

# Evaluating the Economic Impact of Social Science



**Summary Report for the Economic and Social Research Council**

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# Evaluating the Economic Impact of Social Science: Valuation Study

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## Introduction

The Economic and Social Research Council (ESRC) evaluates the quality and impact of its research investments, and in recent years has developed qualitative and quantitative approaches to assessing non-academic impacts on policy, practice and business<sup>1</sup>. In June 2015, following a pilot study, ESRC asked The Carnegie Faculty at Leeds Beckett University (LBU) to conduct a series of case studies to quantify the economic impact of selected social science investments, and to advise on implications for measuring and stimulating economic impact. Five case studies have been conducted<sup>2</sup>:

- The Falmouth Harbour Knowledge Transfer Partnership bringing together the Falmouth Harbour Board and the University of Plymouth.
- New Directions for Economic Renewal – a partnership of ESRC’s Centre for Research on Socio-Cultural Change at the University of Manchester with the London Borough of Enfield.
- The Profitnet partnership – a knowledge exchange project bringing together diverse groups of small and medium sized enterprises (SMEs) and the University of Brighton.

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<sup>1</sup> This has added to the ESRC’s well-established systems for evaluating academic impacts.

<sup>2</sup> All projects were identified by the ESRC and consisted of submissions to the Research Excellence Framework in 2014 where impact had a strong economic dimension, and showed clear attribution to the social science contribution which had been wholly or partially funded by the ESRC.

- The Clear Ideas initiative from ESRC's Centre for Organisation and Innovation at Sheffield University Management School aimed at innovation-based improved organisational practice.
- Influencing SME Policy and Practice conducted by Leeds University Business School within ESRC's Evolution of Business Knowledge (EBK) initiative

The study drew on an extensive review of documentation and interviews with leading academics, user organisations and directly involved stakeholders. This summary report is presented in three sections - following this introduction (section one) these look at:

- the summarised economic impact case studies (section two)
- common themes across the case studies, lessons for enhancing economic impact and recommendations for development (section three).

The organisations contributing directly to this evaluation are also shown in Annex A<sup>3</sup>.

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<sup>3</sup> An annex on selected terms and abbreviations was developed for the pilot study and is not repeated here.

## **Economic impact in the case studies**

The circumstances of the case studies, together with identified impacts, are set out below as standalone and thematic summaries<sup>4</sup> looking at:

- user and stakeholder circumstances
- impact summary and the quality of attribution
- actual (or potential) economic/monetary impacts
- quantified (or quantifiable) non-monetary impacts
- pathways to impacts and success factors.

Each also sets out emerging lessons for researchers, non-academic users and funding bodies.

### **Case study I: Falmouth Harbour Knowledge Transfer Partnership**

#### **Project and funding**

Knowledge Transfer Partnership for Falmouth Harbour Commissioners (FHC) KTP007098; £144,795 funding (£97,013 from ESRC and NERC).

#### **Lead academic and institution(s)**

Dr John Dinwoodie, University of Plymouth

#### **Research summary**

The KTP was a collaboration between FHC and the University of Plymouth to develop environmental management capacity and credentials in an environmentally sensitive harbour area<sup>5</sup>. The KTP aimed at the development and embedding of an Environmental Management System (EMS), providing an evidence-base to improve the quality of response to campaign group and regulatory body concerns about prospective FHC developments. This was expected to help enable further FHC commercial activity through safeguarding existing and future business activities by providing a better understanding of FHC's environmental and social-economic impacts. This was expected to contribute to FHC's five year rolling strategy including extending and improving FHC's relationship with its network of stakeholders.

The KTP was supported by a funded Associate, and inputs from a range of academic staff to provide access to the University of Plymouth (UoP)'s world-class expertise in shipping logistics and marine science. Running since 2010 and developing several spin-off activities, the KTP has been said by partners to have exceeded the expectations of all those involved, and to be: "... immensely successful, reinventing FHC's relations with its stakeholders and safeguarding its business activities".

It has also helped engender more robust and effective relationships with stakeholders, building a Stakeholder Management System (SMS) and transforming the quality of external working. Across this the KTP has built an enduring partnership between FHC and the University, as well as other research institutions and government bodies.

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<sup>4</sup> These follow a standardised format and structure of each as developed by ESRC for wider dissemination.

<sup>5</sup> Falmouth Bay has a number of environmental designations aimed at protecting the environment by regulating or prohibiting sensitive and potentially harmful activities.

### **Users and stakeholders/settings**

The KTP took place against a background of historically poor engagement with FHC stakeholders, regulatory, campaign group and other environmental organisations, with a legacy of suspicion (and some misinformation) about FHC's development. The KTP has engaged directly and indirectly with many of these bodies, transforming relationships and co-operation with many through better harnessing robust evidence, management systems and communications improvements. It has also seen collaboration with other small ports operators, including across Europe via the PORTONOVO transnational project (FHC and 10 other Atlantic region partners).

### **Impact Summary**

The KTP's impact is illustrated most conspicuously by:

- Significant culture change within FHC, improved management systems including an evidence-based, controlled approach and response to environmental issues now firmly embedded in their policies and practice.
- 'Seamlessly widened circle of external (stakeholder) relationships' via the new EMS and SMS with substantially increased positive external communications from increased use of data and knowledge.
- Safeguarding of three core FHC business activities (bunkering, jack-up rig storage and anchoring), safeguarded revenue and increased profitability in part through KTP related cost-savings.
- Raised national profile through joint FHC-UoP dissemination including to the UKHMA 2010 Conference, five international conferences, and the International Harbour Masters Association conference (2014).

