

EVIDENCE SUBMISSION

Adrian Smith/Department for Business, Energy and Industrial Strategy *Review into Future frameworks for international collaboration on research and innovation: Call for Evidence*

MillionPlus is the Association for Modern Universities in the UK, and the voice of 21st century higher education. We champion, promote and raise awareness of the essential role played by modern universities in a world-leading university system. Modern universities make up 52% of all UK undergraduates, and 37% of all postgraduates, with over one million students studying at modern institutions across the UK.

Researchers and academics at modern universities are vital in ensuring that businesses, especially the small and medium enterprises that are the lifeblood of the UK's towns, communities, regions and nations, can benefit from expertise in research and innovation. Modern universities are essential in bringing these experts closer to business, supporting them in providing solutions to major challenges and driving economic growth.

METHODS BY WHICH NEW FUNDING ARRANGEMENTS CAN:

a. support research discovery of outstanding quality in all disciplines through international partnerships

Over half of all research carried out at modern universities was judged world-leading or internationally excellent in the REF14, proof of the immense contribution modern universities make to the overall research output of the UK. A considerable proportion of this research output is made in collaboration with international partners located in all four corners of the globe. MillionPlus member institutions alone have over 600 partner institutions in 435 cities in 81 countries, conducting research in all 7 continents.

In order for new funding arrangements to support outstanding quality through international partnerships, it is clear that new funding mechanisms must support modern universities to thrive. MillionPlus has for a long time argued that many funding mechanisms in the UK are outdated and ripe for reform. Funding mechanisms in the UK relating to research and development have been highly concentrated in a select number of institutions. This creates a highly disproportionate and skewed funding landscape in terms of finance, geography and institution type. Creating new arrangements that distribute funds more equitably across HEIs could be hugely advantageous for society and economic growth outside London and south east. A more proportionate funding arrangement has the potential to be more efficient and more competitive and foster the creation of more partnerships outside of the UK.

It is of great importance that new funding mechanisms support all disciplines through international partnerships and that no field is unfairly disadvantaged. If disciplines are overlooked, then this could cause certain areas of output to suffer, diminishing the overall standing of the UK in terms of research and innovation. MillionPlus would caution against an over-emphasis on disciplines that are seen as a priority, causing an uneven playing field. The full breadth of research in the UK must reflect the complexity and heterogeneity of contemporary society and must stay flexible so it can adapt as the country changes. Putting all your research eggs in one basket, so to speak, would be misguided in a world that is subject to such rapidly evolving change.

The number of different areas of research & innovation that draw down on a wide range of disciplines has proliferated over recent decades. That is, the direction of travel in developed economies is one towards

multidisciplinary. One way to ensure that funding arrangements keep in line with this shift is to ensure that there is ample room for funding of interdisciplinary research.

b. attract to the UK, researchers of outstanding capability from around the world

The ability of universities and other organisations to recruit research students and research staff to their institutions is critical to health of the sector and its ability to establish successful frameworks for international collaboration. In a highly competitive global market for students and staff, institutions are operating on fine margins, and even the optics and messaging surrounding immigration and higher education are instrumental. Getting this wrong at the level of government can act as a deterrent to people choosing to come to this country to study or work, as it is so easy for students and academics to go to other countries.

One example that MillionPlus has previously challenged is the language often espoused by government about attracting the “brightest and the best” to the country. MillionPlus believes this to be an erroneous use of language, primarily from a strategic point of view, since there are many potential research students or staff who might not characterise themselves in these terms who nevertheless will make an extremely valuable contribution to British society, advancing research and innovation. Our preference would be for a focus on language such “entrepreneurial and talented” when referring to international students and academics.

MillionPlus has welcomed the Department for International Trade’s International Student Strategy. Some of the hallmarks of this, namely a strategic outlook that has the stated objectives of enabling an expansion of staff and students coming into the UK, should be replicated in other areas of government so as to improve research and innovation and foster international collaboration.

Any new funding arrangements will only achieve their full potential if they are complimented by immigration policy and corresponding VISA system that is fit for purpose and enables institutions to operate dynamically. Any system that inhibits recruitment for staff or students, is overly burdensome for institutions, or unfairly punishes institutions for their overseas recruitment will act as an impediment to future international collaboration and development of research and innovation capabilities.

