PROXIMITIES of INNOVATION

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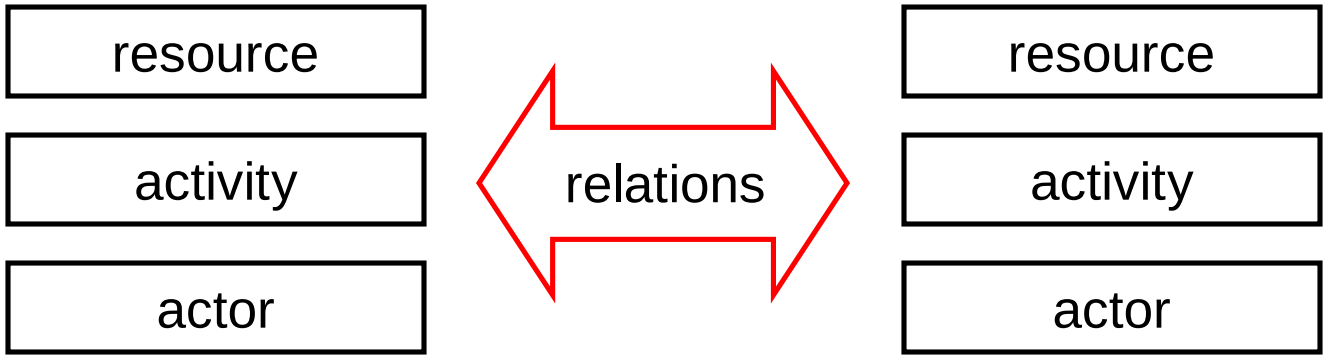
INNOVATION

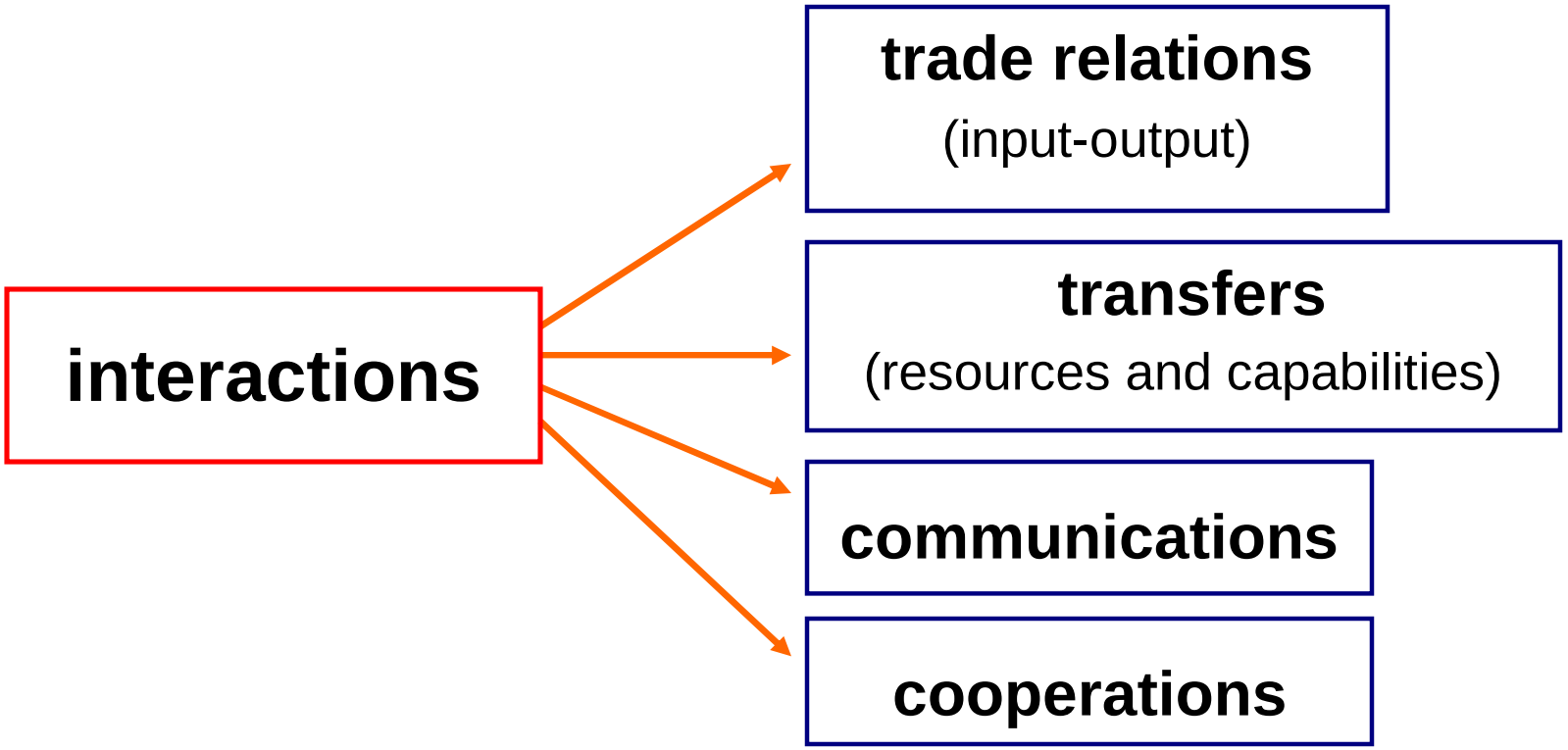
- Innovation is an interactive process between heterogenous actors, during which actions and institutional structures are linked.

- Innovation is a social process involving,
  - learning by interacting
  - interaction between firms and other firms, institutions
  - ...



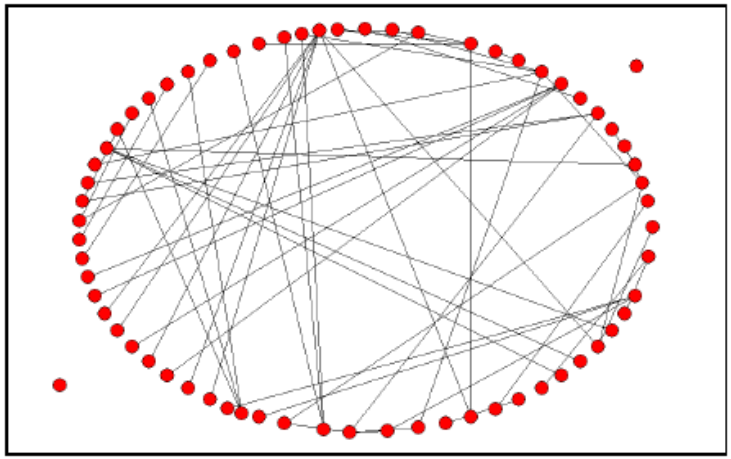
FLOWS

In a “space of flows”,



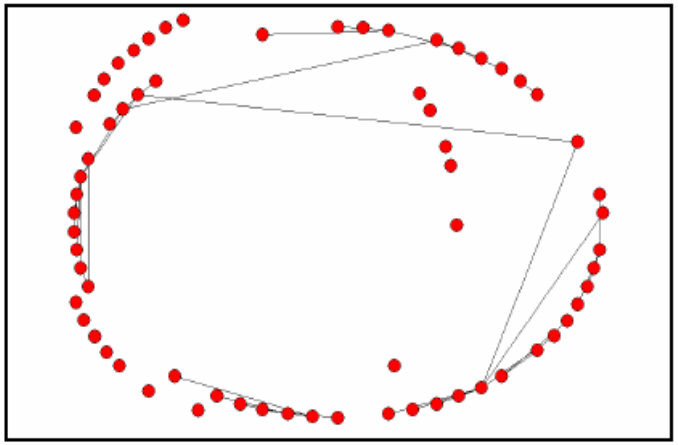
contribute to the coordination of innovation activity.

Ex: Networking among a group of organic production firms in Southern Italy (*Morone, Sisto and Taylor, 2004*).



