



# Scottish Institute for Research in Economics Annual report to the Scottish Funding Council

For the period 1 Oct 2013 to 30 Sept 2014

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## *Executive Summary*

- E1 The quality, range and scale of SIRE’s activities and outputs, together with the quality of new appointments made (both SFC co-funded SIRE appointments and additional appointments by SIRE institutions) clearly indicate the substantial progress that has been made towards achieving the objectives set out in SIRE’s mission statement and milestones.
- E2 One of the key roles of the SIRE Executive is to facilitate and foster a wide-range of research-focused events and activities, which provide a major mechanism for within-SIRE and external networking, engagement and collaboration. Brief reports on the extensive range of high quality events taking place over the reporting period are provided in section 8. Such events were rare or non-existent in Scotland prior to SIRE.
- E3 The influx of new high quality researchers into Scotland, combined with the development of SIRE events and the opportunities they provide, has caused a significant and ongoing shift in the economics research culture in Scotland. As the research culture and reputation of Scottish-based economics grows, this feeds back into further improvements in the quality and range of new appointments and research-related events, creating a virtuous circle.
- E4 While SIRE events play a key role in networking, collaboration and engagement, SIRE researchers also play a leading or major role in a wide variety of other substantial collaborative projects. Leading examples include: the development of the ‘Longitudinal Survey of Ageing in Scotland’; involvement in the ‘Scottish Centre for Constitutional Change’ and other closely related work; involvement in ‘ClimateXchange’, the Edinburgh Centre for Carbon Innovation, and other major projects concerning energy and the environment; and a group of large, multi-country, multi- institution and multi- discipline EU-funded projects in the area of health and well-being.
- E5 A major achievement, during the reporting period, is the award of an ESRC Large/Centre grant for approx. £6 million for work on “Credit and Labour Market Foundations of the Macroeconomy”. The PI is John Moore, with a further 9 SIRE researchers as named Co-Is. Our success in the rigorous ESRC competition for this large grant owes much to SIRE and achieves one of the more ambitious goals set out in the original SIRE proposal.
- E6 There are currently three vacancies at senior level and one at junior level in SFC co-funded SIRE posts arising from recent departures. Such turnover is a normal part of the academic labour market in economics and in one of the senior cases is the outcome of a move elsewhere in Scotland.
- E7 On top of the SFC co-funded SIRE posts, there have been a substantial number of additional high quality senior and junior appointments made by participating universities. The extent and quality of these net additions to the Scottish research base, over and above the SFC co-funded posts, provides a strong signal of the sustainability of the SFC investment in SIRE.
- E8 In addition to the extensive portfolio of general events, SIRE organizes and supports a number of events and activities specifically directed at ECRs and PhD students. These include: The SIRE Young Researchers’ Forum; support for ECRs and PhDs to present at major international conferences; ECR Engagement Grants, utilising SIRE’s ‘restored funds’; earmarked sessions

for ECR presentations at workshops; and a range of advanced training workshops and mini-courses.

- E9 There are currently 80 PhD students on the Scottish Graduate Programme in Economics, and a substantial number of additional economics PhD students not directly registered on the SGPE taking the total number of PhDs well above 100. This represents significant overall growth since the creation of SIRE. There is, however, strong competition from other leading graduate programmes and, despite substantial developments to which SIRE has contributed, our provision of systematic and structured post-MSc training and exchanges with other leading graduate schools lags behind the very top graduate programmes in the UK and internationally.
- E10 In line with SIRE milestones, there has been a substantial increase in publications in highly ranked journals since the creation of SIRE. One simple indicator is publication in the “top 5” journals. Prior to SIRE, such publications by Scottish-based economists were a rarity. In the current reporting period, there were five “top 5” publications by SIRE researchers, matching the achievement noted in the previous SIRE Report.
- E11 As further simple indicators of the enhanced reputation of Scottish-based economics: the current Secretary (John Beath) and President (John Moore) of the *Royal Economic Society* are located in Scotland; as is the Managing Editor (Philipp Kircher) of the *Review of Economic Studies* (generally ranked in the top 5 international research journals).
- E12 There have been a healthy number of new grants awarded to SIRE researchers over the reporting period, in addition to the ESRC Large/Centre grant for £6 million, noted above. Total grant income spent in 2013-14 is estimated to be £2,926,868.
- E13 The substantial enhancements to research personnel, publications, grant income and PhD numbers, together with the dramatic step change, across several dimensions, in the broader research environment, dissemination, collaboration and engagement under the SIRE aegis have had a strongly positive impact on the REF submissions of SIRE’s participating departments. There was no appetite among senior management or SIRE researchers for a collective SIRE submission comprising either all, or a subset, of participating universities. This is consistent with the views outlined in the original SIRE proposal.
- E14 The financial sustainability of the SFC co-funded SIRE posts has been assured by the substantial growth in income from research grants, RAE/REF-related income and PGT and UGT fee income achieved since the creation of SIRE. This growth in income has not only provided for the sustainability of the original SIRE posts, but has also allowed for a substantial number of additional new net-hires. More broadly, the substantial step change in research culture and outputs which has taken place is firmly established and provides a virtuous circle encouraging sustainability and, indeed, an ongoing upward trend. At a more detailed level, there are some key challenges concerning the need for ongoing (post 2015) collective funding to support the sustainability of SIRE events and activities, and needed developments to the PhD programme, which link to the SIRE proposal for stage II funding from the SFC. In addition, there is a strong case for collective investment in applied micro-econometric expertise.
- E15 SIRE has a good and ongoing track record of obtaining European Research funding, and has fully utilised the first two tranches of PEER funding. SIRE’s restored funds have been used to establish an ‘ECR Engagement Grant’. To date there have been eleven successful applications, and two very effective completed projects.

## 1. Introduction

- 1.1 SIRE's mission statement, set out in the original proposal for funding (see box 1), outlines the main objectives of SIRE. These objectives are reflected in the key milestones in terms of increasing publications in top journals, increasing grant income and enhancement to the quantity and quality of postgraduate and ECR activities.
- 1.2 The quality, range and scale of the various activities and outputs outlined below, together with the quality of new appointments made (both SFC co-funded SIRE appointments and additional appointments by SIRE institutions) clearly indicate the substantial progress that has been made towards achieving these objectives.

### *Box 1: SIRE's Mission Statement*

#### ***Mission Statement***

1. To develop and sustain a reputation for internationally excellent research in major fields of economics, building around and beyond existing strengths, enabling economics in Scotland to compete effectively with leading English and European research centres and attract high quality staff at senior and junior levels.
2. To attract high quality graduate students to Scotland, consolidating and enhancing the growing success of the Scottish Graduate Programme in Economics (SGPE), and building the next generation of research leaders by attracting and developing high potential young researchers at PhD and junior lecturer level.
3. To foster and disseminate high quality economics research among all economists in Scotland.
4. To contribute to the quality of policy-related and other research activities, by providing a forum for interaction between fundamental researchers and policy/applied researchers and through knowledge transfer and CPD activities.

- 1.3 Nevertheless, there remain some challenges to be addressed for SIRE to fully capitalise on the progress made to date. To highlight three:
  - (a) To develop and implement a more structured advanced (post-MSc) training programme for PhD students, which can flexibly meet the differing needs of SIRE institutions, and to build closer links with leading graduate schools in Europe and further afield. While there has been substantial progress, there remains a need for further co-ordination and development. Further collective (SIRE-wide) funding beyond the current 2015 deadline would greatly assist these developments, and this forms a core element of SIRE's proposals for phase II funding.
  - (b) The wide range of collective SIRE events, summarised below, play a very important role in SIRE's networking activities. Increasingly many of these events are co-funded, but some SIRE-funding typically plays a key part in initial event planning and leveraging external funding. There is a need to for ongoing collective SIRE funding for such events, and associated administration, post 2015, and this forms the other key element of SIRE's proposals for phase II funding.
  - (c) There is a perceived need in Scotland for an independent source of high level policy analysis, akin to the IFS. While it can take time to build an effective organisation of this kind and build a reputation for quality and independence, a key building block is a collective need in Scotland for a group of high quality micro-econometricians, with an interest in Scottish

data and policy, to strengthen our existing capacity in this area. Such a group would, inter alia, provide a natural link with the newly launched Data Science Innovation Centre.

- 1.4 In contrast to the earlier annual reports produced by SIRE, spanning the years 2007-2012, which separated the coverage of each of the three main programme themes, this report provides a consolidated overview of SIRE. This consolidated approach not only helps to reduce the report's length, but it also reflects the evolution of research and research activities taking place within SIRE. While the three original thematic programmes (Behaviour, Incentives and Contracts (BIC); Work and Well-being (W&W); and Macroeconomics, Financial Linkages and the Regions (MFLR) still play an important role, a number of the more exciting research outputs and activities outlined below cross programme boundaries.

## 2. Collaboration and Engagement Activities

- 2.1 SIRE's organisational and governance structure remains unchanged from the 2012-13 Report. The Executive comprises:
- David Ulph (SIRE Director)
  - Stuart Sayer (SIRE Executive Director)
  - Ed Hopkins (Director of BIC)
  - Charles Nolan (Director of MFLR)
  - David Bell (Director of W&W)
  - Liam Delaney (SGPE PhD Director)
  - Catia Montagna (Policy Forum Co-ordinator).
- 2.2 One of the key roles of the Executive is to facilitate and foster a wide-range of research-focused events and activities, which provide a major mechanism for within-SIRE and external networking. The SFC-funded activities budgets of the SIRE Centre and Programmes have been invaluable in developing and sustaining the events programme. In many cases the offer of SIRE funding has allowed initial event planning to go ahead and enabled event organisers to leverage various sources of external funding or co-funding by the host institution, to supplement or in some cases partially replace the use of SIRE funds. This success in leveraging co-funding has enabled us to develop and run a substantial and high quality event portfolio, while extending the life of the SFC-funded activities budgets, from the 5 year footprint envisaged in the SIRE proposal, until January 2016 with the agreement of the SFC.
- 2.3 The SIRE Centre, administered by Gina Reddie, oversees and co-ordinates SIRE events, liaising with local organisers at the host institutions. She maintains a calendar of SIRE events, along with other economic-research-related events (including departmental seminar series and David Hume Institute seminars) on the SIRE website (<http://www.sire.ac.uk/>), and publicises events through the website, twitter and extensive email distribution lists, which include economists and others working in the public and private sectors as well as academics at SIRE institutions. While we have to date been able to extend the appointment of the SIRE administrator beyond the 5 year term covered by SFC funding, maintaining this valuable collective oversight, co-ordination and publicity function requires an ongoing source of collective funding.
- 2.4 The main SIRE events taking place over the reporting period are summarised in section 8 below. As the summaries indicate, the events foster networking across different dimensions, with the precise mix depending on the nature and topic of the event:

*Networking among Scottish-based researchers* working on the topic of the workshop or other event. As is evident from section 8, events typically attract presenters or participants from most SIRE institutions.

*Networking between senior established researchers and early career researchers (ECRs) and PhD students.* In addition to explicitly targeted activities, such as the SIRE Young Researchers' Forum and advanced training events, many SIRE events earmark one or more slots for presentations by ECRs or PhD students. Whether or not they are directly presenting, the events provide a valuable opportunity for ECRs and PhDs to interact with their more established peers, and frequently provide opportunities for one-to-one meetings between ECRs/PhDs and leading international researchers.

