



Science and Technology Committee

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From Rt Hon Greg Clark MP, Chair

Rt Hon Kwasi Kwarteng MP
Secretary of State for Business, Energy and Industrial Strategy
(By e-mail)

16 December 2021

Dear Secretary of State,

The role of technology, research and innovation in the covid-19 recovery: lessons from the West Midlands region

I'm writing to you following the Committee's [25 November visit to and oral evidence session](#) in Coventry, as part of its inquiry into [the role of technology, research and innovation in the covid-19 recovery](#).

During the morning we visited the Manufacturing Technology Centre's (MTC) facilities, where we witnessed innovations in construction methods—for example in how rebar is made, automating the process to save time and eliminate the risk involved in producing it—as well a laser processing unit, which is used for cladding and welding a wide range of materials. We also heard about the importance of well-trained, highly-skilled people, and how the advantages of cutting-edge technology can only be brought to bear by people with the required skills to operate the equipment. We also heard about how the MTC is funded and its commitment to investing any surplus it makes back into research and development.

In the afternoon, we heard from Andy Street, Mayor of the West Midlands, Professor Simon Collinson, Director at City-REDI, University of Birmingham, and Dr Clive Hickman, Chief Executive at the MTC. We also spoke to representatives from [Lucideon](#), [Malone Group](#), [Cobra Biologics](#) and the [Energy Research Accelerator](#).

Disparities in private and public R&D spending

The West Midlands is an exemplar in terms of private R&D spending. In fact, recent data show that private sector R&D spending per person is £398, which is the third highest in the UK (behind only the East of England and the South East). There is, however, a great disparity between this number and the amount of public money invested in R&D in the region with public sector spending being only £83 per person, which is lower than in any other region in the UK.

The Mayor, Andy Street, said that although the region had “some incredible strengths”, it was “not doing well enough at drawing in public funding” and that, given the strong record of attracting private funding in the region, this was a major lost opportunity. He argued that this “cannot be the right position for this region” and advocated that we “need to ask ourselves what needs to happen with Government and all the institutions of government to shift that”.

Dr Clive Hickman echoed this, pointing out that while the region was “very good at attracting inward investment”, it needed to “find out” how it could “attract the Government investment”. He argued that the Government’s planned research agency, ARIA, represented a “strong opportunity” for the region, and that he was “making a case that says the West Midlands is absolutely the ideal location for the new ARIA programme”, believing that it would “pull in more Government investment”.

Mr Street agreed with this assessment. He argued that if ARIA had some grounding in the region, it could help change the West Midlands’ “public funding performance”. He suggested that there might not be enough understanding of what the West Midlands did and was good at, and that, “if there was a presence, that understanding would naturally improve”, this was because “there has to be a link between ARIA and the other research funding bodies—the public research bodies”.

The Committee is inclined to agree with the witnesses it heard from that the West Midlands that the disparity between the Region’s success in attracting private investment in R&D and its relative weakness in attracting public investment in R&D needs to be explained and improved. Ways to address this should be explored in the forthcoming Levelling Up White Paper to ensure that the West Midlands—and by extension the UK—is fulfilling its maximum potential.

The need for a broader view of the West Midland’s strengths

We heard that the West Midlands had more potential in terms of its R&D contribution. Professor Simon Collinson suggested there was perhaps a:

slightly blinkered view about what regions like the West Midlands have to offer and what the opportunities would be in terms of beneficial outcomes if further R&D funding was put into regions.

While he acknowledged that the region was “characterised correctly as the centre for automotive and advanced manufacturing”, he argued that “we [the region] have a very strong critical mass in several other areas”, one of which is “clean technology and energy”. His analysis pointed to regional advantages in “skills supply” as well as “technology development in those areas”. In addition, he said that “life sciences” represented a “latent competitive advantage for the region”, which, he thought, “further investment would unlock, with again strong multipliers to regional strengths in firms”.

Andy Street agreed with this analysis, stating that the region was focused on “build[ing] our strength in the life science sector”. He pointed out that “we have had for 40 years some outstanding success areas”, but added that “they are not broad enough”. He continued:

What we are trying to do is build our life sciences capability, we are trying to build our capability in energy storage and distribution, and we are trying to build our capability in fintech.

The narrow concentration of industry in the region was, he said, “arguably a strength, because it means the quality is very good”, but it was also “arguably a weakness in that we do not have the diversified economy that we might like to get to”.

While the West Midlands is rightly recognised for its strengths in sectors like the automotive industry there is a risk that its potential competitive advantage in other fields such as clean technology and energy and life sciences are overlooked. Greater investment in these areas could bring beneficial, catalytic effects which would broaden the region’s industrial base, increase its resilience and, in turn, attract additional private sector investment in R&D, bringing about an accelerated shift to new areas and emerging industries. This would not only benefit the region but also the UK as a whole.