Interactions

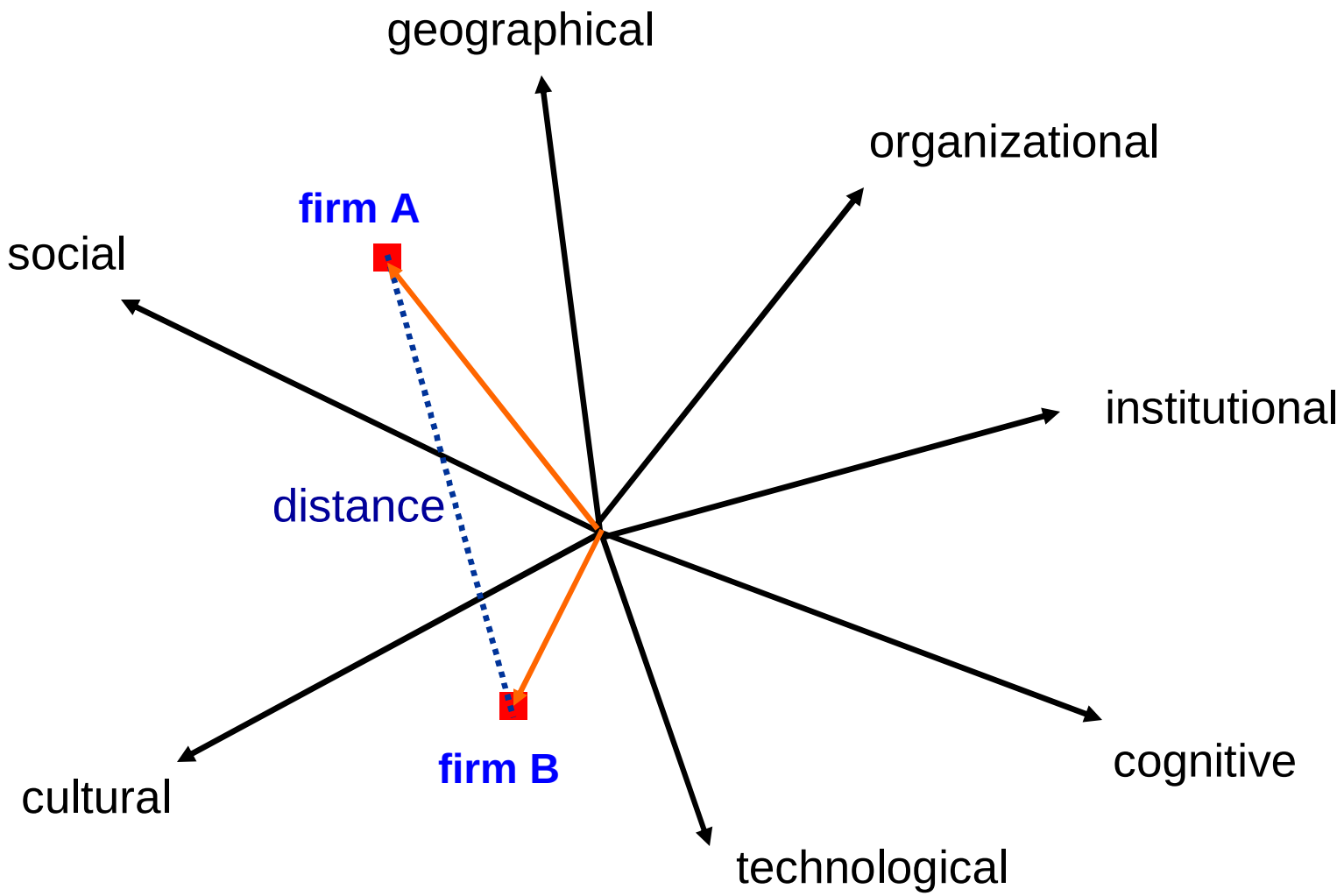
- **trade**
- **information/knowledge exchange**
- **cooperation**



Communications

- **information/knowledge exchange**

A BASIS FOR THE SPACE OF FLOWS



(Boschma, 2005; Knoben and Oerlemans, 2006)

PROXIMITIES

Geographical Proximity

The spatial or physical distance between economic actors.

Small distances between economic actors increase the benefits of knowledge externalities,

- exchange of tacit knowledge
- interactive learning

lack of spat. externalities — lack of geo. openness

local buzz, dense extnl. linkages

too little — too much

issue: geo. extension
measure: phys. distance

(R. A. Boshma; 2005)

Territorial structures involve more than just physical proximity!

Innovation dynamics of territorial innovation models

(*Moulaert and Sekia,2003*)

i. Industrial district

Capacity of actors to implement innovation in a system of common values.

ii. Innovative milieux

Capacity of firms to innovate through the relationships with other agents of the same milieu.

iii. Localized production system

Similar to the industrial district.

iv. New industrial space

A result of R&D and its implementation; application of new production methods.

v. Regional innovation system

Innovation as an interactive, cumulative and specific process of research and development (path dependency).

vi. Learning region

Similar to regional innovation system, but stressing co-implementation of technology and institutions.

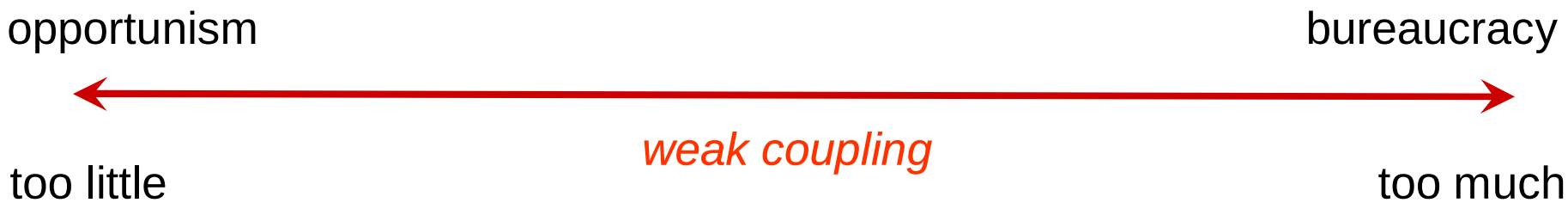
vii. Innovative cluster

Innovation networks, social networks and local rivalry.

Organizational Proximity

The extent to which relations shared in an organizational arrangement, in a network of organizations or between organizations.

- learning and innovation in non-hierarchical governance structures
- reduction of uncertainty



issue: interdependencies, ties
measure: control

Social Proximity

The distance in personal relations. It can be personal or relational; referring to actors in the same space of relations, and embeddedness.

- exchange of tacit knowledge
- reduction of opportunistic behavior
- communities of practice

issue: social embeddeness, interactive learning
measure: trust

Institutional Proximity

Formal and informal institutions influence the coordination of actions. Proximity represents the sharing of same institutional rules, and cultural habits and values.

- collective learning from free knowledge transfer on a common space of norms etc.
- lowering of transaction costs

issue: governance
measure: trust

Cultural Proximity

Distance between informal rules of the interacting actors (codes of conduct, ways of working, customs, ethics, values and norms).

- easier interaction due to similar routines and interpretations

issue: common interpretations, routines
measure: cultural difference

Cognitive Proximity

The similarities in the way actors percieve, interpret, understand and evaluate the world (education, working experience, technological focus etc.).

- communication and transfer of new knowledge due to similar frames of reference
- incorporation of external and internal knowledge (higher absorptive capacity for knowledge in close proximity)
- communities of practice

issue: knowledge sharing
measure: knowledge gap

Technological Proximity

Shared technological experiences, and the knowledge actors possess about those technologies.

