Department for Business Innovation & Skills

RESEARCH

BIS RESEARCH PAPER NO. 185

BIS Research Strategy 2014-15

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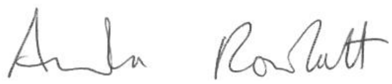
Foreword

I am delighted to introduce the Department for Business, Innovation and Skills (BIS) Research Strategy for 2014-15. We are committed to using robust evidence to support the development, implementation, monitoring and evaluation of our policy.

We stay in touch with new research and work with researchers in a range of ways to make sure that our evidence base and policy analysis is top quality. This research strategy outlines how we do this, and summarises our key research interests. We hope that it is helpful, and that it encourages more researchers to engage with our research agenda.

I am very grateful to the many staff from across BIS who have contributed to the development of this strategy, and particularly to Anthony Morris, Chris Bryant and Hiroko Plant who have led its production.



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Introduction

1. BIS is responsible for a wide range of policy areas, which include: consumer and competition policies; corporate law; labour market regulations; better regulation policy across Whitehall; adult skills, further and higher education; science and innovation; regional policy, business and sectoral strategies; and trade policy.

2. The Department's aim is to connect people to opportunities across the country, and to make the connections that bring together the right mix of skills and resources to deliver sustainable prosperity. In addition to the Industrial Strategy, the Department has five key objectives. These cover the themes of Enterprise, Skills, Knowledge and Innovation, Markets and Trade.

- **Enterprise:** Making it easier to start and grow businesses in the long term
- **Skills:** Promoting more opportunities for individuals in realising their potential
- **Knowledge and Innovation:** Promoting excellent universities and research and increased business innovation
- **Markets:** Creating markets that serve businesses' and consumers' long terms interests
- **Trade:** Supporting UK trade overseas and inward investment

3. To meet these objectives, BIS is strongly committed to using robust evidence to support the development, implementation and evaluation of our policies. This document brings together a high-level overview of BIS research priorities for academics, key stakeholders and other researchers, with the aim of informing stakeholders and starting a dialogue on the main evidence gaps and challenges BIS faces. BIS strives to ensure that it makes the most of the available skills and expertise in the research community and encourages openness in policy making.

4. This document does not provide a comprehensive list of BIS research projects for 2014/15; instead, it focuses on core BIS research priorities where we are keen to engage with the wider research community. It does not include the research priorities for BIS partner organisations, such as the Intellectual Property Office, Office of Manpower Economics, UK Commission for Employment and Skills, the Low Pay Commission, UKTI and ACAS. These bodies have their own research strategies, some of which are published[1][2][3].

[1] https://www.gov.uk/government/publications/invitation-to-tender-for-research-on-low-pay-for-2015-report

[2] http://www.ipo.gov.uk/pro-ipresearch.htm

[3] https://www.gov.uk/government/organisations/office-of-manpower-economics/about/research

Working with BIS

5. BIS possesses one of the largest groups of analysts in Whitehall and draws on the four main analytical professions in government (economics, operational research, statistics and social research). Analysis plays a significant role in the policy making process; for example, research showed that our approach on adult skills between 2003 and 2011 was not delivering as we had hoped. We are now piloting a number of different interventions to find out what works.

6. Most analysts are based in small specialist teams within the policy directorates they support. There are also central teams carrying out more cross-cutting analysis. This mixed model is designed to ensure that BIS analysts are closely integrated within their policy teams, while the central team ensures consistency and undertakes strategic analysis of BIS policies.

7. The work of analysts in BIS includes:

- The use of evidence and analysis to shape future policies such as the Transatlantic Trade and Investment Partnership;
- The appraisal, monitoring and evaluation of BIS policies and programmes, including the Regional Growth Fund and the Trust and Transparency measures;
- Prioritisation of activities based on relative economic impact and value for money at fiscal events (the Budget and Autumn Statement) and Spending Reviews;
- Statistical data collection and analysis, for example on student support and on construction statistics;
- The undertaking and/or commissioning of research to inform policy and augment the evidence base. For example on vocational learning based on face-to-face or blended learning (significant learning elements are delivered by online teaching); and
- Analytical training for non-analysts, such as our series of economics masterclasses for senior policy-makers, and specialist training for analysts to build capacity, which over the next two years will focus on evaluation methods and data analytics.

8. BIS analysts and policy officials work extensively with partners from across academia, research, business, consumers groups, local authorities, trade unions and other stakeholder groups on economic and social research projects. The research these collaborations produce needs to be sufficiently robust and focused to inform the questions facing BIS and timely enough to inform the policy debate, while offering value for money for BIS.

9. The high-quality outputs produced by external organisations are critical to BIS in developing, implementing and evaluating BIS policies and programmes. BIS regularly reviews the academic literature and last year, commissioned around 130 research

projects. There have been a number of excellent examples where BIS and the research community have worked together to produce high-quality and influential research.

Case study: English and maths skills in adults

The 2011 Skills for Life survey[4] reported that 24 per cent of adults aged 16-65 (8.1 million people) lack functional numeracy skills[5] and 15% (5.1 million) lack functional literacy skills.[6] This picture was confirmed by the OECD's International Survey of Adult Skills (ISAS) published in October 2013; England is around the OECD average for adult literacy skills, but is below average for adult numeracy, ranking 17th out of the 24 participating countries. Comparing to the 2003 Skills for Life survey we saw that although literacy had improved slightly, we had made little progress in improving the numeracy skills in the adult population. This has led to a programme of research and evaluation to help us understand what might be the most effective forms of delivering skill gain and retention. Through a Randomised Control Trial linked with a large longitudinal study, we are examining the effectiveness of different modes of learning for English and maths. We are testing for any difference in skill gain between traditional 'face to face' learning and 'blended learning' (where significant elements are delivered via on-line alongside classroom based teaching) and, if there is any difference, the size and direction of the difference. The longitudinal aspect of the study will measure any potential loss of skills over time and whether a lack of use contributes to this.

