

Some Dimensions of Vulnerability: A Study of the Urban Poor with Reference to Kolkata

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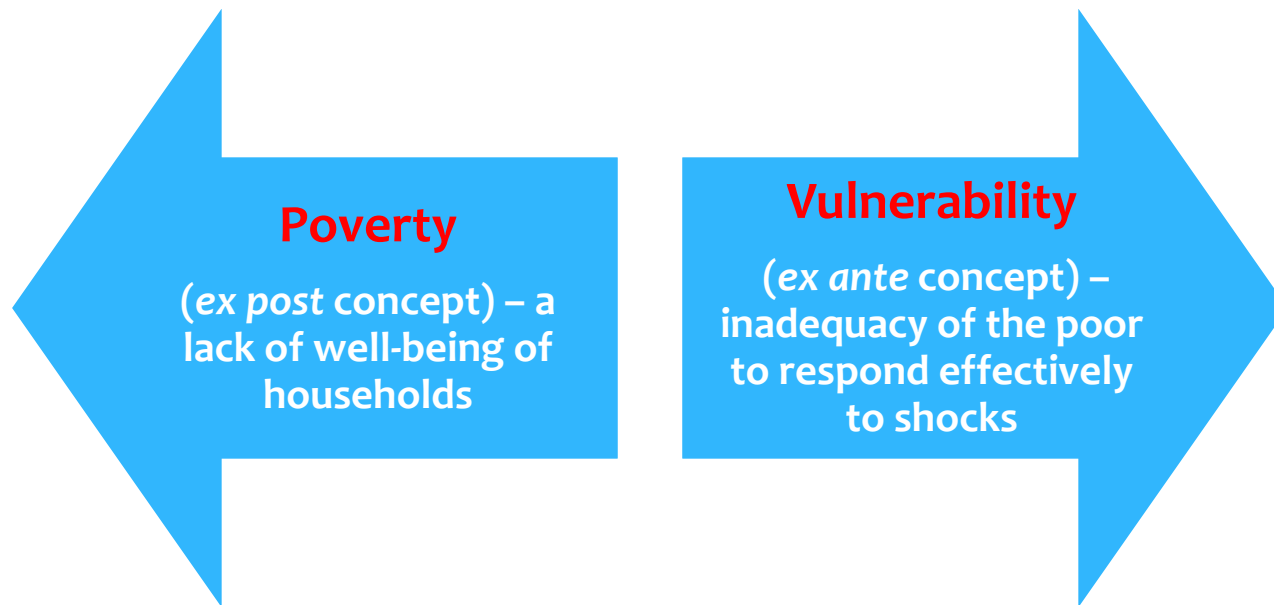
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Introduction

- ❑ **Rapid urbanization**

- ❑ **Urbanization of poverty**

- ❑ **Rural poverty Vs Urban poverty**
 - **Commoditization**
 - **Overcrowding**
 - **Low earnings**



Objective of the Study

This paper attempts an analysis of the vulnerability of the people living in slums in Kolkata.

The determinants of the degree of vulnerability of the sampled households

Data and Methodology

- ❖ The paper is based on a primary survey of 300 households (2010-11) in the slums of Kolkata.
- ❖ The vulnerabilities of the slum-dwellers are analyzed after constructing a **Vulnerability Index (VI)** using the technique of Principal Component Analysis.
- ❖ A multivariable linear regression model is estimated to look into the possible determinants of the degree of vulnerability of the sampled households.



Six wards of Kolkata Municipal Corporation was initially chosen.

- **The six wards are 1,2,6,28, 29 and 61.**



Pockets or locations where higher concentration of slums exist are located.

- **Two such slums from these pockets are identified for each of these wards.**



Households from these slums are randomly selected.

- **25 households from each of these slums are randomly selected for the purpose of data collection.**

Components of Vulnerability



Food Insecurity

- Number of food groups consumed
- Food Frequency



Health Insecurity

- Access to Sanitation
- Overcrowding
- Per capita monthly medical expenditure



Unemployment

- Unemployment Days

Food Insecurity

- **Number of food groups (nfg) consumed.**

Cereals

Roots and
tubers

Pulses

Fish and
eggs

Vegetables

Fruits

Meat

Snacks

Table 1: Frequency Distribution of Households by the Number of Food Groups Consumed

Food Groups	No. of households
Only Cereals	3 (1)
Cereals Plus Another Type	47 (15.67)
Cereals Plus Any Two Types	64 (21.33)
Cereals Plus Any Three Types	89 (29.67)
Cereals Plus Any Four Types	63 (21)
Cereals Plus Any Five Types	24 (8)
Cereals Plus Any Six Types	9 (3)
All Types	1 (0.33)
Total	300 (100)

Note: Figures in the brackets denote percentages

Source: Field Survey, 2010

Health Vulnerability

- The households' access to sanitation: 87% use toilets on a sharing basis.
- Pattern of room sharing: 86% of our sampled households have a single room where all members sleep.
- Per capita medical expenditure.

