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Summary

UK Research and Innovation and the Department for Business, Energy & Industrial Strategy set up the Industrial Strategy Challenge Fund quickly but we have concerns about its clarity of purpose including the multiple projects now being funded, the length of time it takes for a project to be approved and the lack of clear evaluation about the impact.

By January 2021 over 1,600 projects had benefited from funding of £1.2 billion to support innovation in some of the most complex issues faced by the UK. Businesses and other bodies have contributed almost £600 million themselves to projects in what is known as co-investment. It is important that the fund tracks the job creation ambitions and the number of jobs delivered over time if it is to properly demonstrate its economic impact.

Greater clarity is needed on what the Fund as a whole is trying to achieve and how it is trying to do it. Although UKRI can point to good performance in beginning to tackle the various chosen challenges and amongst their funded projects, and in involving industry in the selection of challenges to support, its objectives for the Fund overall are input focused. This makes it difficult to assess whether the investment of taxpayers' money through the Fund has been successful in terms of, for example, economic impact including the number and quality of jobs created. The financial support provided by the Fund is currently concentrated in certain parts of the country and larger organisations have recently received an increasing proportion of funding. We are concerned that these risks undermining future performance by overlooking ideas from elsewhere and smaller businesses. The proof of whether the fund delivers is some years off and it is important that clarity about desired outcomes and proper evaluation of progress is built in at this early stage.

The fund is a key element in achieving the government's ambitious target for the UK to spend 2.4% of GDP on R&D by 2027. This was challenging before the outbreak of COVID-19 and is more so now. The Department needs to set out clearly how it proposes to meet this target. Structural issues in the Fund's design- such as lengthy approvals processes and co-investment requirements- similarly need an overhaul if it is to play an important role in helping re-build our economy post-pandemic. UKRI, the Department, and HM Treasury need to act with more urgency to tackle these issues and protect taxpayers' investment.

Introduction

Announced in November 2016, and started in April 2017, the Industrial Strategy Challenge Fund (the Fund) is a relatively new approach to promoting innovation, placing its emphasis on working with industry to identify issues, known as challenges, where public funding can make a difference to innovation. The Fund has supported the 2017 Industrial Strategy's aim to raise long-term productivity and living standards and address some of the complex issues the UK faces through supporting four 'grand challenges' set out in the strategy - future mobility; clean growth; artificial intelligence and data; and the ageing society. The Fund invites businesses, universities and other bodies to submit ideas for new 'challenges', linked to the four grand challenges, and, if approved, to submit bids for funding for projects that will address those challenges. When inviting bids for support the Fund encourages businesses and academia to work together with the intention of encouraging stronger links between the two sectors and fostering innovation. The Fund has a budget of £3 billion earmarked for the period 2017–18 to 2024–25.

UK Research and Innovation (UKRI), established in 2018, is responsible for managing the Fund. It reports to the Department for Business, Energy & Industrial Strategy (the Department) which scrutinises the affordability of challenge-related proposals and approves spending. HM Treasury scrutinises and approves Fund business cases from a value for money perspective.

Conclusions and recommendations

1. **UKRI's Challenge Fund is insufficiently focused on what it is expected to deliver in terms of benefit to the UK.** The Department set up UKRI with five objectives, including increasing UK businesses' investment in research and development (R&D), while also improving R&D capability, capacity and technology adoption and increasing multi- and inter-disciplinary research. But these objectives are focused on inputs, which the Department acknowledges are 'second order' measures. They do not give an indication of whether the Fund as a whole is making a difference, for example, by creating high quality, high productivity jobs. Difficulties in assessing what the Fund is achieving overall are exacerbated by the number and diversity of the challenges the Fund is currently supporting and the growth in the number of initiatives to which it is looking to contribute, such as the move towards net zero and the levelling up agenda. Any increase in the number of challenges supported in the future could make the assessment of performance more difficult. While recognising there are difficulties in making this assessment, it is imperative that UKRI and the Department understand what benefits the Fund is delivering for the UK and the taxpayer.

