

International Economics Seminar

Lecture 3

Clusters vs. pipelines: Global value chains and firm-level performance

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with credit to my colleague *Rune Dahl Fitjar*



Clusters vs. Pipelines: Aims of lecture

- ▶ **What happens to firm-level and territorial competitiveness in a more integrated environment?**
 1. Theoretical and policy options
 2. Cluster vs. Pipelines
 3. How does this works in practice?
 4. The case of Norway

Two dynamic economic forces

▶ **Buzz** (Storper and Venables, 2004)

1. Face-to-face as a central element for the coordination of the economy
2. Agglomeration
3. Urbanisation: Nursery cities (Duranton and Puga, 2001)
4. Externalities: Innovation and economic growth

▶ **Archipelago economy** (Veltz, 1998)

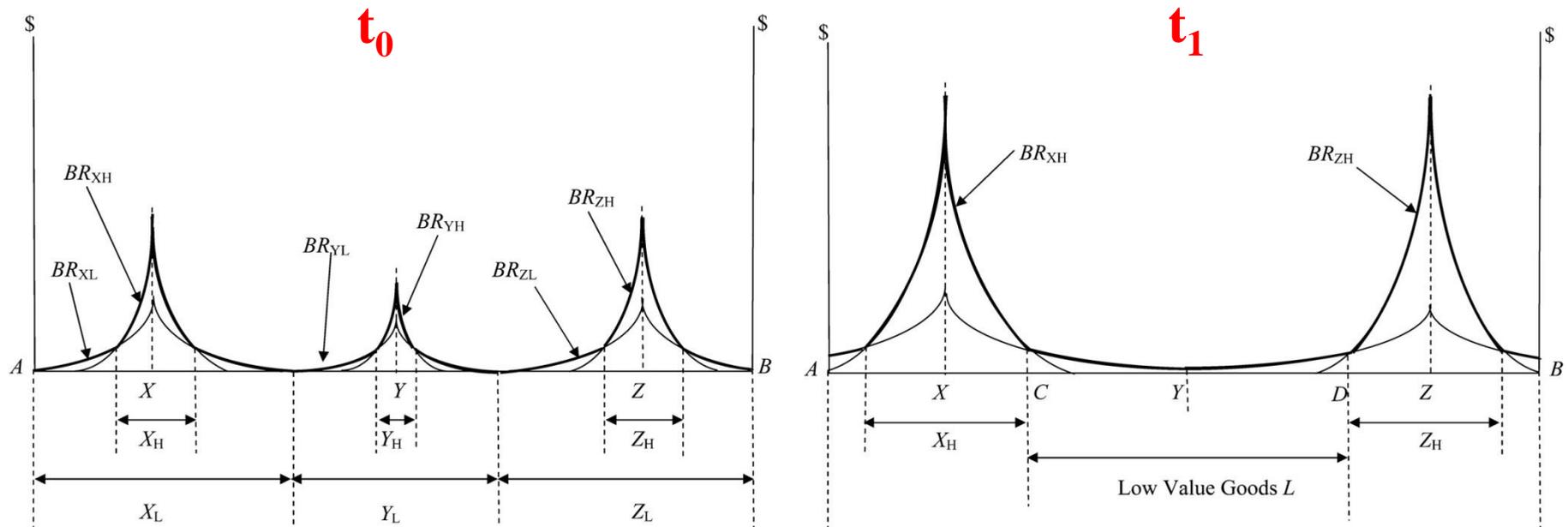
1. Interaction at a distance, overlooking traditional hinterlands
2. Through global pipelines (Bathelt et al., 2004)
3. Linking core nodes in distant locations (GaWC, Peter Taylor)

Who benefits?

- ▶ **Big cities and urban agglomerations**
 1. Interaction at close quarters matters
 2. Agglomeration generates externalities
 3. Size is crucial in establishing international links
 4. The key international links are set up between large metropoli (Taylor, 2004)
- ▶ **A new world driven by large cities**
- ▶ **But the majority of the population does not live in large cities**
- ▶ **What happens to them?**
- ▶ **What is the future for intermediate and peripheral regions?**
- ▶ **Two options**

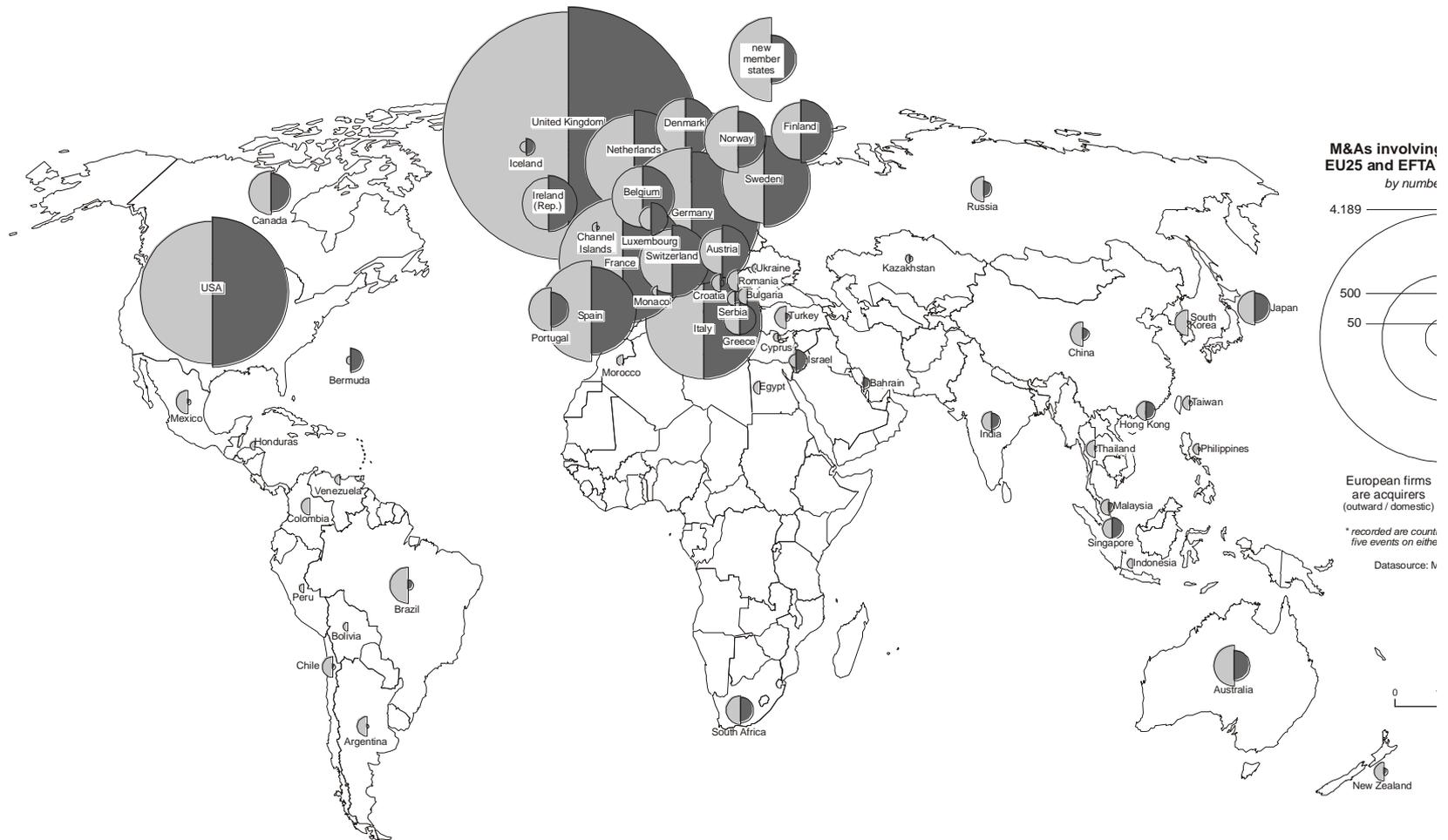
Option 1: Decay and vanish

1. Agglomerations are more dynamic
 2. Agglomerations attract resources from neighbouring areas
 3. Spread effects never materialise
- ▶ **Intermediate areas slowly decay** (McCann, 2008)
 - ▶ **Or become permanently subsidised**