- technological learning
- acquisition and development of knowledge (higher absorptive capacity for knowledge in close proximity)
- anticipation of technological developments

loss of cooperation — loss of tech. diversity

tech. trajectories,diversity

too little — too much

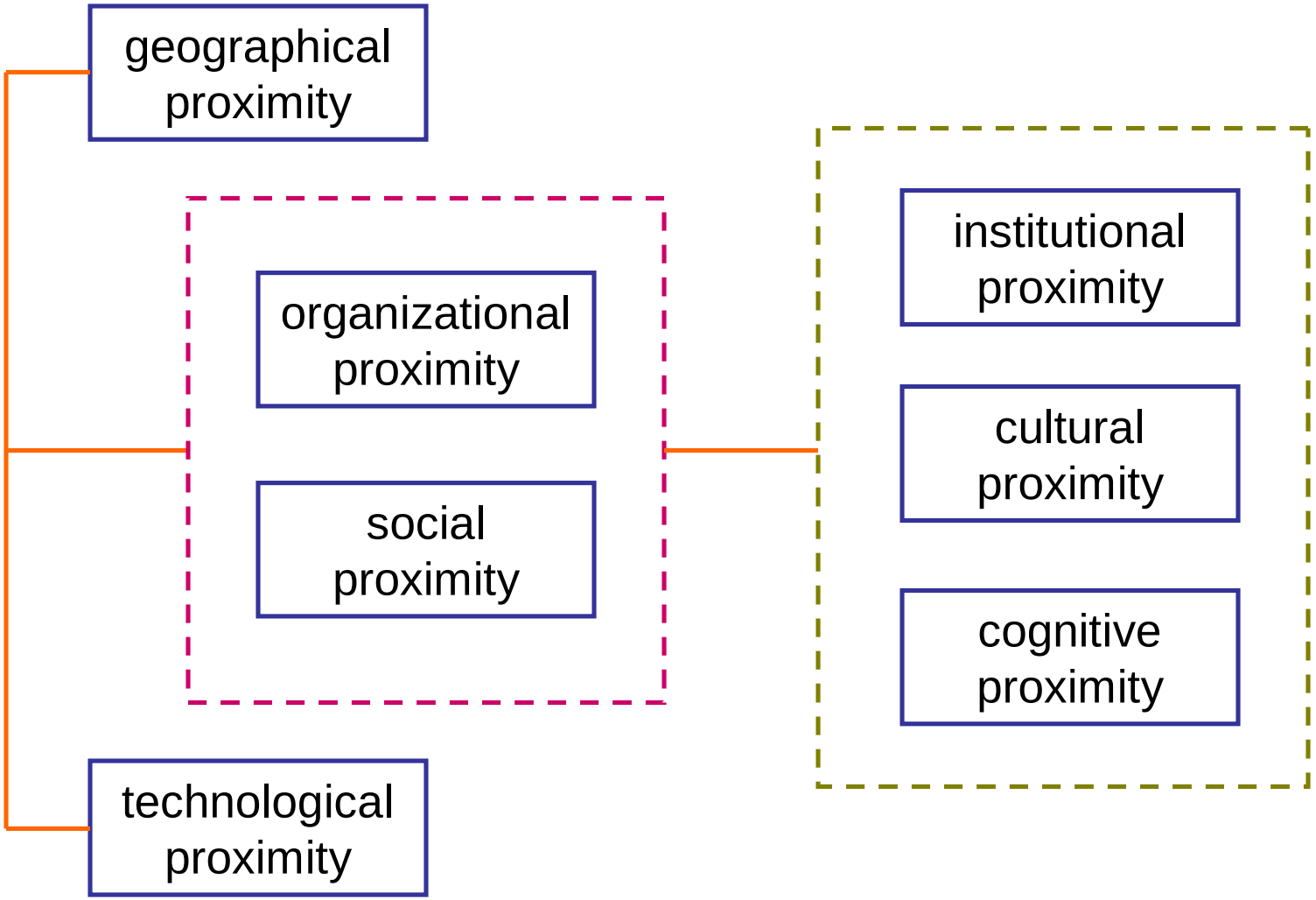
issue: partnership, innovation
measure: local specialization

INDICATORS OF PROXIMITY

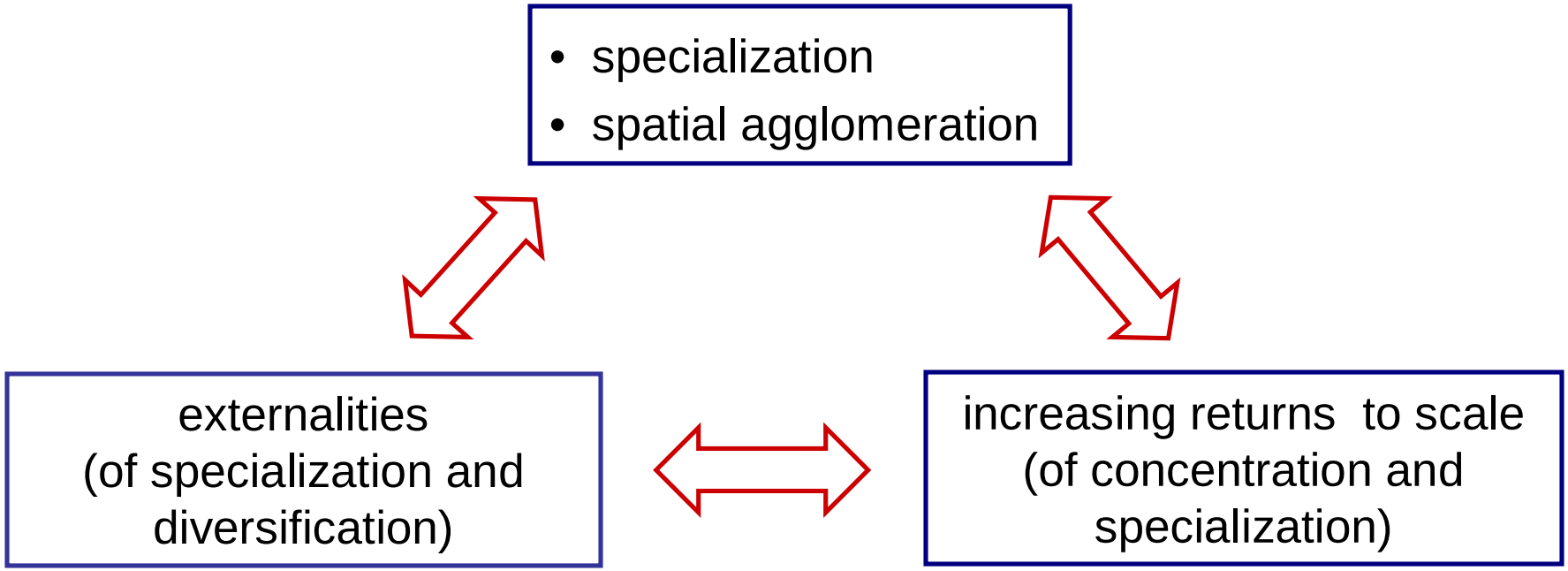
(Vandeberg, Moors and Kuhlmann, 2007)

	indicator
geographical	scientific publications, patents
organizational	hierarchy, network, market
institutional	laws, regulations, mutual agreements
social	formal and informal relations
cognitive	education, work experience, technological focus
cultural	codes of conduct, ways of working, customs, ethics, values and norms
technological	technological focus and exchange

