Centre for Business Research

Annual Report
Foreword

Because of the uncertainties caused by Brexit and the continued pressure on public funding of university-based research, these are challenging times for British social science. In the CBR we have sought to meet these challenges by diversifying our funding base and exploring new opportunities for research in areas which include the impact of the new digital technologies, the political economy of public health, and the interaction of trade and development. In the past year we gained significant new funding from the ESRC’s Newton Fund, which will enable us to study the fast-growing area of internet-based finance (‘Fintech’) in China and the UK. Research projects on austerity in cities and the health and social impact of IMF structural adjustment programmes made substantial progress, and the CBR’s economic forecasting model, UKMOD, made a major contribution to debates over the likely effects of Brexit. Our socio-legal research on the privacy implications of data sharing was very widely cited and led to significant changes in regulatory practices. Work we carried out for the Cambridge Ahead consortium has improved the understanding of the business environment in and around Cambridge and helped firms and local authorities to plan for the future development of the region. Our research has continued to appear in core journals across several disciplines and through the archiving of our datasets we have supported the principle of open access to publicly-funded research. Our key metrics are improving, in particular in the area of publications in peer-reviewed journals, downloads of our datasets, and views and shares of our blogs and podcasts. I am very grateful for the continuing support of the Centre’s core research and administrative team, our research associates, and the Centre’s Advisory Board and Committee of Management, which have made this success possible.

Simon Deakin
Director, CBR

July 2017
General Overview, Research and Dissemination Highlights

Introduction

The CBR, established in 1994, conducts interdisciplinary, evidence-based research on the determinants of sustainable economic development and growth. CBR research has pioneered new methods of data collection and analysis of enterprise and innovation, novel approaches to macroeconomic modelling, and original datasets tracking legal and regulatory changes and their economic impact over time. Current projects are examining inequality in cities, the effects of IMF structural adjustment policies, macroeconomic projections for the UK economy, social rights and poverty alleviation, law and finance in the BRICS, the role of universities in knowledge exchange, business development in the Cambridge region, and the relationship between contract forms and innovation in construction and infrastructure projects.

The Centre’s areas of specialisation include the construction and analysis of large and complex datasets on SMEs and innovation, longitudinal analysis of regulatory change affecting business firms, and fieldwork-based studies of corporate governance and organisational practice. The Centre has made a significant contribution to the development of research methods and theory in the analysis of law and finance. The Centre’s research is disseminated to and used by managers, policy-makers and regulators in numerous countries.

The CBR is located at 11-12 Trumpington Street in the centre of Cambridge. In 2016-17 the Centre had 18 members of staff, 15 of whom were research staff, and 3 administrative staff.

This report covers the activities of the CBR from 1 August 2016 to 31 July 2017.

Research Achievements and Results in 2016-17: Overview

In the year under review we published 33 papers in refereed journals (up from 24 the year before), several for the first time (these include American Journal of Sociology, Proceedings of the National Academy of Sciences, Health and Technology; BMC Health Services Research and BMC Public Health). Significant new funding was obtained under the ESRC’s Newton Fund to carry out research on informal finance in China, including the rapidly growing area of ‘Fintech’. The CBR ‘leximetric’ datasets were the third most frequently downloaded of the more than 1,000 datasets deposited with Cambridge University’s Apollo Archive. Articles and blogs on data sharing and digital technologies were particularly highly cited, and blogs and podcasts on Brexit, Hinkley Point C, and labour standards research were widely shared.
Impact Highlights: Working with Government, Business and Civil Society

Cambridge Ahead

The CBR is supporting the work of Cambridge Ahead, a group bringing together businesses, local government and academics, aimed at ensuring successful growth of Cambridge and its region in the long-term. The project has developed a unique methodology for analysing business activity and growth on a regional basis. It also provides a means measuring research activity outside the corporate sector. As part of this work CBR researchers have developed the Cambridge Cluster Map, is a ‘big data’ resource on over 20,000 Cambridge-based businesses. It is available as a free-to-access online resource which highlights the vibrancy of the Cambridge technology and life science cluster (http://www.cambridgeahead.co.uk/camclustermap/). The map is refreshed approximately twice a year and is updated with annually. The first update took place at the end of January 2017.

Andy Cosh being interviewed on Cambridge TV in connection with the Cambridge Cluster Map

Labour standards, global supply chains and corporate social responsibility initiatives in emerging markets

In September 2016 a user workshop was held in Cambridge to report research on labour standards by members of the CBR and colleagues from Manchester University the ESRC Rising Powers and Interdependent Futures Research Programme (http://www.blogs.jbs.cam.ac.uk/cbr/labour-standards-and-labour-law-reforms-in-the-rising-powers-trends-and-prospects-in-public-and-private-regulations/). Those taking part included officials from the International Labour Office and Trade Union Advisory Council of the OECD. The workshop heard presentations on global supply chains, corporate social responsibility initiatives, and labour law reform programmes in India and China, and received feedback from the ILO and TUAC officials who took part.

Post-Brexit Options for the UK

On 30 March 2017, shortly after the UK government had given notice of its intention to leave the European Union under Article 50 TEU, the CBR and the Cambridge Public Policy Strategic Research Initiative organised a user workshop with academics, policy makers and representatives of business and civil society, to analyse the institutional and economic options available to the UK in a post-Brexit world (http://www.blogs.jbs.cam.ac.uk/cbr/the-new-legal-and-economic-challenges-facing-the-government-as-the-uk-negotiates-a-brexit-deal/). The workshop heard presentations on the legal background to issues such as the size of the UK’s ‘exit bill’ and the implications for tariffs and regulations of falling back on WTO rules in the event of a ‘hard Brexit’. There was also a
presentation of the latest research on the economic effects of Brexit using the CBR’s forecasting model, UKMOD.

Hinkley Point C Revisited

In April 2014 the CBR and the Cambridge Public Policy Strategic Research Initiative organised a workshop of academics and policy makers to discuss the proposed contract for the construction of the new Hinkley Point C power station. The contract, which was signed in September 2016, is the largest public infrastructure agreement ever concluded by the UK government and raises far-reaching questions concerning energy policy, nuclear security, and commercial risk. Following the conclusion of the contract, the CBR and PPSRI held a follow-up workshop with expert researchers and policy makers including the former Secretary of State for Energy and Climate Change, Mr. Chris Huhne (http://www.blogs.jbs.cam.ac.uk/cbr/hinkley-point-c-revisited/). The workshop heard that fundamental issues around Hinkley Point C remain unresolved, including the nature of the nuclear technology that will be used, and its long-term cost effectiveness given falling prices for alternative sources of energy including renewables.

Dissemination Highlights: Informing Policy Debates

Data-sharing: the Royal Holloway NHS Trust-Google DeepMind deal under scrutiny

CBR researcher in law and computer science, Julia Powles, and her co-author Hal Hodson, carried out a path-breaking study of the a deal in which Google’s artificial intelligence subsidiary, DeepMind, acquired access to sensitive NHS patient records. The arrangement made it possible for Google DeepMind to analyse sensitive information about 1.6 million patients using the Trust’s hospitals each year. The paper, published in the journal *Health and Technology*, questioned whether the necessary patient consents had been given for the use of the data, and argued that there should have been more extensive consultation with agencies including the Information Commissioner’s Office. The article was downloaded over 10,000 times within days of its publication and received extensive media coverage. In response, the ICO initiated an inquiry into the deal, while DeepMind and the Trust replaced the old agreement with a new one. In July 2017 the ICO ruled that the deal breached several of the relevant data protection principles and was a breach patient’s common law rights to confidentiality (https://www.theguardian.com/commentisfree/2017/jul/05/sensitive-health-information-deepmind-google).

Open Access: making data available for re-use by researchers and policy-makers

The CBR’s leximetric datasets use a novel legal coding methodology to track legal changes over time in the areas of labour, company and insolvency law. The datasets have near-global coverage and a significant time span (in the case of the labour law index, 117 countries, representing 95% of world GDP, and 44 years of data, 1970-2013). In 2016 the datasets were made publicly available via the University of Cambridge’s Apollo Data Archive (https://www.repository.cam.ac.uk/handle/1810/256566), having previously been available via the Centre’s own website (https://www.cbr.cam.ac.uk/datasets/). They have been used and/or cited in over 50 studies by third parties, and as of July 2017 they had the third highest number of downloads of the 1,000 or so datasets deposited in the Apollo archive. In November 2016 Simon Deakin gave a talk on the datasets to the OpenConCam 2016 conference, *Building Impact through Openness*, a satellite event for Opencon 2016, a student and early career academic professional conference open access held in Washington, DC. The Cambridge event was dedicated to exploring the potential of open access to assist early career researchers, and there was a lively discussion of the the CBR case study (https://www.youtube.com/channel/UCUz0Zf0Nt52Hjx1y_sKUnQ).
CBR Blogs and Podcasts

The last year has seen extensive development of the CBR blog page, with CBR researchers working closely with the CBR policy adviser, Boni Sones, to prepare blogs and podcasts. The following issues were covered in 2016-17:


Post-Brexit options for the UK: combining legal and economic analysis


The new legal and economic challenges facing the government as the UK negotiates a Brexit deal
Research Highlights: Quality of Research Outputs

CBR researchers aim to publish their research outputs in the leading journals in their respective fields. Highlights of publications in peer-reviewed journals in 2016-17 include outputs in the *Proceedings of the National Academy of Sciences*, the *American Journal of Sociology*, the *Journal of Corporate Finance*, and *Socio-Economic Review*. Since the start of the 2014-20 REF cycle, CBR research has appeared, or is forthcoming, in the following highly-ranked journals:

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<th>Discipline</th>
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<tr>
<td>Sociology</td>
<td>American Journal of Sociology; Socio-Economic Review</td>
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<tr>
<td>Employment relations</td>
<td>International Labour Review; Industrial Law Journal; British Journal of Industrial Relations; Indian Journal of Labour Economics; International Journal of Comparative Labour Law and Industrial Relations; Journal of Industrial Relations</td>
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<tr>
<td>Political Science</td>
<td>Governance: An International Journal of Policy, Administration and Institutions; Regulation and Governance; Review of International Organizations; Development Policy Review; Public Administration</td>
</tr>
<tr>
<td>Public Health</td>
<td>Implementation Science; BMC Health Services Research; Proceedings of the National Academy of Sciences; Social Science &amp; Medicine; Health and Technology; Critical Public Health; BMC Public Health; Health Services Delivery Research; Public Health Reviews; Journal of Health Services Research &amp; Policy</td>
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The contract between the ESRC and the University of Cambridge under which the CBR was established in 1994 specified a number of aims and objectives to be met by the Scientific Programme of the CBR.

Major advances were expected in these areas:

- the analysis of the interrelationships between management strategy, takeovers and business performance in an international competitive context;
- the analysis of the relationship between corporate governance structures, incentives systems, business performance and the regulatory and legal environment;
- the analysis of policy, entrepreneurial styles, innovation, finance, training and international activity and networking and cooperative activity in relation to the survival, growth and development of small and medium-sized firms.

