Final report

IMPACT OF SOCIAL SCIENCE ON BUSINESS:
A study of Knowledge Transfer Partnerships in the private sector

Report to Economic and Social Research Council (ESRC)

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Executive summary

Knowledge Transfer Partnerships (KTP) represent a means through which academic and business partners can come together to mutual benefit through developing projects that have potential for both commercial exploitation and academic research. Historically the majority of KTP projects have focused on scientific, technical, engineering and/or mathematical (STEM) subject areas. However, social science projects are eligible for KTP funding and the Economic and Social Research Council (ESRC) provide full or part funding for projects which entail some input from social scientists.

Given the growing interest in the potential impact of social science on business (as well as policy and society more broadly) the existence of information about KTP projects to which ESRC has contributed provides an opportunity to explore the extent and nature of interaction between business and the social sciences and in particular the impact of such interactions, the determinants of success and lessons for the future.

The key objectives of the study were as follows:

- To assess the range and nature of social science impacts on the private sector as identified in KTP reports, and highlight examples of good practice
- To explore the extent to which Knowledge Transfer Partnerships have facilitated further private sector engagement with social science
- To identify any further collaboration and impacts that have occurred since the completion of the KTP
- To identify and analyse the determinants of the impacts identified (i.e. why and how impact has been generated)
- To develop an understanding of the private sector’s appreciation and need for social science
- To identify good practice and lessons for enhancing the contribution that social scientists can make to the private sector
- To inform the ESRC’s business engagement activities with a view to maximising future impacts

Between 2008 and 2012, 25 private sector KTP projects funded wholly or partly by the ESRC were completed and submitted reports. Mean ESRC funding was around £38k per project. Projects were drawn from different geographical areas and involved a wide range of HE Institutions and company types.

The overwhelming majority of companies stated that they felt that KTP was significant for the company’s future performance and believe its significance will increase over time.
In addition to secondary, documentary analysis we undertook a small number of primary case studies of completed projects that were likely to yield additional and valuable information.

This has been a small-scale and exploratory study with a focus on obtaining in-depth qualitative information about a small number of relatively successful social science KTPs involving private sector business partners. The recommendations we set out below should be interpreted in the light of the nature and scope of our research and it is suggested that further research and consultation will be necessary in order to validate and where appropriate progress these recommendations. Most notably we suggest that more detailed comparisons between projects that are successful in terms of business impact and those that are not successful would yield valuable additional insight.

Conclusions

Our conclusions are drawn against the key objectives of the study set by the ESRC:

- We assess the range and nature of social science impacts on the private sector as identified in KTP reports, and highlight examples of good practice

Our evidence suggests that that social science can make an important contribution to the overall impact of KTP projects, most of which entail a combination of social science skills with expertise from other disciplines. The range of impacts attributed by the KTPs themselves include increased turnover, profits and employment, although the nature of the evidence does not allow us to draw a clear causal line which would mean that this can be attributed simply to input from social scientists. Importantly, the KTP final reports provide limited information about non-financial and/or non-quantitative impacts arising from the KTP, and medium to long term impacts are based on company projections which are difficult to verify. Case study work and interviews with 11 of the 25 projects provided further information about the nature of social science impacts and the determinants of those impacts. The range of impacts includes:
  - Enhanced business or management policy or practice
  - Reduced cost of implementing projects
  - Reduced timescale of project implementation
  - Introducing social science expertise to ‘technical’ projects

- We explore the extent to which Knowledge Transfer Partnerships have facilitated further private sector engagement with social science

In KTPs where the company was already aware of the social sciences (e.g. academic spin outs or the company representative had worked in academia),
there was little fundamental effect on attitudes towards the social sciences except to perhaps reinforce them. However views on the specific subject matter (e.g. socio-linguistics) of the KTP have been influenced. However in one or two case studies perspectives had been impacted substantially. One company CEO commented that it (the KTP) had ‘changed our views dramatically’ on the usefulness of social science research and on the benefits of collaborating with other organisations in general, rather than being insular as they were before.

- We identify any further collaboration and impacts that have occurred since the completion of the KTP

All the companies from our case studies have maintained contacts with an academic partner; in most some form of knowledge exchange continued and some had taken on intern or placement students from the KTP partner institution. Nevertheless, it is necessary to qualify this picture somewhat. Our research shows that companies do not think in terms of academic disciplines or constructs such as the “social sciences.” If anything, they are more interested in a pragmatic, interdisciplinary approach to solving a ‘problem’.

- We identify and analyse the determinants of the impacts identified (i.e. why and how impact has been generated)

While it was not possible to construct a deterministic model of the impact process on the basis of a small number of projects, analysis of the interviews and case studies suggests that the following factors are associated, in different combinations, with increased social science impact:

- Up-front planning of the KTP with consensus on the aims etc and effective dialogue and communication throughout the project
- The company playing an active role in initiating the project
- Senior level company support and commitment to the project
- The quality, background and skills (including soft skills) of the Associate
- Successfully embedding the results of the KTP into the company post its completion
- The background and experience of the partners
- Geographic proximity between the academic partner and business

- We develop an understanding of the private sector’s appreciation and need for social science

Our research suggests that while there is no particular demand for “social science” expertise per se, business is interested in knowledge exchange and is interested in working with academic partners, where there is the right fit in terms of background and skills etc. As we say above, our research shows that companies do not think in terms of academic disciplines or constructs such as
the “social sciences” but they are interested in a pragmatic, interdisciplinary approach to solving business problems.

- **We identify good practice and lessons for enhancing the contribution that social scientists can make to the private sector**

  Our research highlights a number of examples of good practice:
  
  - Getting the right associate who has the necessary technical skills and knowledge and who also has high-level people skills (previous business experience was not seen as necessary).
  
  - Senior level buy in within company is important to get staff throughout the whole company to engage and give their commitment.
  
  - Flexibility and willingness to adapt to meet the company’s changing needs and commercial imperatives.
  
  - Early meetings to ensure the development of the proposal reflects all partners’ needs and there is a shared sense of what is useful and achievable.

- **Our research can inform the ESRC’s business engagement activities**

  Our research confirms that KTPs are popular with businesses and academics, suggesting that KTPs should continue to be a primary focus of ESRC’s activities to promote business engagement. Key lessons include the need, *inter alia*, for clarity of purpose, better awareness raising, more effective organisation and creating more opportunities for cross-disciplinary collaboration.

  Our case studies also highlight the conclusion that one of the key features that attracts businesses to become involved with KTPs is that the research takes place on their own ‘turf’, with a high level of day-to-day input from business managers. One lesson for ESRC is to explore the potential for developing or amending other initiatives to enable this benefit to be realized by business participants in ESRC-supported projects.

  Finally, we have identified that businesses tend not to recognise or be especially concerned about disciplinary labels such as ‘social science’. Businesses are interested in the potential benefits of knowledge exchange from whatever source it comes and care little about disciplinary boundaries. This suggests that ESRC should be less concerned about promoting the potential business impact of social science *per se*; rather the focus should be on how social science can help to enhance impact as part of a multi-disciplinary approach to addressing business issues.
Recommendations

The following recommendations emerge from our study. In presenting these recommendations, we recognise that the focus of our research was upon KTP projects that were initially funded as far back as 2006 and all were completed by 2012. Since these projects were undertaken a number of changes have been made in areas such as funding criteria, eligibility, project monitoring and reporting[^1], changes which are broadly supported by our evidence.

1. **Improve the clarity as to the kind of KTP applications the ESRC can and will fund.** This has been addressed somewhat by the most recent RCUK and ESRC guidance. In addition, however, we suggest greater use of hypothetical ‘case studies’ (in addition to existing ‘good practice’ cases[^2]) to illustrate the range and nature of applications the ESRC would be willing to fund through the programme. We recognise that the Regeneris report[^3] highlights the relative attractiveness of the KTP programme to business and that ESRC is working to improve the KTP application process, which is widely regarded as fairly onerous, especially for small organisations[^4]. Nonetheless our findings suggest the need to explore the costs, feasibility and potential benefits of providing more support within ESRC to promote the potential benefits of KTPs to academics and businesses, and provide additional support through the application process.

2. **Raise awareness of the ESRC and the potential impact of social science expertise among business.** This could be achieved through increased communication and by building a presence at business events or conferences. The findings of this research, together with existing good practice material, could be used as part of this communication exercise.

3. **Explore the potential for expanding the number and range of academic-industrial collaborations with researchers based on business rather than academic premises.** The KTP case studies have illustrated the potential benefits of such collaboration and the ESRC should explore whether there is a demand for partnerships in addition to KTPs, supported by ESRC funding.

4. **Collate a range of more up-to-date successful or good practice social science KTP case studies, including those reviewed in this report.** Highlight these to businesses to demonstrate what can be achieved through a social science KTP. This could build on the KTP Impact Awards which reflect successful projects completed to date. The latest award brochure, **KTP Best of the Best 2012**, is available on the KTP website and includes a number of ESRC KTP award winners.

[^1]: ‘Research Councils overarching statement for support of Knowledge Transfer Partnership projects’
http://www.esrc.ac.uk/_images/RCUK-Overarching-KTP-Statement_tcm8-25521.pdf
[^2]: See for example http://www.esrc.ac.uk/_images/ESRC_Award_for_Best_Application_KTP_2011_tcm8-18460.pdf KTP case study 2008 winners: Arriva (PDF, 2Mb)
[^4]: ‘Knowledge Transfer Partnerships: current funding situation’, paper for ESRC Sounding Board Group, 2011
These could also be used to demonstrate the benefits of social science to academics in other areas of expertise.

5. **Encourage company partners from successful social science KTPs to present the benefits achieved from the KTP at business events or conferences, maximising the benefits of peer-to-peer promotion and recruitment.** The ESRC could encourage involvement by paying company partners or at least reimbursing expenses.

