INNOVATION & RESEARCH CAUCUS

METHODOLOGICAL POSSIBILITIES FOR CAPTURING UKRI VALUE ADDED:

The core research council case.

IRC Insight Paper 014

REPORT PREPARED BY

Marc Cowling
Oxford Brookes University

Delivered with ESRC and Innovate UK

Authors
The core members of the research team for this project were as follows:

- Professor Marc Cowling – Oxford Brookes University

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About the Innovation and Research Caucus
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Contact
You are also welcome to email us if you have any questions about this report or the work of the IRC generally: info@ircaucus.ac.uk

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Introduction

United Kingdom Research and Innovation (UKRI) comprise seven research councils, plus Innovate UK, and Research England. Each has its own explicit focus, target constituencies, and objectives. The vision is to create an outstanding research and innovation system in the UK that creates the foundations for an economy where everyone can contribute to and benefit from through new knowledge creation and innovation. It is this connection between new knowledge and an improved understanding of ourselves and the world around us that can empower people to face the challenges faced by the UK today and in the future.

What ties all these UKRI organisations together?

The common threads that tie all of these UKRI organisations together is that the UK economy and society have a huge potential to benefit from the creation of new knowledge in the first instance and, through its use and diffusion, new innovations that will improve the lives and wellbeing of the population. In the case of the core research councils, the focus is on the creation of foundational knowledge that addresses important economic and societal issues that we face today and in the future. Other organisations, such as IUK, tend to operate closer and more directly with key agents in the business innovation ecosystem who are seeking to conduct R&D and commercialise that R&D into new products and services that will increase future growth and productivity. The EPSRC tends to span both the core academic foundational knowledge creation and, through its partnership model, the translation of foundational knowledge into commercial products and services. Research England and also the STFC provide core funding that is comparable to an investment in infrastructural assets and core capabilities.

If we start from the premise that new knowledge creation is the fundamental building block for future innovation and ultimately the future economic and social wellbeing of the UK and its population, then there are some key issues that need to be addressed in terms of the diffusion and translation of new knowledge into innovation. The first being who is able to appropriate the returns to new knowledge creation and innovation that may be derived from it. It has been a feature of the UK economy for decades that the investment rate has been relatively low and that this has been a major contributory factor in the low productivity growth rates that have been observed. This has been particularly so in respect of innovation investment where the returns are risky and uncertain at the firm level, meaning that capital markets are wary of

innovation investments which leads to sub-optimal investment at the firm level despite the potential for the wider and significant societal gains from higher investment and higher innovation rates. There is also a tension between the gains to the innovating firm and the societal gains from innovation as whilst there is evidence of spatial and industry spillovers through knowledge diffusion emanating from innovative firms, the societal benefits are best served if new knowledge is disseminated widely and as quickly as possible throughout the economy. These tensions can also be translated into the academic sphere by assessing the individual returns to the funded research against the wider gains to the academic research community.

How can we capture value added created by core UKRI research councils?

The typical approach to answering the question of what value-added UKRI creates is through a top-down analysis. This would start with a broader overview of what UKRI does and then breaks this down into by moving from general to specific ways in which UKRI creates value added for the economy, for example, in economic, social and societal terms. An alternative approach is to examine the question in a bottom-up way that starts with specific details and then aggregates them up to form a wider, detailed and comprehensive picture of how and where UKRI creates value added. For our example, which focuses on the initial creation of foundational knowledge, the bottom-up approach represents a clearer pathway to achieving this.

If we take our point of departure that core research council funding for foundational academic research is the academic equivalent of R&D funding as it is an investment in time for academics to pursue new knowledge creation, and that disseminating and diffusing this new knowledge is fundamental to other agents in the research and innovation community, including people and businesses, being able to adopt and apply this new knowledge in ways that improves economic and social wellbeing, then we have a pathway to capture value added that extends beyond the academics who initially benefit from core research council funding. That is not to say that supported academics do not benefit from core research council funding at an individual level, but to state quite clearly that capturing value added must go beyond the lowest level (unit of analysis) at the bottom of the value chain.

