Research & Innovation Policy: Finland in the Age of Austerity

Public Support of Private R&D: Review of Microeconometric Impact Studies

Publications of the Government's analysis, assessment & research activities, 57/2016

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Seminar organized jointly by MEAE & OECD: The Role of R&D in Fostering Economic Performance: Lessons from Research and Implications for Finland (at Radisson Blu Seaside Hotel, Helsinki)

Session: Revisiting research and innovation policy in times of economic stagnation and vulnerability: the EU and the Finnish contexts

1 Dec. 2016, 13:10–14:40


Macro
Literature
Review
OECD
Finland's
Background
Report
MEAE
ETLA
Micro
Literature
Review
ETLA
OECD
Review of
Innovation
Policy
Government's
Midterm
Review

The R&I Scene in Finland

- The Finnish education, research & innovation system a stellar **success** in the postwar era
- *Nokia*-dominated aggregates led to a local/global **illusion** that Finland at large was a foremost knowledge economy

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- After stable two decades, **drastic** changes since 2008
- In search of **new directions** – unsuccessfully as of now…
- **Pre-conditions** for innovation-driven growth but drifting in its **past**

Strengths

R&D intense: One of the most R&D intense countries in the world with heavy emphasis on engineering and science.

Highly educated: An equal opportunity system with stellar lower and good higher education. Highly educated labor force.

Able to collaborate: Low hierarchies, no-nonsense culture, fact-based argumentation, ease of networking.

Accountable: High institutional accountability and a strong evaluation culture.

Opportunities

Sense of urgency & a need for change: A widespread agreement that Finland is in need of large changes.

Re-deployment of ICT expertise: In R&D&I, Finland remains specialized in ICT. After restructuring, amble expertise available.

Emerging startup ecosystem: Since 2008, great progress: 5–10 yrs on this trajectory makes Finland a Top 10 location globally.

Economic & institutional cleansing: After decades of stability, private/public institutions shaken; improvements re-combinations?

Weaknesses

Introvert: R&D&I builds on own/domestic effort with few international linkages. Does not attract top talent from abroad.

Autistic: Tolerates & encourages passive behavior. Too little search for new opportunities. Avoidance of risks.

One-sided: Few leading industries & companies. A size distribution that is thin in “Mittelstand”.

Fragmentation & lack of scale: Dispersion combined with a lack of emphasis leads to units below “minimum efficient scale” and underperformance.

Threats

Loss of faith: Suspicion that knowledge is not the ultimate drive of growth. Reflected in political decisions. Lack of private inv.

Mismatches: More strengths in knowledge than in its deployment. Seemingly a mismatch between R&D inputs & outputs.

Gridlock: Institutional rigidities loom large. E.g., labor market & social reforms (cf DE/SE) remain absent.

Lack of creative destruction: Focus on minor improvements & operational efficiency. Even if “new to the world”, little ability to capitalize on it.

