



US
UNIVERSITY
OF SUSSEX

**BUSINESS
SCHOOL**

RESEARCH REVIEW 2022-23

SPOTLIGHT ON SUSTAINABILITY

Positive solutions for our planet
and its people

FROM FINANCE TO FOOD SYSTEMS

Innovative approaches to
society's grand challenges

SPOTLIGHT ON AI

Responding to the risks,
reaping the benefits



WELCOME FROM THE DEAN

Welcome to the Business School's 2022-23 Research Review. This year was a defining one for the School as we retained our number one ranking for business and management research income in the UK. Our research grant success reflects, and allows us to build on, our engagement with important, current issues confronting our economy and society.

Our reputation for research on the great challenges of our time was affirmed this year with a substantial donation from the Bennett Foundation to create the Bennett Institute for Policy Innovation and Acceleration.

This publication showcases the breadth, depth and real-world impact of some of our most recent research. I hope it provides a glimpse of the dedication and passion of colleagues across the School, as well as delivering insights into our world-leading work in areas as diverse as sustainability, artificial intelligence, finance, education and food systems.

Professor Steven McGuire
Dean of the University of Sussex
Business School

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INTRODUCTION

Topping the UK research income table for the second year running has enabled us to invest significantly in world-leading research that makes a positive contribution to the world.

This year, we welcomed two major new centres to the School – the Bennett Institute for Innovation and Policy Acceleration and the national Energy Demand Research Centre. The School also hosts two of the university’s newly designated Centres of Excellence – the Sussex Sustainability Research Programme and the UK Trade Policy Observatory.

The combination of disciplinary and interdisciplinary approaches taken in our research enables us to develop evidence-based solutions to address some of society’s greatest challenges. Our collaboration with communities beyond the university – several of which are highlighted in these pages – is critical to our success.

Our innovative research not only shapes business and society but also finds its way into our classrooms. Our students are taught by world-leading experts who draw on cutting-edge research, equipping our graduates for the present and preparing them for the future.

Following our REF 2021 success, which confirmed the School as one of the UK’s foremost producers of world-leading and internationally excellent research, our work continues to be recognised across the globe. The 2023 Times Higher Education World University Rankings placed the School eighth in the UK and in the top 60 in the world for citations in Business and Economics. Indeed, two of our researchers are among the top 1% of the most cited researchers globally.

The School is accredited by the international bodies EQUIS and AMBA, and we recently received very positive feedback in the progress reports from both organisations. We are aiming to reach ‘triple-crown’ accreditation status by 2025 and are currently working hard to achieve AACSB accreditation as we continue to build on our strengths and deliver excellent, innovative research.

Paul Nightingale
Associate Dean of Research



Scan the code for a full list of the School’s publications.

Editorial team

Tessa Russell, Gofaone Koorapetse, Helena Mullineaux, Cosmo Rana-Iozzi, Ruby Scott, Laura Ulanowski, Mariam Zubair

Editorial enquiries

business-rescomms@sussex.ac.uk
+44 (0)1273 873202

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Carol Anderson, Richard Flockemann, Katie Hiscock, Aristea Markantoni, Gemma Smith, Alexander Mason and Siobhan Stack-Maddox.

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Louise Harvey and Emma Willoughby, Chimney Design Limited

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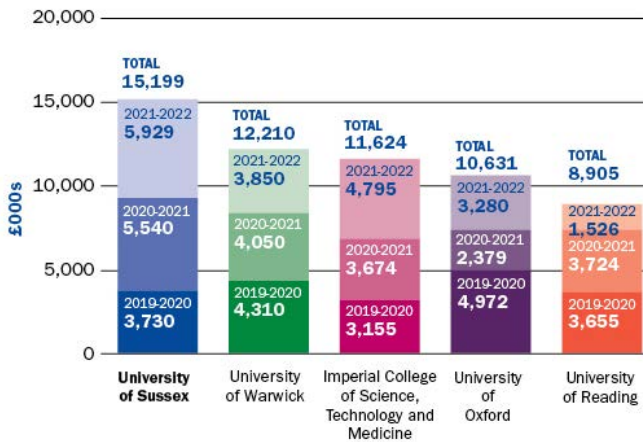
Stuart Robinson, University of Sussex

OUR KEY ACHIEVEMENTS

Our world-leading research has led to record numbers of journal articles, gained high-profile media attention, and attracted more funding than any other business school in the UK

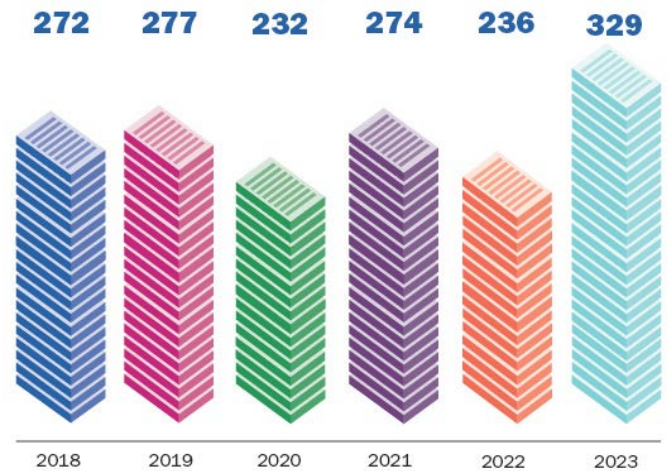
RESEARCH INCOME (2019-2022)

Top 5 business schools based on research income (£000s)



RESEARCH OUTPUTS

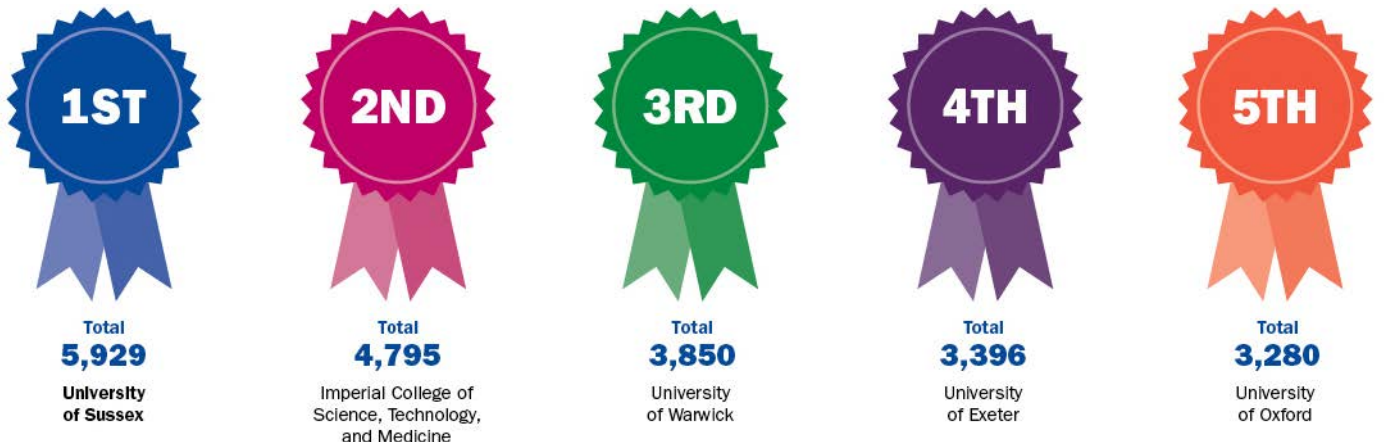
Number of journal articles published (2018-2023)



A full list of the School's recent research publications is available at www.sussex.ac.uk/business-school/research/publications

RESEARCH INCOME RANKING (2021-2022)

Top 5 business schools based on research income (£000s)



Source: Chartered Association of Business Schools, July 2023



IN THE MEDIA

Stories about the Business School's research reached a total of 1.8 billion people between September 2022 and August 2023.

Stories with the highest reach include:

- 1** **Aspartame: The billion dollar battle to keep sweeteners in our drinks**
 (August 2023)
The Telegraph
 Erik Millstone, Professor of Science Policy
- 2** **Global economy on the brink as 'butterfly effect' of China risks major crisis**
 (August 2023)
MSN UK
 Sambit Bhattacharyya, Professor of Economics
- 3** **Brexit blow: exports to Japan slump after 'landmark' free trade deal**
 (November 2022)
The Guardian Online
 Minako Morita-Jaeger, Senior Research Fellow in International Trade
- 4** **Government refuses to publish economic benefits estimate of latest Brexit trade deal**
 (December 2022)
The Independent
 Michael Gasiorek, Professor of Economics
- 5** **Brexit row erupts as Rishi Sunak accused of sitting on benefits of looming new deal**
 (December 2022)
MSN UK
 Michael Gasiorek, Professor of Economics
- 6** **Jeremy Hunt told 'act now' to boost Britain's economic growth ahead of Spring Budget**
 (March 2023)
MSN UK
 Paul Nightingale, Professor of Strategy
- 7** **Global financial crash warning after two 'tremors' signal 'something big' may happen**
 (March 2023)
MSN UK
 Sambit Bhattacharyya, Professor of Economics
- 8** **Ethereum cryptocurrency completes move to cut CO2 output by 99%**
 (September 2022)
The Guardian
 Carol Alexander, Professor of Finance
- 9** **BBC Radio 4 – The Briefing Room, Britain's productivity puzzle**
 (September 2022)
BBC
 Nicholas Crafts, Professor of Economic History
- 10** **After the FTX chaos, is crypto down and out after a torrid 2022?**
 (December 2022)
BBC News Online
 Carol Alexander, Professor of Finance
- 11** **Why is technology not making us more productive?**
 (July 2023)
BBC Online
 Nick Crafts, Professor of Economic History
- 12** **'Complex and dangerous' Zaporizhzhia nuclear plant poses major threat following IAEA visit**
 (September 2022)
Daily Express
 Paul Dorfman, Science Policy Visiting Fellow

OUR NEW RESEARCH CENTRES

ENERGY DEMAND RESEARCH CENTRE



The new £15m centre is delivering crucial research to shape energy demand for a fair, affordable and healthy transition to net zero.

