



Global Innovation Networks Policy Implications

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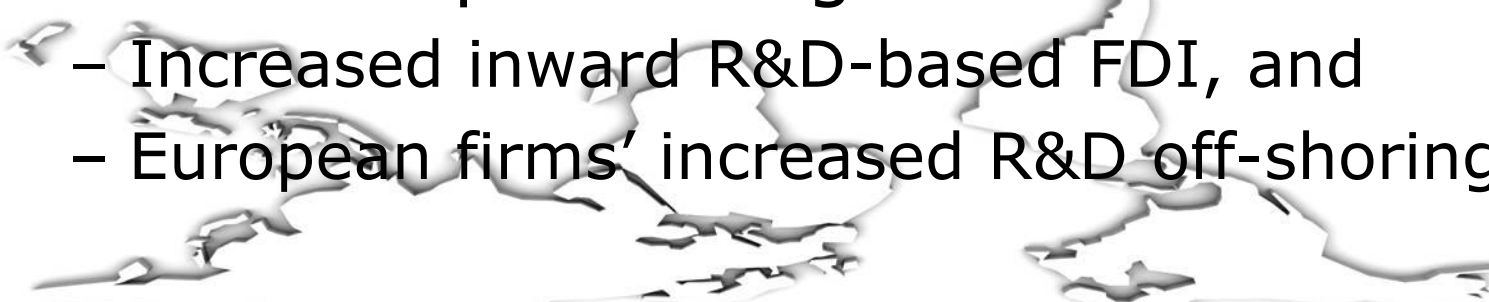
- Evidence from INGINEUS
 1. Limited global innovation networks
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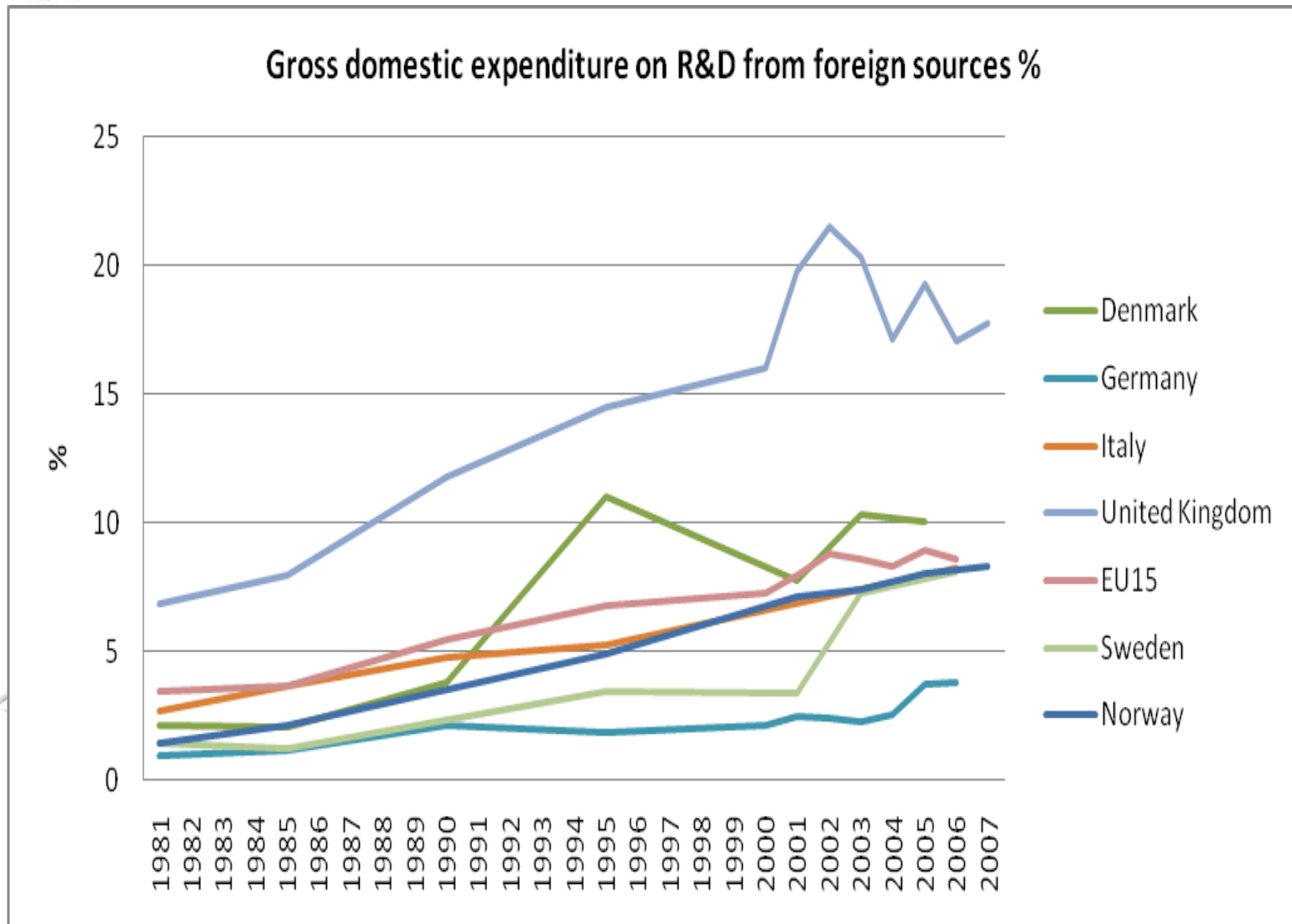
EVIDENCE 1