   Recommendation: ***UKRI, working with the Department, should clearly set out, by October 2021, what it expects the Fund to deliver. This should include its impact on jobs and economic impact in the short, medium and long term.***

2. **We are not convinced that UKRI's and the Department's approach to intellectual property generated by the Fund adequately protects taxpayers' interests.** Taxpayer funding invested through the Fund creates a 'bridge' between pure research investment and commercial development. There will potentially be value in the intellectual property associated with the projects that are funded. As we have seen with previous reports, it is important that intellectual properly produced as a result of taxpayer investment is exploited to maximise the value of the investment. However, UKRI has not ensured that any intellectual property generated as a result of the Fund is used to the benefit of the UK. The Department asserts that the Fund's purpose is to accelerate R&D investment generally, not to capture any potential benefits in this way. We are not convinced by its view that retaining a say over intellectual property rights is not necessary to recoup the benefits of the Fund for the UK. A better understanding of what benefits the Fund is expected to deliver to the UK economy would provide UKRI and the Department with a stronger basis for considering the best way to protect taxpayers' interests. The Committee is highly sceptical about the Department's response after the hearing that "IP rights, should be owned by the party best placed to exploit them" because UK Academia does not have a strong record of protecting IP rights.

   Recommendation: ***UKRI should re-examine its current approach of not holding a claim on intellectual property generated through the Fund. It should write to the Committee by July 2021 setting out the results of its review and explain how it intends to best protect the taxpayers' interests and maximise the value from taxpayer investment in the future.***

3. **The Department has not yet made clear how it will make sure the UK will meet the target to spend 2.4% of its GDP on R&D by 2027.** The government has a target to

increase the UK's public and private investment in R&D to 2.4% of GDP by 2027. In 2018, the latest year for which data are available, the UK spent £37 billion on R&D, the equivalent of 1.7% of its GDP. This is well below the Organisation for Economic Cooperation and Development's average of 2.4%, and the level achieved by other OECD countries. Germany for example spent 2.9% of its GDP on R&D in 2018. In 2019, the Department announced that to achieve government's target of 2.4%, both public and private R&D investment would need to rise to around £60 billion each year. The government has committed to increasing public investment in R&D to £22 billion by 2021–25. UKRI asserts that meeting the target is challenging but plausible. The recent impact of COVID-19 on the economy may make prioritising the public investment required to meet the target even more challenging.

Recommendation: ***The Department should develop, and then publish, by October 2021, its plan setting out the steps it will take to meet the 2.4% spending target by 2027.***

4. **Despite its focus on collaboration between companies of different sizes, the proportion of smaller companies benefiting from the Fund has declined.** One of the Fund's objectives is to increase collaboration between new small companies and those that are established, putting an emphasis on funding micro-, small- and medium-sized enterprises. In the most recent wave of funding, the proportion of projects awarded to large companies increased from 20% of the total number of projects in the second wave to 29%. This has taken place at the expense of micro and small-sized enterprises, whose participation in the Fund has fallen from 44% to 31% of the total number of projects receiving funding over the same period. The reduction in smaller businesses involvement could be down to a number of factors – such as an increase in co-investment requirements, poor communication with SMEs about the Fund, SMEs' limited resources to participate in collaborative bids, and lengthy approvals processes.The Department recognises that, while it is not possible to say that the increase in co-investment was the sole reason for drop in the proportion of smaller companies receiving funding, it is nonetheless a factor.

Recommendation: ***UKRI should, by October 2021, set out how it will increase SMEs involvement in the next wave of support from the Fund.***

5. **UKRI is not doing enough to make sure the Fund is attracting successful bids from across the country.** Funding awarded by the Fund is distributed unevenly across the regions of the United Kingdom. By October 2020, just over 63% of the Fund had been awarded to organisations registered in London, the South East and West Midlands. UKRI does not assess the regional balance of bids in assessing awards. In part, this distribution of funding probably reflects to a degree the location of existing centres of R&D activity, for example the advanced manufacturing base in the West Midlands. The nature of the challenges selected could also have an impact on the location of projects funded, skewing project selection to existing areas of activity. The geographical distribution of funding, however, is not necessarily explained by the distribution of businesses undertaking R&D activities in the economy. UKRI asserts that activity can take place outside of the regions where the company in receipt of funding is registered, but does not have additional analysis to show that this was the case.