Change in **R&D** since 2008

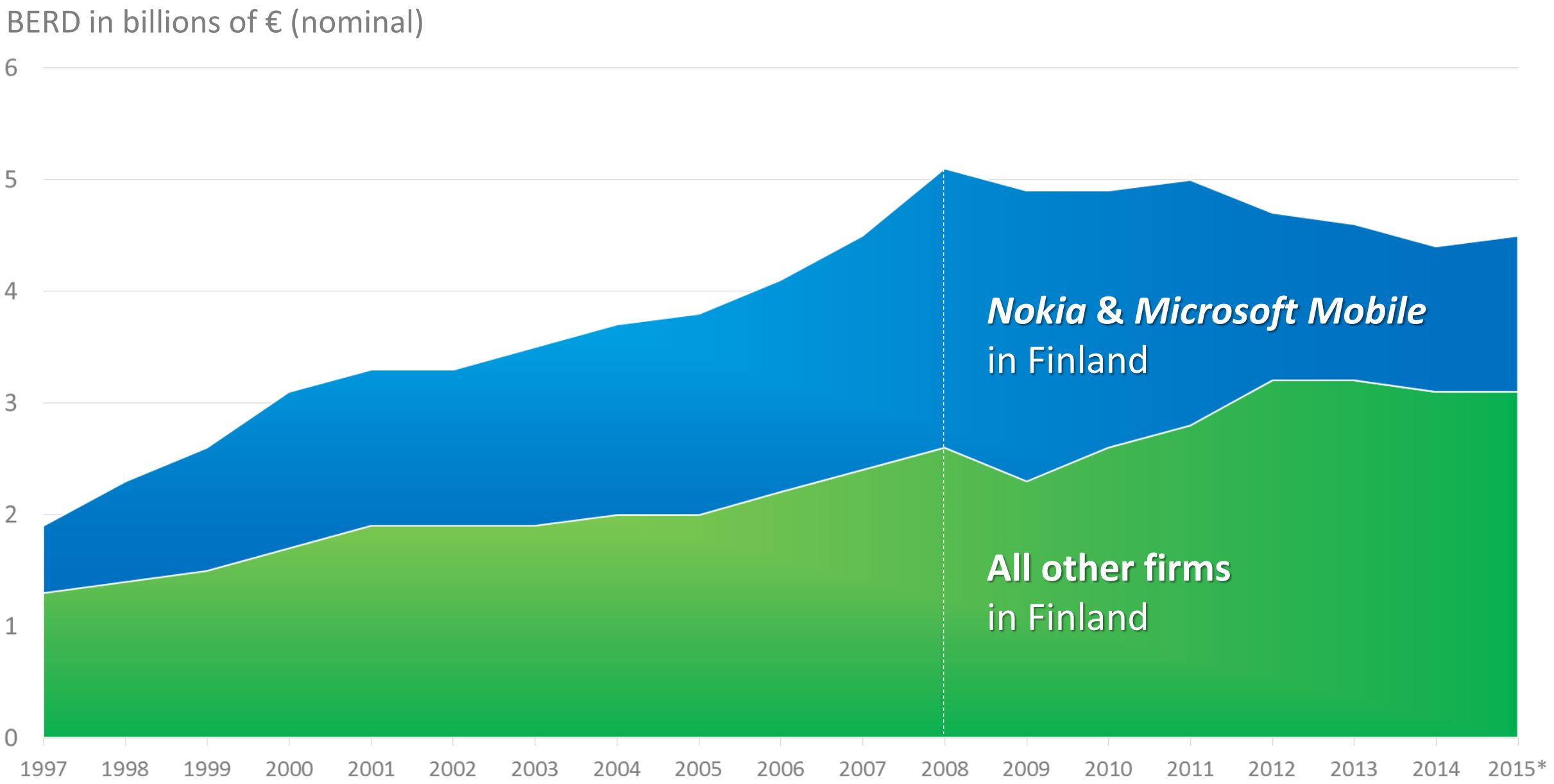
- GERD/GDP (’08-’15) **–0.41**%
- BERD (’08-’15) **–711**m€ (–14%)
- *Nokia’*s sh. of BERD (’09-’15) **–35**%-points
- Gov’t R&D budget (’08-’16) **+32**m€ (+2%, –11% vs ’11)
- Gen. adv. of science (’08-’16) **+18**%-points

- *Academy of Finland* (’08-’16) **+141**m€ (47%)
- Universities (’08-’16) **+133**m€ (29%)

- *Tekes* (’08-’16) **–150**m€ (–28%)
- Public research orgs (’08-’16) **–89**m€ (–31%)

