Ancestral Barriers and the Spread of Development

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Deeply-rooted Factors and the Scope for Policy

• Strong correlations between deep historical factors and the level of development, e.g.:
  - Pre-colonial traits and institutions
  - The legacy of colonialism

• If the past casts a long shadow on current outcomes, can contemporary societies escape from the straightjacket of history?

• These correlations are usually interpreted as involving direct effects: you either have a trait associated with development, or you don’t

• This can lead to a form of historical determinism that reduces the scope for policy
A More Hopeful Mechanism: (Temporary) Barriers to the Diffusion of Knowledge

• In this presentation, a different emphasis: long-term history affects *barriers* between populations.
• The more divergent the historical paths of different populations, the greater the barriers.
• The greater the ancestral barriers, the more difficult it is for novel technologies, institutions and behaviors to spread.
• While barriers are deeply-rooted, *their effect is not permanent and immutable*. 
Outline

• Measuring Ancestral barriers
• Three examples:
  – Spread of Technologies
  – Spread of Institutions
  – Spread of New Fertility Behaviors
• Implications for Policy
Measuring Ancestral Barriers

• How can we measure historical separation among populations to capture ancestral barriers?
  - Genetic distance
  - Linguistic distance
  - Cultural distance
• All three classes of measures involve traits transmitted across generations
• All three are positively correlated
• But they are different due to different drift rates, different degrees of horizontal transmission and different functional forms
Genealogical Tree of Human Populations
Three Examples

- Technology: The diffusion of the Industrial Revolution from England
  - Genetic distance relative to the frontier predicts the timing of adoption

- Institutions: The diffusion of democracy during the Third Wave
  - Genetic distance relative to the United States predicts the timing of adoption

- Behaviors: The diffusion of the fertility transition in 19th century Europe
  - Linguistic distance to French predicts the timing of the behavioral change.
The Diffusion of the Industrial Revolution

Figure 1 – Standardized effect of genetic distance relative to the UK on bilateral differences in per capita income over time, 1820–2005 (source: Spolaore and Wacziarg 2014a).
The Diffusion of Democracy

Figure 2 – Standardized effect of genetic distance relative to the USA on bilateral differences in Polity 2 Democracy scores, 1960–2005 (source: Spolaore and Wacziarg, 2016b).
The Diffusion of the Fertility Transition

Figure 3 – Standardized effect of linguistic distance to French on marital fertility through time, in overlapping samples of 30 years centered on the date displayed in the x-axis. The sample is a balanced sample of 519 European regions (source: Spolaore and Wacziarg, 2014b).
Lessons

- Long term historical barriers to the innovation frontier are predictive of a wide range of outcomes.
- The effect is maximized in the immediate aftermath of the innovation.
- The effect thereafter declines, signaling the diffusion of the innovation to societies at increasing distances from the frontier.
- It is not the historical barrier itself that changes, but its effect on the outcome of interest.
Policies

• Innovations carried through international interactions (trade, FDI)
• Innovations carried through diasporas and population movements
• Lowering ancestral barriers does not necessarily involve a loss of cultural diversity (on the contrary)
• But it may involve a reduction in the degree of association between culture and ethnolinguistic origin/identity
• It can be done in an enlightened way (multilingualism, educational standards, translation)
Global Migration of Talent
GEM 2017

Sari Pekkala Kerr
Wellesley College & MIT
Patterns of high-skilled migration

- Rapid & increasing pace
- Increasing importance of women
- From a broadening set of source countries
- High concentration
  - Destination countries
  - Top skill level (Nobel Prize winners, top scientists & inventors)
  - Geography within destination
  - Top universities & firms
Main findings

- Exceptionally talented people migrate much more frequently than the general population
- The US receives an exceptionally large share of these inflows, and its “trade balance” for talent flows is very lopsided
- Big immigration destination countries are heavily dependent on migrants for their skill development
- Growth in the migration of talent to a country closely timed with that location’s growth in overall leadership
A handful of countries receive the bulk of high-skilled migrants.
Small countries lose a lot of human capital in this process.
High-skilled migrants move much further than low-skilled migrants
Specific lessons for the U.S.

- Immigrants account for a large share of United States’ accumulated talent, growing in the quality level of the contribution
  - Vast regional differences in high-skill immigrant concentration
  - Agglomeration effects are a major driver
- Competition for global talent is intensifying and attracting migrants in the top skill groups is becoming harder
- Immigration policy matters greatly...
Figure 4: Distribution of High-Skilled Migrants in USA, 2010
H-1B Problems?
Pivot to Canada
New Start-Up Visa
Low Taxes
immigration.gc.ca/startup
LEARNING FROM MIGRANTS

Ljubica Nedelkoska, CID at Harvard University
Presenting the work of many
GEM, April 19, 2017
Knowhow diffuses through human mobility

- **Tacit knowledge.** Industry-specific knowhow diffuses only with great difficulties through codified materials such as books and manuals. It diffuses through face-to-face interaction.

