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Results and Impact of national Foresight studies

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Dr. Dirk Meissner

Deputy Head and Research Professor

Research Laboratory for Science and Technology Studies

Higher School of Economics - National Research University

Institute for Statistical Studies and Economics of Knowledge



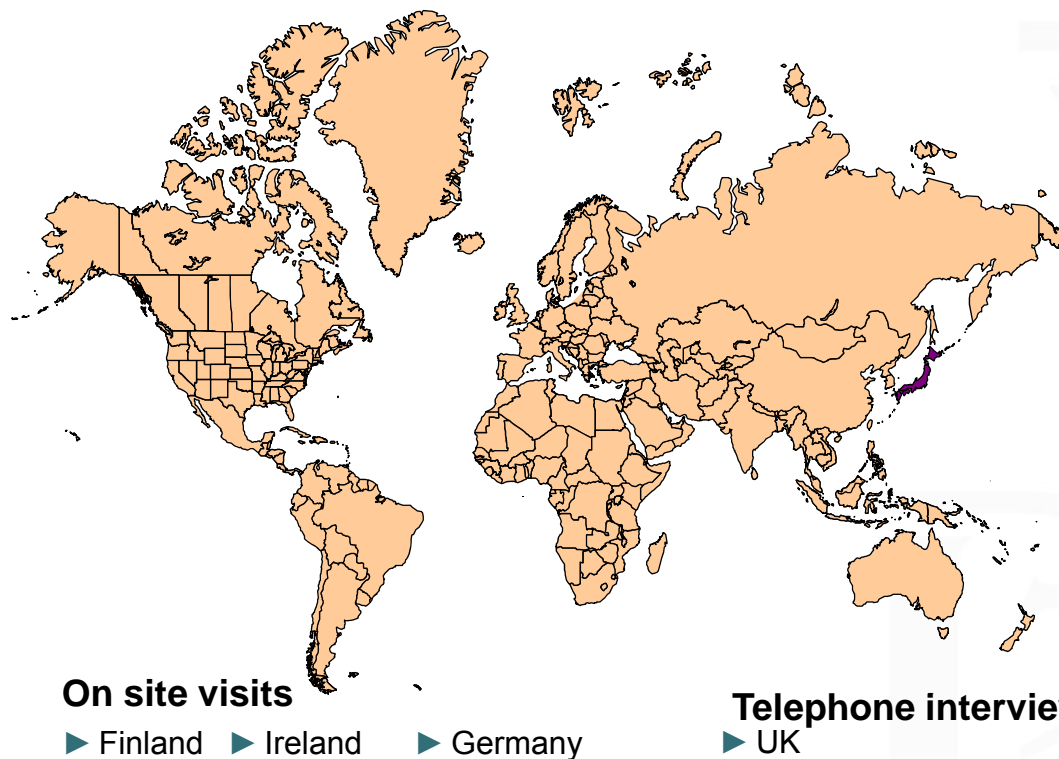
Results and impact of national Foresight studies

- Foresight studies have significant impact on the design of national innovation systems
- National innovation performance seems to be influenced long term by Foresight studies
- Foresight studies are used as a instrument to prepare nations for meeting future challenges
- Foresight-Studies contribute
 - to enhanced industry-science relationships
 - the cooperation and coordination of administrative and political institutions and actors
 - provide a useful tool for university strategy development
- Foresight studies are used as radar by industry to identify societal feelings and development trends

A Foresight study is a participative process between actors from academia, business, government and other societal non governmental organizations with the aim to identify and assess potential future developments in science, technology, business and society.

- Long term focus
 - ☛ Time horizon between 10 and 30 years
 - ☛ Time horizon differ according to topic discussed
- Open and interdisciplinary discussion and communication
 - ☛ Exchange between actors from policy administration, industry, science and society
 - ☛ Interplay assessment between science, technology, economy, culture and social impacts is crucial
 - ☛ Network strengthening to implement results later
- Systemic approach
 - ☛ integrative approaches with different instruments and methods
 - ☛ Match of diverging interests and aims
- consensus:
 - ☛ Get all parties on board
- Commitment:
 - ☛ Clear responsibilities for studies and result implementation