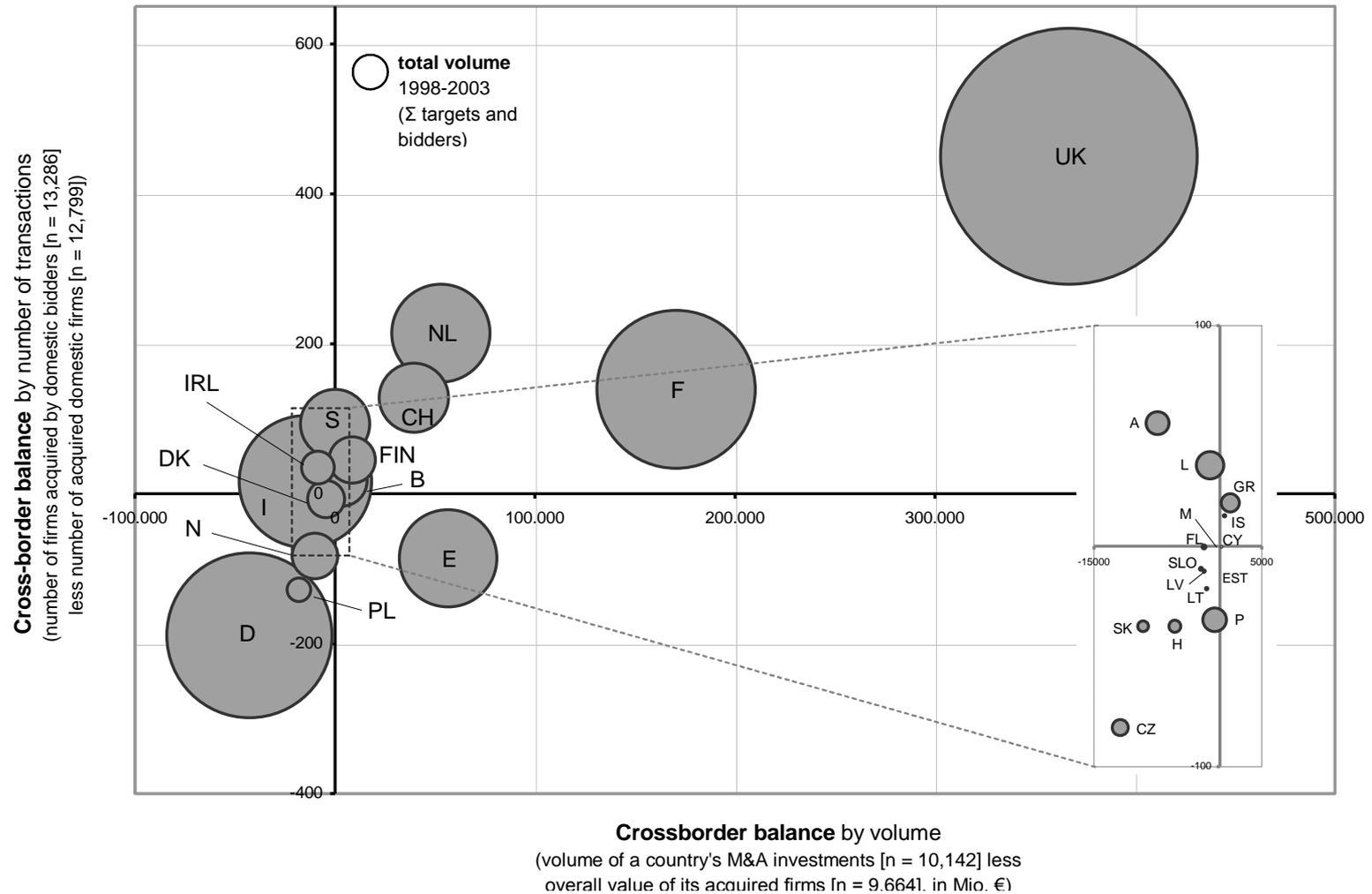
Source: McCann, 2008

Competitiveness risks: FDI



The European market of corporate takeovers at global scales: M&As involving firms located in EU25 and EFTA states, 1998-2003 (by number of events)

Competitiveness risks: M&As



Cross-border interactions in the markets of M&As in Europe

Option 2: Fight for survival

- ▶ **Try to generate economic dynamism through innovation and knowledge**
 1. And many of the dynamic areas in places like Europe are, in fact, intermediate cities
- ▶ **Again, two options**
- ▶ **Option a): Interaction at close quarters (*Buzz* option = clusters)**
- ▶ **Option b): Interaction at geographical distance (*Pipeline/global value chains* option)**

The fight for survival (Buzz option)

- ▶ **Option we have been sold**
- ▶ **Reproducing buzz in areas with relatively low levels of agglomeration**
 1. Constant interaction
 2. Competition with cooperation (Becattini, 1977, Industrial districts literature)
 3. Clustering (Porter, 1990)
 4. Regional systems of innovation
 5. Local trust
 6. Endogenous growth
- ▶ **Sectoral and geographical proximity promote interactions, networks and flows of tacit knowledge**
- ▶ **Agglomeration economies (clusters) compensate for SME's limited economies of scale (Maskell 2001)**

The fight for survival (Buzz option II)

