

Workshop on “Network Approaches to Innovation”

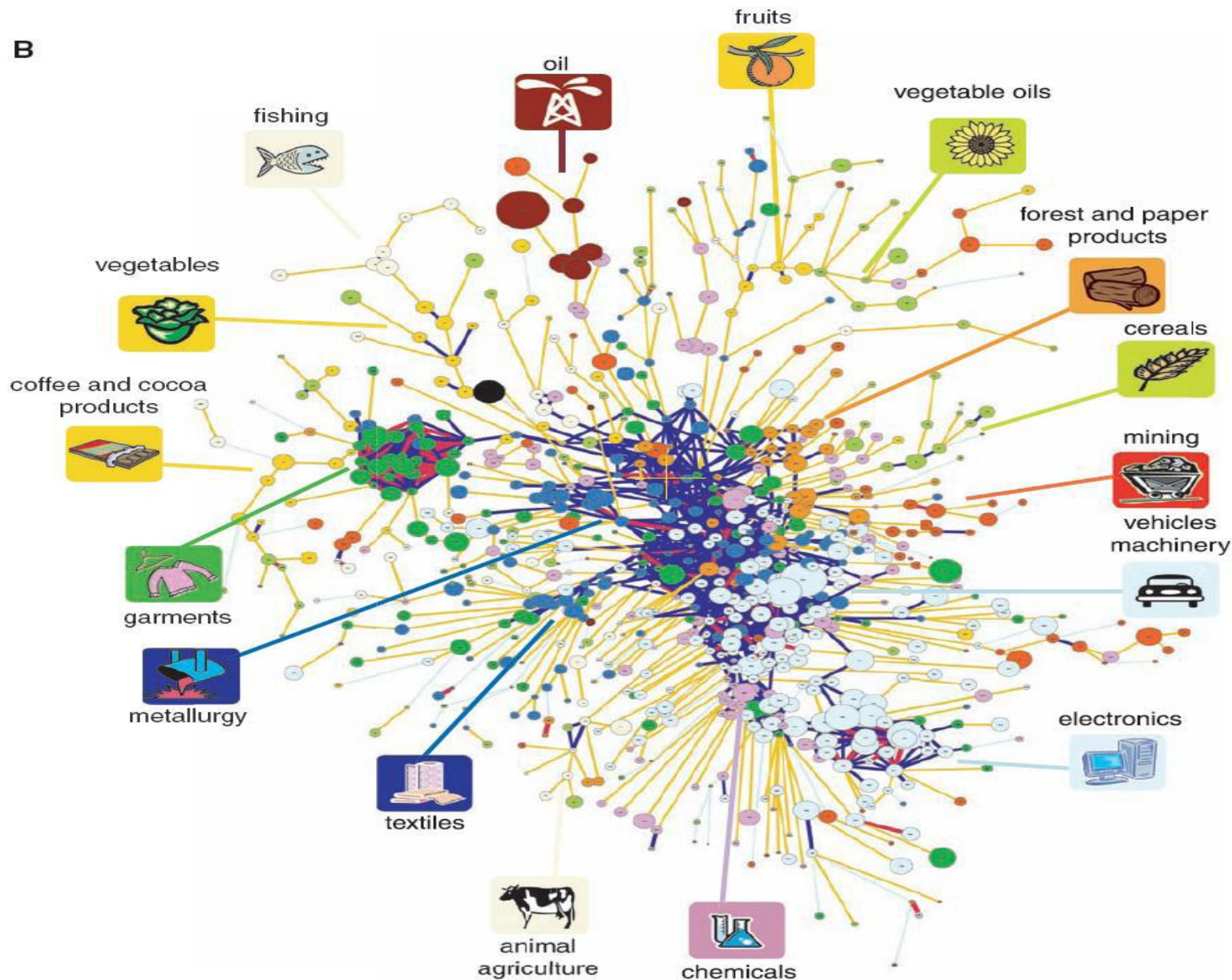
OECD, 8 December 2008

Motivation

- We live in a 'connected age' and network effects seem to be pervasive in many areas of economics, such as:
 - Social capital
 - Innovation networks
 - International trade & business networks
 - Other phenomena where architecture of interactions seems to determine behaviour of economic agents

