



Boosting growth and productivity in the United Kingdom through investments in the sustainable economy

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Annex: A longstanding research agenda on investment for strong, sustainable and inclusive growth in the UK

The underlying story presented in [this report](#) reflects a longstanding body of work undertaken by authors at the LSE's Grantham Research Institute and the Centre for Economic Performance, and co-authors from other institutions, on weak and misdirected UK investment and innovation. Key reports are listed below. Much of this extensive, unbiased and evidence-based research has met with political consensus on the need for making progress for some time. The analysis has been updated for the current fiscal, monetary and geopolitical environment.

The key numbers presented in this report, including a recommended 1% of GDP uplift for public investment, are broadly consistent with those in the [report](#) that then-Prime Minister Boris Johnson asked some of authors to prepare for the G7 summit under the UK presidency (held in Carbis Bay June 2021) and which he championed. This was broadly welcomed by the whole G7 in their communique. The Chancellor who took the G7 strategy paper so successfully to the G7 summit in 2021 was Rishi Sunak.

Our argument goes back to [LSE Growth Commission](#) papers of a decade ago, and to the need for a change in the direction and size of public and private investment following the financial crash of 2008–2009. Additional research over the last decade or so has made these, or related, arguments, including during and after the global COVID-19 pandemic.

This report is the most recent step in our consistent efforts to move the economy in a more sustainable, resilient and productive direction, and create a new growth story. The analysis draws from and is consistent with key messages in the [Economy 2030 Inquiry](#), a collaboration between the Centre for Economic Performance and Resolution Foundation, which published its final report in December 2023. It comes at an important time in national strategic decision-making. In the period over which these reports have been written, a lot of time has been wasted and opportunities lost. The UK's productivity challenge remains as pressing as ever.

Key reports

2009-2020: Post financial crisis and the need for investment for sustainable growth – including [LSE Growth Commission](#) and associated reports

[An outline on the case for a ‘green’ stimulus](#), Alex Bowen, Sam Fankhauser, Nicholas Stern and Dimitri Zenghelis, Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE, February 2009.

[A macroeconomic plan for a green recovery](#), Dimitri Zenghelis, Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE, January 2011.

[The basic economics of low-carbon growth in the UK](#), Mattia Romani, Nicholas Stern and Dimitri Zenghelis, Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE, June 2011.

[A strategy for restoring confidence and economic growth through green investment and innovation](#). Dimitri Zenghelis, Grantham Research Institute and Centre for Climate Change Economics and Policy, LSE, April 2012.

[Investing for Prosperity: Skills, Infrastructure and Innovation](#), Philippe Aghion, Tim Besley, John Browne, Francesco Caselli, Richard Lambert, Rachel Lomax, Chris Pissarides, Nick Stern and John Van Reenen, CEP Report, LSE Growth Commission, January 2013.

[In praise of a green stimulus](#), Dimitri Zenghelis, WIREs CLIMATE CHANGE, 5:7–14. doi: 10.1002/wcc.256. January 2014.

[Path dependence, innovation and the economics of climate change](#). Philippe Aghion, Cameron Hepburn, Alexander Teytelboym and Dimitri Zenghelis, Centre for Climate Change Economics and Policy and the Grantham Research Institute on Climate Change and the Environment, Contributing Paper to the New Climate Economy, November 2014.

[Climate change priorities for the next UK Government](#), Samuela Bassi, Chris Duffy, Ajay Gambhir, Bob Ward, Grantham Research Institute and Centre for Climate Change Economics and Policy LSE, March 2015.

[Decarbonisation, innovation and the economics of climate change](#), Dimitri Zenghelis. The Political Quarterly, 86: 172-190 <https://doi.org/10.1111/1467-923X.12239> July 2016.

[Building sustainable 21st century infrastructure \(Part 1\): time to invest](#) and [Building sustainable 21st century infrastructure \(Part 2\): institutional reform](#). Grantham Research Institute and Centre for Climate Change Economics and Policy LSE, August 2016.

