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Cover photos are from the ESRC 2015 and 2016 photo competitions.
Summary

Social science-led research and innovation are central to understanding how people, businesses and governments work effectively at local, regional and global levels. ESRC-funded research plays a key role in framing the major societal questions which need to be addressed and in identifying ways of tackling them by providing robust evidence and insights at the level of individuals, local networks, institutions and societies. Social scientists often challenge common-sense assumptions about the world, demonstrating the importance of gathering detailed evidence before reaching conclusions. If we want new technology and scientific breakthroughs to deliver for society, we also need the capacity to understand that society.

The researchers we fund are providing evidence on issues across the public policy agenda as well as those relevant to business and the third sector. This report includes some of the key impacts our research and infrastructure investments have had over the last year.

- From 1 April 2015 to 31 March 2016 we:
  - invested £159 million (74 per cent) of our budget in research and infrastructure and £45 million (21 per cent) in skills training
  - directly leveraged £25 million in additional income – 13 per cent of our £191 million grant in aid budget from industry, government departments, other public sector organisations and charities
  - supported collaborations with over 432 organisations who engaged in our research and training activities
  - supported collaborations with 183 distinct organisations through our newly funded grants; of the 183 collaborators 13 were local and regional government, four were hospitals/NHS trusts, 30 were from the industrial/commercial sector, 30 were charitable organisations, 53 were academic institutions/independent research organisations and 36 were other organisations
  - funded 17 new and continued to fund 57 ESRC-supported Knowledge Transfer Partnerships with small businesses and social enterprises (case studies 4 and 14)
  - continued to support 24 Impact Acceleration Accounts, each supporting social science researchers to engage and collaborate with users to increase the impact of their work
  - held 243 events (six per cent more than 2014/15) through the ESRC Festival of Social Science, enabling social science researchers to reach an estimated audience of 25,500 (a 27 per cent increase on 2014/15) and leveraged 376 per cent additional funding from 11 HEI partners.
  - published 20 evidence briefings that reached an estimated 4,500 policymakers
  - partnered, through the Newton Programme, with the South African National Research Foundation to commission research with a combined budget of £3 million, and with the National Natural Science Foundation of China to commission research with a combined budget of £4.3 million.

Highlights of the year

1. We invested over £95 million on responsive mode grants and strategic collaborative research, £37 million on methods and infrastructure, and a further £44 million on skills and training, with the remainder on other areas such as international partnerships and knowledge exchange.

2. The Celebrating Impact Prize 2016(b) recognised 13 outstanding impacts from ESRC-funded research and capability investment.

3. In partnership with Innovate UK we launched the Innovation Caucus.

4. Social science continues to be effective at influencing policy as 15 per cent of our awards have reported at least one instance of policy influence within five years of their start.

5. The ESRC UK in a Changing Europe initiative continues to inform public and political debate, reaching policymakers, businesses, journalists, third sector organisations, educational institutions and the general public.

Impacts arising from our research are varied and significant – some provide new business models, some support innovation in delivery of public services (case studies 6 to 8), while others seek to protect and support families (case studies 22 and 24). Our research informs policy and practice, and several of the impacts in this report demonstrate how social science has enabled effective and cost-efficient ways of providing services (case studies 5 and 9) and improving the health of the population (case studies 10 and 14). We believe that social science research needs to be at the heart of the many challenges facing our society. Our interdisciplinary research tackles major issues and makes a real difference to people’s lives, both in the UK and globally (case studies 3, 4, 6 and 20).

The UK remains world-leading in the use of social science data resources. Through our continued support of the UK data infrastructure we enable better understanding and exploitation of existing data, creating new forms of data, new methodologies and new approaches to analyse complex systems. The impacts arising from the reuse of our data resources have enabled local to global insights. We also helped set up a new Data Service in India (case study 12), influenced recent UK data legislation, and users of our data resources are helping us to realise the opportunities of new technologies.

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a. Refers to research grants at point of application.

b. Impacts reported to ESRC in 2015/16 and researchers recognised at our Celebrating Impact Prize event in June 2016.
UK in a Changing Europe

The ESRC-funded UK in a Changing Europe[2] initiative was set up to promote rigorous, high-quality and independent research into the complex and ever-changing relationship between the UK and the European Union (EU). Throughout the period leading up to the EU referendum and in the many discussions after, the initiative has provided an authoritative, non-partisan and impartial reference point for those looking for information, insights and analysis about UK-EU relations that stand aside from the politics surrounding the debates. The ‘ukandeu’ project website, launched in June 2015, hosts over 230 blogs and by July 2016 had recorded over 438,000 users and one million page views.

The initiative’s remit is to deploy high-quality social science research to inform public and political debates about the UK’s relationship with the EU and their work is designed to be easily accessible to policymakers, businesses, journalists, third sector organisations, educational institutions and the general public. The UK in a Changing Europe has delivered or contributed to a large number of high-profile events: there have been over 140 events with in excess of 8,700 attendees. Through these events the initiative’s Director and its Senior Fellows have engaged with civil servants and members of parliament which has included giving evidence at select committee hearings, acting as panellists at conferences, and contributing to town hall meetings with the public. In addition, the team are in constant demand with both UK and international print and broadcast media and have in excess of 10,000 followers on their social media channels.

UK in a Changing Europe explored how EU policies make a difference in areas like the single market, financial regulation, trade, investment, growth and the free movement of people, as well as social and political attitudes towards the EU, the nature of Euroscepticism, generational differences and the media’s role in these. It also researched differences in public opinion in England, Northern Ireland, Scotland and Wales, and the implications of constitutional changes in the UK and of a British exit for the nations. Research findings were presented through a breadth of activities including events, workshops, debates, talks, e-books, briefing papers, reports, blogs, social media and the press.

Through our UK in a Changing Europe investment in June 2016 we provided additional funding to enable UK-based academics to make the findings of social science research available in an accessible form to the public and other key stakeholder groups. The initial focus of this new work will be the economic and budgetary implications, as well as the constitutional and legal aspects of ‘Brexit’.
Impact through **world-class research and investing in capabilities**

From 1 April 2015 to 31 March 2016 we continued to invest in the best research and facilitated impact of our funded research on society and the economy. During the year we spent approximately £159 million (74 per cent) of our gross budget on supporting research, funding 17 per cent of the applications we received. On new awards, we supported collaborations with 183 distinct organisations; of which 13 were local and regional government, four were hospitals/NHS trusts, 30 were in the industrial/commercial sector, 30 were charitable organisations, 53 were academic institutions/independent research organisations and 36 were other organisations.

**Enabling impact**

We prioritise creating, supporting and promoting opportunities for knowledge exchange (KE) and public engagement (PE). These are embedded across the full range of our activities – from research applications and Pathways to Impact statements, through to standalone activities within the Festival of Social Science. We have developed a deep understanding of the qualities of excellent KE and PE through our impact evaluation programme[3] and have used this in the development of our Impact Acceleration Accounts (IAAs)[4].

Our approach to excellent KE and PE is also well rooted in the management and commissioning of strategic and responsive grants and in promoting our data resources beyond the research community. Our major research investments are required to develop, review and improve their impact strategies with ESRC staff support. This portfolio of investments has produced a range of policy, practice and business impacts evident through our analysis of investments’ annual reports and evaluations.

**Impact Acceleration Accounts**

Impact Acceleration Accounts are block awards of funding made to 24 research organisations to support KE activities and to accelerate the impact of social science research. Since 2014, our funding of IAAs has enabled research organisations to fund KE activities in response to opportunities, and in ways that suit their own strategies. Providing funds in this way empowers universities to make agile, strategic decisions and devolves decision-making on KE projects and relationship-building. In November 2015 we also welcomed Leeds Social Sciences Institute who launched a University of Leeds-funded Impact Acceleration Account, developed in association with the ESRC. Overall, our IAA funding has enabled social science researchers to engage with government departments, businesses and the third sector, with:

- eighty-five IAA projects with total project costs of £1.6 million leveraging £0.6 million in additional support from local, regional and national government departments
- one hundred and fifty-nine IAA projects with total project costs of £2.9 million leveraging £1.6 million in additional support from third sector partners
- sixty-seven IAA projects with total project costs of £3.4 million leveraging £2.5 million in additional support from business partners.

In addition, IAAs have funded 64 international projects that are classified as Official Development Assistance (ODA) and an additional 90 international projects that were non-ODA. Our IAAs continue to engage with each other to share best practice and build an understanding of international challenges, which enables universities to pursue KE activities and opportunities for impact at a local and global level.

**Celebrating impact**

Our annual Celebrating Impact Prize event recognised the outstanding social and economic impacts of ESRC-funded researchers, with over 100 guests attending. This, our fourth prize, was in partnership with SAGE Publications. The event was hosted by Randeep Ramesh, Social Affairs editor, *The Guardian*, and guest speakers included Kelvin Hopkins, MP, Chair, All Party Parliamentary Group for Social Science and Policy; Mark Lowcock, Permanent Secretary, Department for International Development; and Campbell Robb, Chief Executive, Shelter. Several of the Prizewinners’ case studies feature in this report (15, 16, 21 and 25).

**Evaluating impact**

Our long-standing programme of impact evaluation across the ESRC’s portfolio provides robust evidence of the long-term impacts of our investments. Three impact evaluation studies undertaken during the year have found significant economic impact from our funded (ranging from 1999 to 2014) social science investments. Drawing on impact submissions to the Research Excellence Framework 2014, the studies – commissioned by ESRC – provide evidence that ESRC research and knowledge exchange investments have directly supported cost savings in business and public services, economic renewal through increased inward investment, and improved business turnover and profitability.

