

The Role of Household Income and Public Provision of Social Services in Satisfaction of Basic Needs in Pakistan: A Cross District Analysis

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The Role of Household Income and Public Provision of Social Services in Satisfaction of Basic Needs in Pakistan: A Cross District Analysis

- **Issues**
- **Data**
- **Characteristics of Districts wrt capabilities, income poverty, public provision of social services etc**
- **Basic Need Policy Model**
- **Results**
- **Conclusion**

Issues

Pakistan is a Developing Country with 30 percent of its population below poverty line. The number doubled when we measure poverty in terms of capabilities or opportunities.

- In 1970 about 25 million people lived in income poverty. Over time this number has approached to 50 million
- Over the same period of time 42 million suffered from the poverty of basic human opportunities in health, education and material well being. This number approaches to around 70 million despite a large number of efforts to reduce poverty.

Capability Poverty Measure (CPM) (Poverty beyond Lack of Income)

- CP is a multidimensional concept of human deprivation. It is defined in terms of inability to meet certain basic human needs such as
 - Hunger
 - Ill health
 - Clothing
 - Lack of education, sanitation facilities, safe drinking water
 - Decent Housing

- These are necessary inputs to produce well nourished, healthy, and educated population, which has more opportunities and capable of earning more.

Issues

How we overcome this situation?

Basic need Approach is considered a direct route to raise the capabilities of poor.

The questions are:

- How basic needs be fulfilled through
 - increase in per capita income or
 - direct provision of social services?

- Are CD needed to lift poor from income poverty or vice versa?

Issues

- What is effective poverty reduction strategy.
 - Growth oriented policies
 - Direct provision of social services

Former emphasized by the World Bank and latter by the UNDP

Literature

- World Bank emphasizes on maximization of production.
 - Increase in income increase command over goods and services to buy basic needs.
 - Without growth development process cannot be sustainable.

Some studies give examples of South Korea and Srilanka

Literature

- UNDP emphasizes on public provision of social services. They consider it as a direct attack on human poverty.
- They argue that
 - people are not wise enough to spend their incremental income wisely.
 - growth oriented Policies benefits to few not all.
 - Education and health are inputs where government action is necessary, building schools, hospitals etc.
 - Public provision of social services can help to reduces bias against females in intra household allocation of resources.

Objective

1. Calculate Socio economic indicators using district level data. Indicators include: poverty, inequality, literacy rates and a number of indices for public provision of social services (health , education, water and sanitation facilities).
2. Develops a Basic Need Policy Model to test the argument that basic needs can better be fulfilled through
 - Growth or
 - Publics provision of Social services

Data

Data Sources

- **Pakistan Socio Economic Survey 1998-99.**
- **Pakistan Integrated Household Survey(PIHS)-
1998-99**
- **Census data –1998 and**
- **Mahmood (2003).**

Measurement of Capability Poverty and Income Poverty

■ Capability Poverty

1. Infant Mortality Rate (IMR) reflects satisfaction of at least four basic needs and is considered the best indicator to measure the capabilities development.
2. Literacy Rate: Accumulation of Knowledge

IMR and LR are bounded variables and become indeterminate after certain level. Linear transformation of these variables- $\log(\text{IMR}-5)$ for IMR and $(100-\text{LR})$ measure the proportionate gap between actual and desired level

Public Policy Indicators

Public Policy Indicators (PPI) reflects public investment at the district level

- **They are developed for education, health, water and sanitation facilities.**
- **These variables portray**
 - **Quantity and**
 - **Quality of public provision of social services**

Education and Health Facilities

- The number of Public primary schools in a district indicates quantity.

- Size of public investment in primary school relative to their needs indicates quality of education
 - School age population per school

- Public Provision of health facilities (PPH)
 - Population per health units and
 - Population per bed

Water and Sanitation Facilities

- Public Provision of water supply and sanitation facilities (PPWS): These indicators are constructed for
 - Availability of tap water (PPTW),
 - Availability of two types of sanitation facilities, covered (CSEW) and open (OSEW),
 - Availability of government services to collect garbage.
- A dummy variable “D” is defined as $D=1$ if facility exists in a district then weighted by the percentage of population using that facility.
- Indicators have been integrated to form a composite index by taking average of the PPTW, CSEW, OSEW, Gar.

