



Economic
and Social
Research Council

ANNUAL REVIEW 2021/ 2022

The Productivity Institute is a UK-wide research organisation which aims to pinpoint the causes of the stagnation in UK productivity and focus energies to laying the foundations for a new era of sustained and inclusive productivity growth through interdisciplinary research in collaboration with businesses and policymakers.

The Productivity Institute has made great strides in its mission to lay the foundations for an era of sustained and inclusive productivity growth over the past year, with work underway in all of our research portfolios, within our eight Regional Productivity Forums and the Productivity Commission.

We are grateful for the fantastic work and support from all our affiliated researchers, partner institutions, and business leaders, Regional Productivity Forum chairs and members, our support team based at Alliance Manchester Business School; and our funder, the Economic and Social Research Council.

Bart van Ark, Managing Director
 Tony Venables, Research Director
 Nicola Pike, Engagement and Impact Director
 Charlotte Jones, Head of Operations

THE PRODUCTIVITY INSTITUTE PARTNERS



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PURPOSE, OBJECTIVES, OUTCOMES AND IMPACT

OUR PURPOSE

Lay the foundations for an era of sustained and inclusive productivity growth and help policymakers and business leaders across the UK understand how to improve productivity and raise living standards

OBJECTIVES

To set an agenda and develop national capacity that will deliver research and promote actions that contribute to the improvement of productivity

To frame the productivity narrative such that it enters the classroom, boardroom, councils of government, and other civic societal groups and influences ideas at each of these levels

To work with organisations to identify obstacles to productivity at the individual, firm, and institutional level, and to formulate and evaluate private and public policy actions

To work with policymakers as part of an agenda to better understand the impact of local, regional and national policies on providing an environment supportive of productivity growth

DESIRED OUTCOMES

To discover new facts and create knowledge about the causes of and obstacles to productivity

To improve the knowledge base made available to policymakers (national, regional and local) and embed productivity as a priority across policy domains

To extend recognition across society that productivity is critical to improving living standards and tackling inequality

To develop and implement scientifically based measurement and methods to assess the effectiveness of business and policy interventions

To increase capability of researchers working directly with business to deliver an improved evidence base relating to UK productivity and provide better connection between insights and implementation

DESIRED IMPACT

Evidence-based interdisciplinary research is translated into meaningful change in practice across public and private sectors

Context specific solutions and interventions for productivity improvements are implemented based on evidence-based research (particular focus on regions, sectors, organisations and value chains)

New techniques, perspectives and methods are developed and a new generation of researchers enter this field

Public and private sector decisions are made ensuring sustained productivity improvements creating benefits for wider societal and environmental outcomes

THE PRODUCTIVITY INSTITUTE AT A GLANCE

ESTABLISHED
1ST SEPT
2020

200 INDIVIDUALS
INVOLVED
IN OUR REGIONAL
PRODUCTIVITY FORUMS

10 INSTITUTIONAL
PARTNERS

5 YEAR
GRANT

8
REGIONAL
PRODUCTIVITY
FORUMS

38 TPI PAPERS
PUBLISHED
AS OF SEPTEMBER 2022

5,900+
DOWNLOADS OF
RESEARCH PAPERS

60+
AFFILIATED RESEARCHERS

As the UK has moved from post-COVID recovery to a renewed period of economic slowdown in part related to the invasion of Ukraine, it is clearer than ever that there is a pressing need to improve our underlying economic performance. The big aim of The Productivity Institute is to inform those who can make that happen, and the past year has seen good progress towards meeting that goal.

A year with far fewer COVID interruptions has seen the output of the Institute increase with several major strands of activity. At national level, the initial report of the Productivity Commission, spearheaded by the National Institute of Economic and Social Research, drew out some of the major themes the Institute needs to respond to. At the regional level, the fora have begun to develop projects of most importance to them. The close relationship between

TPI and representatives of the business community is proving a particular strength. In the long-run, this should support firms accepting and implementing business-related solutions which will be a vital success factor.

The importance of the task and the scale of the Economic and Social Research Council's commitment mean that the Governing Council, which I am privileged to chair, is a key part of the oversight. We are asked to oversee the strategic direction of TPI and review how the funding is directed. Over the past year, the Governing Council met three times - once in person and twice virtually. In particular, it has discussed the evolution of the research programme and the development of the business innovation programme.

It has also been very welcome to see the Institute increasingly referred to as an authoritative source.



Dame Kate Barker

Chair, The Productivity Institute Governing Council

The consequences of slow productivity growth in the UK have been acutely felt for a decade or more. The supply side of the UK economy has weakened, whether due to persistently low investment, a skills system in need of reform, or the lack of diffusion mechanisms to enable weaker firms, poorer regions and lower-income workers to benefit from those that have prospered.

This diagnosis has been thoroughly documented by the The Productivity Institute and others. The opportunity now is to develop a research agenda that is focused on evidence-based solutions that policy makers and business leaders can act on to reverse UK's waning productivity trend.

I'm honoured to have taken on the chair of The Productivity Institute's Advisory Committee this year. The purpose of this

group is to garner insights from a wide range of experts in academia, policy and business to help TPI develop and implement an effective programme of activities and research.

The Advisory Committee has met twice this year. Following the inaugural meeting in October 2021, Professor Nicholas Crafts of Sussex University stepped down from his role as chair. I would like to thank him for his help in getting the Committee off the ground, and am grateful that he has agreed to stay on as a member.

In July 2022 the Committee discussed the TPI's research progress and its priority research themes going forward. In the next year, subgroups of the Committee will meet with theme and programme leaders to provide focused input, aimed at further refining TPI's research in ways that help it have impact with decision makers.



Tera Allas

Chair, The Productivity Institute Advisory Committee

During the second year of the ESRC grant (2021/22) funding covered in this report, The Productivity Institute has significantly advanced its mission to help better understand what is happening to UK productivity, where it is heading, and what should be done to make productivity contribute to improving living standards across the nation.

As this report shows, our portfolio of research projects has delivered across all major themes. The Regional Productivity Forums have progressed their agenda and obtained greater focus, and the Productivity Commission has delivered its first report surveying the landscape of the UK's productivity problem. As reported at greater length in this review, this year's work has allowed us to zoom in on the key explanations for the productivity slowdown and the areas of focus to move the needle towards a more positive development of productivity in going forward.

Unfortunately, in the short term, the environment to raise productivity has become significantly more challenging. The immediate recovery from the COVID-19 pandemic has been rather short-lived over the course of 2021 and into the first half of 2022, and the potential productivity effects from the increase in hybrid working have been muted so far. The rise in energy costs due to the war in Ukraine and the overall increases in cost levels because of bottlenecks in supply chains have created significant short-term pressures on businesses. Those pressures come on

top of longer-term commitments to accelerate the transition to Net Zero and provide broader based benefits and improve the well-being of people across regions and different income brackets.

The short-term pressures have been extensively addressed in numerous engagements and communications by the Institute, including media performances and blogs from our Co-Is, several episodes of our podcast series *Productivity Puzzles* as well as in the public and private meetings of our Productivity Forums. Productivity can play a critical role in mitigating some of the short-term pressures mentioned above, especially if firms are able to leverage benefits from investments in digital transformation and innovation, green growth, and improvements in worker skills and management competencies. Indeed, the research priorities and discussion of the Productivity Forums are primarily directed to unleashing those key drivers of business productivity.

Government has an important role to play in providing adequate and targeted support to businesses and people whose productive and earnings capacity will be harmed by crisis. But for the medium- to long-term, government needs to outline a path to recovery that sees the rise of more productive businesses across the country creating opportunities for good jobs, green growth, and sustained income and well-being. Much of the Institute's research agenda is focused on identifying and designing the contours of policies and institutions that allow for a commitment to productivity growth.

Important highlights from the research agenda in the past year include three papers focusing on industrial policy, fiscal devolution and governance

and institutions which were released around the time of the publication of the Levelling Up White Paper in February 2022; two symposia on the relationships between productivity and pay and productivity and well-being in the International Productivity Monitor; and our Research Conference on digital transformation and Net Zero transition in June 2022.

Based on these and other pieces of research, our key narrative on strengthening productivity has evolved around four main elements. First, there is a need to urgently address the narrowing of the top of the productivity pyramid. There are currently too few sectors that excel in terms of productivity growth and too few large and innovative firms that achieve world excellence. Second, there are serious concerns about the ability of the UK economic system to connect top performing industries and firms to the rest of the economy. Institutions and policies which encourage diffusion of technologies, strengthen absorption capacity, and encourage innovation need to be strengthened and in part redesigned.

Third, there is a substantive place-related dimension to the productivity problems with persistently underperforming regions across England (outside London and the South East) and the three devolved nations, Northern Ireland, Scotland and Wales. More specifically the productivity performance of major so-called second-tier cities has been weak, not only relative to London, but also to comparator cities in other countries across Europe. Finally, all three elements of the productivity problem above are strongly interacting with the occurrence of low skilled and often precarious employment, with implications for the quality of life and health.

This narrative underlies the current sharpening of focus on the Institute's research agenda on seven main programmes of work, as outlined in the Research Director's report. Building on our eight research themes we will now zoom in on research which is organised around the productivity of people (in particular, skills and well-being), firms (with a focus on Net Zero and digital transition and the role of intangible assets), and the role of institutions, policies and the economic system (including short-termism, knowledge diffusion and productivity of cities).

In the coming year, we aim to strengthen connections between the research agenda, the work of the Productivity Forums and the Productivity Commission. This interaction between research, business and policy engagement will be a key measure of success for the Institute. It can only happen as the result of the commitment of the broader community of The Productivity Institute. The Institute involves 10 partners across the UK, 41 Co-Investigators, more than 25 researchers, around 200 members from business, policy and academia across eight Productivity Forums in England, Northern Ireland, Scotland and Wales, and 25 members of the Productivity Commission. I would like to thank all those involved for their work and support, also including podcast participants and other events by The Productivity Institute.

Last but not least, I would like to acknowledge the dedication of the Programme Support team at the Institute's headquarters at the Alliance Manchester Business School at the University of Manchester. Their work is indispensable for the functioning of a broad-based organisation to provide a platform for high quality work and collaboration.



Bart van Ark

TPI Managing Director, Professor of Productivity Studies, *The University of Manchester*

THE RESEARCH PROGRAMME

The Institute's research programme has taken off during the last year. In the period of October 2021 to September 2022, we have produced 27 Working Papers (WP), 11 Productivity Insights Papers (PIP), run regular Institute seminars, hosted a research conference and boosted research staff numbers. Most importantly, many new projects have been initiated, some of which have started, others commencing in autumn 2022. New projects are listed in the theme highlights in this report. Of particular importance are new projects on firm level internationalization, innovation, and productivity (Roper), business model innovation (Velu), labour market polarization (Rafferty), and governance (Richards, Westwood et al.).

Work completed includes several papers on the importance of sectoral structure for UK productivity.

The measurement work of Coyle and Mei (WP018) and Goodridge and Haskell (WP022) points to the fact that the slow-down in total factor productivity growth was greatest in sectors that are intangible-, knowledge-, technology-, and digital-intensive. Detailed sectoral studies have been undertaken for the energy sector, showing the relatively poor performance of regulated energy network sectors and quantifying the contribution made by emissions-oriented regulation (Ajayi et al. WP012, WP016). In the health sector, Coyle and Muhtar (WP017) point to the costs, in terms of resilience and productivity, of running the NHS too close to capacity. Productivity performance and management of the public sector more widely is studied by van Ark (*Making Public Sector Productivity Practical*). The importance of sectoral structure for regional economic performance is demonstrated by Rice and Venables (WP021), who show that a measure of the 'tradability' of a region's output accounts for a majority of regional earnings disparities, with regions that have lost – and not replaced – traditional specialisms at the bottom of the earnings list.

Driffield and co-authors (WP011, WP014) have analysed the productivity benefits of inwards foreign direct investment, and are tracking the impact of Brexit and the pandemic on levels of foreign direct investment. This work shows an increase in inflows from 2016-2019, followed by sharp decline. The project is continuing, and will provide the most up to date information on these inflows, distinguishing by location, size, sector and

greenfield vs merger and acquisition investments, and their impact on productivity (FDI Briefing 1).

Fragmentation and instability of the policy environment is often held to be a factor in poor policy and regional performance, and the extent of such instability is charted in work by Coyle and Muhtar on the UK's industrial policies (PIP002, WP019), by McCann who makes the case for greater coordination and provides a detailed study of official productivity commissions in five other countries (PIP008, PIP011), and by Westwood et al. on the local and regional governance implications of the Leveling Up White Paper (PIP005).

A full list of work completed is given in the Publications section of this report.