We are keen to drive up the use of technology in English and maths learning and will be trialling innovative approaches for its use. We will test the impact of mandating, from day one, that 18-21 year old JSA claimants with English and maths skills below Level 2 should take English and maths training that is predominantly blended and online.

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[4] TNS-BMRB and AlphaPlus Consultancy Ltd. (2012), The 2011 Skills for Life survey: a survey of Literacy, Numeracy and ICT Levels in England, BIS research report 81, available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/36000/12-p168-2011-skills-for-life-survey.pdf, accessed on 28/1/14.

[5] Defined as below Entry Level 3 numeracy

[6] Defined as below Level 1 literacy

Examples of established BIS relationships with external researchers

10. BIS officials have a wide range of formal and informal relationships with researchers, including several academic panels. This section outlines some of the most structured arrangements.

11. On 1 January 2013, the Enterprise Research Centre (ERC) was launched to develop the evidence base on SME growth. BIS part funds the centre (alongside ESRC, British Bankers Association and Innovate UK[7]) and the total funding pot is £2.9 million over 3 years. It is an independent research centre which conducts policy-relevant research on SME growth and development. The ERC is a partnership between Warwick Business School, Aston Business School, Imperial College Business School, Strathclyde Business School, Birmingham Business School and De Montfort University.

12. The ERC's Research programme was agreed with funders and covers 6 themes:

- **Entrepreneurial Ambition and Growth:** exploring the relationship between levels of ambition and realised growth, factors influencing growth intentions (Individual, firm level and business environment).

- **Leadership Capability and Growth:** the impact of leadership team composition, what shapes opportunity identification and goal setting, how do firms adapt their strategies and resources to opportunities.

- **Diversity and SME Growth**: factors effecting growth in Black, Asian & Minority Ethnic and women led businesses.

- **Finance and SME Growth:** exploring demand side issues affecting access to finance such as ownership types, firm life cycle, discouraged borrowers and the effect of private equity on growth – a collaboration with the Centre for Management Buy-Out Research.

- **Innovation, Exporting and Growth:** exploring the mutually reinforcing roles innovation and export play in driving growth, firm capabilities to do either and exploring intermittent exporting versus persistent exporting.

- **Business Demography:** understanding the sources of growth, which firms have the most growth potential and what prolific growers do to achieve growth.

13. BIS will be setting up a **Vocational Skills Research Centre**, which will be an independent, virtual, research centre that will also for the first time, bring an analytical and experimental capacity together to improve Vocational Education policy. Our vision is that it will undertake innovative, state of the art analyses of linked administrative datasets and other research data to offer new insights into the different benefits different stakeholders receive from vocational education and how this could be

[7] Previously the Technology Strategy Board (TSB)

improved. The centre will use this insight to create an experimentation programme with the sector to test effectiveness, and then actively disseminate results to influence and improve policy decision-making and adoption at the national and local levels.

14. BIS and the Behavioural Insights Team (BIT) have jointly set up the **Behavioural Insights Research Centre for English and Maths**. The new Centre will apply the latest research from behavioural science to the challenge of motivating adults to improve their English and maths. The Centre will generate and test ideas emerging from the behavioural science literature and make recommendations for policy that are scalable and sustainable. It will conduct a range of randomised controlled trials (RCTs) and other types of evaluation to help answer two critical questions.

- What interventions engage and motivate adults and lead to improvements in the English and maths skills?
- Do improved skills lead to better outcomes in and of themselves or are there other factors and/or characteristics involved?

15. In addition to the frequent contacts that BIS analysts have with individual researchers and research organisations, for the past 6 years BIS has hosted a twice yearly meeting of **HE Stakeholder Bodies** which commission research into HE policy and practice. Currently over 25 organisations are represented including sector bodies such as HEFCE, UUK, HE Academy, OFFA, UCAS, QAA and NUS, charitable organisations such as Sutton Trust and the Nuffield Foundation, and the Devolved Administrations. The purpose of the meetings is not only to discuss recent research findings around key topics but also to share thinking about identified gaps in the evidence base and internal research planning. Organisations also commit to providing an updated list of current research projects. Meetings are also being held with Knowledge and Innovation experts and stakeholder bodies with the same purpose and objectives. A successful meeting was held earlier in the year and another is planned for October.

16. There is a shared recognition that the different organisations have different perspectives on HE and that there is value in different bodies undertaking research on similar topics. However, while the meetings do not aim to develop a single coherent and integrated research plan, over the years a number of collaborative research projects have been identified between different organisations. The meetings have been invaluable in developing the trust, understanding and contacts which have supported a substantial amount of formal and informal networking outside of meetings, allowing organisations to get an early indication of research findings or plans for new projects.

Monthly analytical seminars

17. The BIS Analyst Seminar series is an on-going monthly lunchtime series of seminars for analysts and policy officials from across the Department. Analytical teams organize the seminars, inviting an internal or external speaker(s) to present on a topic related to BIS work.

18. Recent seminars have been on the relationship between graduates and growth; the productivity puzzle; updates on the macroeconomy; research on the immigrant-native earnings gap; and results from the International Survey of Adult Skills.

19. We are keen to widen the community of researchers who present their work to the Department. If you have an interesting research topic that is BIS-relevant and would like to present your study or findings to BIS officials, please contact us (using the details supplied in annex D). Research leads in each policy areas would be happy to discuss this with you.

BIS Statistics

20. BIS collects and publishes national and official statistics on further and higher education, building materials, construction prices and costs, economic performance and employment, innovation and trade union membership[8]. We also carry out analysis using data from the Office for National Statistics, BIS partner organisations such as the Student Loans Company and Skills Funding Agency, and other government and academic sources

Research priorities

21. Going forward, BIS wants to improve and extend these research community links to ensure that future policy decisions are based on the most robust evidence and that we are making best use of scarce economic and social research, whether public or privately funded, within government. As the majority of BIS research is policy relevant, this will help academics demonstrate the impact of their research, which is important under the Research Excellence Framework, the system for assessing the quality of research in UK higher education institutions.