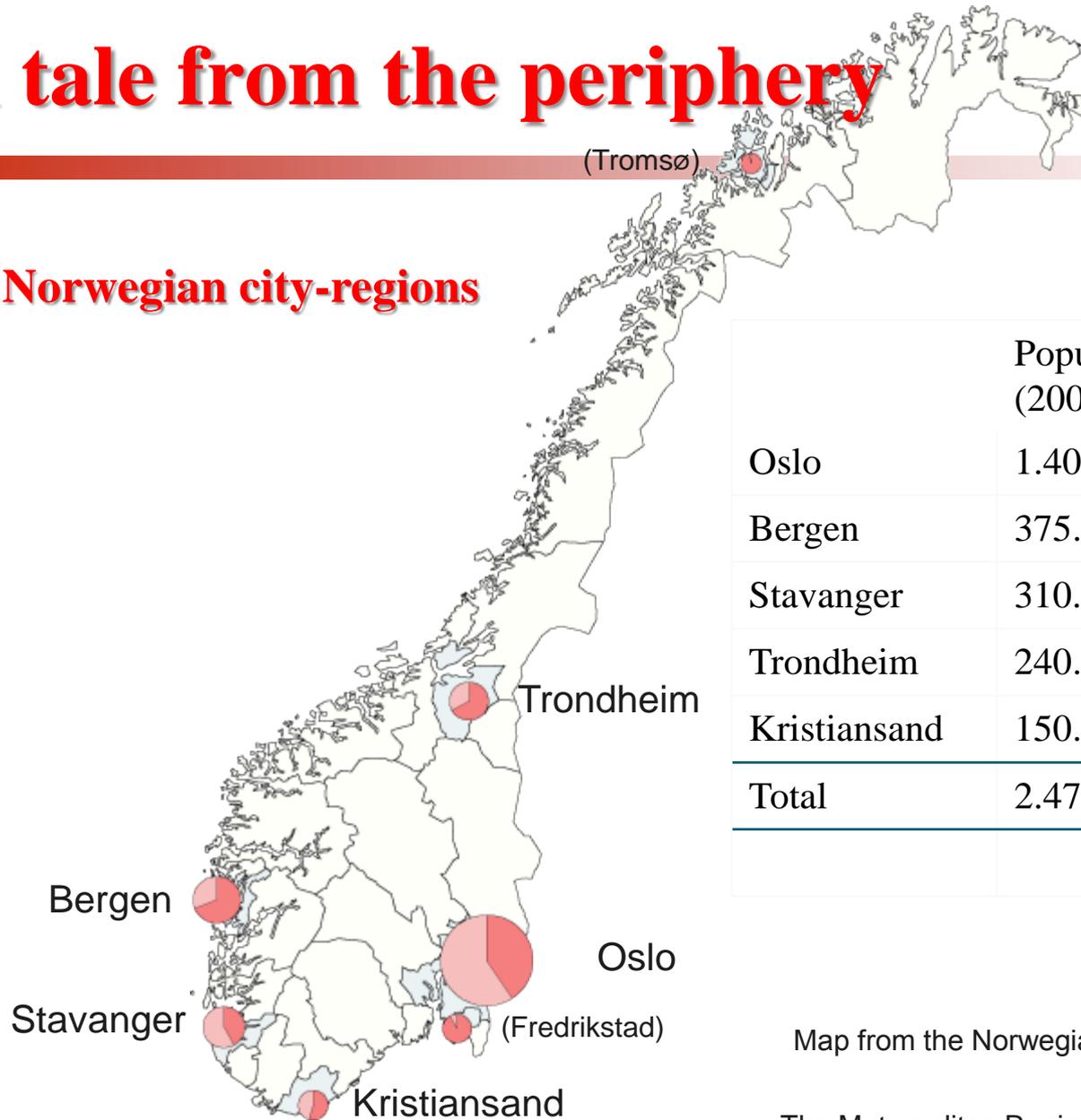
- ▶ **Build-up of trust in institutionally thick environments are crucial for the development of local buzz (Amin and Thrift 1995, Storper and Venables 2004)**
- ▶ **Tacit knowledge travels badly**
- ▶ **Firms in clusters benefit simply from “being there” (Gertler 1995)**
- ▶ **But, does this work?**
- ▶ **Are intermediate and peripheral regions not at a disadvantage because of lack of economies of agglomeration?**
- ▶ **Is there not a risk of lock-in?**

The fight for survival (GVC option)

- ▶ **Interaction at a distance**
- ▶ **Costlier and more difficult to achieve**
- ▶ **But, does this work?**
- ▶ **Where does one start?**

A tale from the periphery

Norwegian city-regions

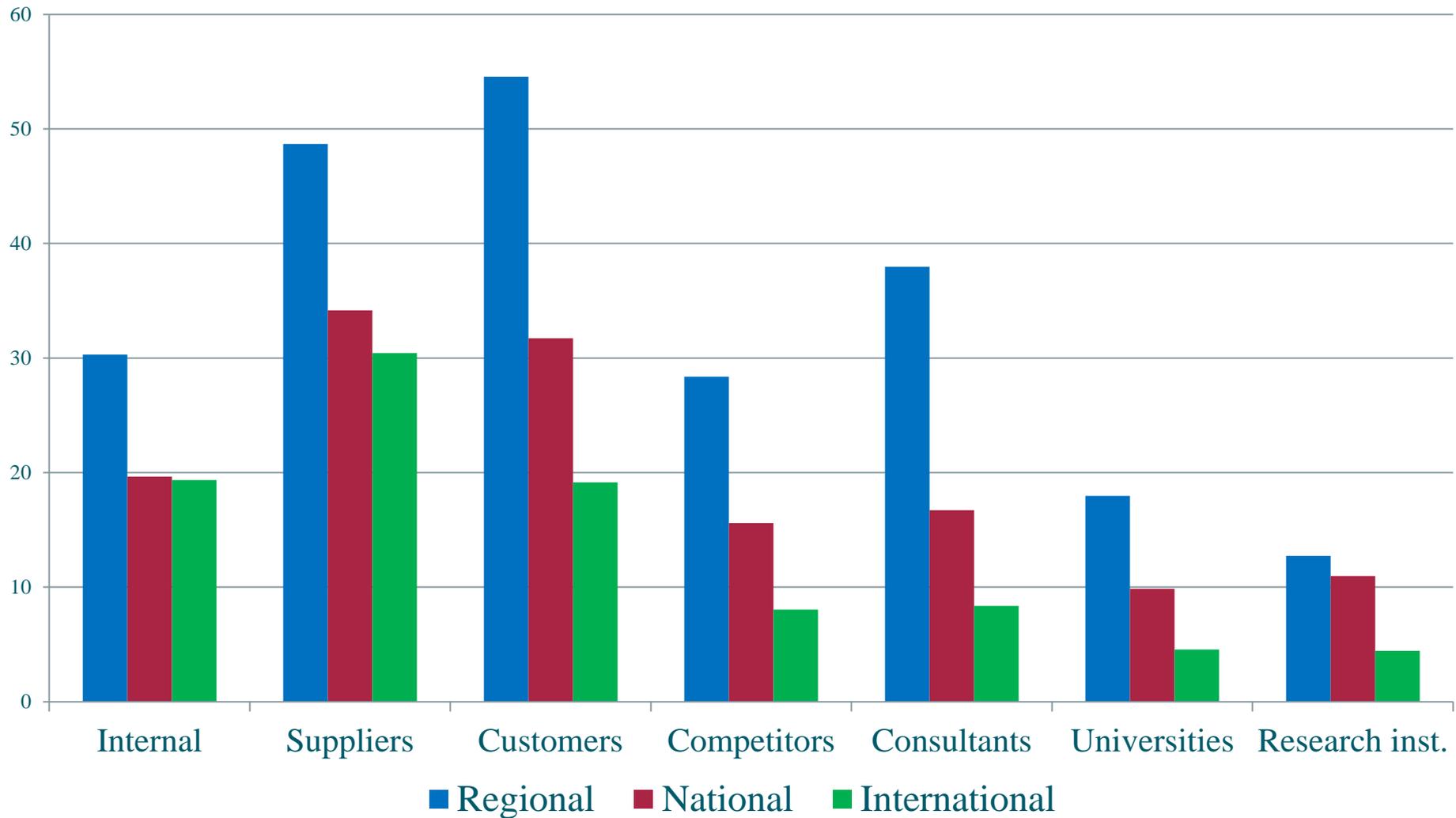


| | Population (2009) | Businesses > 10 empl | Sample |
|--------------|----------------------|-------------------------|-------------|
| Oslo | 1.400.000 | 4921 | 403 |
| Bergen | 375.000 | 1210 | 401 |
| Stavanger | 310.000 | 1282 | 400 |
| Trondheim | 240.000 | 901 | 300 |
| Kristiansand | 150.000 | 469 | 100 |
| Total | 2.475.000 | 8783 | 1604 |

