517–527. [CrossRef]

40. Datt, G.; Ravallion, M. Has India's Economic Growth Become More Pro-Poor in the Wake of Economic Reforms? *World Bank Econ. Rev.* **2009**, *25*, 157–189. [CrossRef]

41. Sen, A. Himanshu Poverty and Inequality in India-II: Widening Disparities during 1990s. *Econ. Polit. Wkly.* **2004**, *39*, 4361–4375.

42. Park, E.Y.; Nam, S.J. Multidimensional Poverty Status of Householders with Disabilities in South Korea. *Int. J. Soc. Welf.* **2019**, *29*, 41–50. [CrossRef]

43. Bossert, W.; Cato, S.; Kamaga, K. Generalized Poverty-Gap Orderings. *Soc. Indic. Res.* **2022**, *164*, 189–215. [CrossRef]

44. Alkire, S.; Santos, M.E. A Multidimensional Approach: Poverty Measurement & Beyond. *Soc. Indic. Res.* **2013**, *112*, 239–257.

45. Gibba, M. A Study of Multidimensional Poverty Index in the Gambia: Alkire-Foster Approach. In Proceedings of the 35th IARIW General Conference, Copenhagen, Denmark, 20–25 August 2018; pp. 26–29.

46. Wagle, U.; Vollmer, F.; UN DESA; Thorbecke, E.; Sen, A.; Santos, M.E.; Lugo, M.A.; Lopez-calva, L.F.; Cruces, G.; Battiston, D.; et al. *Multidimensional Poverty Measurement and Analysis: Chapter 5—The Alkire-Foster Counting Methodology*; Oxford Poverty & Human Development Initiative, University of Oxford: Oxfrod, UK, 2010; Volume 9, ISBN WPS 5580.

47. Alkire, S.; Foster, J. Counting and Multidimensional Poverty Measurement. *J. Public Econ.* **2011**, *95*, 476–487. [CrossRef]

48. NITI Aayog. *National Multidimensional Poverty Index Baseline Report*; NITI Aayog: New Delhi, India, 2021; Volume 4.

49. Wagle, U.R. The Counting-Based Measurement of Multidimensional Poverty: The Focus on Economic Resources, Inner Capabilities, and Relational Resources in the United States. *Soc. Indic. Res.* **2014**, *115*, 223–240. [CrossRef]

50. Duclos, J.-Y.; Tiberti, L. Multidimensional Poverty Indices: A Critical Assessment. *SSRN Electron. J.* **2016**. [CrossRef]

51. Ataguba, J.E.O.; Ichoku, H.E.; Fonta, W.M. Multidimensional Poverty Assessment: Applying the Capability Approach. *Int. J. Soc. Econ.* **2013**, *40*, 331–354. [CrossRef]