Unless developed countries significantly reduce their energy demand, it will be impossible to meet net zero targets. Research shows that we can cut the amount of energy we use by 50% without compromising our quality of life – but such a change requires huge shifts in behaviour, attitudes and policies.

These are the challenges that the new Energy Demand Research Centre (EDRC) hopes to address. Established in July 2023, the interdisciplinary centre is embarking on a five-year research programme to explore the technological, economic and societal solutions needed to reduce energy demand in buildings, transport and industry.

“Tackling climate change is so urgent, it’s vital that we produce the evidence needed to help people take action to reduce energy use,” explains the Business School’s Professor Mari Martiskainen, who is leading the centre alongside Professor Sara Walker from Newcastle University.

“We need to change the perspective on energy. There’s been a lot of focus on decarbonising the electricity supply, but it’s also vital to look at the demand side – how we can reduce the amount of energy we use, and how government policies can make it easy, attractive and affordable to make low-energy choices. The EDRC presents a unique opportunity for the UK to be at the forefront of these changes.”

Working with industry and policymakers

“One of our main objectives is to achieve impact from day one,” says Martiskainen. “Industry and policy stakeholders have helped shape our research programme, and many of our projects involve collaboration with non-academic partners. We need a strong commitment to energy reduction from both government and industry. It’s not fair to ask people to change their behaviour unless the right infrastructure is in place to enable low-energy lifestyles.”

EDRC advisory board members include Bea Natzler from the Climate Change Committee (CCC), the UK government’s independent advisor on climate change. “Part of the CCC’s role is to review the evidence and model a feasible and cost-effective pathway to net zero by 2050,” explains Natzler. “Energy demand reduction is an important tool for reducing emissions, and we’re really looking forward to drawing on the evidence and outputs from the EDRC.”

A call to action

Reducing energy demand could meet half of the emissions reductions needed to reach net zero by 2050. It could also make the UK a more productive, cleaner, healthier, fairer and better place to live. The EDRC’s ‘Call to action on energy demand’, launched in November 2023, outlines the benefits of reducing energy demand, as follows:

- **Affordability** Improved efficiency will enable households to use less energy, reducing the number of people in fuel poverty.
- **Energy security** Reducing reliance on imported energy and associated price shocks will increase energy security.

- **Health and social benefits** Warmer homes, more active lifestyles and reduced pollution will improve health and reduce pressures on the NHS.
- **Energy systems** Reducing energy demand means a smaller overall energy system, which will be cheaper, quicker and easier to deliver.
- **Value for people, society and the economy** Energy demand reduction can support job creation and income generation.
- **Innovation** New technologies and lifestyle changes can establish the UK as a global leader in action to reduce energy demand.

Research themes and projects

EDRC researchers consulted with 200 stakeholders from industry, policy and NGOs to co-develop the centre’s five research themes: futures, flexibility, place, governance and equity. Research in each theme will adopt approaches, tools and methods from the social sciences, engineering and physical sciences, with University of Sussex Business School researchers playing a leading role.

- Dr Marie Claire Brisbois is working with a deliberative panel of policy professionals to explore the political feasibility of energy demand reduction measures and to test findings developed by Professor Tim Foxon and Dr Gerardo A Torres Contreras.
- Dr Brisbois will develop and test participatory governance models for emerging energy systems, including traditional big energy companies as well as small-scale and household generators and battery owners.

“One of our main objectives is to achieve impact from day one”

- Professor Foxon and Dr Contreras are looking at how to assess the economic, social and environmental co-benefits of energy demand reduction measures.
- Professor Foxon is also exploring how governance systems can be co-created and implemented to support top-down leadership and bottom-up uptake of energy demand solutions.
- Dr Donal Brown is studying how different energy demand transition pathways will affect the jobs and skills needed in particular regions, and how to support young people to pursue low-carbon careers.
- Dr Brown and Professor Martiskainen are also exploring ways to tailor local decarbonisation strategies and how to support households and businesses pursuing low-carbon retrofit solutions.

Find out more

The EDRC is one of six research hubs and centres set up in 2023 to drive change in the energy system and to help meet the UK's net zero target by 2050. Funded by the Engineering and Physical Sciences Research Council (EPSRC) and the Economic and Social Research Council (ESRC), it involves researchers from Newcastle, Cardiff, Edinburgh, Imperial College, Lancaster, University College London, Leeds, Manchester, Reading, Strathclyde and Surrey universities.

For more information and to join the centre's mailing list, see www.edrc.ac.uk

@EDRC_UK



Professor Mari Martiskainen

THE BENNETT INSTITUTE FOR INNOVATION AND POLICY ACCELERATION

New Institute will focus on urgent policy solutions for society's greatest challenges.

In 2023, the University of Sussex received a major donation from the Peter Bennett Foundation to establish the Bennett Institute for Innovation and Policy Acceleration. Based in the Business School's Science Policy Research Unit (SPRU), the new institute draws inspiration from SPRU founder Chris Freeman's optimistic vision of humanity's capacity to innovate solutions for even the most difficult challenges.

In the nearly 60 years since it was founded, SPRU has developed and refined a sophisticated operational model for rigorous interdisciplinary problem-solving at both an organisational and societal level. As such, it provides an unrivalled base and resource for the Peter Bennett Foundation's ongoing mission to effect systemic change to solve global problems.

The new Bennett Institute at Sussex will loosely model itself on the UK Government's Scientific Advisory Group for Emergencies (SAGE) in its mission to address long-term crises. First and foremost, it will focus on accelerating policies to halt and reverse climate change, and will later tackle challenges around migration, trade and global health.

Led by Professor Benjamin Sovacool, one of the world's most cited researchers in energy policy and climate change, the Institute will work with corporate executives, entrepreneurs, scientists and engineers, as well as policymakers.

The aim is to build holistic partnerships in order to:

- influence changes in behaviour and practice, both locally and globally
- inspire net-zero industry policies in production and manufacturing processes
- inform policies that bring about energy and climate justice

“Covid-19 broke the boundaries of what was considered possible for accelerated policy responses to global crises,” says Sovacool. “The Bennett Institute seeks to retain this sense of urgency as the standard pace for policymakers and sector leaders in addressing other global problems. With expert input from industry, government and academic perspectives, we want to develop agile responses to fast-changing and unforeseen crises.”

The institute will draw on the Business School's strengths in sustainable finance, innovation studies, accounting, management, strategy and marketing – harnessing these attributes to create a future world that is more sustainable, equitable, and resilient.

Find out more

<https://www.peterbennettfoundation.org/our-partnerships>



Professor Benjamin Sovacool

SPOTLIGHT ON SUSTAINABILITY

The University of Sussex strives to be one of the most sustainable universities in the world, currently standing as 8th in the UK and joint 26th in the world in the QS World University sustainability rankings. In support of this ambition, Business School researchers are using their expertise to tackle the profound environmental and societal challenges facing our planet and its people.



SOUTH COAST SUSTAINABILITY: NAVIGATING A PATH TO SUSTAINABLE USE OF LAND

A place-based action research project is bringing south-coast communities together to create land-use systems that meet the diverse needs of people and nature.

The wellbeing of communities, the sustainability of future generations and the health of our environment are all shaped by the way we use the land we live on. Dr Shova Thapa Karki's research explores how land can be managed to meet competing needs for food security, biodiversity conservation and climate change mitigation.

"In recent decades, the priority has been to use land to produce affordable food," explains Dr Thapa Karki, a Senior Lecturer in Entrepreneurship and Sustainability. "But this system is broken. We're producing adequate amounts of food but much of it goes to waste. Meanwhile, intensive, homogeneous land-use systems have damaged precious ecosystems. And farmers are facing constantly changing policies and precarious livelihoods. Bottom-up, local-level and scalable solutions are needed to address these multiple challenges."

The interdisciplinary South Coast Sustainability project, co-led by Dr Thapa Karki, together with rewilding and nature recovery expert Dr Chris Sandom, is working with local communities to design a land-use system that meets the needs of people while also creating space for nature. Not only does the South Coast region include a National Park and a designated biosphere reserve, but it is also home to diverse urban communities with differing priorities for land use, including recreation, food production and materials.

A network of living labs

"We want to create a regional transdisciplinary research system through a network of 'living labs' to support the transition to sustainable land use," says Dr Thapa Karki. Living labs promote a hands-on, interactive approach to problem-solving, with a focus on community engagement. The system of labs will enable local stakeholders – including universities, communities, councils, businesses, advocacy organisations and farmers – to come together and freely exchange data and information. Researchers

will test and develop innovative ideas, gathering valuable insights and feedback from the people most affected by changes in land use.

Dr Thapa Karki describes the living labs as "knowledge exchange hubs that enable us to transfer our action-oriented research directly into practice". The goal is to create a shared vision of a regional sustainable land-use system, develop pathways to achieving it, and equip stakeholder communities with the knowledge, training and tools they need to overcome obstacles and achieve a sustainable transition.

