ECONOMIC GEOGRAPHY: LOOKING BACK, SEEING AHEAD

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Duke University and the World Bank
World Bank: March 25, 2019
ECONOMIC GEOGRAPHY SINCE 2009

• The Revenge of Markets
  • Urbanization in India and Africa
• The Revenge of the Regions
  • Territorial development in Europe and the US
• The Revenge of the Colonies
  • International integration in East and Central Asia led by China
THE THREE BIG CHANGES SINCE 2009

• Agglomeration
  • Urbanization appears to be going awry in the world’s least developed regions

• Migration
  • Divergent territorial development is fueling resistance to people from other places

• Specialization
  • International integration is happening through connective infrastructure instead of common institutions
LOOKING BACK

01
Agglomeration and Urbanization

02
Migration and Territorial Development

03
Specialization and International Integration
FIRST BIG CHANGE SINCE 2009

• Agglomeration
  • Urbanization appears to be going awry in Africa
  • Migration
    • Territorial development and growing resistance to people from other places
  • Specialization
    • International integration through connective infrastructure instead of common institutions
URBANIZATION WITHOUT AGGLOMERATION IN AFRICA, THE LINK BETWEEN THE GROWTH OF CITIES AND ECONOMIC DEVELOPMENT HAS BEEN WEAK.
Almost one-third of the urban population lives in towns with fewer than 50,000 people

Source: Calculations based on census data from citypopulation.de.
Note: Based on data for 39 countries in Sub-Saharan Africa for which censuses were available after 2004, excluding therefore Angola, Central African Republic, Comoros, Equatorial Guinea, Eritrea, Nigeria, Somalia, and Swaziland.
Land is being developed in small & disconnected fragments: People are disconnected from other people and from jobs.
Rapid urbanization and unmanaged growth tend to generate unsustainable land use, which is nearly impossible to change after a city grows.

Misallocation of 1000 acres of land near city center costs (4 km from downtown)

$1 billion (land value differential) or

$200 per person in greater Nairobi or

70% of Kenya’s GDP per capita in 2014

Source: Modified from Henderson, Regan and Venables, 2016
Congestion without agglomeration

Note: $\mu g/m^3 = \text{microgram per cubic meter.}$
SECOND BIG CHANGE SINCE 2009

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  • International integration through connective infrastructure instead of common institutions
Territorial inequality across the world (Second Theil Index, 2012)

Source: Andres Rodriguez Pose
AND SEEMS TO BE ON THE RISE

Changes in regional disparities in developing countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Spatial units</th>
<th>Period</th>
<th>Initial</th>
<th>Final</th>
<th>Average</th>
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<tbody>
<tr>
<td>Argentina</td>
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<td>1992-2006</td>
<td>0.040</td>
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<td>Bolívia</td>
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<td>India</td>
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<td>0.090</td>
<td>0.074</td>
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<td>Mexico</td>
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<td>Peru</td>
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<td>Philippines</td>
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<td>2005-2006</td>
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<tr>
<td>Poland</td>
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<tr>
<td>Romania</td>
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<td>1990-2006</td>
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<tr>
<td>South Africa</td>
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<td>0.439</td>
<td>0.473</td>
<td>0.439</td>
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<tr>
<td>Turkey</td>
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<td>1990-2001</td>
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<tr>
<td>Venezuela</td>
<td>23</td>
<td>1990-2006</td>
<td>0.006</td>
<td>0.028</td>
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</tbody>
</table>

Notes: Spatial inequality is measured using Theil's index. Source: Ezcurra and Rodríguez-Pose, 2013
Differences in consumption across sub national regions in MENA contribute 63% more to total inequality than elsewhere in the world.

Spatial inequalities can be attributed to differences in endowments and returns to endowments.

Most MENA countries are not fully leveraging the most potent vehicle to enhance returns from endowments - migration.

On average, 14 percent of households have moved from their place of birth in the Middle East and North Africa, compared to 28 percent elsewhere.