Recommendation: ***The Department and UKRI should, by October 2021, set out: the factors that are inhibiting more widespread participation in the Fund; and the steps they are taking to attract more interest in the Fund from across the UK.***

6. **The elongated time taken by the Department and UKRI to provide funding to successful bidders risks putting off businesses from applying for the programme.** It took UKRI, the Department and HM Treasury 72 weeks to select and approve the challenges that were given funding in 2019–20. It took UKRI on average a further 31 weeks to assess applications for project funding and approve individual projects. The lengthy time taken to agree challenges and approve projects leads to delays in funding projects. For example, we heard from one organisation that meaningful work has yet to start on some projects for which those responsible had started to bid for funding as early as 2018. Taking too long to approve challenges and then select projects to fund risks delaying the impact from the projects which are supported. This prolonged process may also potentially deter some organisations from applying for funding and delay the impact of UKRI's investments. We are concerned that this could particularly affect smaller businesses which may not have the financial and staffing resources to wait for funding.

Recommendation: ***The Department, HM Treasury and UKRI should set out by October 2021 how they intend to speed up the time taken to approve challenges and projects.***

7. **Powers currently delegated by the Department and HM Treasury to UKRI do not strike the right balance between the governance necessary to support efficient decision making and unnecessary bureaucracy.** The Department and HM Treasury set the governance arrangements for UKRI's oversight of the Fund, including the requirements for approving new challenges. UKRI, the Department and HM Treasury each approve business cases for challenges in turn—as a result business cases can take over a year to approve. One consequence of this delay is that funding is slow to be allocated. In addition to delaying getting funding to those delivering approved projects, this could create extra financial pressures in the later years of the programme as funded activity builds up. The Departments' approach to the appointment of senior civil service positions has led to delays in appointing Challenge Directors, which have taken an average of over 37 weeks. Challenge Directors are fundamental in setting the direction for, and then overseeing delivery against, the objectives for each challenge. UKRI would like to be able to appoint these senior staff earlier, but to do so depends on its delegated powers from the Department.

Recommendation: ***The Department and HM Treasury should, by July 2021, review the conditions they place on UKRI to manage the Fund with a view to supporting more efficient decision making. The Department and HM Treasury should write to the Committee to explain the changes they have introduced together with their intended impact.***

1 Measuring the impact of the Funds

1. On the basis of a Report by the Comptroller and Auditor General, we took evidence from the Department for Business, Energy & Industrial Strategy (the Department) and UK Research and Innovation (UKRI) about the management of the Industrial Strategy Challenge Fund (the Fund).[1]

Assessing Fund performance

2. The government announced the creation of the Fund in late 2016 to "tackle […] major industrial and societal challenges." The Fund is intended to support the four 'grand challenges' outlined in the 2017 Industrial Strategy: future mobility; clean growth; artificial intelligence and data; and the ageing society. UKRI, which is responsible for managing the Fund, invites potential bidders from business and academia to identify important societal and industrial areas, linked to one of the four grand challenges, at which the Fund could be targeted. These areas are known as challenges. Once a challenge is approved, UKRI invites bids for individual projects that will contribute to the challenge. Project bidders need to demonstrate that they can provide their own funds to the project—known as co-investment—alongside public funding. The Fund, which started in April 2017, has a budget of £3 billion over an eight-year period 2017–18 to 2024–25. By January 2021, over 1,600 projects had benefited from funding of £1.2 billion to support innovation in some of the most complex challenges faced by the UK. Businesses and other bodies have contributed almost £600 million themselves to these projects as co-investment.[2]

3. There are three bodies involved in overseeing the Fund: UKRI, the Department, and HM Treasury. UKRI, established in 2018, has overall responsibility for the Fund and reports to the Department. The Department scrutinises the affordability of proposed challenges and approves spending. HM Treasury scrutinises and approves business cases of proposed challenges from the value for money perspective.[3] In March 2021, the government published a new framework to supersede the 2017 Industrial Strategy, entitled Build Back Better: our plan for growth. The new framework continues to include fostering innovation as a key component of the government's approach.[4]

4. The Department has five objectives for the Fund, to:

- increase UK businesses' investment in R&D, while also improving R&D capability, capacity and technology adoption;
- increase multi- and inter-disciplinary research;
- increase engagement between academia and industry on targeted innovation activities;
- increase collaboration between new small companies and those that are established; and

1 C&AG's Report, *UK Research and Innovation's management of the Industrial Strategy Challenge Fund*, Session 2019–21, HC 1130, 5 February 2021
2 C&AG's Report, paras 2, 3 and 6
3 C&AG's Report, para 1.11
4 HM Treasury, Build Back Better: our plan for growth, Policy Paper CP 401, 3 March 2021

