University -Industry Collaboration

New Evidence and Policy Options

CHALLENGES TO ASSESSING KNOWLEDGE TRANSFER

Broad range of **channels** of science-industry knowledge transfer. Methods often capture only **specific channels**.

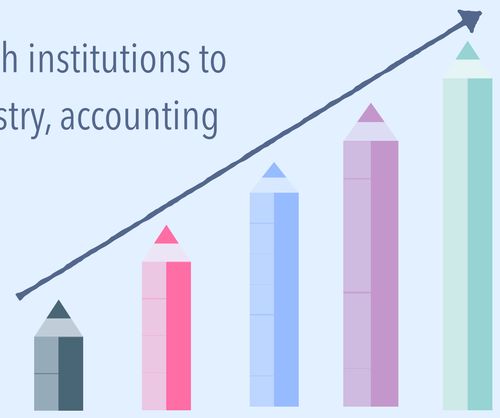
Well-known **impact assessment challenges:** issues related to data quality, comparability, causality, and assessment of broader societal impacts.

KEY FACTS ON THE IMPACT OF PUBLIC RESEARCH

Public research institutions have become **more active in patenting.** Their patent applications increased more than **fivefold** between 1992 and 2014.

But the **overall contributions** of public research institutions to patenting **remain modest** compared with industry, accounting for 1.6% (2,200) of total applications in 2014.

Results based on data on patent applications to the European Patent Office (EPO) from 35 OECD countries & China between 1992 and 2014



POLICY MIX FOR KNOWLEDGE TRANSFER

Policy instruments

Financial

- R&D & innovation subsidies / grants for industry-science research
- Tax incentives for companies purchasing research from universities
- Grants for IP applications from universities
- Financial support for universities to host industry researchers
- Innovation vouchers for R&D services from universities
- Financial support to academic spin-offs
- Financial support to firms to recruit PhDs & post-docs
- Public procurement of university research
- Performance-based funding systems for university linkages with industry
- Public-private partnerships creating joint research laboratories
- Funding of infrastructures & intermediaries for collaboration

Regulatory

- IP regulations regarding publicly-funded research
- Regulation of spin-offs founded by researchers & students
- Sabbaticals & mobility schemes for researchers to work in industry
- Career rewards for professors & researchers engaging in knowledge collaboration
- Open access & open data provisions for publicly-funded research

Soft

- Outreach activities to raise awareness of research & industry opportunities
- Collective industry-science roadmapping & foresight exercises
- Networking support to build industry-science linkages
- Training programs on knowledge collaboration
- Guidelines, standards & codes of conduct for industry-science collaboration

Interactions among policy instruments

Contradictions **Complexity** **Precondition** **Facilitation** **Synergy**

POLICY RECOMMENDATIONS

No "one-size-fits-all"

The role of specific knowledge transfer channels varies not only across science fields and industry sectors but also across research institutions and businesses. Thus, countries need to consider those dimensions and design specific knowledge transfer policies that capitalise on areas of public research and business strengths.

Support co-creation leveraging digital technologies

Policies should move away from knowledge transfer to "co-creation" models where knowledge is jointly created by research and industry. Online communities of experts, crowdsourcing and digital platforms can support co-creation.

Improve the effectiveness of the policy mix for knowledge transfer

Policy makers should consider the interactions and combined effects of individual policy instruments when designing and evaluating knowledge exchange policies, as well as potential redundancies and contradictions.

Allow for diversified knowledge transfer practices

Giving research institutions more autonomy in how they collaborate with industry, including e.g. in decisions over academic spin-offs or IP revenues allows for diversification of approaches according to their capacities and research strengths.

OECD (2019), *University-Industry Collaboration : New Evidence and Policy Options*, OECD Publishing, Paris.