### **Actual/potential economic/monetary impacts**

Adjusted accounting data and projections have mapped and monetised impacts during the project and the subsequent three-years and shown:

- Direct contribution to FHC cost savings estimated at £76,000 annually from projections of past costs across project life cycle; rising to an annual average of £174,000 in the post-project period.
- Safeguarding of core business activities with a rising proportion as changes took effect and amounting to an estimated £2.7 million over the project life cycle (half of this in year three). A significant portion of the in-project increase in income was derived from anchoring operations which would have been under threat had the KTP not been successful.
- Combined effect of the cost savings and increased revenue have seen projected profits for FHC increased sharply over the whole project-period by £1,025,881 above projections although falling back in the post KTP period.

All of these are said to be additional impacts directly attributed to the KTP. Also, increased profitability has seen the employment of new FTE members of staff by FHC, plus one internship by the end of the project.

## **Quantified/quantifiable non-monetary impacts**

- Positive improvement in relations with FHC stakeholders reflected in commitments to working long term with FHC by five key agencies and attributed largely to the new EMS and SMS.
- Widespread improvements to FHC's environmentally sensitive operational practices and monitoring, and more extensive use of data and evidence-collection to identify further improvements (eg leading for major stakeholders a recreational boating evidence-based review).
- Raised organisational effectiveness from adoption of the EMS and SMS, lower costs through greater use of delegated authorities and from raised levels of staff training and development; all adding up to 'significant' productivity gains from staff time savings.
- Participation in three European projects with direct benefits in terms of equipment acquired, predictive models and staff development and training.

## **Impact pathways**

The available evidence shows that the KTP's success and its achieved impacts have been driven by:

- Commitment, support and engagement of senior managers at the University and FHC, working closely to tackle urgent business needs.
- Backing and ready recognition of the importance of the collaboration by FHC governors (Commissioners) providing top level endorsement.
- Complementary mixture of expertise and responsive individuals in the partnership drawing on a range of multi-disciplinary university based expertise into a 'dynamic and resourceful team'.
- Placing data and independent analysis by respected academic teams at the project's heart; combined with effective use in informing communications and relationships with key external agencies.
- Trust and confidence in the partnership to: "... try different things, come up with new ideas and new ways of looking at things in an analytical way".

## **Key lessons**

The success and significant impact of the FHC-Plymouth collaboration has shown the value of a problem-centred, multi-disciplinary and responsive academic team in providing new perspectives to address persistent business problems, and shows:

- The transformational value to FHC, its working practices and external relationships of evidence-based practices and inquiry helping staff move away from more subjective and wholly judgement-based decision making.
- The importance even to smaller and medium sized businesses of structure and systems in tackling organisational improvement and cultural changes.
- The mutual value to organisational profile of academic-industry collaborations and dissemination.

It has also shown that SMEs can continue to profit from KTP-type intervention over the longer term; with any impact assessment needing to take the long view to accurately assess benefits.

## **Case study 2: New Directions for Economic Renewal in North East London**

### **Project and funding**

New Directions Programme for Enfield Borough Council; funding via core ESRC grant of £4.5 million to CRESC (extended to 2014); no differentiated funding amounts for project.

### **Principal investigator and institution(s)**

Professor Karel Williams, Centre for Research on Socio-Cultural Change (CRESC), University of Manchester

### **Research summary**

CRESC research on the foundational economy has, since 2009, seen an important focus on the implications for UK public policy of increasing intra- and inter-regional inequalities (Theme 1: 2009-14). This provided a framework for rethinking industrial and regional policy, and became the practical focus for an evolving partnership with the London Borough of Enfield (among others). This centered on novel approaches to local economic development initiatives and renewal strategies moving from the established focus on training and infrastructure investment (dependent on diminishing public funds), to an emphasis on engagement with utility companies and other major local employers to help re-build local skills and supply chains.

Since 2010, the collaboration has involved a combination of underpinning research on local economic potential, and a commissioned options analysis for Councillors (September 2011) which was asked to "... look outside the box for ways forward". Subsequently this has involved wider dissemination (including a joint CRESC-Enfield Borough conference), knowledge building for council officers, and facilitation of local actions by councillors/officers. A New Directions strategy has been developed from this early options analysis, including prioritised initiatives taken forward by Councillors and staff to engage utility companies in building supply-chains, local skills capacity, and job creation. A further outcome, although not directly linked to the CRESC options, has been a novel initiative which has attracted national interest to re-engineer financial flows to re-invest Borough pension funds in social housing. CRESC has further developed this applied work to test next step policies of re-localisation.

### **Users and stakeholders/settings**

CRESC has worked with numerous stakeholders and academics<sup>6</sup> on the foundational economy, but this case study specifically relates to the collaboration with Enfield Borough Council. This has involved senior Councillors, Directors, and Borough Officers in what has been referred to in national media as 'The Enfield Experiment'. Councillors have called CRESC's involvement in this 'inspirational and strategic' with a more limited role in implementation. The collaborations built with local firms, colleges and utility companies came after these high-level inputs by CRESC working with the Council and specifically through direct action in the New Directions activities by Councillors and Officers informed by the CRESC analysis and capability building.

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<sup>6</sup> Other academic contributions have come from co-researchers at the Universidad Nacional de Educación a Distancia (UNED), University of Amsterdam, Manchester Business School, Queen Mary University of London, and the Open University.

### **Impact summary**

CRESC research on the foundational economy underpinned the Borough-wide options analysis commissioned by the Council. This identified options for evidence-based and strategic actions for local economic development consistent with 'foundational economy' principles. Emerging as the New Directions initiative, this energised change for Enfield in securing a new focus for economic regeneration which could start to address rising economic (and social) imbalances arising from de-industrialisation in the Borough. CRESC's options analysis, and a subsequent presentation to the Council, identified 18 potential strategies and policies. Of these, two-thirds were seen as viable and relevant, although funding and other constraints meant only three could be taken forward.