Table 2: Distribution of Households According to Per Capita Monthly Medical Expenditure

Per Capita Monthly Medical Expenditure (in Rs.)	No. of Households
Below 51	72 (24)
51-100	168 (56)
101-150	43 (14.33)
151-200	13 (4.33)
201-250	4 (1.33)
Total	300 (100)

Note: Figures in the brackets denote percentages

Source: Field Survey, 2010

Employment Insecurity

Table 3: Distribution of Households According to Per Worker Unemployment Days

Per Worker Unemployment Days Per Household	No. of Households
1-20	6 (2)
21-30	57 (19)
31-40	139 (46.33)
41-50	74 (24.67)
51-60	15 (5)
Above 60	9 (3)
Total	300 (100)

Note: Figures in the brackets denote percentages


Source: Field Survey, 2010

Table 5: Proportion of 'Poor' and 'Non-Poor' Households According to the VICLASS Classification

Poverty Status	Vulnerability Index Class (VICLASS)			Total
	Least Vulnerable	Moderately Vulnerable	Vulnerable	
Non-Poor	2.99	77.11	19.9	100
Poor	0	55.56	44.44	100
Total	2	70	28	100

Note: 'Least Vulnerable' implies households with $0 < VI \leq 0.25$, 'Moderately Vulnerable' implies households with $0.25 < VI \leq 0.5$, and 'Vulnerable' implies households with $0.5 < VI \leq 0.75$

Source: Field Survey, 2010



The main implication of these findings is that identifying and categorizing households just in terms of their income levels fails to capture the broader dimension of vulnerability embedded in their socio-spatial framework of existence.

DETERMINANTS OF THE DEGREE OF VULNERABILITY

MULTIPLE REGRESSION ANALYSIS

DEPENDENT VARIABLE

VI= Vulnerability Index

INDEPENDENT VARIABLES

AGE= The age of the household head

SEX= The sex of the household head (male=0 and female=1)

CASTE= The caste of the household (SC/ST=1 and others=0)

EDU= The average educational years of the members in the household

HSIZE= The number of members in the household

MIGSTAT= Migration Status of the household (yes=1, no=0)

ACTVPOP= Proportion of members in the household aged 15-64 years


ASSETS= Value of assets per capita for the household

MULTIVARIATE LINEAR REGRESSION RESULTS OF DETERMINANTS OF THE DEGREE OF VULNERABILITY

Dependent Variable: Vulnerability Index (VI)

Explanatory Variables	Estimated Coefficients	t-value
AGE	0.00102*	2.00
SEX	-0.000289	-0.02
CASTE	-0.0162***	-1.51
EDU	-0.00598*	-2.66
H SIZE	-0.00782*	-2.59
MIGSTAT	0.0305*	2.52
ACTVPOP	-0.0742*	-2.82
ASSETS	-0.000019***	-1.51
NO. OF OBSERVATIONS	300	
ADJUSTED R-SQUARED	0.1074	
F-STATISTICS	5.41*	

Note: * significant at 1%, ** significant at 5%, *** significant at 10%

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- * **The relation between CASTE and VI is found to be negative.**
 - * **The sign of the coefficient of SEX of the household head is negative.**
 - * **The AGE variable is significant along with the expected positive sign.**
 - * **The migratory status of the household (MIGSTAT) is positive.**
 - * **The coefficients of explanatory variables like HSIZE and MEM are negative and statistically significant.**
 - * **Also, on expected lines, the possession of more durable assets reduced the degree of vulnerability significantly.**

Policy Implications

- **The government should assess the levels of vulnerability of households and use that as a yardstick (instead of income alone) at the time of distribution of various benefits so as to avoid the ‘targeting error’.**

Policy Implications

- **The government should encourage the prospective migrants to stay back in rural areas with simultaneous expansion of employment opportunities in the non-farm sector.**



Thank
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