34 countries studied; 4 countries in-depth research



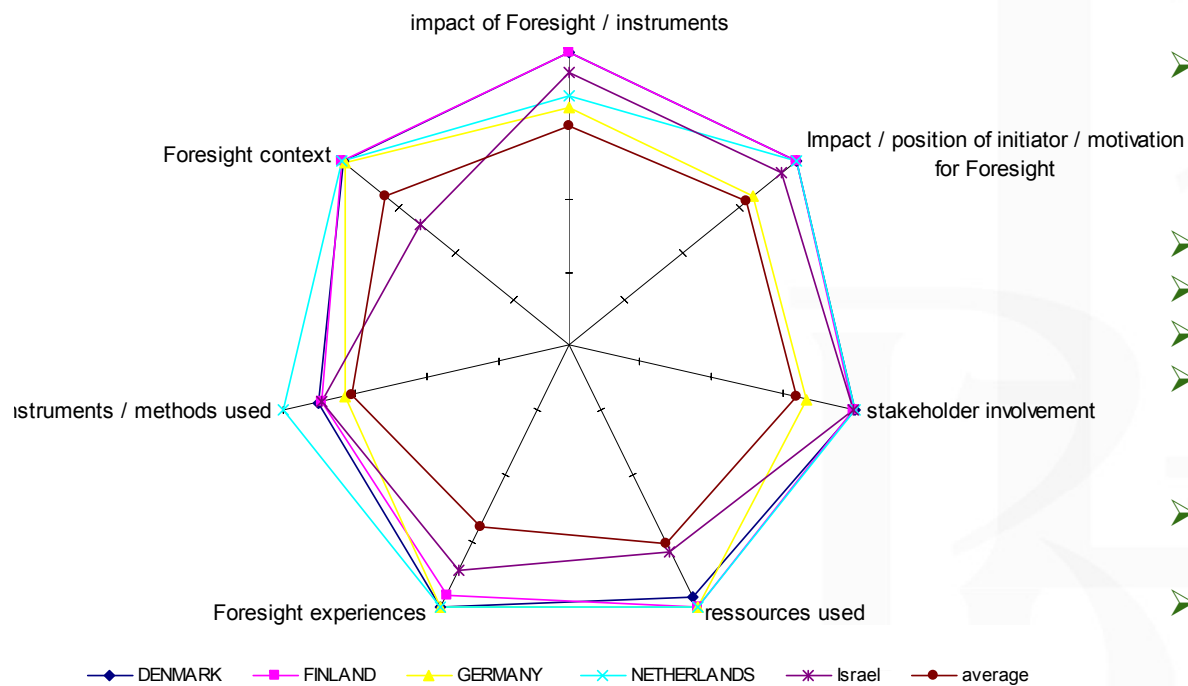
In depth desk research

- ▶ Belgium
- ▶ Australia
- ▶ Austria
- ▶ Belgium
- ▶ Bulgaria
- ▶ Canada
- ▶ China
- ▶ Cyprus
- ▶ Czech Republic
- ▶ Denmark
- ▶ Estonia
- ▶ France
- ▶ Greece
- ▶ Hungary
- ▶ Iceland
- ▶ Israel
- ▶ Italy
- ▶ Japan
- ▶ Korea
- ▶ Latvia
- ▶ Lithuania
- ▶ Luxembourg
- ▶ Malta
- ▶ Mexico
- ▶ Netherlands
- ▶ New Zealand
- ▶ Norway
- ▶ Poland
- ▶ Portugal
- ▶ Romania
- ▶ Slovak Republic
- ▶ Spain
- ▶ Sweden
- ▶ Turkey
- ▶ United States

The following statistical analysis is based on a written survey. Figures shown in charts are based on calculations from questionnaires returned. The answers vary between 28 and 32 usable questionnaires. For reasons of simplicity the numbers of responses are not displayed for individual questions / statements. Remarks or comments added do not state the source of origin to respect authors anonymity.

