

N8/YORKSHIRE UNIVERSITIES JOINT RESPONSE TO DAVID SWEENEY

The N8 Research Partnership and Yorkshire Universities (YU) together represent 17 higher education institutions (HEIs) in the north of England. Our members make major contributions towards the UK's research and innovation base. They are also critical institutions in supporting local and regional development, and act as key anchor institutions underpinning place-making in many cities, towns and communities across the north.

We welcome the questions posed by David Sweeney, Executive Chair of Research England, in his recent blog for WonkHE¹. This joint response by N8 and YU represents a contribution to the important debate about the role of place in research and innovation policy, strategy and funding in the UK.

Executive Summary:

- **Research capacity and funding is not sufficiently spatially distributed in the UK. This reinforces imbalances and inequalities in the UK economy, and is an opportunity cost for UK Productivity and R&D targets.**
- **In order to address this, there needs to be a greater emphasis on place and developing regional R&I ecosystems, which engage partners in the public and private sectors, as well as local citizens;**
- **Definitions of excellence should be reviewed reflecting value of collaborative research which is locally embedded and impactful. Conventional peer review methods, which are accustomed to traditional measures of excellence, may need to be reviewed for funding schemes for which other factors are also strategically important;**
- **Programmes should not be one-size fits all, but informed by regional knowledge. The approach should be flexible and long-term;**
- **To make transformational change, SIPF awards could usefully be significantly larger and longer in duration;**
- **Building capacity and local knowledge could be supported by developing new place-based collaborative research models, disseminating knowledge and informing policy.**

¹ <https://wonkhe.com/blogs/stimulating-local-economies-through-research-funding/>

QUESTIONS:

1. Should research be an instrument of local economic development policy?
- 2a. Is research capacity sufficiently distributed – or concentrated – in the UK?
- 2b. Do we have the appropriate conception of research excellence for research and development and innovation and place policy?
- 2c. Is research capacity sufficiently leveraged for place agendas?
- 3a. How large does SIPF need to be to make a difference?
- 3b. How do we avoid one-size-fits-all solutions?
- 4a. Can research, development, and innovation collaboration with frontier firms ever improve spatial inequalities?
- 4b. Why are links between frontier firms and local small and medium-sized enterprises important – and what is UKRI's role in improving these?
5. How do we link the objective of SIPF to reduce inequalities appropriately with wider responsibilities to achieve that i.e. in local partners/bodies?
6. Research, development, and innovation development is complex, network-heavy and evidence-rich. What can UKRI do to improve and embed relevant local capabilities?
7. Experimentation is critical in developing new policy approaches. Inherent in this is that some projects will fail. How do we both celebrate successes and tolerate and learn from failures?

RESPONSES:**1. Should research be an instrument² of local economic development policy?**

A key principle of devolution is that decisions and policies are made at the most appropriate spatial level, and that there is scope in which to formulate, align and/or integrate specific interventions around a particular geographical area. This improves the efficiency and effectiveness of policy and strategy, as well as the allocation of both public and private investment. However, we need to consider carefully the way that markets, institutions and actors operate, and that they are not bounded by one administrative boundary.

² Policy instruments are tools used by governments to pursue a desired outcome - the tools which can be used to overcome problems, market failures and achieve strategic objectives. Examples include economic tools (taxes, spending, incentives), and regulations (voluntary, legal).

To ensure that the UK's research system continues to be one of the best in the world, we would argue that we need decisions to be taken into consideration which leverage the scale and resources of central government and reflect:

- the nature of the proposed research and what is perceived to constitute 'excellence' in that domain;
- its potential for leveraging local strengths, context, profile and ambition; and
- its contribution to the national and global research endeavour.

There are currently a number of barriers to realising this vision.

Local governments, or multi-local authority entities, such as combined authorities or local enterprise partnerships are not equipped to undertake the role of research funder, and do not have access to the necessary expertise or infrastructure to draw on to make efficient and informed decisions in the context of other research being carried out worldwide.

In comparison, the Research Councils have a track record of being an efficient (low overheads) and effective mechanism for disbursing public funds for research within and across different disciplines and thematic areas.