6. **Identify more opportunities for cross-disciplinary collaboration among academics, recognising where the KTP would benefit from the social sciences working in conjunction with another subject area.** While we understand this is not within the scope of the ESRC at present, we believe that this is something which ought to be raised at a strategic level in order to avoid a narrow, silo-based approach to Knowledge Exchange. These could be focused around the current strategic priority areas of economic performance, influencing behaviour and ‘a vibrant and fair society’, and priority sectors of retail, financial service and the green economy. We recommend the ESRC should promote these opportunities among academics, possibly in collaboration with other Research Councils.

7. **Identify and recruit more academics with a business background and/or a focus on business engagement or applied research to take part in KTPs.** From the other side, there may also be the potential to target potential businesses partners with an academic background (e.g. university spin-outs, former KTP Associates or PhD graduates).

8. **Provide opportunities for businesses and academics to interact.** While this was not a particular focus of this research, the broader literature on co-production supports the centrality of good relationships and networks to achieving high impact.

9. **Improve the standard monitoring and evaluation of KTPs to collect better information about the impact of social science:** We understand that ESRC recognises the limitations of the current appraisal and evaluation processes for KTPs, which inadvertently downplay the contribution of social sciences to the impact of KTP projects involving multi-disciplinary inputs. In conjunction with Innovate UK (formerly the Technology Strategy Board), we suggest that ESRC explores the potential to revise the monitoring process to enable non-financial and/or qualitative impacts to be highlighted, and for the contribution of different disciplines to be identified.

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6 Innovation UK was known as the Technology Strategy Board at the time work was undertaken for the *Impact of Social Science on Business: A study of Knowledge Transfer Partnerships in the private sector* Report.
1. Introduction

Knowledge Transfer Partnerships (KTP) represent a means through which academic (Knowledge Base) and business partners can come together to mutual benefit through developing projects that have potential for both commercial exploitation and progress in terms of academic research. At the heart of each KTP is an Associate who is typically based at the business premises for a period of one or two years, and is under the academic supervision of an expert (or experts) based at the Knowledge Base partner institution. Historically the majority of KTP projects have focused on scientific, technical, engineering and/or mathematical (STEM) subject areas. However, social science projects are eligible for KTP funding and the Economic and Social Research Council (ESRC) provide full or part funding for projects which entail some input from social scientists.\(^7\)

Given the growing interest in the impact of social science on business, the existence of information about KTP projects to which ESRC has contributed provides an opportunity to explore the extent and nature of interaction between business and the social sciences and in particular the impact of such interactions, the determinants of success and lessons for the future.

This report presents findings from a project commissioned by the ESRC and undertaken by researchers from the University of Hull and the University of St Andrews. The objectives of the study were as follows:

- To assess the range and nature of social science impacts on the private sector as identified in KTP reports, and highlight examples of good practice
- To explore the extent to which KTPs have facilitated further private sector engagement with social science
- To identify any further collaboration and impacts that have occurred since the completion of the KTP
- To identify and analyse the determinants of the impacts identified (i.e. why and how impact has been generated)
- To develop an understanding of the private sector’s appreciation and need for social science
- To identify good practice and lessons for enhancing the contribution that social scientists can make to the private sector
- To inform the ESRC’s business engagement activities with a view to maximising future impacts

Section 2 summarises the research methodology.

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2. Methodology

2.1 Overview

The intention of this project was to examine a range of KTP projects that had been funded by ESRC and which involved private sector (as opposed to public or ‘third sector’) partners. Given the objective of assessing the impact of such projects, including impacts subsequent to their completion, it was decided to focus on KTP projects that had been completed between 2008 and 2012.

2.2 Document review

ESRC identified 25 of the 88 projects completed between 2008 and 2012 as ‘private sector’ KTPs. We reviewed the relevant reports (Associate Final Report, KTP Advisor Report and Partnership Final Report) for each of these projects using an agreed template (Appendix III). This review provided an overall picture of the nature and range of KTP projects supported by ESRC, the types of organisations, sectors and activities involved and participants’ assessments of the success of the projects at the end of the funding period.

2.3 Interviews with KTP participants

The document review provided limited data to inform our key research questions regarding the determinants of impact and business awareness of social science. In order to explore these issues in more depth, we undertook interviews with six business participants drawn from the 25 projects included in the desk review, using a flexible topic guide (Appendix IV).

2.4 Case studies of KTP projects

In order to obtain detailed and up-to-date data on the processes through which social science impacts on business through KTPs, we undertook a small number of case studies of completed projects that were likely to yield additional and valuable information. Selection of potential case studies was undertaken in consultation with ESRC and the target projects were chosen in order to provide a broad cross-section, with a focus on those that had been deemed to have been successful in terms of financial or other impact. Five sets of project participants (at least two from the academic partner, business partner, KTP Associate and KTP Advisor) agreed to be interviewed. Details of four of the completed case studies are presented in section 3 of this report and the case study protocol and topic guide can be found in Appendix II.

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8 Note that ‘success’ can mean different things from the perspective of the different participants in the KTP process, e.g. the Associate is likely to be concerned primarily about skill development and career prospects and the Knowledge Base partner about the number and quality of articles produced. Throughout this report, we use the term ‘success’, unless otherwise stated, to refer to the impact of the project on the company, mainly but not exclusively in terms of turnover and/or profits.

9 Note that we were unable to obtain permission from one of the case study organisations to publish their details in the public domain.
3. Document review: key findings

3.1 Social Science Private Sector KTPs

Between 2008 and 2012, 25 private sector KTP projects funded wholly or partly by the ESRC were completed and submitted reports. Our review of this documentation yielded the following key observations:

- The mean KTP grant was in the order of £80k and ESRC typically contributed 50 per cent of the KTP funding, although in two cases ESRC fully funded the KTP project. Mean ESRC funding was around £38k per project.

- Knowledge Base partners were drawn from 19 different Higher Education Institutions, with a broad geographical spread (e.g. 3 from Wales and one from Scotland and a variety of institutional types and sizes).

- The location of the company partners in the majority of cases (23 out of 25) was in the same city or region as the Knowledge Base partner, suggesting a high degree of localisation in academic-business partnerships of this type.

- Company partners came from a range of sectors with finance (5 projects), construction or property (4), professional services, including consultancy (8) being the most numerous.

- Likewise the company partners varied significantly in size, with the largest company employing several thousand people and the smallest employing fewer than 10; similarly the company partners comprise large limited companies as well as partnerships and social enterprises.

- Most KTPs are primarily scientific or technical in nature, with a focus on IT/computing, mathematical modelling and engineering. In many cases the social science elements of the project are not prominent and appear to play a secondary or supporting role to the main project focus on the development of new technological products, services, processes or systems. This is explored further in relation to our case study projects.

- This observation is corroborated by the fact that the Knowledge Base lead of 10 of the 19 projects for which it was possible to ascertain the disciplinary focus of the lead individual was not based in a social science department or faculty. Of the 9 social science led projects, 6 were in business schools.

- Finally, the majority of ESRC-supported projects were deemed by their KTP advisors to have been successful. Out of the 25 completed projects, 6 were rated in terms of their overall performance as A (outstanding), 11 as B (very good) and 3 as C (good). Three projects were rated as satisfactory (D) and two as poor (E). In the last case one of the projects had been discontinued on the resignation of the Associate after 7 weeks and in the other the company entered liquidation during the course of the project.
3.2 Company Impacts

At the end of the KTP the company partner completed a Final Report which includes some data on its estimates of the KTP’s impacts. Unfortunately these data leave much to be desired from the point of view of analysing the impact of the social science element of the KTPs. For example, the data on impacts for some indicators (e.g. sales) are based on company predicted figures for the next three years. Such estimates are likely to involve substantial margins for error. Other indicators do not provide a comprehensive assessment of impact (see the discussion of employment below). It is not obvious that the questions posed to the company are consistently interpreted. Finally, it was not always possible for company partners to attribute impacts on metrics such as sales and profits directly to the KTP (even though they believed its impact had been important), and even less to the role played by social science as opposed to other disciplines. While recognising such limitations, we have analysed the data as an initial assessment of impact.

In 80% of cases (18 out of 23 firms) the company partner reported that they expected the KTP to result in increased turnover in the three years following the end of the project. Between them they expect an annual increase of £12.2m. With 75% of this accounted for by three firms (and one of these accounting for 50%), the impact on potential sales is highly concentrated. The firms reporting no impact on sales included some saying the impact on the firm had been important but that it was not possible to directly attribute changes in sales to the KTP. For a good example of this see the BT case study described in section 4.1. Two of the firms reporting no impact on sales said they had already achieved a significant increase in profits because of the KTP.

By the time of the completion of the KTP 70% (i.e. 16) of companies reported that they had already achieved an increase in profits because of the KTP. One more company expected an increase over the coming three years. The total increase in actual annual profits of all the companies was reported to be £1.1m. As with sales this was concentrated with two firms accounting for £700k. Five of the firms reporting no impact on profits believe the KTP had been highly significant to the firm’s current performance.

However, these positive effects on company financial performance may not translate into increased sales and profits for the company. Other factors can offset the positive effects of the KTP. For example, several companies, especially in finance and construction, noted that their financial performance had been significantly affected by the global financial crisis of 2008. Similarly a number that relied on public sector markets (e.g. in health and social policy) were experiencing problems relating to austerity measures.