22. This section briefly sets out the main research priorities for BIS for this year by theme[9]. We would be very happy to discuss any of these priorities further with you. Contact details by subject area are provided in annex D.

Industrial Strategy:

- **Industrial Strategy:** This is a key priority for the government and the Department. Our research will seek to extend our understanding of supply chains and skills issues across the UK economy and Industrial Strategy sectors in particular. There will also be greater resource committed this year to measuring the impacts of the Industrial Strategy through the innovative evaluation of programmes such as the Advanced Manufacturing Supply Chain Initiative.

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[8] More information on BIS statistics can be found in Annex E or at: https://www.gov.uk/government/organisations/department-for-business-innovation-skills/about/statistics

[9] Some of the research priorities will cover a number of BIS themes.

- **Low Carbon/Green Economy:** Helping businesses adapt to a low carbon environment is key to future economic success. Our research will be aimed at better understanding the size and extent of the green economy and the impacts on businesses, particularly those which are energy intensive, especially given tighter carbon and environmental limits. Low carbon also includes nuclear energy, and BIS is working with DECC on assessing future systems, including Small Modular Reactors and next generation technologies.

Enterprise:

- **Small Business Survey 2014:** The fieldwork for SBS 2014 will be undertaken during the summer with results expected towards the end of the year. This is a major study of small and medium sized enterprises and is used extensively by BIS and other government departments to inform policy development and monitor the state of the SME sector. The data will also be made accessible to external researchers, with previous surveys providing the basis for several impactful cutting-edge academic papers.

- **Policy Evaluations:** Enterprise Analysis will undertake a number of formative and impact evaluations during 2014/15, the most notable of which is the Growth Vouchers Randomised Controlled Trial. These projects will improve our understanding of how effectively enterprise policies are being delivered and the impact they are having, and will inform future polices. Indeed, BIS leads the way in Whitehall regarding evaluation methods where business is the key unit of analysis.

- **Growth ambition in SMEs:** The project will provide definitive evidence of the effects of different levels of ambition on performance and consider the potential for promoting higher levels of ambition. A related project will innovatively explore the sociology of enterprise, examining how the ambitions and behaviours of small business owners are shaped by their 'mindsets'.

- **Increasing understanding of business awareness and the effects of Common Commencement Dates for regulations:** This project also studies the motivations for business compliance with regulations, to support the studies into alternatives to regulation that have already been conducted across Government.

- **Behavioural Insights for Organisations (especially companies):** BIS is liaising with other government departments to co-fund a literature review into the use of behavioural insights for policy makers to influence the behaviour of organisations. Co-funding will allow BIS to help steer this research, seeking to deliver a cutting-edge toolkit for policy makers.

- **Business views of regulatory delivery:** Enforcement, guidance and inspection impact businesses' view of regulatory burdens. The Better Regulation Delivery Office (BRDO) was founded to improve business experience of front line delivery of regulation. BIS will evaluate best practice programmes to see how far businesses have felt the changes that more joined-up and business-focussed local delivery can bring.

- **A study of management and leadership skills in SMEs**: Underdeveloped management and Leaderships skills are widely considered to be the key constraint on small business performance. However, there is currently no reliable evidence to support this contention. This research will fill this evidence gap by providing rigorous data on management and leadership skills and relating these to the use of management best practices and hard data on firm performance. We expect to publish these findings in November 2014.

- **Growth in Small Businesses:** This project will extend last year's work on the factors affecting growth in micro businesses to small businesses. Amongst other things, this earlier worked showed that most micro businesses are constrained from growing in multiple ways and that there is a widespread tendency for business owners to exaggerate the costs and difficulties involved in seeking growth.

- **The Sociology of Enterprise:** This research is designed to explore why many businesses fail to become more productive and fail to grow despite having the potential to do so. In particular, it is will provide a better understanding of how and to what extent the 'mindsets' of businesses owners shape both their thinking and behaviours. Within this, it will show why many businesses are predisposed to exaggerate the difficulties involved in growth and why many avoid advice and support.

- **Understanding Motivations for Enterprise:** This project explores motivations for entrepreneurship. The research is designed to provide better evidence on the prevalence of 'necessity driven' and 'opportunity driven' entrepreneurship and to show whether and how these different motivations affect the nature of the businesses started and their subsequent performance.

Knowledge and Innovation:

23. This year's research will investigate the impact of the UK's research base and into innovation will address the following questions:

- **Investment:** How should public resources be optimally allocated to support the UK research and innovation system?

- **SME innovation:** How do we unlock our local innovation capacity in the context of helping small and medium enterprises (SMEs) innovate and improving their collaboration with local institutions?

- **Human capital**: How can we best support UK businesses to access the human capital needed to extract maximum commercial and social benefits from science and research in a context of increased global competition for talent?

- **Access to finance:** What is the journey that innovative businesses take with regards to seeking access to finance and how does this compare to the general business population? What type of support do they seek and take and how does this affect their performance? Understanding this will allow us to assess how government can better target support for innovative businesses and help attract additional private sector investment in innovation. This links to work in the British Business Bank and IPO.

- **Local innovation:** What are the local comparative advantages in innovation possessed by Local Enterprise Partnerships (LEPs) across England? To answer this question, we first need to identify which components to innovation have a geographical dimension and what evidence sources we can use to assess any given LEPs position in each area. This is a research priority for local economic and smart specialisation policy.

- **Research spending and performance:** What is the relationship between research spending and research performance? Are there points at which small changes in spending can result in disproportionate changes in research performance? How do we identify these points at research area or industry sector level?