It was expected that in making these advances, the CBR would make a significant contribution to the construction and analysis of large and complex datasets including survey and panel data.

In order to achieve the objectives set out above, the CBR was to carry out the following actions:

- conduct an interdisciplinary research programme in Business Research;
- construct and maintain survey and related databases necessary for the conduct of Business Research;
- mount a series of workshops and seminars in Business Research;
- produce and distribute a Working Paper Series to disseminate the results of the Centre’s research programme;
- maintain contact with researchers in the UK and abroad in cognate areas of research, and with potential users of the output of the Centre’s research, in designing and executing the Centre’s programme of research.

It was also expected that, in making these advances, the CBR would make significant contributions to the following areas: a) economics, b) human geography, c) management and business studies, and d) socio-legal studies.

In its final report as an ESRC-designated research centre (Report on Activities 2002-4), the CBR set out how it had achieved these objectives in the three years prior to the ending of core funding in December 2004. These objectives remained broadly relevant going forward. However, following the ending of core funding, the Centre’s management structure was reorganized to reflect a new focus on the twin themes of Enterprise and Innovation and Corporate Governance. These now correspond to the Centre’s two research programmes. The Centre’s programme structure is kept under review.
2. Project Reports

Cambridge Ahead: The Cambridge Corporate Database and Regional Growth

Project team: Andy Cosh, Anna Bullock, Jocelyn Probert
Project dates: 2014-2018
Funding: Cambridge Ahead, Barclays and the Greater Cambridge Greater Peterborough LEP

This project concerns the modeling of the growth of businesses in the local region and to feed the results into a regional spatial forecasting model. The model will be used by researchers at the Department of Architecture to model infrastructure constraints and solutions for the regional economy. The project has a number of elements which are described below.

Cambridge Growth analysis

The Cambridge Cluster Map

Since the project group’s formation, we have been concerned with establishing an authoritative analysis of the current scale, make-up and growth rate of economic activity in the region, defined by a 20 mile radius around Cambridge. We were commissioned by Cambridge Ahead to create a dashboard to monitor growth in Cambridge using the original Cluster Map created by Sherry Coutu and Trampoline Systems as a starting point. We began by updating and re-verifying the original Cluster Map data, adding in data from sectors outside of high tech and then putting in place curation to keep it up to date. For the first time, there is now a sound and robust measure of the Cambridge economy, and how it is growing, but it should also be possible to wind the clock backwards to see how Cambridge has been growing in the past.

The Cambridge Cluster Map was officially launched in July 2016 and is a dataset of information on over 20,000 businesses in the Cambridge region. Using the new methodology, it specifically monitors the growth of Cambridge-registered companies, in terms of their global turnover and employment, and tracks the number of Cambridge-active companies, and public and charitable sector research organisations.
Cambridge-based companies are those with their primary trading address within this area, or those that do not give a primary trading address but have a registered office in this area. Cambridge-active companies are those who have neither their registered office, nor primary trading address in the Cambridge area but do have a trading address in the area that we have identified, examples being Marks & Spencer and Amazon. Non-corporate Knowledge-intensive (KI) organisations are those research institutions that are located in the defined region which are neither companies, nor partnerships. Examples of these are the British Antarctic Survey, the Wellcome Trust Sanger Institute, and Cambridge University.

The map is refreshed approximately twice a year and will be updated with wholly new data annually. The first update was published at the end of January 2017 and includes data for 2015/16 as well as improved functionality. Read more about the map.

Growth data

Using our unique growth measurement methodology, we have so far produced two consecutive sets of growth data for the Cambridge city region, one in February 2016 and most recently in January 2017. The latter shows that the remarkable growth that we revealed for 2014-15 continued in 2015-16. The data reveals that the growth of Cambridge companies continued at around 7% on a one, three and five-year view. Global turnover of Cambridge companies increased by 7.6% to £35.7bn, up from £33bn the previous year, and global employment grew by 7.6% to 210,292. The number of companies with their home base within 20 miles of Cambridge has grown from 22,017 to 24,580. Over the past five years (2010-11 to 2015-16) the turnover of Cambridge companies has grown by 7.5% p.a., and employment by 6.6% p.a.

Turnover and employment in the life science sector grew by 32.1% and 10.5% respectively in 2015-16, and construction and ICT was also buoyant with the former enjoying growth of 11.8% in employment and 7.2% in turnover. Within the Knowledge-intensive (KI) sector as a whole, turnover grew by 10.5% and employment by 6.8%. KI intensity remains high at 34% of turnover and 29% of employment.

These figures demonstrate the importance of Cambridge, not only to the region, but also the value it offers on a national scale as a net contributor to the UK. As cited by the Centre for Cities, Cambridge was the 3rd fastest-growing city for jobs in the country between 2004 and 2013. Read the full January 2017 Growth press release.
The Greater Cambridge Greater Peterborough LEP

The CBR was commissioned to create a company database for the 14 local authority districts making up the GCGP Local Economic Partnership. This work has been completed and the database includes about 65,000 companies and limited partnerships with their employment and turnover over the last six years. Of these, over 50,000 were alive at the end of the 2015/16 financial year and together represented employment of 440,000 and turnover of £69bn. The analyses carried out examine the sectoral composition and growth of each of the local authority districts.

Economic Forecasting

We are working with the Local Authorities to take their current economic model input data and add local understanding to it by using local business and sector-specific expectations rather than national ones. We need to know what businesses think future growth pressures will be and what their growth might be if those pressures were better managed, in order to prioritise the infrastructure initiatives that will need to be taken. Creating such a bottom-up regional growth forecast has never been attempted before, and we have a great learning curve to get round to do it, but it should be very powerful when completed.

For example Cambridge has, with Marshall and its supply chains, a large aerospace component in its economy so the growth expectations of the aerospace sector will feature strongly in the local forecast. Where this breaks down though is that the national forecasts will be dominated by what Rolls Royce’s and BAe’s growth expectations are, which could be very different from Marshall’s.

A survey of the largest companies in the Cambridge area has been carried out. The survey focuses on three aspects: the connections between the Cambridge companies and the rest of the UK economy; local constraints on their growth; and their estimates of their sector’s growth over the next 5 years. It also asks their opinions about their impact on the economy, government policy and the impacts of Brexit on their growth. This survey will create a bottom-up forecast of how much these companies think their sectors will grow over the next decade. The survey results will also be available shortly.

A further supplementary technical task of comparing the actual and forecasts growth rates of the Councils’ East of England Forecasting Model with the Cambridge Ahead data is also being undertaken.
Downloadable documents:

- Methodology behind the Cluster Map (updated Jan 2017)
- Camclustermap summary tables (Jan 2017)
- Distribution of 2015-16 growth by sectors (Jan 2017)
- Distribution of company size & growth by employee size classes (Jan 2017)
- Cambridge Growth update – 2016 data draw Jan 2017
Academic Survey

Co-investigators: Alan Hughes (Imperial), Michael Kitson (Cambridge), Ammon Salter (Bath).
Research Fellow: Cornelia Lawson (Bath).
Database Support: Anna Bullock (Manager), Robert Hughes (Associate).
Project dates: 2016-17
Funding: EPSRC, ESRC, AHRC, NERC and MRC.

Background

A consortium of BIS, HEFCE, and several research councils (EPSRC, ESRC, AHRC, NERC and MRC) funded this project which repeated the highly successful academic survey research which was directed by Michael Kitson and Alan Hughes in 2009. The original research project was rated as outstanding in the ESRC evaluation process. This new project included co-investigators at Imperial College (Professor Alan Hughes) and at the University of Bath (Dr Cornelia Lawson and Professor Ammon Salter). The project was initially due to be completed by the end of the 2015, however, as described below further funding for additional research was subsequently added and the project was extended to October 2016. Dissemination and publication of survey based research and policy development has continued through 2016-17.

Aims & objectives

With significant changes in the policy landscape for research happening since the 2009 UK-wide survey of academics, there existed a unique window of opportunity for undertaking a new survey as equivalent to the previous survey as possible. The new survey was designed to enable the cross-section comparison between 2015 2009. It also allowed the creation of a panel database consisting of academics who responded to both surveys. This allowed analysis of changes in attitudes towards impact and knowledge exchange in the UK. Although the evaluation of impact in REF and the REF impact database has provided new evidence of a cultural shift and detail on the actions that lead to impact, the repeat of the CBR’s UK-wide survey provides systematic longitudinal evidence on the ‘impact’ of the impact agenda.

Methods

The survey instrument was designed in 2015. A hand collected and cleaned database of the email addresses of over 130,000 academics was constructed as the sample frame. The survey was completed in 2015 with over 18,177 responses. When combined with the 21,598 responses to the 2009 survey this has created the largest ever survey database for the analysis of a higher education sector. The surveys in both years are fully representative of the academic population and contain no significant response biases. In 2016, the original project was augmented in two ways. First, the sponsors agreed to a separate survey of Research Council Institutes. These are directly owned or supported by research councils and their researchers sit outside the normal academic survey sample frame. The survey was designed and completed in 2016 and included over 600 responses (a response rate of over 20 per cent). A report on the findings of this survey was published in November 2016. Second, the ESRC commissioned a specific analysis of social scientists in the main 2015 academic database. This disaggregated analysis was completed in 2016 and a report submitted to and published by the ESRC in 2016.
Results

The analysis of the main survey confirmed the wide range of knowledge exchange activities undertaken by university academics. The changed economic circumstances in 2015 compared to 2009 might have been expected to have resulted in significant falls in these activities since the initial survey took place prior to the financial crisis and the subsequent period of economic austerity. Whilst there were some declines in some pathways, in particular, as might have been expected, those of a more commercial kind (patent and licensing and spin formation), the overall picture was of a sustained range of engagement across all disciplines and all impact pathways. The analysis of the unique panel database of over 4,000 academics who responded to both surveys showed that engagement is a sustained activity, often learned through experience: past engagement encourages future engagement. This has three policy implications. First, training and support for junior academics to learn how to successfully engage with external organisations may help start academics on ‘a pathway to engagement’ early on in their careers. Second, those not engaging are more focused on basic research and are unlikely to start engaging. This suggests the impact agenda may have little effect on those individuals with a research orientation towards basic research and those with little experience in engagement. This may represent an appropriate degree of differentiation and of specialisation in the nature of research motivation and activity. Third, the analysis suggests that most effective route for policy may be to provide measures to sustain the activities of academics who are both predisposed to engagement and are actively involved in it.

Further work based on the nature of knowledge exchange in the survey and its impact has continued. This has focussed on the integration of university and scientific engagement activity into industry value chains and the implications for Science Policy and the new UK Industrial Strategy. In journal publications, submissions to the consultation on the UK Industrial Strategy White Paper and conference presentations it has been argued that the impact of UK public sector research activity and industry engagement requires the identification of the way science based value is captured by UK businesses and the extent to which it accrues in the UK. Value Chains and not sectors technologies or “missions” should be the subject of selective industrial policy support.