Foresight studies were assessed in OECD / ERA countries

illustrative examples

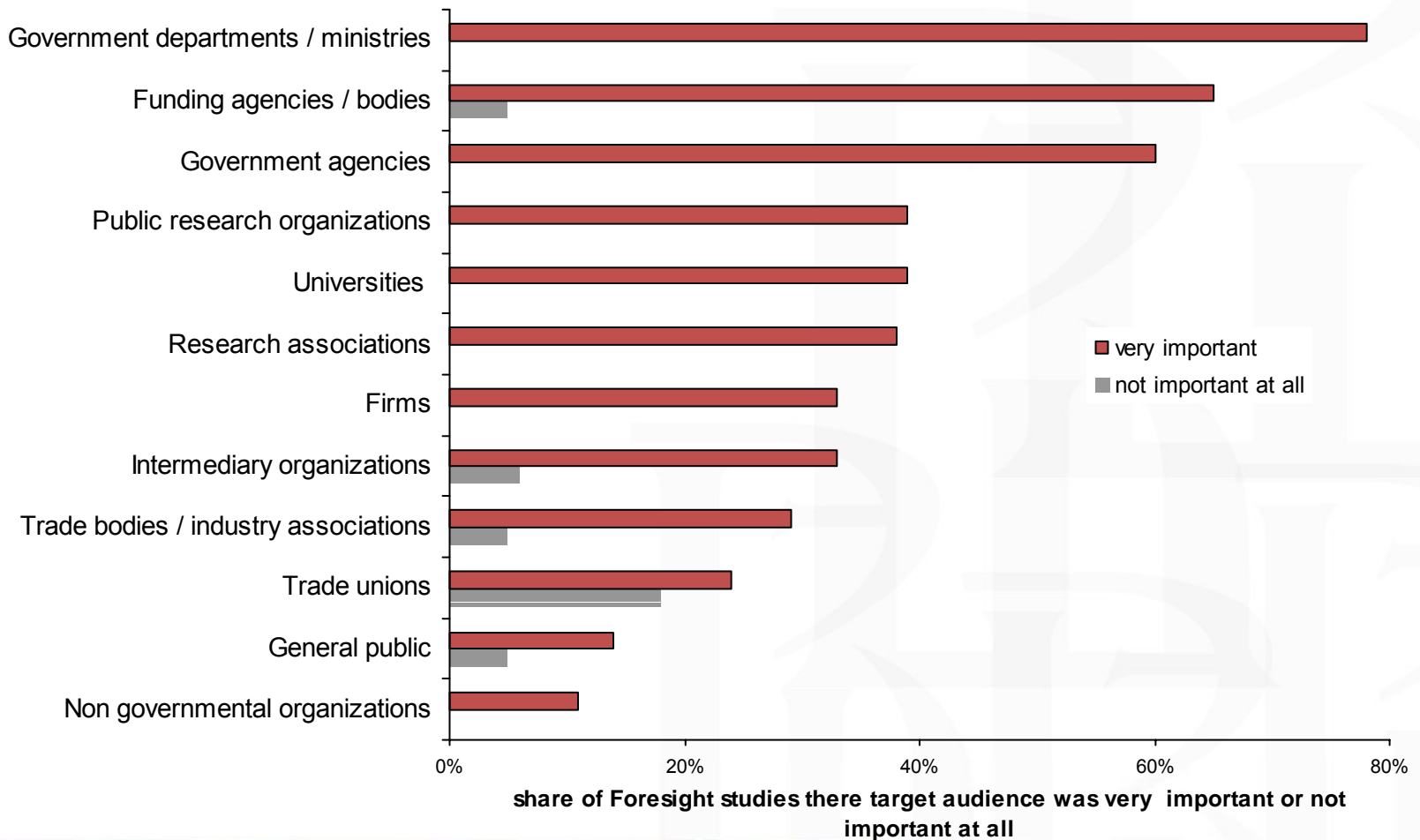


Evaluation criteria

- Which impact did the Foresight have?
 - Impact
 - Sustainability
- What was the motivation to conduct Foresight?
 - Initiator position in NIS
 - Motivation for Foresight
- How are Stakeholders involved?
- How are resources allocated?
- Which experiences were used?
- How were Foresight instruments and methods selected and used?
- Which fields did the Foresight aim at?
- What is the degree of independence of the conduction institution?

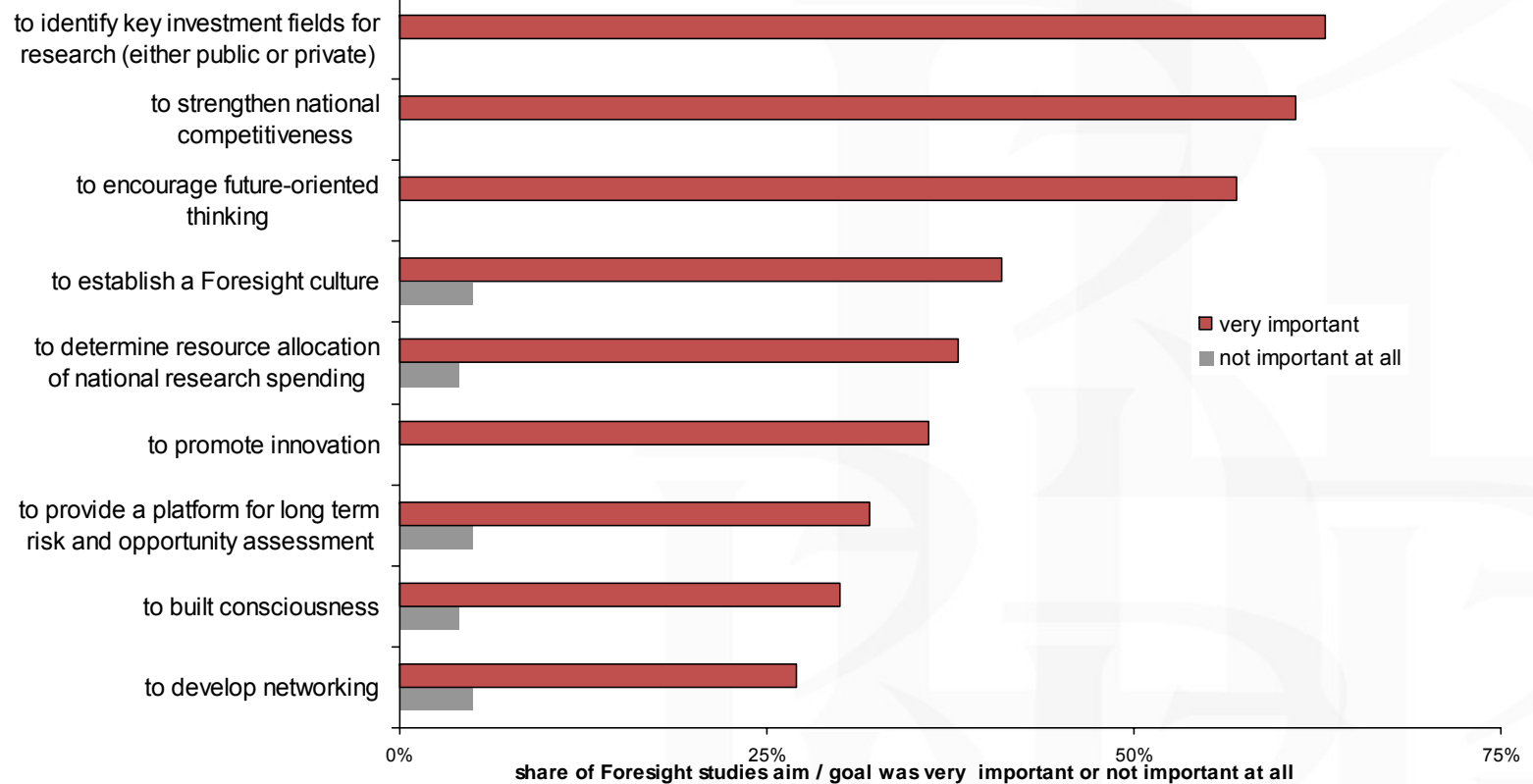
Foresight studies target on public bodies mainly

