Written evidence submitted by the Council on Geostrategy (IPO0055)

1. The Council on Geostrategy is an independent non-profit organisation situated in Westminster. It focuses on shaping British strategic ambition in an international environment increasingly defined by geopolitical competition and the environmental crisis, so that the United Kingdom (UK) is best able to succeed and prosper in the twenty-first century.
2. The author is leading a research project exploring how the UK can build a greener, more competitive and resilient science and technology base, and unlock Britain's potential for enhanced prosperity and security. This work is pertinent to the remit of this inquiry on industrial policy – particularly its focus on the UK's strengths and competitive advantages, and helping the UK reach Net Zero by 2050. The research project is currently ongoing and its findings will be reported in Spring 2024.

Definition

3. Industrial policy can be defined broadly as '*every form of state intervention that affects industry as a distinct part of the economy*'.[1] However, a more specific definition is: '*any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity towards sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of any such intervention*'.[2] Industrial policy instruments are varied and include R&D tax credits, education and training policies, enterprise zones, place-based clusters, apprenticeship policies, trade policies, corporation tax policies, and infrastructure policies.[3]

Context

4. Rising geopolitical tensions, disruptions in supply chains, and the need to tackle climate change have led policymakers around the world to firmly embrace industrial policies.
5. Green industrial policies are those focused on green growth. It has been estimated that the US Inflation Reduction Act will lead to 403,000 jobs,[4] and the European Green Deal may create 2.3 million jobs,[5] leading some to call Net Zero the growth opportunity of the 21st century.[6]
6. However, there are several challenges to industrial policy, including coherence, investment, and skills.

Coherence

7. For industrial policies to be effective, they have to be long-term and give businesses the stability to invest and innovate. Yet, there has been significant 'churn' in UK industrial policy, stemming from the ad hoc and haphazard nature of policy making in Britain.[7] New policy announcements, which are often prematurely changed or reversed, are becoming hallmarks of UK industrial policy. Motivation for changes in British industrial policy is often politically-driven, which means there is a high risk of policies being scrapped when administrations change [8]. In addition, policy churn does not give time for policies to take effect.
8. Improved monitoring, evaluation, and learning from past industrial policies and their outcomes, such as through an independent oversight body, would lead to industrial policies that are more evidence-based. Such policies would be less likely to change when administrations change, and would help the UK learn from failures and build on

successes. This would lead to a more consistent and conducive environment for investment decisions.

Investment

9. Public investment in research, development, and innovation provides broader benefits to society. It is estimated that for every pound publicly invested in research and development (R&D), this is roughly doubled by the private sector – and the returns to public investment are estimated to be significantly higher in science-intensive sectors, such as in biomedical research.[9]
10. However, funding for R&D has long been cited as one of the UK's key weaknesses. For decades, UK R&D spending was well below the OECD average.[10] This changed in 2018, when British expenditure finally overtook the average. However, the UK still lags behind peer countries such as Israel, South Korea, Japan, Germany, and the United States. The UK should increase its R&D spending. A good target has been suggested by The Royal Society in their manifesto for science: that the UK should aim to lead the G7 in R&D intensity.
11. Geography has a key role to play in industrial policies. A 'place-based' approach can help drive prosperity by leveraging strengths from across the UK. British R&D expenditure has not only been low, it has also been regionally imbalanced. UK R&D expenditure is so imbalanced that if the government were to invest in R&D outside the South East of England with the same intensity, it would need to spend an additional £4 billion [11]. This underinvestment not only holds back regions outside the South East, they suffer an additional blow by missing out on additional private sector R&D investment that usually accompanies public investment.
12. Recognising the importance of geography, governments can consider establishing special economic zones such as industrial and technology parks, which offer financial incentives and infrastructure facilities. Similarly, development corridors provide transport connectivity between hubs of economic activity, and can cluster firms along corridors or at their nodal centres. It is expected that this helps develop surrounding areas, including through catalysing investments from within and outside the region.[12]
13. However, the poor state of Britain's public transport is estimated to cost the UK more than £23 billion per year in lost economic activity,[13] and it is more difficult to travel across British cities compared to European counterparts. This is a barrier for access to employment and education, as well as for prosperity more broadly. This problem is exacerbated by the fact that infrastructure projects – including trams, railways, and road – are far more expensive in the UK compared with those in Europe.[14]