Outputs for Academic Survey

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<td>User contacts</td>
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Development of a Stock-Flow Consistent UK Macroeconomic Model for Policy Analysis

Project leaders: Bill Martin; Graham Gudgin.
Project dates: ongoing.

Background

This work, which formed part of the macro component of the UK-IRC Business Services project, follows in the tradition of stock-flow modelling pioneered by the late Professor Wynne Godley. The research is not publicly funded. The modelling is used to inform strategic macroeconomic policy analysis of the UK economy. The work also provides a top-down perspective relevant and complementary to research on the balance of payments, led by Ken Coutts and Bob Rowthorn as part of the Services project. The project has produced numerous outputs since 2007 (see our Annual Reports section for details).

Macro-Economic Forecasting and Policy Analysis for the UK Economy

The project involves a team based at the CBR and at the Ulster University Economic Development Centre (UUEPC) in Belfast. The CBR team consists of Ken Coutts, Graham Gudgin and a PhD student Saite Lu based in development studies and Sydney Sussex College. Colleagues at UUEPC are Professor Neil Gibson and Jordan Buchanan. Dr. Cam Bowie (no affiliation) is also member of the team with special reference to financial forecasting. Work during the year August 2016-July 2017 consisted of three main strands:

1. Maintenance and updating of the CBR macro-economic model of the UK economy (UKMOD). Two rounds of data revision have been completed largely by our colleagues at Ulster University. These were an Autumn 2016 update incorporating the 2015 National Accounts Blue Book data revisions, and a Spring 2017 Provisional Update of 2016 data based on ONS Quarterly estimates and other revised data. Both are major exercises which keep the databases relevant for the most up to date forecast and scenario work. With the revised data, a process of equation revision also took place, as part of a fairly continuous process of model improvement. The UK macro-economic forecasts for 2016 were compared against the 2016 outturn data and also compared with the forecasts on the H M Treasury list of UK Forecasts. Although direct comparisons were not possible with the other UK forecasts which were quarterly (ours are annual), the CBR forecasts published in December 2015 (https://www.cbr.cam.ac.uk/publications/special-reports/) were close to being the most accurate of the 38 reported. We have not published a forecast report in 2017. The uncertainties caused by the Brexit Referendum result mean that short-term forecasts are dominated by somewhat arbitrary assumptions around the impact of Brexit-related uncertainty on business investment and household consumption. We are currently working on an Autumn 2017 forecast report. While Brexit-related uncertainties remain important, there is now a year’s post-referendum data to guide us what the economic impact of the uncertainties are likely to be.
2. Planned work to incorporate the Coutts-Rowthorn UK balance of payments model into the CBR macro-economic model (UKMOD). This will extend and improve the trade section of UKMOD by adding disaggregated export and import flows and allowing a sectoral breakdown of GDP and employment in the model between manufacturing and services. It is intended to take the trade disaggregation further by distinguishing EU and non-EU markets for imports and exports. This work has been delayed from last year due to the gravity-model research reported below. In the context of Brexit, the work is more important than ever and we plan to return to it in the Autumn. Work has proceeded on the major extension of the CBR model to include a financial module (FINMOD) with a range of assets and liabilities for each sector. When completed this will make the model into a full-developed stock-flow consistent system along the lines laid out in Godley and Lavoie’s ‘Monetary Economics’. Assisted by Dr Cam Bowie, we have constructed an outline accounting model and a database of financial assets and liabilities. Initial work has begun to insert a set of behavioral equations into the FINMOD system.

3. A major strand of modelling work involved the construction of a trade database and associated gravity models to estimate the economic impact of the UK leaving the EU Single market and Customs Union in 2019. The work was initiated due to the need to include into UKMOD forecasts an estimate of the long-term impact on trade of leaving the EU. Since we found the published estimates by HM treasury, OECD, IMF and others to be implausible we set out to replicate their gravity model work for trade in goods. This was a major undertaking, involving almost a million data-points on trade plus associated data on GDP etc. The trade data covered 120 countries with annual data for 1948-2016. The gravity model research replicated the Treasury and OECD work, using the entire trade dataset, but also estimated models for subsets of data focusing on the countries of most relevance to UK trade. The key finding was that all of the official studies, except the IMF, used an estimate for the impact of EU membership on goods trade between EU member states which was an average across all 28 EU members. The CBR research found that the impact for the UK exports alone was much smaller than this average. This finding has major implications for beliefs about the economic impact of Brexit and for the UK negotiating strategy in the ongoing Brexit negotiations.

| Outputs for Development of a stock-flow consistent UK macroeconomic model for policy analysis |
|----------------------------------------|----------------|-----------------|----------------|
| Articles in refereed journals         | 10 11          | Working Papers  | 74 75          |
| Datasets created, software written    | 120 121        | Conference papers given | 144 145 146 |
| Media Coverage                        | 204 205 239    | MPhil/PhD Students Supervised | 282       |
IMF Lending and Socio-Economic Development: The Evolution and Consequences of Structural Adjustment, 1985-2014

Project leader: Larry King.
Co-investigators: Alex Kentikelenis, Bernhard Reinsberg, Lori Smith and Thomas Stubbs.
Funding: Cambridge Political Economy Society Trust.

Aims and objectives

The general aim of this project is to develop the definitive assessment of the past 30 years of IMF-supported economic adjustment. The proposed project seeks to examine the evolving character of IMF-supported policies, document in detail country experiences with the IMF, and assess the effects of such policies on selected policy areas.

Despite voluminous literature on the IMF – indeed, recent years have witnessed a rapid proliferation of regression-based studies on the effects of IMF programmes – the organisation's practices remain insufficiently understood. This continuing lack of analytical clarity is a product of two substantial weaknesses in existing research. First, quantitative studies employ a simple dummy variable for IMF participation, despite the fact that IMF programmes vary dramatically in number, type and implementation of mandated policy reforms. Second, these studies are yet to be matched with in-depth case studies documenting how the IMF affects policy space and policy choices of developing countries.

The project seeks to overcome these limitations by utilising a diverse range of sources, including archival data, interviews with stakeholders, and our newly developed data base on IMF conditionality (that is, policy reforms required to obtain funds), to provide an assessment of the organisation. The research will result in a series of journal articles, a book, and a range of impact activities.

Background

After years of decline for its services, the International Monetary Fund (IMF) has recently experienced a revival. New lending has been plentiful, its capital was increased, and high-profile programmes – in Greece, the Ukraine and Tunisia – have placed it at the centre of the policy response to the global financial crisis. In addition, according to the IMF, the organisation has taken on-board criticisms and reformed past practices. For instance, the IMF's Managing Director, Christine Lagarde, recently appeared puzzled by a journalist's question: 'Structural adjustments? That was before my time. I have no idea what it is. We do not do that anymore'.

Given the re-emergence of the IMF as the central institution in directing and managing economic reforms across the globe, there is good reason to probe into these changes, put them in context, provide historical depth, and re-assess the relevant evidence. This project takes on this task, and utilises a mixed-methods approach and a battery of new data to examine three interrelated questions: How has the practice of IMF lending evolved over the past 30 years? What have been the correlates of IMF conditionality? What consequences have IMF programmes had on key issues (e.g. environment or health policy) and selected countries? This project aims to provide a definitive contribution to central debates concerning the IMF in international political economy and development studies.
Progress

The project on has progressed as planned, with a range of research already published and additional outputs in preparation or under review. The initial, agenda-setting piece on this project recently appeared as the lead article of a *Review of International Political Economy* issue, and received wide media attention. The members of the core research team have already produced a range of papers that explore the consequences of structural adjustment programmes on health systems, health outcomes, social expenditures, state capacity, corruption, income inequality and related topics. Several articles have already been published in high-ranking academic journals, including the *Proceedings of the National Academy of Sciences*, *Social Science & Medicine*, and the *Socio-Economic Review*, and additional articles are currently under review.

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<th>Outputs for IMF Lending &amp; Socio-Economic Development: The Evolution &amp; Consequences of Structural Adjustment, 1985-2014</th>
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<td>Articles in refereed Journals</td>
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Regimes of Austerity: Economic Change and the Politics of Contraction

Project leaders: Mia Gray and Betsy Donald.
Co-investigator: Anna Barford
Project dates: 2015-2018
Funding: Cambridge Political Economy Society Trust and British Academy.

Background

This research examines the politics of austerity in British and North American cities as they respond to recession, recovery, fiscal uncertainty, growing economic inequality, and changing policy demands. Over the last twenty years we have witnessed growing inequality within our cities (Walks 2014), a growing list of demands that fall onto local governments, and continued fiscal pressures as the central government pursues austerity policies.

After the 2008 financial crisis, many governments turned to austerity policies to reduce budget deficits by reducing labour costs, privatization, and reconfiguring public services (Whitfield 2014). In many cases, cities were forced to adopt austerity policies to address high levels of public indebtedness absorbed during the heady days of the subprime lending spree (Donald et al. 2014). Many cities around the world are faced with growing responsibilities and demands but without the long-term budgetary certainties that allow them to plan effectively for the long-term.

Aims and objectives

There has been a plethora of analysis of the impacts of the financial crisis and policy responses at the macro-level, but urban-level analysis has been limited (Martin, 2011; Kitson et al. 2011). This research examines the politics of fiscal contraction in British cities as they respond to the global financial crisis, rising inequality, and a changing fiscal policy landscape. To address this topic we propose the following three research objectives:

1. Examine how inequality and the politics around the distribution of public resources have changed at the local level in mid-sized British cities over the last twenty years.

2. Investigate how a city’s economic, demographic and political base can shape the newer politics of austerity.

3. Consider how economic change, inequality and the politics of redistribution inform traditional theories of urban political and economic geography.

Methods

To address these three objectives, we draw on insights from urban political economy. We propose a mixed-methods approach, using quantitative and qualitative research. The quantitative dimension will assess broader trends that may be occurring across British and North American cities, and against which we can benchmark the cities under study. The bulk of the research effort will focus on case studies of selected cities with populations between 350,000 and 500,000.

We will select cities which represent different economic and industrial histories, different institutional contexts, and different current states of economic health and social well-being. Their economies tend to be less complex than their global city counterparts making controlling for variables manageable. These cities, which are at the smaller end of the mid-sized range, are also
understudied and yet the implications of our findings will have relevance to many other cities grappling with similar issues.

**Broader goals**

Our research will advance knowledge in the field of economic change and urban governance. Many theories of urban political economy are built around unchallenged assumptions of growth. In our study, however, while some of our case study cities have continued to experience growth; others are in decline. All of them have had to confront challenging redistribution decisions in particular economic, social and political contexts and have forged new political coalitions around the economics of austerity.