As we move into 2022-23 we will sharpen the focus of our research by building programmes of work that will culminate in a series of research reports to be delivered over the next three years. In the area of skills and employment there will be two such programmes. 'UK Skills Mismatch' will document and diagnose the UK skills problem, taking a long-term view and looking at organisational changes needed to address the problem. 'Precarious employment, labour market flexibility and well-being' will study the relationship between well-being and productivity, placing it in the context of ongoing changes in the nature of employment. Looking at firms and business, there will be programmes on 'The Productivity Implications of Transitions', looking at both

the uptake of new technologies and the implications of transition to Net Zero. The programmes will ask how these changes impact within firms, and affect relationships between firms as the organisation of business changes. A further programme, 'Productivity and Intangible Assets' will ask how firm organisation and productivity will change as technology both destroys and creates new value in firm's assets. Economy wide, we are designing three programmes. 'Short-Termism' will conceptualise this frequently mentioned issue, establish the extent to which it is prevalent in different parts of the UK economy, and address its fundamental causes. 'The Diffusion of Knowledge' will investigate the extent to which knowledge is transmitted between different actors and areas – firms, universities, R&D institutions, and UK regions – and the scope for improving such knowledge and technology flows. 'Urban Economic Performance' will compare the performance of secondary and smaller cities in the UK with their counterparts in other countries, asking why the productivity-scale relationship found elsewhere is largely absent in the UK.

Each of these programmes will have the resources and capacity to produce original academic research and to interact with the business and policy communities, producing reports that will be accessible and, we think, will have impact. They will run alongside and draw on existing and further Institute research projects.



Tony Venables

TPI Research Director and Professor of Economics, *The University of Manchester*

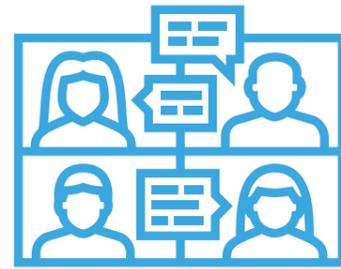
8 RESEARCH THEMES

INVEST IN PEOPLE, IDEAS AND YOUR ORGANISATION



Human capital

The UK labour force is characterised by strong high-end skills, weak vocational skills and a relatively low level of basic skills such as numeracy and literacy. More research is needed on which skills and abilities are important for productivity and well-being, and how these can best be developed and deployed in a rapidly changing digital economy.



Organisational capital

Stagnant long-term productivity growth in UK firms has been linked to low levels of investment, failures in technology diffusion, short termism, and a general decline in business dynamism. As the UK seeks to develop a more activist industrial strategy, key questions arise on barriers to entry, obstacles to innovation in SMEs, and the resilience of supply chains.



Knowledge capital

The institutional structure of research in the UK seems not to provide the coordination necessary for success, particularly in high technology and high value-added areas. There is a need to better understand and measure the impact knowledge capital and other types of intangible capital created by the public and private sectors have on productivity.

LEVERAGE POWER OF PLACE



Geography and place

The low productivity levels of some regions or areas of the UK, and the consequent disparities in income and broader well-being, are widely documented. There are lessons to be learned concerning the effectiveness of local economic development strategies, infrastructure investment, land use and housing policy, educational and social interventions, and their interactions.

COLLABORATE



Macroeconomic trends and policy

Many of the UK productivity issues reflect economy-wide failures. From a private finance viewpoint, a large financing gap for business seems to have emerged as banking restrictions on lending lead to shortfalls in productive investment. From a fiscal viewpoint, public investment in productivity-enhancing infrastructure may be limited by the fiscal regime and accounting frameworks used by the Treasury.



Institutions and governance

UK productivity suffers from overcentralised decision making, topdownism, short-termism, silos, and the absence of effective joined-up government. The geographical concentration of power may stifle local initiative and innovation. A common research theme is the need to better recognise the interactions between those taking the decisions and those affected by them.

MEASURE SUCCESS



Measurement and methods

Productivity is fraught with measurement issues, notably to do with output in service sectors, regional price and productivity differentials, intangible inputs and environmental capital, and knowledge. New techniques and novel data sources, including administrative data and 'big-data' at granular levels, can help to gain deep understanding of regional, national and firm-level productivity drivers.

FOCUS ON THE BIG PICTURE



Social, environmental and technological transitions

Coming decades will see major transitions as the UK adopts new technologies and responds to climate change. There are both opportunities and risks for productivity, jobs and the distribution of the gains emerging from digital transformation and green growth. These transitions will require transformative changes in business models, skills needs, infrastructure, regulatory policies and markets.

RESEARCH CASE STUDIES

LEVELLING UP

The UK government introduced its Levelling Up agenda to the UK as part of its 2019 election manifesto and a White Paper on the subject was released on 2 February 2022. In the run up to the its publication, The Productivity Institute produced research on how policy, institutions and fiscal mechanisms can become less centralised, better coordinated and more long-term oriented highlighting the widespread causes and offering solutions.

UK's Industrial Policy: Learning from the past?

[Diane Coyle and Adam Muhtar](#)

This paper explores the impacts of the deficiencies in the UK's industrial policymaking strategy since the 1970s and contrasts them with the experiences of other advanced economies. The authors find that the UK does not have that mechanism for evaluation and learning and taking on board lessons that we ought to have learnt in the past 30-40 years. Consequently, the UK needs to develop an institutional framework that supports evidence-based, forward-thinking and long-termist policymaking. This could come in the form of a statutory, independent oversight body that could evaluate industrial policies and provide actionable information to Parliament.

Levelling Up, Local Growth and Productivity in England

[Andy Westwood, Marianne Sensier and Nicola Pike](#)

This research focuses on the current role of institutional and governance structures across English regions in tackling spatial equality and low productivity. Successive governments have failed to recognise the effects of regular policy churn, change and reform on local institutions, like Further Education colleges. A stable institutional landscape, which has been missing for decades in England, is critical to productivity. As such a clear devolution and decentralisation strategy based on coherent city-regions and economic geographies is needed at a scale that makes a difference. Furthermore, coordination between institutions at all levels is vital for this to work and succeed.

The Fiscal Implications of 'Levelling Up' and UK Governance Devolution

[Philip McCann](#)

By international standards, the UK's interregional fiscal system is extremely pyramidal in nature and overly complex. Mediocre economic growth coupled with very high interregional inequalities suggests that this over-centralised system has poorly served the UK. Given that a very small number of actors ever get a hearing at the top, they are the ones that overly influence policymaking, independent of who is in power. Therefore, we must address the degrees of separation between London and the rest of the country by introducing a middle tier of long-term, largely independent structures that are focused on coordination with proper fiscal and financial powers.

You're not speaking my language: policy discontinuity and coordination gaps between the UK's national economic strategies and its place-based policies

[Diane Coyle and Adam Muhtar](#)

This research presents evidence from text analysis of a startling lack of coordination in Government policy, with a special focus on the Levelling Up White Paper. The study highlights this linguistic discontinuity by analysing the context of statements about innovation policies from the Plan for Growth and Innovation Strategy with those in the Levelling Up White Paper. It suggests that 'joined-up government' for the UK is as far away as ever in the context of the systemic challenges of spatial economic inequality.

Tradability, Productivity and Regional Disparities: theory and UK evidence

[Patricia Rice and Anthony Venables](#)

This piece develops an analytical framework that shows how sectoral characteristics, like local, regional, and global tradability, determine regional outcomes. According to the evidence, an area's highly tradable activities have a positive effect on average earnings. While this is partially due to tradeable sectors paying higher wages, a large proportion stems from an area-differential effect, as tradables translate to higher local employment and factor prices as an equilibrium response, while non-tradables lead to lower local prices and nominal wages. Crucially, the research shows that structural change during the 1970s and 1980s still casts a shadow on regional wage differentials. As a result, any attempt at Levelling Up regions must first recognise that different places have significantly different economic structures.

Levelling Up: The Need for an Institutionally Coordinated Approach to National and Regional Productivity

[Philip McCann](#)

The paper argues that the UK's endemic regional-national productivity problems cannot be addressed by the UK's current institutional and governance set-up. The economic development aims of the Levelling Up White Paper need to be matched by an institutional schema which allows for proper analysis, consideration and engagement of multiple perspectives and stakeholders to be fed directly into the design of the policy making and policy-delivery process. This requires the ability to coordinate different perspectives and interests so as to facilitate learning and coordination within and across the systems governing economic development, in order to help develop a suite of policy actions which can be deployed medium and long-term. This capability currently does not exist in the UK governance and institutional system, and this paper therefore argues that the establishment of such an institution, body or forum is essential in order to fill the current governance vacuum

INSIGHTS



English Mayors aren't Metro Medicis. Yet.

Andy Westwood explains how 15th century Florence and its ruling Medici family influenced the Levelling Up agenda



Why are there regional disparities

Tony Venables discusses how regional disparities originate, why they are persistent, and why policy has been largely ineffective in dealing with them.

RESEARCH CASE STUDIES

THE ENVIRONMENT

The environment cuts across numerous facets of productivity. The changing social and policy landscape as a response to climate change offers both risks and opportunities for productivity. The transformative changes that stem from environmental issues are having significant ramifications for regulation, fiscal responsibility and economy-wide productivity. TPI have published several papers on this topic over the past year:

Climate change and fiscal responsibility

[Matthew Agarwala, Matt Burke, Patrycja Klusak, Kamiar Mohaddes, Ulrich Volz and Dimitri Zenghelis](#)

Both the physical and transition-related impacts of climate change pose substantial macroeconomic risks. Yet markets still lack credible estimates of how climate change will affect debt sustainability, sovereign creditworthiness, and the public finances of major economies. This study presents a taxonomy for tracing the physical and transitional impacts of climate change through to impacts on sovereign risk. This taxonomy is then applied to the UK's transition to Net Zero, with the authors finding that the opportunities from managing a Net Zero transition would substantially outweigh the costs.

Do climate policies explain the productivity puzzle? Evidence from the Energy Sector

[Victor Ajayi, Geoffroy Dolphin, Karim Anaya and Michael Pollitt](#)

This research investigates the possibility that the slowdown in productivity growth for advanced economies is a product of increased stringency in environmental regulations, with a focus on the regulated energy network industries of OECD countries between 1998-2016. Using the growth accounting method, the study finds that the electricity and gas sectors exhibit lower total factor productivity than the whole economy over the period, with an additional fall post-financial crisis. It also observes that energy and climate policy indirectly reduced energy sector and economy-wide productivity.

Incentive regulation, productivity growth and environmental effects: the case of electricity networks in Great Britain

[Victor Ajayi, Karim Anaya and Michael Pollitt](#)

This paper analyses the productivity growth of electricity transmission and distribution networks in Great Britain and how changes in incentive mechanism have influenced the measured total factor productivity. It also examines the effects of quality of service and environmental targets on measured productivity growth. The findings show that productivity growth is consistently low for the period examined.

Green growth and Net Zero policy in the UK: some conceptual and measurement issues

[Victor Ajayi, Michael Pollitt](#)

This paper discusses some of the fundamental issues related to the future growth of productivity under Net Zero climate change policies. The aim of the paper is to discuss just how challenging it will be for an advanced economy with a Net Zero target to grow total factor productivity.

Changing times: Incentive regulation, corporate reorganisations, and productivity in Great Britain's gas networks

[Victor Ajayi, Michael Pollitt](#)

The gas industry in Great Britain has recorded a number of organisational changes in line with ongoing regulatory reforms in the energy sector to foster competition in the industry and due to the corporate decisions of privately owned gas companies, following privatisation. This paper undertakes two separate productivity analyses in order to examine the implicit effects of these two major events - the change in regulation and the changes in ownership structure.

UK PRODUCTIVITY

While there is little doubt that productivity in the UK is a significant issue, explaining the causes of the slowdown is far from a solved problem. Identifying which sectors and industries are pertinent to the drop in measured productivity growth has been an area of research for the institute over the past year. Furthermore, work has also been carried out to discover whether the slowdown is a UK-specific challenge, or a product of global macroeconomic trends.

Diagnosing the UK Productivity Slowdown: Which Sectors Matter and Why?

[Diane Coyle and Jen-Chung Mei](#)

This paper decomposes the slowdown in labour productivity growth into contributions for different sectors of the UK economy, looking both at within-industry productivity growth and labour reallocation between sectors. It finds that within-industry contribution is the main source of the slowdown and can be mainly attributed to transport equipment and pharmaceuticals within manufacturing, and computer software and telecommunications within information and communication. Strikingly, these are advanced, high value-added sectors considered to be strengths of the UK economy.

The UK Productivity "Puzzle" in an International Comparative Perspective

[John Fernald and Robert Inklaar](#)

The United States and northern Europe experienced very similar total factor productivity growth slowdowns since 2007. This study finds little evidence that capital deepening was an important independent factor. From a conditional-convergence perspective, most of the UK slowdown follows from the slowdown at the U.S. frontier. The relative ground lost after 2007 is modest—cumulating to about 4 percentage points—and is largely attributable to somewhat unfavourable industry weights and industry-specific issues in mining, rather than a systematic UK competitiveness problem.