The result has been a revival in entrepreneurial thinking in the authority, leading directly to collaborations through:

- Two new Enfield job creation partnerships: British Gas refurbishment contracts for domestic insulation (ie three-way supply-chain building and skills and accreditation between the Borough, British Gas and two local colleges) boosting local SME revenues; and Thames Water investment in modernised Lee Valley sewage treatment plant with link-initiatives to boost local recruitment/jobs retention.
- Financial re-engineering in the Borough to provide for a portion of local authority pension funds to be re-invested in addressing chronic shortages of social housing in North London Boroughs, stimulating also local construction employment.

A third initiative to build a heat recovery facility from waste incineration in the Lee Valley linked to a new 50 acre commercial glasshouse using waste heat (with substantial job creation) has yet to be fully realised due to changed market circumstances and other constraints.

Councillors and Directors confirm CRESC's research and knowledge transfer has been the genesis of New Directions. Specific impacts have come from a mixture of the CRESC-led ideas-building and Enfield's subsequent prioritisation and implementation.

### **Actual/potential economic/monetary impacts**

Quantified monetary impacts have been difficult to isolate against a background of pressures on local government finance and changing market opportunities affecting progress on the activities taken forward. However, available evidence shows:

- new investment stemming from the Borough's changes in policy and strategic direction have resulted in new investment into the Borough including contracts from British Gas amounting to an identified £10 million in ECO investments (March 2013) for retrofitting local housing with insulation; and
- the investment in the Lee Valley Heat Network is estimated at £25 million.

The monetary values of the Thames Water investment or the social housing infrastructure have not yet been quantified. There is clear additionality for all of these impacts but no attempt has been made to assess attribution to the early CRESC contributions.

### **Quantified/quantifiable non-monetary impacts**

Among extensive other impacts have been a CRESC contribution towards a significant and timely culture change in the council, with more entrepreneurial emphasis and 'thinking



outside the box'. This initially affected Councillors and is now cascading to Officer level. In addition, other non-monetary impacts have included:

- establishment of two new social housing companies with a new funding model and developing social housing capacity in the Borough
- New Directions job generation – estimated to have created or protected nearly 150 local jobs together with recruitment to British Gas of 25 school leavers
- boosted local skills supply including through the Enfield-British Gas-college partnership for training and domestic insulation certification of local businesses
- developing a specialised local supply-chain of 12 contracting firms, locally staffed with sustainable potential through 'national' accreditation in energy-efficiency refurbishment and scope for non-local expansion to protect revenue streams.

### **Impact pathways**

The CRESC contribution was timely and took advantage of an enthusiasm for new policy approaches to embedded social and economic challenges following a change of political control of the local authority. This was combined with leadership for new thinking in economic regeneration by local Councillors who had a past working relationship with CRESC. In addition, impacts stemmed from:

- CRESC's ability to fast track and fund a robust and credible data-led exploration and subsequent options scoping and strategy paper for Councillors, and follow-up support over a sustained time period
- credibility based on a combination of 'intellectual firepower', applied orientation by CRESC team, and co-creation of the new regeneration strategy – New Directions - through iterative and mentoring processes with senior Enfield staff
- empowerment of local representatives and staff to develop and implement collaborative responses to take forward priority programmes in New Directions.

### **Key lessons**

The collaboration has shown the value of intellectual insights from applied and policy centred social scientists in informing and encouraging new thinking on economic regeneration and empowering actions. The evidence-base provided by CRESC, and the theoretical foundations placed in a localised, very practical and problem-centred situations, has seen greater confidence in taking forward New Directions among those subsequently implementing the actions leading to the impacts for job and skills creation.

## **Case study 3: The Profitnet partnership**

### **Project and funding**

Profit through Networks (Profitnet); funding of £1.1 million from six separate but inter-related funded research projects by EPSRC, ESRC (£215,000), EU and the (former) DTI have supported the development of new knowledge in the area of business learning networks, underpinning the Profitnet programme. Ongoing activities<sup>7</sup> of Profitnet were

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<sup>7</sup> Profitnet in its first Phase was supported by knowledge transfer partnership and 'advanced laboratory' project funds variously from HEFCE, SEEDA and ESRC to experiment with new forms of peer-to-peer interactions. Second phase funding has come variously through ERDF, HEFCE (HEIF), LEP implemented Regional Development/Growth Funds, County Councils and University of Brighton.

supported by various project funds from European Regional Development Fund, Higher Education Funding Council for England, South East England Development Agency and ESRC (£84,000) and others as well as the University of Brighton.

**Principal investigator and institution(s)**

Dr George Tsekouras, Centre for Research in Innovation Management (CENTRIM), University of Brighton Business School.

**Research summary**

Profitnet was a spin-off activity from extensive ESRC funded research at the Complex Products Systems Innovation Centre (jointly managed by the Science Policy Research Unit and CENTRIM). This has taken forward aspects of work on innovation in high value business-to-business goods and product systems into the development of Profitnet as a university-to-business innovation and performance network with ‘member’ firms, including Knowledge Transfer Partnerships.

Profitnet’s early development was supported by monitoring and research activity in CENTRIM to identify the characteristics of effective learning networks and good practice in facilitated business-to-business learning. Profitnet was relaunched in 2014 with Regional Growth Fund support from the Coast to Capital Local Enterprise Partnership and subscription income from member firms. It currently supports three business networks and also a licensed franchise for inter-business learning networks.

**Users and stakeholders/settings**

Users have predominantly been SMEs with innovation management and associated development needs joining one or more Profitnet groups. Over 1,000 firms have been supported through Profitnet since 2004. CENTRIM brings extensive expertise drawn across past Profitnet activities and knowledge in effective facilitation of inter-firm learning for product development and innovation management.