**Progress**

This year we have completed all our field work for the project. We have conducted field research in Cambridge, Great Yarmouth, Norwich, Blackpool, Northampton, Middlesbrough, York and Wakefield. We have just finished our last case studies in late July and will now continue transcribing interviews, analysing data, and triangulating different data sources. We have been exploring the changes of local authority funding of service provision under austerity. We find some councils shifting towards neo-liberal solutions, but other councils actively experimenting with new forms of institutions and governance structures. For example, a number of councils have pursued different forms of trusts, mutuals, wholly-owned for-profit entities which will continue to provide public services, or even sell services to other councils, but are removed from the vagrancies of political power. We also find that each local government’s priorities around services – i.e. which services are protected and the extent of that protection – are affected not so much by the ideological stance of the party in power, but the longevity of a party’s power at the local level. Thus, budgetary spending patterns are connected to power bases which arise from the dominance or decline of local party politics. We are currently working on a number of journal articles for publication, based on this data.

An additional objective, given the subject matter, was to extend knowledge beyond the academy. Gray experimented with expanding public debate around austerity by collaborating with Prof Susan Smith and Menagerie Theatre Company around a piloting a public-engagement play, *The Great Austerity Debate*. See: [https://www.youtube.com/watch?v=k5z3_3wh2oc](https://www.youtube.com/watch?v=k5z3_3wh2oc).

One aim of the play is to offer audiences the tools they need to join a debate that is too often dominated by politicians and bureaucrats. The hope is to encourage greater engagement with topics that are hard to articulate in formal or conventional settings, and to create new channels for information exchange in public affairs. After launching at the Cambridge Festival of Ideas, the play’s first tour was to non-theatre venues in Cambridge, Great Yarmouth, County Durham, Walsall, Norwich and London, in October and November 2016. Performances took place in a church hall, a community centre, a former miners’ reading room, a university lecture theatre and a trade union office: places intimately connected to the everyday life of each locale. After the play was presented, audiences were invited to ‘rewind’, enabling them to guide the characters’ actions and responses, or even to get up on stage in place of (or alongside) the professionals and change the plot. Collaborating with local people in safe, familiar spaces gave audience the confidence to be bold, even daring, in introducing new options and articulating hidden concerns. Every single performance generated a high level of public debate and a host of new ideas. We hope to tour the country with *The Great Austerity Debate* next year.
| Outputs for Regimes of Austerity: Economic Change & the Politics of Contraction | Articles in refereed Journals | 23 | Conference papers given | 143 | Social Media | 238 256 |
Aims & objectives

The aim of this project was to analyse to what extent the quality of legal and other formal institutions has affected financial development and economic growth in the BRIC countries, and whether reliance on informal institutions poses an obstacle to their future growth. The project involved collaboration between the CBR and a number of partner institutions, and was supported by the law firm Clifford Chance. In 2016-17 further funding was obtained via the ESRC Rising Powers and Interdependent Futures research programme to support a number of dissemination activities.

Methods

The project adopted an inter-disciplinary, multi-methods approach, combining quantitative analysis of the extent and nature of correlations between legal and financial development in the countries under review, with qualitative, fieldwork-based research aimed at building up a detailed, micro-institutional account of the perceptions and strategies of actors involved in legal and financial reforms. We used legal and financial datasets to carry out time-series and panel data analysis capable of specifying causal links between legal institutions and economic development in the rising powers and, by way of comparison, in a wider sample of developed and developing countries with over 30 annual observations per country. The fieldwork focused on the role played in each country by the banking sector and capital markets as alternative (or possibly complementary) sources of finance for firms; on how government reconciles or combines its continuing role as owner of financial and industrial
enterprise with its emerging role as regulator of banks and securities markets; and on how firms meet their financing needs.

Results

We constructed new indices of shareholder rights and creditor rights in 30 countries over the period 1990-2013. These new datasets enabled us to measure the global diffusion of laws for the protection of investors and creditors, and to estimate their effects on stock market and credit market development. While the impact of legal convergence was mediated by country-specific effects including local laws and institutions, we did observe some common trends. A key finding is that the strengthening of shareholder rights is associated with a rise in equity values and with increases in stock trading but not in the number of listed companies. Thus a provisional conclusion is that enacting shareholder rights may not be enough on its own to create deeper and more liquid capital markets in developing economies.

We supplemented our econometric work with fieldwork in the four BRIC countries. Each country has a distinct experience but again there are some common trends.

In China our fieldwork led us to be sceptical of the claim that China's recent economic growth is mainly the result of guanxi or interpersonal trust coupled with strong direction from central government. Instead we find increasingly sophisticated use of contracts and growing demand for the rule of law. There is less reliance on guanxi in product markets, in particular in the more economically advanced regions and in developing sectors such as IT.

However, the move towards market-based transacting and transparent pricing is less evident in the case of Chinese financial markets. Chinese stock markets are not regarded as transparent and are dominated by state-owned enterprises. They do not yet provide a reliable source of equity finance for private-sector firms. Start-ups in sectors such as IT tend to rely on family members and angel investors for funding, rather than venture capital or IPOs. However, some of our interviewees expected Chinese stock markets to become more transparent over time.

In Russia we observed a somewhat different picture: there is pent-up demand for the rule of law but less confidence in the legal system, a stronger perception of judicial corruption, and more concern over a 'predatory' state, than in China. At the same time there has been a discernible change in the business environment in Russia since the turbulence of the 1990s. Medium-sized businesses can generally operate successfully as long as they stay 'below the radar' of state officials.

A theme emerging from the Russian research is that western laws and practices cannot be simply imposed in the transition to a market economy. Entrepreneurial freedom and a reduced role for the state do not automatically translate into economic development, but may create the conditions for opportunism and abuse of power. The absence of democratic institutions may undermine otherwise sophisticated market-orientated laws.

The experiences of Brazil and India, both democracies, make for a relevant contrast. In both cases we observe positive effects of legal and corporate governance reforms aimed at promoting transparency in stock markets and encouraging bank-based lending to private sector firms. At the same time, larger enterprises play an important role in the stock market and in the economy as a whole, and convergence on a western model of deep and liquid capital markets is a gradual process.
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Labour Law and Poverty Alleviation in Low- and Middle-Income Countries

Project leader: Simon Deakin.
Research Fellows: Enying Zheng, Parisa Bastani
Researchers: Louise Bishop, Zoe Adams.
Research Associates: Ajit Singh (CBR), Prabirjit Sarkar (Jadavpur University), Ewan McGaughey (King’s College, London), Sanjay Pinto (Cornell and Rutgers Universities).
Project dates: 2013-17.
Funding: ESRC (DFID-ESRC Joint Scheme on Poverty Alleviation); ILO; Cambridge University Humanities Research Grant Scheme.

Aims and objectives

The aim of this project was to understand the role of labour law in alleviating poverty in developing countries, with the focus on four country cases, namely Cambodia, China, India and South Africa. The project was undertaken with the support of the International Labour Office (ILO), which provided advice on access in the case study countries, data support, and policy analysis. It was initially funded by the DFID-ESRC Joint Scheme on Poverty Alleviation (2013-16). In 2015 it received additional funding from the ILO and 2016-17 from the Cambridge University Humanities Research Grant Scheme.

Background

Labour regulation can operate to reduce poverty in two ways: by promoting greater equality of incomes and wealth, and by encouraging the more productive and efficient use of labour resources. A key issue is the effectiveness of labour law regulation in practice. Even if, in principle, labour law rules can serve social and economic goals, they may fail to do so if the capacity of regulatory institutions is limited, if rules lack legitimacy on the ground, or if the laws are ill-suited to economic or social conditions.

Methods

The empirical strategy for addressing these issues was two-fold. The quantitative dimension of the work took the form of econometric analysis of datasets providing data on legal and institutional variables at national and regional level, alongside relevant economic and labour market indicators (GDP, employment, unemployment, productivity, and so on). The qualitative dimension of the work took the form of interviews with actors in the case study countries. These included interviews with legal knowledge and experience (judges, lawyers, politicians, regulators, civil servants, labour inspectors), private-sector firm-level actors (HR and other managers), and actors in civil society (trade unions, NGOs). These two aspects of the study were brought together to provide comparative data on countries with different levels of industrialisation, economic structures and cultural contexts.
Results

We constructed a new dataset coding for changes in labour law in 117 countries over the period 1970 to 2013 (the CBR Labour Regulation Index or ‘CBR-LRI’). The wide reach of the dataset and its decades-long time series make it unique in the field. Its nearest equivalent, the OECD’s Employment Protection Index, codes for a times series only from the mid-1990s, and does not cover working time or most aspects of collective labour law. The CBR-LRI provides data on for five areas of labour regulation (different forms of employment, working time, dismissal, employee representation, and collective action) using a series of original coding algorithms. All codings are precisely sourced to specific laws or regulations.

We then carried out time-series and panel data econometrics in conjunction with the new dataset to estimate the effects of changes in labour laws on economic outcome variables. Exploratory analysis using the pooled mean group regression model suggests that strengthening worker protection generally increases the labour share of national income (after controlling for GDP growth and for differences in institutional quality as proxied by ‘rule of law’ indices). Improvements in employee representation and dismissal protection generally have positive effects on productivity and employment. The picture is more mixed for strike law. Overall the research suggests that worker-protective labour laws can contribute to poverty alleviation both directly, through their impact on distribution, and indirectly, through their effects on growth, but that these effects depend on context and may not be present consistently across all countries.

Qualitative fieldwork was undertaken on the operation of labour laws in MICs and LICs. The Chinese case suggests that legislatively-mandated labour standards can be successfully implemented if there is effective state capacity, but also illustrates the limits of legal strategies in the context of global value chains. The Cambodian, Chinese and South African fieldwork highlighted the importance of labour arbitration systems for providing unions and workers with low-cost access to justice. The Cambodian case illustrated ways in which legislated standards interacted with monitoring by NGOs. The Indian case illustrated the problems that can arise from political deadlock over labour law reform.

A number of methodological advances were made. The project demonstrated the potential of quantitative approaches to the study of legal institutions (‘leximetrics’) to generate new knowledge and opportunities for statistical testing of law-economy interactions. It also demonstrated the value of multiple-methods approaches, combining quantitative and qualitative analysis. In 2017 an updated version of the CBR-LRI dataset was posted on the University of Cambridge Apollo Data Repository, where it is one of the most frequently downloaded datasets. In November 2016 Simon Deakin gave a talk on the dataset to the OpenConCam 2016 conference, *Building Impact through Openness*, [https://www.youtube.com/channel/UCUz0Zf0Nr52HPJx1y_sKUnQ](https://www.youtube.com/channel/UCUz0Zf0Nr52HPJx1y_sKUnQ).

Impacts

In 2015 project findings were used by the International Labour Organization in the preparation of data and reports on global trends in labour regulation and its economic and social effects. This joint work was reported in the ILO’s 2015 World Employment and Social Outlook. In addition, in 2015, Simon Deakin used the dataset to contribute to a discussion on labour law reform organised by leading officials of the European Commission. In 2015-16 the data were made available to the Asian Development Bank for econometric analysis.