*Networking with leading international researchers and the international research community* from outwith Scotland. As is evident from section 8 many SIRE events include presentations from and participation of leading international researchers from outwith Scotland. Departmental seminar series, within SIRE institutions, add to these international networking activities. As SIRE matures, and the international reputation of the economics research base within Scotland grows, our ability to attract international research leaders to events and seminars has grown apace. This international dimension plays a very important role in the context of SIRE's mission. It enables us to benchmark Scottish-based research against the best in the world and raise the aspirations of Scottish-based researchers. It also provides a valuable vehicle for disseminating our research to the international research community and further enhancing the reputation of Scottish-based economics research. In some cases, this international networking leads to or helps build and maintain further research collaborations and co-authorships. It fosters the internationalisation agenda and links closely with the PEER and Connected Scotland initiatives.

*Networking with Scottish Government economists.* In addition to the established SIRE-Scottish Government Policy Forum, a growing number of SIRE workshops include policy roundtables, with panellists drawn from the academic and government sectors. Scottish Government economists are also frequent general participants at SIRE events including workshops, seminars, public lectures and advanced training events.

*Networking with other public sector economists.* The relevant network depends on the topic. SIRE events over the reporting period have included participation of economists from the Bank of England, European Central Bank, the Federal Reserve, the Central Bank of Ireland, Scottish Development International, Scottish Enterprise, Bank for International Settlements, Bank of Finland, Deutsche Bundesbank, Norges Bank, HM Treasury, NHS Scotland, Health Analytical Services Scotland, and the Public Health Division Scotland. Again it is notable, as the reputation of Scottish-based research and researchers has grown, that our work is attracting markedly more interest from further afield.

- 2.5 The range of high quality events such as focussed conferences, workshops, policy forums, and or advanced training were rare or non-existent in Scotland prior to SIRE. Departmental seminar programmes pre-dated SIRE, but attendance at seminars outwith one's home institution was rare so networking was limited. The influx of new high quality researchers into Scotland, originated by but now extending well beyond the SIRE appointees, combined with the development of SIRE events and the opportunities they provide, has caused a significant and ongoing shift in the economics research culture in Scotland. As the research culture and reputation of Scottish-based economics grows, this feeds back into further improvements in the quality and range of research-related events, creating a virtuous circle.
- 2.6 While SIRE events play a key role in networking, collaboration and engagement, SIRE researchers also play a leading or major role in a wide variety of other substantial



collaborative projects. An exhaustive list of these collaborative activities would be lengthy and beyond the scope of this report, some key examples must suffice.

- 2.07 *Longitudinal Survey of Ageing in Scotland:* As announced in last year's report, with the help of SIRE, Scotland has been invited to join the worldwide family of studies of older people which now covers 80% of the world's population aged over 50. These studies have individually and collectively generated a substantial literature which is of great significance at a time when the health costs associated with population ageing are increasing substantially. The Scottish consortium – HAGIS (Healthy Ageing In Scotland) – is led by economists from Stirling and Strathclyde, and includes sociologists, psychologists, social statisticians and medics from a range of Scottish universities. HAGIS has made a successful proposal to the National Institute of Ageing in the USA to set up a pilot study in Scotland.

HAGIS will be hosting this year's annual conference of British and Irish Longitudinal Studies of Ageing (BILS) on November 20<sup>th</sup> and 21<sup>st</sup> 2014 at the University of Strathclyde. Organised by Robert Wright (Strathclyde), the Conference will be opened by Alex Neil (MSP, Cabinet Secretary for Health and Well-being) and include keynote talks by Arie Kapetyn (University of Southern California) and Ian Deary (HAGIS and Edinburgh). SIRE presenters at the conference include: Robert Wright (Strathclyde), Georgios Panos (Glasgow), David Bell and Alasdair Rutherford (both Stirling). The final day of the conference includes sessions on "The Impact Agenda", led by Vanessa Cuthill of the ESRC, and a panel discussion covering funding opportunities under Horizon 2020, the National Institute on Ageing's Harmonisation Initiative, and cost-savings innovations in data collection.

In related work: Robert Wright, David Bell and Alasdair Rutherford are also researchers in the broad-based inter-disciplinary ESRC Centre for Population Change (EPC: <http://www.cpc.ac.uk/>) working on the: 'rural ageing, migration and care' (Bell and Rutherford), 'fiscal aspects of constitutional change' (Bell), and 'fertility and migration' (Wright) projects.

- 2.08 *Constitutional Change:* SIRE economists were closely involved in the establishment of the *Scottish Centre for Constitutional Change*, which is based in the University of Edinburgh and attracted £1.2 million of ESRC funding. Again, this is a multidisciplinary venture, drawing also on political science, social policy, defence and legal studies. While contributing extensively to the debate on constitutional change in the run up to the referendum, the SIRE economists in the Centre have been active in enhancing the capabilities for modelling the Scottish economy, which have an ongoing value, given the additional tax powers in train for the Scottish Parliament, despite the 'No' vote in the referendum. For further information on the Centre see: <http://www.futureukandscotland.ac.uk/projects/research-centre> .

In addition to the Centre, SIRE economists have been engaged in a range of related work, linked to constitutional change. For example:

- Recent research on "Country Size and Border Effects in a Globalised World" was the focus of a two-day Workshop held in Edinburgh in June (see section 8 for further details).
- Research at the University of Aberdeen, led by Alex Kemp, on market and economic issues relating to the North Sea oil and gas industry, had a significant impact on the referendum debate.
- The Scottish Government (Office of the Chief Economic Advisor, OCEA) have adopted a Strathclyde/Fraser of Allander-based CGE model of the Scottish economy to explore the impact of further devolution of taxing powers from Westminster.
- More generally, SIRE economists participated in a wide variety of roundtable discussions with policy makers and officials in Scotland and London as well as contributing extensively through the media and public events to the wider debate.



- 2.09 *ClimateXchange and the Edinburgh Centre for Carbon Innovation (ECCI): ClimateXChange* is a collaborative initiative between sixteen of Scotland's leading research and higher education institutions aiming to provide authoritative evidence to support the Scottish Governments' climate change-related activities. *ECCI*, hosted by the University of Edinburgh in partnership with Heriot Watt and Edinburgh Napier, is a hub for the knowledge, innovation and skills required to create a low carbon economy. A number of SIRE researchers collaborate with ClimateXchange and/or ECCI in a variety of capacities. For example:
- The energy-economy-environment variants of the Strathclyde/Fraser of Allander-based CGE model of the Scottish economy play an increasingly important role in the work of ClimateXchange, and are being further developed in collaboration with the James Hutton Institute (<http://www.hutton.ac.uk/>);
  - Peter McGregor and Grant Allan (both Strathclyde) gave presentations to the Annual Meeting of ClimateXchange held in September 2014;
  - Stuart Sayer contributes to ECCI CPD activities and is an adviser to *Carbon Masters*, a spin-off consultancy, and the *Association of Carbon Professionals* both of which have a base in ECCI and were started by former graduate students;
  - Jelte Harnmeijer (Edinburgh) is a founder and Managing Director of Scene Consulting (<http://www.sceneconsulting.com/>), a social enterprise carrying out research and consultancy on community energy, based in ECCI.

In closely related work:

- Peter McGregor (Strathclyde) has been actively involved as an investigator and in the KE activities of a number of other multi-disciplinary, multi-institutional research networks to which KE activity is central e.g. 3 Supergen Consortia, EPSRC Desimax, EU Biomara, EU TROPOS, NINES (Northern Isles New Energy Solutions).
- Karen Turner (Heriot-Watt), in collaboration with five other previous ESRC Climate Change Leadership Fellows from a range of social science disciplines, organised and presented at a series of workshops with international, UK and devolved regional policy forums, as part of the ESRC Climate Crunch project. (See: <http://www.lwec.org.uk/people/climate-crunch-group>).
- The Aberdeen Centre for Research in Energy Economics and Finance (ACREEF), Directed by Alex Kemp, continues its important work in petroleum economics, along with renewable energy and environmental economics. Building on its strong record of KE engagement and impact with both public and private sectors, the interdisciplinary links of this group have recently been strengthened by the creation of the Aberdeen Institute of Energy.
- Richard Bellingham (Strathclyde) is European coordinator for the STEP UP sustainable city planning programme - a €3.7m FP7 partnership between Glasgow; Gothenburg; Riga and Ghent - involving cities, universities and commercial partners - focused on creating innovative integrated low carbon energy projects. The programme runs from 2012-2015. (See [www.stepupsmartcities.eu](http://www.stepupsmartcities.eu) ).
- Richard Bellingham is also a member of the joint Strathclyde/Edinburgh £1 million interdisciplinary UKRC research project "Heat and the City" on urban low carbon heating solutions. (See: <http://www.heatandthecity.org.uk/> ).
- Arjunan Subramanian (Glasgow) is a Co-I on the "Scalable Solar Thermoelectrics and Photovoltaics (SUNTRAP)" collaborative interdisciplinary project, running from 2014-19, funded by EPSRC for £2,455,231.
- Carlo Morelli (Dundee) is a Co-I on the Centre of Expertise for Waters (CREW) study, funded by DFID and the Scottish Government, of "The Role of Catchment Management in Helping to Protect and Improve Drinking Water Quality in a Cost-effective Way". 2014-17. Total award £140,150 (Economics share: £15,600).

- Mark Schaeffer (Heriot-Watt, in association with Julian Fennema of the Institute of Petroleum Engineering) continues to produce the BP Statistical Review of World Energy (funded: £60,257 by BP).
- The SIRE Energy Economics Workshop, held in June 2014, brought together 27 researchers in energy economics from 8 Scottish universities. The intention is for this workshop to become a regular part of the SIRE calendar, with broader engagement with key energy stakeholders in public and private sectors, as well as researchers from outwith Scotland (see section 8).
- “Energy Modelling for Policy Analysis” was the topic of the SIRE-Scottish Government Policy Forum held in March 2014. The Forum was run in conjunction with the Offshore Renewables Institute, a collaboration between the Universities of Dundee, Aberdeen and Robert Gordon. This very successful forum led to the formation of the Scottish Government Technical Advisory Group on Energy and Climate Change Analysis (TAGECCA) which has, at the time of writing, met twice.

2.10 *Health and Well-being*: SIRE researchers are playing a leading role in a €3 million multi-country interdisciplinary project (Munros), funded by the European Commission for four years from 2012, to undertake a systematic evaluation of the impact of ‘new professional roles’ on practice, outcomes and costs in a range of different health care settings within European Union and Associate Countries. Bob Elliot (HERU, Aberdeen) is PI for the project, with Ioannis Theodossiou (Aberdeen) a further lead investigator. The project also involves NHS Grampian and partners in Manchester, Netherlands, Germany, Norway, Italy, Czech Republic, Turkey and Poland. (See <http://www.abdn.ac.uk/munros/> ).