Limitations and assumptions

Obviously with our focus on new knowledge creation and its diffusion, we make assumptions about the value of new knowledge and its diffusion. For example, we assume that whilst there are private returns that benefit the individual research grant holder, there are different levels of diffusion that also benefit those with strong and weak ties to the focal researcher in different ways and through different processes. It is also difficult to separate out whether a beneficiary researcher wanted to tap into the focal researcher's general knowledge base, or whether the trigger for future research collaborations was inspired by the specific diffusion event related to the core new knowledge.

We also make the assumption that all diffusion of new knowledge impacts the recipients of this dissemination equally. So if twenty public officials attended a policy seminar, they will all have some use for the new research. Further, we assume that wider diffusion of new knowledge that 'leaks' out into the wider community is fundamentally a good thing. That may not always be the case. For example, if a researcher shared new foundational knowledge with another researcher or public official outside of the UK, then whilst this may benefit their host country, it may not directly and immediately benefit the UK.

There is also the issue of the sheer scale of UKRI and its size in comparison to other research funding agencies and organisations. In this respect, UKRI stands alone as a research funding agency. It may be that there are large and significant returns-to-scale in research funding provided by UKRI and our approach may not fully capture these potential effects.

The measurement problem

For mainstream firm level interventions (treatments) we can capture the key elements of the value chain with a degree of precision and a clearer logic model from the pre-intervention period through to the post-treatment period. For example, if we wanted to evidence whether or not an IUK grant raised the productivity of a recipient firm, then we would need to choose some relevant metrics such as output, employment, capital over a time-series that included the pre-treatment period, the treatment, and the post-treatment period. For innovation funding, we might also consider intermediate indicators such as patents or growth in R&D assets.

We would then need to define a relevant counterfactual group of firms who look like those who received an IUK grant, but did not in fact receive one. Typically, from a larger pool of the firm

population, a researcher would use propensity score matching to identify a close control group and then apply a Difference-in-Difference (DiD) methodology (or a staggered DiD methodology if the treatment was given to firms over different time periods). Then a two-step process would be applied where the first step estimates a standard production function and the second step total factor productivity (TFP) in growth terms. Additional modelling might also capture spatial spillovers using techniques such as spatial autoregressive (SAR) models.

However, for foundational academic knowledge creation, the concept that it is the sharing and diffusion of new knowledge is of extreme importance. And this can be captured at several levels in the value chain.

Table 1: The Bottom-Up Value Chain from Foundational Academic Research

From Bottom Up	Nested In:	Spatial Reach
Level I: Individual Academics	An academic department An academic institution An academic ecosystem A funded project ecosystem	Local Local and Regional National and International National and International
Level II: Linked Academics	A funded project ecosystem An academic ecosystem	National and International National and International
Level III: Unlinked Academics	An academic ecosystem	National and International
Level IV: Business and Society	A political ecosystem A business ecosystem A research and innovation ecosystem	National (and International)
Level V: The UK economy		

Level I - Individual academics that receive funding from a core research council engage in new research after receiving their grant funding which is a form of treatment. They may also co-produce new research with their departmental or institutional colleagues or share their new

knowledge which adds to the stock of knowledge and research at the local and regional level. Aspects of the potential value added of receiving a funding treatment can be captured at the individual recipient level by considering the quantity and quality of research outputs pre and post treatment. Local spillovers can be captured by the same metrics but focusing on within department or institution collaborations.

Level II - Individual academics also co-produce new research with their project colleagues in the academic ecosystem at Level II which is often national, and sometimes international in its scope and spatial reach. Thus, engagement and dissemination of new research expands in its spatial reach in a very direct way. For example, a recent ESRC project was a collaboration between core academic teams at seven academic institutions spread across the length of the UK from Sussex in the South of England to St Andrews in the East of Scotland. However, many academics also have existing networks of collaborative researchers and this provides the basis for a counterfactual approach by examining the pre and post treatment research outcomes of the project collaborators (the treatment group) against pre-existing network collaborators (the control group).

