Rural and Urban Poverty

A Spatial Perspective

Dr. Kumar Aniket

University College London

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Motivation

Poverty Rate
25% in rural areas
27% poor
Small Villages pop: 0-4999

Poverty Rate
14% in urban areas
19% poor
Big Villages pop: 5000+

17% poor
Small Towns pop: 0-1mn

6% poor
Big Cities pop: 1mn+
Motivation

The 7 low-income states house 62% of India's poor. The low-income states are home to 45% of India's population. 80% of India's poor live in rural areas.

Number of poor in low-income states (Millions):
- Uttar Pradesh: 60
- Madhya Pradesh: 24
- Bihar: 36
- Rajasthan: 10
- Jharkhand: 13
- Chhattisgarh: 10
- Odisha: 14
INTERPRETING THE NUMBERS

Relative poverty versus absolute poverty?

What do we interpret these numbers?

<table>
<thead>
<tr>
<th>Probability</th>
<th>Deterministic</th>
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<td>Transitional component</td>
<td>Stable Component</td>
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How sensitive is poverty to economic growth?

Is there a notion of entrenched poverty in India?
Introduction

Outline

Space

Poverty

Economic Growth

Local Fiscal Loop
“The present epoch will perhaps be above all the epoch of space.

We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed.”

– Foucault 1986
“Place is simply there, while space is produced or invented.”

– Conley 2012

Lefebvre (1974) examines the spaces that those in power impose on the people who live in them and the alternative spaces these people can invent through the act of resistance to overcome alienation.
“Place is simply there, while space is produced or invented.”
– Conley 2012

A *place* is located at a point, whereas *space* is the relationship between two places.

**Human Experiential Space:** space as humans experience it

**Role of fiscal policy** in shaping space

*Prison, electrified railway lines, highways, expressways*
"Google cars don’t drive on road, they drive on maps …”
– saying in machine learning community
Automated Surfaces

Automated surfaces

folds space

alienates neighbours

Rivers, Canals, Railways, Roads, Airports

Lefebvre (1974) examines the spaces that those in power impose on the people who live in them and the alternative spaces these people can invent through the act of resistance to overcome alienation.
Lefebvre and Automated Surfaces

Lefebvre (1974) examines the spaces that those in power impose on the people who live in them and the alternative spaces these people can invent through the act of resistance to overcome alienation.

Automated surfaces provide freedom of movement at cost of some restriction placed upon people and people outside

Restriction: self-imposed social rules and externally enforced rules E.g. Queuing

Human experiential space influences and is influenced by the range of social rules that exist within it
Automated Surfaces

Automated surfaces naturally lead to congestion

Formal (de jure) rules

Informal (de facto) rules

Social rules prevailing in an automated surface share and are shaped by the nature of congestion

Urban landscape is a jumble of capital-intensive automated surfaces and resultant social rules
London Millennium Footbridge

Designed to vibrate like a old wooden bridge

Turned into a bridge that *swayed beyond control*

“*pedestrian synchronous lateral excitation*” effect or

“*pedestrian lock-in*” effect.

Coordinating device that *synchronised* pedestrians’ footsteps

Compare the *Millennium bridge* to the *simple rope bridge*
Compare the *Millennium bridge* to the *simple rope bridge*
Kerala fish market on 14 January 1997

**Water bodies**

*Water bodies as natural automated surfaces*

Crucial to development of markets in *early urban agglomerations*

- Varanasi
- Venice
- Suez Canal
- Erie Canal

Large parts of India are *landlocked* with very little *access to automated surfaces*
Opened on October 26, 1825
it ran 584 km from Hudson River to Lake Erie
It was faster than carts pulled by draft animals and cut transport costs by about 95%
# Railway Network Size

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Pointillism

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**India’s Accidental Growth**

![Growth Rate of GDP at factor costs chart](image-url)
India’s Accidental Growth
Output gets transformed into private capital through the saving channel
**Augmented Solow Growth Model**

*Output also gets transformed into *infrastructure* through *fiscal channel*.*
Complementarity and Substitutability


O-ring production and the Challenger disaster:
complementarities between factors
chair with three legs

Are congestible public goods and private capital investment substitutes or complements?
POVERTY TRAP: NUTRITIONAL PATHWAY
Poverty Trap: Multiple Pathways

- Infrastructure
- Automated surfaces
- Public capital
- Local market
- Banking
- Education
- Under-nourishment
- Poverty
HIGH POVERTY RATE IN THE 1960s

- Kerala
- Tamil Nadu
- Maharashtra
- Bihar

Poverty rate in rural areas (%)   Poverty rate in urban areas (%)
**Medium Poverty Rate in the 1960s**

- **Andhra Pradesh**
- **Gujarat**
- **Odisha**
- **Uttar Pradesh**

Poverty rate in rural areas (%) - ○
Poverty rate in urban areas (%) - ●
**MEDIUM POVERTY RATE IN THE 1960s**

- **Madhya Pradesh**
  - Poverty rate in rural areas (%)
  - Poverty rate in urban areas (%)

- **Karnataka**

- **Rajasthan**

- **West Bengal**
  - Poverty rate in rural areas (%)
  - Poverty rate in urban areas (%)
Low Poverty Rate in the 1960s
Impact of the Golden Quadrilateral


Impact of being on the path of the Golden Quadrilateral (GQ)

Account for endogeneity by excluding urban areas

Districts that are 0–10 kilometres from the GQ:
Output grew by 49% in decade after construction began

Districts that are 10–50 kilometres from the GQ:
No growth in output

1969 bank nationalisation programme

Banks opened in previously unbanked rural areas

Paper account for endogeneity using a clever instrument

increased savings mobilisation, credit provision in rural areas and reduced poverty where banks were opened
Social equilibrium between automated surfaces and social rules create boundaries

Urban landscapes large automated surface islands with a distinct boundary

Rural areas are islands with limited infrastructure with tenuous links to the rest of the society

Exception: states with rural urban continuum, Kerala and Goa

Understanding growth in various distinct spaces and how they are interlinked
What kind of *spatial relationship* would India like to see between its urban areas and rural areas?

*Rural urban continuum* or

*Large inter-linked urban agglomerations*

and hoping for some *trickle-down effect*

*Hirschman and Rothschild (1973)* tunnel parable.

We require more studies that looks at the myriad impact of fiscal policy on human experiential space