

Dr Michael Hopkins, Science Policy Research Unit (SPRU) – Supplementary written evidence (LSI0127)

A general comment on the focus of the Life Sciences Industrial Strategy - Industrial strategies can support the industry incumbents and/or they can support new entities. There clearly is a balance to be struck between these two, but I do not believe that the current strategy is explicit enough on whether its goal is to provide greater support to the large incumbents (such as AstraZeneca, GSK or Roche) which have been shedding jobs in the UK, or to support the formation of new jobs in other companies – particularly new entrants – in order to offset these losses. These are quite different propositions and it seems that the government should have an explicit position on the balance between these.

On the question raised by Lord Griffiths of Fforestfach, of whether the government could have an industrial strategy without “picking winners”, it is important to note that for the last decade Innovate UK (formerly the Technology Strategy Board) has been making decisions to invest in technology development projects routinely. Similarly The European Union’s H2020 also supports R&D projects with commercial involvement. Various departments of the US government also support programmes that make such investments (in Defence, Energy, Healthcare). These all have established approaches for choosing to support a given project or company, or one technology or another. Indeed these initiatives have been credited by scholars in my field (Science, technology and innovation studies) as being an important part of US success in a number of high-tech areas.

Lord Hunt of Chesterton asked “Is it fair to make this sort of comparison when we have such an enormously different push of money into the whole sector?” (in relation to the US and UK spending 17% and 9% of GDP on healthcare).

I did not have opportunity to respond at the time, but it is of course fair to make comparisons between two countries in order to explore whether different outcomes observed result from different inputs. It is the case that in the USA, there are larger inputs to healthcare technology development due to much higher relative and absolute levels of government R&D spending, as well as from the market demand from patients and their insurers. This provides a rich diet for US firms in the life sciences. Those that are fed a leaner diet, such as is available in the UK, are smaller and less robust. However, that is not to say that the US system is to be emulated in this regard. It may not be efficient to spend as much as the US does on novel medical technologies – particularly when these are adopted without robust evidence of their effectiveness.

Baroness Neville-Jones asked “What kind of people should they be?” (referring to those involved in implementation and evaluation of the industrial strategy). I would agree with Professor Westwood’s answer that experts from academia, industry and the third sector could provide support to the industrial strategy either as reviewers (e.g. supporting competitions) or evaluators (evaluating programmes of investment). I think a further important question beyond who does this, is how such people are selected. A danger to be avoided here is spending too little time on selecting not enough experts and choosing experts only from the industry incumbents and best resourced public sector institutions –

this could lead to selection of a narrow range of technologies which may not be appropriate for wider adoption. Evaluation need to be transparent and it needs to lead to learning within the community of those involved in industrial strategy implementation. There needs to be building on that learning. The whole process needs to be supported by civil servants that are self-aware – or trained in – the effects of their selection (of experts to review and evaluate) on the available technological pathways the UK ends up supporting, the make-up of national scientific and technical capabilities, and the composition of the UK's portfolio of research projects in the fields they support. The selected panels of experts should have some (overlapping) duration of tenure, perhaps over several rounds of competitions or over several years of a programme, so as to promote learning here too. The decisions made will benefit from close involvement of talented individuals over time, rather than parachuting in experts here and there for the odd afternoon. Experts in the design of research evaluation exist and can be consulted on the overall design and implementation of workable competitions to facilitate the funding of the industrial strategy.

Lord Mair asked a question relating to NHS technology adoption "What should be done to improve the situation? We have heard what the problem is. Is the HARP one way of improving the situation? What would you both see as the best way to improve this situation?"

I did not have an opportunity to address this question and would like to emphasise that while the NHS is in crisis (as it often seems to be at present), innovations will be difficult to adopt. The best way to improve the situation would be to better fund essential care in the NHS so that patient outcomes can improve and so that staff have more spare time to engage with innovations. There is a danger that money spent on projects that requires NHS support will not be efficiently used until the NHS funding crisis is resolved.

Lord Maxton asked Professor Westood about whether NHS adoption of innovations could be improved by the devolution "In that situation, does devolution help or hinder?"

I would like to add my own response to this, based on research in my department on the understanding of technological transitions. New technologies needs an opening in the existing way of doing things, and the more devolution that there is, the more opportunity there is for niches to open up where new processes can be trialled (resources allowing). However, what is then needed is a process of learning across these niches, with appraisal and adoption of technologies that seem to be working in individual niches. These sorts of study can be research funded and investigator-led, rather than industry led. Such studies and associated Health Technology Assessment, on whether technologies generate 'real world' clinical utility when fully integrated into care pathways, are extremely expensive – and not necessarily in the interests of industry to fund. However devolved healthcare systems and national bodies (NIHR in particular) can play a crucial, positive role here.

9 December 2017