Level III - This includes unlinked academic researchers who may benefit from the dissemination of new knowledge created by funded researchers. This might initially take the simple form of engagement and dissemination through seminars at academic institutions both nationally and internationally. These interactions often act in a bilateral way to improve the treated academic quality of research and also to inspire new research from seminar participants.

Level IV - Many academics who conduct foundational research have high levels of engagement, both direct and indirect, formal and informal, with policymakers, businesses and wider society. They are a key building block in the research and innovation system and the processes that underpin it. It is this diffusion of new research that provides the basis for new thinking that may lead to innovation be that in government policy, business strategy, or public understanding of science and society.

Level V - The UK economy and society benefit from the creation of new foundational knowledge, but only if it is diffused outside of academia and shared with wider society where it can influence thinking and inspire innovation.

How far can we get with measuring this academic research value chain?

We have briefly outlined a bottom-up approach to understanding how UKRI core academic research council funding might create value at different levels of society and across different constituencies through the generation of new knowledge. But the big question is how might we capture this process from foundational academic research upwards?

There are several existing datasets and repositories that may help us to quantify potential value added at all layers of the value chain from the individual academic, through their funded project teams, and into the wider social and economic ecosystems. As we progress through the levels of the value chain, we can move from narrow academic measures of value, through to diffusion of new research knowledge, to engagement with intermediate and end users of new knowledge, and ultimately to the UK economy.

Table 2: Datasets and Repositories

Name of Dataset or Repository	What it Captures	Specific Metrics
Google Scholar	Academic Publications Citations Academic Collaborators Patents	Number of academic publications and year of publication Citation counts and years of citations List of authors for each publication List of citing publications and authors List of historical co-authors
ResearchGate	Disciplinary Focus of Researcher Citations Research Outputs Grants Awards Research Questions Posed to Members Responses to Research Questions Posed by Members Reads of Research Recommendations of Research Researcher Followers	List of academic disciplines and sub-disciplines Citation counts List of research outputs List of grants awarded List of awards Count of research questions posed and responded to Count of research recommendations Count of research reads Count of research followers

Name of Dataset or Repository	What it Captures	Specific Metrics
RePec (Research Publications in Economics)	Specific to economics Reads of Research Downloads of Research Citations Individual Ranking Measures	Count of research reads Count of downloads of research Count of citations List of researchers who read, downloaded, and cited research List of researchers with a similar ranking
Researchfish	Project based and captures outcomes of core research council funding including: Collaborations and Partnerships Further Funding Engagement Influence on Policy, Practice, Patients and the Public Research Tools and Methods Research datasets, databases and Models IP and Licensing Medical Products, Interventions and Clinical Trials Artistic and Creative Products Software and Technical Products Spin Outs Awards and Recognition	List of collaborations and partnerships List of further funding awards List of engagement events with metrics capturing where, when, size of audience, composition of audience and outcome of engagement Metrics on influence on wider communities List of new research tools and methods, datasets, databases linked to IP applications where appropriate List of new products or in medicine interventions and clinical trials Spin outs arising from research List of awards and wider recognition

A Simple Example to Illustrate the Concept

The creation of new knowledge is embedded in the core research council grant funding process, but it is the diffusion, absorption and application of new knowledge that leads to innovation of all forms and ultimately to improvements in economic and societal wellbeing. Here, we use a simple case study to illustrate how we might trace out this process of new

knowledge creation and diffusion from the individual researcher through various levels of the ecosystems that they are embedded within.

Researcher A receives a UK research council grant for three years. She has an existing network of five academic researchers that she has co-produced research with for a number of years. This forms the linked researcher group. Within Researcher A's narrow sub-discipline there are several unlinked researchers too. This is an outside researcher group. A subset of the linked researcher group are co-investigators on the research grant project. Researcher A and their grant co-investigators generate new foundational research during the course of their three-year grant. They engage with other agents across several levels of their ecosystem including: their department and institution, the wider academic community, and with the political, business, and wider research and innovation ecosystem to share this new knowledge.

