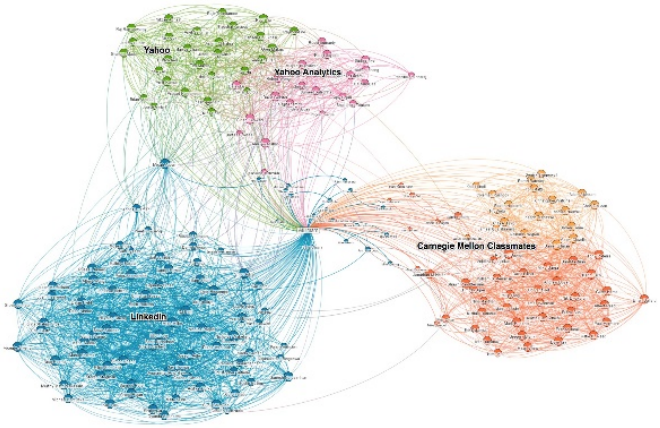
Announcement for the Course

Industry Networks and Economic Development

In this course, we study industry networks with a focus on macroeconomic networks. We study in particular how networks shape countries' GDP, their export competitiveness, and their development opportunities.



Course Content

1. A primer in network theory
    a. Basic concepts and ideas
    b. Centrality measures
    c. Bipartite networks
2. Visualizing networks
    a. Gephi
    b. Python
    c. Matlab
3. Production networks
    a. The basic structure of an input-output table
    b. A brief history of input-output analysis
    c. Production networks and the business cycle
    d. Production networks and international trade
4. The Product Space and Economic Complexity
    a. The Product Space as a one-mode projection
    b. Visualizing the Product Space
    c. Interpreting Economic Complexity
5. Productivity networks
    a. A brief introduction to modern Ricardian trade theory
    b. The gravity equation and the distance puzzle
    c. The Dutch disease
    d. Application 1: The shale revolution in the U.S.
    e. Application 2: NAFTA

There are no formal requirements for students to take this course. A written exam is offered at the end of the semester and at the beginning of the following semester. Optionally, students may obtain bonus points for short presentations (15 min) during the course.

Literature

- Matthew O. Jackson (2010) “Social and Economic Networks” Princeton University Press.
- Newman, Barabasi, Watts (2006) “The Structure and Dynamics of Networks” Princeton University Press.
- Newman (2010) “Networks, An Introduction” Oxford University Press
- Wasserman, Faust (1994) “Social Network Analysis” Cambridge University Press.

Additional literature will be announced during the lecture.

Lecture, Office Hours and Contact

- Lecture: Tuesdays 3:00pm – 6:00pm (online, see Moodle for links, Moodle password: Networks2021)
- Office Hours: Tuesdays 2:00pm -3:00pm by appointment (if you cannot make it at that time please write me at thomas.eife@awi.uni-heidelberg.de)