Our impact evaluation programmes show clear economic impacts:

- £10 million reduction in electricity costs for local authorities, along with reduction of 45.5 megatons in carbon emissions, through the national introduction of energy-efficient white street lightingd
• £10 million investment from British Gas to underpin local economic development in the London Borough of Enfield
• £2.7 million of safeguarded revenue and reduction in operating costs, resulting in increased profitability for the Falmouth Harbour Commissioners
• £1.7 million reduction in costs associated with fire-setting for the South Wales Fire Service
• £1.7 million efficiency savings in adult social care for Sheffield City Council

Rural Economy and Land Use Programme
We also evaluated the interdisciplinary Rural Economy and Land Use Programme (RELU), a distinctive multi-funder investment, which ran from 1 July 2004 to 30 March 2013, with funding of £26.6 million from ESRC, the Biotechnology and Biological Sciences Research Council (BBSRC), and the Natural Environment Research Council, along with co-funding from the Department for Environment, Food and Rural Affairs, and the Scottish Government.

RELU comprised numerous constituent projects as well as programme-wide activities. It focused on connections between rural economy and land use across the UK, and tackled the challenging goals of research quality, interdisciplinarity and impact. The RELU Programme’s leadership team played a key role in studying and steering interdisciplinarity and communicated lessons learned about the processes of interdisciplinary research. Some RELU projects have contributed to theoretical approaches and methodological development. These early projects also illustrated how quantitative and qualitative methods can be best brought together through interdisciplinary teams.

RELU has given rise to a significant number of impacts across a range of sectors and domains, some of which are described in 17 Research Excellence Framework 2014 impact case studies. One of these is a novel carbon footprinting model of the food production chain that provided direct economic and environmental benefits through both waste reduction and technology implementation. This research has also had an impact on sustainability policy development by the World Bank, international NGOs and the Welsh Government.

New Dynamics of Ageing
An impact evaluation of the New Dynamics of Ageing (NDA) research programme was published in 2015/16. The NDA was a ten-year, £20 million multidisciplinary research initiative with the ultimate aim of improving quality of life for older people.

Led by ESRC, the NDA programme involved four other Research Councils (Engineering and Physical Sciences Research Council, BBSRC, Medical Research Council, and Arts and Humanities Research Council) and comprised a research team of over 300.

Investing in national capabilities
Along with funding research, developing and maintaining the supply of trained social scientists continues to be a key priority. Highly skilled researchers are needed to contribute to a competitive knowledge-based UK economy, as well as developing the next generation of world-leading academic social scientists to sustain the national research base. We are promoting the highest quality postgraduate training across the UK social science community, and ensuring that individuals develop the skillsets that are appropriate to our changing society. This year, our Doctoral Training Centres (DTCs) leveraged an additional 237 studentships (above the 600 we directly fund) supported by external agencies, representing an increase of 40 per cent of studentships funded.

In August 2016 we commissioned 14 new Doctoral Training Partnerships (DTPs) to succeed our current DTCs. Our new DTPs will continue to provide training across the full disciplinary range of the social sciences as well as areas of

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c. Williams, K. (PI); ESRC Centre for Research on Socio-Cultural Change (CRESCH), University of Manchester, 2009-2014
d. ESRC-NERC Innovate UK Knowledge Transfer Partnership, University of Plymouth, 2008-2011
f. impact.ref.ac.uk/CaseStudies/CaseStudy.aspx?Id=25249
1. Improving quality of life for older people

The New Dynamics of Ageing research programme has had an unprecedented impact on policy and practice in the ageing field: from UK Government policies on ageing and a new social pension in India to a new approach taken by Britain’s largest charity in this field, Age UK. The programme also created new products on nutritional assessment devices for hospitals which are making lives better for older people.

- **Introducing sleep therapy to the NHS:** Cognitive Behavioural Therapy for Insomnia, developed by the SomnIA project[7], has been rolled out across several NHS Trusts as an alternative to medication for older people with sleep problems.

- **Pension increase for three million people:** The Ageing, Poverty and Neoliberalism in Urban South India[8] project raised awareness and influenced the introduction of a universal pension to older people in South India. The Social Pension in the state of Tamil Nadu was increased to the benefit of three million older people.

- **Pioneering new clothing design:** The Design for Ageing Well[9] project has influenced the way manufacturers design outdoor clothing for older people.

interdisciplinary research. They have been accredited for six years and will start taking students in October 2017. In total around 500 studentships will be available per year through the DTP Network. We also announced two new Centres for Doctoral Training (CDTs), one co-funded with the BBSRC (the ESRC-BBSRC Biosocial Research Centre for Doctoral Training) and another (the ESRC New Forms of Data Centre for Doctoral Training). The CDTs are intended to pump-prime the development of training in new and emerging areas.

Following a review we launched a new set of measures to enhance our support for early career researchers (ECRs), which included recognition of the three distinct ECR stages:

- **Doctoral**
- **Immediately post doctorate**
- **Transition to independent researcher.**

The measures that were introduced seek to provide a more integrated support system, responsive to the needs of different disciplines and recognising different career trajectories. While we discontinued the Future Research Leaders Scheme, we have created many new opportunities for early career researchers. We launched the New Investigator Grants[10] scheme in its place, and our Secondary Data Analysis Initiative[11] now includes a requirement for an early career researcher to be included on every proposal. We will use 10 per cent of our training and skills budget to support Postdoctoral Fellowships through our Doctoral Training Partnerships. The new DTPs, starting in October 2017, will aim to support around 50 Fellowships each year from an annual £4.7 million fund.
Social science aids growth and productivity

Research on the UK’s service and knowledge-based economy is vital to support the breadth of businesses including limited companies, business partnerships, firms and social enterprises. Growth depends on these sectors innovating and improving productivity, and insights from social science research on behaviour, the local environment, economy and society are vital to facilitate innovation. The ESRC, Innovate UK, British Business Bank and Department for Business, Energy and Industrial Strategy-funded Enterprise Research Centre\(^{[12]}\) is providing insights on research, knowledge and expertise on SME growth and entrepreneurship. Through its research it aims to shape better policies and practices to help SMEs to grow. The Institute for Fiscal Studies (IFS) Centre for Microeconomic Analysis of Public Policy is ESRC core-funded and is central to the research carried out and disseminated by the IFS.

The IFS carries out groundbreaking independent research in economics and micro econometrics, and invests in developing a unique range of models and datasets. The IFS also convenes a large number of conferences, seminars and briefings that help bring together government, business, the third sector, the media and academia. Of the 58 events held by the IFS nearly a quarter of the attendees were from government (837), 538 were from business, 667 were from the third sector, 290 from the media, and the remainder (1,620) were academic. Government staff comprised nearly half the attendees for IFS events on devolution (92/182), while at their events on public finances half of the attendees were from government and business (397 and 239 respectively).

2. Fixing the Barnett Formula

Following ESRC-funded research at the Institute for Fiscal Studies, the Barnett Formula – used to calculate changes in funding to UK’s devolved governments – was amended by HM Treasury to correct a flaw in the way the formula treated business rates. This flaw had meant changes in public spending were unevenly distributed across the UK: between 2010 and 2015, Scotland and Northern Ireland saw much smaller spending cuts than England and Wales. Fixing the flaw ensured cuts between 2015 and 2019 were fairly distributed across the UK, with over £1 billion of funding for 2019 redistributed.

Early engagement with HM Treasury and wide dissemination of the findings paved the way for a potentially politically difficult change. HM Treasury acknowledged the useful input of the IFS research in their reassessment of the formula.

3. Quantifying management quality

The ESRC Centre for Economic Performance (CEP) has pioneered new ways to quantify management quality that has been implemented in over 20,000 organisations in 34 countries around the world. Initially with manufacturing firms, it now extends to other sectors, including hospitals, retail stores and schools. The measurement tools have been expanded into national statistical offices working with the US Census Bureau, the UK ONS and their Pakistan and Germany equivalents. Using the tool, CEP researchers have shown convincingly that management is closely correlated with organisational performance, helping explain around a third of the productivity dispersion between UK firms. Their work also implies that most of the correlation between productivity and management measures is causal. Importantly they have shown that the key factors that cause poor management are low levels of competition, poor skills, and weak governance (i.e., a preponderance of family-run firms). These findings address the reason why the UK productivity position was lower than expected and what could be done to improve it.

Aiding productivity

The ESRC Centre for Economic Performance’s Productivity and Innovation Programme\(^{[13]}\) aims to understand the fundamental forces causing some firms and countries to be more prosperous than others. The research found that two broad factors mattered significantly for productivity: management and new technologies (case study 3).

ESRC funds interdisciplinary research to improve growth and productivity in the UK and globally. The Knowledge Transfer Partnership (KTP) programme, managed by Innovate UK, offers opportunities for companies, organisations, higher education institutions and recently qualified graduates to work collaboratively to develop a business opportunity, idea or innovation. KTP funding can help businesses to introduce and integrate technology and skills, gain knowledge and expertise, and address challenges. In 2015/16, the ESRC supported 57 active KTPs, of which 17 were new. This is an increase on the previous year, when we supported 44 active projects.