https://tilastokeskus.fi/til/tkker/2016/tkker_2016_2016-02-25_fi.pdf

The Drop in BERD Attributable to *Nokia/MS*

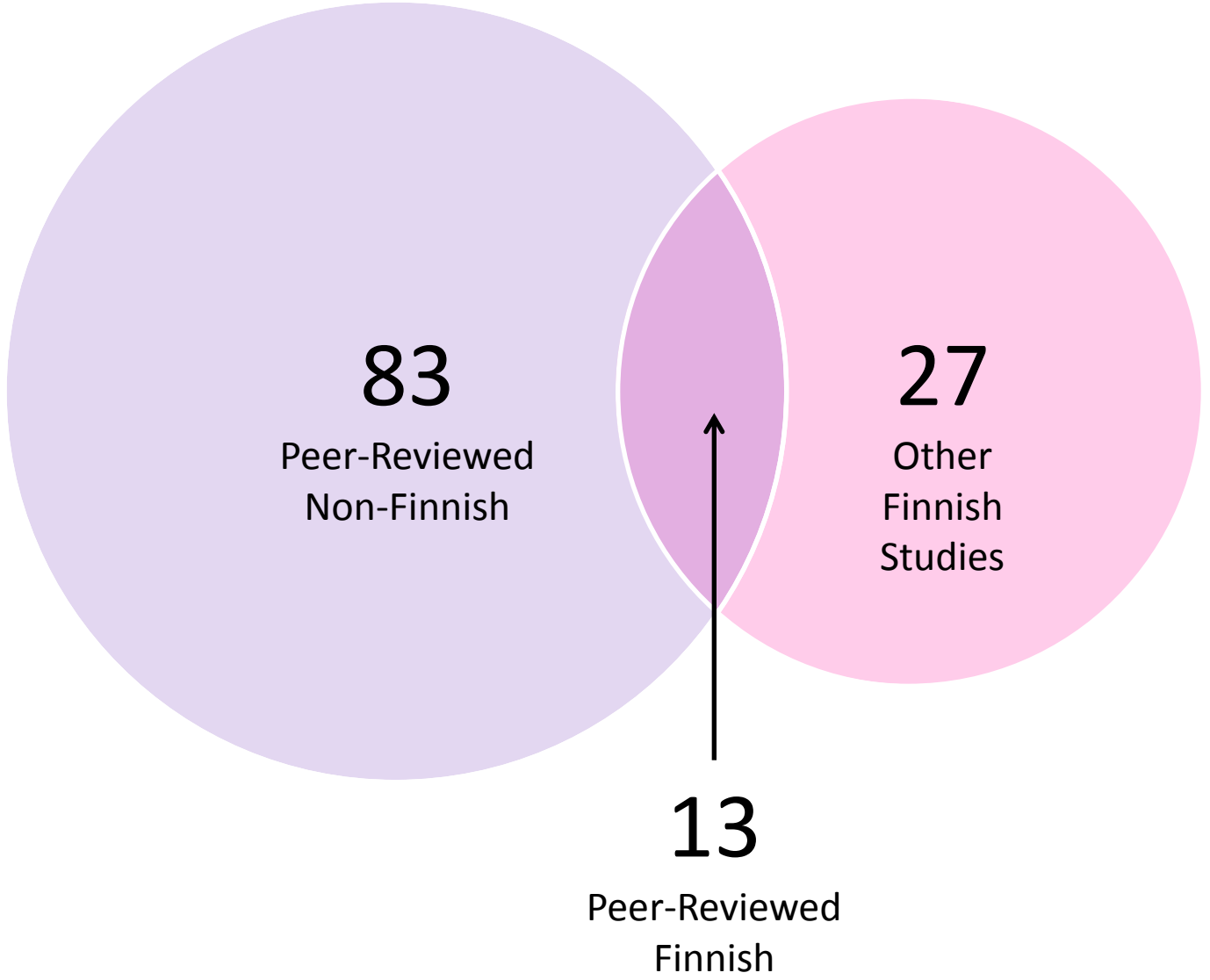


System's Major Institutional Changes since 2008

- Reform of higher education
- *Tekes*: Changes, cuts & merger with *FinPro*
- Re-shuffling of public research organizations & funding
- SHOKs, Strategic Centres of Excellence: From flagship to litter
- More vibrant startup ecosystem with *Aalto Univ.* as its cheerleader
- Changing fortunes of regional innovation activities
- Re-positioning/re-launching of RIC
- Turmoil in public venturing activities
- *Team Finland* façade falls; TF re-structured
- More active role of the *Prime Minister's Office*