To implement the KTP funding, companies generally have to invest in recruiting new staff and sometimes physical assets or further R&D. Eighteen of the KTP recipients said they had or expected to employ new staff (over and
above the Associate) to implement the KTP. In total they expected to employ an additional 46 people. In addition 9 of the businesses (40%) reported that they have invested or expect to invest around £1.4m in plant, machinery or buildings to implement the KTP. While the expected investment is generally fairly small, one company said it expected to invest £1.1m. Rather more companies (15) reported that they have spent or expect to spend additional resources on R&D (widely defined) to implement the KTP. Between them this additional spend amounts to £480k with two companies putting their investment at £100k each.

None of the KTPs were explicitly designed to focus on overseas market entry or exporting in general. Almost 80% of the firms said they expected no increase in exports as a consequence of the KTP. However, between them three firms anticipated an impact on their exports of around £3.5m annually. Two of these are well established exporters.

Finally, the companies reported how significant the KTP had been for its current performance and its significance for future performance (high, medium or low). This measure has the advantage of capturing the company’s view regardless of whether or not a specific indicator (such as sales, profits, productivity etc) is impacted. As such it is an indicator of the overall role and impact of the KTP. The results are summarised as follows:

<table>
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<tr>
<th></th>
<th>High</th>
<th>Medium</th>
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<tr>
<td>Significance for Current Performance</td>
<td>9</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Significance for Future Performance</td>
<td>20</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Analysis of KTP Final Reports

Two points stand out. First the overwhelming majority of companies believe the KTP is significant for the company’s future performance. Furthermore, the two companies rating significance as medium believed the KTP will increase annual sales by £500k and £200k. Second, they believe its significance will increase over time. Nevertheless, even by the end of the KTP one quarter of companies believe the KTP was already highly significant for company performance. Even some of those scoring its significance for performance at the termination of the KTP as low say they had already experienced substantial impacts. For example, two companies which rated its current significance as low said that between them the KTPs had already resulted in additional profits of £350k.

Note, this is to implement the KTP directly. It is not an estimate of the total impact on company employment. For example, the company predicting a £6m increase in sales reported that it would employ 2 people to implement the KTP. However, it would almost certainly require additional staff to increase output by £6m.
4. The case studies

This section summarises four of the five company case studies undertaken as a key part of our research. While we draw on the final reports submitted on completion of the KTP, the case study interviews provided a rich source of data and consequently form the basis of much of the analysis that follows.

4.1 BT

The company and KTP

The company is a large corporation with a substantial research programme and capability. The KTP was a research project (supported by a grant of c£46k) which collected and analysed original data using socio-linguistics and associated research techniques to better understand how individuals communicate across different media modes and, more specifically, how often and why they switch between modes. The company had no expertise or capacity in socio-linguistics. It saw the KTP as a ‘pilot’ to test what socio-linguistics had to offer. It was one of the few KTPs with a strong and explicit social science research emphasis. Both the academic partner and Associate are social scientists with expertise in socio-linguistics.

Impacts and determinants

At the outset of the proposal development process the company saw the KTP contributing to its research knowledge and having a fairly immediate operational impact on product development. However, in developing the proposal a more strategic perspective emerged focusing more on the development of capabilities. In some ways, the research resembled the company’s in-house research programme where impact is understood in the long term. It is accepted that generally an individual piece of research does not have an immediate, attributable impact on the development of, for example, new products. A similar perspective now informs the company’s assessment of the KTP.

While unable to identify specific impacts on quantifiable metrics such as sales, profits or new products, the company is very satisfied with the outputs. The KTP has provided useful background contextual knowledge for its in-house research and for its product development process. As such the company believes it is having, and will continue to have, a substantial (but non-attributable) impact on the company’s operations. The implications of the KTP research have been built into the guidelines issued to its product designers. A simple illustration is that the company now recognises it needs to build ‘ease of switching’ between modes into product design.
The Company Chair of the Local Management Committee (LMC) stressed the importance (especially in an environment such as telecommunications which changes very rapidly) of differentiating between the detailed content of research and research techniques and methodology. With the emergence of social media (e.g. Facebook, Twitter) after commencement of the KTP, the specific content of the study (why and how often individuals switch between modes) had become dated. Social media had changed the behaviour of especially young people. Consequently, the study outputs were less relevant to product design. However, the techniques remain valid and relevant as do the generic research findings (explanation and understanding of individuals switching behaviour). This continues to provide important background knowledge. However, to be directly useful for the development of new products the study needs to be repeated taking account of the changed environment. Consequently, it was important for the company to develop an in-house research capacity to undertake similar studies in the future.

Embedding the KTP

The company took responsibility for developing in-house capacity in socio-linguistics; having worked closely with the Associate the KTP company supervisor took a postgraduate course to develop her own capacity. This was important because the Associate chose for personal reasons to leave the company on completion of the KTP. The company stressed the importance of the Associate being located on its premises and being an integral part of its research team. Having worked closely with the team, the Associate did some staff seminars to help embed the knowledge within BT. The KTP also provided the company with a unique data set which can be further analysed, replicated and updated. However, while the KTP’s findings are often discussed and commented on within the company, as yet the dataset has not been explicitly further utilised.

Company appreciation of, and further engagement with, the social sciences

BT was actively engaged with the social sciences, including work with the ESRC, prior to becoming involved with this KTP. They also employ a number of social scientists in various roles and can therefore be said to demonstrate high awareness of the potential business benefits of social science. To that extent the experience of undertaking this KTP cannot be said to have fundamentally changed the company’s attitude towards the social sciences, which was already positive. However the project did help convince the company of the potential business benefits of socio-linguistics. While no further formal research has been undertaken specifically with the academic partner, BT has maintained a positive relationship with Professor Frohlich, including support for funding applications to undertake follow-on work using

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11 For each KTP project, this consists of the KTP consultant/advisor, the company supervisor, university staff involved in the project, KTP Associates and is chaired by a senior member of the company. It meets at four monthly intervals to ensure project objectives are met and to manage the budget.
data generated by this KTP. The company has also continued to support a range of other social science research projects.

It also seems probable the company’s attitude to KTPs has been influenced. BT had previously been involved with a number of research projects linked with EU and UK government programmes, but was originally unclear about the appropriateness of the KTP scheme to the company’s specific project idea. However, these initial concerns seem to have been allayed and the company believes it got what it wanted on time and in budget. A key advantage of the KTP was that the research was undertaken on its premises with the Associate as part of its research team; also the structured project management approach and regular programme reviews that are part of the KTP process made it easier for BT to be confident that things were on track and being delivered.

4.2 Timber Play

The company and KTP

Timber Play is a small company importing and installing play equipment for children’s outdoor play spaces. At the outset of the two year KTP in 2006, Timber Play had 12 employees, a turnover of £1.1m and profits of just £9k. The aims of the project were to introduce and embed landscape design skills in the company and improve its visual presentation of schemes to enable it to provide a complete landscape design capacity of external play space for clients. This was intended to improve its competitive position in the market increasing sales and profitability. The social science input revolved around the understanding of children’s play needs and how the design of external play space impacts children.

It was a joint project between the Arts and Humanities Research Council (the main funder) and the ESRC. The grant of £78k supported one Associate (who had a Landscape Architecture Diploma and four years’ work experience as a landscape designer). The Academic Partner described herself as a non-traditional academic with twelve years’ experience in professional practice, a degree in Agriculture and Environmental Science and an ESRC supported postgraduate Landscape Design qualification. Her research interests relate to social inclusion and the use (and barriers to use) of open space and the strategic and policy issues of open space, both closely allied to social science disciplines.

Impacts and determinants

Despite having to overcome significant management, inter-personal and personal difficulties, the company is very happy with the project’s outcomes; it has had a substantial and on-going impact on it both operationally and
strategically with increased sales and profitability. During the KTP, sales began growing rapidly and by 2010 had reached £7m. However the market was also expanding due to several government and national lottery funding programmes designed to increase and improve the quality of children’s external play spaces; some sales growth would have occurred anyway. These programmes ended around 2011. In 2012 sales declined to £3m but are once again growing (and are now at £4m). Current employment is 25. The company is in the process of recruiting a further 5 staff and is increasingly outsourcing landscape design work.

The difficulty of apportioning a proportion of growth to the KTP was stressed. Nevertheless, the CEO believes it was responsible for the increase in the company’s market share. On this basis he suggested the impact on current sales to be around £3m but emphasised the broader impact on the competitiveness of the business and said that the change in its market position had been ‘massive and transformational’. With the ability to include a full landscape design service into its product offering, the quality of its products have improved (at the time of the KTP few of its competitors had such a capacity). It is now able to bid for larger contracts; it receives more invitations to tender because its standing and credibility in the industry has been enhanced. It is now seen as a leading innovative company in the industry. Indeed, competitors have extensively copied what Timber Play has done such as employing landscape designers, its business systems and even talking to the academic partner about the possibility of doing similar KTPs with them. This is making it more difficult for Timber Play to retain its competitive advantage.

The company has diversified into several but related play space market areas. An example, at least in part driven by a desire to retain the involvement in the company of the Associate, is the creation of a new subsidiary (Play Garden) to develop and exploit the market in smaller scale play areas for younger children. After a slow start, it is now establishing itself with current sales of £500k per year. The former Associate is responsible for its product design and design processes as well as continuing to work on Timber Play’s more challenging projects.

A difficulty the company is still dealing with is product implementation. The workforce, which used simply to install pieces of equipment requiring joinery skills, now requires landscaping skills. These are gradually being introduced by retraining and recruitment of new staff. The company stressed that assistance is not available to assist with this difficult process. In the meantime the process of changing workforce skills has limited the profitability of increased sales.