In the UK, our support of KTPs has enabled Plymouth University academics and Falmouth Harbour Commissioners to explore the potential environmental and socio-economic impacts of Falmouth Harbour activities, and identify management solutions to develop more sustainable maritime operations (case study 4).
Working with business

Many of our funded social science researchers engage successfully with businesses. A recent report we commissioned in January 2016 revealed that the engagement activities of social scientists have distinct features and strengths. The report highlights that for social science disciplines, commercialisation activities were amongst the least common forms of knowledge exchange activities with business, and that social science academics are much more frequently involved in a wide range of other types of activities including people-based, problem-solving, and community-based engagement activities (Figure 1 below).

The economic benefits of these broader activities are evident in case studies 3 to 7. The report also highlights that focusing on commercialisation activities such as licensing, patenting, spin-out formation and consultancy formation, will significantly underestimate the engagement activities of social scientists with business.

Figure 1: Social sciences engagement across sectors (% of respondents)*

* Corresponds to Exhibit 5.1 (p29) of Knowledge Exchange and the Social Sciences: A Report to ESRC from the Centre for Business Research. Anna Bullock and Robert Hughes; May 2016

www.esrc.ac.uk/files/collaboration/knowledge-exchange-and-the-social-sciences/
5. Preparing flood insurance for climate change

Research by Dr Swenja Surminski and colleagues at the ESRC Centre for Climate Change Economics and Policy highlighted design flaws in the UK’s flood re-insurance scheme Flood Re, resulting in the scheme taking account of climate change impacts. This potentially affects more than five million flood-risk properties in the UK. The research found that more frequent and severe flooding as a result of climate change is a barrier to continued provision of affordable flood insurance, and that linking insurance to effective adaptation and flood risk management is crucial to ensure affordability and availability of insurance. However, these issues were not fully taken into account in the initial design of Flood Re. Following a consultation response by Dr Surminski and CCCEP colleagues, the revised impact assessment from the Department for Environment, Food and Rural Affairs acknowledged that improvements in flood defences due to climate change would be needed. The Flood Re analysis was further developed through an agent-based computer model in collaboration with the University of Oxford and other European research partners, and is featured in the Bank of England’s first Climate Change report.

6. Improving English learning for millions

English language teaching contributes over £2.5 billion to the UK economy annually, according to estimates by the then Department for Business, Innovation and Skills. Researchers at CASS (the ESRC Centre for Corpus Approaches to Social Sciences) have pioneered major advances in English language teaching. ESRC funding of CASS researchers has, in particular, been important in the creation of the British National Corpus (BNC), a 100-million word collection of modern British English, and its successor, the up-to-date BNC 2014. The BNC has been used to create the Oxford Advanced Learner’s Dictionary – selling over 35 million copies worldwide and providing language tests for more than 600,000 students annually, in more than 60 countries. Other work with Trinity College London has contributed directly to the Home Office Secure Language Test for immigrants. Development of a semantic coding tool to detect attitudes in texts has been used by (among others) the Home Office to study the language of violent extremists, and Canadian police to detect adults involved in online grooming of young people.

7. Cutting costs with white street lighting

ESRC-funded research led to the adoption of white light in residential roads and urban centres throughout the UK – saving 113 gigawatt hours of electricity and over £10 million in costs for 2012, and reducing UK CO₂ emissions by 45.5 megatons. The research, led by Professor Tadj Oreszczyn and conducted by Peter Raynham at University College London, examined whether white street lighting provided a better quality of lighting than the traditional yellow or orange lighting. They showed that the same lighting benefits as traditional orange sodium lighting could be achieved using white lighting with lower illuminance. The research fed into revision of the British Standard for street lighting for subsidiary roads, permitting lower illuminance white lighting. The research was also used to support current levels of street lighting, with potential for longer term impact on crime prevention and public safety.
Innovation and business engagement

In 2015, in partnership with Innovate UK we launched the Innovation Caucus (IC)\textsuperscript{[16]} to act as an intermediary between Innovate UK and the social science research base. Since its launch, the Caucus has focused on developing a range of resources and tools that aim to enhance and inform collaborations between businesses, the research community and Innovate UK. These include:

- a series of in-depth briefings for both ESRC and Innovate UK
- a tool to increase engagement between businesses and universities
- a business model innovation tool to help businesses consider how to improve their performance, and technologists to improve their understanding of business model innovation
- developing insight and understanding of funding allocations through Innovate UK competitions.

Supporting the local economy

The research on economic regeneration by the ESRC Centre for Research on Socio-Cultural Change (CRESC)\textsuperscript{[17]} was central to the collaboration between the London Borough of Enfield and local businesses, which helped the council formulate ideas for revitalising the borough’s economy through an alternative business model that focuses on re-localisation and greater entrepreneurship within the community (case study 8).

"In the two areas where we have made most progress with job creation in the short run, CRESC was crucial because their researchers made policy suggestions which officers and councillors followed up. It was CRESC which initially suggested that we press utilities to localise their corporate social responsibility, and the end result is several hundred jobs anchored by a £10-million contract with British Gas."  
Rob Leak, Enfield Council CEO

8. Local jobs boost from partnering with business

Recommendations from researchers from the ESRC Centre for Research on Socio-Cultural Change boosted regeneration in London’s Enfield Borough, with strategic business partnerships leading to large investments and several hundred jobs. Enfield Borough’s changes in policy and strategic direction led to two new job creation partnerships, including:

- British Gas refurbishment contracts for domestic insulation including local construction companies in the supply chain and plans for British Gas to hire 100 Enfield school-leavers and train job seekers through two local colleges.
- Thames Water investment in the modernised Lee Valley sewage treatment plant with link-initiatives to boost local recruitment and retain jobs.
- An agreement to a five-year schedule of work with Thames Water helps the council to support the involvement of local contractors and provide skills training.
- Negotiations with utility companies led to British Gas providing over £10 million for social housing insulation upgrades in Enfield.
- A new insulation manufacturing operation is starting up in the borough, creating 50 manufacturing jobs and a further 250 posts for installation professionals.
- A portion of local authority pension funds was re-invested into social housing in North London boroughs to address chronic housing shortages – at the same time stimulating local construction employment.
Social science promotes innovation

Labour productivity in the UK has remained low over the last eight years, with whole economy output per hour around 16 per cent below the previously anticipated level\[^{18}\]. This issue has spurred a range of work from ESRC research centres and elsewhere to explore answers to the so-called ‘productivity puzzle’. Emerging evidence (as in case study 3) suggests that there is a need for further analysis due to a range of factors at play rather than a single explanation for weak productivity.

Digital technology has transformed the nature of social relationships and working arrangements in contemporary society. It is present in all aspects of our lives, whether we actively engage with it or not – impacting on the way we communicate and the ways we receive, consume and process information. It influences routine behaviours including the way we travel, shop and work. The presence of digital technology mediates our perceptions, behaviours and practices across these different domains and thereby influences our ways of living. This raises a number of fundamental questions about the risks and opportunities associated with digital living, and our understanding of the individual, community and society.

In an increasingly data-driven world our researchers’ insights are being used to harness information and aid the efficient and effective delivery of public services. Such insights include those at the individual and collective level; for instance, behavioural economics can help to determine the best way of motivating people to act in their own and others’ best interest, or provide systems analyses of how organisations and institutions co-operate or compete to provide high-quality services.

Innovation from ESRC data resources

UK census data are fundamental to improving the understanding of life in the UK, enabling informed decisions by providing relevant and independent statistics. The UK Data Service (UKDS) provides access to a wide range of data including large-scale government surveys, international macrodata, business microdata, qualitative studies and census data. An independent evaluation (commissioned by Jisc\[^{21}\]) shows that one year’s investment into UKDS enables additional use of research data worth £58 million-£230 million over 30 years – effectively a 2.5- to 10-fold return on investment. Re-use of existing research data increases cost efficiency and productivity by saving time and resources, as well as providing new research opportunities. The UKDS has 25,000 registered users, and 78,000 datasets delivered.

9. Smarter travel

InFuse data were used for the ‘Smarter Travel’ research project studying how ‘smart choices’ for sustainable travel could be implemented and supported in transport planning. The research directly influenced UK climate-change agendas and policy, including:

- the UK Committee on Climate Change recommendations on cost-effective emission reductions
- the Scottish Government’s targets and household advice for smarter travel
- the UK Government’s Local Sustainable Transport Fund supporting 96 projects across England
- evaluations for numerous Local Authority Transport Plans across the UK.

The Integration Hub, a web resource that was launched by Demos in 2015 to provide data about ethnic integration in England and Wales, uses data from InFuse to populate its interactive maps of the UK.

Census data downloaded from InFuse informed the Welsh Government for policies to engage Gypsy and Traveller families in education, showing that over 60 per cent aged over 16 from these communities had no qualifications.

10. Underpinning plans to prevent obesity

Research findings by the ESRC-funded Millennium Cohort Study (part of the Centre for Longitudinal Studies) revealed that poorer children are at higher risk of obesity, underpinning the Childhood Obesity Report\[^{19}\]. One in five children are overweight or obese when they begin school, and the most deprived children are twice as likely to be obese than the least deprived children at a similar stage. It was estimated that the NHS in England spent £5.1 billion on overweight and obesity-related ill-health in 2014/15.

In response, the government released a plan for action\[^{20}\] to focus on prevention of obesity – aiming to significantly reduce England’s rate of childhood obesity within the next 10 years.
InFuse, an online search facility for census data developed by the ESRC-funded UK Data Service, is enabling tailored search and investigation of UK census statistics. Executive recruitment firm Sapphire Partners used data from InFuse in a report on female representation on boards, revealing that 77 per cent of FTSE board members are men and 70 per cent of new board appointments go to men.