1st Example: Connections in Product Space

B



Source: Hidalgo, Klinger, Barabasi & Hausmann (2007),

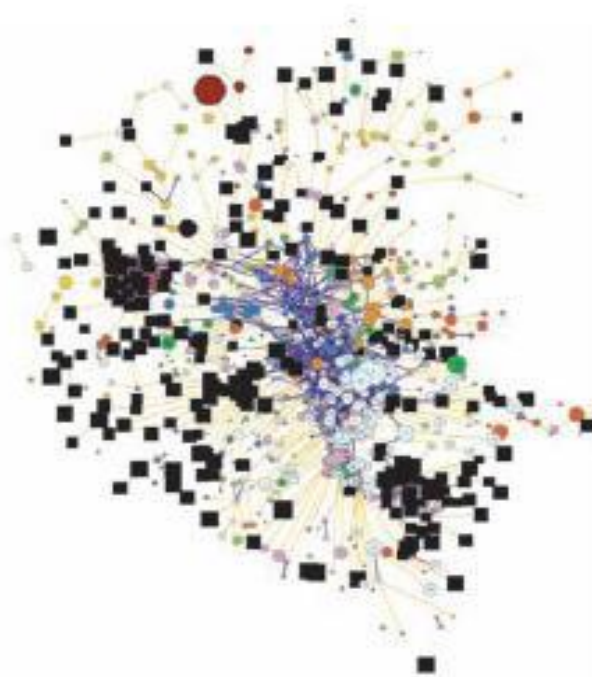
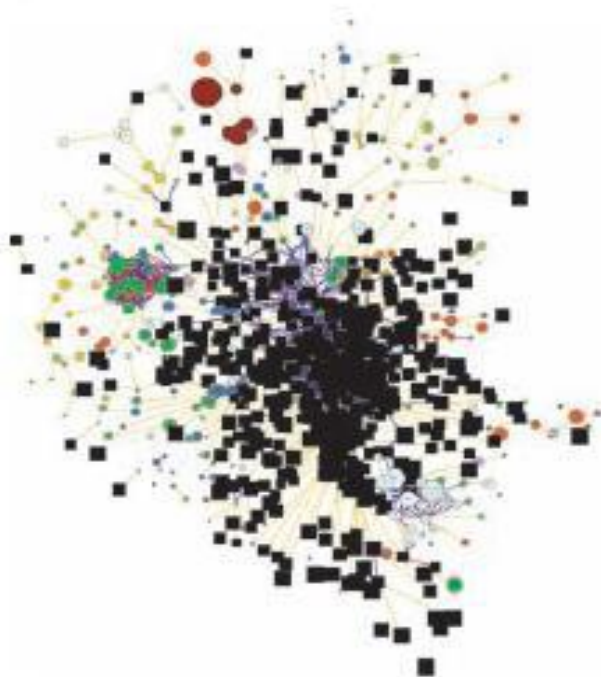
Regions in the Product space