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12 This is an illustration of how industries develop; spillover effects occur and KTPs can have wider more indirect impacts on business.
With substantial financial benefits for the company, from its perspective the KTP has been very successful. The critical factors accounting for this success were:

- The commitment to, and support for, the project from the CEO. He initiated the project and feels the company’s future is dependent on it
- The CEO’s vision in spotting a market gap
- The extent to which company benefits have been prioritised over academic outputs
- The Associate’s professional skills as a landscape designer with considerable practical/professional experience. The CEO described her as ‘a first rate landscape designer.... (and)... an asset to the company’
- The KTP Advisor who provided critical support and advice to the Associate
- An effective working relationship between the company CEO and the academic partner. This was aided by their proximity (which helped the management of problems which arose during the project)
- The role of Academic Partner in managing/overcoming the difficult interpersonal relationships which arose during the course of the KTP project between the Associate and the industrial supervisor
- Importantly knowledge and skills were successfully embedded into the company.

Notwithstanding the very substantial business impacts, this KTP did not receive a high score in the assessment process.

**Embedding the KTP**

Embedding landscape design into the company has involved fundamental change in its management systems and culture (i.e. how it does business). The KTP was responsible for this change. At a ‘basic’ level, the Associate introduced new computer systems and visual presentation skills. More fundamentally the Associate developed and implemented new business management systems and design manuals. She produced new guidelines for the sales force which were necessary to implement the new business/design model. These are still used today five years after completion of the KTP. Additional design staff (graduates from the academic partner’s course) were recruited and trained by the Associate soon after completion of the KTP. The approach introduced during the KTP is now an integral part of company operations.

Knowledge and skills have been successfully embedded in the company in part because of the nature of the KTP. This involved not simply researching and giving advice on what needed to be done and how to do it (i.e. traditional knowledge transfer) but actually doing it. In addition to designing the new business systems, the Associate was heavily involved in doing the landscape design for the company’s commercial projects. As the system developed it
was implemented through the Associate’s involvement in day-to-day operations essentially becoming the company’s design capacity.

*Company appreciation of, and further engagement with, the social sciences*

Much of the embedded knowledge and know-how has little to do with the social sciences and was not transferred from academia. Rather much of it came from the Associate’s previous employment experience. Nevertheless some social science knowledge was exchanged and embedded within the company. This was achieved via regular, often informal, contact and discussion between the company CEO and academic partner. This knowledge has had an important impact on his approach to marketing. He now talks to potential clients about the benefits to individual children and the wider social benefits of children’s play space and how his products generate these benefits.

As a college educated management accountant, the CEO had no previous formal knowledge of the social sciences. However, while running the company he developed an interest in the social aspects of what it (and industry in general) does. From his previous employment he was aware of KTPs through a less than successful one. Nevertheless, he believes academia has much to offer business but, having proactively sought out contacts, his experience is that most academics (especially in the social sciences) are reluctant to share their knowledge. The KTP has not fundamentally changed his, or the company’s, views but it has reinforced them. The academic partner was taken on by the company as an advisor following completion of the KTP (an arrangement which came to an end with the downturn in the market). However, regular informal meetings continue to this day and the company annually takes year out students from the academic’s course. The CEO reports he has now more knowledge (and confidence in his expertise) about the social issues involved in children’s play and the sociological impact of the company’s products. The company is now doing a second, more theoretical, KTP with a different local university about developing a framework/methodology for evaluating children’s play areas. Compared to the initial KTP, this has much stronger social science content.

### 4.3 Moneyline

*The company and KTP*

This is a not-for-profit social enterprise providing access to affordable credit, basic bank accounts and financial advice to those excluded from ‘mainstream’ financial services. It had operated locally for over a decade. Over this period it had collected a great deal of demographic, socio-economic and financial data on its customers and information about factors associated with loan performance which was inputted into its systems manually. It had been thinking about expanding its geographic coverage by opening new
branches. The KTP was to assist this expansion by developing a consistent and efficient data collection and analytic system (which could be scaled up across the branches) and a predictive model for risk assessment of loans. The main purpose was to reduce exposure to bad debt and to assist staff in new branches (often with less financial expertise) with loan decisions.

The ESRC part funded this KTP which had academic partners from Computing (the lead) and Sociology.

**Impacts and determinants**

The original proposal was to develop, test and install the system in one new location with just a handful of customers as a ‘pilot’ exercise. However, by the end of the KTP the new system had been successfully rolled out across the company’s entire network and the number of branches had increased from 4 to 14. (It has subsequently expanded to 20). The knowledge exchange with the company was ‘multi-dimensional’. Over the 4 year period of the KTP annual turnover increased from £0.5m to £2m and employment from 9 to 40.

The KTP established a consistent data collection framework across the branches, developed an in-house capacity to analyse the data and successfully implemented a predictive model. The model provides information for staff making loan decisions (extent of risk etc) which has significantly reduced rates of bad debt and arrears with cost savings for the business. For example, it is claimed loan write-offs have been reduced from 14.3% in 2009 to 8.8% in 2013. The company CEO says of the impact of the KTP “we have significantly reduced the risk in taking on new business in new locations as a result of having this risk database to support new staff in new locations”. This has been achieved despite opening new branches where previous experience suggests that normally this increases bad debt losses. The model has assisted cost effective expansion in other ways. It enables decisions to be made effectively with fewer highly trained staff. This improves productivity, reduces costs and made expansion financially feasible.

The KTP also collected a great amount of relevant data on customers, their characteristics and their loans. The Associate trained a number of staff to enable the data to be analysed in-house. This has been particularly helpful in enabling the company to demonstrate its social impact and is used when reporting to external funders. It has enabled expansion in other ways. The system makes its processes more robust, makes it more credible, enhances its reputation and gives it more confidence in expanding. Using evidence from the system it has successfully attracted additional funding from external sources. Other banks have made offers to purchase the system.

From the company’s perspective the project was very successful. This success was achieved because:
• The Chief Financial Officer (CFO), who subsequently became the CEO, was highly committed to, and supportive, of the project and worked closely with the Associate.

• The system was actually implemented across the company’s branch network (rather than simply being developed and tested). The academic partner feels this was beyond the proposal and involved providing work free of charge.

• The company got the Associate to do some staff training in the use of the system. Again this activity was not part of the KTP proposal.

• Throughout the project the Associate engaged with staff and by carefully describing the system was able to overcome initial staff resistance based on a fear that loan decisions would be simply made by the computer. This was assisted by both actually implementing the system and the support for the project of the CFO.

• The nature and motives of the Associate who was keen to apply her academic knowledge in the real world.

The company supervisor (at the time its Chief Finance Officer subsequently to become its CEO) said a critical success factor was embedding the knowledge in the organisation during the period of the KTP.

**Embedding the KTP**

The practical outputs of the KTP (i.e. the development and implementation of the computer system) was delivered by the Associate (with a PhD in computer science) and lead academic (a computer scientist) specifically using their knowledge of data mining and appropriate (and available) software. To a large extent this knowledge was embodied in the systems that were rolled out across the company’s network. The staff training by the Associate ensured the company was able to use the system.

However, the Associate chose to go back to academia on completion of a second short KTP (designed to integrate the system more extensively into the company’s existing systems). The CEO noted the company lost important skills (based on the Associate’s PhD in computing) which meant it was difficult to further develop the system; hence the importance of implementing the system (rather than simply developing and testing it) during the duration of the KTP while the Associate was still with the company.\(^{13}\)

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\(^{13}\) Note that it was not the aim of this KTP to develop the computer system in-house or to effectively convert Moneyline into a system/software development company. A substantial amount of social science knowledge and the ability to operate the system were embedded prior to the completion of the KTP and it was rated by the KTP advisor as a successful project.
Company appreciation of, and further engagement with, the social sciences

The main contribution (as recognised by all the partners) of the social sciences was upfront providing background and contextual knowledge of finance, the market and social/financial exclusion and more specifically helping the computer scientists understand the sociological reasons why individuals do not access finance and how they can access finance. This shaped the system developed by the lead Academic Partner and Associate (computer scientists). It specifically identified the data to be collected and how it should be analysed. The Sociologist also played a critical role in bringing the KTP proposal together.

The company supervisor had no previous knowledge of the social sciences; but the company itself had had long term contacts with one of the academic partners (a sociologist). These contacts continue; he has been invited onto the company Board. The transfer of social science knowledge continues both via this arrangement and informal contacts. The company CEO commented the KTP has ‘changed our views dramatically’ on the usefulness of social science research and what research and developments are out there that can help. The company would now be interested in collaborating further with academia and social sciences (possibly via further KTPs). Furthermore, the KTP had been ‘the catalyst for Moneyline becoming less insular’: the company now recognises the value of collaborating with other organisations (not just academia) which they now do.

4.4 Integrated Environmental Solutions (IGS)

The company and KTP

With its HQ in Glasgow and staff in the U.S., Europe, Asia and Australia, this software business is an international company employing 140. It has several tools to measure and help reduce the energy consumption and carbon emissions of buildings to make them more sustainable, more comfortable and more cost effective to run. It sells software and operates a consultancy business which supports its software and undertakes bespoke projects. Its defining quality is ‘its ability to quantify, optimise and verify low energy building solutions’. It was formed some 20 years ago as a university spin out. With a highly educated workforce and a company culture it wished to verify and maintain as it expanded, in 2007 it realised it needed an improved HR function. As noted by a Director ‘We wanted to put in place an HR functionality that could preserve and foster the company culture as we grew’. The company could see substantial growth potential and felt that employee engagement of the highly qualified staff was essential to achieve the growth potential.
Having participated in KTPs previously, the company was aware of them and their potential benefits and began to explore whether the programme could be applied to develop their HR function with their KTP advisor and academic contacts. These discussions helped scope a KTP project (supported by an ESRC grant of £87k) with two HR specialists from a Business School (the Academic Partners). The basic theme was the identification and development of good HR practices that a knowledge based business could use. It was hoped such practices would help retain and attract highly qualified staff and make the best use of their expertise while retaining the company’s culture. From the outset the company wished ‘to build someone (i.e. the Associate) into the HR role’. It was intended that the relevant knowledge would be embedded and retained in-house. The Associate (who had a Psychology degree, postgraduate diploma in HR and several years’ work experience in HR) was employed by the firm on completion of the KTP.