**Impact summary**

Profitnet, in its different guises, has had a long history and a range of monitoring evidence has mapped activities and outputs. Impact evidence has been more patchy, often associated with funder’s requirements for outcome evidence at or approaching the end of funding periods but with some mid-point reviews. The diverse evidence shows a range of important business improvement outcomes from groups’ peer-to-peer learning and collaboration. Recurrent features from the monitoring evidence have included improved organisational planning; greater strategic skills among participants; and newly developed as well as more robust innovation strategies (and management) in firms. The monitoring evidence and member testimony has also identified a number of joint-ventures and inter-business ‘pre-competitive’ collaborations emerging from usually bi-lateral co-operation in Profitnet groups. A common theme has been ‘bottom-line’ benefits to member firms reflected in increased profits from a combination of new revenue generation linked to learning from the group interactions and facilitation, and also from reduced expenditure from cost savings informed by intra-group learning. A mid-project evaluation (2006-2008) summarised specific impacts across Profitnet members over this period as including:

- Development of 117 new products and 95 new services.
- Participation in the creation of 43 new businesses.
- Creation of 78 new (FTE) jobs linked to Profitnet learning and collaboration.

- Increase to aggregate turnover (across two financial years) by an average of 19 per cent across members. While this could not be wholly attributed to Profitnet learning, member testimony showed that it played a major role for an improved financial position and resilience among many members.

A more detailed before and after impact evaluation for five Profitnet groups showed small but significant net impacts with an increase over Profitnet members in these two years of +1.3 per cent for gross profit (before tax) and +6.7 per cent for turnover; substantially outperforming a comparison group of non-members showing -15.2 per cent and +3.2 respectively. Profitnet survey data also confirmed wider impacts including:

- improved planning and strategic skills (91 per cent of members);
- development of new innovation strategies (72 per cent). New business collaborations and joint ventures (37 per cent); and
- cost efficiencies and savings (33 per cent).

### **Actual/potential economic/monetary impacts**

Profitnet has not evaluated monetary gains but examples from member interviews showed:

- Peer to peer and expert review leading to new product or product marketing approaches – an IT firm developing new market segmentation strategies yielding over £120,000 in raised revenues in the first year alone; a food service company took a fresh look at packaging design, boosting cost savings and revenue to underpin a £60,000 gain in profits.
- New standards and quality assurance from Profitnet mentoring saw specialist telecoms firms achieve ISO 27001 and retain public sector business worth £180,000 a year.
- Improved business systems and standards (from Profitnet mentoring) saw a specialist telecoms firms achieve ISO 27001 and retain public sector business worth £180,000 a year. Another saw reformed HR procedures and systems saving the firm an estimated £100,000 in likely compensation costs just 14 months later.
- Developing an integrated e-commerce system from Profitnet guidance, informal testing and networks, boosting the firm's web-sales from 20 per cent to 55 per cent in four years and adding £45,000 to revenue.

These often small gains: "... made a big difference to small growing firms".

### **Quantified/quantifiable non-monetary impacts**

Similar examples showed Profitnet:

- built owner managers confidence to grow and mature businesses through highly interactive business non-competitive peer networks, and trusted critical review "... like an unpaid, trusted board of non-executive directors"
- provided trusted referral and access to specialist and proven expert knowledge to help address current specific company challenges
- helped builds firms' momentum for innovation and development by "... *renewing (my) energy and enthusiasm*"; and stimulating new ideas building by "... *showing how to start to do things better and differently*"

- made direct contributions to problem solving through inter-firm knowledge exchange by creating challenge-centred and issues-based opportunities for mutual learning.

### **Impact pathways**

Intra-group (peer to peer) learning has been at the heart of the identified impacts achieved by members. A combination of monitoring information, qualitative feedback from the mid-point review and member testimony has suggested that Groups have worked best where they have worked collaboratively to reduce the isolation of small firm owner-managers and directors through:

- non-threatening interactions between member firms encouraging problem (and solution) sharing in a friendly and supportive working ethos providing: *“a safe environment to check out ideas”*
- applied, flexible challenge-based focus co-constructed by members and facilitators to ensure currency and relevance
- responsiveness also through additional opportunities for following up needs (training, mentoring, expert/consultancy access).

To this is added widely positive feedback from Profitnet group members about the value of constructive and gentle handling of member interactions by the CENTRIM facilitators, and carefully focussed and managed group agendas: *“... it would have been mayhem without them”*.

### **Key lessons**

Profitnet has shown how often isolated owner-managers or directors of smaller businesses who lacked trusted mechanisms for discussing ideas can speedily harness group peer-based knowledge to build ideas and confidence to transform their business performance. It has also shown how:

- well-placed and SME sensitive academic teams can help close the loop by bringing together a critical mass of peers, guiding agendas and working arrangements, and using information and management concepts to guide innovation and improved management systems and practice on the ground
- pro-activity by HEIs is central to engagement with small firms who *“... would not have dreamed of knocking at the door of a university”*, and this can produce spin-offs for the institutions
- SME relationships need nurturing, requiring appropriate lead times for collaboration and facilitation supported by long term working arrangements and reflected in sustainable funding models for networks.

## **Case study 4: The Clear Ideas initiative**

### **Project and funding**

Research funded predominantly via ESRC Centre for Organisation and Innovation (COI) £2.2 million (2001 – 2006) and (funded through the then Department of Trade and Industry) as an Advanced Institute of Management Research (AIM) scholar contributing to DTI UK Innovation Review.

### **Principal investigator and institution(s)**

Dr Kamal Birdi, University of Sheffield (UoS).

### **Research summary**

Clear Ideas (CI) is an innovation development methodology enabling improved organisational practice through encouraging employees to systematically develop skills, generate and implement new ideas in the workplace. Its development was informed by research undertaken by Dr Birdi at Sheffield University's ESRC Centre for Organisation and Innovation (COI) and Sheffield University Management School between 1999 and the present with his research involving: investigating major barriers and facilitators of organisational innovation; identifying knowledge, skills, abilities and other attributes required by managers and employees to deal with these challenges as a successful innovator; and evaluating the effectiveness of training/development activities in this area.

