MULTI-DIMENSIONAL INTENSITY OF POVERTY AMONG IRULA TRIBES IN TAMILNADU: AN EMPIRICAL STUDY

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Abstract

This study examines the severe and multifaceted nature of poverty among the Irula tribes, a Particularly Vulnerable Tribal Group (PVTG), in the Thiruporur and Acharapakkam blocks of Chengalpattu District, Tamil Nadu. The analysis shows that 95.62% of the Irula households in the sample are below the poverty line (₹2,068), and an unbelievable 83.12% are considered destitute (consumption ₹1,000). The Overall Sen's Index of 0.683 shows that there is a lot of poverty, but the type of poverty varies by location. Thiruporur (0.719) has the highest overall intensity, which is caused by the highest prevalence (HCR: 0.789) and the biggest internal inequality (Gini: 0.856). Acharapakkam (0.632) demonstrates a deeper level of deprivation since it has the greatest Income Gap Ratio (IGR: 0.776), which means that the poor are even further below the poverty line. This intensity comes from systemic exploitation (being very likely to be forced into bonded labor), losing traditional ways of making a living, and having long-term problems with education (poor literacy) and health (malnutrition/anaemia).

Key Words: multi-dimensional intensity of poverty, degrees of poverty, Irula tribes, Vulnerable Tribal Group

1.1 INTRODUCTION

India has the largest tribal population in the world. This group is also one of the poorest and most neglected in the country. According to the 2011 Census, there were more than 10.43 crore (102 million) Scheduled Tribes. This number makes up 8.6% of the country's overall population. The tribal population is spread out quite unevenly across India: [i] High Concentration: In many states and union territories, especially in the North-Eastern region, STs make up most of the population. [For example, Mizoram and Lakshadweep: 94.4%, Nagaland: 86.5%, Meghalaya: 86.1%. On the other hand, five distinct administrative areas—Punjab, Chandigarh, Haryana, Delhi, and Pondicherry—do not have any legally recognized Scheduled Tribe communities.

Education is emphasized as a fundamental and vital catalyst for transformation within tribal communities. Its significance transcends simply economic enhancement. Education is an important part in improving the tribes' living standards now and in the future. It is important to help tribal cultures improve their "inner strength" so they can deal with and adapt to the hardships of contemporary life. Education is fundamentally the most significant mechanism by which individuals can strengthen their particular abilities, build key capacities, remove socio-economic barriers, and drastically extend prospects for a lasting improvement in their overall well-being.

So, the Scheduled Tribe population of India is a large part of the country, making up 8.6% of the overall population. They are mostly found in the North-East. Even if there are a lot of them, this neighbourhood is nonetheless economically weak. So, education is not only a nice thing to have; it is a powerful and necessary tool for the overall growth of the tribe. Education is the best approach for this group of people who are on the outside to gain socio-economic power and make long-term growth by enhancing their skills and giving them more chances.

The Irula tribal family units in Tamil Nadu are a specifically Vulnerable Tribal Group (PVTG). They are one of the state's poorest populations because they are so poor. Studies show that it is almost always present. One study found that 95.62% of the people tested lived below the poverty level (also referred to as BPL), as well as 83.12% were considered poor. Poverty is not only prevalent, but also very deep and strong. The large Income Gap Ratio (IGR), which can be as high as 0.776, backs this up. This means that the average impoverished Irula household is really poor and its income is well below the official poverty threshold. A combination of high frequency and deep depth shows that there is a serious and ongoing socio-economic crisis. The **Major Contributing Factors to Intensity of Poverty are as follows:**

Dimension	Key Issues Found in Studies

Livelihood & Income	Relying on very unstable jobs, like casual daily wage work (like in construction or farming) and traditional jobs, like trapping rats and snakes (which are now less common or banned). This makes it hard to find work and makes people less likely to make money.
Education	Low literacy rates, with some places having less than 5% of adults who can read and write. People who finish school don't can't get stable, higher-paying jobs, which keeps the cycle of poverty going.
Health and Nutrition	High rates of **malnutrition** among the sampled population, including prevalent **Chronic Energy Deficiency (CED)** and **anemia** in women, significantly **reduce their work capacity** and heighten their **vulnerability to injury and illness**.
Housing & Standard of Living	A lot of Irula families live in bad housing (such kucha or semi-pucca homes) and can't get important basic amenities like sanitation and banking.
Social Exclusion	They are often left out of society and discriminated against, which, together with being poor all the time, has led many to be stuck in bonded labor. Some estimates say that up to 90% of the bonded laborers who were rescued in Tamil Nadu are from the Irular tribe.