Other Variables

- Income Poverty is defined on the basis of basic need poverty line.
- Income and Expenditure per Capita
- Gini Coefficient

Districts Achievement Level

The ranking of the district by achievement level show that some areas have achieved the level of developed countries but some areas lagged far behind. A comparison across the district shows

- Infant mortality rate (IMR) is 32 per thousand live births in Islamabad and 98 in Sargodha
- Literacy Rate is highest in Islamabad(91.3) and lowest in Layyah(20)

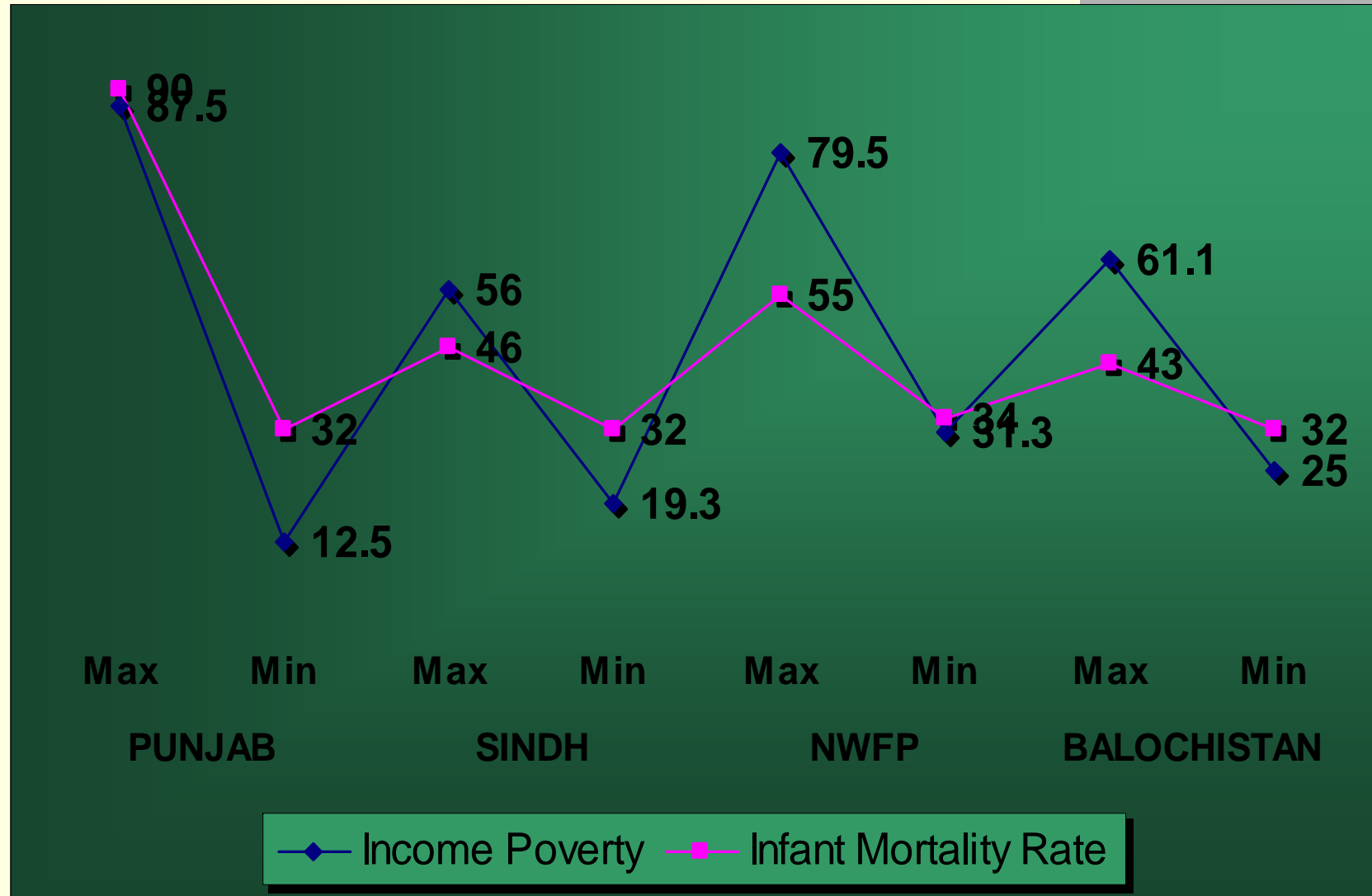
Characteristics of districts

- Highest Income Poverty is in Layya- 91 % population below poverty line
- Per capita income is highest in one district of Punjab and lowest in NWFP.
- Higher Income Inequality in Punjab, i.e., 0.6.
- Large disparity in the area of health is in Sindh and NWFP
- Tap water, garbage collection and sanitation facilities is lowest in Balochistan.