A study by Marie Curie into the differing needs of Black, Asian and minority ethnic groups in Scotland for end-of-life care used InFuse data to determine the minority ethnic population in Scotland has doubled since 2001 from 100,000 to 200,000 – highlighting the need for greater and more appropriate provision.

Our Secondary Data Analysis Initiative (SDAI) – set up to support high-quality research that has an impact on policy and practice, focusing on the use of existing data resources – continues to prove popular. Since 2012 nearly 100 projects have been funded, with 17 new awards in the latest round. From 2016-17 the SDAI scheme will become an open call, allowing applicants to apply at any time. The Phase 1 SDAI projects have now been completed and our data resources have produced an impressive range of impacts on policy and practice.

For the past five years ESRC staff have led a drive to increase awareness of the value of reusing ‘administrative data’ – which is collected routinely by UK government departments for operational and transactional purposes – and the challenges facing researchers who wish to use this resource. Administrative data can be of great value as they can support research on for instance ways of reducing social inequalities, uncovering key influences on health and wellbeing, or improving our understanding of UK productivity and growth.

**Administrative Data Research Network**

The Administrative Data Research Network (ADRN) is funded by the ESRC and is a UK-wide partnership between universities, government departments and agencies, national statistics authorities, funders and the wider research community. It is made up of four Administrative Data Research Centres – one in each country of the UK – and an Administrative Data Service, and together they give trained researchers access to linked, de-identified administrative data (data collected by government) in a secure environment.

The ADRN has developed state-of-the-art physical and electronic infrastructures across the UK. They have established a new, legal, secure and efficient pathway for the research community to access de-identified linked administrative datasets. ADRN security standards and best practices have been established based on five principles: safe environments, safe research projects, secure data, safe outputs and safe people.

There are 112 active projects that depend on linking unit-level administrative data across national government departments – 41 under development, 13 projects in the approval process and 58 projects approved which includes eight projects conducting analysis and three completed projects.

**11. Unlocking administrative data**

The potential value of using administrative data for research purposes inside and outside government is now better understood due to the ESRC:

- The 2012 report from the ESRC-led Administrative Data Taskforce involved contributions from key government departments and statisticians, and had four main recommendations – one of which highlighted the need to change UK legislation.
- ESRC staff have worked with the Cabinet Office and Involve, a charity with expertise in public participation, to explore the suitability of proposals for new data-sharing legislation.
- A novel Open Policy Making process brought together Cabinet Office, third sector organisations, privacy groups, academics and representatives from government departments to explore legislative proposals and options.
- The UK Government’s Digital Economy Bill, which now has had its second Reading in Parliament, includes legislation proposals that offer an optional legal gateway for use by government departments to share their data with researchers.

**Business and Local Government Data Research Centres**

Our three Business and Local Government Data Research Centres, the Consumer Data Research Centre, the Urban Big Data Centre, and the Business and Local Government Data Research Centre, are providing researchers with data routinely collected by business and local government organisations, to enable research of mutual benefit to researchers and data owners alike. The research centres have created cutting-edge physical and virtual infrastructures which facilitate access to, and linking of, business and local government data in safe and secure settings. The centres have also ensured that the process used will prevent a person’s individual identity being extracted and targeted (ie, ‘de-identified’ datasets).

The centres are currently working with approximately 35 businesses and local government organisations and have made substantial progress in developing relationships with data owners. Over the last year data licence agreements have been secured with the Scottish Government, Strava, Zoopla, Nestoria, Renfrewshire Council, Experian, British Geological Survey, HRUK, Appliances Online, Shop Direct, Bike Citizens, DataTalk-BPS, Real Junk Food Project, YouGov, Women’s Cohort Study, Registry Trust Ltd, Footfall, Global Data, LiDAR Earth Images, Laing Buisson, Osiris, Spend Network, Springboard, Hitwise, UCAS, HESA and the Financial Times. Negotiations are ongoing with over 23 other organisations. Primary data collected as part of the Integrated Multimedia City Data project within the UBDC, which collected data in five different research strands in Glasgow, is now also available for researchers to use.
Investing in longitudinal and biosocial resources

Our long-term investments in longitudinal studies enable us to understand society by following individuals through time, looking at how their experiences and behaviour are influenced by their social and economic environments. The examples included here offer a snapshot of the broad range of impacts emerging from the ESRC’s portfolio of world-leading longitudinal investments and data resources.

We have invested in a rich and diverse range of resources for biosocial research and recognise the need to ensure that social scientists realise the huge potential of this biosocial data emerging from longitudinal studies. A wealth of health measures\cite{28} which can be used for interdisciplinary research are collected as part of Understanding Society\cite{29}, the world’s largest household panel study. Three of Britain’s internationally renowned birth cohort studies – the 1958 National Child Development Study, the 1970 British Cohort Study and the Millennium Cohort Study, housed by the Centre for Longitudinal Studies (CLS)\cite{30} – collect biomedical data. Access to the CLS and Understanding Society biomedical resources is available via the META-DAC (Managing Ethico-social and Technical issues and Administration Data Access Committee)\cite{31}.

CLOSER – Cohort and Longitudinal Studies Enhancement Resources\cite{32} – aims to maximise the use, value and impact of longitudinal studies, both at home and abroad, and works to stimulate interdisciplinary research, develop shared resources, provide training and share expertise. Its work packages include projects on harmonisation of strategies for the exploitation of biological sample collections as well as harmonisation of key biomedical measures and linkage to health data.

Working with other research funders we are creating opportunities for strategic partnerships to enable biosocial research. The joint ESRC-BBSRC investment in epigenetics research\cite{33} is an example of a key emerging platform for interdisciplinary research, among the biological and social sciences.

We have also invested with the Medical Research Council in the second wave of Born in Bradford (BiB)\cite{34}, which was originally set up in 2007 to track the lives of 13,500 babies and their families. Wave 2 will collect social and biomedical information from at least 9,000 BiB children at age 7-10 years and their parents, to investigate the determinants of: child social and emotional wellbeing; child cognitive and motor development in childhood; healthy growth in children; and adiposity and cardiometabolic health in children and adults.

Consumer Data Research Centre (CDRC) Masters Research Dissertation Project

The Consumer Data Research Centre\cite{27} continues to successfully recruit and partner Masters students with retail and industry organisations across the UK as part of their popular ‘Masters Research Dissertation Programme’.

Projects were carried out with a wide range of organisations including The Co-operative, British Gas, E.on, Easyjet, Argos and the Local Data Company.

These masters research projects provided innovative insights into the operations of their partnered organisations and were instrumental in bringing about internal policy changes, often with economic or geographic focus.

British Gas are but one industry partner that has continued to work with their student after successful completion of the degree. The student investigated whether it was possible to identify vulnerable energy customers, those who could not afford adequate heating, from smart meter data. Such vulnerable customers may not be able to afford adequate heating, and as a result be at risk of becoming fuel poor. This project has set the focus on financial vulnerability in relation to bill payment. Alternative definitions of vulnerability could include disability or permanent illness as factors that may negatively impact upon customers’ access to heating.

For British Gas this was the first time that a predictive analysis had been attempted for energy consumption data, and the researcher considered that it opens up a clear possibility to use machine learning techniques not just for operational research, but also for policy research that aims to inform policy interventions in the energy sector.

Andy Simpson, Customer Insights Manager for British Gas, stated: “The research on consumption patterns for vulnerable customers suggests there is potential to use this in a more proactive approach to the identification of vulnerability within our customer base. In the future companies can also utilise this information to better identify categories of vulnerable customers that do not have access to a smart meter reader in order to investigate how they can benefit from its installation.”
12. A new Data Service in India
The UK Data Service (UKDS) has influenced and supported the Indian Council for Social Science Research (ICSSR) to develop and launch a Data Service in India. In the past, making data available for research has been an ongoing challenge, with limited open access data; government departments cautious to grant access to data; and private sector data, wherever accessible, expensive to make available for research. The new service is a resource for 417 institutions across India doing social science research. Progress is impressive – in a short space of time some 33 surveys had been published in the survey data catalogue. UKDS has worked collaboratively with ICSSR, sharing learning, processes, the UK Data Archive model and protocols, and a licence to use the UKDS HASSET Thesaurus with the new Data Service in India. Dr Jagdis Arora, Director of the Information and Library Network Centre, spoke of the great support that the UKDS had provided in offering a blueprint for India’s new national data service. Many of its policies and procedures had been adapted and implemented in the form of website structure, use of metadata schema and data cataloguing methods.

13. Changing open data policy
Research by Professor Jo-Ann Bichard and Gail Ramster highlighted the need for open data about public facilities, leading to the first national standard for this data. The research, part-funded by the ESRC through the New Dynamics of Ageing programme, led to a change in Ordnance Survey policy to remove licence restrictions on public toilet locations. The mobility and wellbeing of elderly, pregnant women and those suffering from medical conditions is adversely affected by inability to access public toilets. Bichard and Ramster have set up a business to develop an app to help improve access to public toilets. The map listing 10,268 public toilets has enabled people with conditions, eg, Crohn’s disease, prostate cancer and irritable bowel syndrome, to be more mobile as they can plan their trip beforehand. Health services and charities now routinely include details about the Public Toilet Map when giving information to patients.
Social science engages society

Academics in the social science disciplines tend to engage with charitable and public sector organisations more (49 per cent) than other research disciplines (as shown in Figure 2 below). Social science engagement with these sectors is critical as in addition to growth and prosperity, improving society and quality of life is also essential to our overall wellbeing. However, major inequalities across the life course and in life expectancy still remain. Our research enables governments, charities, businesses and societies to understand the factors that shape inequalities and how we can combat them, and has informed policy and practice in improving health care (case studies 14, 16, 19 and 21), sustaining the environment (case studies 5, 7 and 9) and making a difference in global efforts to alleviate poverty (case studies 18 and 20).