- **Public and private funding:** To what extent does public investment in science, research and innovation attracts R&D investment from private and third sector investors and investors from overseas? How may such investment be categorised and how may policy and funding conditions impact on the level of additional funding secured? What incentives influence the behaviour of science and innovation actors?

- **User-Led Innovation:** Previous research has estimated that millions of pounds of personal resources are dedicated each year to creating new innovations by user-innovators and that this might represent untapped growth potential. BIS are conducting research to understand more about user-led innovators, examining structure of their communities and the barriers that these innovators face in creating new products and in sharing their ideas.

Skills:

24. Research on skills will focus on the following areas:

- **Human capital and growth:** Understanding how human capital development makes a difference to growth at national, business and local labour market level, the links to competiveness and exploring the balance between skill levels and employment levels. Particular elements include understanding employer investment decisions, what drives demand for skills and exploring why particular measures may work in other countries. Understanding what skills make a difference in the labour market and why.

- **Pathways through the labour market and education/training interventions:** Exploring whether youth transitions have changed, how people progress in the workplace and through learning, and whether people can keep their skills updated as jobs change over time. Segmentation of key groups will be the starting point for work to identify which interventions, publicly and privately funded, are most effective for which groups and in what circumstances.

- **Understanding the dynamics of local labour markets:** Skills gaps, growth, how employers engage with skills providers, patterns of provision.

- **Student decision making and the influence of finance:** Participation in Higher Education (HE) has held up well since the 2012 funding changes, however, there are concerns about the cost of the system and impact on part-time, mature and postgraduate students. Studies are proposed to explore how different elements of the support system are viewed and understood by different types of student and which might be most important in influencing participation decisions.

- **The "marginal" student:** Substantial and robust information exists on the average returns for a degree to the individual and the Exchequer. However, there is only limited research on the value of HE to the "marginal" student. Better information about relative returns to Vocational Education (VE) and HE, for different subjects and for different types of student is needed to inform investment decisions for both individuals and government.

- **Understanding differences in HE participation:** Prior attainment has been shown to be a key determinant of an individual's likelihood or participating in HE. However, a variety of analyses have shown that there are substantial differences in HE participation by ethnicity and geographical location which cannot be explained by attainment or other known factors. Depth studies are underway to investigate what appears to drive these differences, and in particular to identify what appears to help individuals make the decision about what form of participation or skills development is right for them, so that appropriate activities or interventions can be developed at individual, local and national levels.

- **Postgraduate study:** The economy is demanding higher skills and individuals are rewarded for obtaining higher skills. However it is possible that barriers within the postgraduate market which affect supply. Work is underway to understand the motivations of mature postgraduate students, with further work required to improve our understanding of the demand for and returns to postgraduates, attitudes to debt and possibilities for funding postgraduate study.

Markets:

- **Pay and performance:** In April 2013, the government passed a package of measures to address widespread concern about the disconnection between pay and performance in the UK's largest listed companies. Research will provide data and assess the impact of these measures.

- **Corporate transparency:** Further research and analysis on corporate ownership and control will be undertaken.

- **Women on boards:** Further analysis and research of this subject area, including in-house academic research into influencing strategies on the number of women on FTSE 100 and FTSE 250 boards.

- **Enforcement of consumer law:** We want to explore the impact of the current arrangements for enforcing consumer law. This will build on previous work on consumer detriment. It will also fit with work on how to prioritise consumer enforcement activity, including across Local Trading Standards Services and at a regional and national level.

- **Consumer empowerment:** This research aims to build a stronger picture about the characteristics and behaviours of different groups of consumers (i.e. a segmentation survey). We will look at consumers' motivation and capacity to engage in different markets, their decision making processes, and the values, beliefs and experiences that underpin these. This research would then aim to identify groups that struggle to achieve the value they need from their transactions; the particular difficulties they face, and the key factors that may help to improve their consumer confidence and empowerment.

- **Prepayments:** We will commence research into consumer detriment from pre-payments (e.g. gift vouchers and deposits) that are lost when a firm enters insolvency, including ways to increase protections available to consumers with pre-payments.

- **Economic regulation:** We are seeking to strengthen our evidence base on how economic regulation in the UK compares with regimes in other countries and across different sectors.

- **Are regulators changing?:** BIS are looking to evidence how regulators are changing in response to the package of measures recently introduced, including the Regulators' Code and Growth Duty. The research will explore, for example, the attitudes of regulatory officers to understand how well high-level organisational policy is being translated into delivery.

- **To promote an effective and fair labour market and to maximise opportunities and minimise exploitation for employee:** We are planning to commission research on pregnancy and maternity-related discrimination, apprentice pay and kinship carers.

- **To ensure that the interests of the UK labour market are fully reflected in European policy making:** We plan to commission research to build up an evidence base on three EU directives (Working Time, Posting Workers and Agency Workers).

- **To keep under review migration patterns and the legislative framework on migration to maintain the optimum balance of opportunity and fairness for both employers and employees in the labour market:** We aim to develop a more comprehensive evidence base to achieve balanced migration that will benefit the UK economy without adverse social and economic consequences.

Trade:

- **Modelling the potential impact on consumers of trade agreements:** To test whether they do lead to wider choice and cheaper goods. It will use a sectoral / case study approach and the aim is for delivery by winter 2014.

- **Modelling the potential impact of a potential Trade in Services Agreement (TISA):** This is needed to demonstrate credible quantified policy benefits, to understand current services barriers and to understand what liberalisation might mean. It can hopefully draw on the recently released OECD services trade restrictiveness index to establish a better guide to the potential barriers facing services and hence the benefits from liberalisation.

- **A study to examine the potential impact on the UK if the EU introduces compulsory country of origin marking (COM) on consumer goods:** This is high priority due to the need to expand the existing evidence and accurately identify the costs to business in time to influence the EU process.

- **Consumer benefits from the European Single Market:** Econometric research into the historical impact of the Single Market on consumer prices (e.g. appliances, clothing).

