



BUILDING (RELATIONAL) COMPETENCES OR RELYING ON NEIGHBOURS: HOW TO ENHANCE REGIONAL INNOVATION?



by

Patrick RONDE- BETA Strasbourg/GRAICO Mulhouse
Caroline HUSSLER- BETA Strasbourg/RECITS Belfort



Paper presented at the conference « Innovation Networks in Regions »

12-13 September 2005, DIW Berlin

AIMS AND OBJECTIVES



- ✦ Identifying the network relations (if any) that are used up in French manufacturing industries in order to innovate
- ✦ Evaluating the impact on regional innovativeness of those networking activities in comparison to spillover effects and to internal development of competences

THEORETICAL DEBATE

Linear and individual
model of innovation

?

Interactive and collective
process of innovation

?

Spillovers

Deliberate
actions

EMPIRICAL ANALYSIS

✦ Competences for innovation (SESSI inquiry):

- ✦ Internal (technical, organisational)
- ✦ Relational (customers, suppliers, financiers, university, competitors)

✦ Spillovers:

- ✦ Regional Infrastructure of Knowledge (HK, SD)
- ✦ Behaviours of regional actors (Technological neighbours or not)

✦ Analysis at the regional level

THE MODEL



$$\ln I_{is} = \alpha + \sum_{k=1}^{k=7} \beta_k \ln comp_{kis} + \sum_{k=1}^{k=7} \delta_k \ln comp_{kiv(s)} + \sum_{k=1}^{k=7} \chi_k \ln comp_{kiw(s)} \\ + \beta_m \ln pop_i + \beta_n SD_i + \beta_p \ln RD_i + \beta_r \ln HK_i + u_{is}$$

i indexes the geographic unit of observations (NUTS 3- level; 94 observations),

s indexes technological areas (14 sectors),

I stands for the innovative output proxied by patent applications during 1997-2000,

Comp refers to competences in 1997 by firms located in the region,

RD measures R&D expenditures in 1997,

HK refers to the percentage of population devoted to R&D in 1997,

SD is a dummy variable summarizing the impact of regional universities

v(s) refers to the set of sth neighbouring technological areas,

w(s) refers to the set of sth non neighbouring technologies,

pop refers to the population of the territory in 1997.

RESULTS



- ✦ Crucial impact of relational competences (the ideal partner differs across sectors)
- ✦ Larger influence of voluntary collaborations than spillovers
- ✦ Relational behaviours of technological and regional neighbours matter

THEORETICAL AND POLITICAL IMPLICATIONS

- ✦ Differentiated impact of each category of competences – need for qualitative analysis
- ✦ Networking capacities = effective enhancers of innovation
- ✦ Improve relationships between technologically close activities within the region
- ✦But what about the frequency of the interactions?