Accounting for the slowdown in UK innovation and productivity

[Peter Goodridge and Jonathan Haskel](#)

Using the latest Office for National Statistics data, this paper conducts a comprehensive sources-of-growth analysis for the UK non-farm market sector, 2000-2019. The data shows the slowdown in UK labour productivity growth can largely be attributed to a slowdown in innovation, defined as the contributions of intangible capital deepening and total factor productivity growth. The analysis highlights that the level of labour productivity in 2019 is 31 percentage points lower than it would have been had it continued to grow at its 2000-07 rate.



TPI academics at The University of Manchester contributed to a collection of essays on productivity

RESEARCH ENGAGEMENT



Productivity Lab

The Productivity Laboratory was established in 2022 as the Institute's hub for all data-related activities. Led by Raquel Ortega-Argilés, the Lab will join data in a central repository for usage across the Institute and beyond and create opportunities for augmented works by updating, scaling up or repurposing datasets.

Research Conference

Our second research conference was held at Alliance Manchester Business School in June 2022. Our keynote speakers focused on the research and policy aspects of digital transformation, technology diffusion and Net Zero transition. Six papers were presented, authored by 20 academics from the UK and Europe.

Our keynotes were:

Innovation for productivity and Net Zero: informing a sustainable growth strategy

- Anna Valero, Senior Policy Fellow, Centre for Economic Performance, LSE, Deputy Director, Programme on Innovation and Diffusion (POID)

The Twin Transition and Productivity: A Policy Agenda

- Dirk Pilat, then Deputy Director of the OECD Directorate for Science, Technology and Innovation

“Achieving Net Zero is key to tackling the climate crisis and it was fascinating to discuss the role that innovation and digital transformation can play in reaching this goal while driving productivity and sustainable growth”.



Dirk Pilat



International Productivity Monitor [↗](#)

The IPM is the joint flagship publication of the Centre for the Study of Living Standards (CSLS) in Canada and The Productivity Institute. The Monitor publishes high-quality peer-reviewed open access articles on productivity issues, trends and developments in Canada, the United Kingdom and other countries and serves as a vehicle for the international discussion of productivity topics.

TPI has been involved with the IPM since Edition No. 40, Spring 2022. It hosted a two-day workshop on productivity and well-being in November 2021 which will result in two symposiums on the topic, the first published in Edition No. 42.

Researcher seminars

TPI researchers met online to present and discuss their research papers in our Brown Bag seminar series. A number of these were subsequently published as working papers for the TPI and other institutions and presented at national and international conferences.

A special online seminar with Thomas Philippon from NYU Stern was held in June 2022 in collaboration with The Bennett Institute for Public Policy and the National Institute for Social and Economic Research. Professor Philippon presented on his paper Additive Growth which discusses how the additive growth model, rather than the exponential model, provides more useful medium-forecasts of total factor productivity.

Research Fellowships

Our fellows come from a wide-range of backgrounds and experiences and will also be involved in research within and alongside business.

Early Career Research programme

This supports early career researchers outside the Institute partnerships. They will be mentored by more experienced researchers to realise academic publications.

Researcher Profiles

Meet some of the up-and-coming researchers contributing to The Productivity Institute's research agenda.



Halima Jibril,
Research Fellow,
Enterprise Research Centre (ERC),
Warwick Business School

Halima joined the ERC in August 2018 and her research interests are in innovation diffusion, financialisation and energy economics. Halima is also interested in econometric methods and quasi experimental methods of impact assessment.

Halima co-authored Working Paper 005 COVID-19, business support and SME productivity in the UK and presented at TPI's Research Conference.



Adam Muhtar,
Research Assistant,
Bennett Institute for Public Policy,
The University of Cambridge

Adam previously worked as an economist within Malaysia's policymaking circles, serving with the Prime Minister's advisory council, the finance ministry, the capital market regulator, and the sovereign wealth fund. His research at Cambridge is around institutional structures responsible for industrial policy. From Autumn 2022 onwards, Adam will be joining the Bank of England as a Data Scientist.

Adam co-authored Insights Paper 002 UK's Industrial Policy: Learning from the Past ? and Working Paper 019 You're not speaking my language: policy discontinuity and coordination gaps between the UK's national economic strategies and its place-based policies.



Dr. Issam Samiri,
Postdoctoral Research Associate,
NIESR

Issam's research interests include the study of productivity from a macroeconomic perspective, financial frictions, macro-finance, macroeconomic theory and DSGE modelling.

He has been part of the secretariat for the Productivity Commission, helping to produce the evidence review.



David Jordan,
Research Fellow,
Queen's Management School,
Queen's University, Belfast

David is researching the reasons behind low levels of productivity in Northern Ireland. His wider research focuses on regional and public economics, alongside economic and financial history. He is particularly interested in the economics of devolution, and the long-run performance of Northern Ireland's economy.

David co-authored Insights Paper 004 Northern Ireland's Productivity Challenge: Exploring the Issues and is leading a business innovation project in the region.



Dr. Konstantinos Myrodias,
ESRC Postdoctoral Research Associate,
NIESR

Konstantinos is a social scientist interested in political economy, institutions, growth models, and industrial policy. He recently completed his PhD in Political Economy at the LSE.

Konstantinos has been part of the secretariat for the Productivity Commission, helping to produce the evidence review. His monograph 'The Political Economy of the Eurozone crisis and COVID-19: crisis and change in Southern Europe' will be published by Palgrave Macmillan International Political Economy Series in 2023.



Peter Goodridge,
Research Fellow,
The University of Manchester

Peter's research interests focus on the measurement of output, inputs, productivity and innovation, with particular attention to intangible (or knowledge) assets and their contribution to growth.

Peter is working on the project UK innovation and productivity at detailed industry level and co-authored Accounting for the slowdown in UK innovation and productivity.



THEME LEAD

Damian Grimshaw



2021-22 was a busy year for the Human capital theme, with the successful commissioning of four new research projects, setting up a research group (HC Group) to discuss preliminary findings from existing TPI projects, and invitations from members to present high-profile publications.

Research highlights include: new evidence tracking the relationship between occupations, job type and regional productivity (Anthony Rafferty, Manchester); new methodologies and big data sources for tracking the demand and supply of skills (Mary O'Mahony, King's); and joint work with ONS to establish robust statistical indicators for measuring 'good work' and modelling its relationship with productivity (Chris Warhurst, Warwick). The intention is to generate material for the TPI Working Paper series, including clear and urgent policy recommendations, as well as high quality journal articles.

New research was commissioned in an effort to better understand the relationship between Human capital and productivity in the UK. Interdisciplinary research is key to this endeavour and this viewpoint informed the selection of three TPI projects to start in 2022-23. Two projects bring together insights from the socio-economics of innovation and employment, asking: i) 'How do Human capital and innovation strategies shape the productivity potential of digital technologies?' (Marcela Miozzo and Damian Grimshaw, King's); and ii) 'How does the digital crowdsourcing of talent shape firms' Human capital, organisational capabilities and productivity?' (Hsing-fen Lee, Royal Holloway). A third interdisciplinary project draws lessons from feminist economics to interrogate the gender inequalities of job polarisation and part-time work (Jill Rubery, Manchester).

Looking forward, 13 multi-sized projects have been proposed for the next stage of TPI research on 'People and Productivity'. These cluster around two themes: Skills mismatch (e.g. focusing on skill underutilisation, green skills and the role of FE colleges) and Precarious work (e.g. exploring the linkages with well-being, worker voice and home-based work). I look forward to a productive 2022-23!

SUMMARY OF PROJECTS

Labour market polarisation, Human capital and regional productivity
Anthony Rafferty

This research examines issues of labour market skills and income polarisation in the UK and implications for understanding spatial issues of Human capital distribution and formation within regional economies. It looks at the extent to which polarisation has occurred within different countries through a 'hollowing out' of middle-skilled or -income jobs, combined with an increased demand for higher and lower skilled work. It also identifies if this is from increased demand for higher skilled work or through a shift toward lower-skilled employment.

Good Work and Productivity Data Development
Chris Warhurst

This project is developing a database to enable analysis of the links between good work and productivity. Following the recommendations of the 2018 Taylor Review, the UK Government's *Good Work Plan* (2018) signalled job quality as a key potential contributor to productivity and aimed to create more 'good work', particularly at the sector level. As earlier analyses were hampered by data inadequacies, a new integrated dataset is being created that enables analysis of the relationship between good work at worker-, firm- or industry-level.

Human capital, innovation and competitiveness in the UK's leading firms
Damian Grimshaw and Marcela Miozzo

This project is designed to help understand the changing demand for Human capital in the UK, with an empirical focus on the combined strategies and structures of firms in sectors with the highest R&D investment. Phase one examines background data from the top 25 R&D spenders in pharmaceuticals, automotive/engineering and computer programming/software development, while phase two consists of detailed case studies of a sub-sample of three companies and their networks, with a wider range of interviews and data collection.

How does the digital crowdsourcing of talent shape firms' Human capital, organisational capabilities and productivity?
Hsing-fen Lee

This project investigates how firms' increasing use of digital/online talent platforms is cultivating new forms of Human capital. It contributes to debate about firms' Human capital, organisational capabilities, and productivity, given the accelerated use of digital talent platforms by firms in all sectors of the economy. It includes an original survey of UK and US firms tailored for this study, while also pulling secondary data from an ILO survey of approximately 3,000 workers carried out in 100 countries on microtask, freelance and competitive programming platforms.

Gender, part-time work and job polarisation: the productivity risks
Jill Rubery and Anthony Rafferty

This research builds on other TPI research with the goals of remedying the lack of attention to gender issues within the current portfolio of TPI projects and contributing to a pressing current debate; how do more flexible forms of working impact on both gender equality and the UK's productivity trajectory? This project addresses the issue of raising women's contributions to productivity, now that the gains from raising women's labour market participation in recent decades are reducing as employment rates by gender converge, while analysing whether women's productive contributions are being undervalued.

RESEARCHERS

Co-investigators

Augustin De Coulon, *King's College London*
Eugenio Proto, *The University of Glasgow*
Jill Rubery, *The University of Manchester*
Simone Schnall, *University of Cambridge*
Chris Warhurst, *Warwick University*

Collaborators

Derek Bosworth, *The University of Warwick*
Martin Fleming
Malgorzata Kuczera, *OECD*
Hsing-Fen Lee, *Royal Holloway University*
Marcela Miozzo, *King's College London*
Sudipa Sarkar, *The University of Warwick*
Michela Vecchi, *Kingston University London*



THEME LEAD

Diane Coyle



The Knowledge capital theme covers the realm of ideas in generating productivity and growth, ranging from the institutions that enable research and development to the diffusion of new technologies within businesses and the creation of intangible assets, such as intellectual property, data or management know-how. The measurement of intangible capital is a core challenge we have been addressing, developing up-to-date data and applying it in research projects.

The research published under this theme during the past 12 months has explored innovation and productivity at the level of the firm. In addition to finding that business model innovation is an important contributory factor, this work has pointed to the fact that some high value, knowledge-intensive sectors have been major contributors to the UK productivity slowdown. Other work has looked at electricity and energy, and the scope for climate transition to drive productivity through innovation. Under this theme, we have looked at the role of government in shaping the institutional framework within which innovation occurs, including the need for policies that build in learning from the past and avoid policy-generated instability. Another strand has incorporated well-being and time use into productivity considerations.

The next year will see more work on intangibles, both their measurement and seeking a better understanding of how their use drives productivity and how intangible capital is generated. Digital, as well as energy innovation, will remain important themes, and we will be digging deeper into the productivity performance of knowledge-intensive industries whose productivity has slowed considerably, such as software and computer services, or pharma.

SUMMARY OF PROJECTS

Institutions of Innovation

Eoin O'Sullivan and Richard Jones

This project discusses the role of public and public/private R&D institutions in strengthening national and regional innovation systems and increasing sectoral productivity performance. It examines institutions focusing on "translational research" – more applied research, often carried out in partnership with the private sector. It compares UK institutions, such as the Catapult Centres, with a variety of international comparators, including the institutes of the Fraunhofer Society in Germany and the Industrial Technology Research Institute in Taiwan.

Business Model Innovation, Digital Technology and Intangible Capital

Chander Velu

This study investigates the innovation and productivity dynamics of firms within supply chains, the barriers and enablers of business model innovation within a firm and across the supply chain, and how Knowledge capital can help improve productivity within firms in the supply chain. The research employs a combination of quantitative analysis as well as qualitative case studies based on interviews.

Productivity in the health service: COVID-19

Diane Coyle, Kaya Dreesbeimdieck and Annabel Manley

This set out the methodology used to calculate health productivity in the UK, and traced why measured health output in the UK declined sharply during the COVID-19 pandemic, despite the evident increase in some NHS activities. The research found that, within NHS England, capacity constraints contributed to substantial falls in non-COVID-19 health care activities, and argued that increased capacity in the social infrastructure of the health service is essential to enable higher productivity in an uncertain environment.

Intangible capital and productivity growth: a UK-US industry comparison

Carol Corrado and Jonathan Haskel

This research looks at intangible assets within different industries, using an existing detailed database for the US alongside developing a detailed database for the UK including intangibles. It will document productivity growth, spillovers, intangible and other capital accumulation between the US and the UK, with a strong focus on the

productivity slow down after the financial crisis and around Brexit. The study also looks at whether the pandemic changed the future path of a number of industries, such as retailing, hotels and restaurants.