**Impacts and determinants**

Reported impacts on quantifiable metrics such as sales, productivity and profits on completion of the KTP were not large. However, the KTP was implemented during a major recession which had a dramatic effect on the construction industry. It is also almost impossible to identify the impact of changes in HR policies on the bottom line. Nevertheless the company is very happy with the KTP outputs and believes the HR processes and practices implemented helped the company successfully navigate the recession and retain a high employee engagement. For example, it expects the KTP will increase profits over the three years subsequent to its completion to £675k. The two Academic Partners provided ‘cutting edge thinking’ and the Associate converted this into a number of business practices the company could repeat on a regular basis. Examples directly attributed to the KTP include:

- An improved and clearer definition of the company’s culture. This has been effectively integrated into recruitment and induction of new staff and staff appraisal.

- Employee Engagement Survey. This was first done in 2008 during the KTP and has been repeated every year since. This is seen as a key element in HR policy and it identifies what they need to do. For example, because of its findings, the company recently introduced a substantial staff training programme; created a company intranet to assist internal communications and initiated staff working groups to examine issues such as ideas generation, internal communications and knowledge sharing.

- The design and implementation of a ‘job groupings framework’ or grading framework across the company establishing a grading structure that provides career progression for staff.
- A quarterly HR report on issues such as staff turnover and absence data, skills and qualifications in relation to emerging needs, productivity per head, staff costs by region and how these relate to revenue etc.

With reference to the latter KTP output a director commented

‘the senior management team get a lot of benefit from that and being able to see at a glance what we spend and what are we getting back. It really adds to the strategic thinking at management level and it is not something we would have been close to be able to achieve prior to this project, I mean it would have just been a finger in the air... It helps us make really important strategic decisions in various regions of the world.’

**Embedding the KTP**

Several initiatives started as part of the KTP (e.g. staff engagement survey, the HR report) have been continued and become part of the company’s operations. Essentially it exchanged knowledge by doing things, not just by talking or advising about things. During the KTP the Associate worked closely with the company supervisor (a Director) which gave useful access within the company via a monthly meeting with the senior management team; had a regular slot at the company annual conference; regularly wrote a piece for the its newsletter to update staff on the project’s progress and implications and generally worked hard to ensure its visibility within the organisation. On completion of the KTP, the Associate was employed by the company and remains with it. The Associate was offered employment because, as outlined by the Director, the Associate had completed the KTP very well, fitted into the company and over the two years of the KTP built up substantial understanding and knowledge of the company.

**Company appreciation of, and further engagement with, the social sciences**

Little evidence emerged that the business had changed its attitudes towards or perspectives on the social sciences, or academia in general. Given this was an academic spin out which already had well established links with academia and had been keen to incorporate leading edge academic thinking into its HR function, this is not surprising. Nevertheless, contacts have been maintained with the KTP academic partners and the company has hosted two student placements for Masters students in Human Resource Management from the KTP partner’s institution.
4.5 Overview

The case studies illustrate some important dimensions of knowledge exchange via ESRC funded KTPs. Few involve only (or mainly) knowledge exchange in which the key issue is to transfer academic research results (often presented via some form of research report). Only one of the case studies (BT) involved a substantial applied ‘academic’ research programme. This sought to share knowledge of socio-linguistics. However, it was also about building knowhow of relevant techniques used in socio-linguistics so that the firm could replicate the study or undertake similar studies should it choose to do so. This was important because the specific findings of the research were quickly dated (by the emergence of social media). Nevertheless, the research continues to add to the company’s stock of contextual or background knowledge and understanding of how individuals behave. However, it no longer has any direct use in developing new products.

Indeed, all of our case studies involved the development of knowhow (not just knowledge transferred). In some cases this was achieved by the Associate training relevant staff and/or actually doing the job (rather than simply advising on what needs to be done or designing the job) during the KTP and/or subsequent to completion of the KTP becoming an employee of the firm. The training required to translate the knowledge into practice could involve training of staff that would not normally be described as knowledge workers. For example, this included training of staff in how to apply or operate a system (either a technical or business system) developed during the KTP. Much of the knowledge exchanged was in the form of embodied knowledge. It could be embodied in a technical system such as that developed for Moneyline or in business practices and procedures as introduced in Timber Play and Integrated Environmental Solutions. Finally, some of the knowledge shared has little social science content and has more to do with professional practice.
5. Range and nature of KTP impacts

The range and nature of impacts vary greatly between KTPs depending upon, inter alia, the aims and objectives of the project. While the impacts identified were many and varied, and often specific to particular projects or companies, it is possible to identify four broad types of impact, in addition to the quantifiable impacts discussed above:

- Enhanced business or management policy or practice
- Reduced cost of implementing projects
- Reduced timescale of project implementation
- Introducing social science expertise to ‘technical’ projects

5.1 Business policy and management impacts

The Integrated Environmental Solutions (IES) case illustrates clearly how social science expertise introduced through a KTP project assisted the company to improve its management policies and processes by taking on board the recommendations of academic experts in human resources and associated fields. For example, Moneyline collaborated with social scientists to develop up-to-date analysis of lending decisions for application in the context of a not-for-profit organisation.

‘Non case study’ organisations also reported impacts on business policy and management. One highlighted the role of the KTP project in improving internal communication; another said that their KTP project had ‘spurred on’ the organisation to think more seriously about succession planning.

5.2 Costs of implementation

In several of the case studies, the Associate worked on the actual implementation of the knowledge and knowhow being transferred. For example, in the case of Moneyline the system was implemented (rather than simply developed and piloted) across its entire branch network; in Timber Play the Associate did a substantial amount of work generating new commercial projects. Nevertheless, to convert the KTP outputs into increased sales or profits, most of the companies incurred, or expect to incur, additional costs. The population of social science KTP recipients employed, in addition to the Associate, 44 staff, invested (or expect to invest) £1.4m in plant and machinery and £480k in further R&D to implement the results of the KTP.

One of the non case study respondents was very positive about the role of the Associate in providing additional resources and commitment to take the project forward:
The impact of the Associate was brilliant; she has re-awoken the business, put new vigour into the company and has turned the company around through the attraction of new customers and a new approach to working with customers.

5.3 Timescale of impacts

In the majority of cases at least some of the financial impacts had materialised on completion of the KTP. Substantial financial impacts occurred specifically in cases when the knowledge and know how were introduced through the Associate working on company day-to-day operations (see the Moneyline and Timber Play case studies).

The case studies also illustrate that several KTP outputs were unlikely to have immediate effects on impact indicators such as sales, but were expected to affect the company’s financial performance in the longer term. In the case of Integrated Environmental Solutions an annual employee survey is now undertaken which has itself led to several HR initiatives (e.g. training programmes, improvements to internal communications), a job grouping framework has been created which provides a better and clearer route for staff career progression and regular HR reports covering issues such as costs, productivity, absence and revenues etc in each of the company’s locations are produced which inform company strategy.

All of the non case study organisations noted that impact on the business as a result of KTP projects often took some time to materialise, typically around one or two years. In one case, the purchase of a new piece of machinery had begun to impact on profits subsequent to the completion of the KTP.

5.4 Introducing social science expertise to ‘technical’ projects

The social science impact within KTP projects often comes about due to the combination of social science and technical expertise that enables technical developments to occur in ways that are informed by the analysis and understanding of human behaviour. The in-depth study of socio-linguistics in the context of the BT project is one such example of social science providing vital context to product and service development plans that are essentially technical.

Finally, Timber Play was ostensibly a technical project to develop play space and equipment for children, but there was an important social science input to the landscape design process, ensuring that the newly-developed equipment recognised the play patterns of children through the use of relevant sociological and psychological approaches.

Like the case study organisations, our non case study interviewees tended not to make distinctions between the contributions of different academic
disciplines; however engagement with KTPs had, in general, highlighted the benefits to businesses of external expertise and in particular the expertise available within Higher Education Institutions. One respondent said that the KTP had changed the culture of their institution in relations to research, to the extent that they now conduct their own internal staff survey where none existed previously.

5.5 Identifying and measuring impacts: final note

An important implication follows from both the range and nature of impacts. The process used to document impacts (see section 3) could lead to the underestimation of impacts, particularly given the variety of impacts reported in the case studies. For example, large scale quantitative studies focussing on a limited range of metrics (such as sales, productivity, profits, new products etc) may exclude many important impacts. On any one indicator only a relatively small proportion of firms can be expected to report an impact (because the main impacts are on, for example, contextual knowledge, company policies etc). Consequently impacts are underestimated.
6. Determinants of impact

Given the Project Final Reports provided little information on the determinants of impact, our analysis is based largely on the five case studies. All cases were different with at least one unique factor at play, however, several generic factors appear to result in (or are at least associated with) positive business impacts. The generic success factors identified can be summarised as follows:

- Up-front planning of the KTP with consensus on the aims etc and effective dialogue and communication throughout the project
- The company playing an active role in initiating the project
- Senior level company support and commitment to the project
- The quality, background and skills (including soft skills) of the Associate
- Successfully embedding the results of the KTP into the company post its completion
- Flexibility (as and when appropriate)
- The background and experience of the partners
- Geographic proximity between the academic partner and business

While differing combinations of these factors played a role as determinants of business impacts in the case studies, none is either a necessary or sufficient condition of success. For example, the case studies suggest that greater impact occurs when the project is initiated by the company rather than an academic. However, even in our small sample, this is not so in all cases. Similarly in most cases the academic partner had industrial work experience, but this was not always the case. Each of the generic determinants of business impact is now discussed.