[UK Growth: A New Chapter](#), Philippe Aghion, Terra Allas, Timothy Besley, John Browne, Francesco Caselli, Richard Davies, Richard Lambert, Rachel Lomax, Stephen Machin, Gianmarco Ottaviano, Christopher Pissarides, Isabelle Roland, Xavier Rolet, Nicholas Stern and Anna Valero, CEP Report, LSE Growth Commission. February 2017.

[Climate Policy and the impact of Quantitative Easing](#), Emmanuel Campiglio, Sini Matikainen and Dimitri Zenghelis May. Grantham Research Institute on Climate Change and the Environment, LSE. May 2017

[Sustainable Growth in the UK: Seizing opportunities from technological change and the transition to a low-carbon economy](#), James Rydge, Ralf Martin and Anna Valero; Centre for Economic

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Performance - Grantham Research institute Special report for the LSE Growth Commission, December 2018.

[Securing decarbonisation and growth](#), Dimitri Zenghelis. National Institute of Economic and Social Research (NIESR) Economic Review, 250th edition, Issue 1. November 2019.

[Delivering strong and sustainable growth in the UK: A special decade for innovation and investment](#), Sam Unsworth, Nicholas Stern and Anna Valero. Centre for Economic Performance - Grantham Research institute Special report for the LSE Growth Commission, March 2020.

2020-21: COVID-19 and a sustainable recovery

[Supplementary Report to the Committee on Climate Change](#), Paul Ekins, Mallika Ishwaran, Rain Newton-Smith, Phil Summerton, Karen Turner and Dimitri Zenghelis, Committee on Climate Change, June 2020.

[Strategy, Investment and Policy for a Strong and Sustainable Recovery: An Action Plan](#), Nick Robins, James Rydge, Nicholas Stern, Sam Unsworth, Anna Valero and Dimitri Zenghelis, Centre for Economic Performance - Grantham Research institute report, CEP Covid-19 analysis series paper 5, July 2020.

[Innovation for a strong and sustainable recovery from Covid-19](#), Ralf Martin, Sam Unsworth, Anna Valero and Dennis Verhoeven. Centre for Economic Performance - Grantham Research institute report, CEP Covid-19 analysis series paper 14, December 2020.

[Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?](#), Cameron Hepburn, Brian O'Callaghan, Nicholas Stern, Joseph Stiglitz and Dimitri Zenghelis, [Oxford Review of Economic Policy](#), Oxford University Press, vol. 36 (Supplement), pages 359-381. 2020.

['Building forward: investing in a resilient post-Covid-19 recovery'](#), Matthew Agarwala, M., Diane Coyle, Marco Felici, Ben Goodair, Rebecca Leam, Saite Lu, S., Annabelle Manley, Julia Wdowin, and Dimitri Zenghelis November. Bennett Institute, University of Cambridge, November 2020.

[Fiscal responsibility in advanced economies through investment for economic recovery from the COVID-19 pandemic](#). Nicholas Stern and Dimitri Zenghelis, Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science, March 2021.

[G7 leadership for sustainable, resilient and inclusive economic recovery and growth: An independent report requested by the UK Prime Minister for the G7](#). Nicholas Stern, Josue Tanaka, Amar Bhattacharya, Hans Peter Lankes, Roberta Pierfederici, James Rydge, Charlotte Taylor C, Bob Ward, London School of Economics and Political Science, June 2021.

[Why sustainable, inclusive, and resilient investment makes for efficacious post-COVID medicine](#). Dimitri Zenghelis. WIREs Climate Change, June 2021.

[Innovation, growth and the transition to net-zero emissions](#). Nicholas Stern and Anna Valero, Research Policy, 50(9), 104293, November 2021.