Measurement of productivity growth in the regulated energy, water and transport sectors in the presence of increasing quality, engagement and environmental targets

Michael Pollitt

This research studies how environmental targets seeking to promote resource use efficiency, reduction of Greenhouse Gas emissions and low carbon technologies are impacting on measured total factor productivity (TFP) in the regulated electricity and gas sectors. It examines the prospects for green growth, including the possible future path of productivity under Net Zero policies and a separate analysis of electricity and gas sectors, creating original corporate datasets covering the early post-privatisation years up to the most recent years.

Firm level evidence on the use of potential capital

Paul Mizen

This research explores how equipment used to work from home (WFH) to produce output (potential capital) can impact productivity measured by conventional means, which ignores potential capital and tends to overstate output per hour to create an artificial boom/bust in the productivity cycle. This project examines the impact of WFH and use of potential capital on output and productivity by firm type and sector and investigates if firms are investing in new ways of producing goods and services using remote labour and capital.

Public procurement and innovation 'missions'

Elvira Uyerra

This project seeks to understand the effectiveness of public procurement as a policy lever to drive innovation and understand its role and contribution as a tool in designing and implementing mission-oriented policies. It makes use of a large-scale public sector spend and procurement database provided by the public sector market intelligence company Tusnell and links it to other data sources to investigate the use of public procurement to drive long-term productivity, innovation performance, Net Zero or levelling-up.

RESEARCHERS

Co-investigators

Chander Velu, *University of Cambridge*
Vasco Carvalho, *University of Cambridge*
Richard Jones, *The University of Manchester*

Collaborators

Anastasios Kitsos, *Aston University*
Annabel Manley, *University of Cambridge*
Carol Corrado, *The Conference Board*
Elvira Uyerra, *The University of Manchester*
Eoin O'Sullivan, *University of Cambridge*
Janice Eberley, *Northwestern University*
Jonathan Haskel, *Bank of England*
Kaya Dreesbeimdieck, *University of Cambridge*
Malcolm Harbour, *Connected Places Catapult*
Matthew Agarwala, *University of Cambridge*
Michael Pollitt, *University of Cambridge*
Mirko Draca, *University of Warwick*
Myungun Kim, *University of Cambridge*
Nuran Acur, *University of Glasgow*
Oishee Kundu, *Cardiff University*
Pei-Yu Yuan, *University of Sheffield*
Paul Mizen, *University of Nottingham*
Raquel Ortega-Argilés, *The University of Manchester*
Peter Goodridge, *The University of Manchester*
Sam Markey, *Connected Places Catapult*
Victor Ajayi, *University of Cambridge*
Yamini Cinamon Nair, *University of Cambridge*



THEME LEAD

Nigel Driffield



Work completed over the last year (Jibril, Roper) examined the impact of government support measures during the COVID-19 crisis on future productivity potential. This suggested some positive results, with furlough and COVID-related loans both positively linked to future investment intentions.

Current projects (Roper, Jibril) are examining the complex links between innovation, exporting and firm-level productivity. Do firms improve their innovation and productivity in order to export, or is it exporting and exposure to competitive international markets which leads to higher innovation and productivity? Initial results suggest that innovation novelty plays a key role in helping firms to establish a strong export market position. Other related analyses (Du) are focussing on how Brexit impacts on trade have affected firm-level productivity.

Further projects focus on inward investment and supply chains; Driffield (with Yong) published a paper on the productivity effects of Foreign Direct Investment (FDI) on the firms undertaking the investment, and completed a further paper on the impacts of inward investment on UK productivity. There was also a distinct piece of work done for our local stakeholders on the position in the West Midlands. Driffield, along with Gorg and Temouri (both TPI fellows) completed a paper on the links between welfare spending and the ability of regions to attract high tech FDI, and they are now examining the links between migration and FDI. Finally, our first piece with Moody's on the snapshot of FDI trends has been published.

The supply chain work has started, bringing in Chakkol to replace Godsell. It explores the "bull whip" effect on productivity and how the leading firms can mitigate this for their suppliers.

SUMMARY OF PROJECTS

How will the COVID-19 crisis impact finance, investment, innovation and productivity in UK firms? How effective have government supports been in offsetting the effects of the crisis?
Stephen Roper

Lockdowns, social distancing and market disruption put significant strain on many firms during the COVID-19 crisis. This project takes a short-term look at how the crisis has impacted productivity and its drivers in UK firms and the effect of government support packages. The research uses survey evidence from government and business representative groups to compile a comprehensive picture. It also undertakes secondary analysis of SME Finance Monitor and ONS data and will analyse the impact on short and longer-term productivity, including the effects of Brexit.

Exploring the relationship between supply chain productivity, resilience and spillovers
Nigel Driffield

This research explores the effect of supply chain linkages on productivity, resilience and the relationship between productivity, resilience and spillovers. It uses unique data constructed from Bloomberg to construct a number of four-tier supply chains over a number of years, based on supply chain relationships amongst firms. Along with a more traditional productivity approach, the project estimates the average effect of vertical linkages on productivity spillovers across chains and firms, and individual-specific coefficients.

Innovation, internationalisation and productivity

Stephen Roper and Jun Du

This project explores the links between two critical areas of policy making – supporting innovation and exporting – and their joint link to improving UK productivity. It brings together a team with established expertise in firm level innovation with leading researchers on firms' export strategies and behaviour. The research exploits matches between the UK Innovation Survey and other official data sources to explore the causal links between innovation, export behaviour and productivity.

Inward investment and productivity in a post-COVID, post-Brexit setting
Nigel Driffield

This research focuses on the evolution of the composition and location of inward foreign direct investment (FDI), the changes in Investment Promotion Strategies for FDI attraction and retention, and their impacts on post-COVID-19 recovery patterns and productivity. It offers new policy frameworks to understand the contribution of FDI to post-COVID-19 productivity growth and leverages FDI data alongside an innovative survey on national and regional Investment Promotion Strategies to determine new trends and impacts on FDI location choices in the UK and abroad.

RESEARCHERS

Co-investigators

Stephen Roper, *University of Warwick*
Irina Surdu, *University of Warwick*
Christopher Warhurst, *University of Warwick*
Mark Hart, *Aston University*

Collaborators

Mehmet Chakkol, *University of Warwick*
Jun Du, *Aston Business School*
Halima Jibril, *Warwick Business School*
Kevin Mole, *University of Warwick*
Oleksandr Shepotylo, *Aston University*
Xiaocan Yuan, *Aston University*
Elvira Uyarra, *The University of Manchester*
Cresenzi Castellani, *University of Leeds*
Sandra Lancharos, *University of Leeds*
Katuscia Lavoratori, *University of Reading*





THEME LEAD

Rebecca Riley



The Measurement and Methods theme considers gaps in productivity measurement arising with the changing structure of the economy and the availability of new data sources. Addressing these facilitates new understanding, underpinning the evidence base available for enhancing inclusive growth. Areas of focus include the measurement of human and intangible capital, and their scope for improving productivity, as well as better capturing the productivity implications of advances in digital technologies. Alongside these, research under this theme exploits and develops large-scale business datasets, linking developments in business demographics and growth to economic outcomes at the national and sub-national levels.

During the past year we have worked on the measurement of UK firms' intangible capital, including their management practices and digital readiness. Our research highlights some of the mechanisms through which intangible capital may help improve the productivity performance of UK businesses. These include enabling businesses to better anticipate sales, allowing them to optimise production processes, as well as enabling businesses to better respond to economic shocks, such as that induced by the COVID-19 pandemic. Another strand of research explores methods for valuing free digital goods and how we might incorporate the value of free in productivity measurement. Research to date produces a broad range of valuations, but points to non-negligible implications for measured productivity growth.

Going forward, and working with the Institute's recently launched Productivity Lab, research under this theme will seek to measure and understand business dynamism and the underlying market structure of the UK economy and its relationship to productivity.

SUMMARY OF PROJECTS

The impact of the COVID-19 pandemic on productivity dynamics by industry Bart van Ark

This project employs quarterly national accounts data at two-digit level for France, UK and USA, covering labour productivity and measures of capital intensity and total factor productivity where possible. It includes a shift-share analysis to detect the impact of the underlying industry dynamics on macro productivity by quarter and discusses the implications of the medium-term projections of productivity in The Conference Board's global economic outlook model. It also provides input to the development of a regular indicator to predict productivity growth in the UK.

UK regional productivity level and growth: from the micro to the macro Giordano Mion

This project constructs a large firm-level dataset allowing for the analysis of spatial distribution of productivity at a granular level. Firm-level data use allows for the unpacking of different elements of productivity and analysis of the extent to which regional disparities are driven by these different aspects of firm performance and spatial features. The use of numerous data sets, some only recently available, allows further measuring of multi-factor Total Factor Productivity.

Measuring innovation in the digital economy Mary O'Mahony

This project develops a framework to measure innovative behaviour by firms and they relate to shifts in demands for skills at both firm and industry levels and by region. It covers: constructing measures of 'COVID readiness' in terms of innovation, AI adoption and use of cloud services before the pandemic and firm response; estimating the value of data investment at the industry- and firm level; estimating managerial/ organisational capabilities based on company accounts and annual reports; and measuring AI innovations and applications for job vacancies.

Measuring Productivity Growth in the Digital Economy Kevin Fox

This project addresses the paradox of rapid technological change accompanied by low productivity growth through developing theory, analysis of official data, collection of valuations of free digital products and regular market goods and using massive online experiments. This research has three key aims: develop new frameworks for measuring productivity growth in the presence of digital goods and services; address biases in standard productivity statistics arising from inadequate accounting for new and disappearing goods; and introduce a better understanding of the impact of quality change on productivity.

The demand and supply of skills across regions of the UK: evidence from new data sources Mary O'Mahony

This project examines if Further and Higher Education institutions produce graduates with skills that match those demanded in a region and the effects of outward and inward migration. It will create a comprehensive picture of skills most frequently demanded by firms both before and after the COVID pandemic by region and sector, as well as skills related to AI and digital transformation. It also measures the mobility of workers across regions and links this to skill levels based on qualifications.

RESEARCHERS

Co-investigators

Mary O'Mahony, *King's College London*

Collaborators

Abdul Erumban, *The Conference Board*
Augustin De Coulon, *King's College London*
Bart van Ark, *The University of Manchester*
Carmel Schwartz, *University of New South Wales*

Cecilia Jona Lasinio, *ISTAT*
Chiara Criscuolo, *OECD*
Elodie Andrieu, *King's College London*
Francesco Venturini, *National Institute of Economic Research*
Giordano Mion, *University of Sussex*
John Poquiz, *King's College London*
Joseph Ball, *Office for National Statistics*
Kevin Fox, *University of New South Wales*
Klaas de Vries, *The Conference Board*
Larissa Marioni, *National Institute of Economic Research*
Malgorzata Kuczera, *OECD*
Michela Vecchi, *Kingston University*
Oleksii Romanko, *King's College London*
Paul Mizen, *University of Nottingham*
Sarah Sheppard, *National Institute of Economic Research*



THEME LEAD

Philip McCann



The Geography and Place research theme investigates the productivity drivers and inhibitors of the local economies at the city and regional scales. The research cuts across many of the other research themes, drawing insights from different perspectives including spatial economics, economic geography, governance studies and political science.

The research agenda involves both quantitative and qualitative research methodologies and also spans both analytical and empirical approaches, bringing together insights from different fields and lines of enquiry. The Geography and Place theme has initiated various different lines of enquiry, resulting in a growing list of publications. Current publications from the Geography and Place research theme include an analysis of the lack of scale economies in UK cities and regions (McCann and Yuan 2022); an examination of the central-sub-central fiscal structure of the UK economy and its implications for devolution processes in the light of international evidence (McCann 2021, 2022a); an analysis of the governance-reform lessons arising for the UK from the pro-productivity institutions operating in other OECD countries (McCann 2022b); and an analysis of the likely productivity consequences for city economies of the post-COVID shift towards greater levels of working-from-home (Bond-Smith and McCann 2022). In addition, new work is currently underway examining: the UK regional productivity implications of public R&D funding; the capital pricing shocks across UK and European cities and regions associated with the global financial crisis; firm-level micro-based construction of regional productivity measures; and the construction of new measures of UK regional capital stocks. Each of these research strands are expected to result in TPI Working Papers in 2023.

SUMMARY OF PROJECTS

Productivity variation across GB sub-regions: the role of sectoral and occupational composition Tony Venables

This research disentangles spatial variation in measured productivity using NUTS3 data on earnings, GVA, and employment by occupation and sector. The project focuses on the decomposition of spatial variations in productivity by sector and occupation and an econometric analysis of equilibrium effects, capturing the impact of some sectors/occupations on the measured productivity of others. Particular attention is paid to the interaction between highly tradable sectors (typically operating in relatively few places) and non-tradable sectors (operating in most places, and with spatial price variation).