- **Complex knowhow.** The more complex the knowhow about a product or service is, the more important face-to-face interaction and imitation becomes.

- **The chicken and egg problem of diversification.** How do we start doing something new when there is no one to learn it from?

- **You need to move brains to move knowhow into (other) brains.** Move people from knowhow rich to knowhow scarce places and integrate them in common work projects.
4 country stories

- Does knowhow diffuse through migration?
- Natural experiments of (forced) return migration
  - Albania-Greece (Hausmann and Nedelkoska)
  - Mexico-USA (Diodato and Neffke)
- Do you learn from your skilled foreigners at home?
- Migration and labor market policies that facilitate knowhow transfer between groups.
  - Panama (Espinosa, Hausmann, Obach, Santos)
  - Saudi Arabia (Obach)
Countries of Destination of Albania Emigrants

http://www.migrationpolicy.org/programs/data-hub/international-migration-statistics

Note: the size of the circles corresponds with the size of the migrant community
Then came the sovereign debt crisis in Greece ...

- At least 120,000 Albanians, equivalent to 5% of the labor force, return back between 2009 and 2014

- How did this affect the wages and employment of those Albanians who never left the country (the non-migrants)?

Unemployment rates of Greek Nationals and Albanian Nationals in Greece 2006-2013

Return migrants chose entrepreneurship and self-employment

- Return migrants are twice more likely to choose entrepreneurship than are non migrants;
- The trend towards self-employment (with or without employees) is steeper than the trend towards paid employment.

Note: 3-period moving averages.
Return migrants help create jobs in their regions of origin

Data: QLFS Albania 2012-2014
Results from 2SLS models
Instruments of return migration: place of birth of return migrants and distance to nearest border crossing to Greece.

Case 1: Albania

Data: QLFS Albania 2012-2014
Results from Cox proportional hazard models.
Countries of Destination of Mexican Emigrants

Note: the size of the circles corresponds with the size of the migrant community

http://www.migrationpolicy.org/programs/data-hub/international-migration-statistics
Recently, the return flows to Mexico became larger than the flows into the USA

Migration Flows (in thousands)

Forced and voluntary return flows

Source: Diodato and Neffke (2017)
Data from Pew Research and EMIF Norte
Main findings

- Mexican return migrants bring about structural change in Mexico
  - *Mexican migrants in the US work in different sectors than at home*
  - *When they return to Mexico, the total employment in the sector-city they choose experiences a boost*

- Doubling the number of returnees increases employment growth by 9%
PANAMA AND SAUDI ARABIA

Knowhow arrives home. How do you make the best use of it?
Case 3: Panama

Panama Canal Extension Project 2007-2016

Countries of Origin of Immigrants to Panama

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http://www.migrationpolicy.org/programs/data-hub/international-migration-statistics
Note: the size of the circles corresponds with the size of the migrant community
Foreigners are overrepresented among managers, professionals and technicians

Source: Espinosa, Hausmann, Obach, Santos (2016)
Data from Population Census 2010
Barriers to the diffusion of knowhow

- Quotas on FDI employment (10% of workforce can be foreign)
- Annual renewals of work (professional) visas and high costs for these
  - Legal fees from $4000
  - Annual renewal from $1500
  - Degree accreditation $1500
- Work visas are employer-specific, making mobility between employers difficult if not impossible
- Path to permanent residency and citizenship only available for 1/4 of all countries (Friendly Nations Visas)
  - Bank deposit $5000
  - Legal fees $5000
The Kingdom of Saudi Arabia

Country of origin | Millions
--- | ---
India | 1.89
Indonesia | 1.29
Pakistan | 1.12
Bangladesh | 0.97
Egypt | 0.73
Syria | 0.62
Yemen | 0.58
Philippines | 0.49
Sri Lanka | 0.40
Other | 1.74
Total | 9.84

Data by: UN Migration Stocks 2015

http://prcweb.co.uk/lab/worldmigration/
Two distinct labor markets: domestic and foreign

Foreigners specialize in low-skilled jobs, but ...

<table>
<thead>
<tr>
<th>Occupations in which foreigners specialize</th>
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<tbody>
<tr>
<td>Managers</td>
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<tr>
<td>Professionals</td>
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<tr>
<td>Technicians</td>
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<tr>
<td>Clerical occupations</td>
</tr>
<tr>
<td>Services and sales</td>
</tr>
<tr>
<td>Personal and household services</td>
</tr>
<tr>
<td>Agricultural jobs</td>
</tr>
<tr>
<td>Industry and chemical jobs</td>
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<tr>
<td>Mechanical occupations</td>
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Source: Obach, forthcoming
Data from GOSI
Conclusions

- Migration is a channel of knowhow diffusion from knowledge-rich to knowledge-poor countries.

- To make full use of migration as a channel of knowhow diffusion, countries need to make it easy for people to:
  - *Come and move between jobs*
  - *Integrate and aspire to become permanent residents and citizens*