The current student visa system (Tier 4) does not currently deliver for the UK: it is unduly subjective, inequitable, and can act as a non-tariff barrier to trade in educational exports. With the government's target of achieving £30bn in education exports by 2020, MillionPlus believes this can only be achieved through a sector-wide strategy for growth, with a range of reforms to international student recruitment. MillionPlus laid out its plan for an alternative system in “[A new system for student visas](#)”.

Leaving the European Union in a way that removes freedom of movement to the UK from the other 27 EU nations will have an immediate and sizeable negative impact on institutions ability to recruit the talent they are looking for. MillionPlus would therefore advocate any new funding arrangements that create the smallest levels of friction and ensure the mobility of individuals is preserved as much as is possible between the UK and other EU nations.

c. attract further R&D investment to the UK, thereby contributing to the Government’s 2.4% agenda

MillionPlus has long called for the government to be ambitious in setting its targets for R&D spend. MillionPlus therefore welcomes steps that have been taken to setting targets to increase the percentage of spend on R&D in the British economy. In order to create an environment which best incentivises and attracts R&D investment to the UK, it is vital the country remains open, global and outward-looking. This will be best achieved by joined up thinking across departments to establish some level of coherence in approach. Optimal R&D investment coming into the UK will not be realised if BEIS is only allowed to operate in

isolation on this issue and investment in this area will not be maximized without involvement or cooperation of other government departments.

The government should explore ways in which it can leverage greater levels investment from the private sector in supporting R&D. One area here is the ratios of public to private investment that are required to initiate spend within some of these funding mechanisms. Some countries structure funding mechanisms in a way that is more ambitious in this regard, and that creates more advantageous returns for investment. For example, some funding structures in Germany work on a 3:1 or 2:1 private-public investment model in contrast to “matched” or 1:1 funding models in the UK. This would be a cost-neutral approach, in terms of the public purse, to increase R&D coming into the UK. However, such methods should not absolve the state of its role in directing investment to boost research and innovation. OECD figures demonstrate the importance of public funding in providing confidence to private investors.

MillionPlus agrees with the government’s ambition of increasing research investment to 2.4% of GDP – in fact, we believe there is scope for even greater ambition, for example an increase to 3%. However, while the 2.4% figure is a useful figure that serves as a target to aim for and work towards, this is an overall percentage and hides the absolute figures as well as the variation or fluctuation of investment within the UK. We must also interrogate the geographical distribution of this investment and ask how funding mechanisms can be best constructed so as to spread themselves across the full width and breadth of the UK in order to have maximum impact. The reach of modern universities extends to remote and rural areas in many cases, touching some of the more peripheral parts of our economy. They work with and support local business in areas that are often overlooked or ignored by traditional funding mechanisms. Questions will be raised if the percentage of R&D spend is increased only as a high concentration of investment in London and the South East.

THE OPTIMUM BALANCE OF EMPHASIS FOR ANY NEW FUNDING ARRANGEMENTS IN EACH OF THE FOLLOWING DIMENSIONS:

a. European collaboration, Overseas Development Assistance and global collaboration

It would be short-sighted to attempt to place a figure on the precise percentage that each of the three dimensions listed above should take in new funding arrangements. However, Million Plus would underline the need for emphasis to be placed on all three of these areas: European collaboration; overseas development assistance; and global collaboration. Universities are autonomous institutions and one of the great strengths of the UK sector is its diversity. Therefore it is critical that there is sufficient funding in all three areas so that universities are afforded the flexibility and room to concentrate on one or the other as they see fit, in keeping with their specific institutional mission and objectives, whatever they might be (increasing comparative advantage in a given area, establishing a global footprint etc).

MillionPlus has called for maintained access of collaborative programmes such as Horizon 2020 or a matched level of funding from government post Brexit. Modern universities receive important money via European funding streams, a lack of which would harm institutions. The distribution of European research funding is falls more evenly across institutions than domestic UK research spending. So, any new funding arrangements that replacing those within the EU, that are more “British” in their design, could risk further concentrating investment into a small, select group of institutions which could harm the diversity and vibrancy of the sector.