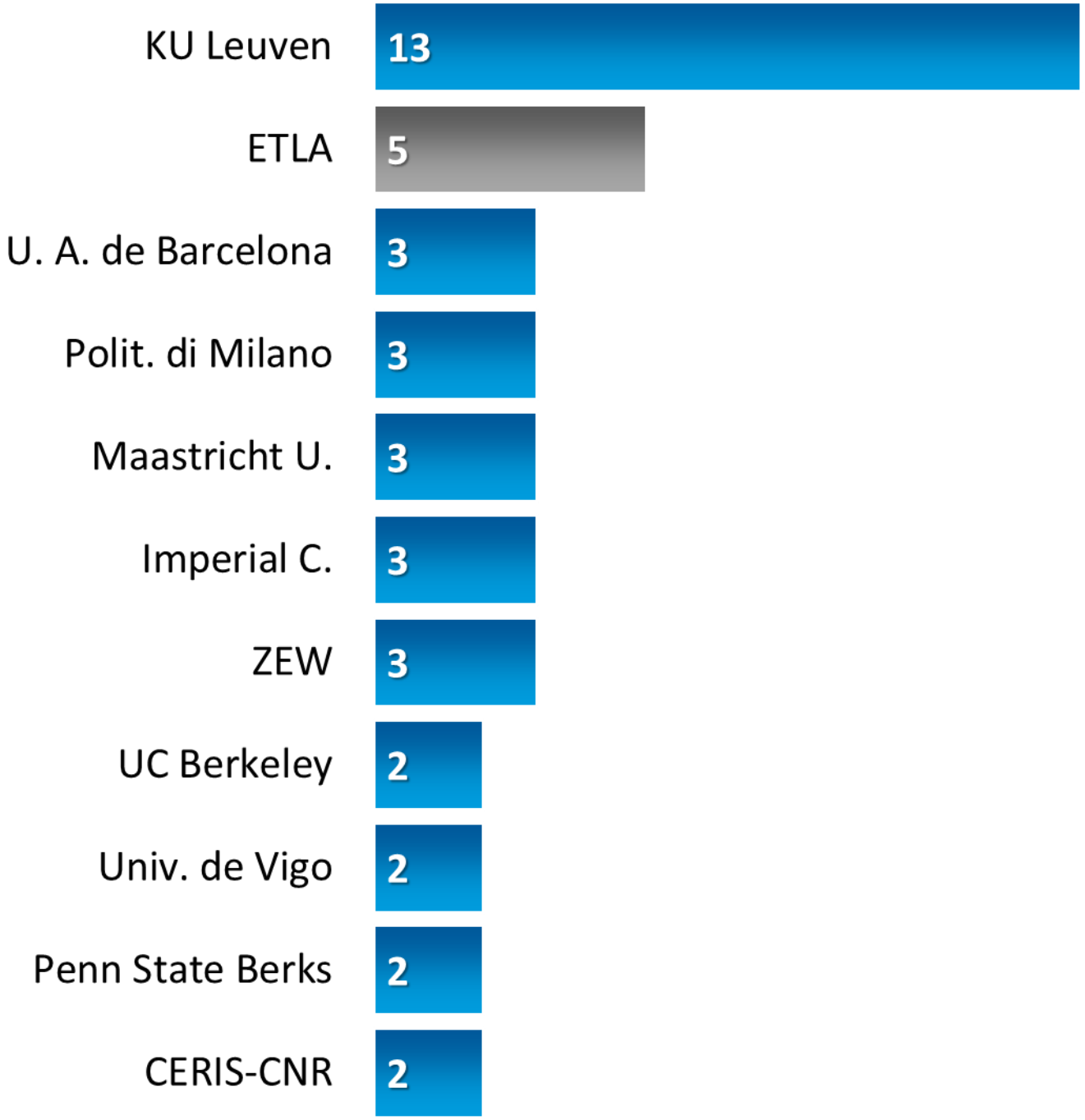
Public Support of Private R&D: Review of Microeconometric Impact Studies

