Urbanization and Economic Development

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Abstract theory of catch-up growth

- Technology already exists in rest of the world
- Using it to produce better standards of living involves complementarity between domestic private goods and public goods
- The fundamental constraint lies in the limited capacity of the state to provide the public goods
Setting Priorities

- Given the inevitable capacity constraints, it is not helpful to list all the things that a government “should” do, as in the MDGs.
- The relevant questions are: What is most important to do today versus what can it do later when it has more capacity?
Is \( x \) a high priority public good?

I. Does a plausible theory justify an important role for public good \( x \) in raising GDP per capita (\( y \))? 

II. In the data, do \( x \) and \( y \) vary together? 

III. Are there feasible policies that can increase \( x \)? 

IV. Does (at least) some causation run from \( x \) to \( y \)? 

If \( x \) fails I, II, or III, it’s not a promising candidate for speeding up growth. It may not be worth even trying to answer question IV.
THREE CANDIDATE TYPES OF PUBLIC GOODS

- Health
- Education
- Urbanization
We have seen relatively more progress in health; e.g. more convergence in health than in market income. This could be partly because nonstate entities can provide relevant public, e.g. vaccines. These are a natural opportunity for external participation. However better health might not increase capacity of the state; nonstate provision might even undermine it. Nothing more to say about presentation about health in the rest of this presentation.
I. Theory: Human Capital and Urbanization

Urbanization

Public spending: infrastructure

Private spending: housing

GDP growth

Human capital

Structural Transformation

Formal sector employment and experience
EDUCATION AS LEVER?

- Urbanization
  - Structural Transformation
    - Formal sector employment and experience
      - Human capital
        - Education
  - Public spending: infrastructure
    - GDP growth
  - Private spending: housing
    - Education
Long lag between better schools and more $H$

Suppose people work for 50 years. Start at $t = 0$ with workforce with human capital $H = 1$ for all ages. Compare two possible effects from public goods: a) $H$ of school leavers starts increasing by 5% per year or b) workers start acquiring an additional 5% of H for each year of experience on the job:
? STRUCTURAL TRANS \( \Rightarrow \) FORMAL SECTOR JOBS \( \Rightarrow \) HUMAN CAPITAL

- Urbanization
- Public spending: infrastructure
- Private spending: housing
- GDP growth
- Formal sector employment and experience
- Human capital

Structural Transformation
Employment Share 1800-2000
Employment Share 1800-2000

Manufacturing

Log of GDP per capita (1990 international $)

Share in total employment

Belgium, Spain, Finland, France, Japan, Korea, Netherlands, Sweden, United Kingdom, United States
Employment Share 1800-2000

![Graph showing the relationship between Log of GDP per capita (1990 international $) and Share in total employment. The graph includes data points for various countries, such as Belgium, Spain, Finland, France, Japan, Korea, Netherlands, Sweden, United Kingdom, and United States.]
Structural transformation depends on urbanization

- One problem with agriculture, particularly by small holders, is that it may not generate as much $H$ via experience
- Formal sector jobs in manufacturing and services are more productive in an urban area
- Workers are more likely to be matched with a more educated manager in an urban area
- Complementary inputs provided by the rest of the world (e.g. via DFI) are more likely to be present in an urban area
Types of $H$ acquired via experience

”Non-cognitive human capital”
- Punctuality
- Reliability
- Adherence to strict quality standards
- Team work

In most countries, formal sector employment may be better at developing these skills that the school system
Hence, encourage urbanization.
II. Do urbanization and income vary together?

1. Historical Examples of increases of $x$ and $y$ by large factors?
2. Post WWII data - correlated in the cross section?
3. Post WWII data - correlated in changes over time?
4. Coincident change in rate of growth of $x$ and $y$?
II.1: Historical Cases

Looking over a century or more, do countries that have successfully raised GDP per capita experience a parallel increase in urbanization? Yes of course.
II.1: Historical case - London 1800
II.1: Historical case - London 2000
II.2 and II.3: Correlation of $x$ and $y$ between countries and over time?

In the post WWII sample, do we see cross-sectional and time series correlation between urbanization and GDP per capita? Yes.
Urban Share and GDP per capita

The scatter plot illustrates the relationship between urban share of the population and GDP per capita. The data points are scattered across the graph, with urban share on the x-axis and GDP per capita on the y-axis. Two key years are highlighted: 1955 and 2010. The data shows a positive correlation, indicating that as the urban share of the population increases, GDP per capita also tends to increase.