This has a spatial aspect to it as we move from the local department and academic institution, through to national and international engagement and diffusion and also a scope aspect to it. How many people and agencies have engaged with the new research and what constituencies do they represent? Where has any impact of new research been recorded?

Table 3: Capturing New Knowledge Diffusion and Spillovers

Diffusion and Spillovers	Measure	Database and Method
Local	Collaborative Research Outputs within Department and Institution	Count of co-produced outputs with departmental and institutional colleagues. DiD approach. Time-series analysis with test for structural break during (and after) grant period. Datasets: Google scholar, researchgate.
National	Collaborative Research Outputs with Grant Co-Investigators	Count of co-produced outputs with grant co-investigator colleagues. Citation counts. DiD approach. Time-series analysis with test for structural break during (and after) grant period. Datasets: Google scholar, researchgate, RePec (for economists only).
Local, National and International	Engagement with New Research	Reads, downloads, followers, citations, partnerships and recommendations. Time-series analysis with test for structural break during (and after) grant period. DiD approach. Datasets: Google scholar, researchgate, RePec (for economists only), researchfish.
Local, Regional, National and International	Engagement with and Dissemination of New Research	Engagement events with metrics capturing where, when, size of audience, composition of audience and outcome of engagement. Datasets: researchfish.
Local, Regional, National and International	Research Impacts	Influence on wider communities captured through tangible measures of impact on people, business, politics. Datasets: researchfish.

Table 4: The Evolution of Collaborative Research Outputs with Principal Investigator (real ESRC grant funded project ended October 2025)

Year of Publication	Co-Investigator B: Existing Linked Co-Author	Co-Investigator C: Existing Linked Co-Author	New Unlinked Co-authors	New Unlinked International Co-authors: Country of Origin
	Count of Number of Joint Outputs		Count	
2020	2	1	7	
2021	1	2	1	China
2022	0	2	4	China
2023	0	1	3	Czech
2024	1	3	0	
2025	0	2	4	China
Accepted by Peer Reviewed Journals	9	10	14	Portugal, Italy, Tunisia, US
Peer Reviewed Journal 2nd Review	5	4	1	China
Peer Reviewed Journal 1st Review	3	7	5	Brazil, Italy
Pre-Treatment Total	3	3	8	1
Post-Treatment Total	10(+11)	18(+11)	25(+6)	7(+3)

Notes: Figures in brackets indicate research outputs in peer review currently.

Table 4 shows that research output with existing linked researchers who subsequently became grant co-investigators has increased from the pre-treatment period in respect of both researcher B and C. This is also observed for new and previously unlinked researchers which is evidence that there is increasing diffusion of research ideas that extend outside of the core research grant research team in related areas. The international diffusion reflects the fact that new knowledge created through the research grant has extended beyond the local and national context. This could be incorporated into a DiD methodology using a counterfactual of non-grant linked and unlinked researchers, or through tests for structural breaks in a time-series.

Table 5: Local Spillover Research Collaborations

Year of Publication	Local Project Early Career Researcher (within PI Institution)	New Local Research Collaborations (within PI Institution) Unlinked Researchers
	Count of Number of Joint Outputs	Count
2020	*	0
2021	0	0
2022	0	0
2023	0	0
2024	0	2
2025	0	1
Accepted by Peer Reviewed Journals	8	1 (ECR)
Peer Reviewed Journal 2nd Review	6	0
Peer Reviewed Journal 1st Review	9	0

Notes: * indicates a PhD student at that time. ECR denotes early career researcher.

Table 5 shows that local ECR researchers are able to increase their research output significantly through their formal association with the grant and PI. There is also evidence of local spillovers and diffusion as more local institutional researchers became engaged in related research, including ECRs. This could be incorporated into a DiD methodology using a counterfactual of non-grant linked and unlinked researchers, or through tests for structural breaks in a time-series.