### **Users and stakeholders/settings**

There was collaboration with several public agencies in South Yorkshire. This case study focuses on the impact on South Yorkshire Police and Sheffield Children's NHS Foundation Trust.

### **Impact summary**

A training resource for the public sector was developed collaboratively by the UoS and Sheffield Hallam University (SHU) and from 2010 was used to enhance leadership and innovation skills, attitudes and behaviours of public sector managers in the local South Yorkshire area through the Sheffield City Region Leaders Programme (SCRLP). The aim of the programme was to improve public service delivery in the Sheffield City Region. The programme comprises five modules, two led by academics at SHU and three led by academics at the UoS. Birdi designed and conducted a two-day, 10-credit UoS module on innovation built around the CI model, where participants apply the model to real-life problems. From 2010-13, 216 senior managers completed the programme from:

- seven Councils (Sheffield, Barnsley, Rotherham, Bolsover, North East Derbyshire, Doncaster and Chesterfield)
- NHS institutions including Sheffield Children's NHS Foundation Trust, NHS Blood and Transplant service and Sheffield Care Trust
- South Yorkshire Police (SYP)
- South Yorkshire Fire and Rescue
- Sheffield College, University of Sheffield and Sheffield Hallam University
- others including South Yorkshire Forest; and Sheffield Homes.

The CI model has also been used as a stand-alone programme with agencies including the Department of Business, Innovation and Skills (2012), Scottish Government (2011, 2013) and the British Psychological Society (2010-2013). A mobile app for CI was released in January 2015.

### **Actual/potential economic/monetary impacts**

Impacts emerge from the ability of participants to review current work practices and/or to re-think management problems using the CI methodology in different contexts. CI has helped senior managers improve performance in complex, often multi-goal oriented environments, by enabling them to focus attention on core aspects of the problem creatively, to emphasise implementation of practical solutions and to involve a range of associated institutional actors (such as, in a hospital context, clinicians, pharmacists and administrators or in the police, officers and administrators with various functions) who may have potentially conflicting priorities.

Participants on the innovative SCRLP not only acquired the skills and techniques associated with CI but also introduced less senior employees to its potential as a means of encouraging (organisational) cultural shifts towards creative and collaborative problem solving. The following represent good indicative (there are others) estimates of monetary impacts resulting from the initial CI intervention:

- efficiency savings in adult social care, saving Sheffield City Council £1.7 million
- saving on prescription drugs of £10,000 per annum per hospital resulting from a changed combination of prescribed drugs for gastro-oesophageal reflux
- significant savings for SYP arising from administrative changes via an emphasis on continuous improvement (but these have not been estimated or audited).

Attribution of impacts entirely to CI is inappropriate but users acknowledge CI has contributed significantly to culture of change and continuous improvement.

### **Quantified/quantifiable non-monetary impacts**

The non-monetary impacts of the changes brought about by CI are difficult to quantify but their significance is striking for:

- Improved health care practice: problems of poor patient compliance relating to gastro-oesophageal reflux medication was addressed using CI workshop techniques. This resulted in cost and health benefits including 90 per cent of patients changing to new arrangements with improved compliance; greater ease of supply; more accurate dosing; more positive treatment outcomes; and fewer re-admissions (with consequent cost as well as health benefits).
- Influence on service management and continuous improvement training in the police service: CI is used to inform SYP's continuous improvement strategy, since 2013 adopting a toolkit for staff and service improvement groups in all four SYP districts. To date, 30 employees of differing ranks in Rotherham district have taken part in workshops developing innovative methods of reducing burglaries, vehicle crime and promoting more efficient working. Specific outcomes include the 'Pawn Shop Partnership' reducing markets for stolen goods and an internal newsletter to improve morale.

### **Impact pathways**

Research on creativity training pointed to the need for a new approach that combined the strengths of various existing approaches. Impact depended upon:

- development of a novel tool and training package
- brokerage of university services facilitated by collaboration with a partner university

- support for a major regional innovative training initiated by key public sector stakeholders, notably the city council.

### **Key lessons**

The successes of the initiative have been built on the willingness and aptitude of the researchers to build trusting relationships with senior practitioners based on an applied approach centred on understanding and identifying the needs of others. It has also emphasised the need for:

- a genuine commitment and active steps to ensure that the collaborations have been based on co-construction and participative delivery through continuing user-engagement
- HEI institutional skills and capacity to audit, deliver and evaluate impact of commercially-centred work from academic routines and to recognise time needed to nurture external relationships
- mutual recognition of the cultural challenges of HEIs and business working together (eg business pressure to show early benefits) and of the value of co-creation of projects to meet mutual interests/goals
- project funding (and funders) to resource audit and evaluation of impact; and taking a long-term perspective on impact.

## **Case 5: Development approaches that stimulate knowledge acquisition and growth in small and medium-sized enterprises: influencing practice and policy.**

### **Project and funding**

ESRC Programme: The Evolution of Business Knowledge among SMEs; multiple funding sources<sup>8</sup> of which ESRC contributed £364,000 in 2003 (£74,000 to Leeds); with other funds (£666K) principally from RDAs for 'think tank coordination by Leeds. ESRC has also contributed a later Impact grant (2007) of £32,227 and an ESRC Follow-on grant of £76,709 (2010).

### **Principal investigators and institutions**

Professor Richard Thorpe, University of Leeds and Ossie Jones, initially Manchester Metropolitan University and then the University of Liverpool.