The Effects of Capital Flows, Capital Prices and Capital Shocks on Productivity in UK and European Cities and Regions Michiel Daams

This research aims to uncover the role that capital shocks and investment allocation processes play in shaping local and regional productivity responses. It examines how the links between the macroeconomic and national governance features of a country and the internal economic geography of a country shape the productivity-driving role of cities and regions. It integrates OECD-standardised national, regional and city data on productivity growth, and monetary and fiscal policy outcomes, with region and city data on a whole range of productivity and productivity-related features.

Understanding endowments of regional capital and investment in the UK regions and their links with productivity Ana Rincon-Aznar

This project is a mixed-methods approach to understanding the patterns of investments across UK regions, particularly in relation to business response to the COVID-19 crisis. Its qualitative perspective examines companies' perceptions and how they measure investments and new types of assets. It also undertakes a new exercise – mapping the local Kind of Activity Units on the business register to the Quarterly Acquisitions and Disposals of Capital Assets Survey, which feeds into the UK National Accounts and the compilation of gross fixed capital formation.

RESEARCHERS

Co-investigators

Anthony Rafferty, *The University of Manchester*
Tony Venables, *The University of Manchester*
Ana Rincon-Aznar, *National Institute of Social and Economic Research*

Collaborators

Richard Barkham, *CBRE*
Michiel Daams, *University of Groningen*
Paolo Veneri, *OECD*
Tim Vorley, *Oxford Brookes Business School*
Patricia Rice, *University of Oxford*



THEME LEADS

Andy Westwood & Adrian Pabst



Our key project, investigating institutions and governance in Westminster, Whitehall, the devolved nations and at regional and local levels is now underway, led by Professors Dave Richards and Andy Westwood at The University of Manchester, Patrick Diamond at Queen Mary University of London and Mike Kenny at the University of Cambridge.

A series of working papers have been published, including an introduction to the theme and an overview of the issues surrounding the Levelling Up agenda. This theme is a key part of the work of the Productivity Commission hosted by NIESR, with members contributing as commissioners and evidence contributors. Theme academics also contributed to a NIESR journal investigating the impact and implications of COVID-19 on productivity. The team has also been busy with a series of additional articles, blogs, podcasts and activities on UK governance, skills, regional inequality and Levelling Up.

SUMMARY OF PROJECTS

The UK Productivity-Governance Puzzle: Are the UK's Governing Institutions Fit for Purpose in the 21st Century? Dave Richards, Andy Westwood, Michael Kenny and Patrick Diamond

This research examines the ways in which UK governance institutions have changed over the last forty years. It focuses on the principal claim that improvements in UK productivity are constrained by a range of governance pathologies: overcentralised decision-making; top-downism; short-termism; siloed policy-making; and the absence of effective joined-up government. It suggests an essential element of tackling economic inequalities and uneven/low productivity requires the reform of an over-dominant centre, in conjunction with the development of a coherent, stable and adequately resourced institutional approach to local, regional and devolved governments.

RESEARCHERS

Co-investigators

Augustin De Coulon, *King's College London*
Claudine Bowyer-Crane, *National Institute of Economic Research*
Michael Kenny, *University of Cambridge*

Collaborators

Konstantinos Myrodiadis, *National Institute of Economic Research*
David Richards, *The University of Manchester*
Marianne Sensier, *The University of Manchester*
Elvira Uyarra, *The University of Manchester*
Patrick Diamond, *Queen Mary University of London*



MACROECONOMIC TRENDS AND POLICY

THEME LEAD

Jagjit Chadha



The macroeconomics theme concentrates on reconciling key stylised facts with a range of models to understand better the causes and implications of the productivity slowdown, as well as the form of monetary, financial and fiscal interventions required to improve performance.

We have held an international research symposium on productivity and structural change at the Bank of England, where Jagjit Chadha gave a keynote address highlighting the research agenda (19 November 2021). Some of this work was published in 2022 in the NIESR Occasional Paper, COVID and Productivity – Impact and Implications, edited by Paul Mortimer-Lee and Adrian Pabst. Nicholas Oulton wrote a working paper titled “The Productivity-Welfare Linkage: A Decomposition”, uploaded to the TPI website in November 2021. ESCoE published a more recent version of Oulton’s work in July 2022.

Issam Samiri presented the early results of a research project on “Heterogeneous Labour Supply, Urban Effects and Productivity” in the TPI’s brown seminar (16 March 2022). He presented the results of a macroeconomic model reproducing stylised facts about the UK’s geographical distribution of skills and its impact on differences in regional productivity. Issam Samiri presented the same work on the occasion of the conference celebrating Birkbeck’s Economic Department’s 50th anniversary (9 June 2022). The macroeconomics theme funded the work of John Fernald and Robert Inklaar titled “The UK Productivity ‘Puzzle’ in an International Comparative Perspective”, which was published on the TPI website in April 2022. Jagjit Chadha presented a research project with Issam Samiri on “Microfinance and Productivity” at the TPI Brown Bag seminar which showed some puzzling facts about low levels of investment in the UK despite low interest

rates in the country and presented the outlines of a general equilibrium model providing a potential explanation to the puzzle. (4 May 2022). A sketch of some of the macroeconomic ideas for the theme were published in the National Institute Economic Review, as a Commentary by Jagjit Chadha, The Great Divides in May 2022. Jagjit Chadha and Issam Samiri are also working on a scoping paper on the issue of productivity from macroeconomics lens..

SUMMARY OF PROJECTS

COVID-19 and productivity – the productivity implications for the UK of the coronavirus pandemic Jagjit Chadha

This outlines the main channels by which the pandemic affects labour productivity. The intensity of lockdowns, their international scope, and the constant threat of further deployment has acted on both aggregate demand and supply. Consumers have held back on consumption, firms deferred investment and employment has fallen markedly. The project includes an analysis of the role of different institutional and policy responses to the outbreak of the pandemic to shed light on how institutions and public policy have affected the UK’s labour productivity performance.

Long-term productivity trends – UK in an international perspective Robert Inklaar and John Fernald

This paper highlights how the United States and northern Europe have experienced very similar productivity slowdowns since 2007. The common factor was a slowdown in total factor productivity (TFP) growth. From the mid-1980s to 2007, the UK’s relative productivity level moved closer to the level of the U.S. and northern Europe. The relative ground lost after 2007 is modest—cumulating to about 4 percentage points—and is largely attributable to somewhat unfavourable industry weights and industry-specific issues in mining, rather than a systematic UK competitiveness problem.

RESEARCHERS

Co-investigators

John Tsoukalas, *University of Glasgow*

Collaborators

R. Claudine Bowyer-Crane, *National Institute of Economic and Social Research*

John Fernald, *INSEAD*

Paul Lavery, *University of Glasgow*

Issam Samiri, *National Institute of Economic and Social Research*

Robert Inklaar, *University of Groningen*

Abdul Erumban, *The Conference Board*

Ana Rincon Aznar, *National Institute of Economic and Social Research*

Rory MacQueen, *National Institute of Economic and Social Research*

Cyrille Lenoel, *National Institute of Economic and Social Research*

Kemar Whyte, *National Institute of Economic and Social Research*



SOCIAL, ENVIRONMENTAL AND TECHNOLOGICAL TRANSITIONS

Theme lead

Jonatan Pinkse



The UK is undergoing a twin transition as digital and Net Zero technologies are shaking up the economy. This twin transition will have an impact on firms and their assets, skills, technologies, and business models with productivity implications.

This year, the theme’s position paper was published which analyses the opportunities, risks and barriers for productivity, jobs and the distribution of the gains emerging from digital transformation and green growth.

The first major project started, which investigates how an accelerated zero-carbon transition might affect UK productivity in the near and longer term. It will uncover the requirements for policies, institutional frameworks, and behaviours to ensure that this transition will lead to productivity improvements.

Two new projects will start soon. The first focuses on the housing sector, which suffers from low productivity, and will investigate how Net Zero can be an impetus for productivity improvements through business model innovation. The second will uncover the obstacles and opportunities for SMEs to become ‘eco-adopters’ and co-design pathways for SMEs to improve productivity by improving green skills and innovation.

Future focus

- The productivity impact of digital and Net Zero, and their interaction

How will digital and Net Zero change sector- and firm-level productivity? What will the differences be in terms of the timing of productivity impact, direction of impact, and impact across types of firms and sectors?

- The twin transition’s impact on firms, value of assets, and value creation

How will the twin transition change the nature of firms, the value of assets, and processes to create value added?

SUMMARY OF PROJECTS

Comparative analysis of green recovery packages in the UK, Germany and France Frank Geels

Governments around the world have developed and implemented large recovery packages to mitigate the economic effects of the COVID-19 pandemic. This research project investigates and compares the green recovery plans and packages in the UK, Germany and France. It focuses on investments - the absolute and relative size of green plans compared to the total recovery; productivity - the anticipated effects of these investments on jobs and low-carbon transitions; and implementation - the specific policies, instruments and projects through which the green recovery packages will be applied.

Driving low-carbon transitions and productivity growth Frank Geels

This project investigates how an accelerated zero-carbon transition might affect UK productivity in the near and longer term and what policies, institutional frameworks and behaviours will be needed to maximise the benefits and minimise the associated risks. The research aims to better understand how interacting techno-economic and actor-related processes bring about tipping points that drive the deployment of low-carbon technologies, lower costs, and increase productivity. It suggests that low-carbon transitions and productivity growth initially go through long periods of limited change, followed by rapid acceleration.

Environmentally-adjusted productivity estimates in the UK Josh Martin

This project uses various data sources to create productivity measures that account for environmental issues, constructing metrics where energy and emissions replace traditional inputs like labour and capital. It also develops ways to construct environmentally-adjusted labour

productivity, where output is adjusted for emissions (a bad output) or efforts to reduce emissions (a good, currently unmeasured, non-market output). It also examines if the UK slowdown in emissions can be explained by changing industrial-structure or increases in emissions-productivity within industries, and which industries are making more effort.

Addressing the Net Zero and productivity challenges: How could the housing sector play a key role? Jonatan Pinkse

This project investigates if the housing sector’s three major policy challenges - productivity, Net Zero, and affordable housing - could be managed synergistically. Changes in the policy framework and incentives could help unlock the business model innovations needed for the housing sector to meet the significant investment challenge required to both retrofit existing homes and build new ones. Automation, artificial intelligence and data analytics have been heralded for their potential to transform many industrial sectors, but their implementation in the housing sector is lagging.

RESEARCHERS

Co-investigators

Frank Geels, *The University of Manchester*
Bart van Ark, *The University of Manchester*
Bridgette Wessels, *University of Glasgow*

Collaborators

Martina Ayoub, *The University of Manchester*
Josh Martin, *Bank of England*
Guillermo Ivan Pereira, *The University of Manchester*
Cliodhna Taylor, *Office for National Statistics*
Graham Winch, *The University of Manchester*
Dimitri Zenghelis, *University of Cambridge*
Kieron Flanagan, *The University of Manchester*
Suzanne Peters, *The University of Manchester*



PRACTITIONER AND POLICYMAKER ENGAGEMENT

From the outset, The Productivity Institute's ambition has been to build a research model that fully engages and connects practitioners and policy makers with our academics; ensuring that research and knowledge is used to help create practical solutions to transform UK productivity and in turn ensures that our research community learns from business leaders & policymakers to fully inform the Institute's research agenda. Our Regional Productivity Forums and Productivity Commission sit at the heart of this engagement strategy, in addition to a select number of strong partnerships at a national level.

Regional Productivity Forums

The second year of the Institute has been focused on working with Regional Productivity Forum members and key partners to develop (and ultimately deliver) a plan that creates practical solutions to transform UK productivity.

Every conversation has started with the important question "what do we already know"?

With the Regional Productivity Forums this has led to the development and launch of our Regional Insight papers and Executive summaries. These have been invaluable for providing not only RPF members but key stakeholders and decision makers with synthesised local and regional productivity knowledge and research findings (the publications have also allowed us to disseminate key productivity insights more widely) and this vital stage allowed each Regional Productivity Forum to look at their local strengths, weaknesses, opportunities, and threats and, through focused workshops, develop a number of project ideas and proposals.

In addition, engagement and discussions with RPF members have led us to identify project ideas that can be delivered at a national level. The most significant of these has been the inception of our project "Strategic Productivity for the Leadership Team".

Organisational functions and Productivity

One of the biggest findings from our interactions with business leaders has been the need to synthesise and communicate existing productivity research findings in better, more targeted ways which in turn allows researchers and practitioners to work together more effectively and identify novel insights and solutions.

Engaging, researching and communicating with different business functions about productivity is, we believe, a novel way of looking at the firm-level productivity puzzle and one that might help to shed light on issues and, ultimately, provide solutions. The starting point of this project has been our publication and 2022 Business Conference "Strategic Productivity for the Leadership Team" and the second leg of its journey will continue into 2022/23 and beyond.

