



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



by

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# 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



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Linear and individual  
model of innovation

Interactive and collective  
process of innovation

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Spillovers

Deliberate  
actions

# EMPIRICAL ANALYSIS

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## ✦ 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

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- ✦ 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?