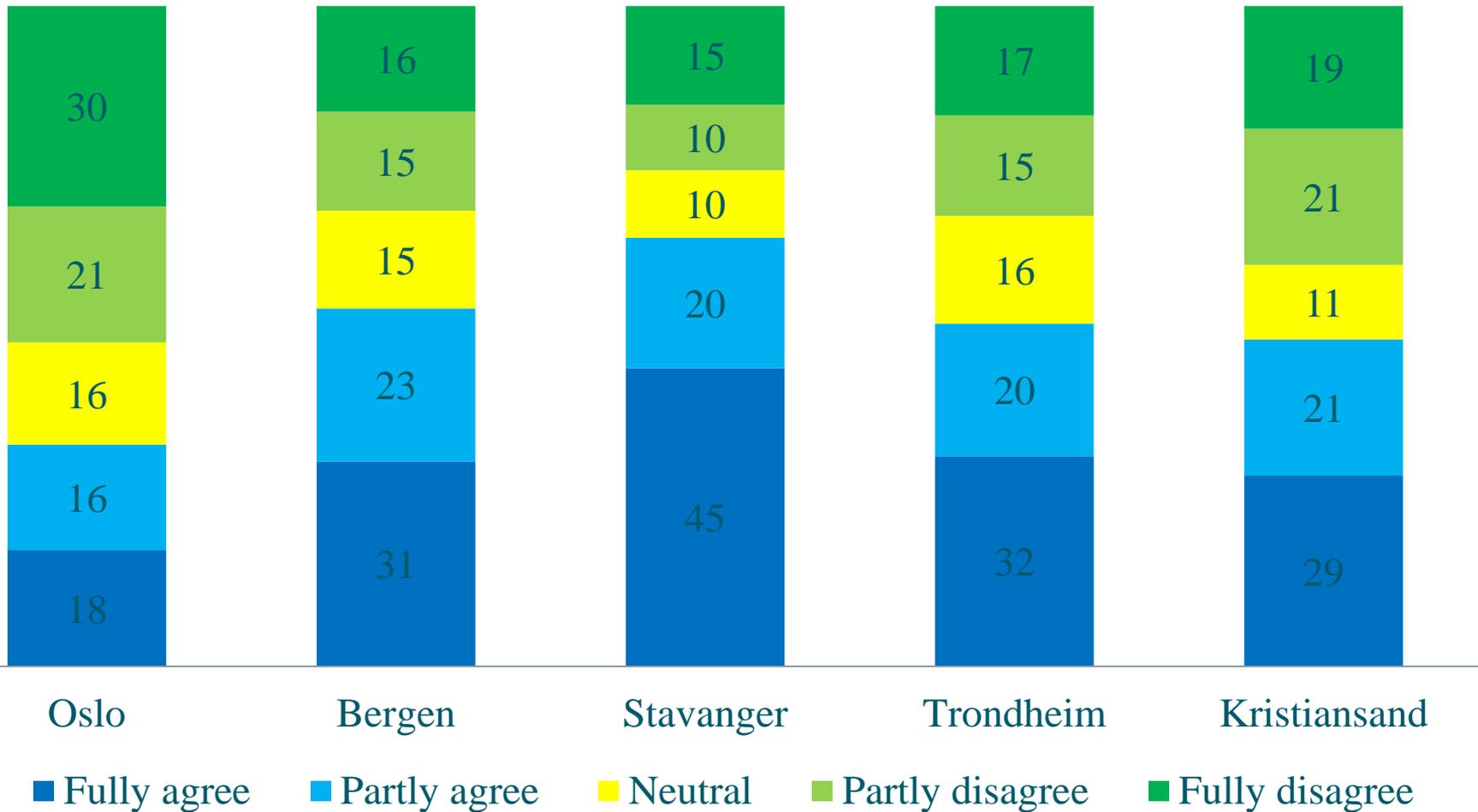
Map from the Norwegian Government's white paper no. 31, 2002-03:

The Metropolitan Region Report: On the development of policies for metropolitan regions.

They seek local partners...

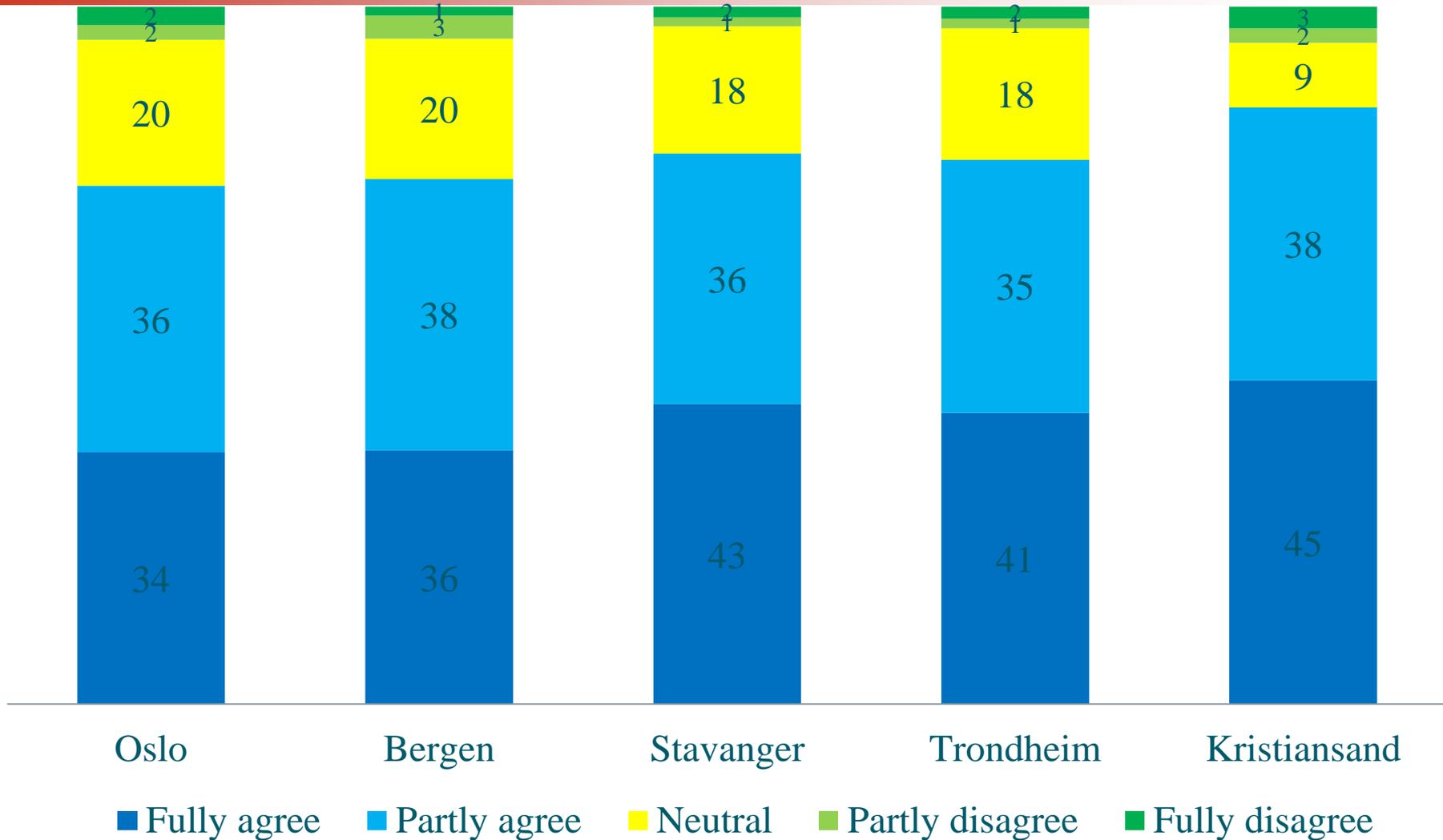


They prefer local partners...



«I find it easier to cooperate with local and regional actors than with people from outside the region»

They trust one another...



«I trust other business managers in this region»

They promote clusters...