- Limited number of GINs:
 - Only 1,2% of the INGINEUS survey are highly globalized, innovative & networked
- Yet, evidence of broad medium-level g-i-ns
 - Around 50% of all firms are global-innovative-networked at a medium level.
 - Hence GINs might be a gradually emerging phenomenon.
- This corresponds to general trends:
 - Increased inward R&D-based FDI, and
 - European firms' increased R&D off-shoring.





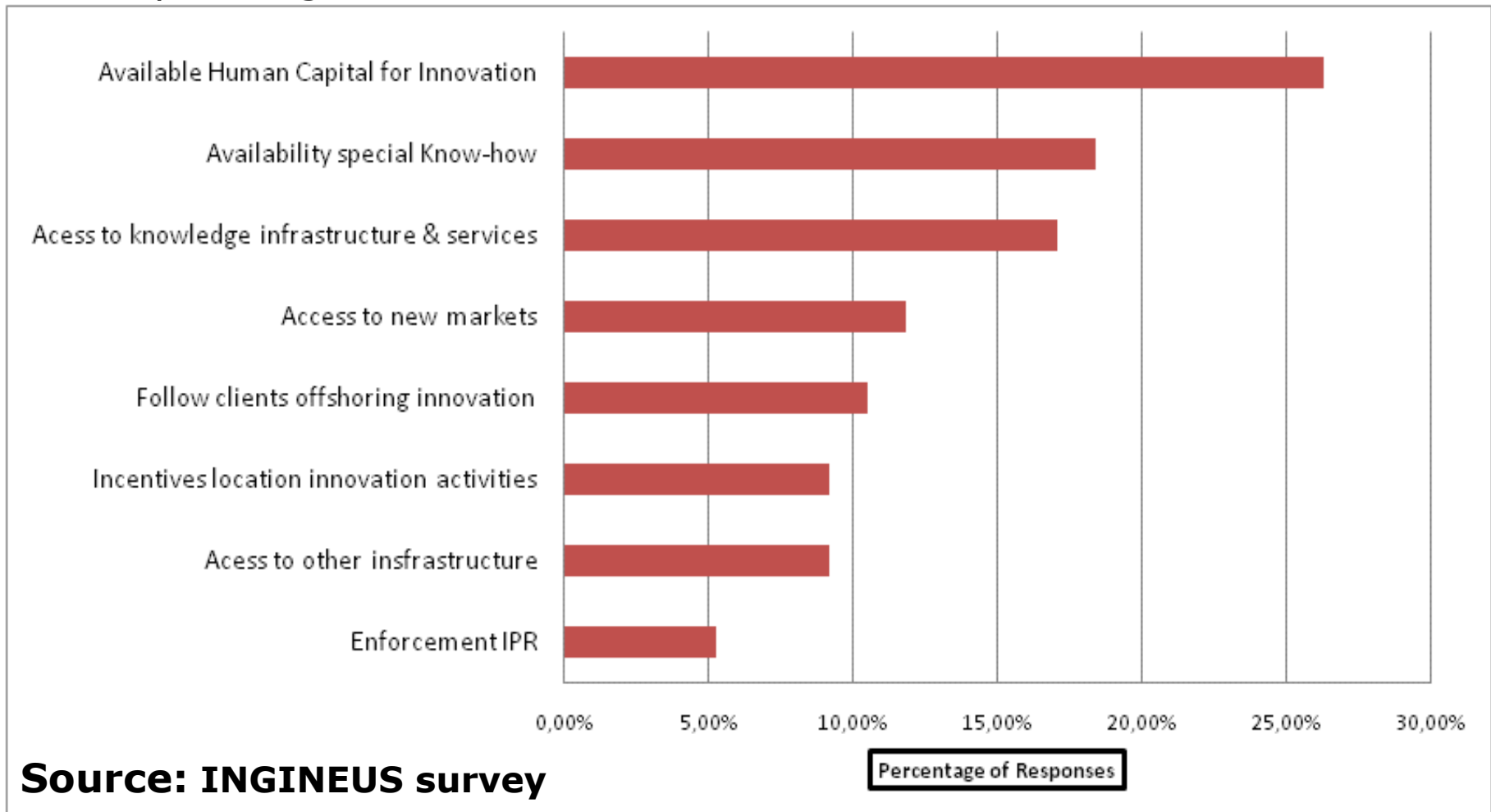
Inward R&D FDI by European INGINEUS country