Losing any access to Horizon 2020 funds as well as other EU organisations would be a catastrophic blow to the sector. It is important to emphasise that when looking at the global geography of funding arrangements

and future collaboration, it is not a zero-sum game. Closing off connections to one part of the world does not itself open new doors elsewhere. In fact, the UK's membership of the EU and active participation in programmes like Horizon 2020 directly contributed towards its ability to collaborate outside of Europe as well. Conceptualising these three dimensions as to be traded off with each other is a wholeheartedly misplaced approach. The goal instead should be to maximise all areas as best we can irrespective of their relative standing.

Another advantage of the Horizon 2020 scheme was its timeframe. The seven-year length of the programme and the existence of multi-year grants enables some institutions to plan and act strategically over time directing investment in a way that would have the most coherence and direction. Any new funding arrangements should consider this and try to facilitate a long-term approach where suitable.

b. support for: outstanding individuals; blue-skies research; business innovation and research impact; and research facilities and infrastructure;

Again, attempting to pluck an arbitrary ratio of emphasis is not productive here but MillionPlus would highlight the area of research impact as one that has been historically undervalued in funding arrangements. More than sixty percent of the research carried out at modern universities was judged to be world-leading or internationally excellent in terms of its impact. Research at modern universities is often carried out on the frontline of the discipline in coordination with businesses, professionals and practitioners, which means the impact of the research is inherently bound up in the process of knowledge exchange and not solely related to outputs or outcomes.

c. research and innovation domains (research disciplines, business sectors etc).

The target of 2.4% for R&D investment is an overall figure that hides the levels of investment in different domains of research and innovation. To gain a richer picture of the state of play of investment in the UK, it is incumbent on the government and its departments to unpack this figure to see the distribution of funds across different domains and use this to shape and inform future investment. While there might not be any perfect balance of emphasis that can be established and remain dynamic over time, the exercise will enable the government to identify areas where investment is lacking, across the country, but also as a percentage of R&D spend when compared with international competitors. To give one example, the level of R&D investment that specifically flows to the area or domain of business is lower than other similar sized European competitors.

METHODS AND TIMESCALES FOR INTRODUCING ANY NEW FUNDING ARRANGEMENTS FOR INTERNATIONAL COLLABORATION, INCLUDING THOSE THAT

a. reflect the ambitions of small and large businesses

Modern universities have a long and well-established history of cooperation with SMEs and developing networks of collaboration, support and enterprise. To illustrate this connection, in 2017/8 academic cycle, modern universities provided services to 24,359 SMEs. In the same year, modern universities were responsible for two thirds of all graduate start-ups; 92% of modern universities had an enquiry point for SMEs; and 88% provide assistance to SMEs in specifying their needs when working in some form of collaboration. The UK has the joint-highest number of SMEs who apply for funding through the Horizon 2020 programme. Many of these bids are made through collaboration or engagement with universities

Modern universities therefore have a vast wealth of experience and knowledge relating to SMEs and bypassing this valuable asset in any new funding arrangements would be a grave error. Modern universities

should be consulted or utilised in the development and implementation of any new funding arrangements so as to ensure the most productive use of public investment. All modern universities have embedded themselves in business communities particularly those featuring SMEs, and this has resulted in them developing strong and deep networks of partners over time.

New funding arrangements should aim to build on these networks. Indeed, when questioned these businesses highlight the security and trust at the heart of these long-term relationships as key to their success. Consequently, attempting to wipe the slate clean and start again would be a huge waste of knowledge and expertise and could be hugely damaging to research and innovation in the UK, particularly in some of the more peripheral and less affluent regions of the UK where many modern universities have a notable presence.

ANY OTHER ISSUES RELATING TO THIS WORK THAT YOU WISH TO BRING TO OUR ATTENTION

MillionPlus believes it is important to remember that alongside the research and development elements that make up the umbrella that is commonly referred to as R&D, there is a third pillar, that of implementation. This is a crucial factor that is often forgotten in discussions about R&D. This is effectively the last stage of R&D, but one on which much of its success hangs. This should therefore be brought into the conversation and feature much more prominently in the process.