SIRE researchers based in Aberdeen and Dundee (Catia Montagna, Hassan Molana and Yu-Fu Chen) are part of another pan-European interdisciplinary research consortium covering 33 partners from 12 EU countries awarded a grant of €8.5 million from the EU running from 2012 through 2016. The project (Welfare, Wealth and Work for Europe) brings together researchers with interdisciplinary expertise from economics, ecology, history, demography, political science and gender research to work on how Europe can cope with the challenges of the financial crisis, globalisation, demographic shifts, climate change and new technologies, whilst delivering social inclusion, wellbeing and environmental quality. (See: <http://www.foreurope.eu/> ).

Ioannis Theodossiou (Aberdeen) is a co-investigator on a €4 million EU funded project (PARASITE), running from 2012 to 2016, providing a multidisciplinary approach to detect, monitor and mitigate risk of seafood-borne parasites. The Consortium is composed of 12 European and 3 Asian research institutions and 6 European SMEs from a total of 13 countries.

Michèle Belot (Edinburgh) is a co-investigator on a further large interdisciplinary collaborative project (Nudge-it), awarded £7.4 million by the EU. The project was launched in January 2014 and runs for 5 years. The goal is to understand the physical and psychological factors that control eating behaviour, so that we can develop more effective strategies for encouraging healthier food choices. The five-year initiative – called Nudge-it – will be conducted by experts from 16 institutions across six European countries, the US and New Zealand. A mixture of brain imaging, behavioural studies and laboratory experiments will be used. Researchers will also collect information from families about the social and economic factors that affect people’s eating decisions. (See: <http://www.nudge-it.eu/>).

2.11 *Macroeconomics*: A major achievement this year is the award of an ESRC Large/Centre grant for work on “Credit and Labour Market Foundations of the Macroeconomy”. The project aims to: (a) Re-examine the foundations of macroeconomics in the light of the financial crisis, with particular emphasis on credit and labour markets, and their inter-linkages with the

aggregate economy. (b) Inform and improve the standard of debate on macroeconomic policy and how this is related to labour and credit markets – with a view of proposing policy recommendations. (c) Build capacity in macroeconomic research to re-establish and sustain the UK as a world-leader in the field.

The grant provides £5,929,511 over 5 years from June 2015. The grant is led by John Moore (Edinburgh), with 9 other SIRE/Edinburgh-based economists as named CO-Is, including 4 SIRE Chair-holders (Rodriguez Mora, Guell, Elsby and Kircher). The remaining named CO-Is are: Nobuhiro Kiyotaki (Princeton), John Hassler (Stockholm), Gary Solon (Michigan State), Matthew Shapiro (Michigan), Ryan Michaels (Rochester), Iourii Manovskii (Pennsylvania), Pieter Gautier (Amsterdam) and David Miles (MPC, Bank of England). This group of leading international researchers will visit on a regular basis for workshops, brainstorming sessions and other events, which will be open to other interested macroeconomists in Scotland and elsewhere.

A key element of the pathways to impact will be a Policy Forum series, to be held in Edinburgh, London (and possibly Europe and the US), with economists and policy-makers from Central Banks and government. These policy forums, along with other aspects of the grant's governance, organisation and work-plans, build on the experience of SIRE, with SIRE's Executive Director (Sayer) taking on the role of Executive Director for the grant, and Charles Nolan (Glasgow), Alan Sutherland (St Andrews) and Gary Gillespie (Scottish Government Chief Economist) on the management/advisory team. More generally, SIRE played an important role in our success in obtaining this award, while this success in the very rigorous ESRC Large/Centre grant competition in turn achieves an ambitious goal set out in the original SIRE business plan.

While the focus of this large grant is on micro-foundations, reflecting its origins in the core of SIRE's 'Behaviour, Incentives and Contracts' (BIC) programme, it links to the more aggregated macroeconomic research within SIRE's 'Macroeconomics, Financial Linkages and the Regions' (MFLR) programme as well as the labour economics strand of the 'Work and Well-being' programme. Related activities within SIRE during the report period include:

- The Workshop on "Econometric Modelling and Forecasting in Central Banks", held in May 2014, which attracted presenters or participants from the Scottish Government, ECB, Norges Bank and Deutsche Bundesbank.
- The Conference on "Monetary Analysis and Monetary Policy Frameworks", held in April 2014, which attracted presenters or participants from the Bank of England, Price Waterhouse Coopers, ECB, BIS, Bank of Finland, Central Bank of Ireland, and Deutsche Bundesbank.
- The SIRE lectures given by Jean Tirole (Toulouse, Oct 2013) and Nobuhiro Kiyotaki (Princeton, April 2014) on aspects of banking and finance post-crisis.
- The fourth annual Search and Matching (SaM) Conference held in May 2014.
- The PhD training course on Search and Matching in December 2013.
- The SIRE Young Researchers' Forum on 'Accounting for Mismatch Unemployment' in October 2013.
- Alan Sutherland's (St Andrews) ongoing ESRC grant for £285,762 on 'The Macroeconomics of Globalisation', which runs until May 2015.
- Michael Hatcher and Charles Nolan's (Glasgow) ESRC grant for £150,289 on 'Should central banks adopt price-level targeting?' Quantifying the long-term impact on social welfare', which ran from 2012-2014.
- John Moore's ongoing ERC FP7 grant for £1,230,768 for work on 'Money, liquidity and the aggregate economy', which has been extended to run until 2016.

### 3. SIRE Appointments

- 3.1 The current post-holders of SFC co-funded SIRE senior and junior posts are set out, respectively, in tables 1 and 2.

*Table 1 SIRE Senior Post-holders as of 31.10.2014*

<b>Programme</b>	<b>University</b>	<b>Appointee</b>
BIC	Edinburgh (5)	José V (Sevi) Rodriguez Mora Maia Güell Ed Hopkins Mike Elsby (started Dec 2010) Philipp Kircher (started Sept 2012)
	Heriot Watt (1)	<i>Tooraj Jamasb</i> (departed mid 2013)
WW	Aberdeen (2 + 1 initially converted from L to P, replaced by R with agreement of SFC)	Keith Bender (appointed from July 2012 to replace Hans Hvide, who moved to a fractional post); <i>Miguel Costa-Gomes</i> (moved to St A, summer 2013) Ramses Abul Naga (Reader)
	Stirling (1)	Liam Delaney (from Sept 2011, replacing Sascha Becker).
	Dundee (1) (P)	<i>Yu Zhu</i> (from Sept. 2014, replacing Arnab Bhattacharjee who moved from readership at Dundee to P at H-W, May 2013)
MFLR	Glasgow (3)	Gabriel Talmain Charles Nolan Tatiana Kirsanova (started Sept 2011)
	St Andrews (3)	Rod McCrorie Paola Manzini <i>Clara Ponsati</i> (from Jan 2015, replacing Marco Mariotti, who left in 2014) George Evans <sup>1</sup>
	Strathclyde (2)	Gary Koop <i>(Bernard Fingleton left Sept 2011, yet to be replaced).</i>

<sup>1</sup> Part-time 0.2 FTE

**Table 2 SIRE Junior Post-holders as of 31.10.2014**

<b>Programme</b>	<b>University</b>	<b>Appointee</b>
BIC	Edinburgh (4)	Tatiana Kornienko (promoted to SL) Kohei Kawamura (promoted to SL) Robert Zymek (from Aug 2011 – replacing Gorbachev) Anikó Bíró (from Aug 2011 – replacing Steiner)
	Heriot-Watt (1)	Philippe LeMay-Boucher (promoted to SL)
WW	Stirling (1)	<i>Ian Lange</i> (left Dec 2013)
	Dundee (2)	Grigorios Emvalomatis (started Nov 2013, replacing Dennis Petrie, who left Dec 2012) Andrzej Kwiatowski (from January 2010)
	Aberdeen (2 – minus 1 converted to P)	Yu Aoki (from Aug 2012, replacing Silvia Mendolia)
MFLR	Glasgow (3)	Luis Angeles (promoted to SL) Céline Azémar (promoted to SL) Iona Moldovan
	Strathclyde (2)	<i>Stuart McIntyre</i> (replacing Lise Tole, who retired) Rodolphe Desbordes (Promoted to Reader)
	St Andrews (3)	Gonzalo Forgues-Puccio Alexandru Nichifor (from Sept 2011 replacing Faravelli) Georgios Gerasimou (replacing Arico departed Feb 2012)

- 3.2 At senior level, the vacancy at Dundee, arising from the move of Arnab Bhattacharjee to Heriot-Watt, has been filled by Yu Zhu, who took up the Dundee Chair in September 2014, moving from a Readership at the University of Kent. Professor Zhu’s main research interests include the economics of education, family economics, and applied microeconometrics. He has been a Research Associate of the Centre for the Economics of Education (CEE) at the London School of Economics since 2003. He is also a founding member of the Economics of Higher Education network based at the Centre for Economic Performance at the LSE.
- 3.3 Clara Ponsati has been appointed to a Chair at St Andrews, following the departure of Marco Mariotti in 2014. Professor Ponsati takes up her St Andrews Chair in January 2015, moving from her previous post as Research Professor and Director, Institut d’Anàlisi Econòmica, Barcelona (C.S.I.C.). She is the associate editor of the Review of Economic Design and the International Journal of Game Theory, and a member of the academic council of the Barcelona GSE, the scientific board of the Spanish Foundation for Science and Technology, and a former member of the research council of the European University Institute. Her research interests are in game theory and bargaining, including recent publications with SIRE co-authors (Sanchez-Pages, Sakovics and Manzini).

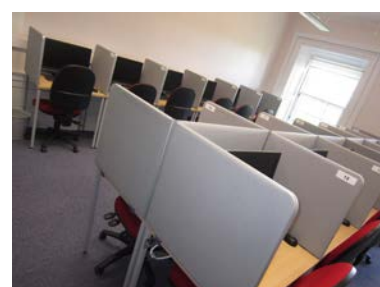
- 3.4 The senior vacancies arising from the move of Miguel Costa-Gomes from Aberdeen to St Andrews, and the departures of Bernard Fingleton and Tooraj Jamasb (from, respectively, Strathclyde and Dundee) remain unfilled at the time of writing.
- 3.5 At junior level Stuart McIntyre, a former SGPE student, has been appointed at Strathclyde to fill the vacancy created by the early retirement of Lise Tole; and a new vacancy has arisen at Stirling, following the departure of Ian Lange to the US in December 2013.
- 3.6 One sign of the success of the SIRE junior hires is the promotion of most of the more long-standing appointees to SL or Reader. Explicitly: Tatiana Kornienko, Kohei Kawamura (both Edinburgh), Philippe LeMay-Boucher (Heriot-Watt), Ian Lange (Stirling, before his departure in Dec), Luis Angeles, Céline Azémar (both Glasgow) have been promoted to SL, and Rodolphe Desbordes (Strathclyde) has been promoted to Reader. While Jakub Steiner, originally appointed as a SIRE lecturer before his departure to Northwestern, has returned to Edinburgh as a half-time Professorial Fellow.
- 3.7 Some noteworthy indicators of the high quality of recent SIRE hires:
- Following the award of a Philip Leverhulme Prize (a highly competitive multi-disciplinary prize for the leading researchers in the UK under age 36) to Mike Elsby in 2012, he has received the *American Economic Journal: Macroeconomics* Best Paper Prize 2014 for “Marginal Jobs, Heterogeneous Firms and Unemployment Flows” and was recently elected to the Editorial Board of the *Review of Economic Studies*.
  - Philip Kircher, who received the British Academy's first Wiley Prize in Economics in 2013 for achievement in research by an outstanding early career economist, has recently been asked to be a section leader of a group of the National Bureau of Economic Research (NBER). He continues to be Managing Editor of the *Review of Economic Studies*, Associate Editor of the *Review of Economic Dynamics*, a Council Member of the European Economic Association (EEA) and a member of the Executive Committee of the Search and Matching (SaM) research group.
  - Maia Güell has recently become a member of the European Economic Association Women in Economics Committee and serves as an elected Executive Committee Member of the European Association of Labour Economists.
  - Paola Manzini became an Associate Editor of the *Journal of the European Economic Association* in January 2014.
  - Ed Hopkins is an Associate Editor of the *Journal of Economic Behavior and Organization*
- 3.8 On top of the SFC co-funded SIRE posts, there have been a substantial number of additional high quality senior and junior appointments made by participating universities in the lifetime of SIRE. Notable new senior arrivals in the reporting period include Yiannis Vailakis (Glasgow, previously University of Exeter); Andriy Zapechelnuk (Glasgow, previously Queen Mary University, London), Mustafa Caglayan (Heriot-Watt, previously Prof at Sheffield), Timothy Worrall (Edinburgh, previously Manchester).
- 3.9 The extent and quality of these net additions to the Scottish research base, over and above the SFC co-funded posts, provides a strong signal of the sustainability of the SFC investment in SIRE and the step change in research culture it has induced. What is more, these net additions are ongoing, with a number of departments actively engaged in the job market at the time of writing.