Skills shortages:

14. Access to skilled workers in key sectors in a critical enabler of innovation and productivity growth. In 2021, HM Government estimated that the UK needed 150,000 more researchers and technicians by 2030 to capitalise on planned increases in R&D investment effectively.[15] The Institution of Engineering and Technology (IET) has estimated a shortfall of over 173,000 workers in the STEM sector, an average of 10 unfilled roles per business in Britain.[16]
15. However, the UK's visa system is one of the most expensive in the world, and the upfront costs of visas are substantially higher in Britain compared to other research

intensive countries.[17] This risks making the UK less attractive to global talent compared to competitors.

16. Recently, the government announced a significant increase in the minimum salary that a skilled migrant must earn in order to qualify for a work visa, from £26,200 to £38,000. This increase means that the threshold is higher than the salary of most early career researchers, which could be damaging for the UK's industrial policies and vision.[18]
17. The UK's net migration figure for 2022 was at a record of around 745,000. The gap between Britain's talent shortages and this figure indicate that migrants arriving in the UK do not have the right skills to ease labour shortages, and that Britain should be doing more to close the skills gap.[19]

References

[1] Foreman-Peck, J., and G. Frederico (1999), *European Industrial Policy: The Twentieth-Century Experience*, Oxford: Oxford University Press.
[2] Warwick, K. (2013), *Beyond Industrial Policy*, OECD STI Policy Paper No. 2.
[3] Crafts, N., and A. Hughes (2013), Industrial Policy for the medium to long-term, Government Office for Science
[4] E2 (2023), *An Economic Impact Analysis of major clean energy projects announced in year one of the Inflation Reduction Act*, BW Research Partnership and E2
[5] EY (2021), *How the new era of green growth in Europe is impacting jobs*, EY
[6] Skidmore, C. (2022), *Mission Zero: Independent Review of Net Zero*
[7] Pope, T., and P. Hourston (2022), *Churn in 'levelling up' policies in the UK*, The Institute for Government
[8] Coyle, D., and A. Muhtar (2021), *The UK's Industrial Policy: Learning from the Past*, Available at SSRN 3973039.
[9] Smith, A. (2023), *Anniversary Day Address 2023 from President of the Royal Society, Adrian Smith*, Royal Society
[10] Department for Business, Innovation and Skills (2014), *Our plan for growth: science and innovation*
[11] Forth, T. and R.A.L. Jones (2020), *The Missing £4 Billion: Making R&D work for the whole UK*, Nesta
[12] Maloney, W. F., and G. Nayyar (2018), Industrial policy, information, and government capacity. *The World Bank Research Observer*, 33(2), 189-217.
[13] Rollinson, C. Improving transport connectivity in UK cities: three key takeaways
[14] Dumitriu, S. and B. Hopkinson (2023) *Britain's infrastructure is too expensive*, Notes on Growth
[15] Department for Business, Energy & Industrial Strategy (2021), *Research and development (R&D) people and culture strategy*, Department for Business, Energy & Industrial Strategy
[16] The Institute of Engineering and Technology (2021), *Addressing the STEM skills shortage challenge*, The Institute of Engineering and Technology
[17] The Royal Society (2021), *Summary of visa costs analysis*, The Royal Society
[18] Plackett, B. (2023), *UK scientists fear impact of new immigration rules*, c&en
[19] White, L. (2023), *High Migration Failing to Ease Tight UK Labor Market, Says S&P*, Bloomberg