The Irula tribes in Tamil Nadu are a Particularly Vulnerable Tribal Group (PVTG) and are stuck in a situation of extreme and widespread poverty. A lot of their households live below the poverty line (BPL), and most of them are considered to be poor. This is not just a problem with money; it is a complicated, structural problem that comes from a number of variables, such as big gaps in education and health, as well as being quite socially isolated. To help the Irula PVTG, we need to make focused, region-specific changes that address their individual weaknesses. These changes should address the deep-seated lack of income as well as the widespread social and infrastructure problems.

1.3 REVIEW OF LITERATURE

The research consistently emphasizes the significant and complex poverty faced to the Irula communities of Tamil Nadu, designated to be a specifically Vulnerable Tribal Community (PVTG) [1] [2]. There is a lot of poverty because of a mix of failed traditional ways to make a living, widespread exploitation, and persistent challenges with human growth. Studies that employ indices including the Head Count Ratio (or HCR) demonstrate that poverty is very deep and common. They often name the community "destitute." Research consistently demonstrates that a considerable percentage of Irula households exist below the poverty limit line (BPL), with reported incidence rates frequently varying among 73% and 81% across several locations [3] [4]. The problem is worse because so many people are in the lowest spending groups. A lot of people, like 83.12% of a sample, were put in the "deprived" category because of the analysis you talked about before and other research.

This means that they spend very little on food and other necessities (typically less than ₹1,000 per month), which is the worst kind of poverty [5]. [6]. The degree of poverty is closely associated with the deterioration of their traditional self-sustaining forest-based economy. Irulas were known for hunting snakes and rats, collecting honey, and knowing a lot about ethnobiology [7]. [8] [9]. The Wildlife Protection Act (1972) made it unlawful to sell snake skins, which took away a lot of money.

Many people were forced to do casual work because they couldn't get proper rehabilitation [10]. [11]. The most extreme example of how poor they are is the high number of people who work as bonded laborers. State-level surveys have shown that most of the bonded laborers who were rescued in Tamil Nadu (in some cases, 90%) are from the Irula tribe [12] [13]. Because they are nomads, don't have basic needs, and don't produce much money, they are easy prey for the debt trap, which often leads to generational bondage. [14]. Lapses in Human Development Long-term issues with health, education, and living conditions make the economic poverty worse. The percentage of adults who can't read or write is surprisingly high, with some studies saying that 66% to 83% of adults can't read or write, and adult literacy rates are often less than 5% [15] [16]. This makes it harder to obtain steady, non-exploitive job, which maintains people in poverty.

Health is a serious problem, especially for Irula women and children, who have high rates of anemia and malnutrition [17] [18]. Their bad health makes it difficult for them to work, which means they can't make as much money and their poverty gets worse. Many Irula communities don't have the basic things people require, like excellent roads, power, clean drinking water, and sanitation. People who answered the question often say they are quite unhappy with their living and economic situations [19]. The extreme poverty seen among the Irula tribes in Tamil Nadu is not just a problem of low income; it is a deep, multi-generational disaster caused by systemic deprivation and exploitation. The high values of the Sen's Poverty Index show how bad things are. They show that there are a lot of poor households (Head Count Ratio or HCR) and that they are in serious financial trouble (Income Gap Ratio or IGR). They also show that there is a lot of inequality among the poor population (Gini). The loss of traditional ways of making a living and the Irula's high vulnerability to bonded labor make this situation much worse, keeping them in a cycle of constant marginalization. Developmental initiatives must be comprehensive, emphasizing emancipation from servitude, securing land tenure, enhancing literacy, and fortifying public health services.

1.4 METHODOLOGY

The study utilized a multistage stratified random sampling technique to identify the participants. The study utilized a stringent, multi-stage sampling methodology to guarantee that the final sample accurately represented the Irula tribe community. The selecting process progressively progressed from the highest administrative level to individual households: Stage 1 was picking the Chengalpattu District, and Stage 2 was picking the Thiruporur Taluk. The next phases (Stages 3 and 4, indicated) were to find the exact Blocks (Thiruporur Block and Acharapakkam) and the last Villages in them, which was usually dependent on how many people lived there. The final sample size selected for in-depth analysis was 160 Irula tribe homes. The 160 families were selected from the Thiruporur Block and Acharapakkam Block in the Thiruporur taluk of Chengalpattu District.