During 2015 Simon Deakin used part of the findings in the course of consulting work on labour law reform for the Vietnamese government. This work, connected to reforms of labour dispute
resolution procedures, was presented by Deakin at workshops in Hanoi and Ho Chi Minh City, in March 2015.

In 2016 team members contributed to a discussion of benchmarking of employment protection laws organised by the European Commission and to a workshop at the OECD to discuss proposed reforms to its Jobs Strategy. In 2016 and 2017 they contributed to the deliberations of the European Economic and Social Committee.

In September 2016 a user workshop was held in Cambridge with support from the ESRC Rising Powers and Interdependent Futures Research Programme. The workshop was attended by officials from the International Labour Office and Trade Union Advisory Council of the OECD. At the workshop, there were presentations of results from quantitative research analyzing the CBR-LRI dataset, and from fieldwork in developing countries conducted by the CBR team and by colleagues at the University of Manchester. Case studies explored the interaction of labour laws with private labour standards operating in global supply chains, and investigated the influence of civil society actors and states in the development of private regulatory initiatives and in the framing of discourses on labour standards. A report of the workshop proceedings was placed on the CBR website along with a blog and podcast (http://www.blogs.jbs.cam.ac.uk/cbr/labour-standards-and-labour-law-reforms-in-the-rising-powers-trends-and-prospects-in-public-and-private-regulations/).

| Outputs for Labour Law and Poverty Alleviation in Low and Middle income countries |
| Articles in refereed journals | 1 | Chapters in books | 48 57 58 |
| Books | 66 | Working Papers | 69 |
| Datasets | 119 | Conference papers given | 131 137 138 139 140 195 |
| Media | 253 | Mphil/PhD Supervisions | 279 280 |
Maximising Innovation in the Supply Chain Beyond Procurement and Contract Execution

Project leaders: Simon Deakin and Boya Wang (CBR), Tim Embley (Costain Ltd), Adam Golden (Costain Ltd) and Shy Jackson (Pinsent Masons LLP).
Project dates: 2015-2016.
Funding: Innovate UK.

Aims and objectives

This project involved collaboration between the CBR, Costain Ltd and Pinsent Masons LLP to study the constraints on innovation in major civil engineering and construction projects. The project aimed to:

- Develop a conceptual model surrounding how to rectify the problems which currently exist within the supply chain within construction, with specific reference to contractual and related commercial practices and processes.
- Understand and illustrate how the contracting process in construction has evolved over time and how the contracts themselves have had to change to embrace these changes.
- Develop a case study showing how a client encouraged a behaviour of innovation across a programme.
- Identify key areas of focus in the procurement process, from customers to the supply chain, analyse how the commercial process currently does or does not encourage innovation; and look at what can be done to address this. Again, case studies with a range of customers will assist with this.
- Produce commercial and legal guidelines which include clauses which can be adopted and recommendations on how to get more from the supply chain. This guidance / toolkit will allow for innovation to be ingrained throughout the whole supply chain relationship.
- Write a ‘white paper’ to take the learning and discussion points from the organisations involved and stimulate debate within the industry, including among large government customers.

Background

There is a high degree of uncertainty inside the supply chain in construction and infrastructure projects. There is particular concern over the capacity of current contractual frameworks and supply chain practices to deliver innovation. Innovation by its very nature carries a degree of risk and where collaborative innovations are undertaken and the desired result is not as expected, these relationships can become litigious. Once a contract has been agreed, the scope to accommodate innovation within the contract is governed by the contract itself and the nature of the contractual relationship. Most construction contracts are not set up to accommodate this. Under the current model, the potential for innovation diminishes as a project develops. The project studied ways of addressing this reduction in the ability to innovate, ensuring that the opportunity to do so is maintained throughout the whole life of a contract.
Results and dissemination

An initial literature review produced the following conclusions:

- The logic of collective action suggests that that the risks of free riding increase as projects involve more parties and additional layers of contracting.
- Contracts are only a partial solution to the collective action problem.
- Relational contracting may be preferable to more traditional ‘classical’ contracting but the ‘braiding’ of formal and informal elements of contract seems more likely to work than a completely informal contracting framework.
- Standard forms such as the New Engineering Contract NEC do not correspond exactly to the concept or ideal type of a ‘relational’ contract.
- Bespoke governance structures such as the Heathrow Terminal 5 Agreement and Thames Water’s 82O initiative, and flexible procurement practices such as early contractor involvement, may have a role to play in promoting knowledge sharing in innovative projects.

On this basis, a conceptual model was developed in which key variables driving project outcomes were identified as the degree of complexity of a project; the contractual devices used to address complexity; and nature of the resulting behaviours.

The empirical analysis consisted of three parts:

- A survey of industry practitioners conducted between March and June 2016.
- In-depth interviews with a number of practitioners selected through industry contacts.
- Four focus groups with 20 or more participants in each case, held periodically during the year-long life of the project.

The survey showed that practitioners value formal contracts as devices for shaping their relationships during the performance of projects. They understand contracts to be legally binding agreements which should be strictly enforced and do not, on the whole, view them as loose, non-binding arrangements. In particular they see a role for formal contracts in dispute resolution should problems arise in the course of a project.

In addition, the survey indicated that civil engineering and construction contracts have been changing: they are seen as more collaborative than they were. However, this does not mean that they have necessarily become more clearly drafted, more flexible, or more important to the performance of projects: responses on these points were mixed or equivocal. It does not appear that the shift which has taken place has made contracts easier to read or understand. Nor has it resulted in fewer contractual disputes than in the past.

The survey evidence indicated a strong association in the construction industry between trust, on the one hand, and flexibility in performance, as indicated by the practices of honouring informal understandings and engaging in dialogue, on the other. Respondents associated strict performance of contracts with trust, although to a lesser degree. This suggests that in certain contexts, contract and trust can be complements.

In the survey data there was a stronger association between flexibility, dialogue and the sharing of information, risks and costs, on the one hand, and innovation, on the other, than there was between these features of contractual practice and trust in general. This suggests that innovative projects more than others require a contractual framework capable of engendering close cooperation, based on dialogue and risk-sharing, between the parties.
The interview-based evidence suggested that barriers to innovation in the construction industry exist, including a continuing emphasis on adversarialism in contractual relations. This is exacerbated by price-driven procurement processes. There is scepticism towards innovation on the part of clients who see it as expensive and risky. Main contractors, conversely, regard many clients as unwilling to share risks and willing to use formal contract terms to displace costs on to contractors. Pain-gain sharing arrangements are helpful for fostering innovation but they may not work if gain-sharing is not cascaded down the supply chain as opposed to being confined to first-tier contractors.

A case study of the Crossrail project, based on a combination of interviews and documentary research, suggested that clients need to be proactive in developing business and commercial models that encourage supply chain participation. Contracts which share the benefits of innovation among the parties are one aspect of this. Bespoke governance structures can play an important role in creating the equivalent of ‘common pool resources’ for sharing knowledge and information. Crossrail’s innovation programme illustrates the benefits of taking steps to ensure that innovation does not conclude when projects come to an end.

The results of the work were presented at the final conference of the project which was held in London in September 2016, and published in a ‘white paper’ designed for wide dissemination in the construction sector. The white paper made a number of suggestions for the improvement of industry practices including proposals to promote university-industry collaboration, improve contract clauses affecting innovation, and achieve better measurement of the social benefits deriving from projects. During 2016-17 further dissemination of the project findings took place and discussions are continuing with policy makers and industry-level actors to implement its findings.

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The Legal Framework for Data Sharing: Balancing Crime-fighting with Privacy and Data Protection Concerns

Project leaders: Simon Deakin, Julia Powles (Cornell University), Christopher Markou (Faculty of Law, University of Cambridge)
Funding: EPSRC
Project dates: 2015-20

Aims and objectives

This project forms part of an interdisciplinary initiative based in the Computer Laboratory, the Cambridge Cybercrime Centre (https://www.cambridgecybercrime.uk/). The aim is to study the legal framework governing data sharing and its relationship to patterns of crime in cyberspace.

Background

Internet and telecommunications companies are receiving many thousands of data access requests every year from law enforcement agencies. Compliance may be in the interests of the companies themselves and of wider societal interests in cases where it can materially assist the detection and prosecution of crime. The legal framework governing such access requests is not clear, however. Companies may find themselves subject to legal action by their users and may also risk breaching laws such as the US Electronic Communications Privacy Act (ECPA), which regulates access to stored electronic communications. Human rights laws and data protection laws in Europe also place limits on how far internet companies can share personal data with government agencies.

There are three problems facing both companies and government agencies in this area:

Laws may be rendered uncertain or out of date because of advances in technology. The ECPA, for example, was drafted before email usage became common.

Laws may clash. For example, legal duties to assist government agencies may conflict with privacy or data protection laws. The latter may make exceptions for data relating to national security or criminal acts but the scope of such derogations may be unclear.

It may not be clear which jurisdiction applies to a particular data request. US and European standards, as well as those other countries, differ significantly on points of both process and substance.

Research methods

We are studying these issues through a multi-level approach.

The first level consists of a review of relevant laws and of the secondary literature on these issues.

The second level consists of the interviews with legal advisers, NGOs and government agencies in order to get an understanding of how the law is working in practice in different jurisdictions.
Results and Dissemination

The first stage of the project consisted of developing a conceptual framework for analysing data sharing and exploring related issues of legal policy. In the second stage, the emphasis has been on case studies of data sharing and its legal regulation, together with analysis of the risks and potential of new technologies in this area, including big data and artificial intelligence.

In March 2017 Julia Powles published the results of a study critically analysing the architecture, communication, and oversight of a foundational deal between Google DeepMind and the Royal Free London NHS Hospital Trust. The paper addressed questions of transparency, data value, and market power in data-driven healthcare. The paper received wide press coverage, including in the BBC, Quartz, The Verge, Business Insider, Wired, ABC Radio National and numerous other outlets, and led to changes in the practice of data sharing in the NHS and UK public sector more generally. On 22 March 2017 Julia gave the Annual Lecture on Law and Emerging Technologies at the University of Leeds, entitled Data Kingdoms and Keys: The Case of Google and the NHS, which focused on the Google DeepMind. Julia and her co-author Hal Hodson are currently working on a second paper, analysing the terms of the revised DeepMind-Royal Free arrangement since November 2016 and ongoing regulatory investigations.