REDUCTION OF PROXIMITY DIMENSIONS



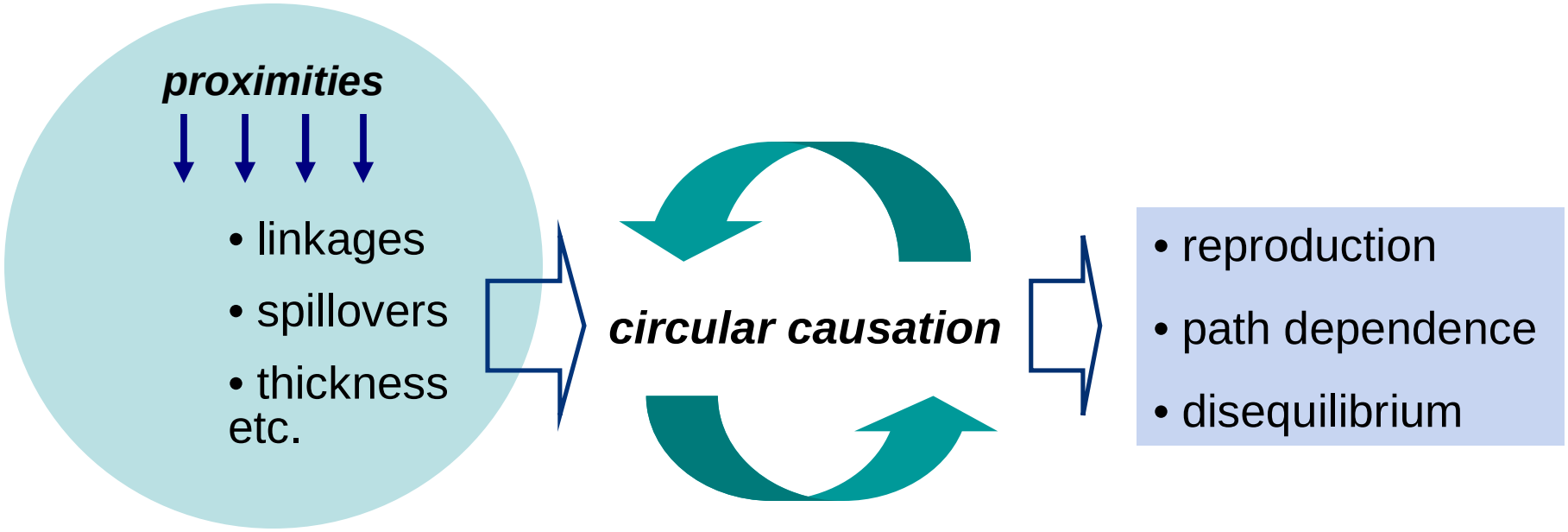
ECONOMIC GEOGRAPHY



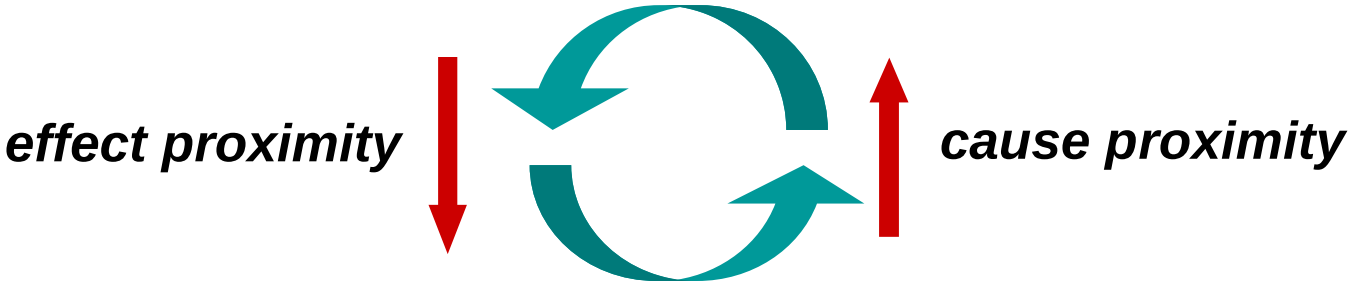
Q: HOW DOES THE SELF-REINFORCING PROPERTY OF A SPATIAL CONCENTRATION EMERGE?

(Krugman, 1995; Porter, 1994; Martin and Sunley, 1996)

Spatial order ~ Self-organization



Similarly, proximites can themselves self-organize:



INSTITUTIONALIST and EVOLUTIONARY PERSPECTIVES

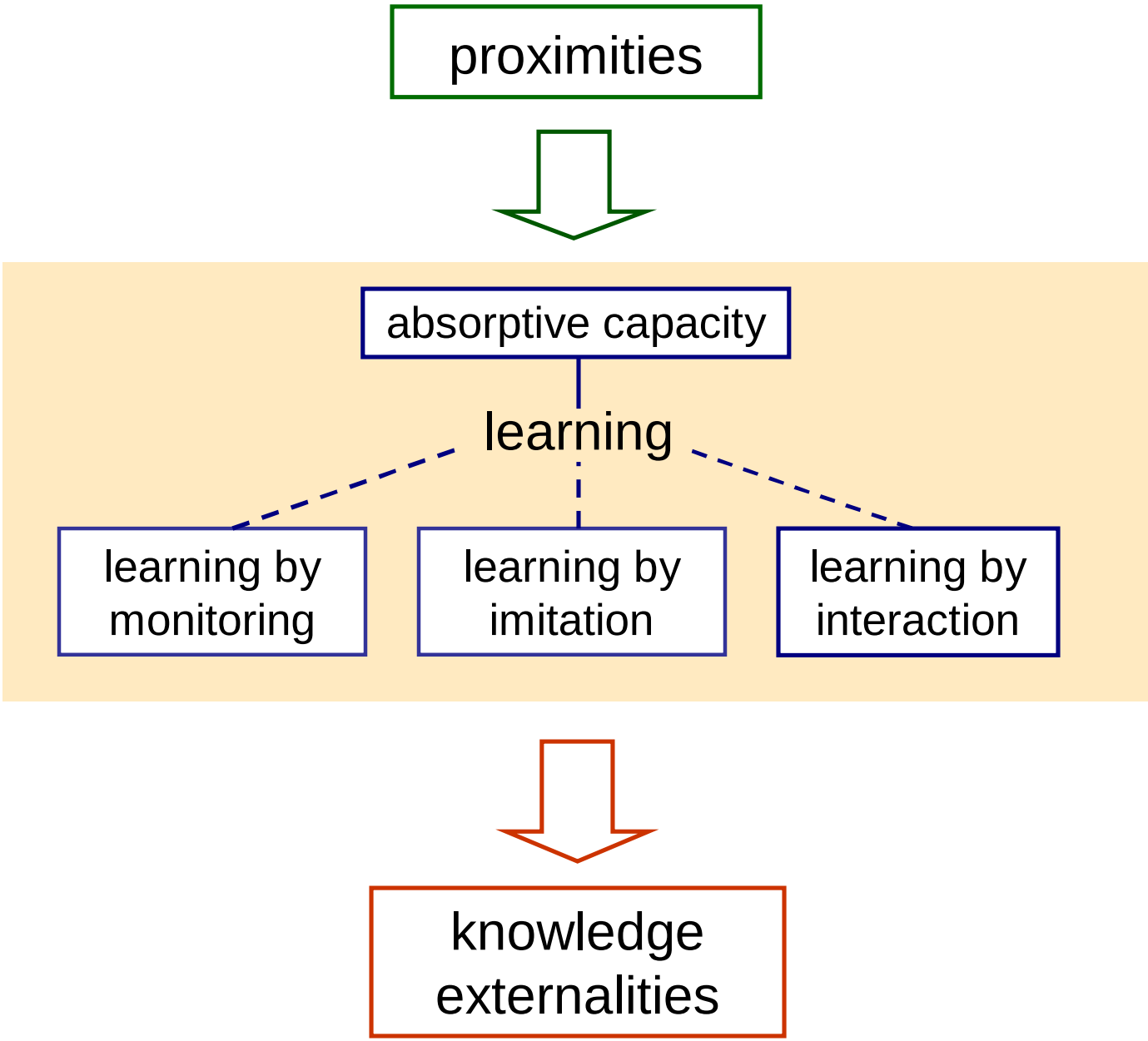
ties of **proximity** and **association**