Notwithstanding this, there are inevitably some areas that are worthy of further improvement, particularly in strengthening the diversity of the UK's research base. Place, in this context, is one important dimension of diversity, and which has grown in value and significance as a feature of public policy in recent years.

There is a stronger case for a greater proportion of the national innovation funding to be deployed through more local input to decision-making; to enable the creation and strengthening of clusters; to facilitate a more systemic view of the local innovation ecosystems and for the lifelong development of technical and higher-level skills to enable the diffusion of innovation- most likely at the further education and Masters Level. Greater involvement of regional stakeholders in developing calls with UKRI, NIHR etc. would be welcome, and with greater weight placed on the support and engagement of regional stakeholders in decision-making in relation to strategic innovation investments.

As a key foundation of improved productivity, we do need to see increased levels of research and innovation investment and activity in the northern regions with the benefits of; creating and diffusing knowledge for new and existing businesses, driving more and better jobs in the regions; attracting inward investment and talent because of the fantastic quality of life, combined with professional opportunities, data, analysis and innovation to improve our public services. This means creating local and regional innovation ecosystems which link universities with prime industries and smaller businesses and with foundational sectors and services such as local government, health, transport or the police, as well as local communities.

Moreover, it is increasingly clear that productivity growth, measured in terms of GDP/GVA for example, cannot sustainably be used as the sole measure for the contribution of research and innovation to local economies. The contribution of research to clean and inclusive regional growth will become increasingly important. A definition of regional wealth would account for the assets in the regions that underpin improved productivity and quality of life;

such as natural capital, cultural heritage, produced capital, and human capital. This would also allow for the contribution of the arts and humanities research to be better captured in both national and local economic development and thereby supported more effectively.

The UK (especially England) is one of the most highly-centralised states and economies in the OECD. Incremental devolution in recent years has begun to provide local government, metro mayors and other institutions with new flexibilities to deliver services and investment that designed to reflect local conditions and meet the specific needs of a locality or region. What this means specifically for research is:

- Local areas and regions will have more freedom to engage with universities on the issues that matter the most to particular places
- Local stakeholders and citizens can be more closely involved with research programme design, strengthening the programmes and accelerating impact. This means that discovery and applied programmes are likely to generate better, bolder outcomes more quickly (win) and are more likely to be funded as a result (win).

2a. Is research capacity sufficiently distributed – or concentrated – in the UK?

Currently, three sub-regions of the UK- Oxford and its environs, Cambridge and its sub-region and inner West London- account for 31% of all R&D spending in the UK. Public sector R&D is even more concentrated, with 40% taking place in these three regions³

Historically, the R&I system in the UK has been optimised to produce ‘excellence’- typically defined by citation metrics. Issues have arisen because of the conceptualisation of ‘excellence’ and because of the emergence of academic disciplines, each with its own culture and values. This has led to concentration of funding (and therefore research capacity) within institutions that have a track record of ‘excellence’, often going back hundreds of years. In turn, this attracts ‘excellent’ people to work within these universities, because of access to funding, and networks of contacts and colleagues have developed over decades which form an ecosystem around these universities which tends to attract research and innovation funding from government and have high productivity growth.

Therefore, excellence as the driver has contributed, towards the growth of inequalities geographically within the UK, producing an unbalanced national economy, with some regions becoming increasingly unsustainable whilst other places have continued to struggle economically as a consequence of managing long-term industrial decline, and with limited productive investment compared to other places. Regions with younger universities (such as the North of England) or fewer universities (the South West of England) tend to have less access to research and innovation funding. This may be due to perceptions of the ‘excellence’ of and/or density of research-intensive provision in these regions. Arguments to rebalance are met with outcry. As a result, funding schemes aimed at increasing the

³ Jones, R. L. (2019) A Resurgence of the Regions: Rebuilding innovation capacity across the whole UK, University of Sheffield: Sheffield.

research infrastructure and capacity of regions with smaller but 'excellent' capabilities tend to be insufficiently resourced to achieve transformational change.