## 4. Other ‘Outputs’ and Performance Indicators

- 4.1 As noted above, in addition to the SFC co-funded SIRE junior appointments, there have been a substantial number of further junior appointments across the SIRE universities to Lecturer, Post-Doctoral or Research Fellow posts. Thus there is a substantial and growing base of *Early Career Researchers* (ECRs). At present, while contact details for all new hires are reported to the SIRE Centre annually, we do not systematically collect and collate pooled information specifically on ECRs. A more systematic and detailed data-gathering exercise on ECRs is planned for the final SIRE end of grant Report.
- 4.2 SIRE organizes and supports a number of events and activities specifically directed at ECRs. Of particular note are:
- The *SIRE Young Researchers’ Forum (SYRF)*: an ongoing series of workshops organised by ECRs, with senior support. The Forums involve a leading senior researcher, from within or outwith Scotland, who provides a keynote talk and feedback/discussion of research presentations by two or three young researchers. The location of the workshop migrates around the SIRE universities. See section 8 for further details of SYRF events held in the reporting period.
  - The SIRE programme activities budgets have been used to provide capped financial support to ECRs, who need funding to enable them to *present research at major conferences*. Requests for funding are relatively simple to make and subject to tight quality controls by the SIRE Executive, so that support is primarily focused on major conferences such as the annual Royal Economic Society, European Economic Association, or Econometric Society meetings. There were 24 successful applicants for these grants in the reporting period. As well as providing very valuable experience and encouragement for the ECRs, this support also helps to disseminate SIRE research and SIRE itself.
  - The SFC funds restored to SIRE are also targeted at ECRs, to support high quality research that involves a significant element of *engagement with a non-academic organisation* in the public or private sector in UK or abroad. Further details are provided in section 7 below.
- 4.3 The *Scottish Graduate Programme in Economics (SGPE)*, a long standing collaboration between the 8 pre-1992 Scottish universities, was established well before SIRE. The SGPE provides the ESRC recognized pathway for Economics within the Scottish Graduate School of Social Science (SGSS). There are currently around 80 PhD students on the SGPE PhD programme, and a substantial number of additional economics PhD students not directly registered on the SGPE taking the total number of PhDs well above 100. A more systematic and detailed data-gathering exercise on PhDs is planned for the final SIRE end of grant Report.
- 4.4 Overall PhD numbers show a significant growth, since the creation of SIRE, although the growth has been unevenly distributed across the SIRE universities. As well as growth in numbers, there has also been a notable improvement in quality. The aim is for further substantial growth, as long as this can be achieved while at least maintaining, and striving to enhance intake quality. The competition for high quality economics PhD students, within the UK and internationally, is particularly fierce. The reputation and quality of the research environment and potential advisors is one important dimension of competition and, as indicated throughout this report, SIRE has done much to enhance our competitiveness in this dimension.

- 4.5 The availability of funded PhD studentships is another important dimension of competition. Since the creation of SIRE, there has been a substantial growth in the number of funded studentships, with the funding coming partly from increased grant income (e.g. the recent ESRC Large/Centre grant in macroeconomics includes 3 fully-funded PhD studentships) and partly from participating universities/departments. The differing availability of funded studentships across universities provides a possible partial explanation of the unevenly distributed growth in PhD numbers. The proposal for phase II SIRE funding, which we are in the process of refining, aims to enhance this important dimension of the competitiveness of our PhD programme by using the matched funds from participating HEIs for the provision of PhD studentships. This targeted use of matched funds has the support of all 8 Principals.
- 4.6 A further important dimension of competition for PhD students is the quality of the advanced, post MSc, training offered. Here again, there have been some significant enhancements since the creation of SIRE. Key advanced courses from the SGPE MSc programme are now available as webcasts, and form part of the SGSS approved pathway. SIRE departments with a greater concentration of PhDs, primarily Glasgow, Edinburgh and St Andrews, have been developing their own in-house advanced core modules, which are made available, via SIRE and SGPE networks, to PhDs based elsewhere who wish to attend. As well as encouraging these developments, SIRE has more directly provided a range of more specialised advanced training workshops, boot-camps and mini-courses, which have been well-attended and well regarded by PhD students (along with ECRs and even some ‘more mature’ researchers). In the early phase of SIRE such specialised training events tended to be somewhat opportunistic but, more recently, we have been consciously developing a more systematic approach to ensuring that key tools and techniques required by significant sub-sets of our PhD students are covered effectively, particularly in the areas of econometrics and computational techniques. In addition the extensive list of SIRE events provides a variety of valuable learning opportunities for PhDs and ECRs, both in general, and more specifically by, where appropriate, providing earmarked opportunities for PhD students or ECRs to present their work.
- 4.7 Despite this considerable progress and the perception of the Economics pathway, within the SGSS, as a role model for systematic PhD training, the leading graduate schools, with which we aspire to compete have also been moving forward. With the effect that our provision of systematic and structured post-MSc training still lags behind the very top Economics graduate programmes in the UK and internationally. We also lag behind in establishing connections, exchange opportunities and jamborees for PhD students with leading graduate schools in Europe and further afield. There is a sense in which we need to run in order to maintain our competitive position, and to narrow the gap with the very top we need to be able to run even faster. We see narrowing this gap as the key strategic goal for the next phase of SIRE. While pooling and collaboration can in a number of respects be very helpful, and even essential, in achieving this goal, not least in the provision of scale, reputation and high quality researchers, at times the multiple institutions involved, including the SGPE, SGSS and ESRC, alongside SIRE, and their respective participating universities, can make progress difficult and slow. With strong leadership, focused on achieving this key strategic goal, this impediment is not insuperable. Leadership needs to be backed up with collective (SIRE-wide or SGPE-wide) funding to support the development of more systematic post-MSc advanced training along with exchange opportunities and jamborees. The need for such funding, beyond the current July 2015 deadline, forms the key element of SIRE’s bid for phase II funding from the SFC.
- 4.8 The launch of a new *experimental laboratory* (The Behavioural Laboratory at the University of Edinburgh – BLUE) in March 2013 was announced in the previous SIRE Report. BLUE has been put to good use throughout the reporting period. One notable, and relatively intensive, use was a pilot study on job search conducted by Philipp Kircher



and Michele Belot. The study adopted a novel field experiment approach, in which unemployed individuals searched for real jobs online, using a researcher-designed search engine, during a six-month period, and their strategy was observed, while they were exposed to different information and incentive treatments. The researchers obtained access from the Department of Work and Pensions to use the set of all job vacancies that are posted on Universal Jobmatch, which is also used by the job centres in the UK and represents the largest source of job vacancies in the UK. The pilot study was relatively limited in scope, involving 180 participants for 1 hour per week. The successful pilot forms the basis of a much more extensive field experiment to be run over the internet, as one of the core projects within the recently awarded ESRC Large/Centre grant. This project should shed valuable light on applied policy design as well as on the underlying theories that are the corner-stones of current unemployment theory.

- 4.9 In line with SIRE milestones, there has been a substantial increase in high quality *publications* in highly ranked journals since the creation of SIRE. This increase partly results directly from the SFC co-funded SIRE appointments, providing a strong indicator of the high quality of the appointments made. But the increase also stems from longer-standing Scottish-based researchers upping the quality and quantity of their research outputs, in response to the enhanced research environment as well as the high quality of the new appointments made over and above the SFC co-funded posts. A more formal and detailed bibliometric analysis of the evidence base underlying this claim is planned for the final SIRE end of grant report.
- 4.10 One simple indicator is publications in the “top 5” journals. Prior to SIRE, such publications by Scottish-based economists were a rarity. One hit would have been a ‘good year’, two would have been truly exceptional. In the current reporting period there were five “top 5” publications by SIRE researchers, matching the achievement in the period covered by the previous SIRE annual report:
- Paola Manzini and Marco Mariotti *Econometrica*
  - Ed Hopkins *Review of Economic Studies*
  - Andreas Steinhauer *Review of Economic Studies*
  - Takashi Hayashi *Econometrica*
  - Alexandru Nichifor *Journal of Political Economy*

The authors include three senior and one junior SFC co-funded SIRE hires, along with two further recent ‘additional’ hires (one senior, one junior).

- 4.11 Section 9 below provides a longer, but still highly selective list of publications by SIRE authors in highly ranked journals during the reporting period. The selection is partly based on journal rankings, but also aims to provide some indication of the range and depth of SIRE research outputs by including some publications in leading field journals as well as general journals. The list was truncated to avoid excessive length - there were a substantial number of other publications in identical or similarly ranked journals, which might have been included.
- 4.12 Along with journal articles, SIRE research outputs are disseminated by the *SIRE Discussion Paper* series available on the SIRE website (<http://www.sire.ac.uk/>) maintained by the SIRE administrator, Gina Reddie. At the time of writing there are 552 Discussion Papers in the series, which dates back to 2008.
- 4.13 Major elected offices and prizes provide a further indicator of the growing reputation of Scottish-based economics research and researchers. Recent such honours include:
- John Moore (Edinburgh), a previous President of the Econometric Society, is the serving elected President of the Royal Economic Society;
  - John Beath (St Andrews) is Secretary of the Royal Economic Society;

- Michele Belot (Edinburgh) received the *Scandinavian Journal of Economics* Best Paper award for 2012 for her joint paper with Timothy Hatton on “Immigrant selection in the OECD countries”.
- Mike Elsby (Edinburgh) followed up his Leverhulme Prize with the award of the *AEJ: Macroeconomics* Best Paper Prize for 2014.
- Theodore Koutmeridis (St Andrews) won the 2014 Cairncross Prize for his paper “The Market for 'Rough Diamonds': Information, Finance and Wage Inequality”, as well as being elected to the Royal Society of Edinburgh’s Young Academy of Scotland.

