

Measuring the impact of researcher skills development: a Government perspective

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What are the relevant decisions Government needs to take (or ensure are taken)?

- How much public money to spend on funding research through the Science Budget:
 - Why is public investment needed?
 - What are the economic and social benefits from different expenditure choices?
- How should this budget be allocated between different uses?
 - Between parts of the dual funding system
 - Between Research Councils
 - Between modes of funding
- What is the balance of funding for future researchers between quantity (numbers of posts) and quality (researcher support and development)?

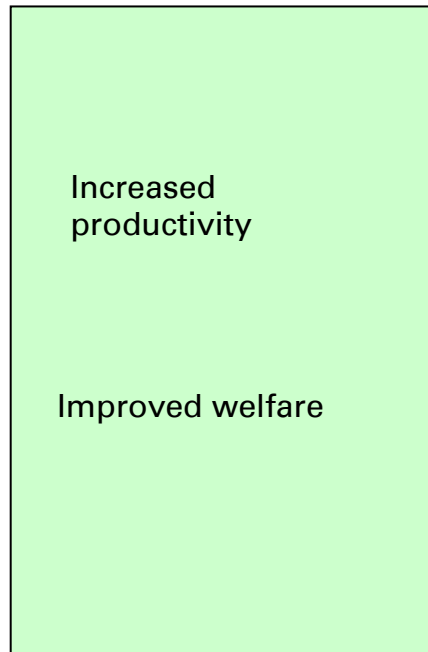


Economic impact reporting framework

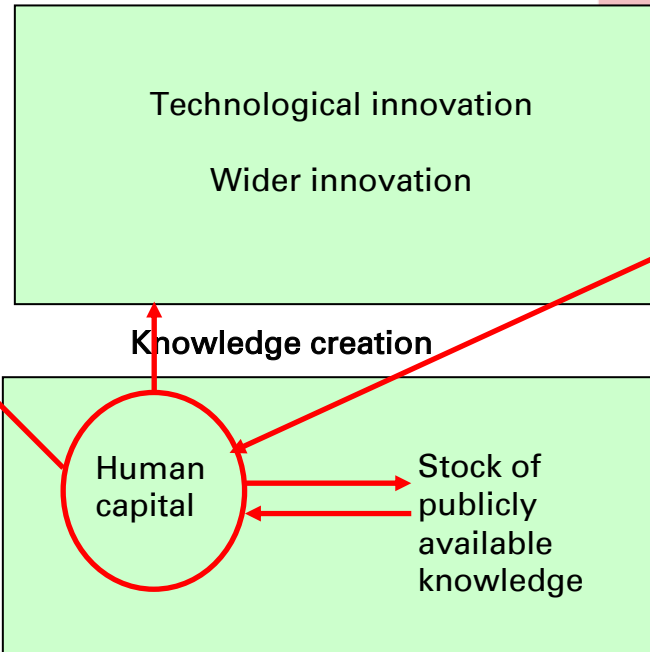
- Used to report on UK progress against ten year framework objectives
- Used to organise output and performance data from Research Councils
- Way of organising disparate material:
 - Linked to innovation systems concepts
 - Simple framework (cf. SPRU work on channels of impact)