- ▶ **Norway is a country which has actively promoted the creation of clusters in the last two decades**
- ▶ **Interaction at a distance is also present**
 1. Promotion offices abroad
 2. Support to attend fairs, exchange knowledge and information
 3. Favourable policy towards the placement of human capital abroad
- ▶ **But, pipeline policies have played second fiddle to cluster policies**

Does local cooperation lead to innovation?

Logistic regression models, N = 1604.

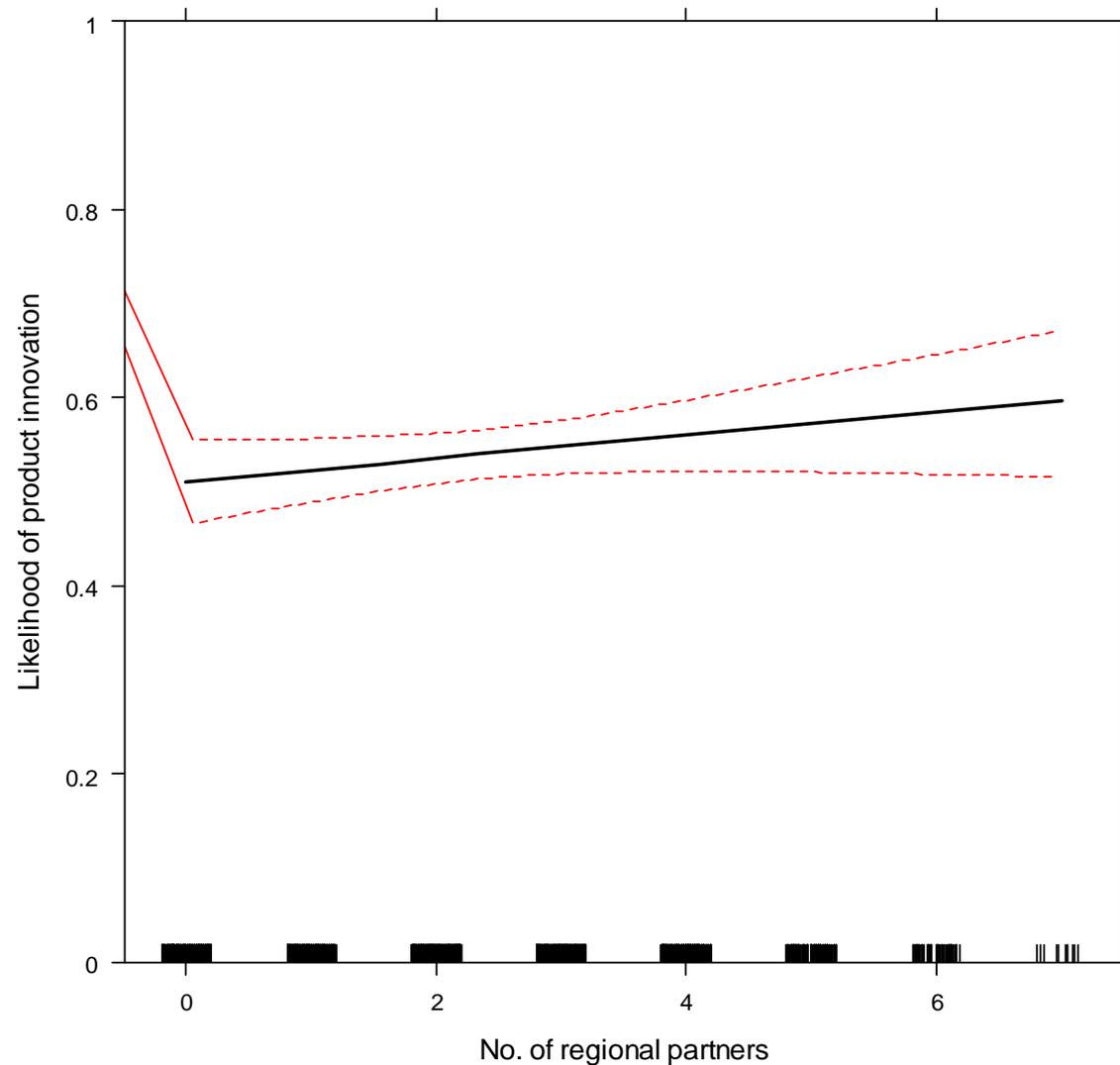
Controls: Sector, region, education, age, board memberships

| | Product | New to market | Process | New to industry |
|-------------------------------------|-------------------|-------------------|-------------------|------------------|
| Diversity of local partners | 0.05 (0.03) | 0.05 (0.04) | 0.03 (0.03) | 0.01 (0.04) |
| Diversity of national partners | 0.05 (0.04) | 0.03 (0.04) | 0.07 (0.04) | 0.07 (0.05) |
| Diversity of international partners | 0.19*** (0.05) | 0.23*** (0.05) | 0.09 (0.05) | 0.13** (0.05) |
| % foreign ownership | 0.50* (0.21) | 0.43* (0.19) | 0.28 (0.19) | 0.13 (0.22) |
| Log no. of employees | 0.22*** (0.06) | 0.15* (0.06) | 0.25*** (0.06) | 0.18** (0.07) |
| Nagelkerke R ² | 0.15 | 0.15 | 0.11 | 0.11 |