### **Research summary**

A research programme entitled 'The Evolution of Business Knowledge (EBK) among SMEs', funded by the ESRC, can be seen as one strand and the foundation of this case study. Longitudinal research on business learning and leadership with 90 SMEs identified that

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<sup>8</sup> Funding sources included: ESRC: The Evolution of Business Knowledge in SMEs, Economic and Social Research Council, £364,000 of which £74,000 to Leeds [RES-334-25-0015] (2003). Three northern Regional Development Agencies (RDAs): Northern Leadership Academy (NLA). Total funding of £4.8 million of which £666,903 was allocated to Leeds University Business School. An additional £141,000 was also awarded by the same agencies to create NLA Centres across the north (1/1/2006 to 31/3/2008). Yorkshire Forward (RDA): Business growth programmes £248,814 for Yorkshire Centres, £140,000 for Leadership Journeys, £149,889 for SME Knowledge Network (funded by Economic Challenge Investment Fund /Yorkshire Forward) and £2.7 million Goldman Sachs programme. ESRC subsequent agreed an Impact grant of £32,227 (2007): Making Space for Development – developing high-level skills for business growth in SMEs [RES-172-25-0056] and a Follow-on grant: Growing a Regional Network to support leadership development in SMEs, £76,709 [RES-189-25-0191] (2010).

knowledge is transferred implicitly via business networks, supply chains and professional advisors, as well as being embedded in work practices and systems. A second complimentary strand related to the development needs and pedagogical processes important in developing SME managers and leaders. This research was conducted earlier and focused on action learning funded by the North West Development Agency. This showed how action learning, peer learning and learner/problem-centred approaches to business education influence behaviour and energise change within SMEs.

These parallel streams of research addressed the way managers learn, particularly through action learning, and identified and led to the development of a 'best practice' approach to management training and development for small firms and their managers and leaders. New ways of conceptualising entrepreneurial activity and learning led to new ways of developing and delivering training programmes that chimed with research being conducted in other centres, particularly Lancaster and Liverpool. Research on the features of successful SME development programmes demonstrated how business schools could contribute to national economic growth through SME business support.

### **Users and stakeholders/settings**

In 2006 there was a decision to form the Northern Leadership Academy (NLA), a partnership between the Universities of Lancaster, Leeds and Liverpool as part of the Northern Way Initiative led by three northern Regional Development Agencies (RDAs). As part of this initiative, Leeds University Business School (LUBS) hosted the NLA's Think-Tank. From its inception, the think tank utilised the underpinning research from the ESRC EBK initiative to inform its approach to leadership and development in SMEs and through the NLA ran a number of programmes specifically for the SME sector. On the conclusion of the NLA project, the Think-Tank and the NLA brand continued, focusing exclusively on the SME sector and researching on aspects of leadership and how to implement best practice in learning and leadership. The ESRC Impact and Follow-on awards were helpful in the dissemination of the research evidence to other providers regionally.

The activity during this second phase saw the establishment of regional centres to deliver leadership courses and action learning sets for SMEs, peer mentoring and coaching schemes, and masterclasses. The web portal (developed during the original project) for sharing resources continued as did a fellowship programme for PhD students researching in the area of leadership.

Six principles of good practice underpinned the practice-oriented approach, and new funding from mainly Yorkshire Forward (£340,000 and the Higher Education Funding Council (£150,000 enabled this good practice to be disseminated through the setting up of a number of SME leadership/business-growth programmes across the north. This paved the way for the launch of the Goldman Sachs 10,000 Small Businesses programme to be trialled in the UK at Leeds. This global initiative aims to provide high-quality, practical education and business support to leaders of high-growth small businesses and social enterprises.

### **Impact summary**

The research has had an impact on three constituencies: business education providers who have used the findings to improve the quality of their provision of training to SMEs; policy-makers who have been better informed about the kinds of programmes to support and SME owner-managers who have participated in a training programme and, as a consequence, improved their strategic planning skills and become more entrepreneurial. The focus of this



case study is the Goldman Sachs programme delivered by a dedicated and experienced faculty at Leeds University Business School, using the experience and knowledge acquired from the previous activity outlined above. Evaluation of the impact of the programmes suggests that the newly acquired skills resulted in significant turnover and employment growth in the businesses owned or managed by the participants. As a result, the GS programme won a European Foundation for Management Development Excellence in Practice Award in 2012 and was praised by the (then) Secretary of State for Business, Innovation and Skills (BIS) for forging a valuable connection between SME research and practitioner development.

### **Actual/potential economic/monetary impacts**

An evaluation of the results of this programme from all of the expanded group of UK delivery centres showed that skills developed on the GS programme enabled the owner-managers were able to improve the competitive performance of their business to the extent that:

- net employment grew between 16 – 26 per cent (depending upon when they completed their programme), whereas the average employment growth rate for SMEs in general was only 4 per cent for the same period
- turnover increased between 23 – 42 per cent among SMEs where the owner-manager had participated in the programme, whereas average turnover growth for SMEs generally was 8 per cent for the same period.

More specifically, during 2014:

- owner-managers who had participated in the programme grew net employment in their SMEs by 20 per cent compared with net employment growth for the SME population as a whole, where employment growth was 13 per cent
- more than double the proportion of SME owner-managers (37 per cent) enjoyed growth in turnover of over 20 per cent compared with the SME population as a whole (18 per cent).

### **Quantified/quantifiable non-monetary impacts**

The SME owner-managers who participated in the GS programme reported that they:

- were more confident in their approach to running the business (93 per cent)
- had changed work processes (92 per cent) and were able to integrate financial information more effectively into decision-making (82 per cent) than previously
- were more likely to invest in staff training (68 per cent) than prior to participation in the programme.

There was also qualitative evidence that some had also:

- benefitted from strong alumni (learning) networks arising from the structured activities of the programme
- experienced positive lifestyle and wellbeing consequences, enabling them to manage the business more professionally and work ‘office hours’.

### **Impact pathways**

The impacts were enabled by:

- the creation of a coherent body of independent, research-based expertise, that was shared extensively and openly
- an effective inter-university, multi-disciplinary, collaboration which underpinned a strong network of like-minded academics which extended the collaborative approach to promote principles of good practice in the development of owner managers
- a willingness and an ability to engage in programme co-creation with SME users.