There are other 'knock-on' implications of this geographical concentration of research capacity:

- House and land prices in Oxford and Cambridge are exceptionally high, alongside London. The South East and East of England are the most water-stressed areas in the UK, increasing population growth in these areas has negative environmental impacts on water sources in the region. Additionally, these areas are also likely to be those where agricultural land is needed to increase the UK's home produced fresh fruit and vegetable supply to reduce Carbon emissions. In order to not place agriculture in competition with human consumption for water and further stress the water supply it is important to see population growth outside the Golden Triangle.
- The R&I system and the UK economy overall is failing to mobilise and utilise all the talent that exists in places and universities in the northern regions and elsewhere. This talent could contribute towards helping the government reach its 2.4% GDP R&I target and help the UK address its productivity challenge.
- Because of the entrepreneurial ecosystems that have developed around universities in Oxford, Cambridge and West London, it is far less risky for an adult to take employment in an SME here; if one fails there are others in the near vicinity requiring similar types and levels of skills. One therefore has the confidence to buy a house and put down roots within a community- again factors which make moving outside of this region unlikely.
- Equality and diversity considerations are also important. Places in the North of England are diverse in terms of health, wealth, culture, race, class and geography. Concentrating research capacity within certain types of university in a certain part of the country restricts the range of perspectives and viewpoints that can be brought to bear on economic, social and environmental challenges. Today's 'wicked' problems need a more diverse and interconnected range of expertise and perspectives across different sectors, and universities in the North of England are well placed to source solutions if more investment were targeted towards these HEIs.

Because research capacity in the UK is concentrated geographically it contributes towards spatial inequalities in health, education and wealth. The uneven geography of research and innovation investment in the UK is not the sole factor behind the country's spatial inequalities, but it is both a contributor and a symptom. If we are to create a more balanced and a more productive national economy, then research and innovation institutions and investment have a key role to play in realising this objective.

2b. Do we have the appropriate conception of research excellence for research and development and innovation and place policy?

'Excellence' is a crucial lens through which to approach R&I funding, but it should not always be the sole or primary ranking criterion. If we are to reverse regional inequalities, achieve the 2.4% target and improve national productivity, we need to invest in a more vibrant and

diverse research system – funding different types of institutions, and more funding for place-based research, with a priority for large investments outside the Golden Triangle, and especially in the North of England.

We need to remove the structural bias that exists against different sectors, industries and regions in relation to funding calls such as the Industrial Strategy Challenge Fund, which has been directed towards a narrow range of specific sectors.⁴ There is an argument that overall productivity gains could be more impactful by also supporting employment-rich and/or foundational sectors of the economy. We need to drive and inspire excellence across the country, and that means providing the supportive tools, networks, infrastructure and cultural change required for this to happen. In reality, there is no absolute definition of ‘excellence’; it is a relative concept.

To address this, might we consider the question: ‘*is research excellence **always** the primary criterion for making ranking/funding decisions?*’ For **some (not all) funding schemes** might it be more appropriate to use excellence as a minimum threshold with other factors used for ranking, recognising that in some cases research excellence is **necessary but not sufficient** to achieve the strategic purpose of those funding investments?

There is an inherent issue with the use of conventional peer review for making decisions which require other factors to be considered alongside research ‘excellence’. There are cultural norms around what determines excellence; so for a conventional funding stream making funding recommendations on the basis of research ‘excellence’ within that culture (e.g. a discipline), conventional peer review works fine. However, where schemes or individual proposals cut across those cultural boundaries, peer reviewers providing advice in the way that they are used to will tend return advice based on the cultural norms of research ‘excellence’ that they are used to seeing. This impacts for example on multidisciplinary research where this phenomenon is well known but will also impact on other strategically important factors e.g. place, impact etc. In addition, the absence of an agreed definition of ‘excellence’ creates an environment where unconscious bias is able to thrive; on the basis of research discipline, gender, place, race, class, technology readiness level etc.

2c. Is research capacity sufficiently leveraged for place agendas?