This approach will undoubtedly allow us to communicate and disseminate relevant research findings more effectively to medium and large organisations and we will continue to work closely with organisations that represent key business functions on this project.

SMEs and Productivity

We see SMEs as vital to improving UK productivity and we will continue to work closely with Be The Business here (we signed a Memorandum of Understanding with them in 2022) in addition to other key stakeholders such as Innovate UK and those involved through our Regional Productivity Forums. Our connection with the Enterprise Research Centre is also invaluable here (with Directors Stephen Roper and Mark Hart also being Co-Investigators of The Productivity Institute).



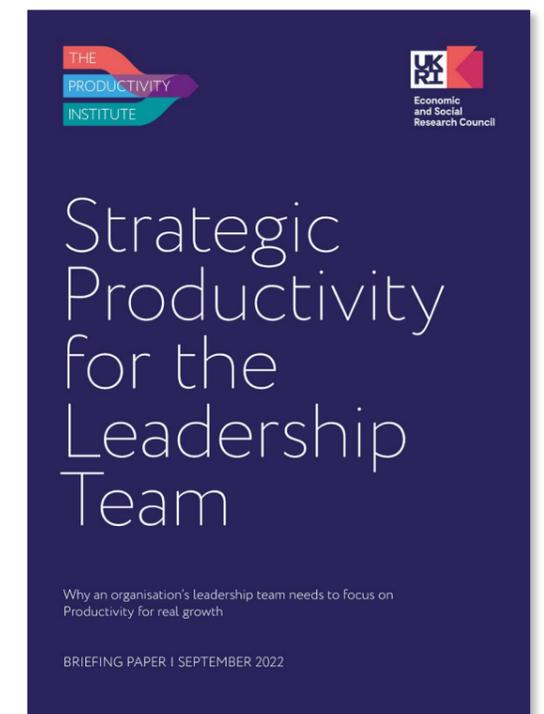
Nicola Pike

Engagement & Impact Director

PROJECT HIGHLIGHTS



TPI hosted its Business Conference in September 2022, highlighting why an organisation's leadership team needs to focus on productivity for real growth. The online conference featured CIPD's Peter Cheese and Dame Rotha Johnson as speakers and a panel event with members from our Regional Productivity Forums, with Professor Mark Hart, North West RPF Chair Jennifer Halliday, Innovate UK Director Martin McGuirk, Scotland Productivity Forum Member Eve Wallace (Morgan Stanley Glasgow) and Be The Business ambassador Rebecca Falder (HMG Paints). [↗](#)



MAKING PUBLIC SECTOR PRODUCTIVITY PRACTICAL

This project connects our knowledge about concepts, measurement, drivers and barriers to public sector productivity growth with practical insights into improving productivity. The report demonstrates that organisations can boost their productivity by:

- Mapping the public sector delivery chain in terms of budget, inputs, outputs and outcomes
- Identifying key productivity drivers
- Managing productivity systematically

The project pulls together research from a variety of different literatures about public sector performance and growth and identifies the overarching themes, before offering recommendations on the direction for future work into implementation and understanding of public sector productivity.

Supported by Capita



SKILLS, INNOVATION AND PRODUCTIVITY: THE ROLE OF FE COLLEGES IN LOCAL AND REGIONAL ECOSYSTEMS

This research, funded by the Gatsby Foundation, aims to better understand how the mismatch between supply and demand of vocational skills arises at the regional and local level, and to design and experiment with models that should enhance the role of further education (FE) colleges in regional and local innovation ecosystems to improve the match. It extends initial work, funded by Innovate UK and the Gatsby Foundation, on the opportunity for colleges to support business innovation - and the connection that this has for productivity in the UK.

Supported by Gatsby Foundation



REGIONAL PRODUCTIVITY FORUMS 2021/22 HIGHLIGHTS

NORTHERN IRELAND

The Forum has discussed the productivity challenge in Northern Ireland with businesses, students, trade union organisations, and policymakers, resulting in extensive local media coverage. It has also designed and circulated a management practices survey which aims to benchmark the region's managerial practices against other UK regions and other OECD economies, with results expected in 2023. Two working groups were formed: one looking at the economic statistics produced for Northern Ireland to better communicate the region's productivity challenge and understand what additional data is needed to improve policymaking; and the other focussing on managerial skills and practice. Amid political uncertainty, the forum will continue to set forth some of the ways in which the region can improve its productivity.

YORKSHIRE, HUMBER & NORTH EAST

Productivity issues affecting local private and public sectors have been identified as being especially challenging for the regions east of The Pennines. Forum discussions centred on three key themes: access to capital for small firms – angel investors and venture capital are in short supply; skills training – looking at mismatches between the skills produced and what business needs; and supply chains – dealing with logistics and arrangements with European firms post-Brexit. The forum aims to make progress on understanding better these challenges and identifying the potential policy responses which will help address these challenges.

MIDLANDS

Interviews with high-profile private sector members of the Forum built on the themes arising from the Midlands Insights Paper. The viewpoints from multinational enterprises and relevant business organisations identified region-specific issues including poor transport interconnections and fragmented business support, in addition to UK-wide issues affecting regional productivity – such as non-standardised productivity measures, highly-flexible labour markets, undervalued vocational qualifications, and recent issues of Brexit and COVID-19. Research projects in skills and investments are underway and work is also beginning on a mental health project with Midlands Engine. The Forum has also presented to local forums and connected with government and unions on Levelling Up and Good Work.

WALES

The Forum's business membership was strengthened over the year, culminating in the Insights Paper, which has continued to attract attention and formed the basis of its submission to the Productivity Commission. Welsh productivity was also discussed in an episode of the Productivity Puzzles podcast covering Forum themes, including understandings of productivity by business, skills in Wales and the challenge presented by the retention of talent, promoting investment and innovation, and regional dispersion of productivity and prosperity within the nation. The importance of productivity improvement in Wales in the context of the *Well-being of Future Generations Act (Wales)* is also a critical component – it is a key means to the delivery of future well-being in terms of inclusive and sustainable growth.

SCOTLAND

Two key themes emerged as opportunities for Scotland from its Insights paper - digital transformation and understanding the drivers of economic disparities across regions. A joint project with the Scottish Government aims to understand the enablers and obstacles of adoption of digital in our SMEs, including sharing data resources and designing a new longitudinal SME survey. Another project is with the Glasgow City Region to identify and measure the determinants that underpin differences in economic performance across Scottish regions, as well as between Scottish and English cities. Lead John Tsoukalas was also involved in the productivity working group set up by the Scottish Government to advise on the new Economic Strategy published in March 2022 and is serving as a member of the advisory board of the Scottish Council for Development and Industry Productivity Clubs programme.

LONDON & SOUTH

The Forum established expert sub-groups of members on the key themes for regional productivity – Skills and Digital Technologies and Green Business Growth - and identified practical ideas for projects to identify solutions. The project Enabling SMES to implement green business growth began in September 2022 and will map what works for SMEs located in diverse regional and sectoral contexts, and provide generalisable actions and insights for applying environmental technologies and incorporating green business practices, while improving business performance. The project also offers considerable potential for scaling up with relevance for SMEs across the UK economy.

EAST ANGLIA

The challenge of balancing the growth of Cambridge with the rest of the region was one of the key issues arising from the Insights paper covering East Anglian productivity. Other issues include the future role of the Fens, given their national importance to the UK's food security; and the role of the coast in providing renewable power and connectivity for the rest of the country. The Forum has also discussed how its 'leading edge' sectors can work to support the foundational economy in the current climate. A research project is underway to help understand the connections between those sectors in East Anglia where there is a particular concentration of businesses compared to the rest of the country. By understanding how they connect through technology, skills and location, it's hoped interventions can be identified that can help to boost productivity across many sectors.

NORTH WEST

The findings from the Insights paper have been disseminated by our members to policymakers and practitioners in the region through roundtable discussions, conferences and personal media coverage. A Forum submission was sent to the Productivity Commission, underlining the importance of physical and mental health, with specific reference to the working people in the north of England. The next step is to undertake research on the specific productivity issues in the region.



THE PRODUCTIVITY COMMISSION

The UK Productivity Commission was established in 2021, and has been partly funded by the ESRC as part of The Productivity Institute. Comprising of 18 Commissioners drawn from both academia and public policy, and hosted at the National Institute of Economic and Social Research. The Commission's principal objective is to produce a set of policy proposals that address the significant shortfall in national economic underperformance, and the accompanying levels of regional fragmentation which are a grave concern.

In its first year the Commission held three evidence sessions. The first assessed the scale of the problem internationally, nationally, regionally and sectorally. It then moved on to understand better the distance we are from the international best practice frontier and the third evidence session examined potential policy solutions. In total, we received over 20 pieces of written evidence and took oral evidence from 10 witnesses across the three sessions. The evidence has been published.

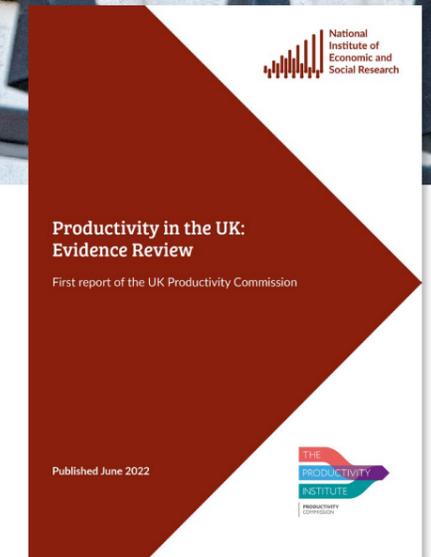
Over the course of these sessions numerous policies were suggested to improve the UK's poor productivity performance by tackling structural problems, which include over-centralisation, weak and ineffective

institutions and policy churn, institutional and policy silos, as well as short-termism and poor policy coordination. There were also questions raised in the evidence concerning the precision of productivity statistics. Based on some of these recommendations, and the evidence amassed, it is the Commission's intention to publish a separate report that focuses on policy recommendations and establishes our priorities for its second year.

In summing up the first year, I want to express my warm thanks to all the Commissioners, as well as those who gave evidence. However, particular thanks is due to our secretariat Konstantinos Myrodiadis, Matt Panteli and Issam Samiri who have shown patience and quiet dedication.



Professor Jagjit Chadha, Director



Policy Commission witnesses

- **María Belén Zinni**, Head of Productivity Statistics Unit, *Organisation for Economic Co-operation and Development (OECD)*
- **Louise Hellem**, Director of Economic Policy, *Confederation of British Industry (CBI)*
- **Josh Martin**, formerly Head of Productivity at *Office for National Statistics (ONS)*, now an economist at the *Bank of England*
- **Paul Swinney**, Director of Policy and Research, *Centre for Cities*
- **Chiara Criscuolo**, Head of the Productivity, *Innovation and Entrepreneurship Division, OECD*
- **John Fernald**, Professor of Economics, *INSEAD and the Federal Reserve Bank of San Francisco*
- **Beata Javorcik**, Chief Economist, *European Bank for Reconstruction and Development*
- **Chad Syverson**, Professor of Economics, *University of Chicago Booth School of Business*
- **Jesse Norman MP**, Conservative MP and former Treasury Minister
- **Kitty Ussher**, Chief Economist at the Institute of Directors, former Labour MP and Treasury Minister

Productivity in the UK: Evidence Review

The first report of The Productivity Commission was released in June 2022, which summarised all the oral and written evidence from its first year. Its next report will detail policy proposals that address ways to tackle the UK's longstanding productivity puzzle.

"The UK's productivity problem is due to places outside the Greater South East punching below their weight. This is especially the case for the biggest cities, with conservative estimates that this underperformance is costing the UK economy £50 billion per year. It's important that The Productivity Commission's evidence sessions have brought together wide-ranging experts to help produce policy proposals to help increase the performance and skillsets of the UK's cities outside London."

Paul Swinney, Director of Policy and Research, *Centre for Cities*

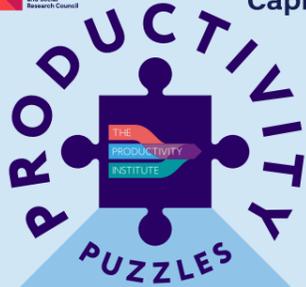
"Productivity is so intrinsically linked to the long-term ability of the country to generate wealth, and I'm pleased to contribute to The Productivity Commission's work to pinpoint where the greatest long-term impacts can be made. For me, the focus should be on life-long learning and incentives for workplace reskilling and upskilling through the tax system."

Kitty Ussher, Chief Economist at the Institute of Directors, former Labour MP and Treasury Minister



PRODUCTIVITY PUZZLES PODCAST

FUNDED BY  IN PARTNERSHIP WITH 



WITH BART VAN ARK

The Productivity Puzzles podcast enjoyed great success during its first season, reaching third in Apple Podcast's government category ranking.

The 20-episode series, which ran from May 2021 until July 2022, was hosted by TPI Managing Director Bart van Ark and featured guests from across the academic, policy and business worlds discussing all things productivity.