1.5 Analysis of Data and Results

The present analysis concentrates on evaluating the severity of poverty among Irula middle-class families in the study area through the application of Sen's Poverty Index. The first measurement sets the poverty threshold at ₹2,068 per person for food (depending on the timing of the survey). The research using the Head Count Estimate indicated that 85% of the Irula tribes in the sample are below this poverty criterion. Out of the 160 Irula tribes in the sample, 133 are below the poverty level, and only 27 are above it. Table 1.1 shows this data, which is the basis for applying the Sen Index to compare the severity of poverty in the Thiruporur and Acharapakkam Blocks. The examination of the poverty conditions among the Irula tribes in Thiruporur and Acharapakkam Blocks indicates a significant incidence of poverty with slight geographical discrepancies.Overall Poverty Status: The most important thing to note is the high overall rate of poverty: [i] Below Poverty: 133 of the 160 Irula tribes, or 83.12% of the entire sample. [ii] over Poverty: Only 27 of the 160 Irula tribes, or 16.88% of the entire sample, were over the poverty line. Rates of Internal Poverty and Block Distribution: There are 80 tribes (50.00%) in each block, therefore the sample is evenly split between the two. But there is a small difference in the way their internal poverty is made up:

Table 1.1 Area wise classification of Irulas tribes as (i) above poverty and (ii) below poverty

Block	Total Tribes	Below Poverty (N / %)	Above Poverty (N / %)
Thiruporur	80	68 (85.00%)	12 (15.00%)
Acharapakkam	80	65 (81.25%)	15 (18.75%)

Source: Computed

The Thiruporur Block has a little more poverty than the Acharapakkam Block, with 85.00% of its Irula people living below the poverty level. The Acharapakkam Block has a little less poverty, with 81.25% of its people living below the poverty line. When you look at how the poor groups spread out among the blocks: The Below Poverty class is almost evenly split: 51.13% (68 individuals) live in Thiruporur and 48.87% (65 people) live in Acharapakkam. The Above Poverty category is greater in Acharapakkam Block, where there are 55.55% (15 people) among the total Irulas above poverty, whereas Thiruporur possesses 44.44% (12 people).

The data shows the members of the Irula tribes within the study's region are exceedingly poor, with over forty-five percent (83.12%) of the overall population surviving below the poverty line. Both blocks have a lot of poor people, however Acharapakkam Block possesses a little greater socio-economic profile. The country has a lesser internal rate of poverty (81.25%) as well as greater percentage and proportion of Irulas whose are not considered poor. Thiruporur Block, on the other side, has the greatest percentage of people living in poverty (85.00%). The results show how the Irula tribes need quick and particular help, especially the more vulnerable people in Thiruporur Block. The study further classifies the 133 Irula communities who reside less than the poverty line through categories depending on what amount they allocate on the food and other basic needs. The statistics suggests that things are pretty awful.

An astonishing 133% (perhaps a mistake for 100%) of the Irulas tribes that have already been identified as living below the poverty line are now considered destitute. The other 27% of the entire sample (the 27 tribes that were said to be "above poverty" in the last context) are split into the groups of extremely poor, poor, slightly poor, marginally better off, better off, and rich. Essentially, among the Irulas living below the poverty line, the most severe kind of deprivation (being destitute) is widespread.

Table 1.2 shows how poor the 160 Irula tribes are by breaking down their monthly spending into different groups. The acknowledged poverty line is ₹2,068, which is the level below which groups up to "Marginally poor" fall (as described in the prior context). This means that most people are below the poverty line. There are, 153 tribes are below the poverty line (destitute, very poor, poor, or marginally poor), Percentage Below Poverty is 95.62% of the sample as a whole. Only 7 tribes, or 4.38%, are considered to be better off, marginally better off, or rich. This shows that the Irula community that is being researched is not at all stable economically. The most important fact is that most people spend the least money: Poor Category, 133 tribes (spending between ₹500 and ₹1000). There are 83.12% of the total sample are bad. This means that not only are the Irula tribes poor, but more than four-fifths of the people are in the worst condition of deprivation, spending only ₹1000 or less a month. There are 153 tribes that live below the poverty line, although the distribution is quite uneven. The most severe groups garner the most attention. Most of the people in the poor population are very poor (133). There are only a few people who are Very Poor (9), Poor (7), or Marginally Poor (4). Table 1.2 shows that the Irula tribal

community in the sample is going through a really bad time with poverty. The results are very clear: the main economic reality for the Irula tribes is that they are very poor. An astounding 95.62% are officially below the poverty line, and 83.12% of the entire sample are living at the lowest level of spending (Destitute). This means that this community needs immediate, well-planned development and welfare measures to improve their fundamental consumption levels and economic well-being.