Industrialized
Countries



East Asia
Pacific



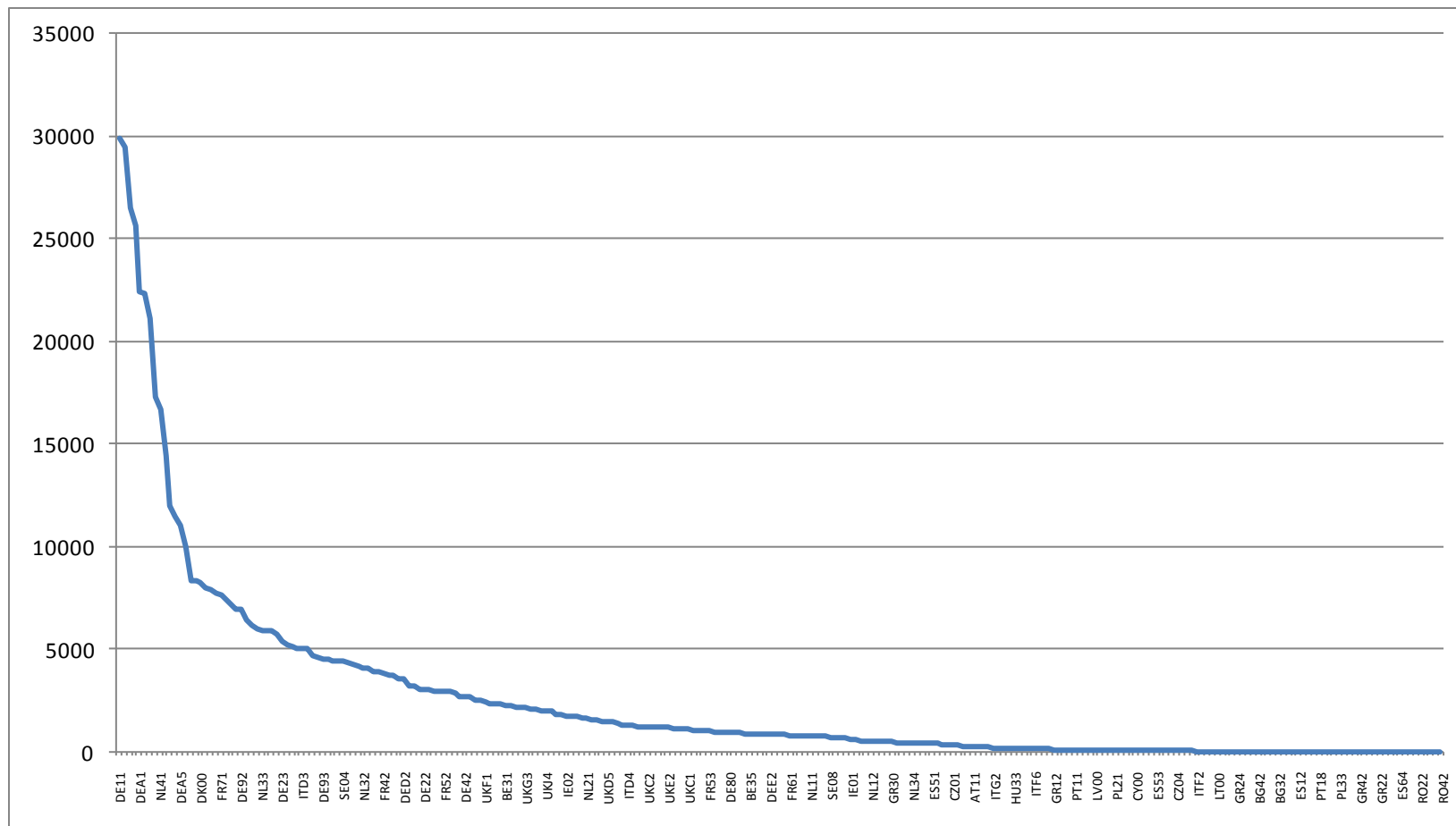
Source: Hidalgo, Klinger, Barabasi & Hausmann (2007)

NB: The products for which the region has a $RCA > 1$ are denoted by black squares

Motivation (cont'd)