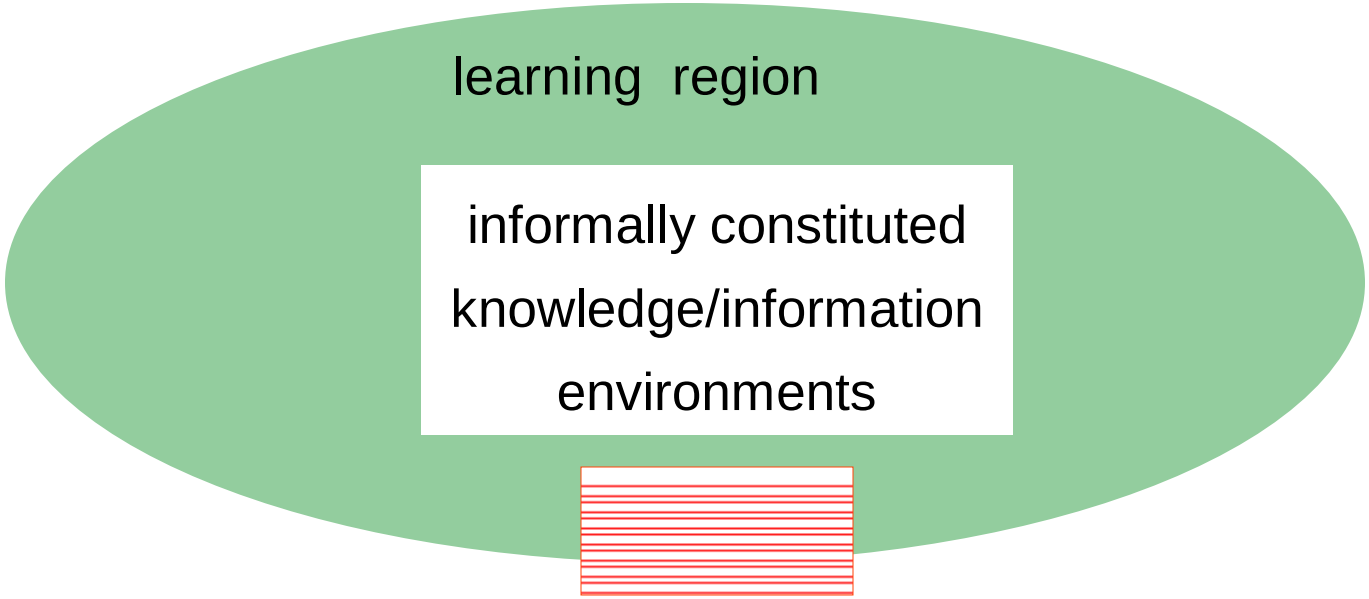
as sources of
- knowledge
- learning

untraded interdependencies (relational assets)

- local tacit knowledge and face-to-face exchange
- quality of local institutions
- social habits and norms
- local conventions of communication and interaction,

etc.


proximities
absorptive capacity
learning
learning by monitoring
learning by imitation
learning by interaction
knowledge externalities



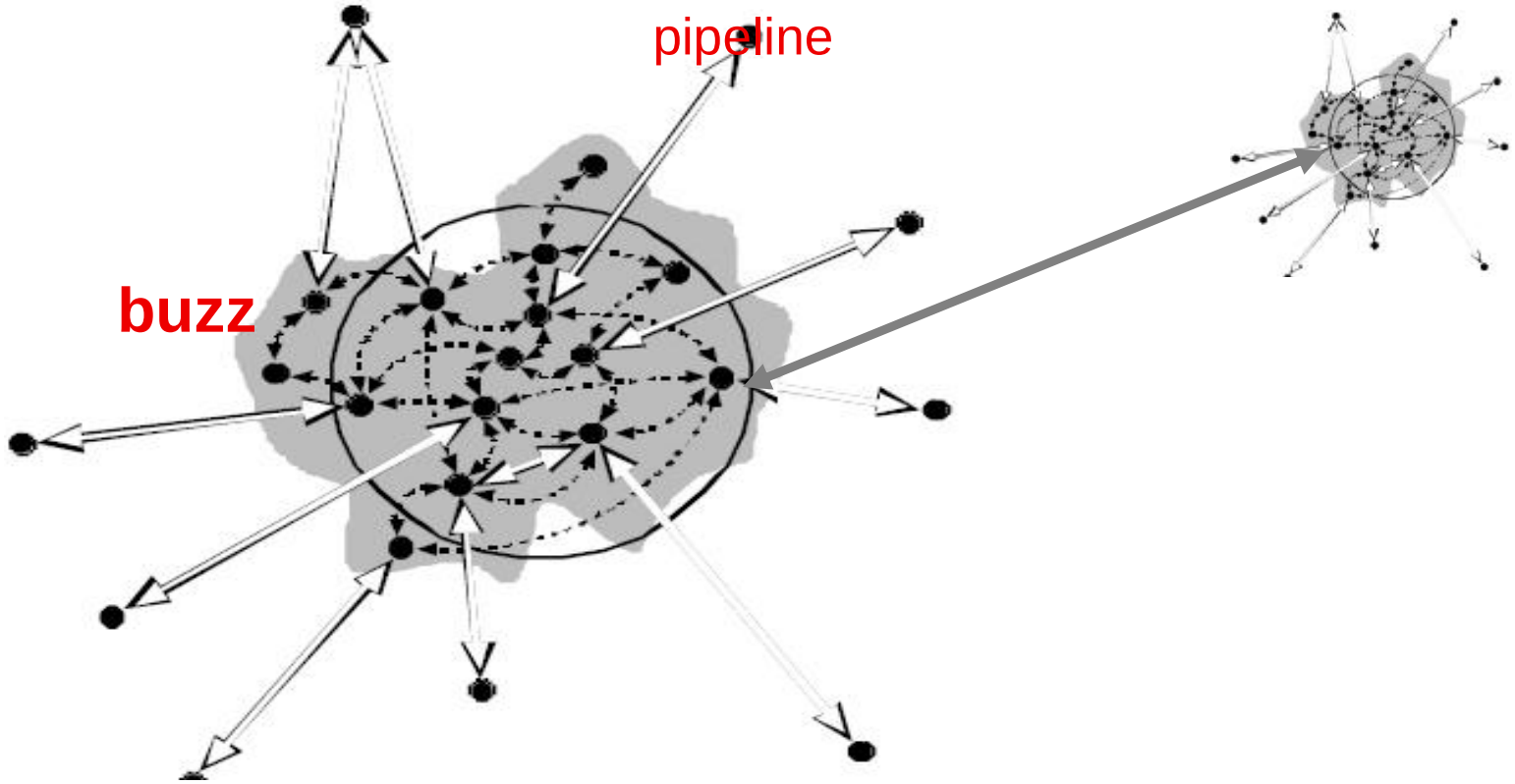
- networks of interdependency
- formal institutions of learning
- common understandings

learning-based competitiveness

(Amin and Thrift, 1995; Storper, 1997; Sunley, 1996; Morgan, 1997; Cooke, 1998; Morgan and Nauwelaers, 1998)