After the podcast was recommended in The Observer article *Economics made simple: 10 experts on where the cost of living crisis came from, and where it's heading* in July, the podcast rose up the charts, reaching No. 3 in Apple Podcast's government category.

The paper wrote: "To go deeper for all you ever wanted to know about productivity, try the Productivity Puzzles podcast – the first episode is about why productivity matters."

The podcast was sponsored by: 



Episode 1: Why does productivity matter?

Andy Haldane, *Chief Economist at the Bank of England (at time of recording).*
 Dame Kate Barker, *Economist.*
 Professor Nick Crafts, *Professor of Economic History at The University of Sussex (at time of recording).*



Episode 2: Productivity in the post-COVID-19 era

Jan Mischke, *Partner at McKinsey Global Institute.*
 Tera Allas, *Director of Research and Economics at McKinsey UK.*



Episode 3: Productivity in UK health care during and after the COVID-19 pandemic

Professor Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*
 Dr. Jennifer Dixon, *Chief Executive, The Health Foundation.*
 Kaya M. Dreesbeimdiek, *Research student and researcher at the Engineering Design Centre, University of Cambridge.*



Episode 4: Can Levelling Up raise productivity in the Northern Powerhouse?

Lord Jim O'Neill, *Vice Chair, Northern Powerhouse Partnership.*
 Dame Nancy Rothwell, *President and Vice-Chancellor of The University of Manchester.*
 Professor Philip McCann, *Professor of Urban and Regional Economics in the University of Sheffield Management School (at time of recording).*



Episode 5: Will hybrid and flexible work help or hurt productivity and well-being?

Andy Start, *Capita CEO Government Services (at time of recording).*
 Professor Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*



Episode 6: How can productivity create sustained growth in Northern Ireland?

Dame Rotha Johnston, *Entrepreneur, Chair of Northern Ireland Screen.*
 Professor John Turner, *Professor of Finance and Financial History, Queen's University Belfast.*
 Dr. Esmond Birnie, *Senior Economist, Ulster University.*



Episode 7: Can we still measure productivity in the modern economy?

Josh Martin, *Head of Productivity at Office for National Statistics (at time of recording).*
 Professor Rebecca Riley, *Director of the Economic Statistics Centre of Excellence and Professor of Practice at King's Business School.*
 Professor Jonathan Haskel, *Professor of Economics at Imperial College Business School and External Monetary Policy Committee member at Bank of England.*



Episode 8: Practical Productivity: How to Transform Performance?

Paul Abraham, *Managing Director and Client Partner for Local Public Service, Capita.*
 Mark Hart, *Professor of Economics, Finance and Entrepreneurship at Aston Business School and Deputy Director, Enterprise Research Centre.*
 Mark Logan, *Professor in Practice (School of Computing Science) at the University of Glasgow.*



Episode 9: Can labour shortages help productivity?

Yael Selfin, *Partner and Chief Economist at KPMG.*
 Anthony Rafferty, *Professor in Employment Studies and Managing Director of the Work and Equalities Institute at The University of Manchester.*
 Tony Venables, *Professor of Economics at The University of Manchester and Research Director at The Productivity Institute.*



Episode 10: Health and Productivity in the Workplace

Sir Cary Cooper, *Professor of Organisational Psychology and Health at Alliance Manchester Business School.*



Episode 11: Levelling Up and Productivity: The Role of Industrial Policy, Institutions and Fiscal Mechanisms

Professor Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*
 Professor Andy Westwood, *Professor of Government Practice, The University of Manchester.*
 Professor Philip McCann, *Professor of Urban and Regional Economics in the University of Sheffield Management School (at time of recording).*



Episode 12: The Links Between Productivity and Pay

Anna Stansbury, *Assistant Professor of Work and Organization Studies at the MIT Sloan School of Management.*
 Larry Mishel, *Distinguished fellow at Economic Policy Institute in Washington DC.*
 Andreas Teichgräber, *Researcher at the Centre Economic Performance at London School of Economics, and a member of the Programme on Innovation and Diffusion (POID).*



Episode 13: New business formation and productivity

Anthony Impey, *CEO, Be The Business.*
 Clare Elsby, *Head of People and Culture at Elsby & Co.*
 Jakob Schneebacher, *Office for National Statistics.*



Episode 14: Staying productive in uncertain times

Jagjit Chadha, *Director, National Institute of Economic and Social Research.*
 Rain Newton-Smith, *Chief Economist, Confederation of British Industry.*
 Paul Mizen, *Professor of Monetary Economics, University of Nottingham.*



Episode 15: Restarting the Future: How Intangibles Can Fuel Productivity

Jonathan Haskel, *Professor of Economics at Imperial College Business School and External Monetary Policy Committee member at Bank of England.*
 Stian Westlake, *Chief Executive of the Royal Statistical Society.*
 Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*



Episode 16: Can productivity rescue the global economic recovery?

Steve Odland, *CEO of The Conference Board.*



Episode 17: The Wales Productivity Challenge

Andrew Henley, *Professor of Entrepreneurship and Economics, Director of Research Engagement and Impact, Cardiff Business School.*
 Rhian Elston, *Investment Director at Development Bank of Wales.*
 Ben Cottam, *Head of Wales, Federation of Small Businesses (FSB).*



Episode 18: Productivity and well-being

Conal Smith, *Senior Economist at the Institute for Governance and Policy Studies at Victoria University of Wellington.*
 Tim Hazledine, *Professor of Economics at the University of Auckland Business School (retired).*
 Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*



Episode 19: Productivity in the Public Sector

Paul Abraham, *Managing Director & Client Partner at Capita Public Service.*
 Stephen Aldridge, *Chief Economist and Director of Analysis and Data at the Department for Levelling Up, Housing and Communities.*
 Anna Smart, *Systems Thinking/Organisational Design Lead at London Borough of Camden.*



Episode 20: The Productivity Policy Agenda: Short-Term Priorities and Long-Term Commitments

Diane Coyle, *Bennett Professor of Public Policy at the University of Cambridge.*
 Catherine Mann, *External member of the Monetary Policy Committee at the Bank of England.*
 Adrian Pabst, *Deputy Director at the National Institute of Economic and Social Research (NIESR)*

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 (May 2021-September 2022)

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 (As of September 2022)

48
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PUBLICATIONS

WORKING PAPERS

2022

Victor Ajayi, Michael Pollitt
Working Paper 024
Green growth and Net Zero policy in the UK: some conceptual and measurement issues ↗

Victor Ajayi, Michael Pollitt
Working Paper 023
Changing times: Incentive regulation, corporate reorganisations, and productivity in Great Britain's gas networks ↗

Victor Ajayi, Karim Anaya, Geoffroy Dolphin, Michael Pollitt
Working Paper 016
Do climate policies explain the productivity puzzle? Evidence from the Energy Sector

Diane Coyle
Working Paper 017
Healthcare as social infrastructure: productivity and the UK NHS during and after COVID-19

Diane Coyle, Jen-Chung Mei
Working Paper 018
Diagnosing the UK Productivity Slowdown: Which Sectors Matter and Why?

Diane Coyle, Adam Muhtar
Working Paper 019
You're not speaking my language - policy discontinuity and coordination gaps between the UK's national economic strategies and its place-based policies

John Fernald, Robert Inklaar
Working Paper 020
The UK Productivity "Puzzle" in an International Comparative Perspective

Patricia Rice, Anthony J. Venables
Working Paper 021
Tradability, Productivity, and Regional Disparities: theory and UK evidence

Peter Goodridge, Jonathan Haskel
Working Paper 022
Accounting for the slowdown in UK innovation and productivity

2021

Bart van Ark, Tony Venables
Working Paper 001
A concerted effort to tackle the productivity puzzle during the post-COVID era ↗

Diane Coyle, Kaya Dreesbeimdieck, Annabel Manley
Working Paper 002
Productivity in UK healthcare during and after the COVID-19 pandemic ↗

Diane Coyle
Working Paper 003
The idea of productivity ↗

Frank Geels, Guillermo Ivan Pereira, Jonatan Pinkse
Working Paper 004
Public investments in COVID-19 green recovery packages: A comparative analysis of scale, scope, and implementation in France, Germany, and the United Kingdom ↗
Also published in *Energy Research and Social Science* ↗

Halima Jibril, Stephen Roper, Mark Hart
Working Paper 005
COVID-19, business support and SME productivity in the UK ↗

Damian Grimshaw, Marcela Miozzo
Working Paper 006
Human Capital and productivity: a call for new interdisciplinary research ↗

Bart van Ark, Klaas de Vries, Abdul Erumban
Working Paper 007
Productivity and the Pandemic - Short-Term Disruptions and Long-Term Implications. The impact of the COVID-19 pandemic on productivity dynamics by industry ↗
Also published in *International Economics and Economic Policy* ↗

Matthew Agarwala, Matt Burke, Patrycja Klusak, Kamiar Mohaddes, Ulrich Volz, Dimitri Zenghelis
Working Paper 008
Climate Change and Fiscal Responsibility: Risks and Opportunities ↗
Also published as a CAMA Working Paper ↗

Frank W. Geels, Jonatan Pinkse, Dimitri Zenghelis
Working Paper 009
Productivity opportunities and risks in a transformative, low-carbon and digital age ↗

Martin Fleming
Working Paper 010
Productivity Growth and Capital Deepening in the Fourth Industrial Revolution ↗

Nigel Driffield, Yong Yang
Working Paper 011
Leveraging the benefits of location decisions into performance: A global view from matched MNEs ↗
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Victor Ajayi, Karim Anaya, Michael Pollitt
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Incentive regulation, productivity growth and environmental effects: the case of electricity networks in Great Britain ↗

Nigel Driffield, Jun Du, Jan Godsell, Mark Hart, Katuscia Lavoratori, Steven Roper, Irina Surdu, Wanrong Zhang
Working Paper 013
Understanding productivity: Organisational Capital perspectives ↗

Nigel Driffield, Katuscia Lavoratori, Yama Temouri
Working Paper 014
Inward investment and UK productivity ↗

Adrian Pabst, Andrew Westwood
Working Paper 015
The Politics of Productivity: institutions, governance and policy *Productivity Insight Papers* ↗

PRODUCTIVITY INSIGHTS PAPERS

2022

Owen Garling
Insights Paper 009
East Anglia's Productivity Challenge: Exploring the issues

Nigel Driffield
Insights Paper 010
The Midlands' Productivity Challenge: Exploring the issues

Philip McCann
Insights Paper 011
Levelling Up: The Need for an Institutionally Coordinated Approach to National and Regional Productivity

2021

Diane Coyle, Abi Adams-Prassl, Jeremias Adams-Prassl
Insights Paper 001
Uber and Beyond - Policy Implications for the UK

Diane Coyle, Adam Muhtar
Insights Paper 002
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John Holden, Marianne Sensier, Richard Allmendinger
Insights Paper 003
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David Jordan, John Turner
Insights Paper 004
Northern Ireland's Productivity Challenge: Exploring the issues

Andrew Westwood, Marianne Sensier, Nicola Pike
Insights Paper 005
Levelling Up, Local Growth and Productivity in England

John Tsoukalas
Insights Paper 006
Scotland's Productivity Challenge: Exploring the issues

Andrew Henley
Insights Paper 007
Wales' Productivity Challenge: Exploring the issues

Philip McCann
Insights Paper 008
The fiscal implication of Levelling Up and UK governance devolution

EXTERNAL PUBLICATIONS

2022

Bart van Ark
Productivity growth, diversification and structural change in the Arab States (2022) Consultancy Report

Kevin Mulligan, Helena Lenihan, Justin Doran, Stephen Roper
Harnessing the science base: Results from a national programme using publicly-funded research centres to reshape firms' R&D (2022) ↗

Rajat Panwar, Jonatan Pinkse, Valentina De Marchi
The Future of Global Supply Chains in a Post-COVID-19 World (2022) California Management Review ↗

Guillermo Ivan Pereira, Eva Niesten, Jonatan Pinkse
Sustainable energy systems in the making: A study on business model adaptation in incumbent utilities (2022) Technological Forecasting and Social Change ↗

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Enterprise Research Centre
The State of Small Business Britain 2021 (2021) ↗

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Export status and SME productivity: Learning-to-export versus learning-by-exporting (2021) Journal of Business Research ↗

Peter Goodridge, Jonathan Haskel, Harald Edquist
We See Data Everywhere Except in the Productivity Statistics (2021) The Review of Income and Wealth (2021) ↗

Andrew Henley
The rise of self-employment in the UK: entrepreneurial transmission or declining job quality? (2021) Cambridge Journal of Economics ↗

Richard Jones
The R&D Roadmap - Levelling Up across the UK: Correcting for regional imbalance (2021) The Journal of The Foundation for Science and Technology ↗

Mary O'Mahony, Lea Samek
Measuring the Volume of Services Industries Output and Productivity: An Audit of Services Producer Price Indices in OECD Countries (2021) International Productivity Monitor ↗