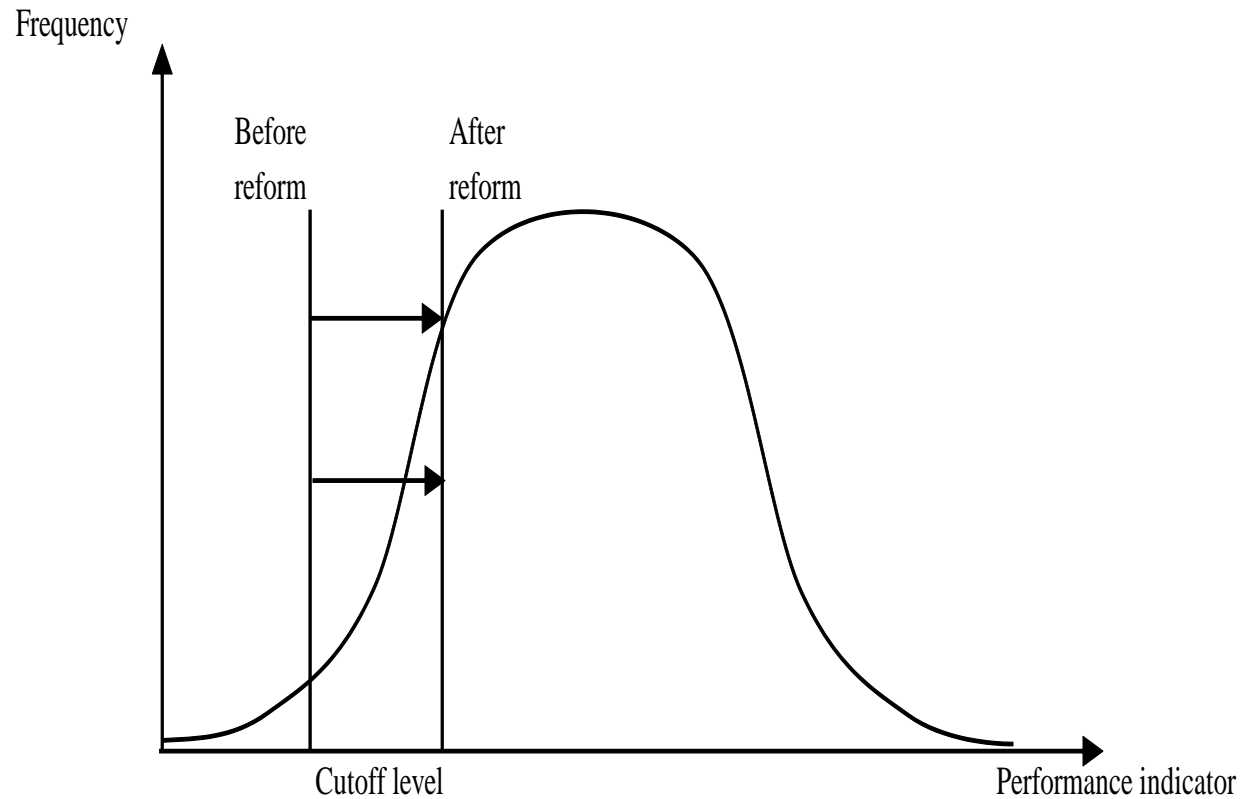
- Heterogeneity of economic agents is often neglected when designing policies
 - Hypothesis of perfect, monopolistic competition and/or representative agent
 - Shape of the size distribution matters. Often, normal laws are assumed (where an average has a meaning) but power laws are frequent in networks