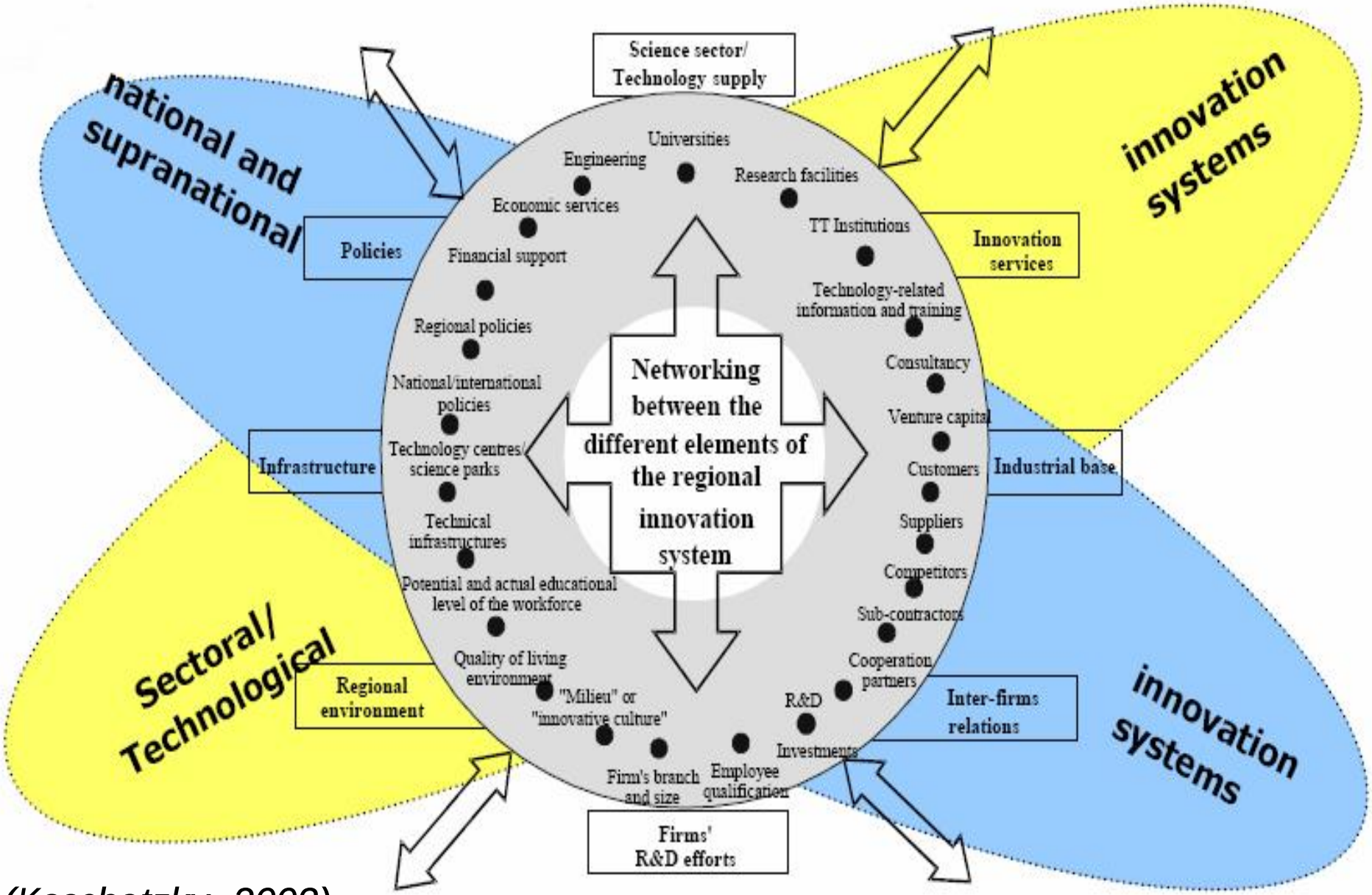
LOCAL BUZZ - GLOBAL PIPELINES

(Bathelt, Malmberg and Maskell, 2004)



Buzz: an information and communication ecology emerging from the social context of relationships (something in the air = knowledge spillovers).

REGIONAL INNOVATION SYSTEM



(Koschatzky, 2003)

Endogenous Growth

- different externalities
- policies, investments

Endogenous Development

(economic growth and structural change led by local community)

initiatives for development, employing local potential

- economic dimension: specific production system
- institutional dimension: complex system of relations

TWO ORGANIZED INDUSTRIAL ZONES - ANKARA

Surveyed: manufacturing SMEs who under global pressures;

- need to improve firm capabilities
- need to improve competitiveness

but often display lock-in around the imitation level of innovation development with low innovation gains.

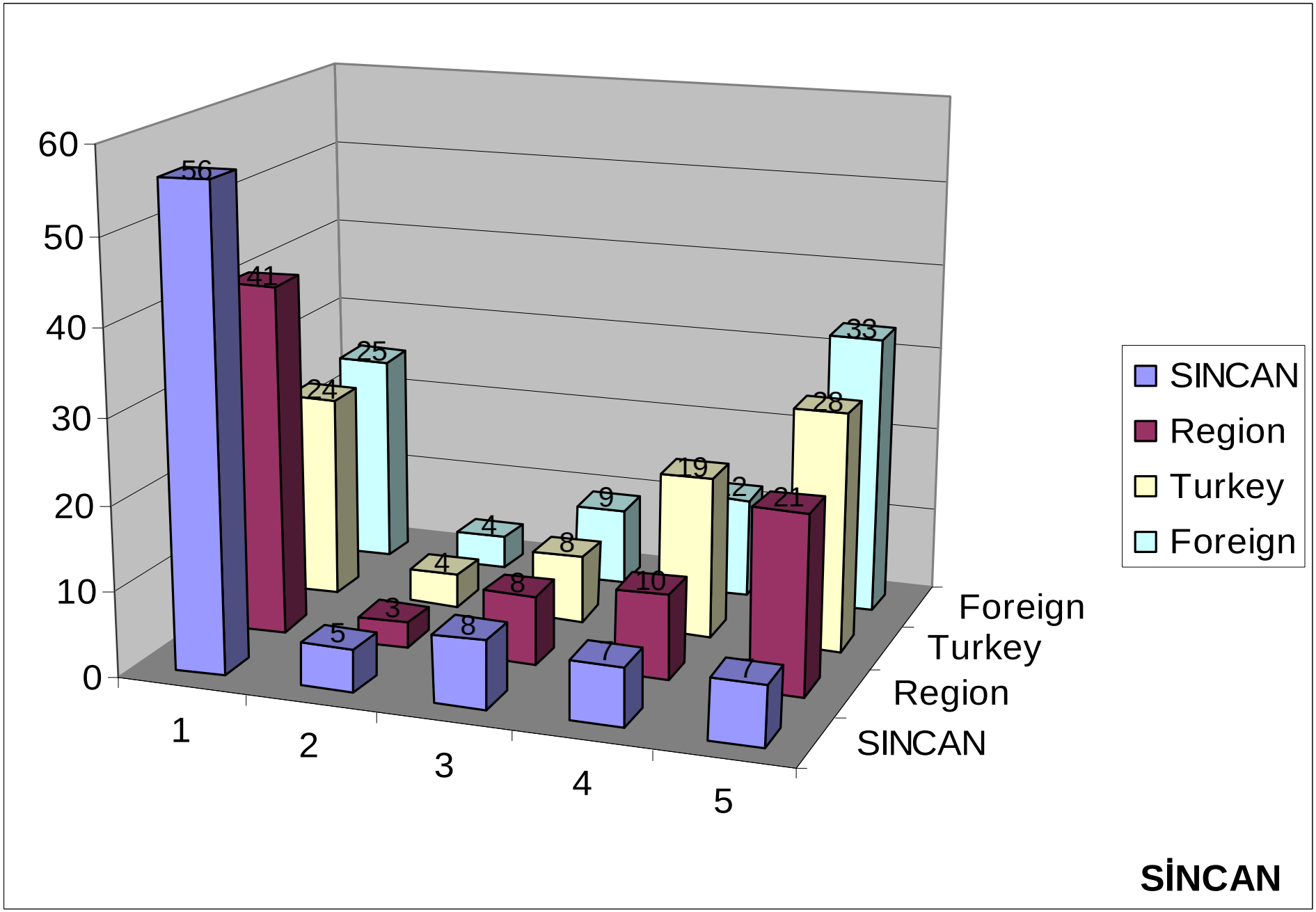
Role of proximity on imitation trap (or learning) ?