Outward: European Firms' Reasons for Taking Part in Global Innovation Networks

Percentage of responses about European firms' reasons for taking part in global innovation networks.





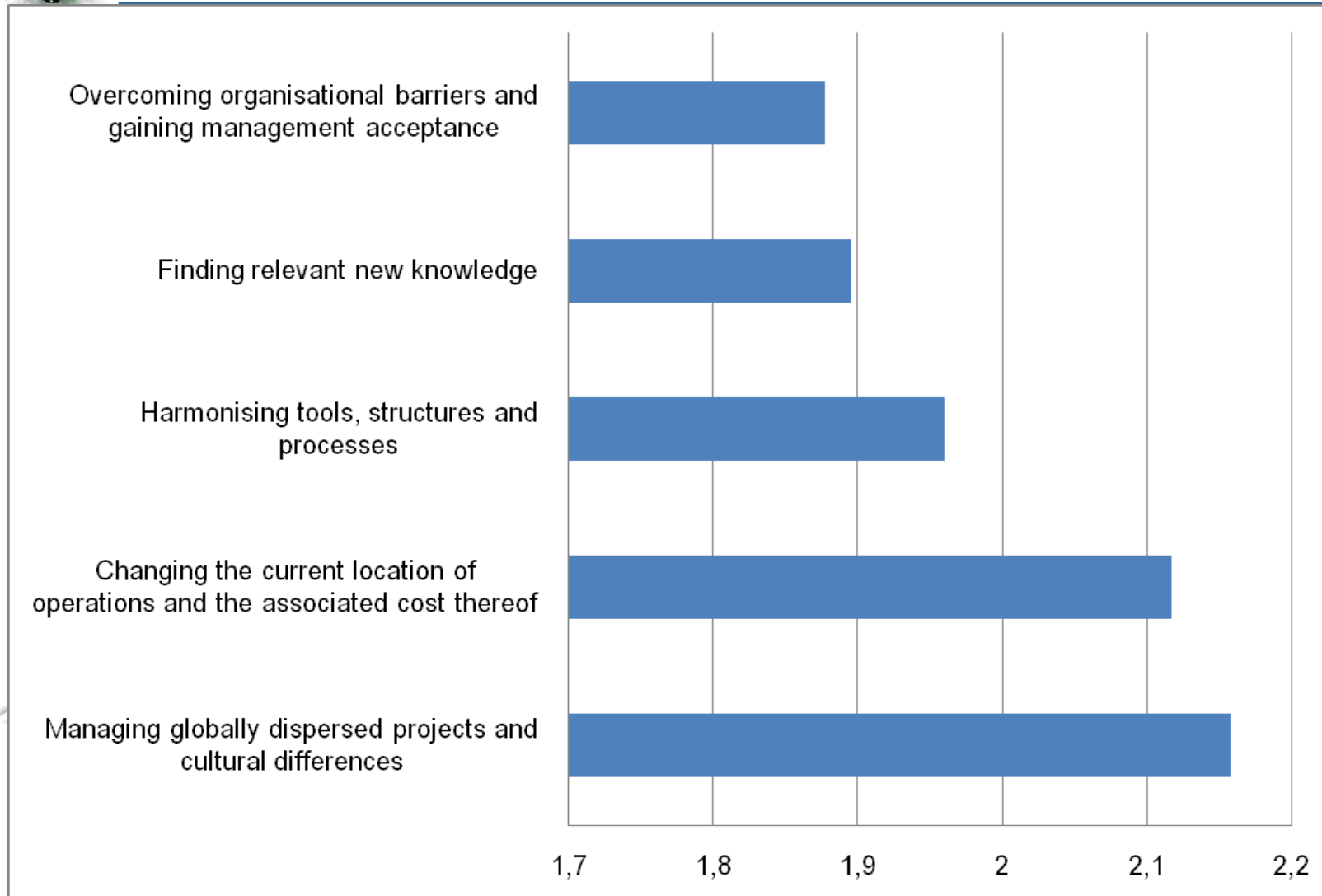
EVIDENCE 2: Institutional issues

- Institutional barriers: evidence from INGINEUS survey:
 - 18% of firms do not face barriers
 - Low-medium level of barriers (average below 2,5 threshold)