Key Observations:
- The urban share and GDP per capita are positively correlated.
- The data points are spread across various GDP per capita levels, suggesting a range of economic performances associated with different urban shares.
- The trend line indicates a clear upward trend, especially from 1955 to 2010, suggesting economic growth in countries with increasing urbanization.

Further analysis would require examining the specific data points and their underlying policies and economic conditions.
Add India and Brazil

GDP per capita

$60,000

$22,000

$8,100

$3,000

$700

Urban Share of Population

Logarithm of GDP per capita

Brazil

US

India

$22,000

$700

$60,000

$8,100

$3,000
Add China
Add South Korea (ROK)
Aside: Interaction Effects

- The slope of the relationship between $u$ and $y$ is varies a lot between countries
- Suggests that it is $u \times z$ that might encourage growth, not $u$
- Labor market policy is a likely candidate for $z$
- Jedwab also points to evidence that ”unsuccessful urbanization” is common and perhaps becoming more common
- Even if it is $u \times z$ that matters for growth rather than $u$ alone, attention to $u$ may be the highest priority because it is so difficult to change once development takes place
II.4 Coincident Changes

Are there cases in which a big change in the rate of growth of urbanization coincides with a big change in the rate of growth of GDP per capita? Yes.

In China, after reform in 1980:

- the rate of increase of the urban population share increased from 0.2% per year to 1%
- the rate of growth of GDP per capita increased from 2.5% per year to 6% per year

GDP per capita

Change in
ü = 0.2% p.a.
g = 2.5% p.a.

Change in
ü = 1% p.a.
g = 6% p.a.

u - Urban share of population
III. Can anyone increase the pace and quality of urbanization?

- Built urban area differs from a good like restaurant meals.
  - Governments can let the market supply restaurant meals.
  - If regulation is required for health reasons, it can be added later.

- Collective action is required first to get the public space that allows urban mobility and interconnection
  - The market does not supply it
  - Once urban development takes place, almost impossible to increase or reconfigure public space
Public space for mobility

The 1811 Commissioner’s plan for New York City set aside 32% of the land in midtown Manhattan for surface mobility. A 1 km line on 42nd Street is bisected by many avenues that a bus can go down.
Public space for mobility

In parts of Bangkok that developed in an uncoordinated, "atomistic" fashion, there are regions where a comparable 1 km line is not bisected by a single road that a bus can travel.

New York

Bangkok
Once urban development takes place and some division of land into public space and private space is established, it almost never is changed.

- It is unlikely that the real estate interests that backed Haussman’s additions to public space in Paris in the 19th century will ever again have the political power to tear down buildings and redraw property lines.
- Because of political opposition, Hausmann himself was fired.
Wall Street was build before the 1811 plan for NYC
Today, the street synonymous with capitalism still has no room for a bus or pedestrians.
Streets in midtown are wider because of the 1811 plan.
A bus on 42nd Street
Pedestryans on 5th Ave
Other Grids

Establishing a grid is easy

If someone puts “stakes in the ground” before development takes place, this is enough to coordinate private activity

One surveyor and (at most) three commissioners drew the 1811 grid for Manhattan

The surveyor and a few helpers then staked all the intersections

In a few cases, nonstate actors provide the stakes in the ground
El Carmen squatter settlement, Peru
Burning Man Camp
What about causality and other causal factors?

- Causality almost surely goes both ways: $u \leftrightarrow y$
- Worst case, $y \rightarrow u$ and planning for a grid allows more functional urban development even if it does not increase the rate of growth of $y$
- More likely, better and faster urbanization does also encourage faster growth
- Defining public space is easy and inexpensive
- It is arguably the highest priority in the developing world today
- Other policies, e.g. to encourage formal sector employment, can be adopted later
Recap

I. Does a plausible theory justify a big role for urbanization in raising GDP per capita? Yes, provided formal sector employment is also tolerated or encouraged

II. In the data, do urbanization and GDP per capita vary together? Yes

III. Can the government or some form of collective action facilitate urbanization? Yes. In fact, some kind of prior action is essential for successful urbanization.