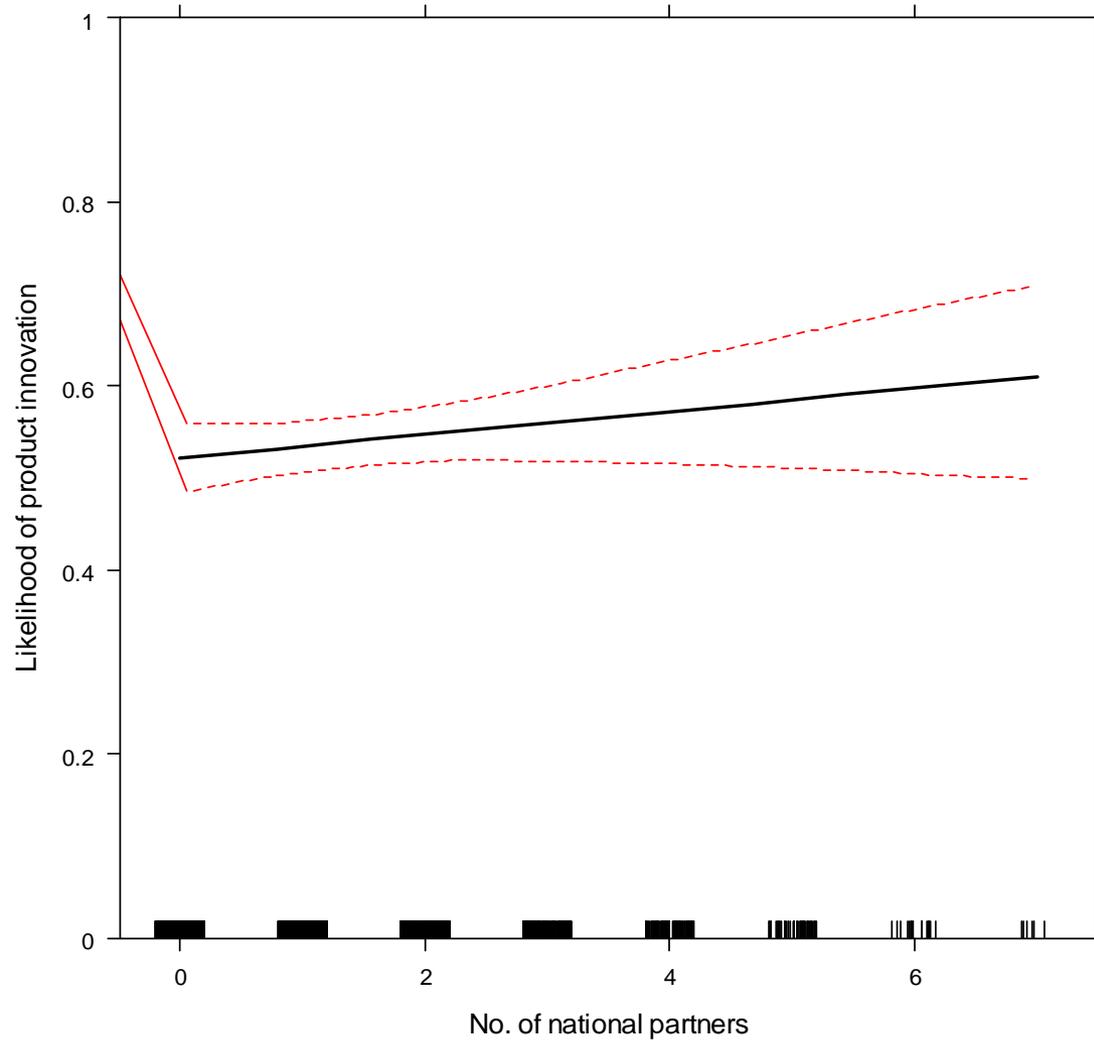
* p < 0.05, ** p < 0.01, *** p < 0.001

Diversity of international partners makes all the difference

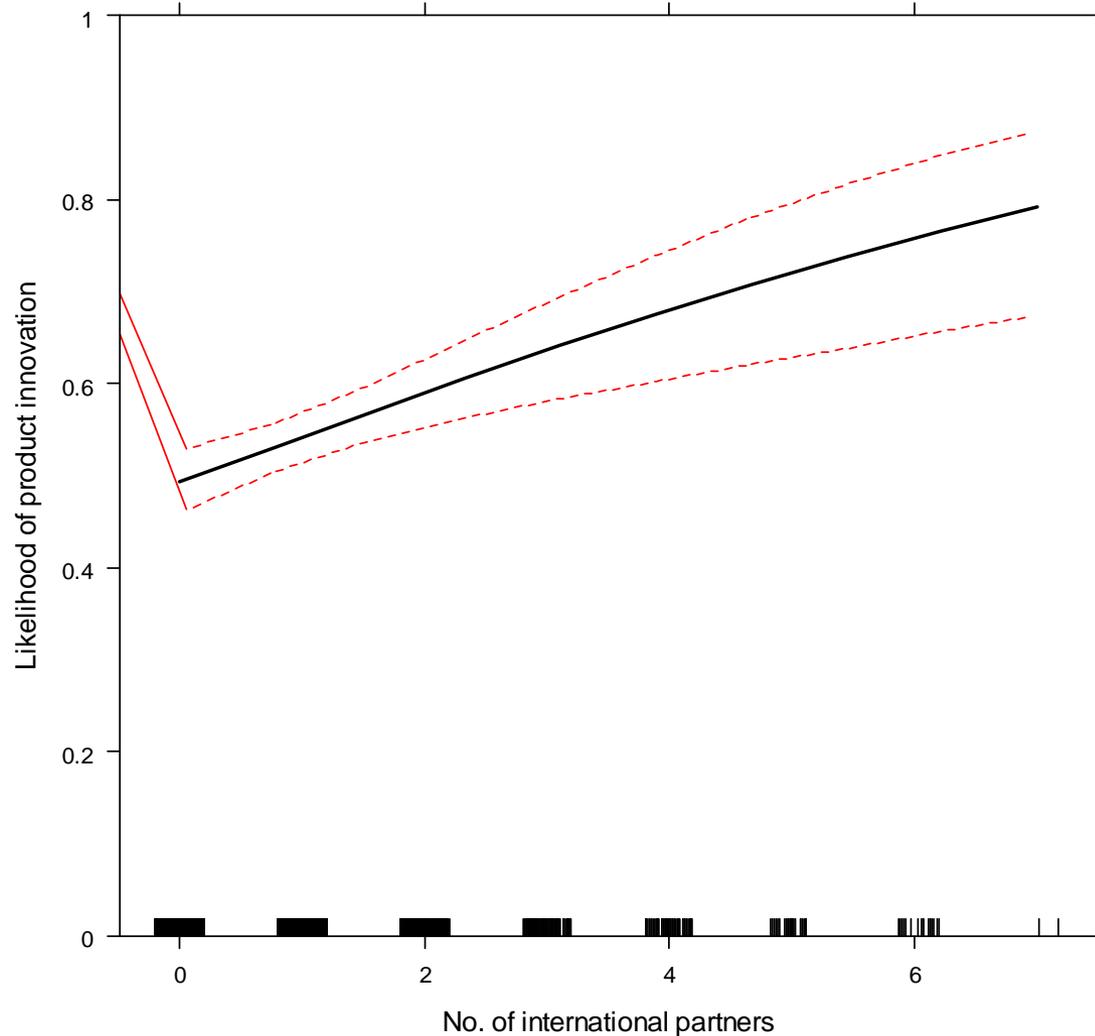
But regional interaction does not suffice