 - Higher barriers: management of cultural dimensions & costs of re-location.
- Policy-relevant factors in the past:
 - Most negative: availability of venture capital, IPR regulations; and FDI regulations
 - Most positive: Training & skills, international exposure, public incentives





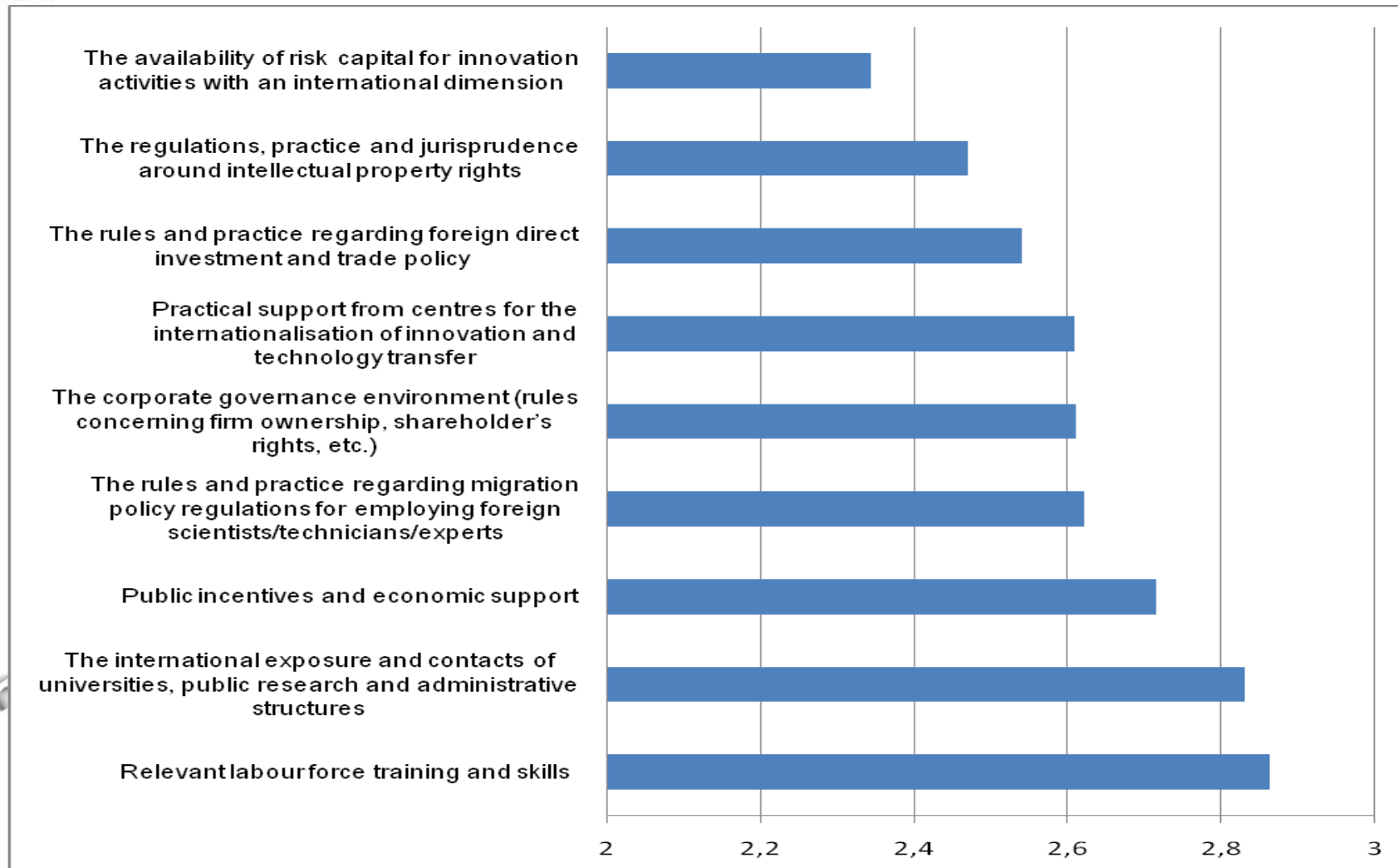
Barriers and challenges that European firms encounter when collaborating with other firms or organizations abroad