- and increase overseas investment in R&D in the UK.[5]

5. The National Audit Office concluded that while UKRI could track the performance of projects and individual challenges there was no clear link between these and the Fund's overall objectives. It found that the five objectives focused on who received support from the Fund, rather than the impact the projects were expected to deliver. It similarly found that while UKRI reported performance against the objectives, it had not set any baselines against which to judge progress, and reporting did not focus on impact.[6] We therefore asked UKRI how it would know what success would look like in five years' time. UKRI told us that the number of challenges and projects involved meant that determining the success of the Fund as a whole was difficult as it could not be "summed up in one number or even three numbers".[7] It told us that the Fund's objectives, though input focused, emphasised the importance of collaboration between business and academia. The Department conceded, however, that the objectives were 'slightly second order' in enabling it to determine whether the Fund was successfully delivering against the individual challenges.[8]

6. UKRI's ability to assess the Fund's performance is complicated by the fact its funding is spread across 24 challenges which are linked to the four 'grand challenges' set out in the 2017 Industrial Strategy.[9] These range from supporting the UK's development of low-carbon technologies, to looking to support the better detection of disease and to identify new ways to tackle cyber security threats and each challenge has a range of objectives and which currently support over 1,600 projects.[10] The National Audit Office found that that increasing the number of challenges supported by the Fund risked making the assessment of performance more difficult.[11] UKRI told us that the government was also looking to the Fund to contribute to other policy objectives and national priorities.[12] UKRI explained that it expected the Fund to contribute to the government's target to spend 2.4% of the UK's gross domestic product on R&D. UKRI confirmed that the government recently looked to the Fund to help achieve net zero carbon emissions by 2050.[13] The Department also told us that the government was also considering how its 'levelling up' agenda will apply to R&D and innovation spending across the UK.[14]

Managing intellectual property

7. The Department described the Fund as a model which "bridges [a] gap" between pure research and commercial development using public investment.[15] In our November 2020 report on the supply of ventilators during COVID-19, we concluded that the intellectual property that had been created should be exploited to maximise value for the taxpayer.[16] The Department told us that as a general rule, the best owner of intellectual property was

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5 C&AG's Report, para 5
6 C&AG's Report, paras 20, 3.9
7 Q 21
8 Q 21
9 Q 23
10 C&AG's Report, paras 6 and 3.9, Figure 2
11 C&AG's Report, para 24
12 Qq 23, 24; C&AG's Report, para 2
13 Qq 15, 23, C&AG's Report, para 2
14 Qq 44, 46; C&AG's Report, para 2
15 Qq 60–61
16 Committee of Public Accounts, Covid-19: Supply of ventilators, Twenty-Seventh Report of Session 2019–20, HC 685, 25 November 2020

a the company or university responsible for developing it. It explained that any intellectual property (IP) generated by a project supported by the Fund therefore remained with company or university responsible for that project.[17] After our evidence session, the Department wrote to us outlining the Government's position on knowledge assets, such as IP, was that "IP rights, should be owned by the party best placed to exploit them."[18]

8. We asked the Department and UKRI why it had not ensured that the taxpayer benefited from any intellectual property generated as a result of successful commercial development paid for by the Fund.[19] The Department told us that securing intellectual property was not the purpose of the Fund—instead it was to accelerate R&D expenditure more generally. UKRI recognised that it was important to consider how to ensure a return on public investment, but added that it was not clear that retaining intellectual property rights was necessarily the best way to recoup the benefits of an investment. In its view, securing intellectual property was neither "...simple, cheap or low energy". It told us that it was considering alternatives such as taking an equity stake in some investments.[20] We sought assurances from UKRI and the Department that they would seriously think about how the public purse can benefit in the event of any "commercial successful roll out that has benefited from this bridge funding from the public purse."[21] The Department agreed to look at whether there might be specific exceptions to its current position.[22] The Department subsequently wrote to us to explained that the Intellectual Property Office was working on "how to ensure that the Government receives a financial reward for its innovation and taxpayers are getting value for money going forward."[23]

Meeting the R&D spending target

9. The government has a target to increase the UK's public and private investment in R&D to 2.4% of gross domestic product by 2027. The Fund contributes to this target.[24] In 2018, the most recent year for which data are available, the UK invested 1.7% of its gross domestic product in R&D. This is below the average across the OECD of 2.4%. UKRI told us that it thought the UK should be aiming well above the OECD average. It told us that in 2018 Germany spent 2.9% of its GDP on R&D.[25]