Working with local partners

Collaboration with a range of local stakeholders is helping to integrate different types of knowledge and is vital to the project's success. By working with land owners and managers, NGOs such as the Sussex Wildlife Trust and the Living Coast Biosphere, regional government bodies and local businesses, including Southern Water and Shoreham Port, the team can understand the complex issues affecting land use and start to unravel potential conflicts between different groups' needs.

An integral member of the project team is Richard Goring, Chair of the 6,000-acre Wiston estate in rural West Sussex. Researchers have the opportunity to access data collected by the estate, and hope to expand this collaborative approach to other stakeholders in different areas

The project's urban partners include the Brighton & Hove Food Partnership, whose Land Use Plus project aims to create multi-use land that provides food and spaces for people, protects and restores nature, and supports farmers' livelihoods. The team is also working closely with Brighton & Hove City Council, whose City Downland Estate Plan aims to transform 13,000 acres of land on the city's outskirts into a climate-resilient landscape to support sustainable farming and wildlife.

Top-down and bottom-up solutions

The project will also analyse the broader policy landscape and consider what policy changes could help to support sustainable land use. "We want to look at the impact

of evolving land use policies, such as environmental land management systems, on land management practices, food production and nature recovery," says Dr Thapa Karki. "The current mainstream policy framework lacks the adaptive and collaborative processes needed to address context-specific issues. In our follow-up project, supported by the Sussex Sustainability Research Programme, we are examining how people on the ground make sense of top-down national guidance and how we can marry this with bottom-up ideas to create place-based, practical solutions."

Next steps

The researchers are working to secure the long-term continuity of the living lab system and to build a guiding framework to support place-based sustainability solutions. "We're all passionate about the issues and dedicated to creating real change," says Dr Thapa Karki. "The work certainly won't end when the project does."

The project team

The project was supported by the Sussex Sustainability Research Programme.

The project team includes:

- Chris Sandom, School of Life Sciences, University of Sussex (PI)
- Shova Thapa Karki, University of Sussex Business School
- John Thompson, Institute of Development Studies
- Bonnie Holligan, School of Law, Politics and Sociology, University of Sussex
- Pedram Rowhani, School of Global Studies, University of Sussex
- Richard Goring, Wiston Estate
- Sophie Robinson, Brighton & Hove Food Partnership



Dr Shova Thapa Karki



OPENING UP NATURE-BASED SOLUTIONS FOR CLIMATE CHANGE

Solutions to climate change are all around us – from trees that absorb carbon to soils that hold it in the ground. The Intergovernmental Panel on Climate Change estimates that nature-based solutions could contribute as much as 30% of the global mitigation needed to meet the Paris Agreement goals.

To help explore the trade-offs between different land-use priorities – such as carbon storage, biodiversity, food production and cultural values – Professor Fiona Marshall is working with a transdisciplinary team on a new landscape mapping and modelling tool. Incorporating social, economic and ecological data alongside cutting-edge informatics and machine-learning technology, the tool can visualise and assess different nature-based solutions for specific areas of land, as well as modelling the impact of future land-use scenarios.

“One of our key aims is to make this information as accessible as possible to diverse stakeholders, from farmers to local authorities,” explains Marshall. “Once users have a comprehensive picture of their land – for example, where carbon stores are building up – they can make informed decisions about sustainable land use.”

More than just a technical tool, the project involves engagement with local decision-making processes and key stakeholders. “We want the platform to become a kind of meeting point where we can collaboratively explore the changing function and value of landscapes, and consider different solutions to the challenges we all face,” says Marshall.

Initially working on mapping areas of Sussex, the team also hopes to bring the tool to other locations and to inform wider policy and practice, for example, looking at how to combine progress towards net zero with progress towards environmentally sustainable and inclusive city-region food systems.

The project builds on **work in India and China**, where colleagues from the Business School and the School of Engineering and Informatics worked with international partners on a prototype of the tool.

- The Sussex project is part of a broader UK government-funded Nature-based Solutions for Climate Change at the Landscape Scale project led by Natural England, the Environment Agency, RGB Kew and the Forestry Commission.
- The collaborative team consists of Fiona Marshall, Jonathan Dolley and Simona Panaro from the Science Policy Research Unit in the Business School; Jeremy Reffin, Novi Quadrianto, Paul Crossley and Oliver Thomas from the Predictive Analytics Lab in the School of Engineering and Informatics, and Izabela Delabre from the Department of Geography at Birkbeck, University of London.



Professor Fiona Marshall

SUSTAINABILITY IN BRIEF

Comic book champions smart energy systems

A research team led by Adrian Smith, Professor of Technology and Society, developed a **comic book** to make their research findings about smart local energy systems (SLEs) more accessible to policymakers across the UK.

SLEs – connected systems made up of technologies that generate, store and manage renewable energy – are crucial to the UK’s transition to a net zero energy system. The comic book uses visuals and storytelling to highlight the importance of a participatory approach to designing SLEs, taking into account a wide range of household energy circumstances and priorities.

As Smith puts it: “The comic illustrates complex issues and different scenarios in a novel way that challenges conventional thinking. We worked closely with the artist Tim Zocco to develop images of people using future systems, and to highlight the consequences of paths not taken.”

The comic book has been sent to policymakers in the UK parliament and the devolved parliaments in Scotland and Wales, as well as to energy professionals and citizen associations.



International lessons in decarbonisation

Two teams of Business School researchers are investigating what we can learn from other countries' approaches to decarbonisation.

Dr Marfuga Iskandarova and Professor Benjamin Sovacool are focusing on the governance of industrial decarbonisation in the industrial megaprojects and clusters of three countries: the USA, UAE and Norway. The aim is to gather best practices and inform global policy and practice.

Meanwhile, the Going Dutch project, led by Dr Matthew Lockwood, explores the different approaches to decarbonising heating in the UK and the Netherlands, and examines what UK policymakers can learn from the Dutch experience.

"The UK and the Netherlands are similarly reliant on gas for heating homes, so they face similar challenges in the race to net zero," says Lockwood. "But there are key differences in how the two countries are approaching the transition from natural gas, especially in the degree of planning and the role of local government. We hope the research will inform UK policies, in particular by creating an effective role for local government." The team has presented key findings to officials in the Department for Energy Security and Net Zero and to the Scottish Government.

Cutting deforestation out of supply chains

Dr Anthony Alexander's research is supporting attempts to protect tropical forests by exploring the influence of global food commodity supply chains. In a project funded by the European Space Agency, he worked with policy advisers and experts in agri-tech and earth observation, using satellite images to monitor the links between food commodity supply chains and deforestation.

As more countries introduce regulations to control the import of 'forest risk commodities' such as soy from Brazil or palm oil from Indonesia, Alexander is engaging with international civil servants to understand what data they need to be able to track compliance and to meet the UN Sustainable Development Goals.

Framework to drive sustainable business action

A Behaviour Change Framework developed by Business School researchers is helping not-for-profit coalition Rewired Earth to build a compelling business case for sustainable action.

The framework, co-developed by Professor Debbie Keeling and Jessica Hadjis Van Thiel, allows enablers of sustainable behaviour to be built into Rewired Earth's tools, which explore which of the United Nations Sustainable Development Goals people care about most, and how companies are performing against these goals. The aim is to give citizens a voice and to give businesses a reason to change. The next stage of the project is to co-create impactful stories to respond to the identified enablers.

Local Green New Deals: a new route to net zero

A report by Business School academics and the New Economics Foundation explains how local actions can support climate goals while also improving citizens' wellbeing. It recommends enhanced powers and funding for local authorities to implement Local Green New Deals, focusing on cheaper, warmer, zero carbon homes; affordable, sustainable public transport; car-free city centres and active

travel; and expanding green spaces. The report provides evidence of high levels of public support for these policies.

In her foreword to the report, Caroline Lucas MP states: "If we design it right, climate action is win-win. Local Green New Deals will create jobs, deliver warmer homes and lower energy bills, and make our neighbourhoods more pleasant places to be."

NEW SUSTAINABILITY PROJECTS

Bridging finance and biodiversity for coastal restoration

Coastal habitat restoration projects – designed to reverse the degradation of coastal environments – face many challenges, particularly in the integration of biodiversity and finance. The newly established Solent to Sussex Bay Seascape Restoration Research Network, co-led by Professor of Marketing Debbie Keeling, is working to connect local projects and develop a new framework for integrating biodiversity and finance.

JustWind4All

The JustWind4All project is a three-year research initiative that aims to support inclusive, participatory and fair development of on- and offshore wind energy across the EU. Led by Professor Andy Stirling, the project will bring together diverse academic disciplines (including engineering, planning, modelling, ecology and sociology) and draw on knowledge from business, civil society and local communities.

Climate innovation in Kenya

Dr Rob Byrne and team are collaborating with African partners to create climate innovation schemes for entrepreneurs in Kenya, with the aim of plugging gaps in infrastructure, knowledge and skills. Building on the success of a pilot student-entrepreneur 'matchmaking service', which led to eight contracts between academics and Kenyan enterprises, the Transforming Climate Innovation Ecosystems through Inclusive Transdisciplinarity (TransCIIT) team is working with Kenyan officials to promote the scheme more widely.

INSPECTING OFSTED: AN ECONOMIC PERSPECTIVE

School inspection body Ofsted was recently branded 'toxic' and 'not fit for purpose' by an independent inquiry and has been earmarked for reform by the Labour Party. We spoke to Dr Iftikhar Hussain about his research on the subject, which was recently cited by the House of Commons Education Select Committee.