National cooperation and product innovation

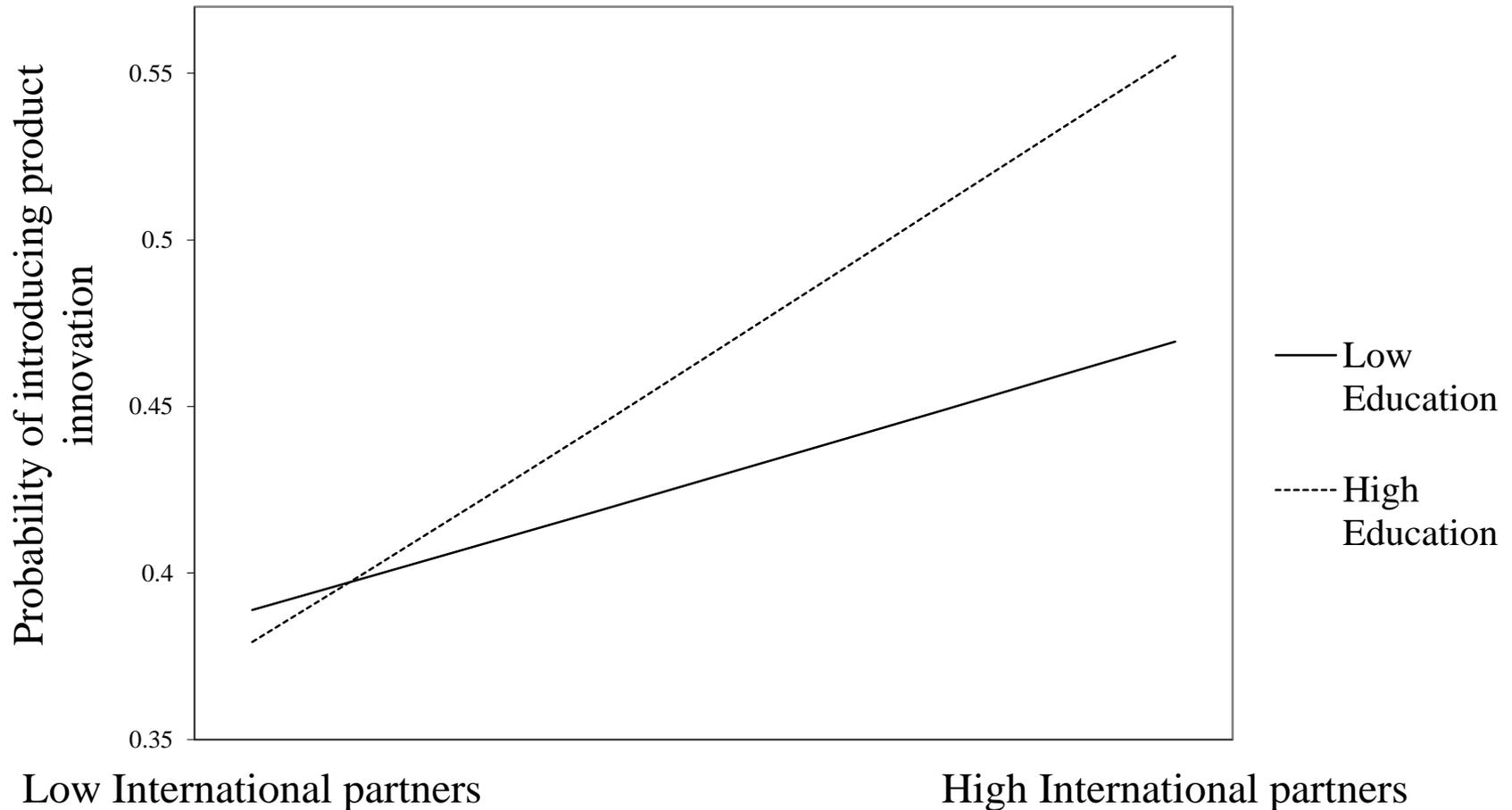


Intl' cooperation does the trick



International links interact with education

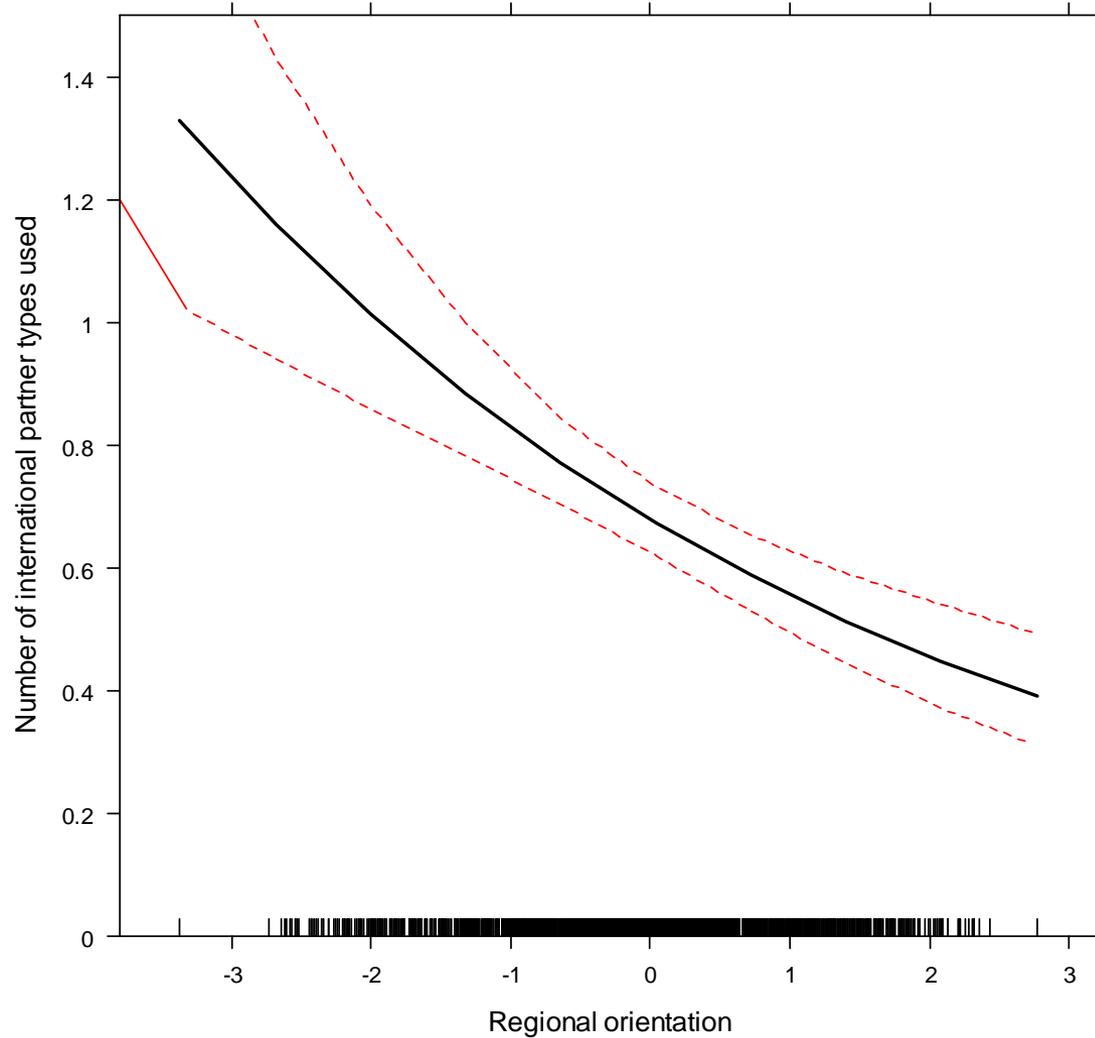
Foreign partners always have a positive effect, but more so in highly educated regions