1. SINCAN District

   ~190 firms, 88 surveyed

2. OSTIM District

   over 5000 firms, 77 surveyed



Other firms as important knowledge/skill sources for main production

Observation:

When important, far distant firms are preferred as knowledge/skills sources. However,

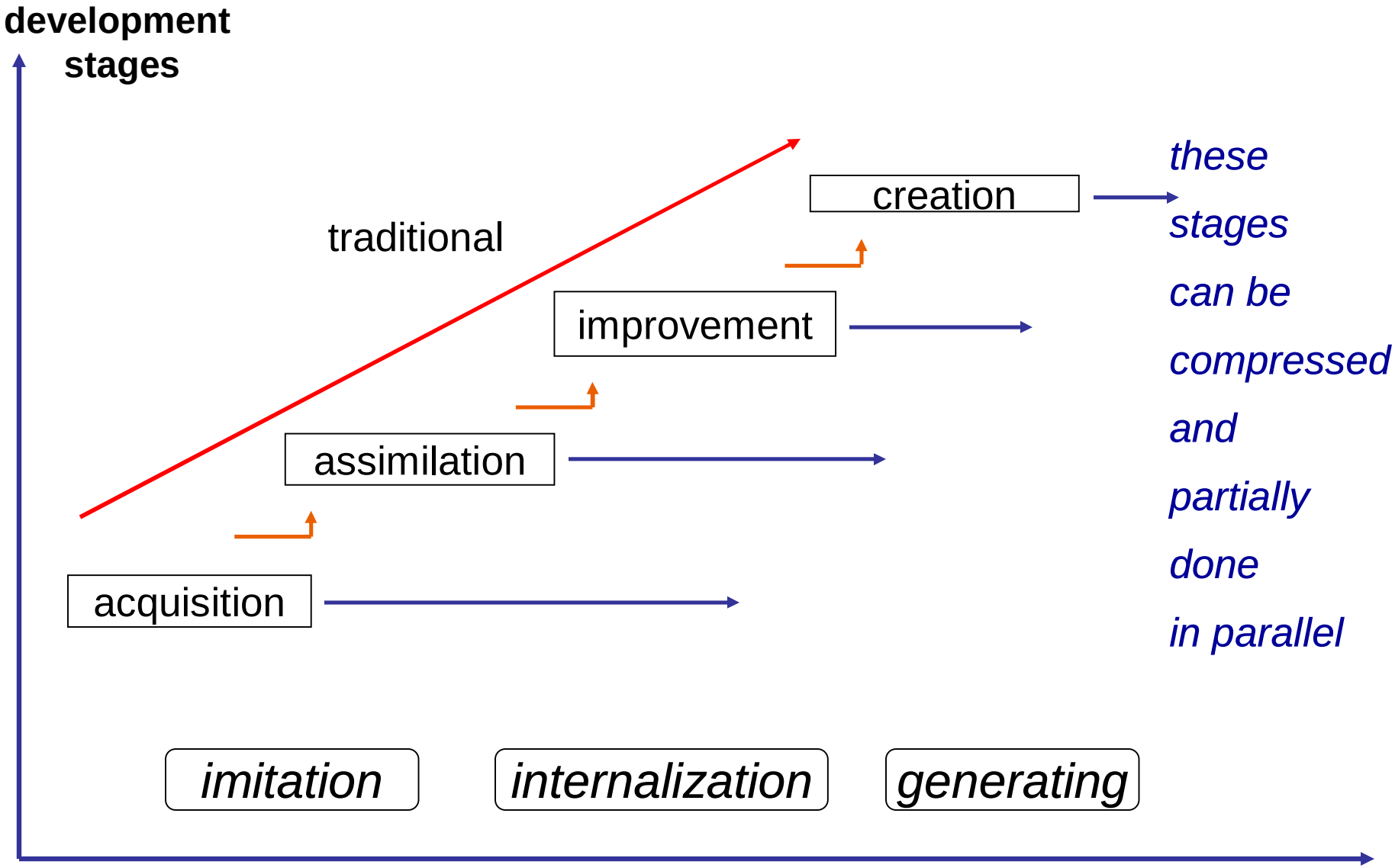
- not only such firms are geographically far away
- but also they are distant in terms of other proximity dimensions.

Lack of proximities between local firms contribute to,

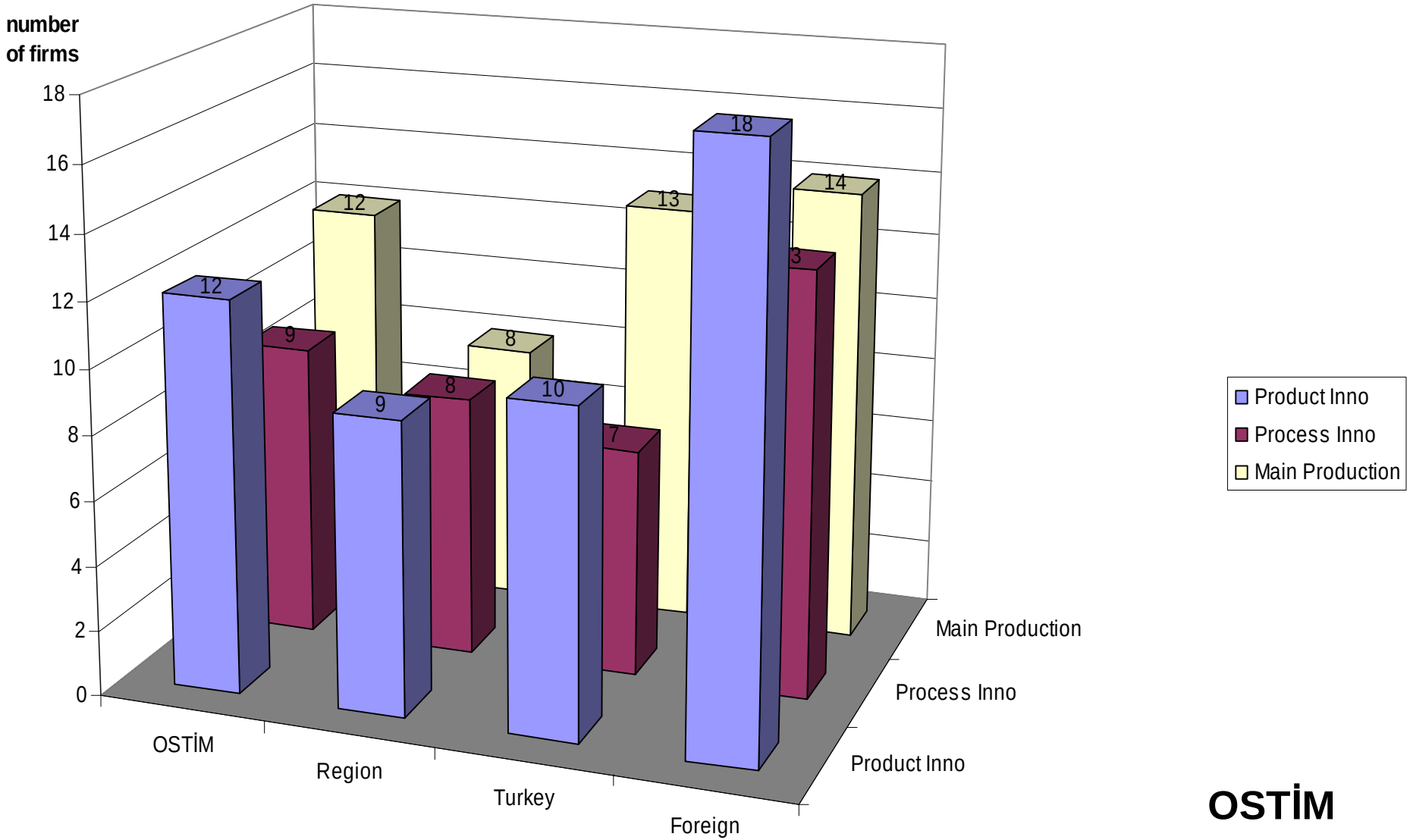
- the weakness of local inter-firm linkages for learning and innovation
- the weakness of local structures (networks, innovation systems etc.)

hence to the “imitation trap” of local firms.