Target audience



Ambitions to conduct Foresight studies are high

The Foresight study was initiated ...



Positive effects of Foresight studies

Networking of participants

- ☛ experts /stakeholders brought together and working together towards a common goal
- ☛ the study brought private sector representatives and academicians around the same table to form R&D vision
- ☛ Interaction between human sciences and natural sciences
- ☛ Bring together stakeholders from different fields
- ☛ Met warmly by high-level scientists and company CEO's

Stimulation of dialogue

- ☛ Open discussion & some changes in way of thinking
- ☛ Promote long-term thinking
- ☛ Stimulate future orientation
- ☛ Global Perspective independent of organization
- ☛ Enthusiasm of involved parties to think and conceptualize about the future

Influence on policy / innovation

- ☛ Positive impulse for innovation
- ☛ New governance
- ☛ Influence on public investments and trajectory development
- ☛ Direct contribution to policy making
- ☛ Increase of democracy in decision making

Varied

- ☛ Costs corresponded to the benefits gained
- ☛ Useful results
- ☛ Steep learning curve, teaching programme at university

But there were also negative experiences

Networking of participants

- Difficult to bring together all sorts of people and experts who are both specialist and generalists and are capable of being really objective and forward-looking, not focusing on their own interests
- Difficult to select expert panels representing all stakeholder groups
- Tricky to provoke the participant to extend their mind set over 10 years and longer
- Difficult to reach a common framework of communication between different scientific fields
- Aggressive position of some stakeholders seeking to dominate and influence the experts and working group