UK Economic Impact Reporting Framework

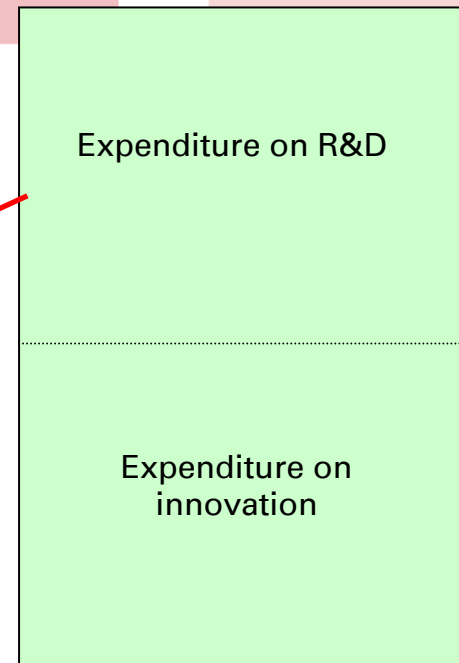
Overall economic impacts



Innovation outcomes and outputs

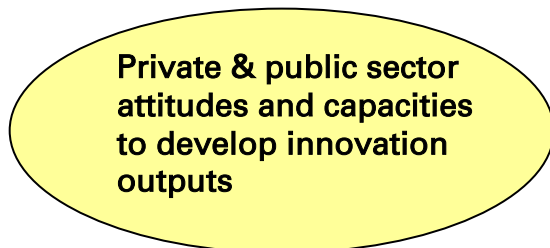


Investment in the research base and innovation

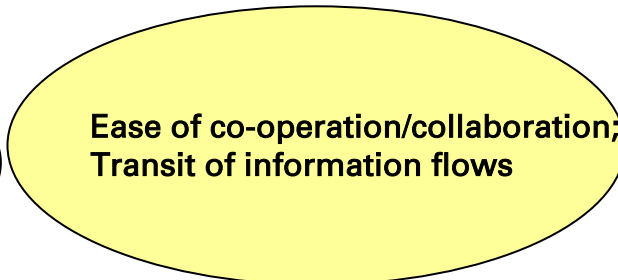


Influenced by:

Demand for innovation



Knowledge exchange efficiency



Framework conditions





Current human capital indicators

- STEM A Levels
- STEM and non-STEM graduates (including by area of study, gender, ethnicity)
- PhDs: numbers, per 1000 population (and by area of study)
- Researchers per 1000 of the workforce

Indicators in
science and
innovation
Public Service
Agreement



Research Councils' Mission Statement on Societal and Economic Impact

To advance knowledge, understanding and technology (including the promotion and support of the exploitation of research outcomes), and provide trained researchers;

To build partnerships to enhance take-up and impact, thereby contributing to the:

- economic competitiveness of the United Kingdom,
- effectiveness of public services and policy, and
- enhancement of the quality of life and creative output of the nation.

Statement of expectations

...

- exploit results where appropriate, in order to secure social and economic return to the UK
- ensure that research staff and students develop research, vocational and entrepreneurial skills that are matched to the demands of their future career paths
- take responsibility for the curation, management and exploitation of data for future use
- work in partnership with the Research Councils for the benefit of the UK

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What types of evidence are needed to support these decisions?

- Reliable data on outputs:
 - Numbers of researchers supported
 - Numbers undergoing training and career development
 - Qualifications gained by researchers as a result of support
 - [Link to research outputs produced]
 - Future career paths of researchers over time
- Link through to outcomes:
 - Economic returns to highly qualified researchers:
 - “Private” returns (wage premia)
 - “Social” returns (spillovers) – may not all be quantifiable or capable of monetisation
 - Net of cost of investment
- Evidence of value for money:
 - Perceptions of beneficiaries
 - Comparisons of quantity/quality of output and different levels of investment
 - Example: impact of change to PhD stipend?
 - Adjustment for “selection” v. “treatment” effects
 - Quantitative or qualitative
 - Recognition of counterfactual



Where can this evidence come from?

- Administrative data:
 - Research Council management and evaluation data
 - HEI records
 - Important to understand “PhD/post-doc experience”
- Follow-up surveys of researchers:
 - DLHE and RCUK-led enhancements
 - Surveys of PhDs in population
 - Role for smaller scale quantitative studies
- Impact Frameworks are how we bring some consistency to the interpretation and design of evidence gathering

Characteristics of persuasive evidence [in this policy context]

- It takes time to put together
- Strong emphasis on quantification
 - Though qualitative information has its place and purposes
- The basics are important and can be overlooked:
 - “what did the money buy?”