INNOVATION SYSTEM DEVELOPMENT



(adapted from Griffiths, 2005)



OSTİM

- placing high importance on

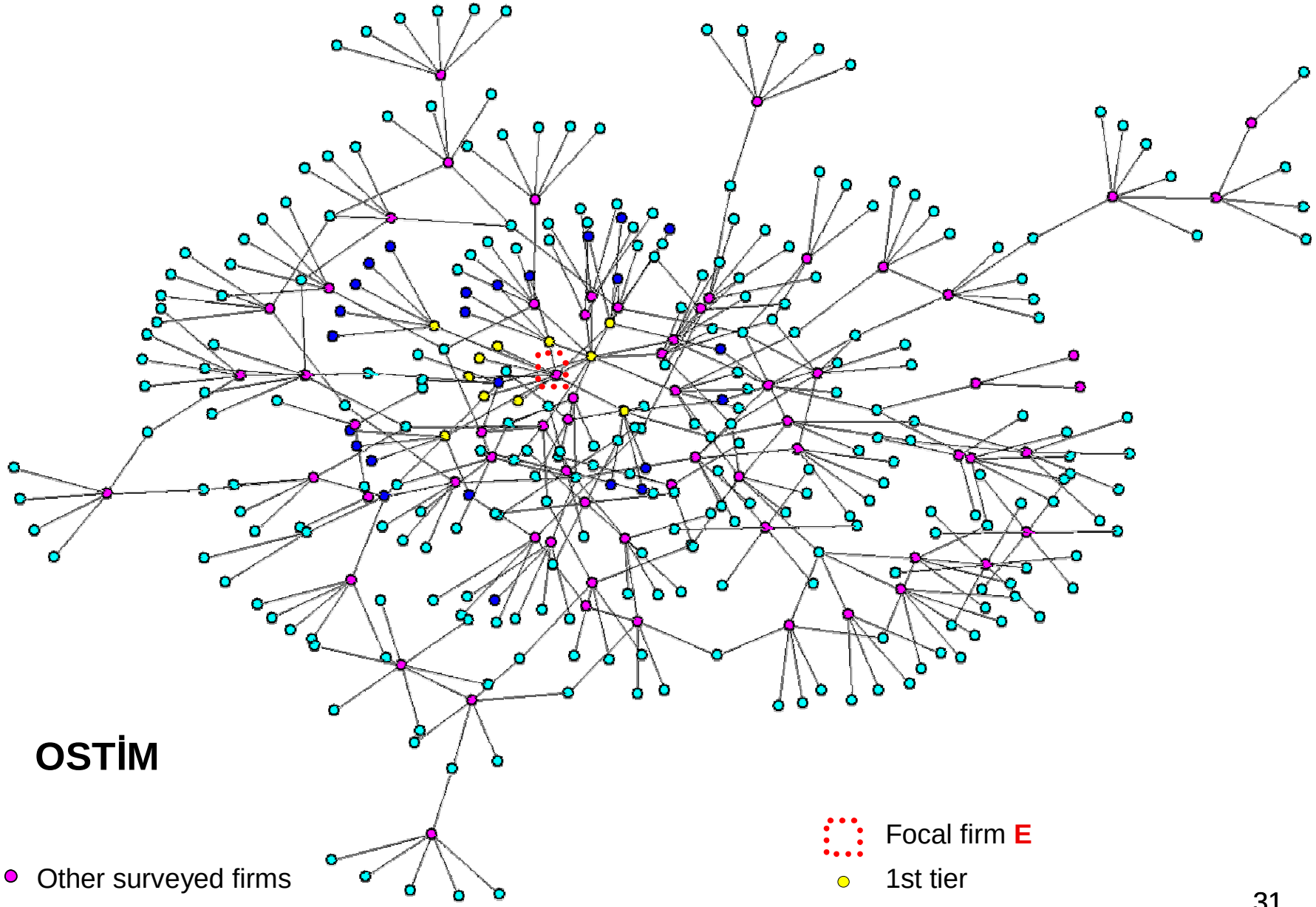
other firms as important knowledge/skill resources for main production

- monitoring other firms for innovation

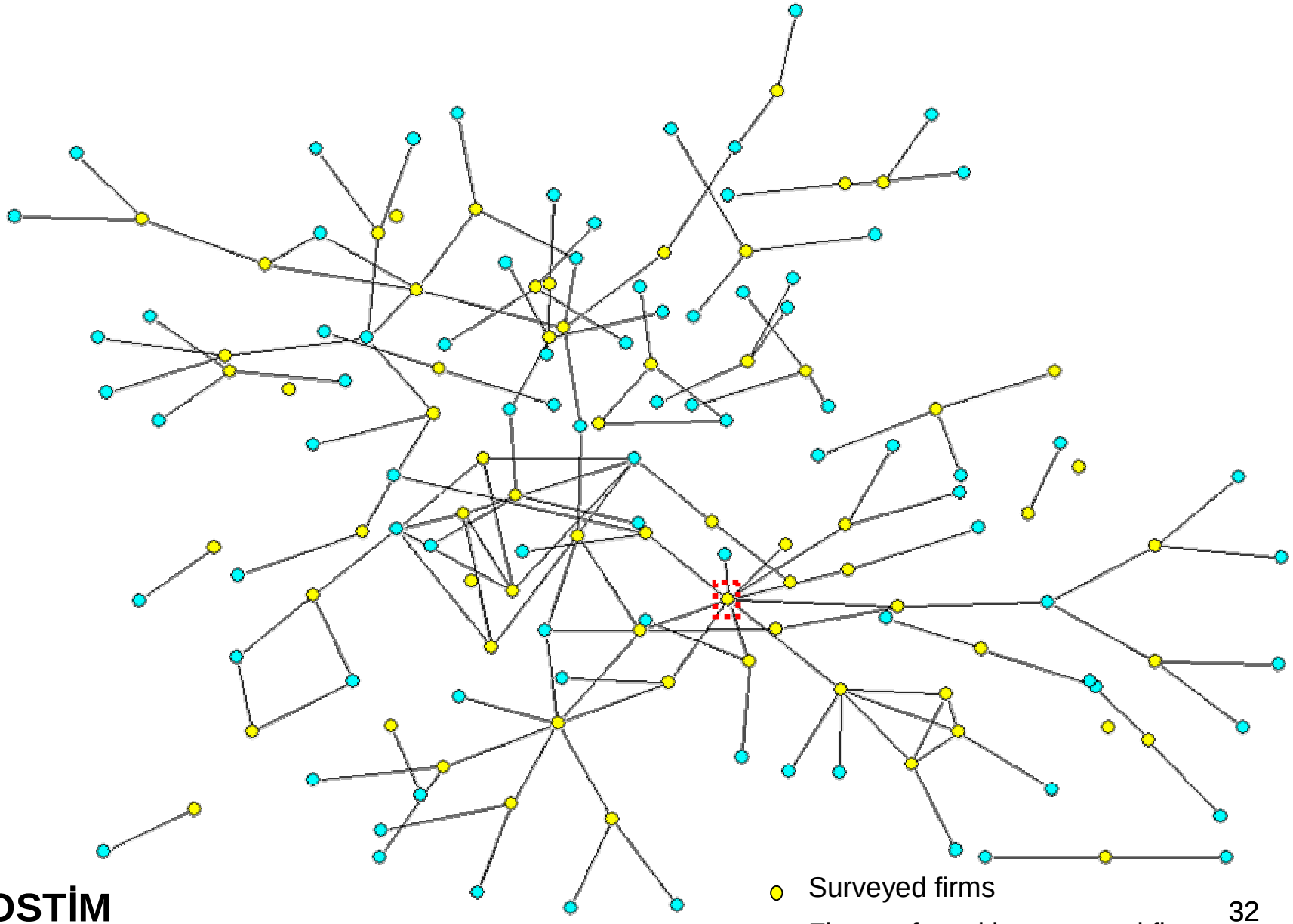
PROPOSAL:

LARGE GEOGRAHICAL DISTANCE MAY IMPLY ALSO LARGE DISTANCES IN OTHER PROXIMITY DIMENSIONS, THEREBY CONTRIBUTING TO THE IMITATION TRAP AS A COMBINATION!

SUPPLIER- CUSTOMER MAP AROUND A FOCAL FIRM



FIRM – LEADER FIRMS MAP



FOCAL FIRM E

- Culture: an old guild tradition of merchants and craftsmen
- Collaborates with a European partner on precision manufacturing
- Acts as a demonstration center for new processes
- A community leader

Firm E is acting as a learning facilitator.

Firm E is acting as a proximity inducing agent.

Firm E may be a nucleus in an real/potential informal network.

Policy ex: Networking (organizational proximity)