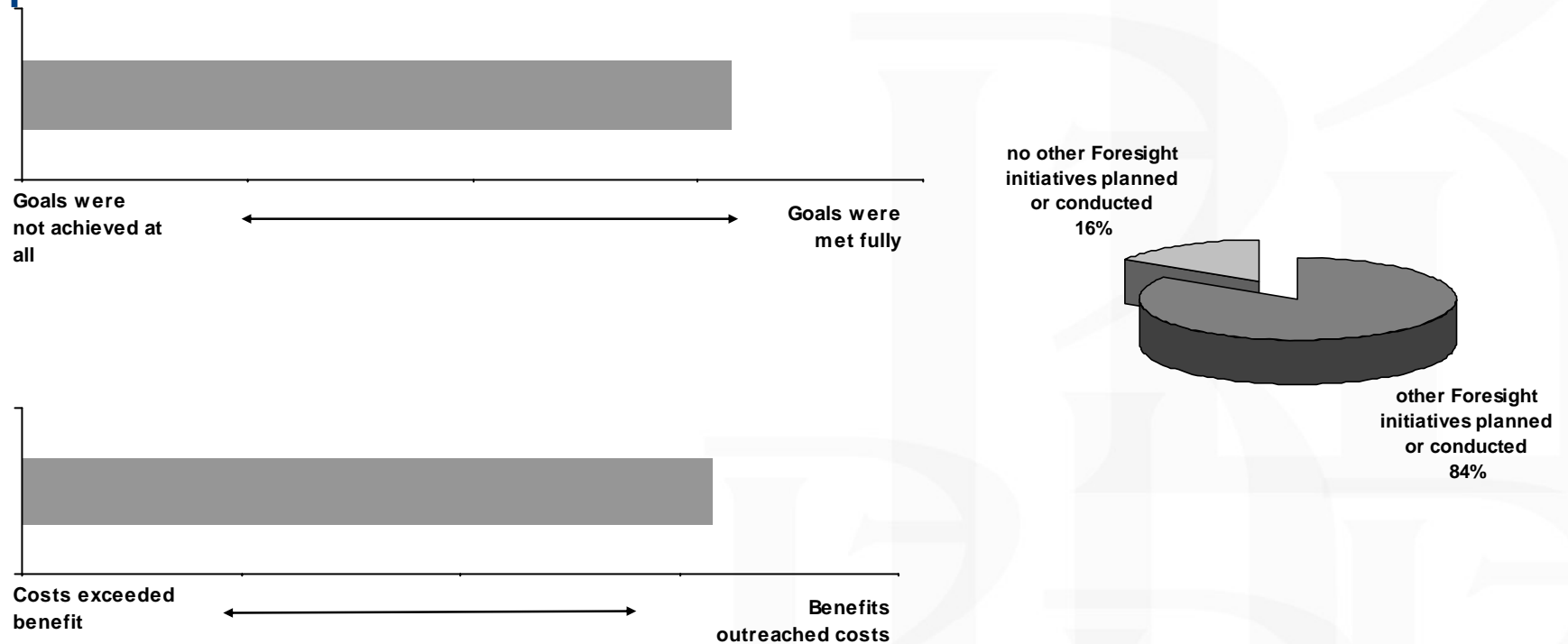
Influence on policy

- Delay in using foresight results for new policy
- Insufficient integration of results and analyses
- Policy makers does not necessarily adopt what experts suggest
- Secret political opposition by some senior members of government
- Decision-makers only superficially involved in actual foresight work
- Negative attitudes in government and academia

Varied

- Over budget and over time
- Too high expectation of echo in NIS
- Too many projects at one time
- Impacts necessarily indirect, not acknowledged
- Lack of methodology competence
- Lack of continuity in the funding to conduct a refinement of the results
- Lack of ability to market the results to industry
- Lack of adequate external consultants support
- Foresight culture needs time to develop. People are not familiar with this sort of thinking and methods
- General negative attitude because only accurate and precise predictions were acceptable