Public engagement
Public engagement is about raising awareness of the social sciences and encouraging involvement in both social and science-related research which will translate into real benefits for society and individuals (case study 15).

We create opportunities for the public and researchers to explore research and its impact. Our annual UK-wide celebration of the social sciences is a key part of our portfolio of activities. The ESRC’s 13th annual Festival of Social Science was held from 7-14 November 2015 and engaged the public with social science research and its impact on society and the economy. There were 243 events (six per cent more than 2014/15) held across 10 regions and in 38 UK towns and cities. Forty-three per cent of attendees were members of the general public while 54 per cent attended in their professional capacity – with 67 per cent of the attendees under 40 and a further 27 per cent under 20. The festival leveraged 376 per cent additional funding from 11 HEI partners.

Approximately 25,500 people attended and valued the Festival – an increase of 27 per cent on 2014. Seventy-eight per cent of respondents said they would seek out further information about the topic, while 80 per cent of general attendees and 88 per cent of young attendees said they would use the knowledge gained from the event in their work or studies.

Social science plays a vital role in our society. From big ideas to the most detailed observations social science affects us all – at work, in school and within our communities. Our photographic competition inspires young people to be creative and explore the relevance of social science to their lives. Focus on Society was our fourth photographic competition, and the third time the competition has been aimed at young people aged 14-18 years old. For 2015/16 the challenge was to use a social science perspective to capture ‘society’ in a picture. The competition offered five diverse categories linked to our priorities: Cradle to grave; Green and pleasant land; From rags to riches; Variety is the spice of life; and No place like home. These categories allowed a range of subjects to be covered, including family, economy, politics, culture, health and sustainability. We also encouraged the use of mobile phones and tablets to take images, making the competition accessible to a larger number of young people. The competition received 905 entries from 184 schools across the UK – engaging 601 pupils to reflect on society. Winners, runners up and those highly commended by the judges had their entries exhibited at the Espacio Gallery, London and can be viewed online[35]; youru.be/U_mV7QhIO-I.

14. New e-learning improves mental health support
An e-training course helps teachers to support children with mental health issues — reaching 9,000 students in 215 special schools. An e-training resource developed through a Knowledge Transfer Partnership has been delivered to 215 special schools in England and Wales, reaching 2,248 staff to date and benefiting 9,000 students. The training resource has increased awareness nationally (including with policymakers) of the importance of mental health in special education needs. Income from sales of the resource to local authority schools has helped the National Association of Independent and Non-Maintained Special Schools (NASS) expand their charitable activities. The training package has been sold to 98 maintained schools outside NASS, with sales enquiries coming from as far afield as Australia. The response from schools has been very enthusiastic, saying that it has made a real difference to their practice — allowing teachers to provide better help for children with complex special educational needs.
15. Inspiring new researchers with tales from the field

Geographers travel all over the world conducting field research – but few tell the tale of their experiences abroad. ESRC’s Impact Champion PhD student Briony Turner co-founded Intrepid Explorers to enable researchers and guests to tell the stories behind their projects, and to inspire others with tales of exploration in the field.

Intrepid Explorers has proved hugely successful, inspiring not just researchers and academics but also bringing the excitement of geography to a much wider audience. It has hosted more than 100 talks as well as film screenings, Q&A panels and workshops, and inspired interdisciplinary collaborations between undergraduates, postgraduates and other universities. The website has over 10,000 unique users and the newsletter over 700 subscribers. Its public outreach events include work with 12- and 13-year-old pupils in Greater London and the Intrepid Explorers travel to schools across the UK to inspire current and future generations of geographers.

Photographs from the 2016 ESRC photographic competition and festival of social science
Social science delivers international impact

We are committed to creating opportunities for UK social scientists to collaborate with researchers on excellent and innovative research projects in all parts of the world in all of our funding opportunities, and to funding research that has global impact. International collaborations strengthen the UK research base and transnational research networks, building a global capacity to understand, conduct and deploy social science.

Responding to urgent challenges
In June 2015 we launched an Urgent Research Grants call to respond to the escalating crisis for migrants in the Mediterranean. With additional funding from the Department for International Development we funded eight projects which began collecting research data among migrants and refugees across the Mediterranean region from September 2015. Though the projects have been running for less than a year, they have already produced over 30 media articles and more than a dozen journal articles, papers and reports. Research teams have provided evidence on the complex motivations and trajectories of migrant journeys directly to policymakers in Whitehall and Brussels, and have collaborated with international organisations, like the UNHCR and International Organization for Migration, and grassroots NGOs in Greece and Italy supporting refugees.

International collaboration
We lead the co-ordination of EqUIP, the EU-India Platform for the Social Sciences and Humanities comprising 14 European and three Indian partner agencies. The platform has convened several successful symposia over the last year. As part of NORFACE j we will contribute £2.5 million to the commissioning of €20 million research into Dynamics of Inequalities Across the Life-course. This builds on NORFACE collaborative commissioning over the last decade that has focused on topics such as religion and society, migration and welfare state futures. A further fifth round of the Open Research Area initiative is also planned for 2017. UK researchers are strongly represented in both the applications to and awards from these international calls.

17. Improving primary children’s reading comprehension
Up to 10 per cent of primary children experience difficulties with reading comprehension. Studying a group of children with poor reading comprehension, ESRC’s Celebrating Impact Prize finalists Professors Jane Oakhill and Kate Cain identified specific areas of difficulty — such as problems with understanding story structure, ‘reading between the lines’ and being able to monitor one’s own understanding. These skills indicate how reading comprehension develops over time. Professors Oakhill and Cain’s work on the skills required to improve reading comprehension has inspired revisions to sections of England’s National Curriculum, English Programmes of Study, and Key Stages 1 and 2. Their research underpins the Inference Training programme, used in more than 800 schools nationwide; and LEE Comprensivamente, used by 900 teachers in Argentina, Uruguay and Brazil. It has also shaped the US-based training package Language Essentials for Teachers of Reading and Spelling, and informs the widely used UK and Spanish assessments of reading comprehension used throughout South America.

16. Ebola response with local engagement
Within weeks of Ebola being declared a public health emergency of international concern in August 2014, Professor Melissa Leach (former ESRC-funded STEPS Centre director) and a team of anthropologists set up the Ebola Response Anthropology Platform (ERAP), an online portal for live information and dialogue. Some humanitarian response teams met local resistance due to social and cultural reasons, and ERAP delivered advice to policymakers and practitioners on engaging with local communities — for instance when identifying and diagnosing cases, managing death and funerals, or caring for the sick.

ERAP has been accessed by more than 16,000 users online and shaped response activities in Sierra Leone, including implementation of locally appropriate Community Care Centres, safe burials, social mobilisation approaches and vaccine trials. Members of ERAP influenced UK strategy through a social science sub-group of the UK Government Scientific Advisory Group for Emergencies, and joined three core World Health Organization committees, producing a range of influential briefings. The ERAP team is currently working with several organisations including UNICEF and the Wellcome Trust to develop the model for wider emergency preparedness and response.
**Newton Fund**

We have been an active Newton Fund Delivery Partner, working to promote and align with the priorities of developing countries, and have also ensured that social science features in RCUK-led interdisciplinary calls. Throughout 2016, in partnership with the South African National Research Foundation, we commissioned research on higher education in Africa (combined budget: £3 million) and, with the National Natural Science Foundation of China, commissioned research on developing financial systems to support sustainable growth in China (combined budget: £4.3 million).^3^

Under RCUK interdisciplinary calls we have commissioned research with partners in Mexico (on inclusive, accountable and secure societies), Turkey (on inequalities and poverty alleviation) and Southeast Asia (on mental health and the food-water-energy nexus). Projects already funded via the Newton Fund are focusing on diverse development challenges:

- Mental health, migration and the Chinese mega-city
- The integration and wellbeing of Syrian youth in Turkey
- Population change and the lived experience of inequality in urban South Africa.

**Global Challenges Research Fund**

The key aim of the Global Challenges Research Fund (GCRF) is to promote the welfare and economic development of people in developing countries as part of a new Official Development Assistance (ODA) strategy for the UK. We have responded quickly to the UK Government’s announcement of the £1.5-billion fund dedicated to support cutting-edge research that addresses the challenges faced by developing countries through:

- challenge-led disciplinary and interdisciplinary research
- strengthening capacity for research and innovation within both the UK and developing countries
- providing an agile response to emergencies where there is an urgent research need.

This has offered us exciting new opportunities to work across disciplines, supporting research and capacity development on an unprecedented scale. We have been highly effective in emphasising and co-ordinating the role which cutting-edge social science can play in delivering beneficial development outcomes, and identified an initial list of five priority research themes:

- Building effective institutions in conflict-affected and fragile states
- Migration, mobility and development
- Dynamics of inequalities
- Innovation and inclusive economic growth
- Shocks, security, risks and resilience.