- **Benefit to non-trading companies from the European Single Market:** an analysis of the impact on UK companies who do not export from the Single Market to provide evidence on the theory that all companies benefit from trade in the form of lower input prices.

- **The scale of integration between goods and services:** In the EU there is an artificial divide in policy making between goods and services, with trade in goods being far more integrated. This research should investigate the link between trade in goods and service inputs over time.

Prosperity right across the country:

- **Spatial analysis of sectors:** This research will look at the size and scale of the Aerospace Maintenance, Repair and Overhaul & Logistics sub-sector in the UK and what growth opportunities are associated with it.

- **Spatial analysis of the labour market:** Local variation in national phenomena – have jobs and population moved out of cities? This research would explore different types of cities over different time periods. The population, jobs, and employment would be looked at to demonstrate whether growth in the great cities has prospered and whether the cities below have suffered. This research would lead to another project on urban labour markets and whether there been resurgence in cities.

- **Further clusters work:** This research would complement our previous cluster work and examine i) the clustering of supply-chains alongside primes; and ii) linkages between non-contiguous clusters in similar sectors - e.g. various offshore wind clusters on the east coast. Do we have good connections between areas of relative strength?

- **High-street/retail research:** There has been a lot of research recently that concerns the policy implications of the high street; however most of it has focused on the state of existing centres, and very little attention has been given to the appropriateness of policy responses to recent trends at a spatial level. This research will examine how different areas have been affected differently by recent trends in the sector and identify four town-centre typologies based on these trends. Then, through studying two LEP areas in detail, it will examine how local and national policy currently interact, and how well aligned local strategies are with recent trends.

Annex A: About BIS

1. The Department for Business, Innovation & Skills (BIS) is the department for economic growth. The Department invests in skills and education to promote trade, boost innovation and help people to start and grow a business. BIS also protects consumers and reduces the impact of regulation.

2. BIS is responsible for:

- working with vocational and higher education providers to give students the skills they need to compete in a global employment market
- supporting innovation and developing the UK's science and research industry, which is important to help economic growth
- making sure consumer law is fair for both consumers and businesses, and that consumers know their rights and are able to use them effectively
- supporting British businesses to increase productivity and compete anywhere in the world
- better regulation - by cutting the amount of regulation and making it easy to understand we can help businesses cut time, save money and be more efficient

3. BIS priorities for 2014 to 2015 include:

- supplying £100 million to universities for long-term research projects
- introducing a new loans system for further education students
- creating a single Manufacturing Advisory Service (MAS) in England to replace the 8 previous regional services
- making the UK one of the fastest and easiest countries in the world to set up a new business
- extending the right to request flexible working and develop a new system of shared parental leave
- ending the culture of 'tick-box' regulation, and instead target inspections on high-risk organisations through co-regulation and improving professional standards
- giving the public and businesses the opportunity to challenge the worst regulations

4. Further details of BIS priorities are provided in the BIS Business Plan[10].

[10] https://www.gov.uk/government/organisations/department-for-business-innovation-skills/about

Annex B: BIS Research Procedures

BIS research and evaluation procurement processes:

1. BIS research and evaluation projects are currently advertised via two routes: Contracts Finder and the BIS Research and Evaluation Framework Agreement.

2. Contracts Finder allows you to search for information about contracts worth over £10,000 with the government and its Agencies. You can use Contracts Finder to search for current contract opportunities; find out what's coming up in the future; and look up details of previous tenders and contracts[11].

3. The BIS Research and Evaluation Framework Agreement was established on 4 January 2012 and will run to 1 January 2016. The framework agreement allows BIS to obtain research and evaluation services from a pre-selected group of service providers. The framework is compliant with EU rules and is accessible to all in the BIS and any other Departments/Agencies that wish to access the service.

4. The framework agreement establishes the terms and conditions under which BIS can enter into contracts for the provision of specified services. It offers high quality research and evaluation service providers within 4 service categories: Economic and Social Impact Assessment and Analysis; Economic and Econometric Forecasting Analysis; Programme and Pilot Evaluation; and Strategic Evaluation.

5. An invitation to tender (ITT) will be produced for research and evaluation projects. The ITT will be the specification detailing the requirements of the project and any relevant special terms such as required completion dates. Potential contractors will be required to submit a bid before the tender closing date.

6. An evaluation panel will be created for projects, which will be responsible for awarding the tender. The panel draws together expertise relevant to the project. The panel will include at least three people and BIS will provide feedback to all unsuccessful bidders, including reasons why they were not successful, in order that they can improve future tender submissions.

Publications principles:

7. It is vital that research conducted for the Department is robust to ensure that the government of the day can make well-informed decisions, leading to better outcomes for society. The government Social Research Service provides five principles on publishing research. A summary of the BIS principles are below[12].

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[11] https://www.gov.uk/contracts-finder

[12] The full report can be found at http://resources.civilservice.gov.uk/wp-content/uploads/2011/09/GSR-Publication-Guidance-29-Jan-2010_tcm6-35775.pdf

Principle 1: The products of government research will be made publicly available

8. The primary purpose of research commissioned and conducted by government is to inform decisions about policy and delivery, but it also plays a role in wider policy debate. The presumption is that products from government research should be made publicly available.

9. The social and economic research papers produced or commissioned by BIS can be found at GOV.UK website. The BIS Analytical Paper series (this series replaced BIS Economics Papers and BIS occasional papers) contains new and/or original research produced internally by BIS, whilst the BIS Research Paper series comprises of reports that have been externally commissioned.

Principle 2: There will be prompt release of all government research

10. Government commissioned research and analysis should be published promptly, with the normal maximum being 12 weeks from agreeing the final draft of the output. Within this period, the timing of the release can coincide with policy announcements/decisions/events. Findings should not be released in such a way as to create a presumed, or actual, advantage to any group or individual.