123 microeconometric impact studies



Institutions

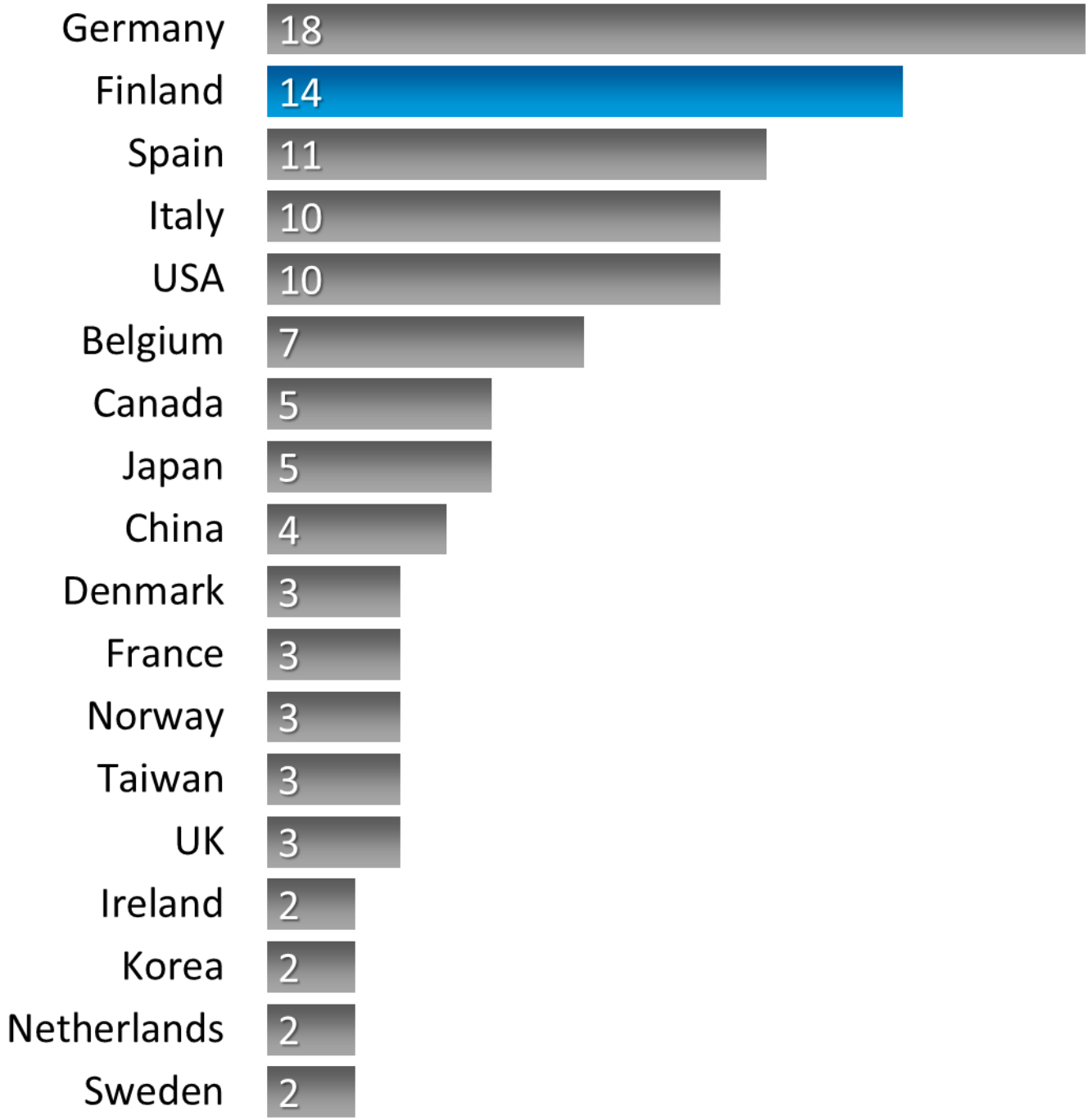
with 2 or more articles



Caveat: Calculated on the basis of the first author's first affiliation.

Target Country

Those with 2 or more articles



Caveat: One study can cover more than one country.

Microeconometric Impact Studies – Summary

Observations

- Mostly positive coeffs, even if somewhat inconsistent & frequently undetermined
- More impact on employment than on productivity
- Emphasis on additionality: policy motivations & issues mostly a side note
- Many challenges, e.g., time lags
- A gap between practitioners' needs & the available research – both a fundamental challenge and blame on research/funding

Recommendations

- Focus: Public interventions' ability to address issues that motivate them
- Two-sided selection → Randomized controlled experiment
- Myriad of questions → A mix of approaches/studies
- Building evaluation into policy designs

- **Veugelers** (2016, p. 19): "*Public R&D certainly has the potential, but we know very little of its actual effects*."

- Note: Microecon. issues do **not** imply that policy should not be conducted or that it does not have an impact*!*

Thank You!

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