6.1 Up-front planning and consensus

All of our case study KTPs entailed considerable time and effort in the preparation of their proposals. Generally the companies saw the application process as too time consuming with over-long and inappropriate form filling. However, while the process was seen as bureaucratic, our interviewees perceived that up-front planning and the process of building consensus and a shared vision for the project as contributing to its success. The benefits included clarifying objectives, building relationships and mutual understanding, setting clear targets and milestones, development of shared language and the quality and clarity of the final proposal.

14 The determinants of KTP success have been assessed in a study for the Council for Industry and Higher Education (P Ternouth et al (2012), Key Attributes for Successful Knowledge Transfer Partnership). However, success was defined as the final Assessor score awarded to the KTP. Our case studies illustrated that this score does not always equate with business impacts.
The initial discussions were generally facilitated and steered by the KTP Advisor with the aim being to strengthen the strategic focus (as opposed to shorter term operational issues) of proposals and to increase the emphasis given to embedding KTP outputs.

6.2 Company initiated projects

Whilst the academic partner plays a central role in developing the proposal, companies are often responsible for initiating the initial contact and idea for the KTP. Company initiated projects are perhaps likely to generate greater business impacts. In part this is because such projects address issues the company sees as critical to its growth or survival. To illustrate from the case studies:

- An IES director commented ‘We knew that we needed HR functionality and we needed to up our game considerably, we were not good enough by any stretch of the imagination.’ It then began searching for potential KTP partners.
- Having recognised the growth issues facing it, Moneyline approached a local academic, whom they had known for many years, for help. He in turn approached a computer scientist. The result was a joint computing-sociology project.
- The Timber Play CEO knew that competitive advantage would be increased with the introduction of landscape design capacity. Consequently, he proactively sought out a relevant academic.
- BT is the only example studied in which the academic initiated the project by approaching the company. In this case the academic had senior level experience of working in a large company research lab and knew BT were interested in his research topic.

In the cases reviewed company initiation of projects appears to generate company commitment to the project and, assuming the project is successful, greater efforts to embed the skills and knowledge into company operations.

6.3 Senior level company commitment

In all the case studies success in generating business impacts was assisted by commitment and active involvement from a senior company member of staff.

All of our non-company interviewees (i.e. academic partners, Associates, KTP Advisors) recognised that the projects were driven by the company (rather than the academic partner). This is reflected in comments such as ‘I couldn’t imagine the project working without someone like (the company supervisor) pushing it forward’ and ‘it wouldn’t have happened without (the company CEO) there, if she hadn’t been so engaged’. In another case these interviewees saw as an important factor in generating business impact the
visionary nature of the CEO in identifying a market gap well ahead of the competition and his determination to stick with his vision. This support and active involvement from senior company people ensured that the needs of the business were at the forefront of thinking. It opened doors for the Associate and enabled them to meet the right people; it helped get buy-in from staff at all levels, where necessary overcome internal opposition and pushed the KTP’s agenda at Board level.

While recognising that ‘There must be clear benefits to the knowledge base partner, including target outcomes’\(^{15}\), substantial business impacts were achieved when such impacts were prioritised (relative to academic interests or the personal development of the Associate). On occasion this meant both academic interests and the Associate’s personal development interests were downplayed somewhat. In most case studies there is little evidence of substantial academic outputs (e.g. in terms of publications). One academic noted that as a non-traditional academic, at the time her main interest was in changing the real world which could be achieved by helping the company. The CEO of another company, commenting on how the academics had been helpful in achieving impacts noted ‘They could bring a lot to the table in terms of academic thinking but they completely got the need for us to make it work in a commercial environment and not overkill the academic side of it.’

6.4 Quality and background of the Associate

More or less by definition this is critical. The companies commented on issues such as their willingness/ability to fit into the company, to get on with colleagues; to communicate effectively and to deal with senior level people. To paraphrase one CEO who felt that although the Associate’s knowledge was obviously a contributing factor to success, one of the key success factors was that the Associate had very good people skills, that she was able to engage with staff at all levels of the company which made it easier to get buy-in from staff and that the Associate had ‘entrenched herself in the business’. The ability to train staff was also noted by several of the companies. The Associates played an important role in embedding the knowledge provided by the academic team in the company.

Our case studies clearly illustrate the contribution that a good Associate can make to the success of a KTP. In contrast two of our non-case study company interviewees said the KTP did not achieve its aims or generate much impact because the associate needed a lot more support than anticipated or the Associate role had several changes of personnel.

In all of our company interviews, the academic knowledge and skills of the Associate were less frequently mentioned. These appear to be taken somewhat for granted. However, all the associates in our case studies were

\(^{15}\) Research Council’s Overarching Statement for support of Knowledge Transfer Partnership Projects; effective from April 2013. www.ktponline.org.uk
highly educated and skilled. All had postgraduate qualifications in a directly relevant subject (e.g. machine learning/data mining, human resource management, landscape design) with half having completed a PhD prior to the KTP. In addition most had previous work experience in a directly relevant position (such as landscape designer, HR management) prior to applying for the KTP post. This experience could be fairly substantial (e.g. in one case at least four years). In this case there was extensive knowledge exchange from the previous employer (rather than academia).

The Associates also seemed to have broadly similar motives for applying for the post. While all had academic interests, they wished to have the opportunity to apply their knowledge in the real world and to develop skills they felt were unlikely to be developed in academia (such as project management). Some saw the KTP as an important career opportunity from which they would gain greater experience and responsibility than in a normal job; others saw it as an opportunity for continuing personal development and one described it as the ideal post offering everything that could not be generally obtained in commercial enterprise and especially a small business.

As noted above, one of the non case study businesses was especially positive about their Associate and her contribution to the business. Another made similar positive comments and regretted that they were unable to retain the services of the Associate due to their desire to enter academia. Another ‘lost’ their Associate to a higher-paying competitor.

6.5 Successful embedding

Proposals for how the knowledge base is to be embedded in the company must form part of a KTP application. Indeed, at least one of our case studies had its initial application referred back because it did not deal adequately with this question. However, the extent to which it happens in practice is thought to vary between KTPs;¹⁶ nor does it happen automatically. An obvious method of embedding is to employ the Associate on completion of the KTP. Perhaps not surprisingly given our case studies were all successful, all either employed or would have liked to have employed the Associate. Those who stayed with the company almost by definition contributed to embedding the KTP knowledge and know how. However, some chose to return to academia or left for personal reasons.

The process was begun during the lifetime of the KTP in all our case studies with the companies and Associates being proactive to embed the outputs of the project. Associates were involved in staff briefings and presentations on their project and its implications, production of company ‘how to do it’ manuals and staff training. The ability of the Associate to get on with staff

¹⁶ While we have no direct evidence, it is logical to suggest that if the project is not satisfactory from the company’s perspective and is unlikely to generate benefits to it, there would be little point in seeking to embed the knowledge (except to recognise not to waste further time and effort in the future).
and influence them was important to overcome resistance to (what could be seen) as threatening change. All the KTP proposals included plans for embedding the knowledge into the company. However, generally the formal training of company staff was over and above the KTP agreed work programme. While the knowledge came from the academic team (including the Associate), the company’s commitment was largely responsible for whether and how the knowledge was embedded.

6.6 Flexibility (as and where appropriate)

A willingness and ability to be flexible in response to changing company needs and market conditions helped generate business impacts in one of our case studies. In the case of Moneyline, the original idea of testing a system evolved into actually implementing the system. Two of our non-case study company interviews also noted the need to change the original KTP proposal in response to changing market conditions and the state of the company’s finances. However, in other cases the willingness to stick with the original proposal despite opposition generated substantial business impacts.

6.7 Background and experience of academic partners

The background and experience of the partners is important. Many academic partners had a background of working in, or with, business. For example, in the case of Timber Play the academic partner had previously worked in business, described herself as a non-traditional academic and, at the time, was more interested in impacting the ‘real world’ than playing the academic game. In the case of BT the academic partner had previously worked in a large company research laboratory (very relevant experience given this was a reasonably traditional large company research project). The academic partners involved in the IES KTP also had previous private sector work experience and worked in an academic department with an obvious focus on business issues. In the one case where such experience was absent, two of the academics had extensive experience of working with business (including the KTP partner company).

For one non-case study respondent, a change of academic partners at the start of the KTP project was perceived to have a negative impact on its progress and success. The replacement academic was felt to be less knowledgeable and enthusiastic than the original partner. This negative experience serves to emphasise the importance of positive relations between Knowledge Base and Business partners.

6.8 Proximity

All but one of our successful case studies consisted of a local academic-industry partnership. This not only facilitates the project development
process, but enables more regular contact and academic involvement throughout the project. Proximity is particularly important for KTPs which encounter difficulties. In the case of Timber Play, with the academic based very close by, the company was easily visited. This contributed to the KTP being able to overcome relationship difficulties which arose throughout its duration and enable on-going academic-business links post completion. In the case of Moneyline one of the academic partners has joined its Board and continues to provide knowledge and advice informally. The non-local partnership examined involved a large company and a traditional applied research project. In this case the company emphasised the benefits of the research being undertaken on its premises (rather than in the HEI).

To establish the true importance of proximity, the impact of some non-local partnerships needs to be examined. Only two of the 25 ESRC-funded KTP projects involved non-local partnership limiting the extent to which this question can be examined. However in one case of a relatively unsuccessful project, the Partnership report suggested that the distance between the partners limited the number of meetings that could be held and thereby contributed to the lack of success. On the other hand, an academic from one of our case study projects expressed the view that the relatively local nature of most KTPs may limit the potential for academics and businesses with similar interests and needs to work together.