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The 2020s as a decisive decade: [Economy 2030 Inquiry](#) reports on a new economic strategy for the UK, and other work on investment through crises

[The Carbon Crunch: Turning Targets into Delivery](#), Jonathan Marshall and Anna Valero. Resolution Foundation, September 2021.

[Business time: How ready are UK firms for the decisive decade?](#), Jesse Kozler, Juliana Oliveira-Cunha, Pablo Shah, Gregory Thwaites and Anna Valero, Resolution Foundation, November 2021.

[Policies for investing in sustainable growth: risks and opportunities in the current macroeconomic environment](#). Dimitri Zenghelis, Charlotte Taylor and Nicholas Stern, Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science, July 2022.

[Foot on the gas? Maintaining momentum for net-zero while responding to the war in Ukraine](#). Dimitri Zenghelis, John Llewellyn, Silja Sepping, and Preston Llewellyn, Andrew Prag, OECD Background paper prepared for the 43rd Round Table on Sustainable Development, October 2022.

[Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth](#). Paul Brandily, Mimosa Distefano, Krishan Shah, Gregory Thwaites and Anna Valero, Resolution Foundation and Centre for Economic Performance, London School of Economics, June 2023.

[Cracking the Productivity Code: An international comparison of UK productivity](#). John Van Reenen and Xuyi Yang, Centre for Economic Performance POID Special Report, November 2023.

[A new UK policy institution for growth and productivity – a blueprint](#). Anna Valero and Bart van Ark, Productivity Insights Paper No 027. The Productivity Institute. November 2023.

[Ending stagnation: A New Economic Strategy for Britain](#). The Final Report of The Economy 2030 Inquiry. Resolution Foundation, Centre for Economic Performance, London School of Economics, December 2023.

2020s: informing (green) industrial policies for the UK – comparative analyses of strengths and implications for policy, including for the [Economy 2030 Inquiry](#)

[Seizing sustainable growth opportunities from zero emission passenger vehicles in the UK](#), Sam Unsworth, Ralf Martin and Dennis Verhoeven; Centre for Economic Performance - Grantham Research institute Special report for the LSE Growth Commission, February 2020.

[Seizing sustainable growth opportunities from carbon capture, usage and storage in the UK](#), Esin Serin, Pia Andres, Ralf Martin, Penny Mealy and Arjun Shah. Centre for Economic Performance - Grantham Research institute report, SP38, September 2021.

[Climate change and fiscal sustainability: risks and opportunities](#), Matthew Agarwala, Matt Burke, Patrycja Klusak, Kamiar Mohaddes, Ulrich Volz and Dimitri Zenghelis. National Institute Economic Review, University of Cambridge, December 2021.

[Productivity opportunities and risks in a transformative, low-carbon and digital age](#). Frank Geels, Jonatan Pinkse and Dimitri Zenghelis, The Productivity Institute. September 2021.

[Enduring Strengths: Analysing the UK's current and potential economic strengths, and what they mean for is economic strategy at the start of the decisive decade](#), Josh De Lyon, Ralf Martin,

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Juliana Oliveira-Cunha, Arjun Shah, Krishan Shah, Gregory Thwaites and Anna Valero, Resolution Foundation, April 2022.

[Growing clean: Identifying and investing in sustainable growth opportunities in the UK](#), Brendan Curran, Ralf Martin, Sabrina Muller, Viet Nguyen-Tien, Juliana Oliveira-Cunha, Esin Serin, Arjun Shah, Anna Valero and Dennis Verhoeven, Resolution Foundation, May 2022.

[Seizing sustainable growth opportunities from tidal stream energy in the UK](#) Esin Serin, Pia Andres, Ralf Martin, and Arjun Shah. Centre for Economic Performance - Grantham Research institute report, SP40, June 2023.

[Embedding green industrial policy in a growth strategy for the UK](#). Valero A and Van Reenen J, IPPR Progressive Review, 30(3), 175–183, November 2023.