A range of calls were launched in 2016 to maximise opportunities for UK researchers to engage with and shape the GCRF agenda, and to work in equal partnership with researchers and research users in developing countries to ensure our research appropriately addresses the most important challenges to development:

- To provide opportunities to strengthen global collaborations between social science researchers and other stakeholders, particularly in the global south, we will fund approximately 20 to 25 Strategic Networks. We expect many of these networks to lay the groundwork for potential future research activity under GCRF, particularly interdisciplinary research.
- To enable leading UK researchers, in partnership with international colleagues, to make major advances in social science for development, we will fund two new centres with a value of up to £5 million each.
- To enhance our support for research using existing data resources, we included a highlight notice for projects relevant to developing countries in our Secondary Data Analysis Initiative.
- To provide opportunities to enhance the capacity of early career researchers to engage with the GCRF we will fund approximately 30 GCRF Postdoctoral Fellowships in the first year.

To strengthen the role of social science in interdisciplinary research, we are participating in a number of GCRF research calls led by other Research Councils and leading two schemes ourselves – Forced Displacement in collaboration with the Arts and Humanities Research Council, and Tackling Antimicrobial Resistance: behaviour within and beyond the healthcare setting, which we lead in collaboration with the National Institute for Health Research; the Medical Research Council; the Arts and Humanities Research Council; the Department for Environment, Food and Rural Affairs; and the Veterinary Medicines Directorate.

**ESRC-DFID collaboration**

Our close collaboration with the Department for International Development (DFID) continues through our three large bilateral programmes[^7]:

- DFID-ESRC Growth Research Programme (DEGRP)
- Poverty Alleviation and Education
- ESRC-DFID Raising Learning Outcomes in Education Systems Research Programme

DEGRP is a £25-million programme that funds world-class scientific research on issues relating to economic growth in low-income countries, with high potential for impact on policy and practice. It has funded 43 research projects to date across the programme’s four main themes:

- Economic growth and agriculture
- Economic growth and productivity/innovation
- Economic growth and financial sector development
- China-Africa.

To support individual projects in improving the likely impact of their evidence on policy and practice we have jointly funded an Evidence and Policy Group. We have also jointly established The Impact Initiative which aims to create new opportunities for shared learning and good practice.

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k. South Africa, £2.5 million was contributed by UK and 10 million RAND (£580k) matched effort; China £2 million contributed by UK and 20 million RMB (£2.3 million) by NSFC
between the programmes, helping to strengthen uptake and communication strategies and achieve maximum impact from the research funded.

In the past year our joint collaboration has expanded into new areas. A jointly funded ESRC-DFID award was made under the ESRC National Centre for Research Methods call for policy-relevant research synthesis. With this award, Paul Montgomery at the University of Oxford is leading a project to develop a systematic framework for evaluating the quality of evidence for complex social interventions.

Many projects are now starting to report interesting examples of early research uptake or engagement with beneficiaries. An example of this is the Independent Medico Legal Unit in Kenya including findings from Professor Tobias Kelly’s research on torture and ill-treatment in a report to the UN Committee Against Torture, as well as evidence of Kelly’s results being fed into wider debate about political violence following uptake of his survey results by the Kenyan press. Several of our partnership projects with DFID are shown in case studies 18-21.

10 years of collaboration: lessons on innovation, engagement and impact

In March 2016 we brought together 175 researchers, donors, policy actors and practitioners to celebrate, reflect and build upon a decade’s research on poverty alleviation funded through the ESRC-DFID Joint Fund for Poverty Alleviation Research. The three-day event identified key learning and knowledge from the programme’s portfolio and used this to help position researchers to more effectively respond to development policy agendas. The diverse programme covered cross-cutting themes around research into policy impact, Southern research capacity-building and policy engagement, as well as focusing on the critical research areas of gender and poverty, education and responding to global health threats. Two thirds of attendees were from the Global South, and attendees included a range of organisations including the Sustainable Livelihoods Organisation, Uganda National Association of the Deaf, Nepal Peacebuilding Initiative, Swiss Resource Centre and Consultancies for Development, Action Aid, UNRISD, African Centre for Technology Studies, Human Sciences Research Council, Wellcome Trust and UK Collaborative on Development Sciences, as well as both ESRC and DFID. A report of the event and a series of associated blogs and short films have been published and are available via www.theimpactinitiative.net.[38]
20. Accessing cheap sustainable energy

A research collaboration funded by the ESRC, DFID, Engineering and Physical Sciences Research Council and the Scottish Government has increased access to alternative energy in developing nations and improved the lives of 250,000 people. By supporting a more resilient and accessible bioenergy industry, PISCES (Policy Innovation Systems for Clean Energy Security) has enriched the livelihoods of people in Kenya, India, Sri Lanka and Tanzania. PISCES enabled the distribution and use of 30,000 gasifier stoves in Tanzania by supporting design and production of a cleaner and more efficient stove technology. The initiative reached an estimated 180,000 people. PISCES created bioenergy Policy Working Groups in Kenya and Tanzania. The Kenyan Policy Working Group played a key role in writing the National Biofuel Policy, which has since been integrated into the draft Kenya Energy Policy. Research evidence from PISCES has since fed into new research on solar energy markets in India and sub-Saharan Africa.

21. The health impact of human trafficking

Previously there was strikingly little attention to the serious and often long-term physical and psychological damage suffered by victims of human trafficking. Over the last two decades Dr Cathy Zimmerman’s research has revealed the wide range of abuses, confinement and deprivation experienced by trafficking victims and the impact on health and wellbeing.

Her work has shaped international policy in key institutions, including the US State Department, the World Health Organization, the United Nations Office for Drugs and Crime, the International Organization for Migration, the UK Home Office and the US Agency for International Development. Health provider training materials developed by Dr Zimmerman with colleagues at the International Organization for Migration have been used in over 155 countries. Guidance on health, ethics and safety of trafficking victims has been translated into a dozen languages and used by international organisations, governments, law enforcement, healthcare providers and support services globally – gaining tens of thousands of website views.
Social science shapes policy and practice

Our research plays a major role in informing government policy, from welfare and benefits to health and education. It also ensures that we understand how markets and social attitudes influence the application of science and technology. It is social science that helps understand people’s behaviours and identifies potential interventions for behavioural change, influencing the development of policies that gain the trust of governments, business and the public. We are working with policymakers and parliamentarians across the UK and the devolved nations to ensure research and researchers are accessible. Given our remit, research funded by the ESRC is much more influential in influencing policy compared to research funded by other UK Research Councils (case studies 22-25). Fifteen per cent of ESRC-funded research grants have recorded in researchfish® at least one instance of policy influence within five years of the start date.

What Works Centres
Social science encompasses the interests of all government departments and all sectors of the economy, and high-quality social science research has always been an important source of evidence to inform policymaking, effective delivery of public services and professional practice in areas such as

22. Support against adolescent to parent violence
Until Dr Rachel Condry’s three-year ESRC-funded research project highlighted the problem, adolescent to parent violence was a hidden form of family violence with mothers in particular suffering in silence. Her research prompted the first formal government policy recognition of adolescent to parent violence, and a collaboration with the Home Office and Youth Justice Board led to the 2015 government guidance and advice for professionals working within health, education, social care, housing, policing and youth justice.

The policy guidance and research findings are now being used to inform the training and practice of thousands of practitioners, as well as providing guidance for housing providers nationwide in cases of disruptive behaviour and potential family evictions.

23. The Talent Toolbox – YES Futures
Yes Futures specialises in extra-curricular personal development programmes, improving young people’s confidence, resilience and access to successful futures. Through the ESRC-supported Project Oracle a student researcher was funded at Yes Futures. Anna Reshetilova helped them to take forward their evaluation in much more detail. She brought the reasoning, knowledge and analytical skills at a critical point. This work enabled Yes Futures to develop ‘The Talent Toolbox’ – a tool that measures confidence, resilience and self-esteem in young people. Following the completion of the research placement Yes Futures went on to win the 2015 Project Oracle Evidence Competition.

The innovative ‘Talent Toolbox’ was awarded a grant to further develop an online version which will help expand its use. Due to significant interest in the ‘Talent Toolbox’ and in Yes Futures’ innovative approach to evaluation Yes Futures established a regular ‘Soft Skills Forum’ to discuss new approaches to measuring soft skills.

24. Protecting and empowering children online
Children’s use of the internet has rapidly increased, transforming their access to information, global participation and learning tools – but also introducing new threats to personal safety. The project UK Children Go Online was the first large-scale study on the potential risks and benefits of online use for children, looking at how 9-19 year-olds access and use the internet.

Findings from the project led to the establishment of the UK Council for Child Internet Safety and informed UK’s first Child Online Safety Strategy, introducing e-safety as a topic in the curriculum. The EU Kids Online project expanded the research across Europe, and led to the EU ‘Safer Social Networking Principles’ in 2009. Professor Sonia Livingstone’s research has also led to changes in service providers’ privacy practices and highlighted children’s digital rights worldwide through the UNICEF-funded Global Kids Online project.
25. Changing the policy mindset on cycling

Despite government encouragement, and unquestionable economic, health and social benefits, relatively few British people have been getting on their bikes. Starting with her 2010-11 ESRC-funded research project into cycling cultures, Dr Rachel Aldred set out to investigate why. Over the past six years she has played a pivotal role in promoting cycling-friendly planning and policy to transport decision-makers, policymakers and the public.