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- High disparity in literacy rate occurs in Sindh.
 - Inequality in public provision of water and sanitation facilities is higher in two provinces Balochistan and Sindh

These statistics reveal region specific needs to develop region specific poverty reduction strategy.

Capability Poverty vs Income Poverty



Basic NEED Policy Model

First it is assumed that income is enough to reduce CP

$$\text{Log}(Bi) = \alpha + \beta \text{Log}(Y_{HPCi})$$

Yhpc = Household per capita income

B = (IMR (actual) - Desired Level) and (100 - LR(actual)),

...Model

- Second equation assume that social outcome can only be improved significantly if income poverty is reduced.

$$\text{Log}(Bi) = \alpha + \beta \text{Log}(Y_{HPCi}) + \gamma \text{Log}(POV_i)$$

- Inequality

$$\text{Log}(Bi) = \alpha + \beta \text{Log}(Y_{HPCi}) + \delta GINI$$

- Income or Public Services

$$\text{Log}(Bi) = \alpha_i + \beta_1 \text{Log}(Y_{HPCi}) + \beta_{4i} \sum \text{Log}(PPI_j)$$

...Model

- Growth is not redundant.
Constraint on public provision of social services is lack of resources

$$\text{Log}(PPI_{ik}) = C_0 + C_1 \text{Log}(Y_{HPC})$$

- Capability development and reduction in income poverty (Means or ends)

$$\text{Log}(POV_i) = P_0 + P_1 \text{Log}Y_{HPC_i} + P_2 \text{Log}(IMR_i - 5)$$

$$\text{Log}(IMR - 5) = \alpha + \beta \text{Log}(Y_{HPC_i}) + \gamma \text{Log}(POV_i)$$

Results of 'Basic Need Policy Model'

| Variables | Ln(IMR-5) Equation 1 | Ln(IMR-5) Equation 2 | Ln(IMR-5) Equation 3 | Ln(IMR-5) Equation 4 | Ln(100-LR) Equation 6 | Ln(100-LR) Equation 7 | Ln(Population/Health Unit) Equation 8 | Ln(No of Primary Schools) Equation 9 | Ln(POV) Equation 10 |
|---------------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|---------------------------------------|--------------------------------------|---------------------|
| Constant | 9.51 (5.01) | 0.22 (0.11) | -5.08 (0.48) | 3.80 (4.07) | 21.32 (4.81) | 6.2 (4.89) | 42.4 (4.32) | -7.92 (2.11) | 6.50 (7.71) |
| Ln(Y _{HPC}) | -0.62 (2.90) | 0.14 (0.98) | 0.58 (0.66) | -0.07 (-0.71) | -1.95 (4.44) | -0.09 (0.59) | -3.64 (3.33) | 1.49 (3.56) | -0.4 (5.09) |
| Ln(Pov) | | 0.61 (3.07) | 0.72 (1.10) | | | | | | |
| Ln(No of Primary Schools) | | | | | | -0.49 (3.79) | | | |
| Ln(POP/ School) | | | | | | -0.22 (3.0) | | | |
| Ln(POP/ Health Unit) | | | 0.08 (2.35) | 0.07 (2.22) | | | | | |
| CSEWI | | | | -0.004 (2.26) | | | | | |
| Ln(Female Literacy Rate) | | | | -0.04 (0.76) | | | | | |
| Ln (IMR-5) | | | | | | 0.20 (1.4) | | | 0.33 (3.63) |
| Ln(Mothers Education) | | | | | | | | | -0.19 (3.14) |

Conclusion

- The descriptive analysis identifies region specific reasons of low/high human development.
 - Islamabad-very developed
 - Layya-very poor
 - Punjab is the region with higher income inequality.
 - High disparity in Education in Sindh.
 - Higher Inequality in Public Provision of Health Services in NWFP.
 - Higher Inequality in public provision of water and sanitation facilities in two provinces Balochistan and Sindh
- These statistics reveal region specific needs to develop region specific poverty reduction strategy.
- Reallocation of Resources would help to reduce regional disparity. The resources can be transferred from rich to the poor through efficient tax system.

Conclusion

- The results of basic need model are consistent with the view that Public provision of social services affects human capabilities significantly.
- Without PPSS Capability Development will be slow and Poverty will grow.
- Capability development is means to reduce income poverty
- The constraints on the sustainable capability development are of material resources.
- Thus income is necessary but not sufficient condition for human development.
- We should focus on the policies to improve public provision of social²⁵ service.



Thank You