What can an economist's perspective bring to our understanding of Ofsted?

Education is a key driver of economic growth, equality and social mobility so many economists keep a close eye on the sector, including the accountability of schools. However, the causal links between accountability and performance are not well understood. For example, there is scant evidence about the validity of inspectors' judgements of school quality. Without a sound understanding of such issues, it is difficult to assess whether the school inspection system is fair or reliable.

I try to bring a novel perspective to this area. By making use of the wealth of official statistical data – for example, the National Pupil Database and parents' school applications – we can begin to assess the validity of the Ofsted regime and its impact on schools, pupils, parents and teachers.

How does Ofsted compare with other school inspection systems?

There is no comparable inspection regime elsewhere in the world. Ofsted is a real outlier, and its unusually stringent inspection regime can have serious consequences. Its single-word assessments can make or break a school's reputation and have a huge impact on local communities, and on parent and teacher behaviour.

How does the inspection process affect schools?

There are two opposing views about the potential impact of a poor Ofsted inspection outcome for a school. One is that a poor judgement stigmatises a school, leading to a cycle of decline. On the other hand is the belief that shining a light on a school's failings can act as a catalyst for change and improvement.

My research does show some short-term improvements in pupil achievement after a school has been judged to be failing. But there is a real lack of evidence about whether Ofsted judgements lead to genuine school improvement in the long term. I strongly believe that this evidence gap is hindering good policy decision making.

What about the impact on parents?

When investigating how parents choose primary schools for their children, we found that around half of parents simply pick their nearest school, while the other half actively choose a school that is further away. Our research demonstrates that parental choices are strongly influenced by Ofsted ratings – over and above factors such as a school's position in the publicly available school 'league tables'. This is true for both better off families and more disadvantaged households.

This study highlights that parents have a great appetite for information about school quality, and Ofsted's simple-to-understand, transparent headline measures of performance are useful in this respect. However, questions remain around the wider use of these ratings, including whether schools should be subject to greater intervention following a poor rating, for example.

What are some of your key recommendations for policymakers

In my evidence to the UK parliament's Education Committee inquiry, I made the point that there are many 'known unknowns' when it comes to the school inspections system in England. There is little robust quantitative evidence on the long-term consequences of poor inspection outcomes for pupils, school leaders and other staff. Fundamental questions such as whether schools improve following a 'requires improvement' or 'inadequate' inspection outcome remain unanswered. One of my key recommendations is that the government and funding bodies should invest in research to better understand these long-term consequences.

There is also a need to better understand which types of inspections lead to the most valid judgements. Over the years, Ofsted inspections have undergone various changes in focus, frequency and funding levels, but it's still not clear what policy lessons have been learned from these reforms and changes. I plan to keep exploring these unanswered questions and to use my research to shape any future reforms.

“There is a lack of evidence about whether Ofsted judgements lead to genuine school improvement in the long term”

Find out more

House of Commons Education Committee's report on Ofsted's work with schools: <https://publications.parliament.uk/pa/cm5804/cmselect/cmeduc/117/report.html>

Iftikhar Hussain, Housing Market and School Choice Response to School Quality Information Shocks, *Journal of Urban Economics*, Vol 138, 2023.

Ellen Greaves and Iftikhar Hussain, School Quality Ratings and School Choice: Evidence from a Nationwide System, 2023. (working paper)

Iftikhar Hussain, Vincenzo Scrutinio and Shqiponja Telhaj, The Impact of Public Sector Performance Disclosure on Employee Wages and Career Outcomes, 2022. (working paper)

Working papers and publications are available at <https://sites.google.com/site/econhussain/research>



Dr Iftikhar Hussain



EXPLORING CRYPTO WITH PROFESSOR CAROL ALEXANDER

We speak to Professor Carol Alexander about her latest research on crypto asset and derivative markets

Carol Alexander, Professor of Finance, was ranked 2nd in the top 50 female quantitative analysts on Wall Street in 2022 by think tank Rebellion Research. The only academic on the list, Carol is an expert in all areas of mathematical and quantitative finance, most recently focusing on misconduct and fraud in crypto asset and derivatives markets.

Having first arrived at the University of Sussex 50 years ago as an undergraduate in mathematics, she pursued a distinguished career in financial markets and risk management before returning to Sussex, where she leads the Business School's Quantitative FinTech (QFIN) research group.

How did you first become interested in crypto assets?

My first research, during the 1980s, was in algebraic number theory and game theory. But after the global stock market crash of 1987, I started to establish consultancies in financial econometrics, risk management and mathematical finance.

I set up the academic advisory council of the newly formed Professional Risk Managers International Association, for which I developed the Professional Risk Manager (PRM) industry qualifications. I published my four-volume textbook *Market Risk Analysis* (Wileys, 2009) but gradually

lost focus on these topics since, in the final analysis, risk managers have virtually no power to shape behaviour in financial markets. Chief Risk Officers are ignored because they have no seat on the board, and financial asset prices (hence also income inequality within and between economies) are increasingly driven by misguided, even corrupt, practices from large US political and financial institutions.

The 2008 banking crisis projected the world into an unsustainable cycle of dumping our debts on future generations. My disgust that this type of capitalism is being sustained by traditional financial institutions propelled me down the rabbit hole of listening to hours of videos about bitcoin (the crypto) and Bitcoin (the blockchain). That was in 2017, and everything else followed from there.

It is a huge challenge to keep abreast of all the innovations in decentralised finance (De-Fi) that are completely reinventing the financial markets of today. We need to teach less traditional finance, because it is dying out in practice, and to introduce more modules about the astonishingly original and rapid developments being led mainly by young computer scientists, entrepreneurs and other participants in decentralised autonomous organisations.

Can you explain your research into rarity metrics for NFTs?

Non-fungible tokens (NFTs) use blockchain technology to verify ownership of a unique digital asset such as your identity, a piece of virtual land or a digital designer watch for your avatar. In virtual and augmented realities, an NFT takes the place of a real-world asset (RWA) such as a painting or – if it is a specific type of NFT called a personal profile picture (PPF) token – a persona. Celebrities including Madonna and Justin Bieber have famously spent millions of dollars on Bored Ape tokens, which they then use online – for example, as avatars or in videos.

The most valuable PFPs are those that are deemed ‘special’ in some way. But there is a very important open academic question: how does one measure specialness within an NFT collection like Bored Apes or CryptoPunks? My research with Xi Chen, Lecturer in Finance, found that the various metrics currently used to measure the so-called ‘rarity’ of NFTs can give vastly different results.¹ A particular token might be considered extremely rare by one model but very common by another. And all existing rarity models are (almost always) mathematically incorrect. No wonder NFT markets are collapsing: nobody knows the right price because they don’t know how ‘rare’ a token is.

Funded by a DFINITY grant, I’ve set up a working group (outrank.io) to standardise rarity analytics. Measuring rarity is an exciting but highly challenging problem in combinatorial algebra. Eighteen months after putting the problem to an ex-colleague, Dr Peter Williams, a retired University of Sussex mathematician, we are pioneering a universal method to measure NFT rarity correctly, and we regard this as fundamentally important research towards a new economic theory of value for virtual worlds.

Tell us about your work on crypto market microstructure and regulation

An *inverse product* is a novel kind of derivative that is very actively traded on numerous completely unregulated crypto exchanges such as FTX or Binance (Alexander and Imeraj, 2023). These products allow bets on the dollar price of crypto, with so-called *leveraged* stakes of up to 100 times the amount of money the

investor actually has, all without requiring any dollars to be uploaded to the platform. Trading on bitcoin and ether options and perpetual futures has an incredible influence on the market price and volatility of crypto everywhere.^{3, 4, 5} In fact, the price of bitcoin is so volatile precisely because the highly leveraged, manipulative trading of inverse (and direct) perpetuals on these unregulated exchanges is allowed to proliferate, completely unchecked.^{7, 8} Not only this, but the exchange’s own market makers run trading algorithms that give themselves millisecond advantages over other traders.⁶

These exchanges also operate as their own clearing house – something that would never be allowed in traditional, regulated markets. Because there are no margin calls, ordinary investors can wake up in the morning and find that their entire account has been wiped out overnight by the exchange’s own market makers. Following my research and blogs about these issues, I have been visiting the Bank of England and speaking with the Federal Reserve Board in the US, as well as advising on international litigation and arbitration.

What’s new in the world of blockchain?

Tokenized RWAs are set to become the most important item on the blockchain agenda in 2024. These are crypto assets (tokens) that represent shares, bonds or other traditional financial assets. I’ve been working on the start-up technology for tokenisation with a recent Business School alumnus from my Blockchains and Crypto Assets module.

Tokenised RWAs are not to be confused with token offerings, which are essentially decentralised crowdfunding campaigns, typically conducted by start-up ventures seeking to raise funds during the early stages of development. Dr Michael Dakos, one of my PhD students, built the most complete dataset of token offerings, from which we assessed the specific determinants of fundraising success. Based on this analysis, we published a guide for blockchain-based start-ups in the digital economy, examining how they can successfully raise money using token offerings.²

Find out more

See Carol’s website: www.coalexander.com

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All articles are available at www.coalexander.com

How do you share your knowledge and expertise with others?

I appear quite often in TV interviews for BBC and CNBC business news, am frequently quoted in the financial press and give several keynote talks and podcasts every year.

My website contains a regular blog as well as free lecture notes, videos and other learning resources on quantitative finance and financial risk management, which are useful for practitioners and academics as well as students. My YouTube channel – Professor Carol Alexander – is designed to offer free access to learning for the younger generation, especially those in countries that struggle to provide resources to students.