11. We aim for prompt releases for all our research projects, however, in some rare instances, we will delay publication – this is normally to coincide with government announcements, which ensures that our research receives maximum exposure with the stakeholder community.

Principle 3: BIS research must be released in a way that promotes public trust

12. Research products should be clearly based on the data collected. They should reflect the policies they have been designed to investigate, but findings should not be influenced by political concerns relating to those policies. Research products should be kept clearly distinct from Ministerial views, although their release can be timed to coincide with Ministerial announcements. BIS complies fully with this commitment. In addition, the majority of BIS outputs are externally quality assured (all Impact Assessments are quality assured by the Regulatory Policy Committee and all impact evaluations are peer reviewed by the evaluation peer review group).

Principle 4: Clear communication arrangements will be in place for all products

13. As mentioned, BIS research and evaluation projects are currently advertised via two routes: Contracts Finder and the BIS Research and Evaluation Framework Agreement. In addition, BIS outputs are published on the GOV.UK website.

Principle 5: Responsibility for the release of Government Social Research must be clear

14. The head of profession for Social Research within BIS has both the authority and expertise to make judgements about whether an output falls within the scope of the guidance and is responsible for ensuring the guidance is adhered to.

Annex C: BIS Research Highlights From 2013/14

15. This section provides a brief high-level overview of the main research outputs produced by BIS in 2013/14[13]. This section is broken down into the following themes: Industrial Strategy, Enterprise, Skills, Knowledge and Innovation, Markets, Trade and Prosperity right across the country.

Industrial Strategy:

- **Industrial Strategy:** The Department published key research documents in relation to the potential UK supply chains in the oil & gas (both offshore and onshore fields) and offshore wind sectors and a detailed analysis of the construction supply chain.

- **Low Carbon/Green Economy:** Research was undertaken to measure the size and scale of the UK's green economy. We also commissioned research in relation to longer term impacts on industry of a move to a low carbon environment and a joint study with DECC to consider the technological and economic impediments to the adoption of carbon capture and storage technology by industry.

Enterprise:

- **Data collection:** Core data for key enterprise projects was collected (for example, from Global Entrepreneurship Monitor, Office of National Statistics and Bankshearch) which is needed to monitor and analyse patterns of entrepreneurship.

- **Sponsorship of the Enterprise Research Centre:** This has underpinned the establishment of the Centre and enabled a range of research that complements projects funded directly from the programme to be undertaken. These include: recent research into discouragement from seeking finance.

- **Management and Leadership in Small Businesses:** This project provides data and evidence in management and leadership skills in small businesses. Findings from this study will be available in autumn 2014.

- **Research into Family Businesses:** Research was commissioned to investigate whether family businesses are distinctive from the general business population and whether there is a rationale for targeted support for these businesses.

- **Evaluation of GOV.UK and Helpline:** Ongoing changes to business support policy have created a need for up to date evidence in this area. This study provides an

[13] A full list of recent BIS research publications can be found at https://www.gov.uk/government/collections/bis-research-paper. Older BIS research papers are on the National Archives website.

assessment of businesses support delivered through the GOV.UK website and the telephone based helpline.

- **Understanding Motivation for entrepreneurship:** Research was commissioned to provide more information on the range of motivations for entrepreneurship in England and the key tipping points in establishing a new business.

- **Businesses and their interactions with regulators:** A baseline survey of 600 businesses provided an insight into the nature and extent of interactions, links to business-level growth and to provide a baseline for future evaluation (not yet published)

- **Business Perceptions Survey:** 2,500 businesses across a range of areas relating to perceptions of regulation (not yet published).

- **Consumer Empowerment Toolkit:** A literature review and segmentation analysis to support development of a toolkit to assist local authority regulatory decision-making and selection of interventions to help achieve compliance (not yet published).

- **BRE commissioned survey and interview-based research to better understand the difference between business perceptions of regulation and the view of government:** Government and business classify different things as regulation. By better understanding the perceived concerns of business, government can be smarter in forming regulation.

- **The Attitudes of Regulatory Enforcement Officers:** was jointly investigated by BRE and BRDO with the need to drive growth being promoted within the possible trade-off between enforcement and growth.

- **Impact Assessment Survey:** gathered feedback on Whitehall experience with Impact Assessments and the Regulatory Policy Committee. This is allowing the BRE to better administer the regulatory agenda going forward.

Knowledge and Innovation:

- **International Comparative Performance of the UK research Base:** This report provided key findings on the performance and productivity of the UK's research base. This study shows the UK continues to be one of the leading research nations in the world.

- **Growing the Best and Brightest: The Drivers of Research Excellence**: The report explored which factors, other than the amount of investment, drive research excellence in UK HEIs.

- **Open Access:** This report examined the feasibility of conducting Economic Cost-Benefit Analysis of Open Access public intervention (due to be published in the autumn).

- **Rates of return to investment in science and innovation:** To inform BIS investment decisions, this report provided an update of the literature, performed original econometric analysis and included case study evidence from two key industrial strategy sectors, the aerospace and life sciences sectors.

- **The Case for Public Support for Innovation:** This study set out the barriers to innovation in 24 areas of economic interest, and outlined the rationale for public support for innovation at the sectoral level. This research showed that the work of Government is central to driving innovation in areas of key strategic importance for the UK economy.

- **Big Science and Innovation**: This report examined evidence on the economic and innovation returns from Big Science facilities. It finds high returns from Big Science through innovations of supplier firms, through spin-offs and through the use by non-academics of the infrastructure. Furthermore it finds that there is a significant “local” economic effect from Big Science, in particular through hosting international facilities.

- **Innovation from Big Science: Enhancing Big Science Impact Agenda:** This report looked at the ways in which “Big Science” facilities (i.e. large scientific infrastructure projects such as CERN) create innovation and hence economic impact beyond the “normal” channel of creating new scientific knowledge. The frontier-pushing engineering problems of Big Science leads to significant innovation as high-tech firms compete to solve these problems. Big Science facilities lead to greater international collaboration between scientists. In addition, the facilities provide very valuable services to businesses that they would not otherwise have access to.