Adrian Pabst
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Patricia G Rice, Anthony J Venables
The persistent consequences of adverse shocks: how the 1970s shaped UK regional inequality (2021) Oxford Review of Economic Policy ↗

Stephen Roper
Learning from the best: National innovation systems (2021) ERC Insight Paper ↗

Enterprise Research Centre
Workplace mental health in Midlands firms 2021: Baseline report (2021) ERC Research Report ↗

Marianne Sensier, Elvira Uyarra
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Bart van Ark
How to not miss a productivity revival once again (2021) National Institute Economic Review ↗

Anthony J. Venables
Wider Economic Impacts of Transport Investments (2021) International Encyclopedia of Transportation ↗

Wit Wannakraioj, ChanderVelu
Productivity growth and business model innovation (2021) Economics Letters ↗

2020

J Vernon Henderson, Tanner Regan, Anthony J Venables
Building the City: From Slums to a Modern Metropolis (2020) The Review of Economic Studies ↗

Anthony J. Venables
Why some places are left behind: urban adjustment to trade and policy shocks (2020) Oxford Review of Economic Policy ↗

CITATIONS

2022

Levelling Up White Paper ↗
Professor Tony Venables (Manchester), **Professor Diane Coyle** (Cambridge), **Professor Philip McCann** (Sheffield/Manchester)

House of Commons Treasury Committee report Jobs, growth and productivity after coronavirus ↗
Professor Bart van Ark (Manchester), **Professor Jagjit Chadha** (NIESR), **Irene Graham** (TPI Advisory Committee), **Jim O'Neill**, **Lord O'Neill of Gatley** (friend of TPI)

Bridging the gap: What would it take to narrow the UK's productivity disparities? The Economy 2030 Inquiry ↗

Professor Tony Venables (Manchester)
Empowering Innovation: The role of universities in boosting regional economies Policy Connect report ↗
Professor Richard Jones (Manchester)

POLICY ACTIVITY

2022

February
Professor David Richards gave written evidence to the Public Accounts Committee on *Sustaining Local Economic Growth Inquiry* ↗

July
Bart van Ark and Jagjit Chadha was quoted extensively in The House of Common's Treasury Select Committee report from its Jobs, growth and productivity after coronavirus inquiry. ↗

2021

February
Dr Matthew Agarwala gave Parliamentary evidence to the Environmental Audit Committee on the subject *Aligning the UK's economic goals with environmental sustainability* ↗

March
Professor Nigel Driffield provided written evidence to DIT select committee enquiry into *inward investment* ↗

May
Professor David Richards gave written evidence to the House of Commons Committee of Public Accounts inquiry into *Local economic growth* ↗

September
Professor Richard Jones gave oral evidence to the House of Commons Science and Technology Select Committee on *The role of technology, research and innovation in the COVID-19 recovery* ↗

September
Professor Jonatan Pinkse was a panel member at the Labour Conference discussing 'What should an effective green recovery look like?' ↗

September
Professor Jill Rubery authored a consultation response for ReWAGE for the Department of Business, Energy and Industrial Strategy consultation on *Making flexible working the default* ↗

October
Professor Jonatan Pinkse presented at the Conservative Party conference fringe panel event *How can we accelerate the UK's green recovery?* ↗

October

Professor Richard Jones presented at the Conservative Party conference fringe panel event *Can place based partnerships drive innovation and growth across a city region and provide the key to Levelling Up?* ↗

December

Dr David Jordan and Professor John Turner Northern Ireland Insight paper was referenced in the *Fiscal Commission Interim Report* ↗

December

Professor Nigel Driffield gave oral evidence at the Economic and Social Research Institute event *Shared Island: 'Cross-border trade in services' and 'Enhancing the attractiveness of the island of Ireland to high-value foreign direct investment'* ↗

2020

December
Professor Andy Westwood was an advisor for the Economic Affairs Committee *Employment and COVID-19: time for a new deal* ↗

REPORTS

Bart van Ark *Making Public Sector Productivity Practical (2022)* ↗

Nigel Driffield, Xiaocan Yuan, Fernando Gutierrez Barragan
The UK's Foreign Investment Position Post Brexit And COVID: Briefing 1 (2022) ↗

Productivity in the UK: Evidence Review (2022) First report from The Productivity Commission ↗
On Productivity (2022) Collection of essays from Manchester-based TPI researchers ↗

Andrew Henley *Is there a link between Small Business Leadership and Productivity (2022)* ERC TPI Joint SOTA Review 1 ↗

Kate Penney, Jim Pendrill *Strategic Productivity for the Leadership (2022)* TPI Report 1 ↗

MEDIA HIGHLIGHTS

2022

June
Britain's productivity problem is long-standing and getting worse The Economist ↗

STRUCTURE AND GOVERNANCE



INTERNAL OVERSIGHTS BOARD - THE UNIVERSITY OF MANCHESTER ²

Chair - Vice-President and Dean of Humanities
 Vice-Dean and Head of School
 Vice-Dean for Research
 Head of Research Services, Research Strategy and Support
 Head of School Operations, AMBS
 Head of Research Finance
 Head of Research and Business Engagement Services
 Associate Vice-President for Research
 TPI Management Team

GOVERNING COUNCIL ³

Independent Chair
 Members of Business Community
 Member from the Academic Community
 Senior Rep from The University of Manchester
 Chair of Advisory Committee
 ESRC representative (Ex Officio)
 Policy Representations (BEIS) (Ex Officio)
 Managing Director/PI (Observer)

ADVISORY COMMITTEE ⁴

Chair
 Members from Academic
 Members from Business
 Members from Policy
 Independent members
 International members

PROGRAMME SUPPORT TEAM (BASED AT AMBS)

Engagement, Communications, and Impact

Engagement & Impact Director
 Business Engagement Officer
 Communications Manager
 Communications & Engagement Coordinator

Operations, Finance and Governance

Head of Operations
 Institute and Fellowship Manager
 Institute Administrator
 Senior Research Finance Officer
 Contracts Manager

MANAGEMENT ¹

MANAGEMENT TEAM

Managing Director/PI
 Research Director/Lead Co-I
 Engagement & Impact Director
 Head of Operations

EXECUTIVE TEAM

Research Theme leaders + substitute
 Representatives from other participating universities
 Head of Research, Alliance MBS

EXECUTIVE COMMITTEE

Management Team
 Executive Team

REGIONAL PRODUCTIVITY FORUMS ⁵

University lead
 Forum Chair
 Forum Members

PRODUCTIVITY COMMISSION ⁶

NIESR Lead
 Commissioner Chair
 Commissioners

PRODUCTIVITY LAB ⁷

Lab Director
 Research Associates

RESEARCH COMMUNITY

Co-Is / Productivity Fellows (research) / PhDs and Postdocs / Other Researchers (including international)

1. Management

Executive Team is responsible for Institute strategy and strategic decisions; Executive Committee is responsible for operational decisions; Management Team is responsible for daily management and tactical execution (support by programme staff).

2. Internal Oversight Board

Provides overall oversight on internal matters to support the operational delivery of the objectives and finances of the Institute and make certain the overall success of the Institute. The Oversight Board will recommend matters, as required, to the Governing Council for further consideration.

3. Governing Council

Oversees the strategic direction of Institute, signs off on financial decisions for unallocated budgets; oversees performance of three members of management team; oversees dispute resolution (and advises ESRC where needed); represent Institute at occasions.

4. Advisory Committee

Advises Governing Council and Executive Team on any strategic issues (research agenda, engagement and implementation agenda) at request of Executive Team or Governing Council or at its own initiative; can advise and staff formation of ad-hoc committees; Chair can represent Institute as specific occasions.

5. Regional Productivity Forums

Connects engagement and impact at regional/devolved nations level; initiates regional innovation activities; represents regions in Productivity Commission; collaborate across regions to develop a comprehensive regional agenda on productivity.

6. Productivity Commission

Oversees policy engagement at national levels and represents Institute at policy level; develops policy proposals and provides policy advice; provides input to research agenda.

7. Productivity Lab

Acts as the Institute's hub for data processing, experimental evaluation studies, and data-driven, human-centred research. Joins data in a central repository for usage across the Institute and beyond.

GOVERNANCE AND PROGRAMME SUPPORT TEAM

HQ Team

Professor Bart van Ark
TPI Managing Director

Professor Tony Venables
TPI Research Director

Engagement, Communications, and Impact

Nicola Pike
TPI Engagement and Impact Director

Craig Donaldson
Business Engagement Lead

Krystyna Rudzki
Communications Manager

James Wilson
Communication and Engagement Coordinator

Operations, Finance and Governance

Charlotte Jones
TPI Head of Operations

Michael Livesey
Institute and Fellowship Manager

Emma Shiels
Institute Administrator

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The University of Manchester

Charlotte Jones
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Professor Diane Coyle
Bennett Professor of Public Policy,
University of Cambridge

Professor Jagjit Chadha
Director

Professor Stephen Roper
Professor of Enterprise,
Director of ERC,
Warwick Business School

Professor Nikolay Mehandjiev
Professor of Enterprise Information Systems,
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Professor Nigel Driffield
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Warwick Business School

Professor Jonatan Pinkse
Professor of Strategy, Innovation and Entrepreneurship,
The University of Manchester

Professor Damian Grimshaw
Professor of Employment Studies,
King's Business School

Professor Andrew Henley
Professor of Entrepreneurship and Economics,
Cardiff University

Professor Kieron Flanagan
Professor of Science and Technology Policy
The University of Manchester

Professor Philip McCann
Chair of Urban and Regional Economics,
The University of Manchester (from June 2022, previously Sheffield University)

Professor Adrian Pabst
Deputy Director, NIESR

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Charlotte Jones
TPI Head of Operations,
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Professor Rebecca Riley
Professor of Practice,
King's Business School & ESCoE

Professor Stephen Roper
Professor of Enterprise,
Director of ERC,
Warwick Business School

Professor John Tsoukalas
Professor of Economics,
University of Glasgow

Professor John Turner
Professor of Finance and Financial History,
Queen's University Belfast

Professor Chander Velu
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University of Cambridge

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Professor Andy Westwood
Professor of Government Practice,
The University of Manchester

Professor Nikolay Mehandjiev
Professor of Enterprise Information Systems,
The University of Manchester

Advisory Committee

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Director of Research and Economics,
McKinsey

Professor Gilbert Cette
Professor of Economic Policy,
NEOMA Business School

Professor Gerard Hodgkinson
Professor of Strategic Management and Behaviour Science,
The University of Manchester

Professor Andrew Oswald
Professor of Economics and Behaviour Science,
University of Warwick

Professor Chad Syverson
George C. Tiao Distinguished Service Professor of Economics,
University of Chicago

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Brookings Institution

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University of Sussex

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London Business School

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Paul Bailey
Head of Strategic and international analysis, Department for Business, Energy, and Industrial Strategy

Jonathan Coppel
Now: Head of Energy Investment, International Energy Agency,
Was: Commissioner, Australia Productivity Commission

Lawrence Jeff Johnson
Deputy Director, Research International Labour Organization

Dr. Geeta Nathan
Head of Economics and Insights,
Innovate UK

Alison Stuart
Agent, North West,
Bank of England

Spencer Dale
Chief Economist, BP

Mike Emmerich
Founding director,
Metro-Dynamics

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Scale Up Institute

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Be the Business

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Chief Economist,
Confederation of British Industry

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Chief Executive,
The Growth Company

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The University of Sussex

Ian Stewart
Partner and Chief Economist,
Deloitte

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OECD

Governing Council

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UK government advisor

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TPI Managing Director,
The University of Manchester

Sir Charlie Mayfield
Chair, Be the Business

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Chief Executive,
Scottish Council for Development and Industry

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Head of the Rights, International, Social and Economics department,
Trades Union Council

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McKinsey

Damien Smith
Deputy Director of Research for Economics,
Economic and Social Research Council

Professor Keith Brown
Dean of the Faculty of Humanities,
The University of Manchester

Dr. Dan Mawson
Senior Economic Advisor,
UK Department for Business, Innovation and Skills

Productivity Commission

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The University of Manchester

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Chief Executive Officer,
Economic and Social Research Institute, Ireland

Professor Gillian Bristow
Professor in Economic Geography,
University of Cardiff

Professor Diane Coyle
Bennett Professor of Public Policy,
University of Cambridge

Professor Eileen Harkin-Jones
Spirit Aerosystems-Royal Academy of Engineering Chair in Composites Engineering,
Ulster University

Dawn Holland
Consult on macroeconomic modelling and forecasting,
National Institute of Social and Economic Research

Rachel Lomax
Economist,
Trustee and Board member

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Professor Jackie Wahba
Professor of Economics,
University of Southampton

Professor Stian Westlake
Chief Executive Officer,
Royal Statistical Society

Professor Andy Westwood
Professor of Government Practice,

Professor Cecilia Wong
Professor of Spatial Planning,
The University of Manchester

Matt Panteli
TPI Head of Policy (until July 2022),
National Institute of Social and Economic Research

Mike Keoghan (Observer)
Director General,
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Office for National Statistics



The Productivity Institute

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