Recently, I’ve been working with the Sussex Innovation Centre on innovative ways to share knowledge and build on these existing resources.

SPOTLIGHT ON THE WORKPLACE

From agile working in the NHS to factory work in Bangladesh, our research addresses important challenges facing the world of work.



Behind the seams: Exploring Bangladesh's garment sector

Researchers from the Departments of Accounting & Finance and Economics are striving to improve the working lives of factory workers in Bangladesh.

Workplace bullying and labour control

Dr Shoaib Ahmed, Lecturer in Accounting, was living close to the Rana Plaza factory when it collapsed in 2013, injuring 2,500 workers and killing nearly 1,200. Despite some safety improvements since, the clothing industry in Bangladesh continues to subject workers to long hours, health and safety negligence and violence. "My experience of the enormous local impact of this disaster is what motivated my research into workplace bullying and labour control in the clothing supply chain," says Ahmed.

His award-winning research, which involved interviews with factory workers, managers and owners, reveals that extreme bullying – including locking workers in, frequent wage cuts and moving targets – lies at the heart of labour control in clothing factories. "Workplace bullying is an inevitable end product of retailers' fast-fashion business model," explains Ahmed. "The pressure from global supply chains, combined with an absence of state protections or trade unions, leads to the use of bullying tactics to achieve targets."

"My aim is for the research to inspire a conversation among stakeholders and to set the groundwork for groups to take responsibility for the livelihoods and rights of Bangladeshi garment workers."

“My aim is for the research to inspire a conversation among stakeholders and to set the groundwork for groups to take responsibility for the livelihoods and rights of Bangladeshi garment workers”

The research received the Labor and Employment Relations Association award for best international/comparative paper in 2023. It also fed into a report to the UN Human Rights Office, which was cited by the UN Special Rapporteur.

Support for female workers

Another perspective on the Bangladeshi clothing industry comes from Dr Adnan Fakir, Lecturer in Economics, who has been leading a research project with the World Bank to investigate the impact of the pandemic on the employment and earnings of female garment workers, and how these women can be reintegrated into the labour market.

A representative survey of 2,000+ female workers from 62 factories revealed that the first half of 2020 pushed about 10% of female garment workers into unemployment, about 49% (130,000) of whom remained unemployed into 2023. This sudden shock had significant negative effects on their food intake, housing, welfare, children's schooling, and empowerment indicators.

Fakir has developed a set of recommendations to help the unemployed women back into work and to protect the industry against future shocks. Recommendations, which have been shared with the World Bank's Accelerating and Strengthening Skills for Economic Transformation (ASSET) project and the Bangladesh Garment Manufacturers and Exporters Association, include on-the-job technical training to improve employability, re-skilling of unemployed workers, government-subsidised schemes for employer-provided support, and innovations in childcare.

Agile working in the NHS

Dr Emma Russell and team are collaborating with the NHS to help achieve its strategic aim of supporting agile working.

agiLab, founded and led by Russell, is a knowledge-exchange collaboration that uses research to inform the effective delivery and implementation of agile working. "A more agile approach can help organisations accommodate different needs and circumstances, make the most of people's unique strengths and meet changing organisational goals," she explains.

As part of an ongoing collaboration, the NHS has commissioned agiLab to carry out research on the specific challenges of agile working in the health service. These include how to implement agile working among lower-income workers, and how to reduce conflict among disparate agile employees.

Findings and recommendations are being shared across the NHS via the NHS Employers website.

Find out more
www.agilab.org.uk



Innovative approaches to tackling modern slavery

Around 50 million people worldwide were living in conditions of modern slavery in 2021 – subject to coercive management practices such as document confiscation, wage theft, movement restriction, deception, threats, and violence.

A business perspective

Professor Robert Caruana, Professor of Marketing and Consumer Research, has been exploring what modern slavery means in a business and management context, and how to better understand it to the benefit of management research and public policy.

“When we examined existing business and management literature, we found an enthusiasm to understand modern slavery,” explains Caruana. “But this was hampered by an inability to see the practice as a unique phenomenon that requires a unique research approach.”

The next phase of this project, which involves an interdisciplinary team from the universities of Bath and Nottingham, will look at markets and consumption. The researchers will explore how ordinary consumers might choose ‘slavery-free’ products and how ‘unfree’ actors

experience products or services as a feature of their exploitation or as a potential vehicle of their liberation.

The role of public procurement

Meanwhile, Dr Michael Rogerson, Lecturer in Operations Management, has been exploring how the scale and scope of public procurement could influence private companies to assure against modern slavery risks. The public sector collectively spends over £250bn a year – on goods from laboratory equipment to food – so has a huge potential to drive responsible behaviours in supply chains.

“There is an increasing recognition of the links between modern slavery and the climate crisis,” explains Rogerson. “For example, people migrating due to climate impacts are particularly vulnerable to exploitation. Understanding where materials and goods have travelled from and to is essential when identifying potential cases of modern slavery.”

Rogerson worked with researchers from the University of Bath, the University of the West of England, the London Universities Purchasing Consortium and modern slavery charity Unseen UK to interview procurement

staff, public sector buyers, suppliers and people with lived experience of modern slavery.

The researchers found that there is currently very little drive for public sector bodies to tackle the issue. “We are calling on the government to implement a clear mandate for public institutions to address modern slavery risks in their operations and supply chains, and to strengthen public tendering requirements,” says Rogerson. “Public sector buyers should be more active in managing modern slavery risks, including training staff in identifying and addressing modern slavery.”

“We are calling on the government to implement a clear mandate for public institutions to address modern slavery risks”

Virtual reality boosts healthcare capacity

Dimitra Petrakaki, Professor of Technology and Organisation, is part of a team exploring the use of virtual reality (VR) technology to train surgeons in Uganda. “In low and middle – income countries such as Uganda, facilities for surgical education are limited and confined to urban settings,” explains Petrakaki. “Since the majority of surgical care in Uganda takes place in remote areas, there is an urgent need for surgical education of rural doctors.”

VR has the potential to make surgical training more accessible and less costly than traditional methods. At the same time, the 360° visualisation enables doctors to view procedures from a wider range of angles than with conventional physical

observations from a fixed position in theatre.

The team’s analysis of the world’s first VR-enhanced surgical training course found an appetite to incorporate VR into East African surgical training programmes; particularly where traditional postgraduate

opportunities are scarce. “We have successfully demonstrated that VR can be used to upscale postgraduate surgical education,” says Petrakaki. “While barriers remain, VR has the potential to build healthcare capacity throughout Africa and beyond.”



Project X: transforming the delivery of government projects

Business School researchers continue to play key roles in Project X – a unique research collaboration between government, academia and industry that is transforming the management and delivery of major government projects.

Dr Rebecca Vine, one of Project X's co-investigators, explains the project's significance: "Our research looks at how to improve the performance of the £600bn+ government project portfolio, which typically suffers from major delays and cost overruns. Most government policy is delivered through major projects, so we're really talking about the effective delivery of government policy."

"If civil servants are going to manage complex projects like HS2 and Net Zero successfully, they need a new approach," says Vine. "Traditionally, the 'iron triangle' of cost, schedule and scope is used to govern project performance. But this measures *project management* success rather than project success and tends to ignore the economic and societal benefits of the project."

Working at the heart of government

Vine has been running a series of workshops with senior civil servants in the Cabinet Office and Treasury

to examine alternative ways of conceptualising the performance of infrastructure projects – focusing attention away from just tracking project metrics to influencing infrastructure performance and project success.

Phillippa Groome, Project X Research Associate and Doctoral Researcher in the Business School, has also been working at the heart of government. While on secondment as a policy adviser in the Department for Transport, she provided training for HM Treasury staff and delivered a technical review for HS2 of documented best practice, innovation and learning from the project. She has also advised the Government's Infrastructure and Projects Authority on equality, diversity and inclusion in major infrastructure projects, and her recommendations form part of the future skills strategy in the civil service.

Through collaboration with the Cabinet Office, Project X has led to new capability frameworks and a new career pathway for 16,000 government project delivery professionals. The researchers are now working with the Cabinet Office Science and Engineering Network to explore different ways to manage complexity in large infrastructure projects.

“We’re working with farmers, retailers, distributors and consumers to co-design climate-smart solutions”

SOLUTIONS FOR A CLIMATE-SMART DAIRY INDUSTRY

Business School researchers and students are leading consumer experiments to help reduce the dairy industry’s negative climate impacts.

Food systems are responsible for one-third of global greenhouse gas emissions, and the dairy industry is a significant contributor: an average of 3kg of emissions are produced per litre of fresh milk. As the global demand for dairy is projected to increase, there is an urgent need to reduce emissions from this sector.

The Business School’s Annemie Maertens, Professor of Economics, is leading the UK strand of the Climate Smart Dairy project – a multidisciplinary, international study that aims to devise innovative carbon-reduction solutions for the dairy industry. “There’s a huge range of innovations – including new technologies, policies and business models – that could help reduce the environmental impact of the dairy supply chain,” explains Maertens. “Our project team is working with farmers, supermarkets, dairy processors, distributors and consumers to co-design climate-smart solutions that are acceptable to all actors – from farm to fork.”

Maertens, a specialist in agricultural economics, is currently conducting a series of consumer choice experiments to understand how everyday milk drinkers value and perceive various climate-smart technologies. “We’re hoping to gain a better understanding of consumers’ knowledge, perceptions and willingness to pay for dairy products which vary in their production methods and ‘climate smartness’,” she says.