Sources: Arab Barometer Wave 4 (2016) and IPUMS International.
MENA governments have focused on national convergence

With new economic poles and new cities that have had limited impact

Why? Focus has been on equalizing endowments, not on enhancing their returns
THIRD BIG CHANGE SINCE 2009

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  • Territorial development and growing resistance to people from other places

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  • International integration through connective infrastructure instead of common institutions
CHINA’S OVERSEAS PROJECTS
(AIDDATA, 2019)
The Belt and Road Initiative
• World Bank study on the Belt and Road Initiative (BRI)
  • 71 economies located along the Belt and Road
    • BRI economies account for over 30% of global GDP, 60% of population, 40% of world trade
  • Connectivity gaps in BRI economies
    • Economic effects of the BRI transportation infrastructure
    • Complementary policies and institutions

• Spatial adjustments to external integration
  • Significant potential for welfare gains and reshaping economic geography …
  • .. If BRI economies implement complementary domestic policies and investments that:
    • Support trade facilitation
    • Leverage agglomeration economies through territorial development policies
## Direct impacts of transport cost decline on real incomes

<table>
<thead>
<tr>
<th>Countries</th>
<th>A -Infrastructure</th>
<th>B -Trade facilitation</th>
<th>C -Trade facilitation and Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>China-3</td>
<td>1.2%</td>
<td>1.8%</td>
<td>2.6%</td>
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<tr>
<td>Kazakhstan</td>
<td>1.9%</td>
<td>4.3%</td>
<td>5.9%</td>
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<tr>
<td>Kyrgyzstan</td>
<td>1.6%</td>
<td>3.4%</td>
<td>4.6%</td>
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<tr>
<td>Pakistan</td>
<td>1.5%</td>
<td>1.5%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>1.6%</td>
<td>2.2%</td>
<td>3.5%</td>
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<tr>
<td>Turkmenistan</td>
<td>0.4%</td>
<td>4.4%</td>
<td>4.7%</td>
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<tr>
<td>Uzbekistan</td>
<td>0.7%</td>
<td>2.8%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Aggregate</td>
<td>1.4%</td>
<td>2.3%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Source: Bird, Lebrand and Venables 2018
NEW TRANSPORT HUBS IN THE WEST OF CHINA

New hubs:
1. Khorgos-Urumqi
2. Kashgar
COMPLEMENTARY BORDER REFORMS ENHANCE SPATIALLY DIFFERENTIATED IMPACTS

- Uzbekistan (a double land locked country): Average income gains across districts increased from 0.08% to 9%

- Kyrgyz Republic: Average income gains across districts rises from 5.1%, to 9.7%

- Magnitude of impacts depend on what cities do
  - Is there scope for a manufacturing response?
    - Yes:
      - decline in trade costs is principally with regional partners, not the rest of world.
      - Economies of scale from concentration of manufacturing drives the spatially concentrated gains
      - Such places will attract more workers
      - Western China, Pakistan, and Kyrgyzstan.
  - No: places with comparative advantage in primary products benefit more

Source: Bird, Lebrand and Venables 2018
Analysis of gains from individual projects reveals two lessons

1. **Approximately half of the projects are expected to generate near zero (land) value**, because they do not create new least cost paths between large populations centers
   - Hambantota (Sri Lanka) and Gwadar (Pakistan) ports are redundant to existing ports in these countries, not creating new links
   - Khorgos-Aktau railway reduces trade costs, but not near to any large markets
   - The gravity model predicts that reductions in trade costs are most valuable when trade costs are already low (i.e. between two nearby cities)

2. Some projects are be creating redundancy rather than filling in key infrastructure gaps
   - Dhaka-Bongaon rail (BGD, IND) could be made redundant by Kunming-Calcutta HSR
   - The same is true for the Kalay-Tamu-Jiribam rail (MNR, IND)

**SOURCE:** Reed, Tristan and Alexandr Trubetskoy (2018)
ENVIRONMENT RISKS

- Ecosystem – e.g., habitat and ecosystem services losses, fragmentation, edge effects
- Wildlife – e.g., collisions, migration barriers, illegal trafficking
- Habitat & environmental service losses, via Land Use response

Source: Geopolitical Monitor; Losos, Pfaff et al 2018
SESSION ON FORESIGHT

01 Redefining Density Technology
02 Intervening to reduce Distance Place based policies
03 Institutions to complement infrastructure that reduces Division Environment