4.14 Alongside a number of ongoing *major grants*, announced in previous SIRE Reports, and the substantial multi-disciplinary, multi-institution collaborative grants summarised in paragraphs 2.07-2.11 above, there have been a healthy number of new major grants awarded to SIRE researchers over the reporting period. These include:

- Joseph Swierzbinski: “Algebra and logic for policy and utility in information security”. Dec 2013 – 2017, £441,734 (Aberdeen share 10%) from EPSRC.
- Seda Erdem: “Exploring and quantifying preferences towards self-management support interventions: a mixed-methods survey among individuals with long term health conditions”. 2014-15, £155,800 (Stirling share £23,372) from the Health Foundation.
- Liam Delaney ESRC Seminar Series on Measurement in Behavioural Science – Co-Applicant. 2014-2015, £30,000k from ESRC.
- Mirko Moro (Co-I) Co-I: “Evaluating the Winter Fuel Payment”: 2014-2016, £147,000 from National Institute for Health Research.
- Alexandru Nichifor: International Outgoing Fellowship (IOF) for career development. £151,112 from EU FP7 Marie Curie
- John Tsoukalas: “Where is the news in business cycles? A new approach with novel methodologies”. 2014-17, £71,552 from Leverhulme Trust.
- Jan Grobovsek and Philipp Kircher: “Misallocation, Agriculture and Aggregate Productivity - The Role of Insecure Land Rights and Missing Financial Markets.” 2014-17, £387,943 from ESRC/DFID.
- Michele Belot: “Using Insights from Behavioural Economics to Design Effective Information Campaigns”. 2014-15, £26,278 from Sweden.

4.15 Tables 3 and 4 below, provide an aggregate summary of grant income across SIRE institutions. The tables reveal a strong and healthy grant income. Although a rigorous comparison is not yet feasible, since the data for comparable tables for the pre-SIRE years have yet to be collected and collated and we struggle to get fully consistent data particularly on the ‘cumulative total’ and ‘pending applications’, the tables indicate the substantial and ongoing increase in grant income that has taken place since the creation of SIRE. The recent award of the ESRC Large/Centre grant for almost £6 million (see section 2.11) highlights this success, providing a good indication of the sustainability of the SIRE investment by the SFC. A more rigorous analysis and comparison of grant income with the pre-SIRE years is planned for the final SIRE end of grant report.

4.16 The substantial enhancements to research personnel, publications, grant income and PhD numbers, together with the dramatic step change, across several dimensions, in the broader research environment, dissemination, collaboration and engagement under the SIRE aegis have had a strongly positive impact on the *REF submissions* of SIRE’s participating departments. SIRE’s participating universities have submitted separately to either UoA 18 ‘Economics and Econometrics’ or UoA 19 ‘Business and Management Studies’, with the selection of UoA reflecting the strategic decision of senior management in the respective university. There was no appetite among senior management or SIRE researchers for a

collective SIRE submission comprising either all, or a subset, of participating universities. This is consistent with the views outlined in the original SIRE proposal. There are several reasons underlying this lack of appetite, notably:

- Unlike some of the pooling initiatives, SIRE is an extensive pool with no specific core research project or physical facility. In the absence of such a core project or facility, cherry-picking top researchers from across SIRE institutions could all too easily lead to negative rather than positive perceptions of the state of economics research in Scotland.
- REF is about much more than the completion of a submission. It plays an integral part in the management of the ongoing performance of individual researchers. Decisions about inclusion/exclusion from REF submission are an important element of this management process as is the ongoing management of researchers whether or not they are included in the current submission. Such management is an important part of HR processes, and the managerial challenges (including pay and promotion considerations) can vary across individuals and institutions. Since SIRE researchers are directly employed by an individual university, SIRE does not have the HR mandate or the managerial authority and information base needed to play this managerial role directly.

**Table 3**  
**Grant income**

<b>Grant income :</b>	<b>2013-14</b>	<b>Cumulative total</b>	<b>Pending applications</b>
Awarded to a single institution within the pool	2,079,555	12,652,283	3,727,320
Awarded jointly to two or more institutions within the pool	597,413	833,163	-
Awarded jointly to two or more institutions across two or more pools	250,000	250,000	1,298,403
Other, please specify	-	-	-
<b>Total</b>	<b>2,926,868</b>	<b>13,735,446</b>	<b>5,025,723</b>

**Table 4**  
**Grant Income**

Grant Source	Scottish		UK		European		Other international		Total	
	AY2013-14	Cumulative	AY2013-14	Cumulative	AY2013-14	Cumulative	AY2013-14	Cumulative	AY2013-14	Cumulative
<b>Research Councils</b>	-	-	1,034,561	8,151,032	-	-	-	-	1,034,561	8,151,032
<b>European Framework Programmes</b>	-	-	-	-	926,914	4,233,242	-	-	926,914	4,233,242
<b>Other public bodies*</b>	236,465	274,582	32,963	32,963	118,413	330,383	2,854	2,854	390,695	640,782
<b>Charities</b>	20,770	20,770	399,659	522,213	-	-	-	-	420,429	542,983
<b>Industry</b>	-	-	114,870	114,870	-	-	-	-	114,870	114,870
<b>Other (please detail)</b>	-	-	-	-	13,139	26,278	26,261	26,261	39,400	52,539
<b>Total</b>	24,775	62,892	756,315	7,117,002	599,066	3,815,945	-	-	2,926,868	13,735,446



## 5. Sustainability

- 5.1 The major part of the SFC's and participating universities' financial investment in SIRE was directed towards new senior and junior academic posts. These posts have all been filled with high quality researchers, surpassing the quality threshold set out in the original SIRE proposal, as was clearly indicated by the interim review conducted for the SFC by two members of the IAB in 2009. Some turnover in personnel holding these posts is to be expected as part of the normal functioning of the labour market for academic economists. As noted in section 3, the senior vacancies that currently exist are part of this normal turnover process. As the SFC co-funding of these posts tailed off, their financial sustainability has been assured by the substantial growth in income from research grants, RAE/REF-related income and PGT and UGT fee income achieved since the creation of SIRE. This growth in income has not only provided for the sustainability of the original SIRE posts, but has also allowed for a substantial number of additional new net-hires at senior and junior levels. This growth is ongoing, with a number of SIRE departments actively engaged in recruitment at the time of writing.
- 5.2 More broadly, the substantial step change in research culture and outputs which has taken place is firmly established and provides a virtuous circle encouraging sustainability and, indeed, an ongoing upward trend. Indicators supporting this observation include:
- the significant and sustained increase in the quantity and quality of publications from SIRE researchers;
  - the increased engagement in collaborative interdisciplinary projects funded by the EU and others;
  - the improvement in quantity and quality of applicants for junior and senior posts and the quality of recent hires;
  - the enhanced ability to attract leading international researchers and policy-makers as presenters or participants at SIRE and other related events;
  - the volume and value of grant income, highlighted by the recent ESRC Large/Centre grant;
  - inter alia, such larger grants provide substantial on-going funding for workshops, conferences, policy-forums, research visitors, PhD students etc sustaining and building on the base created by SIRE.
- 5.3 At a more detailed level, there are some key challenges, as noted elsewhere in this report, in particular:
- The wide range of collective SIRE events play a very important role in SIRE's networking and collaborative activities. Increasingly many of these events are co-funded, but some SIRE-funding typically plays a key part in initial event planning and leveraging external funding. There is a need to source ongoing collective SIRE funding for such events along with the co-ordinating, publicity and dissemination functions performed by the SIRE Centre, post 2015. In the absence of such funding the rationale for and influence of the SIRE Executive will diminish. Some ongoing collective funding for SIRE events along with support for core SIRE administration is a key element of the SIRE bid for phase II funding from the SFC.
  - To sustain and enhance the developments that have taken place in the PhD programme, so that we can compete more effectively with leading graduate schools in the international arena, there is a need to develop and implement a more structured advanced (post-MSc) training programme for PhD students, which can flexibly meet the differing needs of SIRE institutions, and to build closer links with leading graduate schools in Europe and further afield, via exchanges and jamborees. Further collective (SIRE-wide) funding beyond the

current 2015 deadline is needed for these important developments, and this forms the other key element of the SIRE bid for phase II funding from the SFC (backed up by the matching funds from universities to provide PhD studentships).

- More broadly, there is a perceived need in Scotland for an independent source of high level policy analysis, akin to the IFS, building on the work undertaken in the context of constitutional change. While it can take time to build an effective organisation of this kind and build a reputation for quality and independence, a key building block is a collective need in Scotland for a group of high quality micro-econometricians, with an interest in Scottish data and policy.

## **6. Pools' Engagement in European Research (PEER)**

- 6.1 SIRE has been awarded a total of £30,000 from a strategic fund provided by the Scottish Government towards the cost of its Engagement in European Research to enable SIRE to participate in and compete for European Funding. The funds are held by the University of St Andrews on behalf of SIRE. The first two tranches, amounting to £20,000 were required to be spent by end July 2014. The remaining tranche of £10,000 has a deadline of end July 2015.
- 6.2 While SIRE has a good and ongoing track record of obtaining European Research funding, either for individual researchers or as part of large consortia (see section 2), we had struggled to spend the initial PEER tranches under the more restrictive conditions initially applied to these funds. Discussions with key SIRE researchers involved in large EU collaborative grants suggested that funding was not a key issue in the later stages of pulling together a grant proposal. Where funding would help most was in support of the earlier, more speculative, phases of building the European research networks and connections, which form the basis of such proposals.
- 6.3 The greater flexibility in the use of PEER funds, announced in 2012-13, has enabled us to direct funds in line with this need, fully utilising the first two tranches of PEER funding (£20,000) by the July 2014 deadline. Explicitly, we awarded:
- £8,000 to Catia Montagna (Aberdeen) in support of a project on 'Management practices in determining firms' performance and internationalisation', building on Professor Montagna's strong track record of work in this area and at obtaining EU research funding. The funding was directed at travel, subsistence and accommodation for European and Scottish academic researchers to participate in a series of exploratory workshops.
  - £827.20 to Carlo Morelli (Dundee) in support of 'The European Austerity Poverty Network'. The funding was directed at travel, subsistence and accommodation for European and Scottish academic researchers.
  - £5,000 to Paola Manzini and Marco Mariotti (St Andrews) for the "Bounded Rationality in Choice" workshop held in July 2013. The funding was directed at travel, subsistence and accommodation for academic researchers to attend the workshop. (Additional funding for this workshop was provided by the SIRE-BIC activities budget). This very successful inaugural international workshop has led to an ongoing network, with a follow-up workshop held in Barcelona in June 2014, funded by the Spanish Ministry of Economy and Competitiveness. Further follow up activities are planned.
  - £5,000 to Philipp Kircher and Ludo Visschers (Edinburgh) for the Fourth Annual Search and Matching (SaM) Conference, held in May 2014. The conference was co-funded by Centre National de la Recherche Scientifique (CNRS), the European Research Council, and the University of Edinburgh (with some additional funding from the SIRE-BIC activities budget). The PEER funding was directed at travel, subsistence and accommodation for academic researchers to attend the conference. (See section 8, below, for further details of this event).
  - £1,172.80 to Robert Zymek (Edinburgh) and David Comerford (Stirling) for the Workshop on "Country Size and Border Effects in a Globalised World" held in June 2014 (see section 8 below). One more specific aim of the conference was to

strengthen links with researchers in Barcelona (building on existing connections through, inter alia, Rodriguez Mora and Guell), given the topic's relevance to Catalonia. The PEER funding, which exhausted the funds available from the first two tranches, was supplemented by funding from the SIRE-BIC activities budget, leaving the later tranche of PEER funds available to support further relevant activities. The PEER funding was directed at travel, subsistence and accommodation for academic researchers to attend the conference.