High level of satisfaction with Foresight studies – follow up studies planned



Approaches to measure effectiveness and efficiency

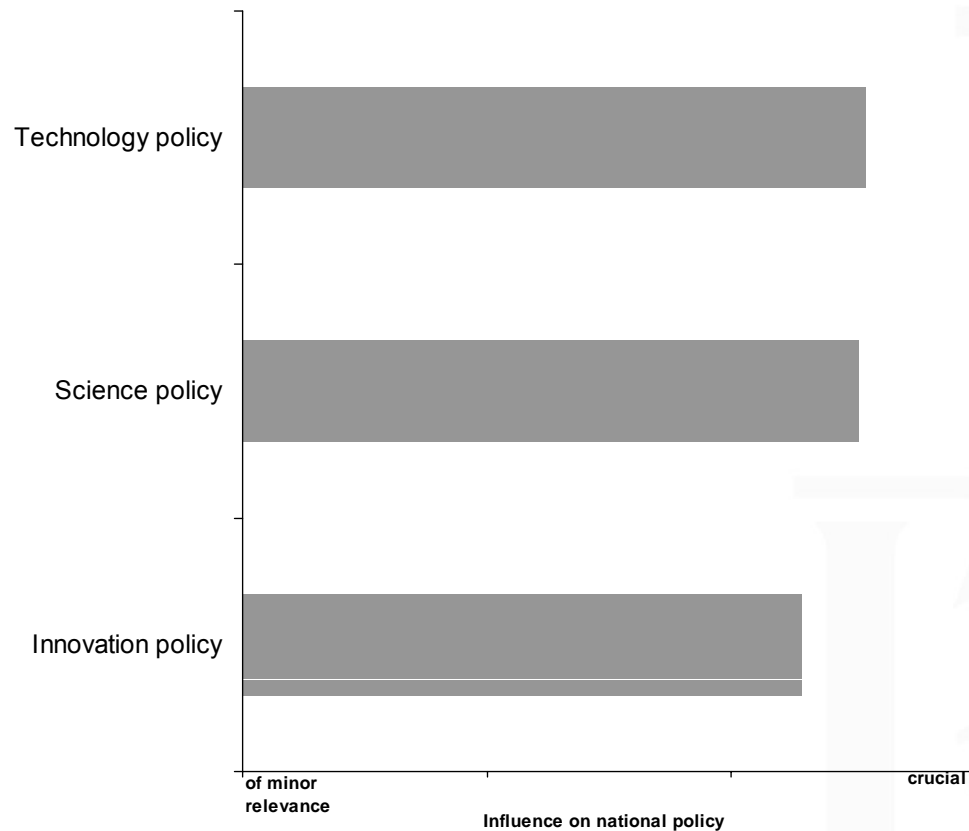
Effectiveness

- Project Management Procedures
- (Empirical) evaluation
- International evaluation
- Overall assessment
- Some indicators of impacts and Delphi participation rate
- Thematic panels' feed back
- Accomplishment of the formally set goal in terms of specifying research areas
- No exact measurement, but visible reactions:
 - ✓ positive comments by the European Commission
 - ✓ creation of a National Foresight Committee after the project
 - ✓ increased public awareness on Foresight

Efficiency

- Project management & monitoring, followed up by review
- Personal and formal information obtained from client and stakeholders
- Overall assessment
- Assessment of change in basic research culture, without metrics
- Comparing with cost of similar projects in other countries
- Benefits not measurable; for everyone to decide

Impact on different policy areas

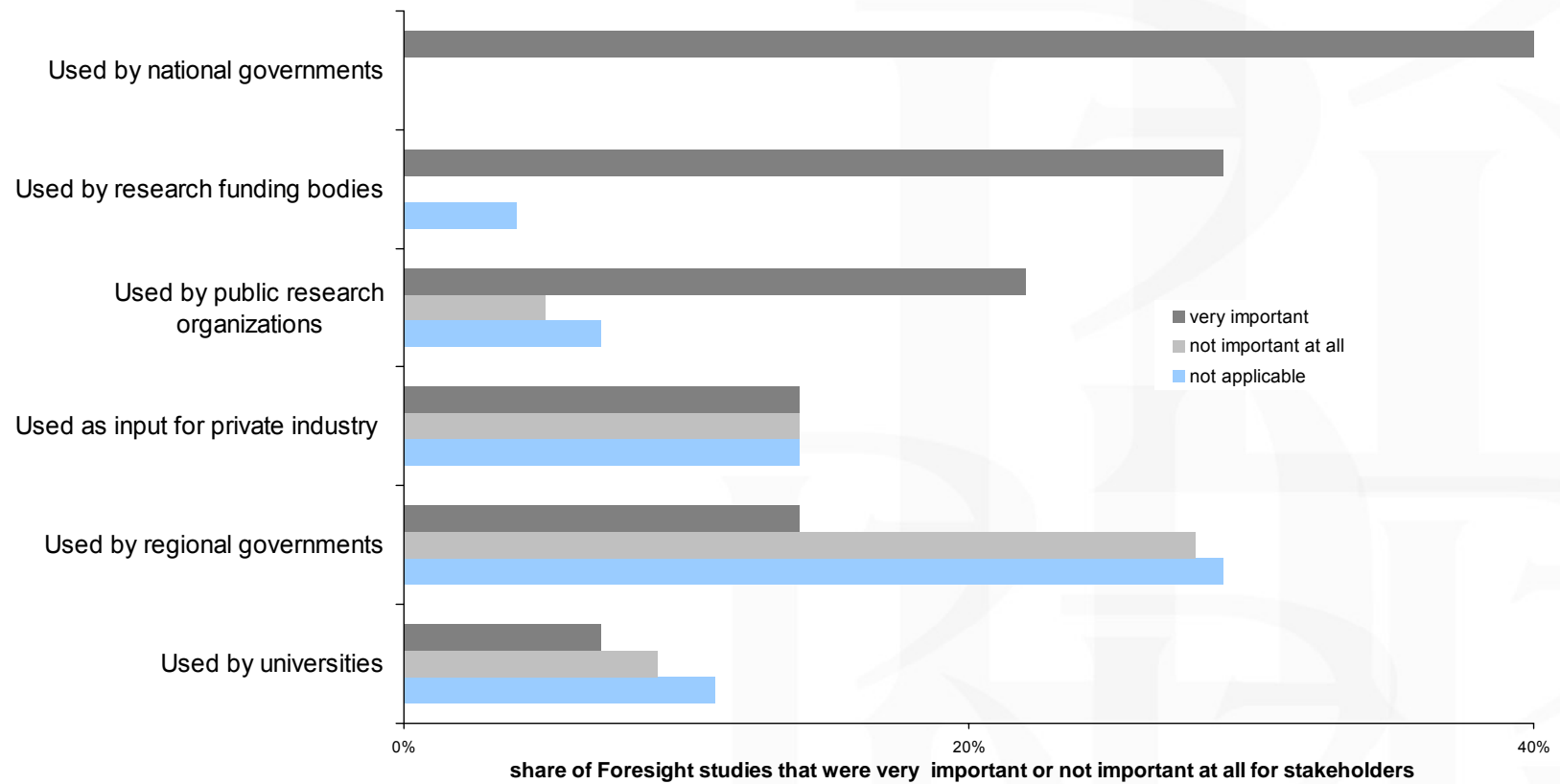


Impacts on science policy:

- Establishing Strategic Centers of Science, Technology and Innovation
- Establishment of significant basis
- Input to research strategy documentation

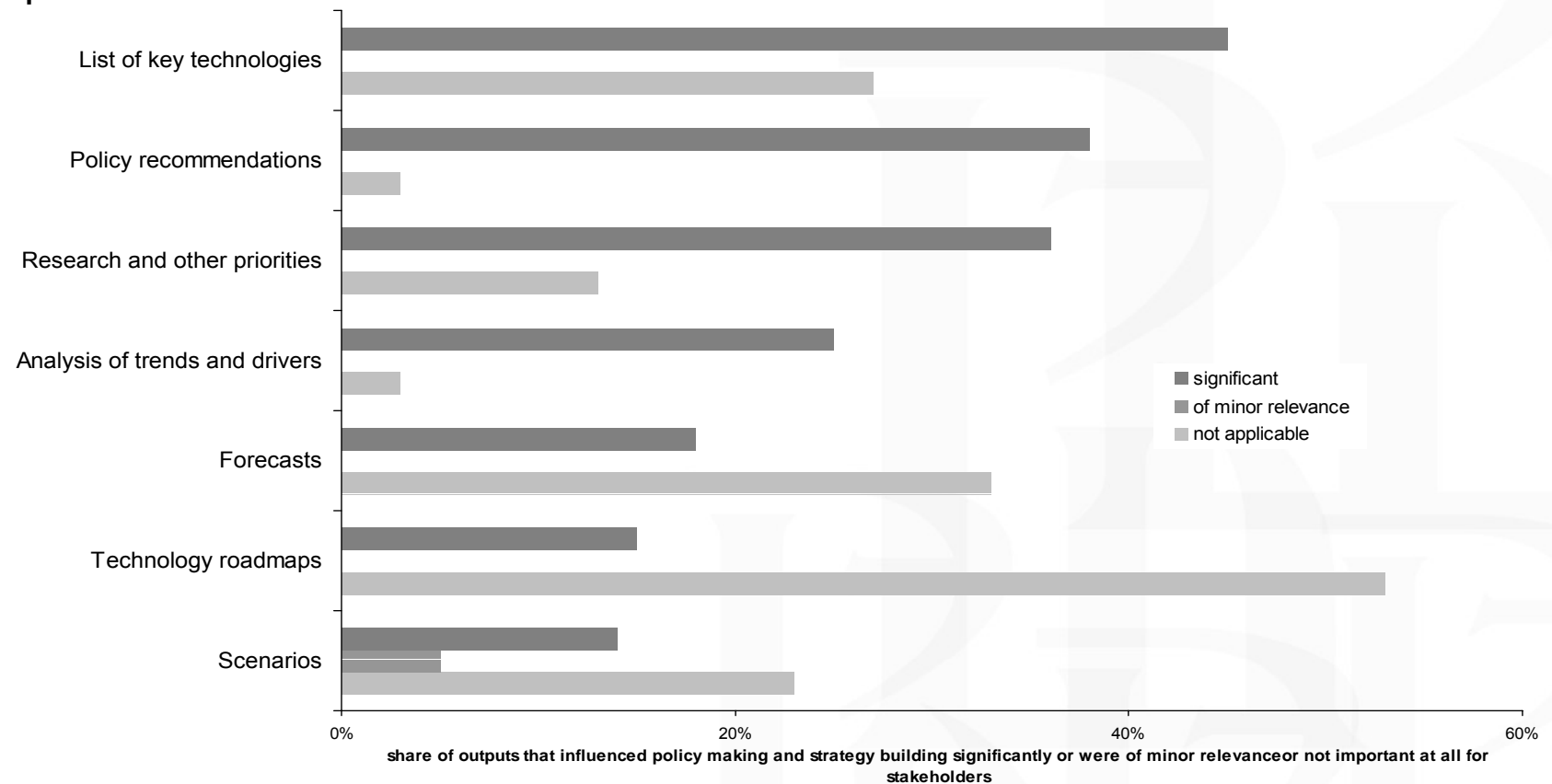
Public authorities on national level most often use results