10. In 2019, the Department announced that to achieve government's target of 2.4% both public and private R&D investment would need to rise to around £60 billion.[26]We asked witnesses how, and by when, it was going to increase funding to meet the target. The Department told us that it hoped to start to see significant increases in public investment in R&D in the next dataset published by the Office for National Statistics, which would cover 2019. It recognised that it needed to make sustained investment through programmes like the Fund to help meet the target.[27] As part of this, it explained that the Chancellor had announced last year that government would increase the amount of public investment

17 Q 64
18 Letter dated 18 March 2021 from the Department's Permanent Secretary to Chair
19 Qq 61–62
20 Qq 62–63
21 Q 64
22 Q 64
23 Letter dated 18 March 2021 from the Department's Permanent Secretary to Chair
24 C&AG's report, paras 2, 1.5
25 Qq 15–16, 46
26 The Rt Hon Chris Skidmore MP, Reaching 2.4%: Securing the research talent of tomorrow, Speech, 7 May 2019
27 Qq 15–16

in R&D over the course of this Parliament, to £22 billion by 2024–25.[28] It told us that, at present, public R&D formed around a third of the UK's overall investment in R&D, with the remainder coming from business, charities and universities' own resources, and that the Fund would be an important part in leveraging further private investment.[29]

11. UKRI considered that meeting the target as very challenging but also described it as plausible if it could, for example, maintain the momentum the Fund had generated around private investment. It asserted that having an ambitious target was important "otherwise, one won't even meet unambitious targets, let along ambitious ones".[30] UKRI acknowledged though that the "hit to the economy" from COVID19 would make prioritising public investment in R&D challenging.[31]

28 Q 16, C&AG's Report, footnote 6
29 Q 16
30 Q 17
31 Qq 16–17

2 Distributing funding fairly and efficiently

Speeding up approval of challenges and projects

12. In the third and most recent wave of funding that started in 2019–20, it took UKRI, the Department and HM Treasury 72 weeks to select and approve challenges.[32] We asked the Department and UKRI why it took them over a year to select and approve challenges. The Department told us that fundamentally the time taken was because it was a difficult process, but recognised that overall it had taken too long and committed to a faster process next time. It identified three reasons for the day: that it had been more open to receiving ideas for challenges and had to consider over 250 proposals as a result; the business cases themselves were challenging because they needed to demonstrate that the Fund was supporting research that could be considered 'genuinely incremental'; and it had to make sure that proposals were relevant to the Industrial Strategy.[33]

13. The Department told us that part of the reason for the delays in approving challenges, and ultimately projects, lay with drawn-out approval processes.[34] The Department and HM Treasury are responsible for approving business cases for challenges. The Department told us that the process for selecting and signing off challenges started with UKRI consulting industry and academia, and then shortlisting potential challenges. UKRI submitted a business case for each challenge to the Department and HM Treasury for their approval in sequence.[35] Once challenges have been approved, UKRI has to select which projects to fund. UKRI explained that it does this after considering, for example, a project's alignment with challenge objectives and financial checks on the applicant and on the project costs. The National Audit Office looked at the total time taken from when applications were submitted to when funding was offered, and found that UKRI took on average 31 weeks.[36] UKRI told us that the time taken to approve projects was because it had to undertake a series of due diligence checks which were crucial to ensure that taxpayer's money was being spent well. It acknowledged that while this was an iterative process it could "drag on for far too long" and that it needed to find effective ways to speed it up.[37] It noted that some of the process it could "speed up within UKRI" but highlighted its dependency on, for example, companies responding promptly to checks.[38]

14. We were concerned that lengthy approval times, combined with changes in coinvestment requirements, could deter participation from some small and microsized companies.[39] For example, we received written evidence from Tees Valley Combined Authority which told us that it had submitted three successful and sequential bids relating to industrial decarbonisation for funding from the Fund. It explained that it had started its bids in early 2018, however meaningful work on the project had yet to commence