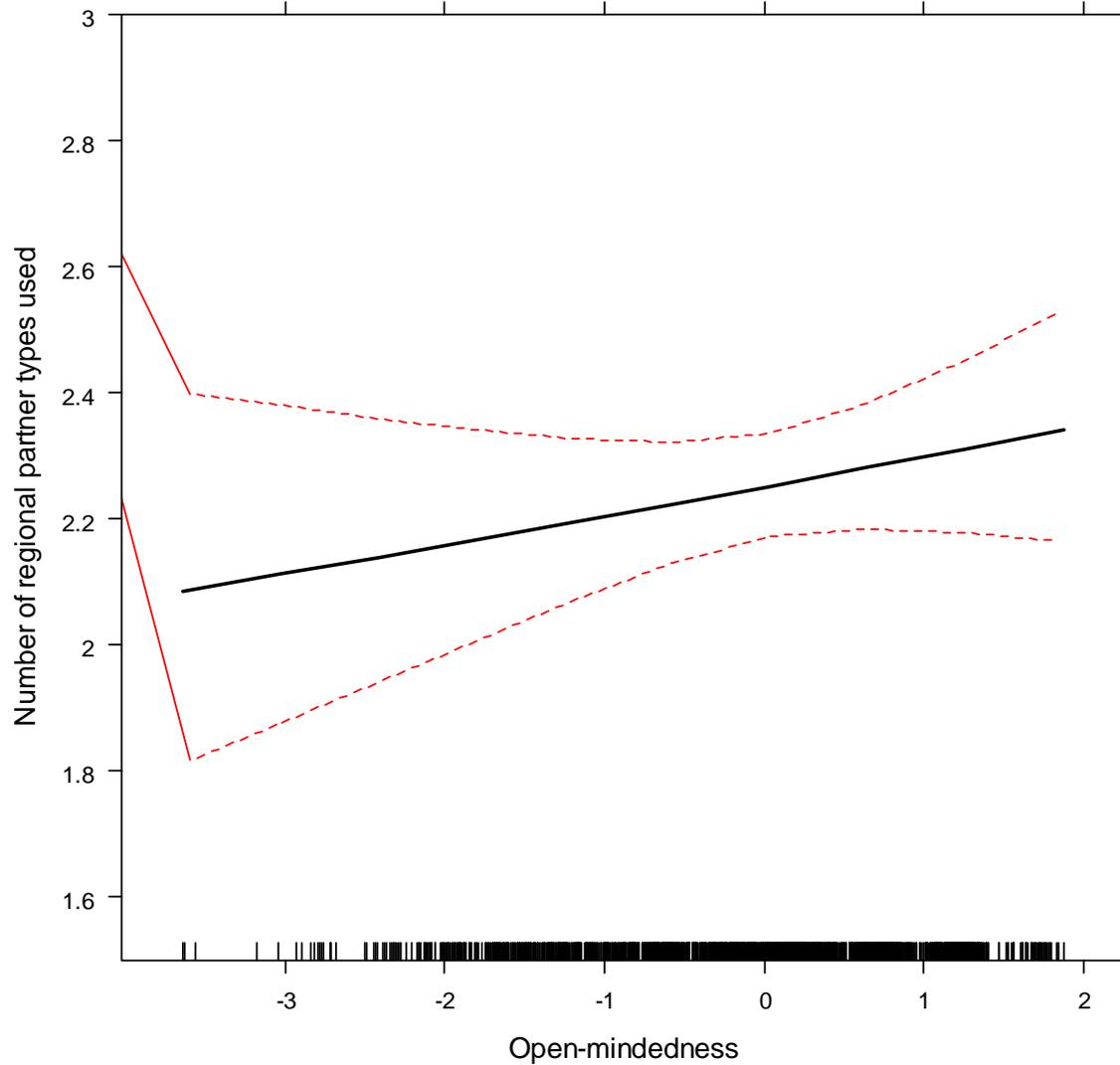
Patterns of cooperation

| | | Neg. bin. regressions, N = 1604 | Regional | National | Internat'l |
|-------------------------|---------------------------------------|---------------------------------|------------|--------------|------------|
| Manager characteristics | <i>General trust (comp. 1)</i> | | 0.07*** | 0.06* | 0.00 |
| | <i>Work-related trust (comp. 4)</i> | | 0.02 | -0.01 | -0.03 |
| | <i>Open-mindedness (comp. 2)</i> | | 0.02 | 0.01 | 0.23*** |
| | <i>Regional orientation (comp. 3)</i> | | 0.00 | -0.16*** | -0.20*** |
| | <i>Education</i> | | -0.00 | 0.03* | 0.07*** |
| | <i>Age</i> | | -0.01*** | -0.00 | -0.01 |
| | <i>Log no. of directorships</i> | | 0.01 | 0.06 | -0.01 |
| Firm char. | <i>Log no. of employees</i> | | 0.06** | 0.16*** | 0.15*** |
| | <i>Foreign-owned share</i> | | -0.14* | -0.08 | 0.80*** |
| | <i>Sector</i> | | Controlled | Controlled | Controlled |
| | <i>Region</i> | | Oslo ÷*** | O/B/S < K/T* | Not sign. |
| | <i>Pseudo R²</i> | | 0.02 | 0.04 | 0.12 |

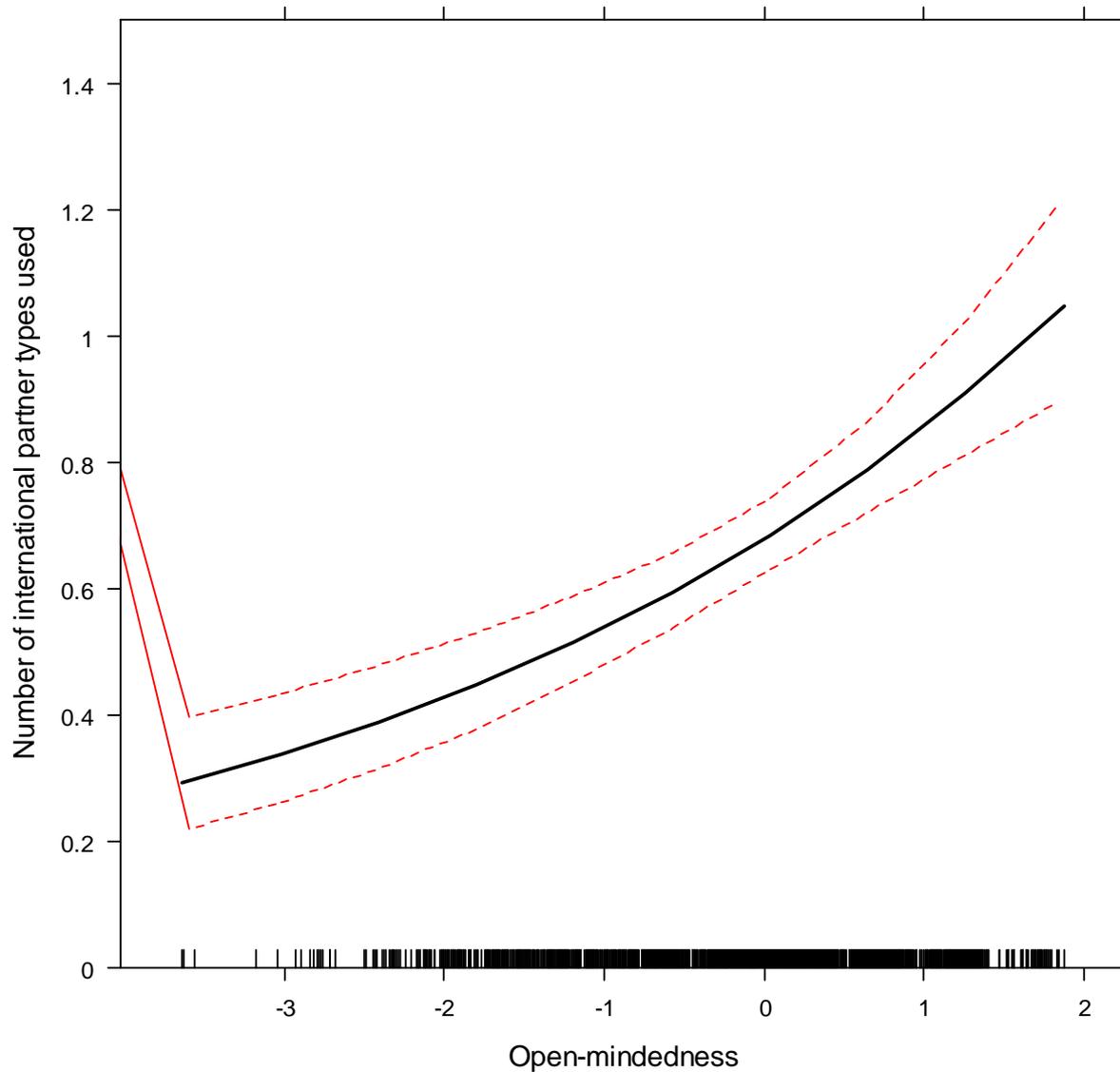
Regional orientation leads to lock-in



Open-mindedness and regional cooperation



Open-mindedness and intl' cooperation



Conclusions

- ▶ **Buzz and archipelago economies seem to favour large agglomerations**
- ▶ **Intermediate and peripheral areas are on the receiving end**
- ▶ **They must act in order to remain competitive**
- ▶ **But the recipes they are being sold may not work and be, at least in some cases, counterproductive**
- ▶ **Too much local interaction may lead to lock-in, stifle the diffusion of knowledge and ideas and reduce innovation**
- ▶ **Perhaps, after all, buzz is for large agglomerations, while intermediate regions should invest in building pipelines/GVC and their own archipelago economies**

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