Simon Deakin and Christopher Markou gave a presentation on ‘Law, work and technology: a systems approach’ to the Rustat Conference on the Future of Work at Jesus College, Cambridge, on 22 November 2016. This presentation outlined a model of the law-technology relation which draws on and develops Niklas Luhmann’s social systems theory (SST) and applied to the model to emerging technologies including Bitcoin and Uber’s ride hailing service. This line of research is continuing.

| Outputs for The legal framework for data sharing: balancing crime-fighting with privacy and data protection concerns |
|--------------------------------------------------|-------------------------|----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Articles in Refereed Journals | 32 33 | Other publications | 112 113 114 115 116 |
| Conference papers/presentations given | 135 170 171 172 173 174 177 | Media | 207 208 209 210 211 241 242 243 244 260 261 262 263 264 |
| Mphil & PhD Students supervised | 281 | | | | | | | | | | | | | | | | | | | | | |
Informal Finance in China: Risks, Potential and Transformation

Project leaders: Simon Deakin and Boya Wang (CBR), Ding Chen, Andrew Johnston and Navajoti Samanta (University of Sheffield), Frank Stephen (University of Manchester)
Project dates: 2017-18.
Funding: ESRC Newton Fund and National Science Foundation of China

Aims and objectives

This an interdisciplinary research project exploring informal finance in China, the risks it is generating, its potential to support economic growth, and its transformation in the light of new technologies and a developing regulatory agenda. The work is being carried out by the CBR in collaboration with the School of Law, University of Sheffield, the School of Law, Renmin University, Beijing, and the College of Finance and Statistics, Hunan University. The project has the following aims:

- To understand the potential, but also the limits, of systems of informal financing in China
- To analyse the relationship between formal and informal finance in China
- To examine the risks posed by China’s shadow banking system
- To study the emergence in China of new forms of financing using big data and cloud computing to drive financial innovation, including P2P lending, crowd funding and similar collective investment schemes
- To explore the scope for the development of social credit systems in China

Background

China’s rapid economic growth in recent decades has been attributed to its reliance on informal contracting and trust-based relationships (guanxi). This claims builds on the absence in China of some of the more formal legal and regulatory institutions of the market economies of the global north. Although the claim that China lacks formal legal mechanisms of market governance may have been somewhat overstated, it is the case that informal finance, particularly in the form of trade credit, family lending and communal investing, has played a major role in supporting China’s growth. The prevalence of informal finance presents a significance source of flexibility for China’s economy given the limitations of the formal sector, which remains dominated by state-owned banks lending largely to state-owned enterprises. Informal finance is also evolving quickly and is converging with the use of internet technologies to deliver finance (‘fintech’) through such mechanisms as crowdsourcing.

However, there are downsides to the reliance of the Chinese economy on informal finance and significant risks arise from its convergence with fintech. The large shadow banking sector, by virtue of its positioning outside most of the regulations applying to mainstream banks, adds to systemic risks. The formal and informal sector coexist in an uneasy relationship: they may substitute for each other, or provide complementary modes of finance, but they can also operate to reinforce and magnify systemic risks.
Similarly, the rise of fintech is a double edged sword. On the one hand, cloud computing and big data may be facilitating new forms of social credit and collective investment schemes which have the potential to meet the needs of the growing social credit sector. Crowdsourcing may provide a new and flexible form of financing for start-ups and innovative ventures. However, these new forms of finance also have the potential to undercut or render otiose regulations designed to maintain market transparency, and to intensify the risks facing investors.

Methods

Part of the work involves fieldwork and surveys with internet financing companies and supervisory bodies in order to better understand the operation of the sector at both national and regional levels. We are also using law and economics analysis to build conceptual models of the likely options for regulation of internet finance and fintech-informed universal banking. A comparative legal study is being undertaken to assess the current state of law and regulation in China and the UK on these issues. In addition we are using questionnaires, face to face interviews and archival/documentary research to build up a picture of the current state of the shadow banking sector and its supervision, related aspects of informal finance, and the operation of social credit systems in China.

Results and Dissemination

The work began in February 2017 and is currently ongoing. An initial round of interviews was carried out in China in April 2017. On 15-16 April 2017 a conference on Fintech was held in Hangzhou, Zhejiang Province, organized with our Chinese research partners, and with the participation of industry-level actors, policy makers and regulators. In July 2016 the Cambridge team convened meetings with each of the Chinese teams and UK financial regulators based at the Financial Conduct Authority and Bank of England (Prudential Regulation Authority).
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Post-Brexit Options for the UK: Combining Legal and Policy Analysis

Project leaders: Simon Deakin, Boni Sones
Dates: 2016-2017
Funding: ESRC Impact Acceleration Account

Aims and objectives

The aim of this project, which was supported by the ESRC Impact Acceleration Account, was to carry out legal analysis of the implications of Brexit in the areas of WTO law, free movement of persons, financial services, tax law, labour regulation and transition costs, and to use the legal analysis to inform macroeconomic forecasts carried out using the CBR’s UKMOD forecasting model. A user workshop was held in Cambridge in March 2017 to disseminate the findings of the research.

Background

The UK government has faced a major challenge in formulating a clear plan for Brexit. In March 2017, at the point when notice to leave the EU was triggered under Article 50 of the Treaty on European Union, the UK government’s official position was that departing the EU necessarily entailed leaving the European Economic Area and customs union. The Prime Minster had previously said that ‘no deal’ was better than a ‘bad deal’.

Against this background, the CBR, in conjunction with the Cambridge Public Policy Strategic Research Initiative, organised a workshop to explore the legal and economic context of the decision to trigger Article 50. The workshop took place in Cambridge on 30 March 2017. Presentations were made on legal issues which include the WTO option, migration, citizen’s rights, the UK’s ‘exit bill’, free movement, taxation, social policy, and the legal mechanics of leaving, including the Great Repeal Act. There was also a presentation of the latest results on the likely effects of Brexit from the CBR’s economic forecasting model, UKMOD.

Results

The workshop heard that if there were ‘no deal’, the UK would lose its preferential access to the EU single market, as well as the benefit of numerous bilateral trade agreements which the EU has with third countries. It would, however, continue to be a member of the WTO, and as such would have certain, more limited rights of access to overseas markets including the EU, and the obligation to observe rules of non-discrimination (the ‘most favoured nation’ principle).

The workshop also heard that the economic effects of reverting to WTO rules might not be as drastic as some have thought: the CBR’s UKMOD forecasting model anticipates a more modest impact of Brexit than that predicted by the UK Treasury prior to the June 2016 referendum, in part because a much-needed revaluation of sterling offsets the effects of tariffs. Alleviating the effects of a ‘hard Brexit’ would, however, require the government to adopt fiscal reflation and an accommodating monetary policy, and to take steps to mitigate the impact of higher tariffs on certain vulnerable sectors, in particular agriculture.

This ‘hard Brexit’ would be avoided if a ‘deep and comprehensive’ trade agreement between the UK and EU can be successfully negotiated. While complete agreement along these lines could take up to a decade to reach, a framework deal within the two years allowed by Article 50 is possible. There would also have to be a transitional arrangement to make sure that, as far as possible, there was ‘business as usual’ after March 2019.
While the workshop was taking place, the government published a White Paper setting out its intentions for the ‘Great Repeal Bill’ which will incorporate much of the current corpus of EU law into UK domestic law after Brexit. The consensus at the workshop was that the White Paper, although brief on key points, nevertheless set out a strategy of keeping the UK in line with EU laws and standards, which should make it easier for the two sides to reach agreement on new trading and regulatory arrangements post-Brexit.

However, the workshop heard that the practical obstacles to this outcome remained considerable. The legal complexity involved in reincorporating EU law into UK domestic law was likely to give rise to new constitutional challenges and to uncertainty which will chill business relations. Moreover, until the outlines of a new UK-EU relationship are known, it would be difficult for the UK to forge new trading relationships with third countries.

Blogs and podcasts based on the presentations were placed on the CBR website shortly after the workshop. By July 2017 there had been over 3,000 listens and downloads of these materials.

<table>
<thead>
<tr>
<th>Outputs for Post-Brexit Options for the UK: Combining Legal and Policy Analysis</th>
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<td>Workshops held</td>
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<td>Social media</td>
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Hinkley Point C Revisited

Project leaders: Simon Deakin, David Howarth, Charlotte Sausman, Boni Sones
Dates: 2016-2017
Funding: ESRC Impact Acceleration Account

Aims and objectives

The aim of this project, which was supported by the ESRC Impact Acceleration Account, was to explore the UK government’s plans to commission a new nuclear power station at Hinkley Point C. The Hinkley Point C contract, signed in September 2016, is one of the largest public infrastructure contracts ever signed in the UK, and has far-reaching legal, economic and security implications. A user workshop was held in Cambridge on 14 December 2016, and explored issues first raised at a similar workshop in April 2014. A range of experts took part including the former Secretary of State for Energy and Climate Change, Mr. Chris Huhne.

Background

The contract to build Hinkley Point C, signed in September 2016 by UK Ministers, EDF energy and the Chinese company, CGN, is by far the most complex and one of the longest running UK contracts agreement ever entered into by a British government. It puts other PFI contracts in the public sector to build schools and hospitals into the shade and has given lawyers much food for thought on how it can be implemented particularly as the UK now plans to BREXIT the EU and this may lead to additional problems for the contract itself if challenged.

Results

The workshop heard that not only is the nuclear technology in question, with issues such as nuclear waste disposal still largely unresolved, but that the price of carbon neutral technologies in the renewables sector such as wind, wave, and solar is dropping dramatically, making their use more viable and competitive by comparison to nuclear power. China’s involvement in the Hinkley C contract has been controversial, particularly as civil nuclear and weapons nuclear development are linked. However without French or Chinese involvement the UK could not afford to fund the project. By working with the UK and the French, Chinese companies will be able to improve their own industrial expertise and put themselves in a position to bid for future contracts in the UK and other countries. A portfolio approach to UK energy policy using a mix of nuclear and renewables is likely to continue in the short term but the longer term implications of the Hinkley Point contract are unclear, as both public opinion, which is now largely supportive of nuclear power, could change in the longer term. Reducing energy consumption is another policy which could be used more rigorously.

Blogs and podcasts based on presentations were placed on the CBR website shortly after the workshop. By July 2017 there had been nearly 900 listens and downloads of these materials.

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<th>Outputs for Hinkley point C revisited</th>
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<td>Workshops held</td>
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</table>
3. Outputs

Articles in refereed journals


29. McLaughlin, C. and Bridgman, T. (2017) 'The battle for “Middle-earth”: the constitution of interests and identities in the Hobbit dispute' Journal of Industrial Relations


### Chapters in Books


50. Katelouzou, D. “Reflections on the Nature of the Public Corporation in an Era of Shareholder Activism and Shareholder Stewardship” in B. Choudhury and M. Petrin (eds.) *Understanding the Modern Corporation* (Cambridge: Cambridge University Press, 2017), also available on SSRN


Kirshner, J. Chapter in forthcoming ECTIL book on U.S. corporate and insurance law


Books


Working papers


78. Katelouzou, D. “Hedge Fund Activism and Shareholder Stewardship: Incompatible, Reciprocal or Something in Between?”, Working Paper


81. Kirshner, J. ECTIL corporate governance and insurance country report


86. McLaughlin, C. and Wright, C.F. ‘Politics, ideology and ideas in liberal market economies’.


90. Schnyder, G. Legal Reform and Corporate Governance Practices in Europe: Longitudinal Firm-Level Evidence from Four Countries, to be submitted to Administrative Science Quarterly.
91. Schnyder, G. *Coping with Autocracy: Corporate political activity, institutional duality, and MNE – local firm rivalry during “institutional backsliding”* (with D. Sallai), to be submitted to International Business Review.