The core answer is that research capacity is not sufficiently leveraged at present for the place agenda. We need to see a greater emphasis upon place-based capability within the R&I system. Mechanisms such as the Research Excellence Framework and Knowledge Exchange Framework will help and have an important role to play in providing incentives for universities and academics to focus attention on generating and co-designing research which has impact at an early stage that generate wider benefits. Investment in research and innovation capacity can also crowd-in private investment, which is often vital to unlocking

⁴ Fothergill, S., Gore, T. and Wells, P. (2017) Industrial Strategy and the Regions: The shortcomings of a narrow sectoral focus, Centre for Regional Economic and Social Research, Sheffield Hallam University: Sheffield.

latent innovation activity. We also need to see more investment in initiatives that help to overcome the structural barriers between research capacity and the challenges of its place; for example time to build new collaborations between the public sector, business, educators and citizens, to build relationships and trust, to understand different priorities and language so that in order that the contribution of research capacity to the place can be optimised.

3a. How large does SIPF need to be to make a difference?

The leverage needed to make a genuine place-based difference is significant. Each award should be a minimum of £25M to make a tangible difference in a place, there should be more awards, the awards should be of sufficient duration to demonstrate impact (at least 7 years) and the overall fund should be much larger than it currently is⁵. Give that SIPF has a declared objective to fund activities which contribute towards significant relative regional economic growth i.e. having a significant impact locally that closes the gap between that region and the best nationally, it needs to deploy sufficient resource to make a material difference. We would support the call for SIPF to be more flexible and to include support for the increasing the demand for innovation and the development of research and innovation infrastructure in particular places, perhaps on a programme rather than project basis.

Our funding estimate is based on experience in engaging stakeholders and budget holders (especially local and national government) within a defined 'place', to lead to coproduced research and innovation. The resources and time needed for building these relationships and understanding tends to be significantly underestimated- this leads to underpowered collaboration and/or funding those with existing relationships rather than forming transformative new ones.

3b. How do we avoid one-size-fits-all solutions?

One-size-fits all solutions are driven by the desire to obtain funding, which is both a prerequisite to achieving the outputs. Applicants like to learn from what has worked in the past in terms of applications, to maximise their likelihood of being funded. Some methods of driving diversity of approach could include:

- Not having one size fits all assessment criteria, and instead having a more place-sensitive evaluation framework. This could link to the recommendations of the Civic University Commission which emphasised the needs for a greater understanding of different localities to drive place-based activity.
- Use alternatives to conventional peer review- the issues with a conventional peer review process and ranking using research excellence has been described above; therefore one could usefully consider research excellence as a threshold measure rather than a ranking criterion. Innovation in approach could be an explicit differentiator- along with fit to local context. One could usefully consider the potential for anonymous peer review to remove unconscious bias.
- Using deliberative discussion with the public to help define challenges for the call.

⁵ HoC (2019) 'Balance and effectiveness of research and innovation spending', Twenty-first report of Session 2017-19, House of Commons Science and Technology Committee: London.

4a. Can research, development, and innovation collaboration with frontier firms ever improve spatial inequalities?

Not by itself, but it does form part of the mix of interventions that are needed to improve productivity and growth in under-performing regions. We would also encourage R&I activity within foundational sectors of the economy as these form part of the important mix of industrial policy and strategy. In addition, many of the UK's productivity problems lie not, as Phil McCann argues⁶, in the 'star performers' of industry but in the broader business base.

4b. Why are links between frontier firms and local small and medium-sized enterprises important – and what is UKRI's role in improving these?

Stimulating the demand for increased innovation in regions such as those in the north of England has long been a challenge within local and regional development policy and strategy. Linkages between 'frontier' firms and local SMEs through supply chain linkages is critical to increasing demand for innovation, improving skills and diffusing the commercialisation of ideas and product and process innovation within and across a wide business base, and for encouraging business scale-ups. Northern Accelerator is an excellent example of a collaboration between four northern universities which is dramatically increasing the number and success of spin-outs. UKRI, through Innovate UK and other funding mechanisms, can facilitate and broker interactions between local knowledge base, frontier firms and local SMEs. There is an opportunity to support more local decision-making for example equity seed-corn funds managed locally, rather than nationally through Innovate UK. There is an appetite to increase the volume of Knowledge Transfer Partnerships, in the North of England, and connect these with efforts to increase trade and investment.