Dr Aldred’s research has had direct impact on cycling policy in London and beyond, improving guidance for designing cycling infrastructure in London and leading to the creation of ‘cycle superhighways’ with segregated cycle tracks. She has introduced cycling ‘near misses’ police reporting, and helped develop the online Propensity to Cycle Tool to support transport planners and policymakers in deciding where cycling has the greatest growth potential. As recognition of these achievements Dr Aldred received the ESRC’s Celebrating Impact Prize 2016 for Outstanding Impact in Public Policy.

What Works Scotland (WWS) aims to improve the way local areas in Scotland use evidence to make decisions about public service development and reform. The Scottish Government, NHS, local councils and other publicly audited organisations in Scotland spend £40 billion annually on public services. The Scotland Acts of 2012 and 2016 provide new financial powers that will enable greater policy choices over tax and spending and more control over public finances. WWS designed the process, and brokered and facilitated relationships both within and across Community Planning Partnerships. In addition, the initiative provided research skills development; project management for the Community Action Research (CAR) teams, capacity-building support for managers, facilitation skills and advocacy. WWS are supporting practitioners across Scotland to redesign and improve public service delivery using the CAR methodology. This has previously been tried in public policy partnerships in England, but is now being used for the first time in complex multi-agency partnerships. WWS engagement has enabled building of relationships, co-working between groups of officers, as well as aiding new relationships across Community Planning Partnerships, including the third sector. The staff have also been instrumental in reviewing and generating evidence along with service redesign, showing what can have negative impacts on partnership working when public services undergo such changes.
Embedding social science in the Parliamentary Office of Science and Technology

Since 2013 we have been supporting a Social Science Section to embed social science expertise into the working practices of the Parliamentary Office of Science and Technology (POST). The aim is to provide parliamentarians with more access to social science expertise and demonstrate the relevance and value of social science research and methodologies to Parliament.

Through this long-standing collaboration ESRC and POST have:

• Contributed to over 100 peer-reviewed briefings for parliamentarians (POSTnotes), including Designing a Circular Economy (2016) and Electronic Cigarettes (2016).


• Provided social science research and expertise to 16 Select Committees across the Commons and Lords, many of which had never engaged with POST before, such as the Commons Community and Local Government Select Committee.

• Supported the Administration Committee in undertaking qualitative research to understand better the needs of Members and their staff and evaluate House services, eg, a project on Women’s experience in Parliament (2015) and identified some practical improvements that could be made by the House administration.

• Led the development of on-demand briefings for Members as part of a pilot scheme for MP’s Professional Development, which received excellent feedback. Next steps are being considered by the Administration Committee as part of the 2016 inquiry on Election Planning and Services.
## Metrics

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<tr>
<td>of which Public</td>
<td>%</td>
<td>3</td>
<td>37</td>
<td>20</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>of which Third sector</td>
<td>%</td>
<td>5</td>
<td>26</td>
<td>30</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>of which Academic sector</td>
<td>%</td>
<td>90</td>
<td>24</td>
<td>6</td>
<td>54</td>
<td>39</td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURE</strong></td>
<td>£m</td>
<td>213</td>
<td>204</td>
<td>229</td>
<td>232</td>
<td>216</td>
</tr>
<tr>
<td>of which Research</td>
<td>£m</td>
<td>44</td>
<td>48</td>
<td>47</td>
<td>43</td>
<td>40</td>
</tr>
<tr>
<td>of which Training</td>
<td>£m</td>
<td>61</td>
<td>55</td>
<td>53</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td>of which other components i</td>
<td>£m</td>
<td>108</td>
<td>101</td>
<td>129</td>
<td>142</td>
<td>131</td>
</tr>
<tr>
<td>of which Research</td>
<td>%</td>
<td>21</td>
<td>24</td>
<td>21</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>of which Training</td>
<td>%</td>
<td>29</td>
<td>27</td>
<td>23</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>of which other components</td>
<td>%</td>
<td>51</td>
<td>50</td>
<td>56</td>
<td>61</td>
<td>61</td>
</tr>
<tr>
<td><strong>HUMAN CAPITAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principal Investigators</td>
<td>#</td>
<td>819</td>
<td>689</td>
<td>769</td>
<td>858</td>
<td>864</td>
</tr>
<tr>
<td>Research Fellowships</td>
<td>#</td>
<td>158</td>
<td>121</td>
<td>73</td>
<td>52</td>
<td>29</td>
</tr>
<tr>
<td>Number of Principal Investigators and Co-Investigators on research grants*</td>
<td>#</td>
<td>1954</td>
<td>1640</td>
<td>1957</td>
<td>2285</td>
<td>2423</td>
</tr>
<tr>
<td>Number of RIs (incl. Independent Research Organisations)*</td>
<td>#</td>
<td>261</td>
<td>258</td>
<td>316</td>
<td>368</td>
<td>429</td>
</tr>
<tr>
<td><strong>POSTGRADUATES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of new PhD Students Supported</td>
<td>#</td>
<td>645</td>
<td>753</td>
<td>770</td>
<td>793</td>
<td>814</td>
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</table>

### HUMAN CAPITAL – Postgraduates

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctoral submission rate</td>
<td>%</td>
<td>83</td>
<td>73</td>
<td>74</td>
<td>76</td>
<td>77</td>
</tr>
<tr>
<td>Destinations of leavers</td>
<td>#</td>
<td>206</td>
<td>335</td>
<td>358</td>
<td>415</td>
<td>422</td>
</tr>
<tr>
<td>of which University</td>
<td>%</td>
<td>68</td>
<td>60</td>
<td>58</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>of which Wider Public Sector</td>
<td>%</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>of which Private Sector</td>
<td>%</td>
<td>7</td>
<td>10</td>
<td>9</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>of which Unknown or Other</td>
<td>%</td>
<td>9</td>
<td>18</td>
<td>19</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>of which Unemployed</td>
<td>%</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

* Of which Strategic & Collaborative was the largest component.
## COLLABORATIONS, PARTNERSHIPS AND SECONDMENTS

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instances of collaborations and partnerships reported at point of applications*</td>
<td>#</td>
<td>111</td>
<td>274</td>
<td>254</td>
<td>311</td>
<td>187</td>
</tr>
<tr>
<td>% of awards reporting at least one partner organisation*</td>
<td>%</td>
<td>19</td>
<td>32</td>
<td>25</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>Instances of new partners attached to collaborations reported in researchfish®</td>
<td>#</td>
<td>213</td>
<td>393</td>
<td>717</td>
<td>696</td>
<td>660</td>
</tr>
<tr>
<td>Instances of new collaborations reported in researchfish®</td>
<td>#</td>
<td>196</td>
<td>277</td>
<td>478</td>
<td>429</td>
<td>432</td>
</tr>
<tr>
<td>Instances of secondments reported in researchfish®</td>
<td>#</td>
<td>38</td>
<td>70</td>
<td>102</td>
<td>160</td>
<td>135</td>
</tr>
</tbody>
</table>

## KNOWLEDGE GENERATION

### PUBLICATIONS:

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of journal articles</td>
<td>#</td>
<td>2940</td>
<td>3036</td>
<td>3402</td>
<td>2909</td>
<td>2692</td>
</tr>
<tr>
<td>Number of books</td>
<td>#</td>
<td>207</td>
<td>208</td>
<td>234</td>
<td>199</td>
<td>167</td>
</tr>
<tr>
<td>Number of book chapters</td>
<td>#</td>
<td>618</td>
<td>533</td>
<td>533</td>
<td>486</td>
<td>464</td>
</tr>
<tr>
<td>Number of awards which gave rise to at least one publication within five years of award start date*</td>
<td>#</td>
<td>471</td>
<td>504</td>
<td>468</td>
<td>422</td>
<td>367</td>
</tr>
<tr>
<td>Proportion of awards which gave rise to at least one publication within five years of award start date*</td>
<td>%</td>
<td>64</td>
<td>71</td>
<td>79</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>Number of instances of IP reported*</td>
<td>#</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Number of spin-outs/start-ups*</td>
<td>#</td>
<td>NA</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Number of awards with at least one instance of policy influence within five years of the start date</td>
<td>#</td>
<td>12</td>
<td>31</td>
<td>30</td>
<td>49</td>
<td>68</td>
</tr>
<tr>
<td>Proportion of awards with at least one instance of policy influence within five years of the start date</td>
<td>%</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Instances of artistic and creative outputs</td>
<td>#</td>
<td>63</td>
<td>68</td>
<td>98</td>
<td>117</td>
<td>107</td>
</tr>
<tr>
<td>Instances of research databases and models reported</td>
<td>#</td>
<td>39</td>
<td>60</td>
<td>54</td>
<td>76</td>
<td>71</td>
</tr>
<tr>
<td>Instances of software and technical products reported</td>
<td>#</td>
<td>8</td>
<td>19</td>
<td>20</td>
<td>31</td>
<td>58</td>
</tr>
<tr>
<td>Instances of research tools and methods reported</td>
<td>#</td>
<td>7</td>
<td>15</td>
<td>25</td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td>Instances of medical products, interventions and clinical trials</td>
<td>#</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>14</td>
<td>2</td>
</tr>
</tbody>
</table>