Table 6: Engagement and Diffusion of New Research to Wider Communities (selected engagements from a real ESRC grant funded project ended October 2025)

Form of Engagement	Setting	Audience	Size of Audience	Spatial Reach
Presentation	European Financial Management Association	Policymakers/politicians, Professional Practitioners, Industry/Business, Postgraduate students	101-500	International
Presentation	International Corporate Governance Society	Academics	101-500	International
Presentation	Conference on Sustainable Banking and Finance	Schools, Policymakers/politicians, Professional Practitioners, Industry/Business, Undergraduate students, Postgraduate students, Other audiences, Study participants or study members, Third sector organisations	101-500	International
Presentation	University of Bologna	Postgraduate Students	11-50	International
Presentation	Wales Innovation Network	Postgraduate Students	11-50	National
Workshop	European Central Bank	Policymakers and Politicians	11-50	International
Workshop	UK Department for Business and Trade	Postgraduate Students	11-50	National
Presentation	University of Kent	MBA Students	11-50	Local

Researchfish captures extensive metrics relating to wider engagement activities that occur during grant funded research projects. This can be used to capture key elements of the diffusion of new research to wider communities and constituencies. Table 5 provides some examples of engagements and metrics captured by researchfish. Here the diffusion of new knowledge can be captured through spatial metrics based on the context, through the nature and constituencies of the audience and through the scale of engagement measured by the size of the audience. These are all hard metrics that capture elements of the diffusion of new knowledge supported by grant funding for foundational research and are appropriate for econometric analysis.

Can This Trace a Credible Pathway to Societal and Economic Outcomes?

From foundational research, which is often shared and disseminated through a variety of channels, this body of knowledge can be used to inform policy making in several ways that can be captured by researchers. For example, the Overton online database can facilitate impact tracking and policy discovery. Covering 193 countries and a current total of 25.76 million policy documents, the Overton Index tracks policy documents and grey literature from nearly 44,000 organisations worldwide. Researchers can browse government documents, guidelines, IGO and NGO reports, think tank research, central bank working papers and several other types of agencies and institutions.

The platform allows individuals to search for scholarly articles and find which papers are used to inform policy. It draws its data from OpenAlex, but only articles with policy citations appear in their Index. Searches can be conducted using the people tab to find if and where a researcher has influenced policy. A full text index for each document can be processed to find ‘mentions’ of researchers, as well as direct citations or references. This provides a direct link from a piece of foundational research (for example a specific named academic paper) and a specific policy document.

An Overton Example: From Research Grants to Knowledge, Dissemination and Policy Onwards

Initial Funding from Department for Business and Trade (now Department for Business and Trade)

Cowling, M. (2010). The role of loan guarantee schemes in alleviating credit rationing in the UK. *Journal of Financial Stability*, *6*(1), 36-44.

So, 9 pages of foundational research led to:

Academic Citations = 266

Host Countries of First Named Citing Authors = Australia, Japan, Ireland, Switzerland, Canada, US, Italy, Sweden (I stopped after first 30 citations)

Number of Different Disciplinary Journals = Economics 5, Entrepreneurship and Small Business 4, Finance 4, Business and Management 1, Innovation 1, Geography 2 (I stopped after first 30 citations)

Citations in Public Policy Documents =

Het Centraal Planbureau

Netherlands Government

Public project financing: when and how?

26/03/2024

Topics

Innovation, Subsidy, Investment, Patent, Interest, Financial risk, Public-benefit nonprofit corporation, Money, Literature, Externality, Bank Research, Venture capital, Bond (finance), Price, Transaction cost, Loan, Credit rating, Conceptual model, Causality, Finance, Business, Economy, Present value, Financial economics, Business economics, Correlation, Capital (economics), Empiricism, Moral hazard, Private sector, Risk, Economics, Language interpretation, Competition (economics).