### **Key lessons**

This case together with the earlier Northern Leadership Academy activity highlights the benefits of multi-disciplinary collaboration to encourage openness and sharing of practices among universities - in the case of the RDA funding to create regional reach, and in the case of Goldman Sachs, to create national reach. More specifically this involved:

- the value to open innovation of co-creation across universities and other stakeholders when drawing on shared foundation of a coherent body of evidence-based research
- carefully constructed engagement to provide significant levels of participation, and careful recruitment, to build the success of the programme
- identifying universities that contain the right mix of a strong research base with an appreciation of appropriate delivery mechanisms
- a foundation of (business) engagement through building on existing networks and supporting established relationships.

## **Common themes and conclusions**

This cross-cutting assessment looks across the five case studies and at the effectiveness of the evaluation methodology. It also sets out recommendations for further developments to better understand the economic impacts of social science research and knowledge exchange.

### **Evaluation of economic impacts**

Although there has been some erosion since REF reporting, significant economic impacts have been confirmed across all case studies; often achieved in difficult circumstances. This has also included some positive, if unexpected, knock-on outcomes and (later) spill-over impacts. Attribution remains a challenge (see below) but for three cases (Plymouth-FHC, Brighton-Profitnet and Leeds-GS) there appears to be a substantial association between secured impacts and the contributions from academic teams, and partial attribution for the others.

### **Impact quantification and attribution**

All of these case studies have faced a substantial challenge in being able to attempt some differentiation between overall (ie gross) and the likely attributable (ie net) economic impacts<sup>9</sup>. While all have made some attempt to measure (although sometimes very selectively) overall impacts, these have more straightforward for project evaluation than assessing likely attributable impacts. Only three projects (Plymouth-FHC, Brighton-Profitnet, and Leeds-EBK) have attempted to measure impacts which are likely to be attributable to the social science inputs, using comparative data or projection-based assessment.

Overall, attribution can be confidently assessed only in those circumstances where impacts can be wholly or largely associated with changes stemming directly from the academic inputs. Among these five cases this is the situation only for the Plymouth-FHC partnership. Taken together with the pilot study case studies, it appears that such circumstances are uncommon when looking at social science impacts in policy development or practice. This often reflects long impact lead-times, complex user and influencing circumstances, and often volatile organisational environments. In addition, assessing net impacts is also held back by projects' limited or delayed evaluation aspirations and an apparent reluctance to use (or lack of confidence in) evaluation methodologies which might help assess attribution.

### **Measuring monetary impacts**

Monetising economic impacts has been challenging for the case study projects, although all but one have identified some monetised impacts directly related to the social science contributions. These have often been substantial. Establishing additionality of these impacts is problematic for all cases, and for two this may be limited. Cost-savings based monetary impacts at participant level (as in the pilot study) remain the most amenable to monetisation of impacts (eg Brighton-Profitnet); others have shown the value of accounting-based projections and audited change (eg Plymouth-FHC).

### **Non-monetary impacts**

A diverse range of non-monetary impacts are shown. These can be highly specific to the project and in different user circumstances can be seen as more important in assessing added-value than monetary measures. These are more amenable to measurement with data

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<sup>9</sup> Both 'Gross' and 'Net' impact have been defined in the earlier report to ESRC and follow the standard use and definition in the *Magenta Guide* for assessing the quality of attribution of impacts to specific interventions.

often drawn from project-level self-evaluation (eg Brighton-FHC; Leeds-GS; Sheffield-CI). A combination of quantitative data from monitoring and qualitative evidence from participant self-assessment have provided a basis for estimating additionality in non-monetary impacts for three cases (Plymouth-FHC; Brighton-Profitnet; Leeds-EBK).

### **Legacy and sustainability**

There has been some enduring impact for all cases; although often eroding over time. Four have also seen positive spill-over effects and continuing working relationships (post-project) between users and the academic teams. Features helping to build impact legacy have included: continuity of project user leadership<sup>10</sup>; sustained funding or development of new funding models, and responsiveness and strategic fit to user needs<sup>11</sup>. Pro-activity by academic teams has also been important in building impact momentum<sup>12</sup> supported by an outward looking and applied focus for sustaining external relationships built during project-activity. Mainstreaming of evaluation practice has also contributed; although these conditions are not reflected in all projects.

### **Pathways towards impacts**

Impacts across these case studies were facilitated by:

- An **opportunity and challenge-centred** focus for the non-academic stakeholders, usually related to current and often immediate or short-term needs<sup>13</sup> and co-constructed between academics and users. HEI's with a track-record of external engagement were often better placed to identify these opportunities.
- **Academic collaborations and pro-activity**, including across institutions and with prospective users, to emphasise co-creation and often drawing on a previously developed and coherent body of research-based knowledge and expertise. Early ESRC investments with applied potential, including in funded Centres, have been important to creating these foundations.
- **Harnessing multi-disciplinary insights** and capacities to provide the necessary breadth and mix of complementary knowledge and skills to meet users' needs and delivery circumstances.
- **Quality in partnership working**, developing trust and confidence in collaboration, as well as responsiveness and effective working practices. A crucial foundation has been a jointly-recognised and objective-based focus for knowledge transmission, and mutual expectations of value built into project goals and delivery.
- Taking steps to **embed data-led evaluation** has been an important success factor; helping to sustain projects by demonstrating early value and providing independent analysis and evidence to support sustainability.
- Well positioned **user commitment** often driven by appropriate executive-level engagement and which supported projects in adapting to any changing delivery needs and circumstances. This has also helped build some of the cultural changes associated

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<sup>10</sup> This is also likely to be a feature of impact legacy from academic teams but cannot be assessed here as all five cases have retained the same PI's (and often teams) since inception.