Legend: 1=small barrier - 4= extreme barrier



Policy-related factors in the internationalization of European firms' innovation activities during the past 3 years



Legend: :1= highly negative factor; 4= highly positive factor



EVIDENCE 3

GINs impact in national innovation systems

- GINs of augmenting (frontier) knowledge have a positive impact as they mobilize national innovation networks by:
 - widening their scope and size,
 - cutting across disciplines,
 - increasing specialization, and
 - stimulating internationalization
- GINs of exploiting knowledge (developing/ combining existing knowledge) do not do mobilize national networks.
- These qualitative findings coincide with quantitative findings on determinants of GINs in the Norwegian context.



General Policy Implications

- **The foresight exercise :**

- Civil servants and stakeholders from at national and EU-level
- Evidence sent before hand & presentations in the workshop
- Focus on GINs in the future: identified one scenario, the desirable scenario.
- Policy implications were discussed on that basis.





General Policy Implications

- **Policy implication 1: No need for direct policy action towards GINs**
 - GINs are still very limited, hence no major issue for policy makers today.
 - Policy implications in the future: The current trends towards the globalization of innovation will expand in the future; therefore policy-makers must monitor the impact of g-i-ns on the national innovation context.





General Policy Implications

- **Policy implication 2: Focus on the knowledge bases of global innovation networks:**
 - Evidence from INGENEUS shows that 'augmenting' or analytical knowledge-based innovation networks are more globalized than those which are 'exploiting' or synthetic knowledge-based.
 - Evidence shows also that "augmenting" GINs have a positive 'mobilization' impact in the national system.
 - Policy implications in the future: These 'mobilizing' trends must be monitored, and policy-makers need to make sure they continue.





General Policy Implications

- **Policy implication 3: Stimulate 'augmenting' knowledge base and capacity-building**
 - Many GINs aim at tapping into/ creating analytical/ augmenting knowledge.
 - Hence, in the future, investing in R&D of cutting-edge nature will continue to be of paramount importance for any country. Specialized cutting-edge knowledge will continue to be essential in order to be relevant in sectors with highest growth potential.





General Policy Implications

- **Policy implication 4: Focus on stimulating SMEs**
 - Most GINs are related to large firms. Yet, SMEs are important for two reasons:
 - because they act as the linchpin between the large GIN and the local context.
 - 'born global' SMEs, particularly in the ICT sector, offer new possibilities, as they seek specialized market niches in a global context.
 - In the future SMEs are very active and needed: Policy makers must encourage global networkness approach of new firms from beginning





General Policy Implications

- **Policy implication 5: Internationalization strategies of R&D policy must support network approach**
 - Internationalization strategies of national research and innovation activities put emphasis on attracting inward R&D FDI, and on export innovative products.
 - In the future R&D policies it will be important that R&D policies do not become protectionist due to the economic crisis.
 - In the future R&D internationalization strategies must support GINs approach.
- **Policy implication 6: Improve network management in global context**
 - Policy-makers must consider helping the development of management techniques: international business education, and ICT platform development



Specific policy implications for Europe

- Focus to make Europe a hub in global innovation: avoid isolationism and protectionism
- Strengthen knowledge-intensive competences
- Move towards more open and flexible migration policies
- Stronger and cheaper IPR in Europe
- Venture capital availability in Europe





Specific policy implications for emerging economies

- IPR regimes seem to be important
- Building knowledge capacity – particularly relevant for emerging economies
- Avoid crowding out effect on the labour market of emerging economies by providing sustained human resources
- Promote policies anchoring 'external knowledge' into the local context: This is most possible in regions with certain institutional 'thikness'.





Thank you for your attention

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