https://www.cpb.nl/publieke-projectfinanciering-wanneer-en-hoe

NBER

USA

Think Tank

Innovation Market Failures and the Design of New Climate Policy Instruments

04/09/2023

Topics

Green bank, Externality, Market failure, Market (economics), Spillover (economics), Loan, Innovation, Policy, Credit rationing, Infrastructure Investment and Jobs Act, Adverse selection, Pareto efficiency, Climate change mitigation, Technology readiness level, Bank, Photovoltaics, Startup company, Infrastructure, Carbon capture and storage, Information asymmetry,

Economy, Subsidy, Economies of agglomeration, Interest, Net present value, Carbon price, Economics, Venture capital, Underwriting, System, Funding, Finance, Economic surplus, Moral hazard, Entrepreneurship, Risk, Technology, Politics of climate change, Business, Clean technology, Environmental economics, Debt, Business economics, Incentive.

https://www.nber.org/papers/w31622

World Bank

IGO

An Exploration of Climate-Related Financial Risks for Credit Guarantee Schemes in Europe

17/11/2022

Topics

Climate change mitigation, Climate change, Risk, Hazard, Climate change adaptation, Low-carbon economy, European Investment Bank, Finance, Financial risk, Effects of climate change, Greenhouse gas emissions, European Union, Small and medium-sized enterprises, Economy, European Green Deal, Wildfire, Flood, Intergovernmental Panel on Climate Change, Natural environment, Stress test (financial), Greenhouse gas, Forest, Politics of climate change, Bank, Mining, Sea level rise, European Central Bank, Loss given default.

https://openknowledge.worldbank.org/handle/10986/38326

Asian Development Bank

IGO

Financing Small and Medium-Sized Enterprises in Asia and the Pacific: Credit Guarantee Schemes

16/03/2022

Topics

Debt, Small and medium-sized enterprises, Dynamic stochastic general equilibrium, Loan, Funding, Finance, Impact evaluation, Macroeconomics, Equity (finance), SME finance, Input–output model, Interest, Access to finance, Credit, Propensity score matching, Labour economics, Vector autoregression, Bank, Computable general equilibrium, Export–Import Bank of the United States, Credit risk, Unemployment, Economics, Private sector, Economy, Business, Guarantee, Employment, Default (finance), Financial economics, Investment, Money, Business economics, Collateral (finance), Economic growth, Option (finance), General equilibrium theory, Interest rate, Economic equilibrium, Difference in differences, Market (economics), Consumption (economics), Small Business Administration, International Finance Corporation, Risk-free rate, Agent-based model, Economy of Africa, Sustainable Development Goals, Econometrics, African Export–Import Bank, Productivity, Moral hazard, African Development Bank.

https://researchrepository.ilo.org/esploro/outputs/book/Credit-guarantees-SME-access-to-finance/995218879702676

Central Bank of Barbados (CBB)

Government

Expanding the Central Bank's Tool Kit: Credit Guarantee Schemes in a Small Island Developing State

31/12/2021

Topics

Small and medium-sized enterprises, Central bank, Lender of last resort, Bank, Economic growth, Market liquidity, Interest rate, Interest, Loan, European Central Bank, Great Recession, 2007–2008 financial crisis, United States Department of Energy, Employment, Private sector, Financ, Economy, Money, Business, Financial services, Business cycle, Productivity, Credit, Distributed generation, Quantitative easing, Average treatment effect, Organisation of Eastern Caribbean States, Security (finance), Bank of Japan, Banking, Propensity score matching, Federal Reserve, Risk, Monetary policy, Photovoltaics, Business economics, Innovation, Renewable energy, Investment, Sustainability, Economic bubble, Access to finance, Collateral (finance).

https://www.centralbank.org.bb/news/working-papers/expanding-the-central-bank-s-tool-kit-credit-guarantee-schemes-in-a-small-island-developing-state-by-shekira-thompson-and-winston-moore

From this single example, we have established, for a single academic peer reviewed paper, both the academic reach based on citations, interdisciplinary reach, and the host countries of the citing authors, and the breadth of the policy reach across public agencies, IGOs and think tanks. It would be possible to take one further step to identify policy changes that occurred following the publication of a specific policy document and the potential 'size of the prize' in terms of numbers of people or firms that were potentially impacted by any policy changes.