93. Schnyder, G. *20 Years of Law & Finance: Time to take law seriously* (with M. Siems and R. Aguilera), submitted to Socio-Economic Review.

94. Stubbs, T., A. Kentikelenis, B. Reinsberg, and L. King. ‘Evaluating the effects of IMF conditionality: A review and extension of quantitative approaches.’


Other publications (eg) Book Reviews, pamphlets, Blogs


108. Johnston, A. Written evidence submitted to Parliament’s Business, Innovation and Skills Committee’s Corporate Governance Inquiry, October 2016


113. Markou, C. ‘Why using AI in sentencing criminals might be a bad idea’ <https://www.weforum.org/agenda/2017/05/ai-sentencing-criminals-is-a-bad-idea-this-is-why> May 16 2017


Datasets created and archived, software written


120. Gudgin, G. Two complete updates of the macro-economic datasets for the CBR Macro-economic model of the UK Economy. Work largely undertaken by colleagues at Ulster University (Prof Neil Gibson and Jordan Buchanan). The UKMOD database is now compliant with the 2016 ONS National Accounts Blue Book, with further data for 2016 using ONS quarterly statistics.

121. Gudgin, G. New large scale trade dataset compiled by Prof Neil Gibson and Jordan Buchanan to facilitate research on gravity models. Innovative software written by Prof Gibson allowed partial datasets to be constructed for specified dates, giving considerable flexibility.

Workshops held


124. Kirshner, J. Detroit, New York University, New York, New York, January 2017

125. Konzelmann, K. Workshops organised for the London Centre for Corporate Governance and Ethics, Birkbeck, University of London:

   International Labour Regulation and Supply Chains 28 October 2016
   Public Trust in Corporations and Corporate Social Performance 27 January 2017
   Do Cultural Differences and Legal Protection Change Internal Managerial Incentives of Pay Dispersion? 24 February 2017
   Creating Governance as a Distinct Discipline 31 March 2017
   Contemporary British Trotskyism: Sect, Party and Social Movement 28 April 2017
   Sending Firm Messages: Letters from the PRA to Banks and Building Societies 26 May 2017

127. Schnyder, G. Business Context & Behaviour: Institutions, Political Risk, Crime, and Private Sector Responses, King’s College London, 26th June 2017

Conference Papers/Presentations given


143. Gray, M. was keynote speaker at the University of Guadalajara, Mexico and the University of Sydney (Regional Studies Association), speaking about the austerity findings in relationship to populism and Brexit.


145. Gudgin, G. University of Buckingham Conference on the Impact of Brexit. 26th June 2017 Paper on Economic Impact of Brexit


149. Hughes, A. 2016 Knowledge Exchange in the Arts and Humanities Presentation to the 2016 Annual Conference of the Association for University Research and Industry Links (AURIL), Edinburgh 6th-7th October.


152. Johnston, A. Invited presentation on ‘Employee voice in European Corporate Governance Regulation: History and Prospects’ at ‘Workshop on Corporate Governance and Workers’ Voice in Europe’, organised by Hans-Böckler Foundation and Hertie School of Governance, CGIL, Rome, 14th March 2017


Kirshner, J. U.S. corporate and insurance law, ECTIL, Vienna, Austria, March 2017


Markou, C. ‘What Role For Law in AI?’ University of Krakow, Program in Private European Law, 20 January 2017

Markou, C. ‘Complexity Theory as a Paradigm for Artificial Intelligence Regulation’ Cambridge Conference on Catastrophic Risk, Clare College, The University of Cambridge, 12 December 2016


182. Sarkar, P. JLFA Annual Conference, Northwestern Pritzker School of Law, Chicago, USA, 11-12 November, 2016


188. Schnyder, G. Legal Reform and Corporate Governance Practices in Europe: Longitudinal Firm-Level Evidence from Four Countries presented at the 33th EGOS Colloquium, Copenhagen Business School, Copenhagen, DK, 6-8th July 2017.


User Contacts Consultancy and Advice given (paid or unpaid)

196. Connell, D. In November 2016 was asked by 10 Downing Street to carry out an independent review of the UK Small Business Research Initiative (SBRI). The Review reports to Jo Johnson, Minister of State for Universities, Science, Research and Innovation at the Department of Business Energy and Industrial Strategy. The review is undertaken on a pro-bono basis and the report will be published in Autumn 2017. Under the terms of reference, it will:

Explore how the US SBIR programme realises its aims and achieves its impact, its strengths and weaknesses, and identifies key lessons and best practice that can be translated to the UK;

Consult businesses on their experience of accessing and using the SBRI programme, and identify how processes can be improved;

Examine how different government departments and agencies have, and could, used SBRI to achieve better procurement outcomes and position it against their other R&D activities

Look into the barriers that have so far inhibited expansion of the SBRI programme in the UK and identify solutions to overcome them

Examine how SBRI could provide better support for follow-on commercialisation and procurement opportunities;

Assess how SBRI is positioned in the innovation and public procurement policy landscapes, including the potential for linkages with other instruments, such as the new innovation partnership procurement procedure;

Make clear recommendations for enhancing and improving the SBRI programme in the UK, evidencing value for money.

197. Hughes, A. 2016- Appointed to UK Ministry of Defence Independent Scientific and Technical Advice (ISTA) Panel (Expert Standing Panel from which MoD related project and organizational research project teams are drawn).

198. Hughes, A. Appointed Distinguished Visiting Professor Lancaster University Management School October 2016.

199. Johnston, A. Report for Great Britain China Centre on Project on Enhancing corporate governance in China, Recommendation report for the Scoping Exercises on Corporate Governance in China (co-authored with Ding Chen and Simon Deakin)

200. Lourenço, A. Member of the Independent General Council of RTP, the Portuguese Public Service Broadcasting Company. The Independent General Council, composed by six members, is the governing body in charge of supervising the company’s public service broadcasting remit. http://media.rtp.pt/empresa/orgaos-sociais/conselho-geral-independente/

202. McLaughlin, C. is working with Business in the Community Ireland’s working group on the ‘Worker of the future’.

**Media Coverage**

(a) **Newspapers**

203. Connell, D. Review was announced by the Prime Minister in her speech to the CBI Annual conference in November 2016 and reported in several newspapers.

204. Gudgin, G. *Sunday Telegraph Simon Heffer Impact of Brexit*


206. Katelouzou, D. recent article (with Iris Chiu) on institutional shareholders’ duties, which is forthcoming in the Journal of Business Law, has attracted news attention informing key stakeholders, such as asset managers. See, for instance: [http://citywire.co.uk/wealth-manager/news/passive-s-next-opponent-climate-change/a1023896](http://citywire.co.uk/wealth-manager/news/passive-s-next-opponent-climate-change/a1023896)

207. Markou, C *Creative Review (the ‘AI Issue’)*

208. Markou, C. *Computer Weekly* (‘Algorithmic Transparency’)

209. Markou, C. *The Independent* (Several occasions)

210. Markou, C. *Wired* (quoted in several articles)


212. Sanderson, P. 01/04/2017, The Independent on Sunday
No way out of the renting gap

213. Sanderson, P. 01/04/2017, INDEPENDENT
Policy change is the only way to close the renting gap

214. Sanderson, P. 01/04/2017, Birmingham Mail
Third of first-time buyers rely on their parents

215. Sanderson, P. 03/04/2017, Manchester Evening News (Online)
Why our mums and dads are our only hope if we want to get onto the property ladder

216. Sanderson, P. 04/04/2017, Manchester Evening News
£Hello, mum? I need a deposit...
217. Sanderson, P. 05/04/2017, Free Press
   Housing inequality worsens

218. Sanderson, P. 06/04/2017, South Wales Argus
   Housing inequality worsens

219. Sanderson, P. 06/04/2017, Wailaike.net
   英国啃老指数又爆表：欧洲年轻人‘一谈将来就发愁’

220. Sanderson, P. 12/04/2017, The Free Press (Pontypool, Cwmbran, Blaenavon)
   First time buyers rely on parents

221. Sanderson, P. 12/04/2017, Redditch & Alcester Advertiser
   Record number turn to ‘bank of mum and dad’ for first home

222. Sanderson, P. 12/04/2017, Dudley News
   Record number turn to ‘bank of mum and dad’ for first home

223. Sanderson, P. 12/04/2017, Free Press
   Concerns over drop in owners

224. Sanderson, P. 12/04/2017, Bromsgrove Advertiser
   Record number turn to ‘bank of mum and dad’ for first home

225. Sanderson, P. 13/04/2017, Bury Times
   Bank of mum and dad helps first timers

226. Sanderson, P. 13/04/2017, Stourbridge News
   Record number turn to ‘bank of mum and dad’ for first home

227. Sanderson, P. 13/04/2017, Halesowen News
   Record number turn to ‘bank of mum and dad’ for first home

228. Sanderson, P. 13/04/2017, Hereford Times
   More parents to the rescue

229. Sanderson, P. 13/04/2017, The Shuttle
   Record number turn to ‘bank of mum and dad’ for first home

230. Sanderson, P. 14/04/2017, The Bolton News
   Bank of mum and dad help first time buyers

231. Sanderson, P. 19/04/2017, Stroud News & Journal
   Bank of mum and dad funds first-time buyers

232. Sanderson, P. 19/04/2017, Swindon Advertiser
   Bank of mum and dad

233. Sanderson, P. 20/04/2017, Gazette & Herald - Devizes
   Bank of mum and dad
234. Sanderson, P. 20/04/2017, Worcester News
Parents help needed

235. Sanderson, P. 20/04/2017, Berrows Worcester Journal
Parents help needed


(b) TV/Radio/Film

238. Gray, M. The Great Austerity Debate:  [https://www.youtube.com/watch?v=kSz3_3wh2oc](https://www.youtube.com/watch?v=kSz3_3wh2oc)

239. Gudgin, G. _BBC Radio 4 Today programme Impact of Brexit 12th Jan 2017_


241. Markou, C. _Newstalk 1010 (Ireland) Sean Moncrieff Radio Show_

242. Markou, C. _CBC Radio 1 (Canada)_

243. Markou, C. _BBC Radio 4 (UK)_

244. Markou, C. _Boni Sones Podcasts_

245. Sanderson, P. Today Programme- BBC Radio 4 News Item

246. Sanderson, P. BBC One Breakfast News item

247. Sanderson, P. LBC – Nick Ferrari Discussion

248. Sanderson, P. You and Yours – BBC Radio 4 Discussion
(c) Social Media/Online blog


264. Markou, C. ‘Robots and AI could soon have feelings, hopes and rights … we must prepare for the reckoning’ The Conversation http://theconversation.com/robots-and-ai-could-soon-have-feelings-hopes-and-rights-we-must-prepare-for-the-reckoning-73462.