Table 1.2 Degree of poverty

Level of poverty	Consumption expenditure range (in Rs.)	Number of Irulas tribes
Destitute	500 – 1000	133
Very poor	1000 – 1500	9
Poor	1500 – 1900	7
Marginally poor	1900 – 2068	4
Marginally better off	2070 –2500	3
Better off	2500 – 3000	2
Rich	3000 – above	2
Total		160

Source: Computed

Intensity of poverty is a description of A. K. Sen's Poverty Index, which is a way to show how bad poverty is in a more sensitive way than just counting. There are three primary factors that go into calculating Sen's Index: [i] Head Count Ratio (HCR): This is the percentage of people living below the poverty level. It is easy to figure out, but it doesn't demonstrate how far below the line the impoverished people are. The Income Gap Ratio (IGR) fixes the HCR's problem by measuring the average income gap of the poor as a percentage of the poverty line. [3] Gini Concentration Ratio (G): This shows how unequal income is among the poor population itself. The HCR is shown to be a required but not enough measure; IGR and G must be included to get a true picture of how bad and deep poverty is.

the Head Count Ratio (HCR) $H = N_p/N \times 100$

Where: N_p = Number of people living below the poverty line

N = Total number of people

The Head Count Ratio (HCR) and the Income Gap Ratio (IGR) have problems when used alone. The Gini Concentration Ratio (G) is a third parameter that is needed to provide a full picture of poverty.

Income Gap Ratio tells you how much less money the poor make on average than the poverty line. A higher IGR means that poverty is more severe.

HCR reveals the occurrence of poverty, and IGR indicates its intensity; nevertheless, neither offers a complete representation. In particular, they overlook the aspect of relative poverty the disparity among the impoverished individuals.

Sen's Index of Poverty Index integrates all three parameters—HCR, IGR, and G—to make a full measure that takes into account how poverty is spread and gives a more complete picture of poverty than any one indicator alone.

The Income Gap Ratio (IGR) is $I = (1 – Y)/Z$.

Where: Y = The average income of the people

Z = income below the poverty line

Gini Coefficient of Concentration for Middle-Class Families (G)

Income distribution among middle-class groups

Sen.'s index of poverty is $S = HCR [IGR + (1-IGR) G]$.

S can be any number from 0 to 1.

The closer it is to 1, the worse the poverty.

The table 1.3 shows the parameters and final calculation of A. K. Sen's Poverty Index for the Irula tribes in the Thiruporur and Acharapakkam Blocks. This lets us compare how bad the poverty is. The Sen's Index value is the most complete measure since it combines the Head Count Ratio (prevalence), the Income Gap Ratio (depth), and the Gini Ratio (inequality among the poor). A higher Sen's Index means that poverty is worse.

Table 1.3 Sen's Poverty Index for the Irula tribes

Parameter	Thiruporur (T)	Acharapakkam (A)	Overall	Interpretation
Head Count Ratio (HCR)	0.789	0.628	0.731	Tiruporur has a higher prevalence of poverty (78.9% of the population is poor) than Acharapakkam (62.8%).
Income Gap Ratio (IGR)	0.626	0.776	0.724	Acharapakkam has a deeper intensity of poverty; the average income shortfall of the poor is 77.6% of the poverty line, much worse than Thiruporur (62.6%).

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| Gini Ratio (G) | 0.856 | 0.688 | 0.777 | Tiruporur shows greater income inequality among the poor (0.856) compared to Acharapakkam (0.688). |
| Sen's Index (P) | 0.719 | 0.632 | 0.683 | Tiruporur has the highest overall intensity of poverty. |

Source: Computed

1.6 CONCLUSION

The Overall Sen's Index of 0.683 shows that poverty is a big problem in both blocks. The Irula tribe is very poor in a complicated way, and the level of poverty is very different across the two blocks. Thiruporur Block (Sen's Index: 0.719) has the highest overall intensity. This is because there are a lot more poor households (HCR = 0.789) and the poor are the most unequal (Gini = 0.856). Acharapakkam Block (Sen's Index: 0.632) has a lower prevalence of poverty, but it is far worse off overall. This is shown by the greatest Income Gap Ratio (IGR = 0.776), which means that the poor here are, on average, the furthest below the poverty line. Because of how bad the structure is and how easy it is for people to be forced into bonded work, legislation needs to be both broad and specific: [i] Strictly enforce rules against bonded labor, give funds for rehabilitation that are tied to economic assets, and speed up the process of assigning land titles (patta). [ii] Livelihood: Move workers out of informal jobs by setting up cooperatives that value traditional skills (like ethno-botany), giving them vocational training with pay and job placement, and making sure they can go to formal financial institutions (like Jan Dhan and SHGs). [iii] Make residential bridge courses for education a top priority, send mobile medical units and nutrition programs to improve health, and speed up the building of safe pucca dwelling (PMAY). [iv] Use the Sen's Index, HCR, and IGR as key performance measures to make sure that resources go to the areas where poverty is most severe and long-lasting. Set up a Dedicated Irula Development Fund that is controlled by a Tribal Welfare Board including Irula representatives.

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