5. How do we link the objective of SIPF to reduce inequalities appropriately with wider responsibilities to achieve that i.e. in local partners/bodies?

The universities in the 'Golden Triangle' are characterised by achieving a critical mass of excellence within a small geographical area. This correlation often leads to an assumption that collaborative research can only be established effectively across small geographies. In contrast, the N8 Research Partnership has shown that thriving and successful collaborations can be built across broader geographies, given the appropriate support and resources. N8 AgriFood, N8 Industry Innovation Forums and N8 Policing Research Partnership are examples of collaboration building grants that have excelled; although the case for 'Centre' funding has proved more difficult to make across a wider geography under 'standard' funding routes.

The universities of the North of England may not always have critical mass in a thematic area within their own institution or local geography, but critical mass can be achieved through collaboration across a city-region, region and/or pan-region, drawing on the strengths of the universities and other partners. It is therefore possible to generate 'multiplier effects' by ensuring that the objective of SIPF to reduce inequalities is aligned closely with

⁶ McCann, P. (2019) 'UK Research and Innovation: A Place-based Shift', [A paper for UK Research and Innovation](#), University of Sheffield: Sheffield.

the wider strategic economic frameworks and local industrial strategies of localities and regions.

Universities in the North of England are working collaboratively to strengthen local research and innovation eco-systems and link these with local development priorities and the long-term plans of sectors such as health, local government and police. Bodies such as N8 and YU are critical to brokering conversations between higher education institutions and other sectors, and breaking down barriers to collaboration, drawing together the collective endeavour and capacity of universities and local partners working as civic anchor institutions. Funded programmes such as N8AgriFood and N8 Policing Research Partnership demonstrate the effectiveness and return on investment of collaboration building, with local and national partners. A route for such programmes to seek long-term substantive funding as part of SPIF would ensure the continued and deepened engagement of local partners and engage with other actors in the local R&I ecosystems.

6. Research, development, and innovation development is complex, network-heavy and evidence-rich. What can UKRI do to improve and embed relevant local capabilities?

We would encourage UKRI to undertake a number of steps, including:

- Investing more in collaboration building activities between universities and different sectors as a precursor to collaborative R&I programmes;
- Connecting diverse but complementary research and innovation capabilities within and across different parts of the North of England;
- Being more ambitious in its use of funding schemes, such as SIPP, prioritised in relation to the place agenda, with an increased number of awards which are each at a scale which can make a tangible difference over the long-term (at least £25M);
- Funding strategic large investments in strategic localities or regions;
- Supporting local programmes, building on the recent place-based partnerships call to support co-design and citizen engagement;
- Introducing programmes that facilitate local networks relating to areas of local strength;
- Connecting more UKRI investment to local and regional economic strategies and devolved authorities, which can help shape and inform long-term research ambition;
- Ensuring local perspectives are accounted for in decision making, both on individual awards and at a strategic level (e.g. UKRI Board);
- Creating opportunities for UKRI staff to build their knowledge of local R&I ecosystems
- Building a network of regional collaborative research models which share learning and best practice, such as Birmingham City REDI.

7. Experimentation is critical in developing new policy approaches. Inherent in this is that some projects will fail. How do we both celebrate successes and tolerate and learn from failures?

“I have not failed. I've just found 10,000 ways that won't work.” - Thomas A. Edison

We need to learn from what hasn't worked in the way that we hoped, involve new actors, encourage risk-taking and lead by example. We need to allow policy approaches to be piloted and evaluated before being rolled out at scale to manage risk and optimise delivery (SIPF is a key example). For particularly high risk-high return projects- stage-gated approaches can be used to reduce the risk to the public purse, with review points in place with the mindset that these are set up to maximise the chances of a project being successful, rather than to close it down.

We should also ensure that effective evaluation methods are in place to monitor and assess the performance and lessons of project delivery. The R&I system should encourage the dissemination of learning from initiatives and support greater collaboration rather than competition between institutions.

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