- 6.4 We are actively seeking bids for the remaining £10,000 tranche of PEER funding and are confident that we will put this to good use prior to the July 2015 deadline.

## **7. Restored funds**

- 7.1 SIRE's restored funds, amounting to £238,978, were originally placed in St Andrews, the home university of the SIRE Director. With the agreement of the SFC, the funds were subsequently transferred to the University of Edinburgh, the administrative centre of SIRE, to facilitate the administration and monitoring of the use of the funds.

- 7.2 As agreed with the SFC the funds have to date been targeted to ECRs, including PhD students, in support of high quality research that involves a significant element of engagement with a non-academic organisation in the public or private sector in UK or abroad – an ECR Engagement Grant. .

- 7.3 To date there have been eleven successful applications for this ECR Engagement Grant:

- Amira Elásra (Glasgow): An internship in the United Nations Development Program (UNDP) country office in Indonesia.
- Marie Briguglio (Stirling): Research in the field of environmental behavioural economics, specifically in relation to collaboration with the Malta Environment and Planning Authority (MEPA).
- Loe Franssen (Strathclyde): An internship at the European Bank for Reconstruction and Development (EBRD).
- Serafeim Tsoukas (Glasgow): Collaboration with the Hong Kong Monetary Authority and the Bank for International Settlements (Hong Kong Office).
- Leonhard Lades (Stirling): To conduct a field experiment in collaboration with Skills Development Scotland in order to gain a better understanding of everyday self-control failures of unemployed individuals who search for jobs.
- Philippe LeMay-Boucher (Heriot-Watt): Collaboration with GERES (Groupe Energies Renouvelables, Environnement et Solidarités, an NGO) on a field experiment in Mali concerning the information and social network impact on the decision to adopt efficient and healthier cook stoves. This project is co-funded by: The Fondazione Giangiacomo Feltrinelli, Milan; The Fondazione Eni Enrico Mattei, Milan; and an internal research grant from Heriot-Watt.
- George Panos (Stirling/Glasgow): a research visit to the World Bank and Global Financial Literacy Excellence Center in Washington DC focussing on data acquisition and processing on financial literacy, including access to an important World Bank data set, which is not publicly available.
- Aniko Biro (Edinburgh): a visit to and work with the Hungarian Central Statistical Office to gain access to confidential micro data; along with follow up work with the National Institute for Health Development, Hungary, and the State Secretariat for Healthcare based in the Ministry of Human Resources, Hungary. The project is aimed at assessing the impact of the Hungarian junk food tax, introduced in 2011. The Hungarian tax is unique in terms of the range of food covered by the tax, the rate of the tax, and the explicit aim of health improvement.
- Twyeafur Rahman (Strathclyde): to conduct a field study in Bangladesh on the role of micro-credit programmes in poverty reduction in collaboration with ASA

Bangladesh. This collaboration follows on from the SIRE sponsored visit of Shafiqul Haque Choudhury, the Founder and Chairman of ASA in January 2013.

- Rodolphe Desbordes (Strathclyde): a one-month visit to the Trade Division of the World Bank (Washington DC), to participate in team meetings and engage with the World Bank's work on Foreign Direct Investment and Finance.
- Luca Savorelli (St Andrews) To set up a field experiment in collaboration with 'Itaca', a medium-size Italian cooperative firm, to explore aspects of motivational structure and incentives within a firm.

- 7.4 To date end of grant reports on two of these projects have been submitted, those of: Serafeim Tsoukas and Loe Franssen. In his end of award report Tsoukas states: "The SIRE Engagement award has provided me with extensive opportunities that will offer me lasting benefits in my future academic career. Crucially, I believe that many of these benefits would have been difficult for me to receive without a SIRE award". In a similar vein, Franssen states: "All in all, the newly acquired knowledge on the countries I am investigating, enhanced skills in Stata, professional skills in doing research and seeing how it can be applied directly into policy, networking within an organization that I see as a potential future employer and access to platforms such as their working paper series and their research seminars made this an extremely valuable internship. Further, without SIRE funding, it is highly unlikely that I would have been able to experience this at all."
- 7.5 Committed expenditure, to date, has amounted to a total of £80,909. This fairly modest rate of spend reflects the rigorous quality standards imposed when assessing applications.
- 7.6 We are pleased to have obtained agreement in principle from the SFC to broaden out the use of the restoration funds to foster international engagement and collaboration of SIRE ECRs, particularly with key countries, outside Europe and the US, targeted by the internationalisation strategy of 'Connected Scotland' (see: <http://connectedscotland.org/>). We are working on the details of this ECR international engagement scheme, for formal approval, with the aim of launching in time for the summer of 2015, when ECRs are potentially mobile.

## **8. Events – public lectures, workshops and conferences**

**The following events, which took place in the academic year 2013-14, were covered in the previous SIRE Annual Report (No. 7), see <http://www.sire.ac.uk> for further details:**

- SIRE Public Lecture – Jean Tirole (Toulouse) – October 7<sup>th</sup> 2013, Edinburgh
- SIRE and SGSS training workshop on "Modern Methods of Programme and Policy Evaluation – October 3<sup>rd</sup>-4<sup>th</sup> 2013, Strathclyde
- SIRE PhD Masterclass on "Bayesian Inference in the Social Sciences" – November 8<sup>th</sup> 2013, Heriot Watt.
- SIRE – Scottish Government Policy Forum: "Successful Exporting: Where does the UK do well and where does it not? Lessons for Scotland" – October 25<sup>th</sup> 2013, Edinburgh.
- SIRE – Scottish Government Policy Forum: "Why Do Reforms Fail? The Roots of Reform Resistance" – November 22<sup>nd</sup> 2013, St Andrews House.

- SIRE – SGPE Advanced Training “Numerical Methods for Economists Python Boot Camp (short course on Python programming)”- starting September 2013, Edinburgh
- SIRE Young Researchers’ Forum - October 25<sup>th</sup> 2013, Edinburgh
- SIRE Workshop on Microeconomic Theory – November 29<sup>th</sup>2013, Glasgow.
- SIRE PhD training course on “Search and Matching” – December 6<sup>th</sup> 2013, Edinburgh

## **New, not previously reported, events during 2013-14**

### ***SIRE-Scottish Government Policy Forum: “Energy Modelling for Policy Analysis” - March 9<sup>th</sup> 2014, St Andrews House***

The Forum was run in conjunction with the *Offshore Renewables Institute*, a collaboration between the Universities of Dundee, Aberdeen and Robert Gordon (see: <http://www.offshore Renewables.ac.uk/>). The session was chaired by Graeme Roy (Scottish Government) with key note presentations by: Keith Bell (Strathclyde) “It must be right – my model says so. Modelling of the electricity system”, Iain Staffell (Imperial College) “Electricity Markets: Better Together?” and Ilkka Keppo (UCL) “Energy system modelling for long term energy and emission scenarios”. An outline of energy modelling developments in the Scottish Government then led into a lively discussion.



This very successful forum led to the formation of the *Scottish Government Technical Advisory Group on Energy and Climate Change Analysis (TAGECCA)* which has, at the time of writing, met twice.

### ***Conference on “Monetary Analysis and Monetary Policy Frameworks” – April 9<sup>th</sup>-10<sup>th</sup>, Heriot-Watt.***

The conference, organized by David Cobham, began with two PhD training sessions by Lynne Evans (Newcastle) on ‘money demand’ and Bernd Hayo (Phillips-U, Marburg) on ‘money supply’. There were two keynote presentations:

- Ben Friedman (Harvard), ‘Has the Financial Crisis Permanently Changed the Practice of Monetary Policy? Has It Changed the Theory of Monetary Policy?’
- Charles Goodhart (LSE), ‘Monetary Policy: Past Failings and Future Problems’.

With additional presentations from: James Cloyne, Ryland Thomas, Alex Tuckett and Sam Wills (Bank of England); Philippine Cour-Thimann and Bernhard Winkler (ECB); Andy Filardo (BIS), Hans Genberg (SEACEN) and Boris Hofmann (BIS); Kaushik Mitra (St Andrews U) and Seppo Honkapohja (Bank of Finland); Atanas Christev (Heriot-Watt U) and Yue Kang (Stirling); and David Cobham (Heriot-Watt).

The conference concluded with a lively panel discussion on monetary policy frameworks, with panellists: Bill Allen (ex-Bank of England), Larry Ball (Johns Hopkins U), Andrew Filardo (BIS), and Sean Holly (Cambridge U). Topics discussed included the raising of inflation targets, the importance of monitoring (but not targeting) the growth of the monetary aggregates, the contribution of macro-prudential tools and the question of ‘leaning against the wind’.

There were 65 participants from: SIRE universities (Heriot-Watt, Glasgow, St Andrews, Stirling, Glasgow Caledonian, Strathclyde, and Edinburgh Napier); other universities (Johns Hopkins, Newcastle, Aston, Birkbeck, Harvard, LSE, Philipps-U Marburg, Cambridge, Warwick, Lancaster, Swansea, Bristol, Malta, and York); and banking/finance – Bank of England, Price Waterhouse Coopers, ECB, BIS, Bank of Finland, Central Bank of Ireland, and Deutsche Bundesbank.

### ***Nobuhiro Kiyotaki Lectures – April 11<sup>th</sup> 2014, Edinburgh***

Nobuhiro Kiyotaki (Princeton) gave two back-to-back presentations during a visit to Edinburgh. The papers presented were:

- Financial crises, bank risk exposure and government financial policy (with Mark Gertler and Albert Queralto)
- Banking, Liquidity and Bank Runs in an Infinite Horizon Economy (with Mark Gertler)



His characteristically masterful presentations were followed by a valuable opportunity to talk informally with Professor Kiyotaki. The event attracted an audience of 70 drawn from: SIRE Universities - Heriot-Watt, Edinburgh, Glasgow, St Andrews, Strathclyde and Stirling; other universities – Sydney, Exeter, and Cardiff; and the Scottish Government. We look forward to further visits from Professor Kiyotaki, who is a Co-I on the recently awarded ESRC large/centre grant on “Credit and Labour Market Foundations of the Macroeconomy”.

### ***Master class on “Instrumental variables, causal inference and GMM estimation” by Frank Windmeijer – April 24<sup>th</sup> 2014, Heriot-Watt***

Professor Frank Windmeijer (Bristol) is a Research Fellow at the Centre for Microdata Methods and Practice, Institute for Fiscal Studies and Institute for the Study of Labor (IZA, Bonn, Germany). His day-long master class covered recent developments in the estimation of linear structural models, including dynamic panel data models, using Instrumental Variables estimated by GMM; and, in a cross-sectional setting, IV estimators for binary outcomes and associated causal inference.