Skills:

- **Adult literacy and numeracy skills:** The OECD Survey of Adult Skills shows that England performed around the OECD average in literacy but significantly below the OECD average in numeracy. England ranked joint 11th in literacy and 17th in numeracy out of 24 participating countries. Young adults in England performed worse in the literacy and numeracy assessments than older adults but early analysis appears to show that their skills improve in their early working life. As well as a major programme of research work to test the effectiveness of different forms of training we are working with OECD to identify effective interventions.

- **Tracking the Impact of 24+ Advanced Learning Loans:** Monitored the awareness and understanding of the loans policy amongst providers, learners and Apprenticeship employers. The evidence was used to direct training providers' engagement and understanding, resulting in a significant increase in their readiness.

- **Evaluation of below Level 2 learning:** This study found positive effects on employability, wages, and time on benefits although these were small and captured mainly by Level 1 rather than entry level and by those aged 19-24. The investment in learning provided a positive cost benefit both to the economy and the exchequer.

- **The relationship between graduates and growth:** The research showed that graduates has strong positive impacts on the long-run productivity and economic growth of countries: it was calculated that 1% increase in the share of the workforce with a university degree raises long-run productivity by between 0.2% and 0.5%; for the UK it implies that at least a third of the increase in UK labour productivity between 1994 and 2005 is due to the rising number of people with a university degree.

- **Privately funded providers of HE:** This research provided the first robust estimate of the number and size of private providers of HE in the UK: revealed a sector much larger than previously believed with around 675 providers with an estimated 160,000 students, around half of whom were UK domiciled. Student satisfaction was comparable to public providers.

- **Wider benefits of international students studying in the UK:** This study identified a range of benefits beyond fee income and spending of international students, including economic benefits to the UK (such as additional HE exports, indirect economic benefits, professional networks, personal consumer behaviour, and skilled migration) and non-economic benefits (such as 'informal' UK ambassadors, promoting trust, and UK influence during capacity building); as well as benefits to international graduates and their countries of origin.

- **Exploring student demand for postgraduate study:** This study explored applications for postgraduate study, revealed that there has been a huge growth in demand for taught postgraduate study, with nearly 1.3m applications in 11/12. This growth has largely been driven by non-EU applications which now account for over three quarters of all applications. However, there was some evidence that undergraduate student fees and student debt may have affected demand for postgraduate study from UK domiciled students.

- **Returns to Higher Education:** This research built on previous Departmental estimates of the graduation premium, finding that the net working life benefits for an individual from gaining a first degree compared to 2+ A levels are estimated to be of the order of £165,000 for men, and £250,000 for women, net of tax and other costs, and in today's value. The report also indicated significant returns to the Exchequer; estimated to be of the order of £264,000 for men, and £318,000 for women – these account for tax payments, student loan repayments, grants, etc., and are in today's value.

Markets:

- **Women on boards:** This included analysis on the number of women on the boards of the FTSE 350 companies, forecasted the expected levels of women directors in the FTSE 350, appraised the narrative reports of all the FTSE 100 and a sample of the FTSE 250 companies in terms of their employment diversity policies, and recommended specific government strategies and measures for influencing progress towards the government targets for the number of women on boards

- **Equity investment:** Research into the uses and limitations of the models and metrics used in the UK's equity investment chain to help drive investment decisions.

- **Corporate Transparency:** A company survey on the business impacts of our Trust and Transparency proposals to increase corporate transparency around company ownership and control was undertaken in 2013/14.

- **Consumer Detriment Survey:** Research was undertaken to examine consumer knowledge, capability, and the relationship between consumer empowerment and detriment. The survey provides reliable and robust estimates of the distribution of detriment across the sectors, and detailed information about the outcomes associated with the detriment events.

- **Midata:** The midata innovation lab (MIL) provided a testing ground to develop information protocols and experiment with different ways of using data. The MIL produced a number of case studies outlining the opportunities that midata enables, providing a practical evidence base for organisations, legislators, regulators and consumer groups to better inform decisions and help enable market growth.

- **2011 Workplace Employment Relations Study (WERS):** Since the release of the WERS first findings and raw data at the end of 2012-13 and the book in 2013/14, findings from the study have featured in four Impact Assessments/evaluations; six evidence gathering exercises, including three by Analysis Directorate and the Government Equality Office and DWP and four PQs.

- **2013 Work-life Balance Employers Survey:** This survey has provided a robust baseline data for monitoring/evaluating anticipated legislative initiatives, including the planned extension to the right to request flexible working, a new system of shared parental leave and changes to maternity, paternity and unpaid parental leave. The data will also provide evidence for on-going Impact Assessments.

- **2013 Survey of Employment Tribunal Applications (SETA):** The sixth survey in the SETA series was completed and provided evidence and baseline data to track changes over time, feed into evaluations of existing and future policies relating to employment tribunals; and to help assess the costs and benefits of different options for regulatory change.

Trade:

- **Balance of Competencies Trade & Investment:** A project that examined the rationale and impact of the EU having competency for trade policy, including assessing other potential options and their implications and how independent medium sized countries fare in trade negotiations. This was used to inform the Trade & Investment Balance of Competencies paper.

- **EU Japan Free Trade Agreement:** Investigating industry and expert views on the extent of non-tariff barriers facing the UK financial services & automotive sectors in Japan and whether the FTA would be a realistic means of trying to tackle these barriers.

- **Literature Review of the Impact of Bilateral Investment Treaties:** Further illustrated by case studies considering potential BITs with China and the US.

- **Survey of Small Businesses:** to assess the impact of the bribery act on SMEs.