Supporting the next generation of researchers is a key aspect of the project, and five Sussex students are playing hands-on roles in supporting the research, while receiving guidance and insights from senior academics. Reflecting on the multiple values of the project, Maertens states: “We’re using it as a training ground for students, a platform to inform all the stakeholders, and a way to build a joint understanding of the dairy sector”.





More about the project

The UK project team also involves the universities of Bristol and Reading. More broadly, the consortium includes researchers from universities in Ireland, Italy and Finland, who are focusing on different aspects of the milk production value chain. Country-specific findings will be shared with stakeholders to ensure that solutions can be practically implemented in the industry.

<https://smartdairyproject.com>



Professor Annemie Maertens

SPOTLIGHT ON ARTIFICIAL INTELLIGENCE

Researchers from across the School are contributing to global debates about this powerful technology and the opportunities and risks it presents.



AI and the future of work

A SPRU team led by Professor Maria Savona, in cooperation with UNU-MERIT in the Netherlands, analysed millions of patents and scientific publications to predict which digital automation technologies will become prevalent by 2030, which sectors will be most affected, and how this will alter the demand for different skills. "This knowledge is critical for predicting future labour demand and developing policies to mitigate the risks and harness the benefits of automation," says Savona.

The study, part of the Pathways to Inclusive Labour Markets (PILLARS) project, found that non-routine cognitive tasks are becoming highly exposed to automation technologies. However, UK firms are lagging in their adoption.

Savona recently co-edited the Research Policy special issue on the Governance of AI. She says: "We need to understand and manage challenges such as the control of data and the impact on communication to ensure the societal consequences of AI are beneficial, sustainable and just."

Enhancing financial data

Accounting Professor Hans van der Heijden has developed AI techniques to enhance financial data. Supervised deep learning methods, for example, can predict industry sector codes from anonymised financial statement data. This is useful when industry codes are unavailable or suspect. Similarly, supervised classification methods can predict geographically segmented revenue data, which can be helpful in identifying tax avoidance.

AI risks in weapons governance

Researchers at the Harvard Sussex Program, based in SPRU, have been studying the implications of AI for chemical and biological weapons (CBW) prohibition regimes. Dr Joshua Moon and Dr Alexander Ghionis have been working with stakeholders to develop foresight scenarios for policymakers. "The findings are relevant not only to CBW, but also to the responsible governance of emerging technologies more broadly," says Moon.

AI use in healthcare

The use of AI in pharmaceutical innovations has increased significantly since the Covid-19 pandemic, according to research by Chirantan Chatterjee, Professor of Development Economics. “In the face of serious productivity crises and increased pressure to deliver new drugs, AI and machine learning have become key tools at every stage of drug development,” he says.

A separate study from Chatterjee offers valuable insights into the use of AI with patients. Partnering with Indian mental health app TickTalkTo, he found that app users were far more likely to engage when messages were presented as coming from a human rather than an impersonal system. “Although some studies show that chatbots can answer patients’ questions effectively, it’s important to consider users’ behavioural responses when deciding what processes should be automated.”

Dr Benjamin Marent’s research also focuses on digital health care – assessing the distinct qualities of doctor-patient interactions that take place face-to-face, over the telephone, and via digitised platforms. He is exploring the redefined roles and responsibilities required by the integration of digital technologies in healthcare.

Meanwhile, Professor Ana Isabel Canhoto is exploring the growing use of generative AI by people with chronic health conditions. “While sources such as ChatGPT can be highly convincing, they frequently produce misleading outputs,” says Canhoto. “This can cause confusion and put a strain on limited healthcare resources.” Canhoto and team are developing guidance to steer people towards more trustworthy digital resources.

Guidance for AI job interviews

A toolkit produced by Dr Zahira Jaser and Professor Dimitra Petrakaki provides guidance on the use of AI in job interviews. It explains the various technologies and outlines implications for employers, careers services and hiring platforms, drawing on in-depth interviews with young job-seekers.



Personalised retail offers

A study of AI-enabled, personalised offers delivered to shoppers through smartphone apps in-store found that, while customers were keen to receive discounts on desired items, many resented the app’s interruptions and wanted to restrict access to their private information and location. “Customers’ high expectations of AI, together with a low tolerance for mistakes, are likely to result in disappointment and app abandonment,” says Professor Ana Isabel Canhoto. “For retailers, this can mean wasted resources and an inability to continue collecting data about customers.”

Fragmented AI adoption

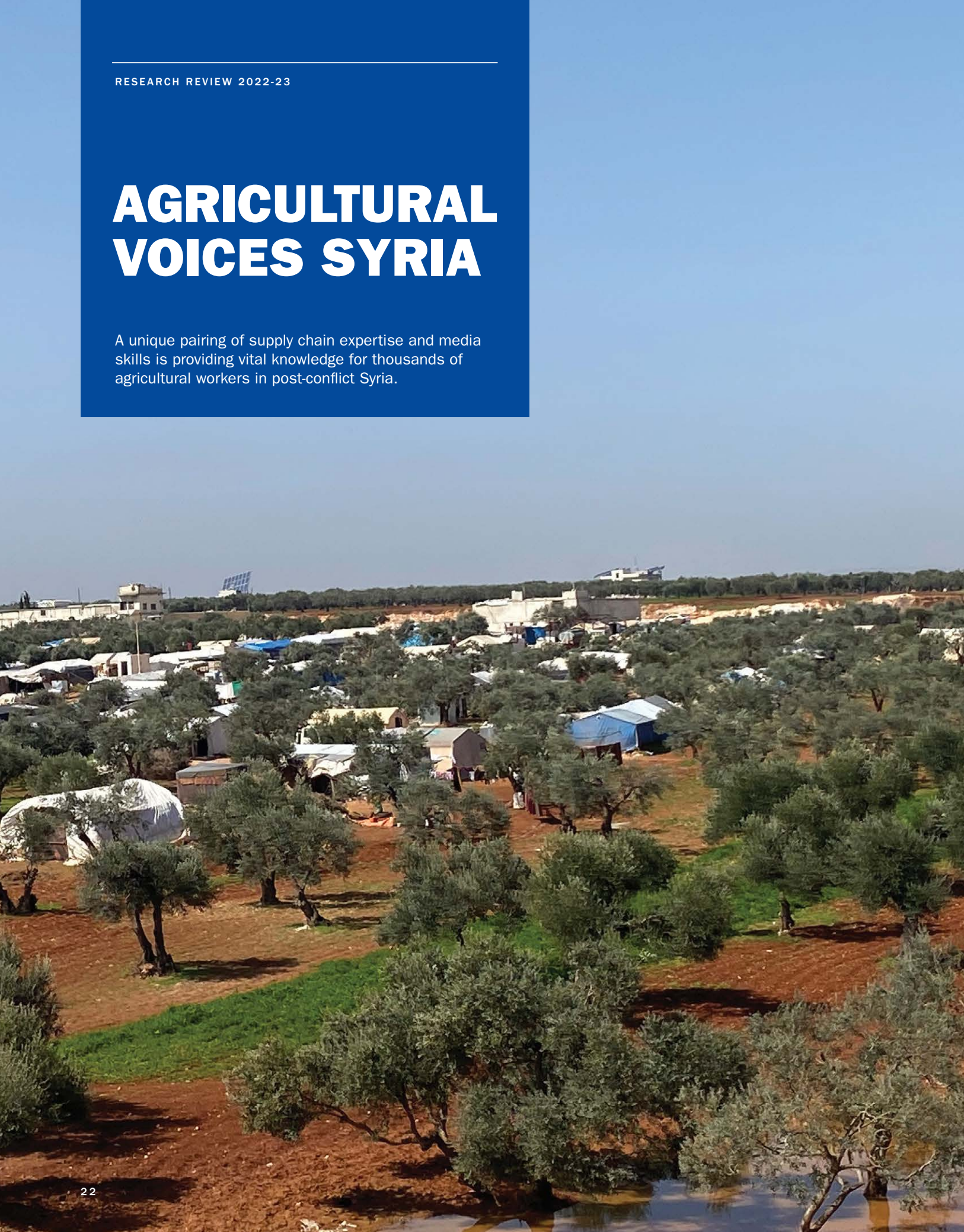
The UK risks a growing division between organisations that are investing in AI and those that are not, according to research from the ESRC Digital Futures at Work Research Centre (Digit, see p27). The team found that only 36% of employers had invested in AI technologies such as chatbots, smart assistants and cloud computing over the past five years, and only 10% of non-adopters planned to invest in the next two years. Reflecting on the study, Professor Jacqueline O’Reilly, Co-Director of Digit, says: “Policymakers need to address this low investment in digital technologies and skills if the UK is to realise the benefits of digital transformation.”

New AI projects

- Funded by a British Academy/ Leverhulme grant, Dr Federico Iannacci is studying how police practices are migrating to artificial intelligence and analytics, and how these technologies affect public value creation across police forces in England and Wales.
- Professor Ana Isabel Canhoto is mapping AI ethical standards for businesses in the EU, and developing tools to help SMEs address the ethical challenges posed by AI.
- Dr Emanuela Stagno is investigating how to create trusted AI solutions for sectors that deal with public safety, such as law enforcement and surveillance. She will study how anonymisation and transparency can shape citizens’ trust in AI systems.

AGRICULTURAL VOICES SYRIA

A unique pairing of supply chain expertise and media skills is providing vital knowledge for thousands of agricultural workers in post-conflict Syria.