### ***Master class on “Bayesian Inference in the Social Sciences” by Taps Maiti – April 25<sup>th</sup> 2014, Heriot-Watt***

This the second of a planned series of three master classes to be given by Professor Taps Maiti (Michigan State and Heriot-Watt), who is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics, and on the Editorial Board of Journal of the American Statistical Association. The topics covered included: nonconjugate priors and Metropolis-Hastings algorithms; linear and generalized linear mixed effects models; latent variable models; and an introduction to advanced computation methods.

### ***Conference on “Recent Developments in Mechanism Design” – May 2<sup>nd</sup>-3<sup>rd</sup> 2014, Glasgow.***

This two-day conference was co-organised by Anna Bogomolnaia, Michele Lombardi and Herve Moulin (Glasgow). Keynote presentations were given by:

- Bhaskar Dutta (Warwick) on “Recent results on implementation with complete information”;
- Arunava Sen (Indian Statistical Institute, Delhi) on “Affine Maximizers in Domains with Selfish Preferences”

With additional presentations from: Debasis Mishra (Indian Statistical Institute, Delhi); Tristan Tomala (HEC, Paris); Ludovic Renou (Essex); Sophie Bade (Royal Holloway); Alexander Westkamp (Maastricht); Dolors Berga (Girona); Ayttek Erdil (Cambridge); Manipushpak Mitra (Indian Statistical Institute, Calcutta); and Indrajit Ray (Birmingham).

There were 26 attendees drawn from: SIRE - Edinburgh, Glasgow and St Andrews; and elsewhere: Royal Holloway, Girona, Warwick, Cambridge, Indian Statistical Institute, Birmingham, Essex, HEC Paris, and Maastricht.

### ***Fourth Annual Search and Matching (SaM) Conference – May 8<sup>th</sup>-10<sup>th</sup> 2014, Edinburgh.***

The fourth annual conference of the European Search and Matching network (<http://www.searchandmatching.org/>) was held in Edinburgh over 3 days. The



conference, which was co-organised by Philipp Kircher and Ludo Visschers, was co-funded by Centre National de la Recherche Scientifique (CNRS), the European Research Council, and the University of Edinburgh, along with SIRE.

There were two keynote presentations:

- Per Krusell (Stockholm): "Gross Worker Flows over the Business Cycle", joint with Toshihiko Mukoyama, Richard Rogerson, and Aysegul Sahin
- Costas Meghir (Yale): Wages and Informality in Developing Countries

With a further 25 presentations in plenary format plus around 50 poster presentations.



The conference attracted 114 participants drawn from SIRE universities (Edinburgh, Heriot-Watt, Strathclyde, Glasgow, St Andrews) and a wide range of other institutions: Aarhus, Aix-Marseille, AMSE France, Bank of England, Collegio Carlo Alberto, Copenhagen Business School, ENSAI France, European University Institute, Federal Reserve Bank of New York, Federal Reserve Bank of Philadelphia, Georgetown, Hanken School of Economics, Helmut Schmidt University, Hull, Humboldt Berlin, IES Stockholm, LMU Munich, LSE, Royal Holloway, Stockholm, Tel Aviv, UPF, Universitat Autònoma de Barcelona, UCL, Bristol, Cyprus, Essex, Exeter, Kent, Mainz, Michigan, Notre Dame, Pennsylvania, Southampton, Toronto, and VU University Amsterdam. The breadth and depth of participation,

and the format of the conference, gave a very valuable opportunity for SIRE researchers working in this important field to build and strengthen links with leading European and international counterparts.

#### ***Workshop on “Econometric Modelling and Forecasting in Central Banks” – May 16<sup>th</sup> 2014, Glasgow***

This one-day event continued the successful series of SIRE Econometrics Workshops. There were presentations from: Francesco Ravazzolo (Norges Bank), Roberto Casarin (University Ca' Foscari of Venice), Christian Schumacher (Deutsche Bundesbank), Shaun Vahey (Warwick), Gianni Amisano (European Central Bank), and Pinho Ribeiro (Glasgow).



The conference provided an excellent opportunity for KE, with presenters contrasting the theoretical challenges faced by academic researchers with the applied everyday challenges faced by practitioners in central banks. Speakers highlighted recent trends in the field, e.g. incorporating nonlinearities, or forecasting with whole forecast distributions instead of communicating to the public a point forecast.

The conference attracted 39 participants drawn from: SIRE universities (Glasgow, Strathclyde, Heriot-Watt, Dundee, Stirling, Aberdeen, West of Scotland, St Andrews); the universities of Surrey, Venice and Warwick; and Scottish Government, ECB, Norges Bank and Deutsche Bundesbank.

#### ***Python Boot Camp – June 2<sup>nd</sup> to 7<sup>th</sup> 2014, Edinburgh***

The Python Boot Camp, led by David Pugh, has developed into an annual training workshop in the important tool of computational modelling and simulation. The boot camp curriculum focused on developing students' computer programming skills using the Python programming language and, in the process, teaching them important software design principles necessary for generating high-quality, reproducible scientific research using computational methods.

The boot camp required no prior knowledge or experience with computer programming and all course materials are made freely available online.

There were 35 participants (1 Prof, 3 Lecturers, 19 PhD students, 11 MSc students, and 1 undergraduate student) drawn from the universities of Edinburgh, Heriot-Watt, Stirling, Glasgow, Aberdeen, Strathclyde, St Andrews and Liverpool.

We plan to continue this valuable training event in summer 2015, incorporating additional material on version control as well as Unix-shell commands for automating basic research tasks.

### ***SIRE Energy Economics Workshop – June 4<sup>th</sup> 2014, Dundee***

This one day workshop, co-organised by Xiaoyi Mu and Ariel Bergmann (Dundee), included 8 presentations:

- Marc Gronwald (Aberdeen) “Financialization of oil futures markets and futures market efficiency: a multifractal perspective”
- Xin Jin (Aberdeen) “Short-run price-inventory dynamics in world crude oil market under different shocks
- Marco Lorusso (Glasgow) “Oil price shocks and the UK economy, 1990 – 2005”
- Alessandro Spiganti (Edinburgh) “The carbon bubble - climate targets in a fire-sale model of deleveraging”
- Manny Macatangay (Dundee) “Hedging the cost of natural gas in regulated electric utilities”
- Dominique Thronicker (Stirling) “Determinants of carbon capture and storage project success”
- Fazel Moridifarmani (Dundee) “How upstream financing contracts distort the field’s dynamic optimal production path? Production sharing contract perspective”.



The workshop attracted 27 academics and PhD students from the universities of: Dundee, Aberdeen, Strathclyde, Glasgow, Edinburgh, Heriot-Watt, Stirling, and Abertay. The success of this inaugural energy-focussed workshop has led to plans to make this a regular event, broadening out the participation to include researchers from outwith SIRE and non-academic stakeholders.

### ***SIRE–Scottish Government Policy Forum on “Health Inequalities: challenges and responses” – June 19<sup>th</sup> 2014, Dundee.***

The Forum was co-organised by Paul Allanson (Dundee) and Marjorie Marshall (Health Analytical Services, Scottish Government). Following an introduction by Gary Gillespie (Scottish Government Chief Economist), there were presentations from:

- Marjorie Marshall ( Health Analytical Services, Scottish Government) “Health inequalities in Scotland: the challenge”;
- Tom Van Oort (Erasmus University Rotterdam) “Inequity in the face of death”;
- William Whittaker (Manchester) “An analysis into the impacts of the removal of the health inequalities factor for resource allocation budgets in England”;
- Barbara Eberth (Newcastle) “Health behaviours and health inequalities”;
- Paul Allanson (Dundee) “Monitoring trends in health inequalities: accounting for change”
- Donald Henderson (Head of Public Health Division, Scottish Government: presentation delivered by Fergus Millan) “Tackling Health inequalities in Scotland: policy responses”.

The event was by invitation only with a good representation (35) of academics, policymakers and health service professionals with specialist interests not only in health economics, but also in the allied fields of public health and human geography. Academic participants came from the Universities of Dundee, Edinburgh, Erasmus Rotterdam, Glasgow, Manchester, Newcastle, Queen Margaret Edinburgh, St Andrews and Stirling.

The event also attracted considerable interest from the Scottish Government and NHS Scotland, with participants from these organisations making up the bulk of the numbers at the event.

The Policy Forum was specifically designed to promote knowledge exchange between the academic and policy communities: informing policy-makers about recent developments in the study of health inequalities, while academics obtained further insights into the nature of the policy challenge and responses. The event also served to establish and reinforce links between individual academics and policymakers that should to foster future dialogue and interaction.

***Workshop on “Country Size and Border Effects in a Globalised World” – June 26<sup>th</sup> to 27<sup>th</sup>, Edinburgh***

This two-day event was co-organised by David Comerford (Stirling) and Robert Zymek (Edinburgh). The event encompassed two keynote presentations:

- James E. Anderson (Boston College) “Border Effects: Canada-US Lessons”
- Enrico Spolaore (Tufts) “The Political Economy of National Borders”

With further presentations from: David Comerford (Stirling), Dennis Novy (Warwick), Cecilia Hornok (Hungarian Academy of Sciences), Ingo Borchert (Sussex), Yoto Yotov (Drexel), Nicholas Myers (Edinburgh), Giacomo Ponzetto (CREI, UPF and Barcelona GSE), Roberto Bonfatti (Nottingham), Jaume Ventura (CREI, UPF and Barcelona GSE), and Robert Zymek (Edinburgh).

Each day of this two-day event constituted a thematically self-contained unit. The first day was dedicated to research exploring the impact of national borders on economic activity. Papers presented, and subsequent discussion, focused on estimates of the so-called “border effect” in international trade, its origins and implications for long-run economic growth.

The second day was dedicated to research exploring the determinants of country size. Papers and discussion focused on the economic benefits and costs faced by larger, more heterogeneous countries, and the impact of globalisation on “ideal” country size.



On the evening of 26 June 2014, the keynote speakers, conference organisers and a representative of HM Treasury participated in a public panel discussion on the likely economic costs and benefits of Scottish independence. Full-length videos of the two keynote lectures were distributed to the general public via the conference website, Facebook, Vimeo and the University of Edinburgh’s Referendum blog. Presentations of academic papers were attended both by researchers and representatives of the

Westminster and Scottish governments, facilitating the exchange of ideas between interested parties.

There were 25 participants drawn from: universities - Boston College, Drexel, Tufts, Universitat Pompeu Fabra, Edinburgh, Nottingham, Warwick, Stirling, and Sussex; and the Hungarian National Academy of Sciences, HM Treasury, and Scottish Government.