6.9 The process and dialogue

From the case studies it is clear, as the ESRC is well aware, there is no suggestion that a specific factor will guarantee a specific outcome. Instead we have aimed to consider ‘principles’ that inform impact generating factors. It is clear that linear (or Mode 1) models of knowledge exchange are inadequate to describe or analyse the interaction between social science ideas or actors and business practices. Our observations about how KTPs generate impact are consistent with studies which emphasise that impacts are achieved through dialogue between academics and business partners, and which embrace and recognise that the business actors play roles which go beyond simply being the passive beneficiaries of social science research (AACSB 2008; Beech et al 2010; Davies et al 2000; Johnson et al 2013; Johnson and Williams 2011; Orr and Bennett 2012 Pettigrew, 2011). In our case study organisations, the practitioners were involved from the outset in identifying the business need and priorities to be addressed, the possibilities and potential of a KTP for addressing these, for formulating the terms of engagement and in actively shaping the course of the work subsequently undertaken. Within this process the need for academics to be able to understand and speak the language of businesses was a critical success factor. Our findings therefore support theories of academic-practitioner exchange which emphasise their relational nature and that impact is achieved through active dialogues. The contribution of KTPs is to provide one
mechanism and set of resources (funding, time, the work of an associate) through which such dialogue can be generated.

7. **Private sector appreciation of need for social sciences**

Based on evidence from the case studies, this section assesses how the KTPs affected business attitudes and perspectives on the social sciences and subsequent engagement with them. In the cases where the company was already aware of the social sciences (e.g. academic spin outs or the company representative had worked in academia), there was little fundamental effect on attitudes towards the social sciences except to perhaps reinforce them.

However, in one or two case studies perspectives had been impacted substantially. One company CEO commented that it (the KTP) had ‘changed our views dramatically’ on the usefulness of social science research and on the benefits of collaborating with other organisations in general, rather than being insular as they were before. As a result of these collaborations the CEO felt the company had a better understanding of what future role they play in the market, and what research and developments are out there that can help them to further develop their work. In another case (Timber Play) the company CEO reported that the KTP had increased his social science knowledge and self-confidence in applying it to develop the business.

However, it became clear that the majority of our case study (and indeed non case study) companies had little or no awareness of the social sciences per se or the ESRC (or that it had at least partly funded their KTP). Indeed, companies do not think in terms of individual or specific disciplines. They are more interested in solving a ‘problem’. This often requires an interdisciplinary approach. In this context a relevant effect on the academic partners (who were involved in an interdisciplinary KTP) is worthy of emphasis. With no previous experience of such work, the experience demonstrated the importance of, and benefits from, the social science inputs. Consequently, this has strengthened both interest and activity in interdisciplinary work (in our specific case study between a computer scientist and a sociologist).
8. Conclusions and recommendations

This was a small-scale and exploratory study with a focus on obtaining in-depth qualitative information about a small number of relatively successful social science KTPs involving private sector business partners. The recommendations we set out below should be interpreted in the light of the nature and scope of our research and it is suggested that further research and consultation will be necessary in order to validate and where appropriate progress these recommendations. Most notably we suggest that more detailed comparisons between projects that are successful in terms of business impact and those that are not successful would yield valuable additional insight.

8.1 Conclusions

Our conclusions are drawn against the key objectives of the study set by the ESRC:

- **We assess the range and nature of social science impacts on the private sector as identified in KTP reports, and highlight examples of good practice**

The evidence generated by our study suggests that that social science can make an important contribution to the overall impact of KTP projects, most of which entail a combination of social science skills with expertise from other disciplines. The range of impacts attributed by the KTPs themselves include increased turnover, profits and employment, although the nature of the evidence does not allow us to draw a clear causal line which would mean that this can be attributed simply to input from social scientists. Importantly, the KTP final reports provide limited information about non-financial and/or non-quantitative impacts arising from the KTP, and medium to long term impacts are based on company projections which are difficult to verify. Case study work and interviews with 11 of the 25 projects provided further information about the nature of social science impacts and the determinants of those impacts. The range of impacts includes:

  - Enhanced business or management policy or practice
  - Reduced cost of implementing projects
  - Reduced timescale of project implementation
  - Introducing social science expertise to ‘technical’ projects

- **We explore the extent to which Knowledge Transfer Partnerships have facilitated further private sector engagement with social science**

In KTPs where the company was already aware of the social sciences (e.g. academic spin outs or the company representative had worked in academia), there was little fundamental effect on attitudes towards the social sciences except to perhaps reinforce them. However views on the specific subject
matter (e.g. socio-linguistics) of the KTP have been influenced. However in one or two case studies perspectives had been impacted substantially. One company CEO commented that it (the KTP) had ‘changed our views dramatically’ on the usefulness of social science research and on the benefits of collaborating with other organisations in general, rather than being insular as they were before.

- **We identify any further collaboration and impacts that have occurred since the completion of the KTP**

All the companies from our case studies have maintained contacts with an academic partner; in most some form of knowledge exchange continued and some had taken on intern or placement students from the KTP partner institution. Nevertheless, it is necessary to qualify this picture somewhat. Our research shows that companies do not think in terms of academic disciplines or constructs such as the “social sciences.” If anything, they are more interested in a pragmatic, interdisciplinary approach to solving a ‘problem’.

- **We identify and analyse the determinants of the impacts identified (i.e. why and how impact has been generated)**

While it was not possible to construct a deterministic model of the impact process on the basis of a small number of projects, analysis of the interviews and case studies suggests that the following factors are associated, in different combinations, with increased social science impact:

  - Up-front planning of the KTP with consensus on the aims etc and effective dialogue and communication throughout the project
  - The company playing an active role in initiating the project
  - Senior level company support and commitment to the project
  - The quality, background and skills (including soft skills) of the Associate
  - Successfully embedding the results of the KTP into the company post its completion
  - The background and experience of the partners
  - Geographic proximity between the academic partner and business

- **We develop an understanding of the private sector’s appreciation and need for social science**

Our research suggests that while there is no particular demand for “social science” expertise per se, business is interested in knowledge exchange and is interested in working with academic partners, where there is the right fit in terms of background and skills etc. As we say above, our research shows that companies do not think in terms of academic disciplines or constructs such as the “social sciences” but they are interested in a pragmatic, interdisciplinary approach to solving business problems.
• **We identify good practice and lessons for enhancing the contribution that social scientists can make to the private sector**

Our research highlights a number of examples of good practice:

- Getting the right associate who has the necessary technical skills and knowledge and who also has high-level people skills (previous business experience was not seen as necessary).
- Senior level buy in within company is important to get staff throughout the whole company to engage and give their commitment.
- Flexibility and willingness to adapt to meet the company’s changing needs and commercial imperatives.
- Early meetings to ensure the development of the proposal reflects all partners’ needs and there is a shared sense of what is useful and achievable.

• **Our research can inform the ESRC’s business engagement activities with a view to maximising future impacts**

Our research confirms that KTPs are popular with businesses and academics, suggesting that KTPs should continue to be a primary focus of ESRC’s activities to promote business engagement. Key lessons include the need, *inter alia*, for clarity of purpose, better awareness raising, more effective organisation and creating more opportunities for cross-disciplinary collaboration.

Our case studies also highlight the conclusion that one of the key features that attracts businesses to become involved with KTPs is that the research takes place on their own ‘turf’, with a high level of day-to-day input from business managers. One lesson for ESRC is to explore the potential for developing or amending other initiatives to enable this benefit to be realized by business participants in ESRC-supported projects.

Finally, we have identified that businesses tend not to recognise or be especially concerned about disciplinary labels such as ‘social science’. Businesses are interested in the potential benefits of knowledge exchange from whatever source it comes and care little about disciplinary boundaries. This suggests that ESRC should be less concerned about promoting the potential business impact of social science *per se*; rather the focus should be on how social science can help to enhance impact as part of a multi-disciplinary approach to addressing business issues.
8.2 Recommendations

The following recommendations emerge from our study. In presenting these recommendations, we recognise that the focus of our research was upon KTP projects that were initially funded as far back as 2006 and all were completed by 2012. Since these projects were undertaken a number of changes have been made in areas such as funding criteria, eligibility, project monitoring and reporting\(^\text{17}\), changes which are broadly supported by our evidence.

1. **Improve the clarity as to the kind of KTP applications the ESRC can and will fund.** This has been addressed somewhat by the most recent RCUK and ESRC guidance. In addition, however, we suggest greater use of hypothetical ‘case studies’ (in addition to existing ‘good practice’ cases\(^\text{18}\)) to illustrate the range and nature of applications the ESRC would be willing to fund through the programme. We recognise that the Regeneris report\(^\text{19}\) and the CIHE study\(^\text{20}\) highlights the relative attractiveness of the KTP programme to business and that ESRC is working to improve the KTP application process, which was widely regarded as fairly onerous, especially for small organisations\(^\text{21, 22}\). Nonetheless our findings suggest the need to explore the costs, feasibility and potential benefits of providing more support within ESRC to promote the potential benefits of KTPs to academics and businesses, and provide additional support through the application process.

2. **Raise awareness of the ESRC and the potential impact of social science expertise among business.** The KTP programme is engaged in a number of initiatives to raise awareness, and there is scope for ESRC to support this through increased communication with businesses and business organisations, and by building a presence at business events or conferences. The findings of this research, together with existing good practice material, could be used as part of this communication exercise.

3. **Explore the potential for expanding the number and range of academic-industrial collaborations with researchers based on business rather than academic premises.** The KTP case studies have illustrated the potential benefits of such collaboration and the ESRC should explore whether there is a demand for partnerships in addition to KTPs, supported by ESRC funding.