265. Sanderson, P. Belfast Telegraph, Arj Singh, Number of young home buyers halves in 25 years

266. Sanderson, P. London Loves Business, Chloe Western, Record number of first-time buyers rely on parents cash

267. Sanderson, P. International Business Times, Dan Cancian Bank of Mum and Dad exacerbates inequality in the property market

268. Sanderson, P. FT Adviser First-time buyers relying on Mum and Dad at 'historic high'

269. Sanderson, P. Estate Agents Today First time buyers' problems set to continue, warns commission

270. Sanderson, P. BT.com Home ownership becoming a 'distant dream' for young

271. Sanderson, P. BBC, Brian Milligan Record numbers rely on parental cash to buy a property

272. Sanderson, P. Business Insider, Ben Moshinsky First time buyers are increasingly relying on their parents' cash — and it's making the housing market less fair

273. Sanderson, P. The Independent, Rob Merrick Home ownership now out of reach for most young people, study finds

274. Sanderson, P. Huffington Post, Front page, Graeme Damianyk Homeownership is in ‘free fall’ and widening inequality, says Social Mobility Commission
275. Siems, M. research on law and finance in China discussed on two blogs: 


MPhil & PhD students supervised (incl. topic)

279. Deakin, S. supervised Zoe Adams (Ph.D.), ‘Towards a social ontology of the wage’


282. Gudgin, G. supervised Saite Lu (Sydney Sussex College) financial Modelling in a Stock-Flow Equilibrium Context

283. Johnston, A. supervised Luke Blindell, The effective implementation of the 2011 UN Guiding principles of Business and Human Rights

284. Johnston, A. supervised Kingsley Udofa, Adapting European Regulatory Framework to innovative and technological advancements in electronic money

285. Kentikelenis, A. supervised Timon Forster: The IMF and Income Inequality

286. Kirshner, J. Supervised 3 Mphil students at Columbia Law School with topics on international insolvency, including law reform efforts in India, Banking regulation in Iceland, and China’s approach to international insolvency

287. Sanderson, P. supervised Marina Bush (ARU) ‘Creating Successful Communities.’
Lida Efstatopoulou (ARU) ‘Improving the ability of public mental health services to use new knowledge: The case of absorptive capacity.’

288. Turner, S. is a PhD Supervisor (subsidiary), The Health Foundation Improvement Science PhD Fellowship, NIHR CLAHRC North Thames, UCL, Sept 2016 – present

289. Turner, S. supervised Ms Samantha Machen (Improving the governance of medication safety)
Training courses attended

290. Kirshner, J. attended Human subjects review training course, NYU


293. Turner, S. Cross Purposes: Networking with ease, half-day workshop, UCL, 30 March 2017

294. Turner, S. Essentials of Academic Leadership, one-day course, UCL, 8 March 2017
4. Staff

Research Staff

Anna Barford, Research Fellow
Parisa Bastani, Research Fellow
Anna Bullock, Research Fellow
Andy Cosh, Assistant Director
Adel Daoud, Research Fellow
Simon Deakin, Director
Alan Hughes, Emeritus Director
Robert Hughes, Researcher
Alex Kentikelenis, Research Fellow
Michael Kitson, Assistant Director
Jocelyn Probert, Senior Research Fellow
Bernhard Reinsberg, Research Fellow
Boni Sones, Policy Adviser
Frank Stephen, Senior Research Fellow
Boya Wang, Research Fellow

Administrative Staff

Jill Bullman, Accounts Clerk
Stephanie Saunders, Administrator
Rachel Wagstaff, Receptionist, Publications Secretary & PA

5. Visiting Fellows/Students

Adam Golden, Costain
Amir Maghssudipour, University of Trento
Henning Meyer, London School of Economics and Political Science
Prabirjit Sarkar, Jadavpur University, Kolkata
Jingjing Zhang, Central University of Finance and Economics, China
6. Research Associates

Research associate status may be conferred on project leaders and members of projects who do not otherwise have a position in the CBR, and to former members of the CBR research staff who are still involved in the relevant projects. This category includes personnel in other University of Cambridge departments as well as from outside the University of Cambridge; these affiliations are indicated below. The following were research associates in the period 2016-17:

John Armour (University of Oxford)
Catherine Barnard (Faculty of Law, University of Cambridge)
Robert Bennett, (Department of Geography, University of Cambridge)
Sveta Borodina (CBR)
John Buchanan (CBR)
Anna Bullock (CBR)
Brendan Burchell (Department of Sociology, University of Cambridge)
Dominic Chai (Birkbeck, University of London)
Lorraine Charles (Solomon Communications)
Brian Cheffins (Faculty of Law, University of Cambridge)
Ding Chen (University of Sheffield)
David Connell (CBR, Senior Research Associate)
Andy Cosh (CBR, Senior Research Associate)
Adam Coutts (Department of Sociology, University of Cambridge)
Ken Coutts (Faculty of Economics, University of Cambridge)
Adel Daoud (CBR)
Panos Desyllas (University of Bath)
Jacob Eisler (Faculty of Law, University of Cambridge)
Xiaolan Fu (University of Oxford)
Mia Gray (Department of Geography, University of Cambridge)
Graham Gudgin (Regional Forecasts Ltd)
Paul Guest (University of Surrey)
Antara Haldar (Faculty of Law, University of Cambridge)
John Hamilton (CBR)
Jonathan Haskel (Imperial College, London)
Jonathan Hay (Law Reform Institute, Washington DC)
Alan Hughes (CBR, Senior Research Associate)
Andrew Johnston (University of Sheffield)
Ian Jones (University of Oxford and London Business School)
Dionysia Katelouzou (King’s College, London)
Alex Kentikelenis (University of Oxford)
Larry King (University of Massachusetts, Amherst)
Jodie Kirshner (Columbia University)
Suzanne Konzelmann (Birkbeck, University of London)
Aristea Koukiadaki (University of Manchester)
Jacqui Lagrue (Cambridge Political Economy Society)
Henry Lahr (Open University)
Cornelia Lawson (University of Bath)
Tony Lawson (Faculty of Economics, University of Cambridge)
Don Light (Princeton University)
Ana Lourenço (Católica Porto Business School, Portugal)
Niall MacKenzie (Strathclyde Business School)
Ben Martin (SPRU, Sussex)
Bill Martin (CBR)
Ron Martin (Department of Geography, University of Cambridge)
Ewan McGaughhey (King’s College, London)
Colm McLaughlin (University College, Dublin)
Stan Metcalfe (CBR, Senior Research Associate)
Henning Meyer (Social Europe)
Philippa Millerchip (Cambridge Political Economy Society)
Andrea Mina (Santa Ana School of Advanced Studies, Pisa)
Tim Minshall (Cambridge Entrepreneurship Centre)
Viviana Mollica (University of East Anglia)
Yoshi Nakata (Doshisha University)
Wanjiru Njøya (Queens University, Kingston)
Michael Pollitt (Judge Business School, University of Cambridge)
Julia Powles (Faculty of Law, University of Cambridge)
Stephen Pratten (King’s College, London)
Jocelyn Probert (CBR)
Bob Rowthorn (Faculty of Economics, University of Cambridge)
Ammon Salter (University of Bath)
Navajyoti Samanta (University of Sheffield)
Paul Sanderson (Land Economy, University of Cambridge)
Prabirjit Sarkar (Jadavpur University, Kolkata)
Gerhard Schnyder (University of Loughborough)
Mathias Siems (Durham University)
Rod Spires (PACEC)
Frank Stephen (University of Manchester)
Thomas Stubbs (CBR)
Colin Talbot (Public Policy SRI, University of Cambridge)
Simon Turner (University of Manchester)
Peter Tyler (Department of Land Economy, University of Cambridge)
Hugh Whittaker (University of Oxford)
Frank Wilkinson (Birkbeck, University of London)
Enying Zheng (New York Institute of Technology)
7. Advisory Board

Susan Acland-Hood
Chief Executive and Board Member
HM Courts and Tribunals Service

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Chair, Centre for Business Research
University of Cambridge

Professor Catherine Barnard
Faculty of Law
University of Cambridge

Dr Ha-Joon Chang
Director, Centre of Development Studies
University of Cambridge

Professor Simon Deakin
Director, Centre for Business Research
University of Cambridge

Gill Dix
Head of Strategy
Advisory Conciliation and Arbitration Service

Nina Fletcher
Head of Research & Foresight
Law Society

Bill Hewlett
Technical Director
Costain

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Director, ESRC Centre for Competition Policy
University of East Anglia

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School of Law  
University of Glasgow

Professor Gavin C. Reid  
Founder/Director, Centre for Research into Industry Enterprise, Finance and the Firm (CRIEFF)  
University of St Andrews

Stephanie Saunders  
Administrative Secretary, Centre for Business Research  
University of Cambridge

Professor Paul Stoneman  
Warwick Business School

Isabel Taylor  
Partner, Specialist in Competition Law  
Slaughter and May

Janet Williamson  
Senior Policy Officer, Specialist in Corporate Governance  
Trades Union Congress
8. Committee of Management

Professor Catherine Barnard  
Faculty of Law  
University of Cambridge

Dr Brendan Burchell  
Faculty of Social and Political Sciences  
University of Cambridge

Professor Simon Deakin  
Director  
Centre for Business Research  
University of Cambridge

Professor Andrew Harvey  
Faculty of Economics  
University of Cambridge

Dr. Sean Holly  
Director of Research  
Faculty of Economics  
University of Cambridge

Michael Kitson  
Assistant Director  
Centre for Business Research  
University of Cambridge

Professor Christoph Loch  
Director, Judge Business School

Professor Ron Martin  
Department of Geography  
University of Cambridge

Professor Richard Penty (Chairman)  
Department of Engineering  
University of Cambridge

Stephanie Saunders  
Administrative Secretary  
Centre for Business Research  
University of Cambridge

Peter Tyler  
Land Economy  
University of Cambridge
9. Performance Indicators

The following Tables contain details of key performance indicators. They are mostly as agreed in the original contract with the ESRC. With the end of core funding, these are no longer binding on the CBR, but we continue to benchmark our performance by reference to them.

### A. PUBLICATIONS

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*Totals shown exclude books, chapters, articles, and papers which were in draft, in press or forthcoming as of 31 July 2014*
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C. STAFF RESOURCES

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† Including a notional allocation representing a proportion of the time of the Director and Assistant Directors (0.4 FTE in each case)

* In 2010 the CBR reviewed its research associate list and redefined the category to include continuing substantive involvement in current projects and publications. This led to a reduction in numbers of individuals formerly listed for example as parts of collaborative networks, as well as normal reductions due to retirement etc.
## D. FINANCIAL RESOURCES

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All sums are expressed in £s. *special reporting periods (see annual reports for 2003 and 2005-6).*