***Major National and International seminar speakers include:***

Ido Erev (Haifa)	Guido Ascari (Pavia)
Andrew Clark (Paris School of Economics)	Jean Jacques-Hering (Maastricht)
Benedicte Apouey (Paris School of Econ)	Juergen Eichberger (Heidelberg)
Eric Strobl (Ecole Polytechnique, Paris)	Karl Schlag (Vienna)
Margaret Bray (LSE)	Marco Lippi (La Sapienza, Rome)

Matthew Shapiro (Michigan)	Peyton Young (Oxford)
Andrey Launov (Mainz)	Roberto Billi (Sveriges Riksbank)
Arnaud Costinot (MIT)	Sandra Poncet (Paris School of Economics)
Christian Dustmann (UCL)	Thomas Lubik (Fed. Res. Bank of Richmond)
Daniel Hamermesh (Texas)	Geoff Hewings (Illinois)
David Levine (Washington U)	Gerhard Sorger (Vienna)
Francisco Buera (UCLA)	Hannu Vartiainen (Helsinki)
Joel Sobel (UC San Diego)	Stelios Michalopoulos (Brown University)
Michael Kosfeld (Frankfurt)	Cees Withagen (VU Univeristy, Amsterdam)
Tor Jacobsen (Sveriges Riksbank)	David Marques-Ibanez (ECB)
Uwe Sunde (Munich)	Joachim Winter (Munich)
Nicolas Vieille (HEC Paris)	Marco Percocco (Bocconi)
Ariel Rubinstein (Tel Aviv and NYU)	Marius Brulhart (Lausanne)
Francis Bloch (Paris School of Economics)	Tomasz Wozniak (Melbourne)
Francois Maniquet (Cergy-Pontoise, Paris)	Stephen Millard (Bank of England)
Erik Plug (Amsterdam)	Flavio Cunha (Pennsylvania)
Victor Rios-Rull (Minnesota)	John Kennan (Wisconsin)
George Mailath (Pennsylvania)	Jean Tirole (Toulouse)
Robert Shimer (Chicago)	Jean-Charles Rochet (Zurich)
Leena Rudanko (Boston)	Greg Kaplan (Princeton)
Benjamin Moll (Princeton)	Nicola Pavoni (Bocconi)
Charles Kahn (Illinois)	Peter Egger (Zurich)
Garry Young (Bank of England)	

## 9. Selected publications:

**Angelopoulos, K.,** Fernandez, B. X., and **Malley, J. R.** (2014) The distributional consequences of tax reforms under capital-skill complementarity. *Economica* . ISSN 0013-0427 (doi:10.1111/ecca.12087) (Early Online Publication)

Aron, J., **MacDonald, R.**, and Muellbauer, J. (2014) Exchange rate pass-through in developing and emerging markets: a survey of conceptual, methodological and policy issues, and selected empirical findings. *Journal of Development Studies*, 50 (1). pp. 101-143. ISSN 0022-0388 (doi:10.1080/00220388.2013.847180)

Bauwens, L., **Koop, G., Korobilis, D.**, and Rombouts, J. V. K. (2014) The contribution of structural break models to forecasting macroeconomic series. *Journal of Applied Econometrics* . ISSN 0883-7252 (doi:10.1002/jae.2387) (Early Online Publication)

Belmonte, M. A. G., **Koop, G., and Korobilis, D.** (2014) Hierarchical shrinkage in time-varying parameter models. *Journal of Forecasting*, 33 (1). pp. 80-94. ISSN 0277-6693 (doi:10.1002/for.2276)

Boulatov, A., and **Taub, B.** (2014) Liquidity and the marginal value of information. *Economic Theory*, 55 (2). pp. 307-334. ISSN 0938-2259 (doi:10.1007/s00199-013-0757-z)

**Campolmi, A.** (2014) Which inflation to target? A small open economy with sticky wages. *Macroeconomic Dynamics*, 18 (1). pp. 145-174. ISSN 1365-1005 (doi:10.1017/S1365100512000314)

**Campolmi, A.,** Fadinger, H., and Forlatti, C. (2014) Trade policy: Home market effect versus terms-of-trade externality. *Journal of International Economics*, 93 (1). pp. 92-107. ISSN 0022-1996 (doi:10.1016/j.jinteco.2013.12.010)

**Campolmi, A.,** and Faia, E. (2014) Rethinking optimal exchange rate regimes with frictional labor markets. *Macroeconomic Dynamics* . ISSN 1365-1005 (doi:10.1017/S1365100513000758) (Early Online Publication)



- Chambers, C. P., and **Hayashi, T.** (2014) Preference aggregation with incomplete information. *Econometrica*, 82 (2). pp. 589-599. ISSN 0012-9682 (doi:10.3982/ECTA11612 )
- Chatterji, S., **Ghosal, S.**, Walsh, S., and Whalley, J. (2014) Unilateral emissions mitigation and global learning. *Climate Change Economics* . ISSN 2010-0078 (Accepted for Publication)
- Dalton, P., **Ghosal, S.**, and Mani, A. (2014) Poverty and aspirations failure. *Economic Journal* . ISSN 0013-0133 (Accepted for Publication)
- Dennis, R.** (2014) Imperfect credibility and robust monetary policy. *Journal of Economic Dynamics and Control*, 44 . pp. 218-234. ISSN 0165-1889 (doi:10.1016/j.jedc.2014.05.004)
- Görg, H., and **Spaliara, M.-E.** (2014) Financial health, exports, and firm survival: evidence from UK and French firms. *Economica*, 81 (323). pp. 419-444. ISSN 0013-0427 (doi:10.1111/ecca.12080)
- Hayashi, T.** (2014) Consumer surplus analysis under uncertainty: a general equilibrium perspective. *Journal of Mathematical Economics* . ISSN 0304-4068 (doi:10.1016/j.jmateco.2014.02.001) (In Press)
- Korobilis, D., and Koop, G.** (2014) A new index of financial conditions. *European Economic Review* . ISSN 0014-2921 (Accepted for Publication)
- Kovalenkov, A.**, and Vives, X. (2014) Competitive rational expectations equilibria without apology. *Journal of Economic Theory*, 149 (1). pp. 211-235. ISSN 0022-0531 (doi:10.1016/j.jet.2013.05.002)
- Moulin, H.**, Ray, I., and Sen Gupta, S. (2014) Improving Nash by coarse correlation. *Journal of Economic Theory*, 150 . pp. 852-865. ISSN 0022-0531 (doi:10.1016/j.jet.2013.10.008)
- Moulin, H.** (2014) Pricing traffic in a spanning network. *Games and Economic Behavior*, 86 . pp. 475-490. ISSN 0899-8256 (doi:10.1016/j.geb.2013.06.002)
- Evans, G.** (with Jess Benhabib and Seppo Honkapohja). Liquidity Traps and Expectation Dynamics: Fiscal Stimulus or Fiscal Austerity?, forthcoming *Journal of Economic Dynamics and Control*.
- Manzini, Paola** and Marco Mariotti, (2014) "Stochastic Choice and Consideration Sets", *Econometrica*, forthcoming (supplemental appendix)
- Senay, Ozge** and **Alan Sutherland** (with M.B. Devereux) (2014) "Nominal Stability and Financial Globalization" *Journal of Money, Credit and Banking*, 46, 5, 921-959.
- Trew, Alex** (forthcoming), 'Spatial Takeoff during the First Industrial Revolution', *Review of Economic Dynamics*.
- Trew, Alex** (2014), 'Finance and Balanced Growth', *Macroeconomic Dynamics*, 18(4), pp. 883-98.

- Zhang, Shoujian** (with Emanuel Gasteiger) (forthcoming), "Anticipation, Learning and Welfare: the Case of Distortionary Taxation," *Journal of Economic Dynamics and Control*,
- Hopkins, E.**, 'Cycles and Instability in a Rock-Paper-Scissors Population Game: A Continuous Time Experiment' with Timothy N. Cason and Daniel Friedman, *Review of Economic Studies*, 81, 112-136 (2014)
- Hughes, G.**, 'The energy sector in Scotland's future', *Oxford Review of Economic Policy*, Vol 30, No 2, pp. 374-391 (2014)
- Sakovics, J.**, "Price formation in a matching market with targeted offers" *Games and Economic Behavior*, 87, 161-177 (2014).
- Steinhauer, A.**, 'Parental Leave and Mothers' Careers: The Relative Importance of Job Protection and Cash Benefits' with R. Lalive, A. Schlosser and J. Zweimüller. *Review of Economic Studies* 81(1):219-265. (2014)
- Elsby, M.** The Decline of the U.S. Labor Share, with Bart Hobijn and Ayşegül Şahin. *Brookings Papers on Economic Activity*, Fall 2013, pp. 1-52.
- Snell, A., J. Thomas** and Z. Wang "A competitive model of worker replacement and wage Rigidity", *Economic Enquiry*, 2014
- Hopkins, E.** "Competitive Altruism, Mentalizing and Signalling", forthcoming *American Economic Journal: Microeconomics*.
- Steiner, J.** Tractable Dynamic Global Games and Applications, with Laurent Mathevet, 2013, *J. Econ. Theory* 148, 2583-2619.
- Steiner, J.** Influential Opinion Leaders, with Antoine Loeper and Colin Stewart, accepted to *Economic Journal*.
- Kawamura, K.** "Biasing Selection Contests with Ex-Ante Identical Agents" (with Inés Moreno de Barreda ), *Economics Letters*, 123(2), 240-243, 2014.
- Visschers, L.** "Precautionary Demand for Money in a Monetary Business Cycle Model" (joint with Irina A. Telyukova, UCSD), 2013, 60(7), *Journal of Monetary Economics*
- Keith A. Bender** and **Ioannis Theodossiou**, "The Unintended Consequences of the Rat Race: The Detrimental Effects of Performance Pay on Health," *Oxford Economics Papers*, 66(3), July 2014: 824-47.
- Alex J. Bryson and **Keith A. Bender**, "Performance Pay: Trends and Consequences Introduction," *National Institute Economic Review*, 226(1), November 2013: R1-R3. (Joint co-editors of special issue of the *National Institute Economic Review* on performance pay.)
- Kemp, AG. & Kasim, S.** (2013). 'The economics of CO2-EOR cluster developments in the UK Central North Sea'. *Energy Policy*, vol 62, pp. 1344-1355.
- Allanson, P.**, "Income stratification and between-group inequality", *Economics Letters*, 124, 227-230, 2014.
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- Anderberg, D. and **Y. Zhu**, "What a Difference a Term Makes: The Effect of Educational Attainment on Marital Outcomes in the UK", *Journal of Population Economics*, 27, 387-419, 2014.

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**Turner, K.** 'Can hazardous waste supply chain 'hotspots' be identified using an input-output framework?', with C.J. Court, M. Munday and A. Roberts, *European Journal of Operational Research*, in press. 2014.

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Banerjee S, **de Vries F, Hanley N** & van Soest D (2014) The impact of information provision on agglomeration bonus performance: An experimental study on local networks, *American Journal of Agricultural Economics*, 96 (4), pp. 1009-1029.

**Bell D, Comerford D** & Eiser D (2014) Funding pensions in Scotland: would independence matter?, *National Institute Economic Review*, 227 (1), pp. R21-R31.

**Blanchflower, D. N. F. Bell, A. Montagnoli, M. Moro** "The Happiness Tradeoff Between Unemployment and Inflation." 2014. *Journal of Money, Credit and Banking*, 46 (2):117-141.

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**Lecca, Patrizio; McGregor, Peter; Swales, John;** Yin, YaPing, (2014) Balanced budget multipliers for small open regions within a federal system : evidence from the Scottish variable rate of income tax. *Journal of Regional Science*.

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