

Methodology for computing Human Poverty index at Village Level (A case study of Khamnor Panchayat Samiti of Rajsamand District, Rajasthan)

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Abstract

The main objective of this research paper is to develop models and methodology to compute Human Poverty Index (HPI) at village level which is the first work of its kind in India. HPI measures deprivations in three basic dimensions of human development viz. a long and healthy life, knowledge and a decent standard of living .

Introduction

Since 1990, United Nation Development Program (UNDP) has been bringing out Human Development Reports (HDRs) every year by adding additional criteria for measuring human progress and well-being of the people of various nations. In 1997, it introduced Human Poverty Index which is multi dimensional measure of human deprivation.

The Study Area

The study covers all the 190 villages of Khamnor panchayat samiti of Rajsamand district, Rajasthan (India) which are spread over 41 gram panchayats in the census year 2001.

Objectives

The main objective of this research work is to develop methodology and models for calculating gender empowerment measure at village level for rural India.

Hypothesis

The research is based on the hypothesis that gender empowerment measure at village level in rural Rajasthan as well as in India is not satisfactory and the index of deprivation (IOD) is still high. Therefore, the state/ country has to travel a long way.

Methodology

The construction of HPI is primarily based on United Nations Development Programme methodology. However, it has been modified wherever necessary, depending on the availability of data (Model 1 and Table 1). To construct the index, maximum (100%, worst) and minimum (0%, best) values have been established for HPI.

- Measuring deprivation in a long and healthy life- by percentage of population not having medical amenities
- Measuring deprivation in knowledge- by percentage of illiterate people
- Measuring deprivation in a decent standard of living by percentage of

population not having amenities of drinking water, power and pucca road respectively.

P₃: % age of population not having amenities of drinking water, power and pucca road respectively.

$$HPI = [1/3 (P_1 + P_2 + P_3)]^\alpha$$

Where:

P₁: %age of population not having medical amenities

P₂: % age of illiterate people

$\alpha = 3$

Limitations of the Methodology

It will be pertinent to mention here that the UNDP has used `life-expectancy at birth` for assessing the level of health status in human development index. Since data related to life-expectancy at village level is

Model 1 : Calculating Human Poverty Index

Dimension	Deprivation in a Long and Healthy Life		Deprivation in Knowledge		Deprivation in a Decent Standard of Living		
	↓			✓	↓		
Indicator	%age of Population not having Medical Amenities		Illiteracy Rate	%age of Population not having Amenities of			
				Drinking Water		Power	Pucca Road
				HPI			

Table 1 : Computing Human Poverty Index at Village Level (2001)

Village			P1	P2	Deprivation in a Decent Standard of Living			P3	
Name	Code in PS	Gram Panchayat	%age of Population not having Medical Amenities	Illiteracy Rate	%age of Population not having Drinking Water Amenities	%age of Population not having Power Amenities	%age of Population not Approached By Pucca Road	(+col. 3+4+5) / 3	HPI ®
					('000 Rs.)				
1	2	3	4	5	6	7	8	9	10
Bhoomaliyon Ka Gurha*	114	Nedach	100	80.4	0	100	100	66.7	
Delwara #	38	Delwara	0	25.2	0	0	0	0	

* Top Village, # Bottom Village, ® Difference in HPI value between Top and Bottom Village : **67.13 %**

Source : Compiled and calculated from "Primary Census Abstract" and "Village Directory" CDs (2001) released from the Directorate of Census Operations, Jaipur.

not calculated or estimated in Rajasthan as well as in India, HSI in the presented study is based on the available data at village level viz. medical and other related amenities^{1#}, sex-ratio and female literacy rate.

Source of Data

This study is based on secondary data, which are compiled and calculated from “Primary Census Abstract” and “Village Directory” CDs (2001) released from the Directorate of Census Operations, Jaipur.

Code Number of Villages

For coding of 190 villages, following three steps have been adopted :

- I Alphabetical coding of 41 gram panchayats that existed in the census year 2001.
- II Gram Panchayat-wise alphabetical coding of the respective villages.
- III Coding of villages in panchayat samiti.

References

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1. # having direct bearing on health status