32 Q 37, C&AG's Report, para 15
33 Q 37
34 Q 37
35 Q 38, C&AG's Report, paras 2.14, 2.16
36 C&AG's Report, paras 2.18–2.19, Figures 1 and 6. Of the 236 projects with applications submitted in late 2018 of after, it took an average of over 31 weeks for funding to be offered. The shortest time between an application being submitted and funding offered was 16 weeks, and the longest took over a year at 53 weeks.
37 Q 42
38 Q 42
39 Q 59 and C&AG's Report, para 2.19

due to "the on-going process associated with managing the funds".[40] Similarly, evidence from Universities Scotland indicated that lead times for the Fund's project—"to build the consortium, complete the application, await assessment outcomes, and for funding to come through to universities"—were, in its opinion, far too long.[41] UKRI acknowledged that a two year wait for funding was very frustrating for businesses wanting to get on with projects. UKRI and the Department told us that there was a trade-off between quality and speed, and that they were hoping in the future to be "equally high quality and a lot faster at the same time".[42]

15. Delays in getting new challenges approved have had a knock-on effect on UKRI's ability to start spending. For example, in 2019–20, UKRI had underspent by £86 million, equivalent to 14% of its budget for the Fund the year. During 2020–21 UKRI agreed to re-profile £165 million from the current budget into future years for 20 challenges, mainly due to the impact of COVID-19. We asked UKRI about the extent to which any delays in distributing funding to projects will affect its ability to spend the Fund in its final years. UKRI said that the need to reprofile spending into future years created financial pressure in the later years of the programme. The NAO found that reprofiling funding could have an impact on planned activity, which in turn might impact on the amount of co-investment generated by partner organisations. It similarly found that additional pressure on future budgets could also come from the impact of COVID-19 on the level of activity undertaken on funded projects. UKRI told us that it would be easier to manage the risks from reprofiling budgets if it had a multi-year settlement. However, in the Spending Review 2020, the Fund was part of a one-year settlement.[43]

16. Lack of staffing capacity within UKRI may also have impacted the time taken to approve bids. At the start of Waves 2 and 3, UKRI faced significant challenges recruiting staff to oversee and manage the challenge programmes. Of the 186 full-time-equivalent staff UKRI estimated it needed to administer the Fund in 2019, 103 were vacant in June 2019. While UKRI relocated staff from other activities, the NAO found examples where a lack of staff had led to delays in the bidding and approvals process. The staffing complement needed to administer the Fund includes Challenge Directors, who are responsible for the day-to-day monitoring and the administering of challenges and are critical to setting their direction and implementation.[44] But it has taken UKRI 37 weeks, on average, to recruit them since the start of the Fund. UKRI told the NAO that these delays were partly due to difficulties in finding and hiring staff at an appropriate level who had a mix of science and industry experience. UKRI told us that it has now improved the appointments process and that "the team [was] reasonably well staffed".[45] Nonetheless, it faces restrictions on the salaries it could offer. UKRI told us that Challenge Directors were "absolutely core" to setting the direction for and then successfully implementing each challenge, and their timely appointment was crucial to the Fund's success. UKRI told us that it would like to appoint challenge directors much earlier in the process but that this depended on its delegations from the Department.[46]

40 Ev ICF0004 Tees Valley Combined Authority submission page 2
41 Ev ICF0001 Universities Scotland submission para 7
42 Qq 38–39
43 Q 67; C&AG's Report, paras 2.30–2.31, Figure 12
44 C&AG's Report, paras 2.16–2.21
45 Q50
46 Q 50; C&AG's Report paras 17, 2.21

Size of company supported

17. One of the Fund's five objectives is to increase collaboration between new small companies and those that are established. Analysis undertaken by the National Audit Office showed that UKRI had initially succeeded in attracting a range of different sized companies to participate in the Fund. However, in the third wave of funding, the proportion of projects awarded to companies classified as large (categorised as having more than 250 staff) increased from 20% in the second wave of funding to 29% in the third. This expansion has been at the expense of the proportion of micro (categorised as having under 10 staff) and small sized enterprises (categorised as having between 10 and 50 staff). Their proportion of projects awarded fell from 44% in the second wave to 31% in the third wave.[47]