stakeholder

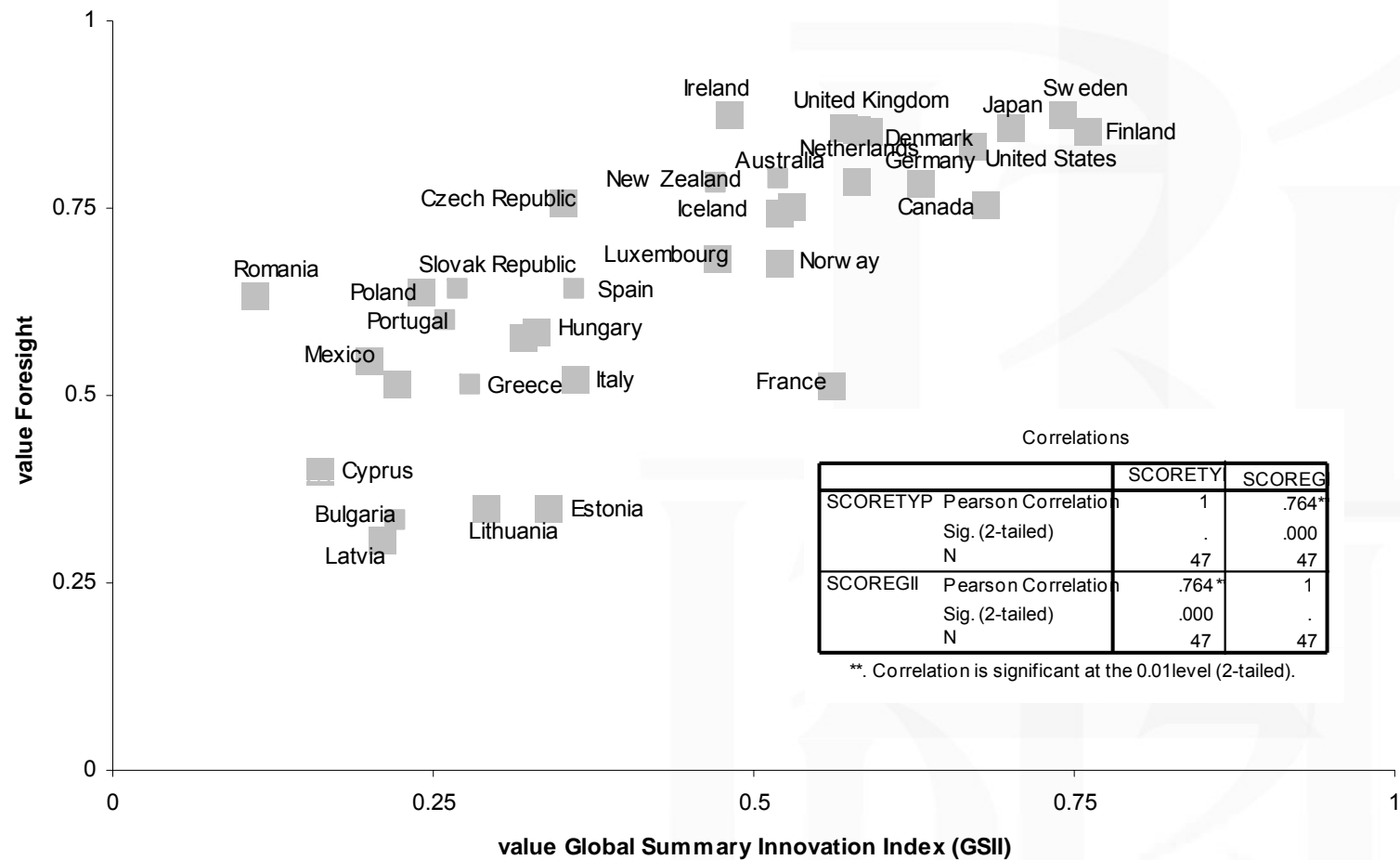


Outputs of Foresight studies have different impact on policy making

output



Significant strong correlation between Foresight and GSII



Arguments Pro Foresight studies

- Foresight suitable for long term innovation technology and research policy definition
- well suited tool for universities and PRO to define strategies
- combination of bottom up and top down approach to identify long term R&D investment fields
- increased cooperation between science and industry and also administration (esp. among different administrative bodies)

Arguments Contra Foresight studies

- uncertain nature of Foresight results
- resistance of stakeholders if used with misleading interpretation by policy makers (intention of budget cuts)
- often self confidence of scientists proves barrier (pride of academics)
- investment in human resources needed to handle such complex projects
- interest of stakeholders often unknown

Conclusion

- Foresight studies are becoming increasingly popular with strong impact on priority setting and policy making
- Foresight studies are considered one but still highly effective and efficient instrument to shape and design the national innovation system
- So far NIS framework conditions are rarely considered in Foresight studies
- Focus of Foresight studies increasingly shifts from pure scientific and technology trend watch towards identifying societal challenges thus combining bottom-up and top-down approach
- Multiple side effects (indirect effects) are caused by Foresight studies though these are not measurable in quantitative terms
- Further long term work is necessary to quantify and prove the impact of Foresight studies on the national innovation performance



Thank you
for your attention!

20, Myasnitskaya str., Moscow, Russia, 101000
Tel.: +7 (495) 621-2873, Fax: +7 (495) 625-0367
www.hse.ru