Can This Extend Beyond Academic Grant Funding?

Our outlined approach was specifically designed to trace out the wider dissemination of knowledge created through foundational academic research and potentially all the way through to policy impact. Other economists on the project have rigorously covered how we can trace out and analyse the impacts on policy treatment on firms and wider society. In this sense, our approach can be seen as taking a different starting point and focus, but one that is complementary to the firm treatment approach.

However, it is an important question whether our approach can extend beyond academic grant funding, for example is it transferable to infrastructure investments and UKRIs convening roles. The former can be treated in two ways: Firstly, as a capital investment and then standard returns-on-investment calculations can be used. For example, the relative returns to an old factory versus a new factory, adjusted for the costs of investment. It could also be treated as a physical infrastructure whose main function is to house people who conduct research. This second, people based, approach could adopt the main methodology outlined in this report. For example, by collecting complementary research assets (people) together in one building, there may be gains from knowledge transfer and complementary skills.

The softer roles of UKRI, such as convening, provides a platform for knowledge transfer and dissemination. This could be captured in a similar way to that outlined in the engagement and diffusion mechanisms outlined in Table 6. In this sense, UKRI convening acts as a forum for the diffusion of foundational knowledge, often to academics, industry and policymakers.

Summary

We set out to explore how we can capture the value added generated from the grant funding provided by UKRI and administered through its research and innovation agencies. Our focus was on how we can trace out and capture the process of diffusion of new foundational academic research and its impacts at different levels of the wider ecosystem from local academic colleagues, through the wider academic community and up to national and international settings and contexts. Our starting premise was that whilst the creation of new knowledge is a key building block, it is only when this is diffused and transferred to other key agents in the economy that it becomes useful outside of the individual academic setting. That is not to say that sharing new knowledge and creating a more diverse and vibrant academic community and ecosystem is not important in its own right as a core research council objective is to help build and sustain the next generation of researchers, but the largest gains from the creation of foundational knowledge occur when it is diffused throughout the economy to the public, politicians, and businesses to better inform their understanding and improve their decision-making and their ability to innovate. It is these latter aspects that can drive value creation and improve the socioeconomic wellbeing of the UK economy. These aspects can be captured through new policy databases and platforms.

Practical Considerations

So how might this be translated into a robust and meaningful research project that captures the value added created by the initial grant and traces it through the various levels of the ecosystem? One approach would be to take a random sample of projects that received grant funding from each of the core UKRI research councils. Each project has a principal investigator and typically several co-investigators and research fellows/assistants. These individuals form the treatment group which could be 'matched' against non-project academics that (a) have prior research relationships with the project team, (b) have no prior relationships with the project team but work in the same sub-field of the discipline, or © academics within the same department and institution. Then the standard before-after DiD methodologies could be employed across a variety of metrics related to research output. This could be extended to include wider diffusion metrics relating to wider research engagement metrics using research search engines and databases.

At higher levels of the ecosystem, the scale and nature of engagement could be used as a reasonable measure to capture new knowledge diffusion throughout the wider ecosystem. Here, the researchfish database would be particularly useful as it captures engagement events, the composition of the audience, the size of the audience, and its spatial reach. Additional analysis could explicitly focus on impact identified through the influence on Policy, Practice, Patients & the Public section of researchfish.

Our suggested approach is bottom-up as it is the foundational new knowledge created that is supported by core research council funding. Without that building block, the ability to generate new innovations and improve the wider understanding of social and economic issues that the UK faces today and in the future is greatly diminished. Thus, we sought to trace out the evolutionary processes through which new foundational research is diffused through all levels of the ecosystem as a means of capturing value added.

Now that you have read our report, we would love to know if our research has provided you with new insights, improved your processes, or inspired innovative solutions.

Please let us know how our research is making a difference by completing our short feedback form via this link.

You are also welcome to email us if you have any questions about this report or the work of the IRC generally: info@ircaucus.ac.uk

Thank you

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