The Syrian crisis, which began in 2011, devastated the country's agricultural sector – leading to damaged crops, disrupted supply chains, a loss of expertise, and the collapse of government support services for farmers. To compensate for this lack of support, the Agricultural Voices Syria (AVS) project created a series of podcasts and videos to connect Syrian farmers with agricultural experts and sustain agricultural production in the area.

The project, which won the 2022 Emerald Real Impact Award for Interdisciplinary Research, is led by Dr Mirela Barbu, Senior Lecturer in Logistics and Supply Chain Management, together with Martin Spinelli, Professor in Podcasting and Creative Media. The pair have worked closely with members of the NGO, Syrian Academic Expertise (SAE), the Council for At-Risk Academics (CARA) and various Syrian agronomists.

“Despite the diminished intensity of conflict in Northwest Syria, the enduring crisis has significantly affected livelihoods and the prospects for economic recovery post-conflict,” explains Barbu. “Literature often discusses the challenges of transitioning from humanitarian aid-dependent livelihoods to fostering economic development. Through AVS, we've demonstrated how innovative social media can facilitate this shift.”

The AVS podcast and videos

The AVS podcast has attracted more than 13,000 plays since its launch in 2021. In each of the 42 episodes, a Syrian agricultural expert shares insights

from their area of expertise. The issues covered – from cultivation of strategic crops to hydroponics and fertiliser use – are chosen based on discussions with farmers about the specific problems they face. The podcasts are easily accessible through the app, both online and offline.

In response to feedback from farmers, the team launched the AVS video series on a free YouTube channel. The instructional videos provide indispensable visual aids and practical demonstrations, covering issues such as safflower cultivation (which has attracted 13,000 views) and alfalfa cultivation (9,600 views).

A 2022 AVS survey of more than 1,000 farmers found that 93% had made use of either the podcast or the video, and 55% had used both.

Radio broadcasts

AVS is continually evolving and has established itself as an important tool for communicating with local and international actors in the region. In the aftermath of 2023's devastating earthquakes in northwestern Syria and southern Turkey, AVS was broadcast on shortwave radio, bringing farmers essential, timely information and advice about how to grow food and manage resources at this critical time. Broadcaster Encompass transmitted the programme free of charge as part of the International Radio for Disaster Relief project. The collaboration with Encompass has continued and AVS now broadcasts daily 30-minute radio episodes, reaching a wide audience in the Middle East.



AVS podcast host Eng. Zuhier Agha

Sharing biodiversity findings

In the summer of 2023, Dr Barbu, together with Professor Fiona Marshall and SAE, undertook a study to explore the state of biodiversity conservation in Northwest Syria, including the consequences for farmers' livelihoods of the near-extinction of the water buffalo. The team produced four AVS podcast episodes, two photobooks and a research brief to share the research findings with livestock projects and other decision-makers in the region.

The future of AVS

Speaking of the next steps for the project, Barbu says: “We aim to extend our achievements by engaging more farmers in Northwest Syria. We also plan to broaden the podcast's content with additional topics. Ultimately, we hope AVS can be replicated in other conflict-affected territories, where conditions permit.”



Agricultural expert provides guidance to a farmer in Syria

Find out more

The Agricultural Voices Syria project was jointly funded by the Sussex Sustainability Research Programme and the International Development Challenge Fund.

<https://agricultural-voices.sussex.ac.uk/>



Dr Mirela Barbu

IN PURSUIT OF FOOD SYSTEMS EQUALITY

Novel methods of community engagement are generating solutions to food poverty and injustice.

Almost a quarter of people in the UK are living in food poverty, due to unjust and inequitable distribution of economic, social, and cultural resources. The Food Systems Equality (FoodSEqual) project is seeking to transform this situation, involving the people who are usually overlooked when food systems, policies and products are designed.

The project is underpinned by an ethos of collaboration and co-creation. Researchers are embedded in the heart of four UK communities, bringing local residents together with food manufacturers, retailers and policymakers to co-develop systems and policies that can provide affordable, sustainable, culturally appropriate and healthy food that people want to eat.

Dr Elaine Swan from the Department of Management is overseeing the community research in Tower Hamlets and Brighton & Hove, working closely with the Women's Environmental Network (WEN) and the Brighton & Hove Food Partnership. "We want to explore what people eat, what they want to eat, how they procure and cook

their food, and why," says Swan. "Food is more than simply fuel. It is also a means of self and cultural expression, a source of pride and pleasure, and an opportunity for resistance."

Creative routes to engagement

Partnering with Pierre Bureau, an award-winning local photographer, the researchers ran a food photography course for a group of Tower Hamlets residents, most of whom were women from British Bangladeshi, Caribbean, Chinese, and Nigerian backgrounds. "Photographs are a really powerful way of communicating and sharing feelings and ideas about food," says Swan. "Through photos and discussions, we learned about how food matters in these women's lives, and how creative they are in feeding their families while also passing on important cultural practices."

The Tower Hamlets team also worked with British Bangladeshi artist Nasima Sultana on a comic to communicate ideas and insights from the research, and a local food map, which illustrates the social,

cultural and economic history of food in the area and how this influences what locals buy, grow or eat today. The team has also produced several blogs, a film and a series of podcasts to share findings with local residents, food activists and researchers.

"All these methods spark interest that can be hard to achieve with standard academic research," says Swan. "We will use our experiences to develop methodological guidance on co-production to help other researchers."

Connecting with communities

Central to the project are the community researchers – local residents recruited to work alongside the academics. They are involved in gathering data and listening to the stories, opinions, needs and wants of community members.

In Tower Hamlets, community researchers Shazna Hussain and Sajna Miah, supported by Julie Yip from WEN, are using a range of methods – including food shop-alongs, cook-alongs and photographic diaries – to understand how the food system and policy landscape shapes the inequalities of what and how we eat. Shop-alongs involve researchers accompanying residents on shopping trips to understand the complex demands and skills involved in this seemingly ordinary process. The diaries record how the participants balance family preferences, tight budgets, health worries and time pressures to feed their families, and what influences these decisions.

Hussain, Miah and Yip also helped shape the comic, podcast and film, advising on appropriate images and cultural practices and how to avoid racist, gendered and Islamophobic stereotypes.

Tower Hamlets food history map





Image from the comic, showing the community researchers with local residents

The Brighton & Hove community researchers have led a series of community workshops and accompanied residents on visits to local farms. Reflecting on her experience as a community researcher, Sara Fernee says: “We have developed trust within the wider research team and our communities. We’re now confident in advocating for our communities, and we have faith that the voices of the communities we care about are being heard.”

What people want

“While the range of people we have spoken to has been very varied, their voices have been clear and united in the call for better access to healthy, fresh and affordable food,” explains Fernee.

Residents in Brighton & Hove discussed their uncertainty about how to cook fish, so the community researchers are now working on fish-related campaigns and advice. There was also a great deal of interest in revitalising the local fishing industry, and ensuring that more fish stays local rather than being sent abroad.

In Tower Hamlets, the food diaries revealed an enormous variety of shopping, cooking and eating habits, even within the same community on the same estate and underlined women’s creativity and ingenuity in feeding their families even when on low incomes. The women were very aware of public health messages about food, but found some of them confusing and were keen to see more consistent, informative messages about the use of fats and oils.

Influencing local and national policies

The project aims to challenge the dominant top-down processes of policymaking. The policy research team, led by Dr Katerina Psarikidou from the Business School’s Science Policy Research Unit (SPRU), has conducted interviews and focus groups with key stakeholder groups from policy, industry and civil society, and co-produced research methodologies with the community researchers to assess how policies affect local communities and what needs to change.

The policy research team is currently working with community researchers in Brighton & Hove and Reading to feed into local food strategies and to meet the policy needs of local community organisations. Similar work with communities in Plymouth and Tower Hamlets communities will follow. The next stage of the project will involve feeding back findings to national and local food governance bodies to inform future policies and processes.

A food shop-along



“We want to explore what people want to eat, how they procure and cook their food and why”



Find out more

The FoodSEqual project (<https://research.reading.ac.uk/food-systems-equality/>) involves researchers from the universities of Reading, Cranfield, Sussex, Plymouth and Kent.

This research was funded through the UKRI-funded Transforming the UK Food System programme (<https://ukfoodsystems.ukri.org/>), delivered in partnership with the Global Food Security Programme, Department for Environment, Food and Rural Affairs, Department of Health & Social Care, the Office of Health Improvement and Disparities, Innovate UK and the Food Standards Agency.

Dr Elaine Swan’s website: www.servings.uk



Dr Katerina Psarikidou



Dr Elaine Swan

NHS DIGITAL INCLUSION FRAMEWORK

Business School academics are working with NHS Sussex to expand access to digital health and care services.

The rapid expansion of digital health and care services has the potential to empower us all to manage our own health, as well as improve clinical outcomes and efficiency. However, it also carries the risk of excluding the most vulnerable and highest-need populations, and worsening health inequalities.

To improve access to digital health services for the people who need them most, a Business School team joined forces with NHS Sussex to create a Digital Inclusion Framework. Launched in December 2022, the framework is already being used to support equality impact assessments across Sussex.

“For people to be digitally included, they need not only the right skills and equipment, but also access to digital services that are secure, reliable and fit with their everyday lives,” says Debbie Keeling, Professor of Marketing and Deputy Pro Vice Chancellor for Knowledge Exchange, who co-led the project. “We hope the new framework will raise awareness of the barriers people face when accessing digital services, and ensure that inaccessible pathways and technologies are not causing disengagement in digital health and care.”