The impact of the pandemic

Mr Street pointed out that the region had been one of the “worst hit of any region in the country in terms of the reduction in GDP for the year 2020”—which he argued “was simply a reflection of the sectoral composition of the West Midlands economy”. The problem was, Mr Street explained, “because we are particularly driven by business investment, not by public investment, that reduction has had a greater impact on our GDP”.

Professor Collinson believed that the effects of covid-19 and those resulting from the UK’s departure from the European Union represented “two economic shocks on the region”, which was hit “exceptionally hard”. He attributed this to the fact that:

For a start, we have a very low-income, low-skills and high-deprivation population—so low household income and low skills—and the starting point was not good. Secondly, we have a high quotient of manufacturing firms in the region who were hit hard by Brexit and subsequently Covid, and now by logistics and supply chain, so recovery is more of a challenge for the region.

In addition to the above, Dr Hickman highlighted a potential “ticking time bomb”:

We have all of this private sector investment, a lot of it coming into the auto sector, but we need to recognise that we have 42,330 people employed in companies making vehicles with internal combustion engines. Those 43,000 jobs are at risk at the minute and they are at risk because of the net zero strategy to move towards electric vehicles. We have to do something to reskill those individuals, to be able to train them to do other things for the future, so it is reskilling and upskilling.

His key point was that the money needed “is not necessarily going to come from the private sector” and therefore argued that “we need help from the public sector to kick start that work so we can get these people back in employment in the future or keep them in employment so that we don’t have a crisis in 10 years’ time”. Professor Collinson added to this, pointing out that there is expected to be a “40% decline in manufacturing employment by 2040”.

The sectoral composition of the West Midlands has meant that it is more vulnerable to the effects of the pandemic than other regions. This could exacerbate structural issues related to the region's reliance on the automotive industry, particularly the manufacture of vehicles with internal combustion engines. Net Zero and associated climate-related targets could have serious displacement effects on parts of the region's workforce and there is a need to ensure that those affected are able to retrain and be deployed elsewhere.

Small and medium sized enterprises (SME) awareness

It became apparent during our tour of the MTC's facilities that SMEs—who could benefit from the MTC's offer—might not be aware of it or what the MTC could do for their business. We were told that the MTC's public funding did not allow for the advertising or marketing of its services. While the Committee understands that research and innovation funding should be principally devoted to research and innovation activity, there is an argument to say that some of this money could be used to ensure that SMEs are aware of what the MTC could do for them, in order to maximise the impact of its funding and activities.

Dr Hickman pointed out that:

We use a large chunk of our Catapult funding to support SMEs, to be able to engage with them, to show them what their capabilities are. For every SME that we have worked with, we have been able to introduce advanced manufacturing technologies that have displaced people from their current job, but along with that we have provided upskilling and reskilling to those people, which has allowed them to take on better paid, cleaner, safer jobs for the future.

Nonetheless, he argued that “to have real societal impact, we need to be able to invest a lot more money in that activity”.

On the subject of SMEs, Stephen Malone, CEO of Malone Group, said that he wanted to see “a body who was tasked with helping SMEs grow and provide support around that. That does not always need to be financial support. That can be advice and guidance”.

Consideration should be given to how the Manufacturing Technology Centre and other similar organisations can use allocated funding to stimulate engagement with UK businesses—particularly SMEs who are well placed to benefit from, but may not be aware of the services offered. Relatedly, the Government could consider measures to improve and increase awareness of its [Small and Medium Business Hub](#).

Supply chains

A final point that arose during our tour and evidence session was that—in the context of the region and the UK's recovery from covid-19—the importance of stable, end-to-end supply chains. Professor Daniel Smith, of Cobra Biologics, which played a key role in the development of the AstraZeneca vaccine, pointed out that “we are

absolutely beholden to a global supply chain for making medicines”, and that it was no longer making the vaccine as it “cannot get the bags we need, the tubing sets we need”, which was detrimental to the development and manufacture of other medicines and treatments.

A similar point was raised during our tour of the MTC, in relation to its involvement in the production of ventilators: the challenge was not one of technology, but of supply chains—and the case was made that the UK Government could seek to address this by focussing attention on the resilience of supply chains.

Tony Kinsella, CEO of Lucideon, argued that the Government could better account for the added value of procuring products such as PPE which, if made in the UK, “you [would] get rates, you [would] get rent, you [would] get VAT, you [would] get employment taxes, yet our buyers just look at the purchase price”.

In the context of recovery from covid-19, the Government should look to ensure that there is resilience in key supply chains to enable companies to assist in the development and manufacture of medicines and treatments.

We would be grateful for your reflections on the points raised and an indication of any action the Government will take by Friday 14 January.

As is usual with the Committee’s correspondence, I will place this letter and your response in the public domain.

With best wishes,

A handwritten signature in black ink, appearing to read 'Greg', written in a cursive style.

Rt Hon Greg Clark MP
Chair