<sup>11</sup> This is notably in terms of quality of fit of project aims and working practices to of the explicit strategic goals (eg business plans for commercial bodies and social enterprises) and/or recognised longer-term organisational priorities

<sup>12</sup> Both during and after case study project activity.

<sup>13</sup> This may reflect the funding circumstances of projects where timescales and resources available encourage a focus on more readily delivered short-term goals.

with the collaborations in user organisations, and the capacity to implement changes to drive specific systems or efficiency impacts.

- **Effectiveness and intensity** in translating academic knowledge and potential for application into practical implementation was especially important for collaborations involving SMEs where lead times to securing value were often very short.

Some constraints to impact held back successes. These included localised factors such as funding eligibility and arrangements, and key staff changes among users. In addition, external constraints, often beyond the control of users, included tightening organisational budgets, and changing business, product or market circumstances leading to new priorities. External constraints including regulatory change also limited the sustainability of impacts and diminished impact legacies for three cases.

### **Effectiveness of the evaluation methodology**

The evaluation has extended the methodology developed in the pilot study, and shown that a combination of secondary analysis with selective and intensive interviews can generate valuable illustrations of economic impacts, and success factors. The approach has been valuable for updating REF-based impact evidence, and for critically reviewing the accuracy and utility of self-assessed impacts. Although the scale of this evaluation has been limited, taken with the four case studies from the pilot study it confirms that primary valuation methods<sup>14</sup> can have wider potential to monetise at least some impacts<sup>15</sup>.

A challenge, however, emerges between quantifying economic impacts and attribution of those measured to the academic contributions. Although impact measurement continues to be affected by some project-level inertia (or caution), and well-recognised methodological challenges, this seems to be less problematic for these (selected) cases than robustly assessing attribution and estimating net impacts. The lack of use of methods such as counterfactual or comparative<sup>16</sup> assessment opens self-assessed case studies to the risk of over-estimation of the academic contributions to measured impacts.

The evaluation concludes that if case study based impact evidence is to secure wider value, and recognition, these challenges need to be addressed to provide practical project-level tools to better illustrate the quality causality of social science contributions to the achieved impacts. We do not suggest that causal measurement is possible. However, from these case studies there appears to be greater potential for harnessing more robust (pre-planned) approaches to estimation or situational assessment and which may have the potential for much wider application to similar ESRC investments.

### **Recommendations and lessons for enhancing economic impact**

The evidence set out here for the potential for quantifying economic impacts is encouraging, and has added to that of the pilot study. However, it also concludes more systematic approaches to impact quantification are needed at project-level and we propose ESRC considers three specific actions.

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<sup>14</sup> The methodological approach and underpinning concepts were set out in the pilot study and report and are not repeated here.

<sup>15</sup> These are likely to be social science contributions engaging individual and user groups in in carefully selected situations of academic-external user collaborations.

<sup>16</sup> For example from using non-experimental analyses harnessing available participant based outcomes from monitoring or evaluative information and comparative (non-participant) data.

### **Recommendation 1 - Review of scope for more systematic approaches to attribution**

The quality of attribution from self-reporting of impacts may fall short of government (and other) expectations on assessing the utility and cost-effectiveness of publicly-funded investments. While measurement of causality will be impractical, there is scope for greater consideration of project-level approaches to estimating or assessing net impacts<sup>17</sup> to better demonstrate attribution. This remains a complex area and a useful first step would be for ESRC to conduct an evidence-review of options, utility and expectations from similar publicly funded circumstances.

### **Recommendation 2 - Widening the evidence base**

To extend the current analysis we recommend encouraging more structured self-reporting of impacts as part of end-of-grant reporting<sup>18</sup>. This might use a similar template to that used here (Section 2). Appropriately validated, this will help to progressively build a wider-evidence base for better understanding economic impacts.

### **Recommendation 3 - Demonstrator projects**

The mechanisms through which monetised impacts can be effectively measured remain unclear. We recommend ESRC set up a small number of demonstrator projects to illustrate the use of suitable approaches to identifying and measuring appropriate indicators for use within end-of-grant reports. We propose that the evidence base from the pilot study and this research constitutes a sufficient base to identify likely targets for such activity, and grant contracting provides an appropriate mechanism for building this into project or programme requirements.

In the near future, these actions should provide a platform for developing generic guidance to all ESRC investments on where and how economic impacts can be identified, measured, attributed and reported. Such guidance is not likely to be universally applicable but will provide a platform for challenging any expectations about the impracticality of measuring economic (or wider non-academic) impacts and informing practice.

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<sup>17</sup> Government guidance (eg Magenta-Combined) emphasises the value in impact evaluation of counter-factual measurement using experimental or quasi-experimental methods. Taking into account proportionality of approach, there may also be scope for at least some research or knowledge exchange investments to harness low-cost non experimental methods – used to a limited extent in three in of these case studies but with wider scope for application.

<sup>18</sup> Where required by ESRC this may also be usefully applied to mid-term reporting requirements where the investments involve longer funding periods.

## **Annex A: Organisations/agencies consulted**

Beaming Ltd.  
Brighton University Business School (Centre for Research in Innovation Management)  
British Gas Ltd.  
Building Bloqs CIC  
Coast to Capital Local Enterprise Partnership  
Centre for International Shipping and Logistics  
College of North East London  
Hotfood Vending Ltd.  
Leeds University Business School  
London Borough Council of Ealing  
Manchester University Business School  
Monster Group  
Podrum Food Group Ltd.  
Sheffield Childrens' NHS Foundation Trust  
South Yorkshire Police  
UK Harbour Masters Association  
University of Brighton  
University of Exeter  
University of Manchester (Centre for Research on Socio-Cultural Change)  
Sheffield University Management School (ESRC Centre for Organisation and Innovation)  
University of Plymouth