The new framework emerged from an integrative review of barriers and enablers to digital inclusion, conducted by Keeling alongside colleagues Dr Maja Golf-Papez, Jessica Hadjis van Thiel, Dr Ralitsa Hiteva and Nora Davies. A collaboration with Kath Sykes at the Kent Surrey Sussex Academic Health Science Network (now known as Health Innovation, Kent Surrey Sussex)

provided guidance on the wider NHS digital health and care agenda and facilitated the involvement of key stakeholders. Clinicians, support workers, digital teams and commissioners from across NHS Sussex were actively involved in testing and developing the framework through a series of engagement activities, interviews and workshops.

Taking a person-centred approach, the framework identifies barriers and enablers to digital inclusion, including lack of awareness, access and affordability, skills and support, motivation, trust, accessibility and useability, at each stage of a person’s interaction with digital health products, services, and pathways.

Crucially, the framework includes an assessment tool, which can be used to ensure new and existing digital programmes and pathways are inclusive and mitigate exclusion. Explaining the value of the framework, one of the current users from NHS Sussex said: “Anyone who is a part of service delivery should use this framework and it should be integrated into health and care management training.”

If the framework is applied by health and care services across England, it has the potential to open up digital services and improve health outcomes for millions of people who might otherwise be excluded or disadvantaged.

Digital exclusion facts

A person is digitally excluded when they are unable to access or use the digital products they need for everyday life, including health and care.

- According to the Lloyds Bank UK Consumer Digital Index 2023, 35% of the UK population have, at best, low level digital skills, meaning they are unlikely to be able to access digital health and care services safely and effectively.
- 1.7 million people had no internet access in 2019 and, according to the House of Lords Communications and Digital Committee, 1 million have cancelled or discontinued their internet packages in the last year due to the cost of living crisis.

Financial Times commendation

The team’s work was highly commended in the 2024 Financial Times Responsible Business Education awards. Sitting alongside research from universities across the world, the Digital Inclusion Framework was one of just six projects from UK institutions to be recognised in the ‘best academic research with societal impact’ category. The awards are designed to showcase innovative, practical approaches to addressing vital societal issues.

Find out more

View the framework at www.digitalinclusionframework.co.uk



Professor Debbie Keeling

OUR MAJOR RESEARCH CENTRES AND PROGRAMMES



Bennett Institute for Innovation and Policy Acceleration

One of our newest research centres, the Bennett institute will develop urgently needed policies and solutions to tackle society's greatest challenges, starting with climate change. See p5 for details.

Centre For Inclusive Trade Policy



Launched in 2022, the ESRC-funded Centre For Inclusive Trade Policy (CITP) seeks to promote effective, inclusive trade policy that delivers something for all parts of society. It is led by Sussex Economics Professors Alan Winters and Michael Gasiorek.

Creative Industries Policy and Evidence Centre



This AHRC-funded centre works to support the growth of the UK's creative industries through authoritative evidence and policy advice. University of Sussex Business School researchers are a key part of the consortium, which is led by Newcastle University and the Royal Society of the Arts.

Digital Futures at Work



The Digital Futures at Work research centre (Digit) explores how digital technologies are shaping the world of work and the implications for employers, workers and governments. The ESRC-funded centre is led jointly by the University of Sussex Business School and Leeds University Business School.

Energy Demand Research Centre



Launched in 2023 and led jointly by the University of Sussex Business School and the University of Newcastle, the centre will undertake research for an affordable and secure low energy future. See p4 for details.

Sussex Energy Group

The Sussex Energy Group (SEG) is an interdisciplinary group of energy policy researchers. Directed by the Business School's Dr Marie Claire Brisbois, Dr Matthew Lockwood and Professor Mari Martiskainen, the group aims to understand and foster transitions towards sustainable, low-carbon energy systems.

Sussex Sustainability Research Programme

The Sussex Sustainability Research Programme is one of the University's Centres of Excellence, focusing on the complex socio-economic, technical and environmental challenges of achieving the Sustainable Development Goals. The interdisciplinary programme is managed from within the Business School.

Transformative Innovation Policy Consortium



The Transformative Innovation Policy Consortium (TIPC) aims to unlock the power of science, technology and innovation to achieve a sustainable future. Coordinated by the Business School's Science Policy Research Unit (SPRU), the consortium brings together academics, policymakers and funders from 10 countries.

UK Trade Policy Observatory



Another of the University's Centres of Excellence, the UK Trade Policy Observatory is a partnership between the University of Sussex and Chatham House. It provides independent research, analysis and expert comment on trade policy proposals for the UK.

2023 EVENTS

Our research conferences and workshops attracted speakers and delegates from across the globe, tackling a wide range of issues – from human resources to trade to sustainability.



Sir James Bevan, former CEO of the Environment Agency, speaking at the Marie Jahoda lecture

27 Mar **Marie Jahoda annual lecture**

This annual lecture celebrates the immense contribution of Professor Marie Jahoda CBE to the Science Policy Research Unit (SPRU). 50 years ago, Jahoda shaped the SPRU response to the Club of Rome’s ‘Limits to Growth’ report, arguing for a shift in the composition of growth. The panel discussion, ‘Thinking about the future, 50 years on’, chaired by Dr Adrian Ely, considered whether this optimism is still justified half a century later. Guest keynote speaker and Sussex alumnus Sir James Bevan spoke about his former role as CEO of the Environment Agency and his optimism for the future in the face of significant challenges.

20-21 Apr **CITP inaugural conference**

The first Centre for Inclusive Trade Policy (CITP) academic conference was held at the University of Sussex campus, organised by Professors L. Alan Winters and Michael Gasiorek. Paola Conconi provided a keynote speech about multinational ownership and trade participation, while Petros Mavroidis spoke about industrial policy for national security.

14-16 June **Eu-SPRI annual conference: Research with impact**

The Business School’s Science Policy Research Unit (SPRU) hosted the 2023 European Forum for Studies of Policies for Research and Innovation conference (Eu-SPRI 2023). The theme of the conference, ‘Research with Impact’, attracted academic researchers and policymakers, and prompted discussions about how well research systems are aligned with the changing needs of society. Keynote speakers included Professor Kathryn Oliver (University of London), Professor Ben Martin (SPRU) and Leonie van Drooge (LVD Impact & Evaluation).



Artist Raquel Durán at British Academy of Management conference

14 Jul

Digit workshop: How AI will shape the future of HR

The Digital Futures at Work Research Centre (Digit), in collaboration with think tank HR Analytics, hosted a workshop of human resources (HR) professionals, tech experts and academics to discuss how artificial intelligence might shape the future of HR and people management. Discussions covered the risks of bias, ethical considerations and the benefits of automation.

1-6 Sep

British Academy of Management annual conference: Towards disruptive sustainability

The Business School welcomed more than 1,000 delegates from 50 countries to the 37th British Academy of Management (BAM) annual conference. Co-chaired by Professor Vassiliki Bamiatzi and Dr Marianna Marra, the conference saw keynote speeches from Professor David Teece (University of California, Berkeley) and Professor Richard Whittington (University of Oxford). Professor Mette Morsing (UN Global Compact), Robin Sundaram (Nestlé UK) and Sowmya Parthasarathy (Arup) joined the panel to explore sustainability in practice.



Professor Francisco Sagasti, former President of Peru, at the Chris Freeman lecture

19 Oct **Chris Freeman lecture**

Held in honour of SPRU founder Professor Chris Freeman, this lecture welcomed guest speaker Professor Francisco Sagasti, former President of Peru. In his lecture, 'Science and technology policy and politics: from ideas to action', Sagasti provided valuable insights from his extensive research and political career while reflecting on the influence of Chris Freeman and other SPRU colleagues.

8 Nov **Sussex Energy Group keynote address**

The Sussex Energy Group hosted its annual address with keynote speaker Chris Stark, Chief Executive of the UK Climate Change Committee (CCC), which advises the UK government on mitigating and adapting to climate change. Stark discussed what to expect in the next Carbon Budget (CB7), due in 2025, including an emphasis on electrification, the UK's building stock, and societal and behavioural change.

29 Nov **Sussex Sustainability Research Programme symposium**

The sixth Sussex Sustainability Research Programme (SSRP) symposium celebrated the programme's new Centre of Excellence status, and the positive impact that SSRP researchers are having in communities from Ecuador to Papua New Guinea.

5 Dec **PILLARS policy workshop**

The Business School and Digital Catapult brought together stakeholders from government, NGOs and the private sector to discuss the policy recommendations of the PILLARS: Pathways to Inclusive Labour Markets project. Professor Maria Savona and Dr Tommaso Ciarli presented their research on emerging digital automation technologies, and Digit Co-director Professor Jacqueline O'Reilly took part in a panel discussion on the future of work and artificial intelligence.

6 Dec

UKTPO annual conference: Whose Rules Rule? The future of trade cooperation

The UK Trade Policy Observatory (UKTPO) annual conference brought together policymakers, academics and stakeholders to discuss regulatory conflict and cooperation across borders. Organised by Professor Emily Lydgate and UKTPO Director Michael Gasiorek, the event included a plenary panel focusing on the future of trade cooperation, with contributions from Creon Butler, Ignacio Garcia Bercero, Fiona Smith and Graham Zebedee.



Professor Maria Savona speaking at the PILLARS policy workshop



**BUSINESS
SCHOOL**

University of Sussex Business School

Jubilee Building
University of Sussex
Brighton, BN1 9SL
United Kingdom

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