18. There are several reasons why the proportion of smaller businesses receiving funding could have fallen including the increase in UKRI's requirements for coinvestment from participants for wave 3 funding. UKRI increased the co-investment requirement from industry in wave 3, responding to a requirement from the Secretary of State for Business, Energy & Industrial Strategy. The ratio of public investment to private investment increased from 1:0.45 in Wave 1 to 1:1.5 in Wave 3.[48] The Department told us that it could not prove that the drop in the proportion of small businesses between waves 2 and 3 was solely due to the increase in coinvestment. But it conceded that it was reasonable to believe that it was a "really big factor" because it was harder for small businesses to meet the coinvestment targets. The Department emphasised that co-investment targets were nonetheless important in generating private investment which helped to boost the overall spend on R&D. It explained that it was working with small businesses to help them address this challenge.[49] UKRI suggested a more tailored approach to co-investment for different sized companies might help.[50]

19. Other factors that may have influenced the reduced participation of smaller businesses include insufficient communication about the Fund reaching SMEs, limited capacity within SMEs to participate in collaborative bids, and the lengthy approvals processes for funding.[51] We received written evidence from Universities Scotland, which told us that "insufficient communication and notice of calls severely limits breadth and excellence" of the research and innovation funded by the Fund. This issue is particularly relevant to small and medium sized enterprises which have limited resources both in terms of people and resources available for co-investment to engage in collaborative bids.[52] UKRI assured us that it is working hard to ensure it is reaching all the businesses that would want to and could contribute and that it has engaged as early and as widely as possible. It asserted that its approach had meant it had been able to reach new participants and that 73% of the businesses that had participated in the Fund had not had any previous interaction with UKRI.[53] But it acknowledged it has tended to work in a "fairly generic way" – for example, with regard to setting coinvestment requirements. It recognised that a different approach could help engagement. It told us that it needed to be more conscious of differences in the research and business communities, and that "the mix of big and

47 Q 21; C&AG's Report, para 5, 2.7, Figure 7
48 C&AG's Report, para 2.9
49 Q 40
50 Q 41
51 Ev ICF0001, para 1–2, 7, C&AG's Report, para 2.9.
52 Ev ICF0001
53 Qq 38, 41

small players is different", within each challenge. It acknowledged that it could take a more flexible approach to targeting its timing of engagement with particular parts of the business community.[54]

Regional distribution of funding

20. Whilst UKRI does not have an explicit objective to consider the regional balance in its funding awards, the 2017 Industrial Strategy did include a focus on 'prosperous communities' across the UK.[55] The government's 2020 Roadmap for R&D expenditure sets out its intention that spending on R&D and innovation should contribute to its 'levelling up' agenda.[56] Analysis by the National Audit Office showed that the distribution of funding across the regions was uneven. Between 2017 and 2020, almost two thirds of the money committed to projects as part of the Fund had been distributed to companies registered in three regions of the UK—London, South East and West Midlands. In comparison, areas such as the North East or Yorkshire & Humber received 2.9% and 1.8% of the Fund respectively over the same period. The NAO concluded that this distribution was not necessarily explained by factors such as population size or the distribution of business undertaking R&D activity. UKRI noted that this analysis was based on data on the location of the organisation in receipt of the funding and not necessarily where the R&D activity took place. However, it did not provide us with any analysis setting out the regional distribution of the Fund based on where it thought R&D activity was actually taking place.[57]

21. UKRI recognised the need to think about R&D expenditure in terms of what it described as the 'place part of the agenda'.[58] Comparing the distribution of the Fund with what it described as normal R&D expenditure, UKRI asserted that it thought that investment through the Fund in London was "very comparable" and that for the South East it was about "one third up". UKRI considered that the level of investment received by the West Midlands was "over twice the level…you see normally".[59] It told us that this was due to the nature of some of the challenges on which the Fund focused, particularly mobility and the fact the UK's advanced manufacturing base was located in the West Midlands.[60]

54 Q 41
55 C&AG's Report, para 2.10
56 C&AG's Report, para 2.10, HM Government, UK Research and Development Roadmap, Policy Paper, 1 July 2020
57 Q 44; C&AG's Report paras 2.11–2.12, Figures 8 and 9
58 Q 46
59 Q 44
60 Qq 44, 46

Formal minutes

Thursday 22 April 2021

Virtual meeting

Members present:

Meg Hillier, in the Chair

Shaun Bailey
Olivia Blake
Mr Gareth Bacon
Sir Geoffrey Clifton-Brown
Dan Carden
Barry Gardiner
Peter Grant
Sir Bernard Jenkin
Nick Smith

Draft Report (*Industrial Strategy Challenge Fund*), proposed by the Chair, brought up and read.

Ordered, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 21 read and agreed to.

Summary agreed to.