## OTHER OUTPUTS

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2011/12</th>
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<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of awards with at least one instance of further funding within five years of the start date</td>
<td>#</td>
<td>24</td>
<td>45</td>
<td>81</td>
<td>72</td>
<td>96</td>
</tr>
<tr>
<td>Proportion of awards with at least one instance of further funding within five years of the start date</td>
<td>%</td>
<td>3</td>
<td>6</td>
<td>14</td>
<td>14</td>
<td>22</td>
</tr>
</tbody>
</table>

## ENGAGEMENT ACTIVITIES

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of awards with at least one instance of engagement within five years of the start date</td>
<td>#</td>
<td>181</td>
<td>223</td>
<td>235</td>
<td>254</td>
<td>244</td>
</tr>
<tr>
<td>Proportion of awards with at least one instance of engagement within five years of the start date</td>
<td>%</td>
<td>25</td>
<td>32</td>
<td>39</td>
<td>50</td>
<td>55</td>
</tr>
</tbody>
</table>

## OPTIONAL METRICS (NON-RCUK HARMONISED)

<table>
<thead>
<tr>
<th>Category/Metric</th>
<th>Units</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of usage of ESRC research resourcesii:</td>
<td>#</td>
<td>20635</td>
<td>24771</td>
<td>22021</td>
<td>21831</td>
<td>21670</td>
</tr>
<tr>
<td>Datasets delivered</td>
<td>#</td>
<td>61081</td>
<td>58568</td>
<td>73171</td>
<td>77404</td>
<td>78316</td>
</tr>
<tr>
<td>Number of researchers trained in media/PE skills</td>
<td>#</td>
<td>171</td>
<td>154</td>
<td>217</td>
<td>116</td>
<td>129</td>
</tr>
</tbody>
</table>

---

ii. This indicator is not part of the Research Council Common Indicators Framework. Active registered users able to access the datasets available from the ESRC’s principal data facility, the UKDS; the figure is based on a ‘snapshot’ as recorded on 31 March 2016 rather than an annual average. The number of unique datasets delivered is an annual total. Data sourced from latest DISAC report (UKDS Annual Report).
Notes on common indicators data

Introduction
The Research Councils have agreed a revised set of common indicators on performance with the Department of Business, Energy and Industrial Strategy. These indicators draw on information from grants databases and the researchfish® system.

researchfish® is an online system, supported by Researchfish Ltd and used to collect information on the outputs, outcomes and impact of Research Council-funded research. Researchers are asked to record these data all year-round and, once a year, to formally submit this information.

Notes on common indicators data
The outcomes data included in the common indicators are not static. Researchers can enter data retrospectively, which may result in changes to individual indicators in subsequent Impact Reports.

ESRC has used the researchfish® system for outcomes collection since 2014. As such, data for earlier years may not be complete.

A particular output, for example a publication or a collaboration, might have arisen from more than one award. In this report a particular output is always reported against each individual award where the unit of analysis is at the award level (for example the number of instances or distribution of activity). Duplicate outputs are removed, where possible, in analyses at the level of the type of output generated. Duplicate outputs are removed using system-generated codes to indicate when a researcher has attributed an output to more than one award. This cannot identify duplicate outputs where researchers have entered similar information independently of one another.

Percentages in this report are rounded up or down to the nearest whole number and so some may appear as zero if this represents less than half of one per cent.

Additional information on individual indicators is provided below. In general, information is only provided for indicators that are new or revised for the 2015/16 Impact Report. Please note that the common outcomes indicators have been expanded to include a wider variety of outcome types beyond publication, spin-outs and intellectual property. The Common Question Set used by researchfish® is available from the researchfish website (www.researchfish.com).

Notes on individual common indicators
Total funds available
Total additional funds leveraged by projects: This indicator reports the cash and in-kind contributions from partner organisations that were listed on the original research proposal. It does not include any further leverage funding that may have arisen during the course of the award. It does not include additional funding leveraged by Research Council Centres, Institutes, and other intramural investments.

Total expenditure
Total Expenditure: Research expenditure: This indicator reports all research expenditure. In previous Impact Reports, this indicator was referred to as ‘responsive mode expenditure’.

Human capital
Number of Principal Investigators (PI): This indicator has now been standardised across Research Councils to report the number of PIs supported on research grants on the 1 April of each reporting year. It excludes PIs supported through intramural investments, unless they are in receipt of a research grant.

Number of Research Fellows: This indicator has now been standardised across Research Councils to report the number of Research Fellows supported on the 1 April of each reporting year. This number is additional to the number of PIs.

Number of PIs and Co-Investigators on research grants: This indicator reports the number of PIs and Co-Is supported on research grants on the 1 April of each reporting year. It excludes PIs and Co-Is supported through intramural investments, unless they are in receipt of a research grant. This indicator also includes the number of Research Organisations (including Independent Research Organisations) where these PIs and Co-Is are located.

Postgraduate Destinations: The destination of leavers data is drawn from the Higher Education Statistics Agency Destination of Leavers from Higher Education (DLHE) dataset. All Research Councils now use a harmonised set of categories for this indicator.

Collaborations, partnerships and secondments
Instances of collaborations: This indicator relates to collaborations reported within the research proposal at the point of application. It includes the proportion of awards (expressed as a percentage) reporting at least one partner organisation at the point of application.

Instances of new collaborations: This indicator relates to new collaborations as reported within researchfish®. Collaborations are only included in the indicator for the first year that they were reported, but may continue for several years after this date. Researchers may also report collaborations that were in place at the point of application.

Instances of secondments: This indicator relates to secondments as reported within researchfish®. Secondments are only included in the indicator for the first year that they were reported, but may continue for several years after this date.
Knowledge generation

Instances of publications: A publication may have arisen from more than one award. Duplicate publication outputs are removed, where possible, using system-generated codes to indicate when an individual researcher has attributed an output to more than one award. This cannot identify duplicate outputs where different researchers have entered similar information independently of one another. It is not feasible to calculate the precise number of unique publications as some publications/publication types do not have unique identifiers (e.g., a Digital Object Identifier, a PubMed ID). The indicator is intended to provide information on the trends over time, rather than a precise measure of total publication output.

Instances of artistic and creative outputs: Some of the data within researchfish® do not have an associated time stamp. For ESRC, there are two instances of artistic and creative outputs which do not include a time stamp and which are therefore excluded from the common indicators. This represents zero per cent of the artistic and creative outputs data within researchfish®.

Instances of research databases and models: Some of the data within researchfish® do not have an associated time stamp. For ESRC, there are 283 instances of research databases and models which do not include a time stamp and which are therefore excluded from the common indicators. This represents 37 per cent of the research databases and models data within researchfish®.

Instances of software and technical products: Some of the data within researchfish® do not have an associated time stamp. For ESRC, there are no instances of software and technical products which do not include a time stamp and which are therefore excluded from the common indicators. This represents zero per cent of the software and technical products data within researchfish®.

Instances of research tools and methods: Some of the data within researchfish® do not have an associated time stamp. For ESRC, there are 49 instances of research tools and methods which do not include a time stamp and which are therefore excluded from the common indicators. This represents 25 per cent of the research tools and methods products data within researchfish®.

Intellectual property

Instances of intellectual property: This indicator includes patents, copyrights and trademarks. Some of the data within researchfish® do not have an associated time stamp. For ESRC, there are two instances of intellectual property which do not include a time stamp and which are therefore excluded from the common indicators. This represents nine per cent of the intellectual property data within researchfish®.

Spin-outs

Instances of spin-outs / start-ups: Within researchfish® researchers are asked to provide details of links between their research and the establishment, development or growth of new private sector organisations, including for profit and not-for-profit organisations. Supplemental information was used to identify duplicate spin-out companies where available (e.g., Companies House IDs for UK companies).

Further funding

Number/proportion of awards with further funding: This indicator includes further funding to continue or develop the research, or to support the translation of outcomes into practical application. This includes further funding from Research Councils and other funders.

Engagement activities

Number/proportion of awards with engagement activities: Researchers engage with a wide variety of audiences and stakeholders to communicate research outcomes, disseminate knowledge, stimulate public awareness, and encourage public engagement and dialogue. The engagement activities indicator helps demonstrate the extent to which researchers are engaging with audiences outside academia.

Influence on policy and practice:

Number/proportion of awards with policy influence: Research may be used to inform policy and practice, which may subsequently lead to wider societal and economic benefit. The influence on policy and practice indicator helps demonstrate the extent to which researchers are informing decision-making within government departments and elsewhere.
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5. Preparing flood insurance for climate change

6. Improving English learning for millions

7. Cutting costs with white street lighting

8. Local jobs boost from partnering with business

9. Smarter travel
   www.esrc.ac.uk/news-events-and-publications/impact-case-studies/opening-up-census-data-for-research/

10. Underpinning plans to prevent obesity

11. Unlocking administrative data
    blog.esrc.ac.uk/2016/09/26/dreaming-about-legislative-change-an-opportunity-for-data-driven-research-that-must-be-seized/

12. A new Data Service in India

13. Changing open data policy

14. New e-learning improves mental health support

15. Inspiring new explorers with tales from the field

16. Ebola response with local engagement

17. Improving primary children’s reading comprehension

18. Capacity building in Liberia — changing access for disabled people

19. The mobile app supporting Kenyan healthcare

20. Accessing cheap sustainable energy

21. The health impact of human trafficking

22. Support against adolescent to parent violence

23. The Talent Toolbox – YES Futures

24. Protecting and empowering children online

25. Changing the policy mindset on cycling
    www.esrc.ac.uk/news-events-and-publications/impact-case-studies/changing-the-policy-mindset-on-cycling/