

**Author(s):** Steve Jackson, 2009

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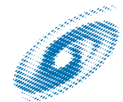
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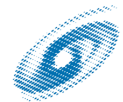
# SI657/757: Information Technology and Global Development (WI 10)

## Wk 5: Research, Knowledge, and Collaboration



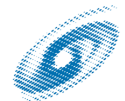
# General Notes:

- Reading responses #1 & 2
- Read S&T policy frameworks for your selected country (cf. Wagner's discussion of Uganda and Vietnam)
- Next week: group work
- Policy assessment paper: March 15<sup>th</sup>



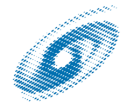
# 4 big questions:

- How are developing country scientists, institutions, and societies positioned in global flows of scientific research and development?
- Do global research and development efforts meet the needs of developing countries / the world's poor? What funding strategies and institutional configurations can best deliver on this goal?
- What role can/should 'indigenous knowledge' play in the development process – and how should we think about it in relationship to 'scientific', 'western' or 'global' knowledges?
- What are the regional dynamics of development, and how can local clusters support or accelerate economic development processes?



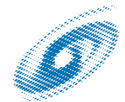
# Science for development

- 1990/2000s return of 'science for development' and 'knowledge for development' themes
- Repositioning of donor institutions as knowledge institutions (e.g. World Bank as 'knowledge bank')
- See <http://www.scidev.net>



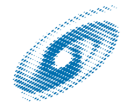
# National (and post-national?) science

- Wagner's arguments for the increasingly global nature of scientific networks:
- Evidence?
- Opportunities?
- Policy conclusions?



# Global distributions of science: UNESCO statistics

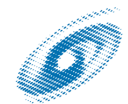
- Global distribution of researchers (Figure 1)
- National research densities (Figure 3)
- Gender gap (Figure 4)
- Gross and per capita R&D expenditures (Figures 5-6)
- Changes in R&D intensity (Figure 8)
- Sources of R&D funding by social sector (Figures 9-14)
- Missing: Targets of R&D funding by research sector
- Other missing but interesting stats???





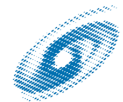
# R&D for development

- *Can* the international research system “deliver the goods” (in pro-poor agricultural biotechnology and neglected disease research)?
- What are the chief problems identified by Spielman and Mrazek & Mossialos? What policy and institutional reforms do they recommend? (Do you agree?)



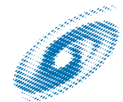
# Indigenous Knowledge

- What's wrong (and right) with “indigenous knowledge” (according to Agrawal? according to you?)
- How should information professionals (librarians, archivists, system designers, policy analysts, etc.) think about indigenous knowledge in the development process? Are there specific design, program, or policy principles that might follow from the IK movement, or Agrawal's critique of it?



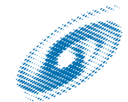
# Regional clusters: background

- Alfred Marshall's "industrial districts",  
(*Principles of Economics*, 1890)
- 1970s-80s economic geographers (spatial distribution of economic activity: or, why does economic activity happen where it does?-- "economies of agglomeration")
- Industrialism / post-industrialism / NIDL and off-shoring debates (nature of 'just-in-time production,' etc.; what leads industries and sectors to relocate or stay put?)



# Regional clusters: star examples

- textile clusters of postwar Northern Italy – dense linkages, small firm sizes, small scale production, management-labor cooperation, local specialization, export success (e.g., Piore and Sabel, *The Second Industrial Divide*)
- ‘high-tech’ districts – Silicon Valley, Route 128, etc. (e.g. Saxenian, *Regional Advantage*)
- Policy lessons: intra- and inter-industry councils, science parks, incubators, ‘innovative milieux,’ FTZs / EPZs, etc.



## SI657 – Wk 5 small group work: regional clusters and linkages

- Distribute and discuss your reading notes on each of the Brimble and Doner, Basant and Chandra, and McCormick readings (in that order). Each of you should lead an 8-10 min discussion of your assigned reading (other group members should ask questions of clarification etc.)
- Group question: 1. How can local clusters support regional and national economic development strategies? 2. What are some key components and requirements for cluster success? 3. What are some barriers or limits facing regional development strategies of this kind?  
(please take notes on your discussions, and prepare a diagram or visualization addressing question 2)