Introduction agreed to.

Conclusions and recommendations agreed to.

Resolved, That the Report be the Fifty-sixth of the Committee to the House.

Ordered, That the Chair make the Report to the House.

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Monday 26 April at 1:45pm

Witnesses

The following witnesses gave evidence. Transcripts can be viewed on the inquiry publications page of the Committee's website.

Thursday 4 March 2021

Sarah Munby, Permanent Secretary, Department for Business, Energy and Industrial Strategy; **Jo Shanmugalingam**, Director General, Industrial Strategy, Department for Business, Energy and Industrial Strategy; **Professor Dame Ottoline Leyser DBE FRS**, Chief Executive Officer, UK Research and Innovation (UKRI) Q1–68

Published written evidence

The following written evidence was received and can be viewed on the inquiry publications page of the Committee's website.

ICF numbers are generated by the evidence processing system and so may not be complete.

1 BSI (ICF0003)

2 Tees Valley Combined Authority (ICF0004)

3 The University of Edinburgh (ICF0005)

4 Unit4 (ICF0002)

5 Universities Scotland (ICF0001)

List of Reports from the Committee during the current Parliament

All publications from the Committee are available on the publications page of the Committee's website.

Session 2019–21

Number	Title	Reference
1st	Support for children with special educational needs and disabilities	HC 85
2nd	Defence Nuclear Infrastructure	HC 86
3rd	High Speed 2: Spring 2020 Update	HC 84
4th	EU Exit: Get ready for Brexit Campaign	HC 131
5th	University technical colleges	HC 87
6th	Excess votes 2018–19	HC 243
7th	Gambling regulation: problem gambling and protecting vulnerable people	HC 134
8th	NHS capital expenditure and financial management	HC 344
9th	Water supply and demand management	HC 378
10th	Defence capability and the Equipment Plan	HC 247
11th	Local authority investment in commercial property	HC 312
12th	Management of tax reliefs	HC 379
13th	Whole of Government Response to COVID-19	HC 404
14th	Readying the NHS and social care for the COVID-19 peak	HC 405
15th	Improving the prison estate	HC 244
16th	Progress in remediating dangerous cladding	HC 406
17th	Immigration enforcement	HC 407
18th	NHS nursing workforce	HC 408
19th	Restoration and renewal of the Palace of Westminster	HC 549
20th	Tackling the tax gap	HC 650
21st	Government support for UK exporters	HC 679
22nd	Digital transformation in the NHS	HC 680
23rd	Delivering carrier strike	HC 684
24th	Selecting towns for the Towns Fund	HC 651
25th	Asylum accommodation and support transformation programme	HC 683
26th	Department of Work and Pensions Accounts 2019–20	HC 681
27th	Covid-19: Supply of ventilators	HC 685

Number	Title	Reference
28th	The Nuclear Decommissioning Authority's management of the Magnox contract	HC 653
29th	Whitehall preparations for EU Exit	HC 682
30th	The production and distribution of cash	HC 654
31st	Starter Homes	HC 88
32nd	Specialist Skills in the civil service	HC 686
33rd	Covid-19: Bounce Back Loan Scheme	HC 687
34th	Covid-19: Support for jobs	HC 920
35th	Improving Broadband	HC 688
36th	HMRC performance 2019–20	HC 690
37th	Whole of Government Accounts 2018–19	HC 655
38th	Managing colleges' financial sustainability	HC 692
39th	Lessons from major projects and programmes	HC 694
40th	Achieving government's long-term environmental goals	HC 927
41st	COVID 19: the free school meals voucher scheme	HC 689
42nd	COVID-19: Government procurement and supply of Personal Protective Equipment	HC 928
43rd	COVID-19: Planning for a vaccine Part 1	HC 930
44th	Excess Votes 2019–20	HC 1205
45th	Managing flood risk	HC 931
46th	Achieving Net Zero	HC 935
47th	COVID-19: Test, track and trace (part 1)	HC 932
48th	Digital Services at the Border	HC 936
49th	COVID-19: housing people sleeping rough	HC 934
50th	Defence Equipment Plan 2020–2030	HC 693
51st	Managing the expiry of PFI contracts	HC 1114
52nd	Key challenges facing the Ministry of Justice	HC 1190
53rd	Covid 19: supporting the vulnerable during lockdown	HC 938
54th	Improving single living accommodation for service personnel	HC 940