2nd Example: Innovation activities are often distributed in very unequal way

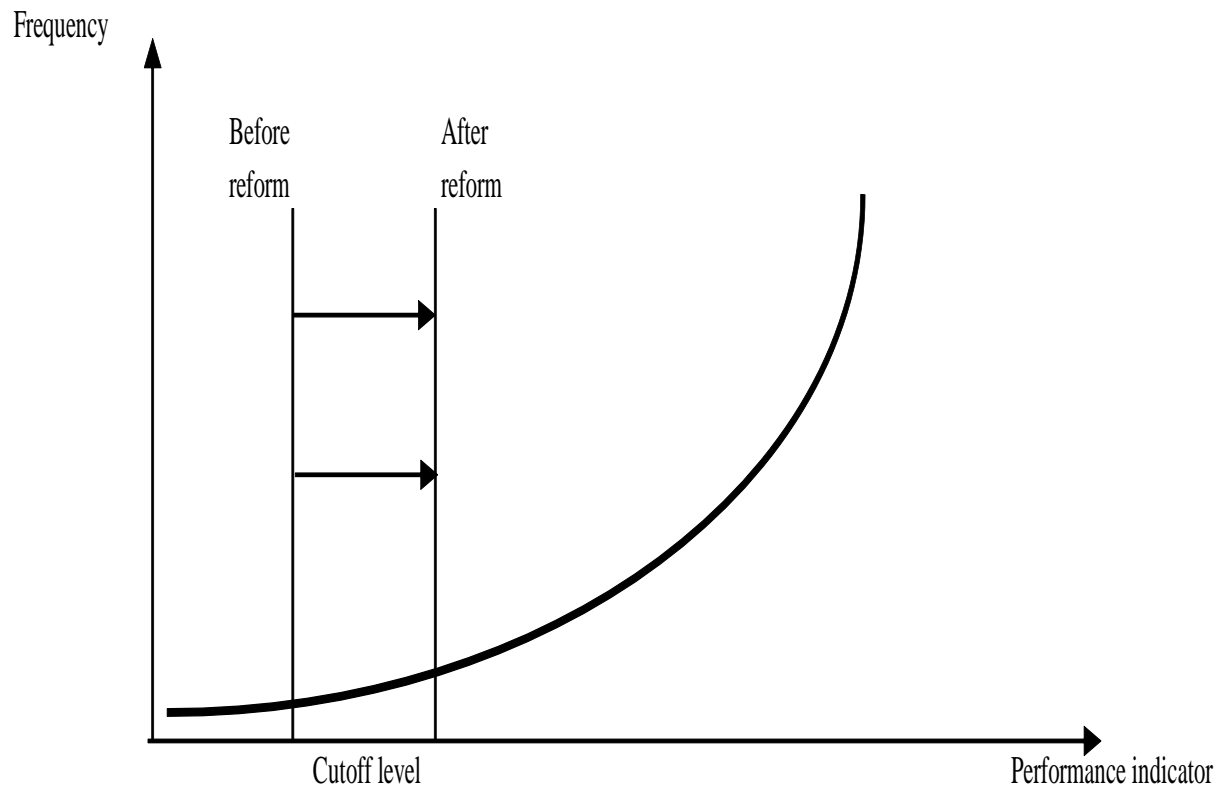


Participation in co-inventions with other EU-27 regions

2nd Example: Heterogeneity & Impact of reforms



2nd Example: Heterogeneity & Impact of reforms



Questions for discussion

- **What are the implications of the network approach for the traditional economic paradigm?**
- **How can the network structure of economic interactions enable to better understand the impact of policies on economic performance?**
- **How can policies be better designed by taking into account the network structure of economic interactions?**
- **How can the network approach help to enhance the efficiency of economic systems?**

Workshop agenda

I. Social networks (9.30-11.00): Basic concepts

Basic concepts and instruments of social networks analysis. Important examples of economic networks.

Lead speaker: Jason Owen-Smith (University of Michigan)

Complementary view: Jean-Benoit Zimmerman (CNRS, France)

II. Business and inventors' networks: their effects on innovation (11.30-13.00)

Why do businesses and inventors set up networks? The various types of innovation-related networks. The geography of networks (clusters, spatial spillovers).

Lead speaker: Fabio Pammolli (Lucca Institute for Advanced Studies, Italy)

Complementary view: Ichiro Sakata (University of Tokyo)

III. Measurement of social networks and innovation (14.30-16.00)

What indicators could reflect the relevant characteristics of networks? Can synthetic indicators be design for capturing network aspects at the national level? What existing data sources are available for compiling network-based indicators?

Lead speaker: Jason Owen-Smith (University of Michigan)

Complementary view: Fred Gault (Adviser, OECD)

IV. Open discussion