Prosperity right across the country:

- **High-street/retail research:** This project was undertaken in two stages - the first involved analysing the best available data to examine recent trends and to try and identify typologies of town-centre based on their recent experiences. The second stage was to talk to key stakeholders in two LEP areas in order to examine in detail how their policies, strategies and plans are working to tackle the problems they face in the high-street/retail sector, and how they interact with other policies, strategies and plans of neighbouring areas, and at regional and national level.

- **Liverpool Vision:** BIS commissioned a study to monitor and evaluate the impacts of the International Festival for Business, which held in Liverpool in June 2014. Furthermore, the contractors have produced a report that seeks to draw lessons from this approach for other delivery partners pursuing evaluations of business interventions in their own local areas.

- **Enterprise Research Centre Clusters work:** The aim of this research was to update analysis carried out by the DTI in 2001, by identifying existing clusters, examining the detailed geography of these clusters and highlighting the relative industrial strengths of particular areas. The analysis was reported at LEP level.

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**Head of profession: Operational Research
***Head of profession: Social Research
****Head of profession: Statistics

Annex E: BIS Statistics

The Department for Business, Innovation & Skills (BIS) collects and publishes national and official statistics on further and higher education, building materials, construction prices and costs, economic performance and employment, innovation and trade union membership.

Business population estimates

The Business Population Estimates for the UK and Regions publication provides the only official estimate of the total number of private sector businesses in the UK at the start of each year, with their associated employment and turnover. This differs from other National Statistics outputs produced by the ONS because it provides an estimate of unregistered businesses in addition to the VAT traders and PAYE employers reported on by ONS. It also provides further information by number of employees, legal status, industry and geography.

Construction / Building materials

BIS Construction Market Intelligence has responsibility for the collection, analysis and publication of statistics on the construction sector, which provides the latest information on selected building materials and contains monthly data on price indices, bricks, cement and concrete blocks. It also contains quarterly data on sand and gravel, slate, concrete roofing tiles, ready-mixed concrete and imports and exports of construction products.

Price and cost indices

BIS construction price and cost indices are produced for use in estimating, cost checking and fee negotiation on public sector construction works. The PCIs are published as an online service by Aecom under contract to BIS.

Further education

BIS produces a number statistics on further education. The Department for Education also has responsibility for post-16 education in England.

Higher education

The Higher Education Statistics Agency (HESA) in collaboration with BIS, the Higher Education Funding Councils for England and Wales, the Scottish Funding Council, the Department for Employment and Learning Northern Ireland, and the UK Research Councils produce a number of statistics on higher education. The main publications are:

- Destination of leavers from higher education
- Higher education in the UK
- Staff in higher education institutions

- Higher education student loans
- Higher education student support
- Student support applications
- Participation rates in higher education
- Widening participation in higher education

Innovation

The community innovation survey complements other indicators of innovativeness by providing a regular snapshot of innovation inputs and outputs and the constraints faced by UK businesses in their innovation efforts, across the range of UK industries and business enterprises. It has the additional benefit of providing the basis for some comparisons with other European countries.

Company insolvency

These statistics cover compulsory liquidations, creditors' voluntary liquidations, receiverships, administrations and company voluntary arrangements. The statistics are produced from administrative records from the Insolvency Service and Companies House. These statistics are updated quarterly and have been designated as National Statistics. The statistics cover England and Wales, for which the Insolvency Service has policy responsibility in respect of insolvency; the quarterly statistics additionally include data supplied by the Accountant in Bankruptcy (Scotland) and the Department for Enterprise, Trade and Investment (Northern Ireland).

Individual insolvency

These statistics cover bankruptcies, debt relief orders and individual voluntary arrangements. The statistics are produced from administrative records from the Insolvency Service. These statistics are updated quarterly and have been designated as National Statistics. The statistics cover England and Wales, for which the Insolvency Service has policy responsibility in respect of insolvency; the quarterly statistics additionally include data supplied by the Accountant in Bankruptcy (Scotland) and the Department for Enterprise, Trade and Investment (Northern Ireland). Additional breakdowns for England and Wales by age, gender and location are published annually. Statistics which show the outcomes of individual voluntary arrangements in England and Wales are published annually.

Science, engineering and technology statistics

Science, engineering and technology statistics is a summary of key science, engineering and technology indicators, prepared in collaboration with the Office for National Statistics.

It aims to:

- Provide a historical analysis of the government financing of science, engineering and technology (SET) activities in the UK

- Describe the relationship between the funders and performers of research and development (R&D) in the UK (government, higher education, business enterprise, charities and overseas)

- Report on business enterprise R&D expenditure

- Summarise key data on output and employment of science graduates and postgraduates, and other employment data

- How the UK compares with other G7 countries

Sub-national statistics

BIS produce a range of sub-national statistics or tools.

Regional and sub-regional job estimates

This section provides sub-national estimates of employee jobs broken down by selected industry sectors and public/private sectors.

Regional economic performance indicators

This publication provides information on a number of socio-economic indicators covering the regions and devolved administrations in the UK. It is complimented by a set of continuously updated tables to report the most current data available.

Assisted areas look-up

BIS assisted area postcode checker can be used to provide an indication of whether a postcode in Great Britain is an assisted area as defined for the 2007 to 2013 assisted area map.

Private sector employment indicator

As part of the department's business plan to support the government's agenda to rebalance the economy across sectors and regions, BIS developed an indicator to monitor private sector employment growth in England. This indicator forms part of the performance framework for assessing the impact of the department's policies and reforms. The indicator shows whether, over time, dependency on the private sector for employment is increasing and how this rebalancing varies by region.

Trade union membership

BIS is responsible, with the ONS for publishing the National Statistics on trade union membership. Estimates are presented for the proportion of people in employment who are trade union members in both the United Kingdom and Great Britain, and for employees whose pay and conditions are affected by collective agreements. We also provide trade union densities by age, sex, ethnicity, income, full and part-time employment, sector, nation and region.

This publication available from www.gov.uk/bis

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