\(^{17}\) ‘Research Councils overarching statement for support of Knowledge Transfer Partnership projects’ http://www.esrc.ac.uk/_images/RCUK-Overarching-KTP-Statement_tcm8-25521.pdf


\(^{19}\) Regeneris Consulting (2010) Knowledge Transfer Partnerships Strategic Review, Report to the Technology Strategy Board


\(^{21}\) Note that KTP applications can now be completed online, which was not the case when our respondents submitted their applications

\(^{22}\) ‘Knowledge Transfer Partnerships: current funding situation’, paper for ESRC Sounding Board group, 2011
4. **Collate a range of more up-to-date successful or good practice social science KTP case studies, including those reviewed in this report.** Highlight these to businesses through the mechanisms suggested in recommendation 3 above, and in collaboration with the KT programme, to demonstrate what can be achieved through a social science KTP. This could build on the KTP Impact Awards which reflect successful projects completed to date. The latest award brochure, *KTP Best of the Best 2012*, is available on the KTP website and includes a number of *ESRC KTP award winners*. These could also be used to demonstrate the benefits of social science to academics in other areas of expertise.

5. **Encourage company partners from successful social science KTPs to present the benefits achieved from the KTP at business events or conferences, maximising the benefits of peer-to-peer promotion and recruitment.** The ESRC could encourage involvement by paying company partners or at least reimbursing expenses.

6. **Identify more opportunities for cross-disciplinary collaboration among academics, recognising where the KTP would benefit from the social sciences working in conjunction with another subject area.** While we understand this is not directly within the scope of the ESRC at present, we believe that this is something which ought to be raised at a strategic level in order to avoid a narrow, silo-based approach to Knowledge Exchange. These could be focused around the current strategic priority areas of economic performance, influencing behaviour and ‘a vibrant and fair society’, and priority sectors of retail, financial service and the green economy. We recommend the ESRC should play a role in ensuring that these opportunities are promoted effectively among academics, possibly in collaboration with the KTP Programme and other Research Councils. For example, we understand that – following an introduction by the ESRC - the KTP Programme is now working with the Association of Business Schools (ABS) to promote KTPs to their members. Our research suggests that this type of approach is likely to yield positive results.

7. **Identify and recruit more academics with a business background and/or a focus on business engagement or applied research to take part in KTPs.** From the other side, there may also be the potential to target potential businesses partners with an academic background (e.g. university spin-outs, former KTP Associates or PhD graduates). As with recommendation 6 above, this is not directly within the remit of the ESRC; however ESRC is well placed to play an important brokerage role, as was the case with the current joint activity between the KTP Programme and ABS.

8. **Provide opportunities for businesses and academics to interact.** While this was not a particular focus of this research, the broader literature on co-production supports the centrality of good relationships and networks to achieving high impact.\(^{23}\)

9. **Improve the standard monitoring and evaluation of KTPs to collect better information about the impact of social science:** We understand that ESRC recognises the limitations of the current appraisal and evaluation processes for KTPs, which our research suggests may inadvertently downplay the contribution of social sciences to the impact of KTP projects involving multi-disciplinary inputs. In conjunction with Innovate UK, we suggest that ESRC explores the potential to revise the monitoring process to enable non-financial and/or qualitative impacts to be highlighted, and for the contribution of different disciplines to be identified. We understand that the KTP Programme would be happy to work with the ESRC to review data capture in Final Reports as a part of a move towards a new system of monitoring and reporting.
Appendix I: Bibliography


Appendix II: Case study topic guide

This document is intended as a guide for interviewers undertaking visits to the KTP case study projects selected for further investigation. The precise format of the visits and the people to be interviewed will vary according to the characteristics of the project and its partners, and the availability of interviewees. Typically we will aim to interview:

1. At least one representative of the company partner, preferably the person who acted as lead supervisor on the KTP project (if still employed and/or contactable)
2. Any other relevant representatives of the company partner organisation
3. The KTP Associate (may be telephone/Skype interview if the Associate has moved on)
4. The lead academic supervisor
5. Other academic supervisors / participants (where appropriate)
6. The KTP Advisor attached to the project

The discussion should cover the following topics although interviewers may be flexible in the light of the specifics of the project and any information that emerges during the preparatory stage and/or other interviews. Note that the focus of the discussion should be on the processes through which business impacts were achieved and the wider benefits of the KTP, for example on attitudes to and levels of business engagement with social science.

N.B. remind interviewee that information will be treated as confidential but that we may come back to them for permission to use some information in the published report and/or case studies.

It may also be helpful to remind respondents that we are interested in a broad conception of ‘impact’ including direct financial benefit to the company (short and long term), changes in organisational operations or culture and changes in attitudes and behaviour towards engagement with social science.

NOTE: This topic guide should be used for all respondents, although not all questions will be appropriate for all respondents. Interviewers’ judgement should be used in deciding which questions to ask and/or pursue in detail.

1. Background details about the respondent and the organisation

   Confirm organisational details from KTP documents. Any significant changes?

   Respondent’s knowledge / experience / views of social science prior to getting involved in the KTP. For example does s/he have any social science qualifications?

   [Where relevant] Associate’s career/educational path before joining the KTP

2. Brief history of KTP collaboration

   How did the idea for the project come about? Prior involvement in KTP or collaboration with universities? E.g. was there a pre-existing arrangement between the business and the HEI?
What role did the Advisor play in matching the ‘problem’ with an appropriate institution/KTP?

Any key points about the project development and initiation process that may have had a bearing on its success?

[Where relevant] what drew the Associate to the KTP opportunity? What were they expecting to get out of it?

What were the expectations of the respondent (or the wider organisation) about the likely impact of the project?

3. What were the main impacts achieved for the company as a result of KTP project?

Build discussion around the Partnership Final Reports and other data. Explore what the respondent feels has been the value added of the KTP project over and above what would otherwise have happened. What were the main critical success factors?

Explore any impacts that have occurred subsequent to the completion of the KTP and the final report. How have these come about? What role did the KTP project play?

**NOTE: ask questions 4-7 of all respondents**

4. Explore the role of the academic supervisor(s), with a particular focus on their contribution to achieving impact for the partner company

Probe/prompt as necessary: frequency of contact, quality of communication, academic credibility of research etc.

5. Explore the role of company partner lead in achieving impact for the company

Prompt as appropriate

6. Explore the role of the KTP associate in achieving impact for the company

Prompt as appropriate

7. Explore the role of the KTP advisor in helping to achieve impact for the company

Prompt as appropriate

8. Explore whether and how the KTP project impacted on the company after it had finished

Prompt: did Associate stay on? Further work with the Knowledge Base partner (e.g. another KTP, PhD research, consultancy, commercial spin-off etc.)
Explore the outcomes of subsequent activities. To what extent did the KTP prompt further engagement with social science? What were the outcomes of this engagement?

9. ‘Second-order’ impacts e.g. through teaching or research outputs

Prompt: did the Knowledge Base partner use any research outputs in further research, teaching, consultancy etc? Any knock-on effects from new products, services, training etc that occurred after the end of the KTP?

What were the effects on the Associate’s career path? Did they move into the private sector (whether or not this was with the same company)?

10. To what extent and in what ways did the respondent’s experience with this KTP project help to change their views (or those of the wider organisation) about the potential usefulness of social science for their business?

To what extent did the KTP experience affect the nature and extent of actual business engagement with social science?

11. Good practice and lessons learnt

What would you say were the main factors that contributed towards the KTP achieving the impacts that we have discussed?

Any other lessons that emerged from the KTP experience (especially in relation to business impact and enhancing the contribution that social scientists can make to the private sector (i.e. not just through KTPs)?

12. Do you have any further suggestions / recommendations for future development of ESRC’s business engagement activities more generally?

Open question, but prompt if necessary e.g.
- greater business awareness of relevant programmes
- encouraging more social scientists to develop proposals
- supporting more joint proposals between scientists/technologists and social scientists
- financial support for projects (e.g. % support for KTP or similar)

Thank you very much for your time (remind again about confidentiality)
Appendix III: Document review template

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<thead>
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<th>Project number</th>
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<tbody>
<tr>
<td>2</td>
<td>Project name</td>
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<tr>
<td>3</td>
<td>Business partner</td>
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<tr>
<td>4</td>
<td>Academic partner</td>
</tr>
<tr>
<td>5</td>
<td>Brief description of project</td>
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<tr>
<td>6</td>
<td>Evidence of business impact</td>
</tr>
<tr>
<td>7</td>
<td>Factors that may have influenced impact (e.g. involvement of academic partner, role of associate, engagement of business partner)</td>
</tr>
<tr>
<td>8</td>
<td>Evidence of impact on attitude of business towards value of social science?</td>
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<tr>
<td>9</td>
<td>Potential for future impact</td>
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<tr>
<td>10</td>
<td>Any other information relevant to assessment of business impact</td>
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<tr>
<td>11</td>
<td>Is the project suitable for an in-depth case study?</td>
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<tr>
<td>12</td>
<td>Would it make a good case study, given the objectives of the project? Why?</td>
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Appendix IV: Telephone interview topic guide

1. **Background details about the respondent and the organisation**

   Confirm organisational details from KTP documents. Any significant changes?

2. **Brief history of KTP collaboration**

   How did the idea for the project come about? Prior involvement in KTP or collaboration with universities? E.g. was there a pre-existing arrangement between the business and the HEI?

   What were the expectations of the respondent (or the wider organisation) about the likely impact of the project?

3. **What were the main impacts achieved for the company as a result of KTP project?**

   Explore what the respondent feels has been the value added of the KTP project over and above what would otherwise have happened. What were the main critical success factors?

   Explore any impacts that have occurred subsequent to the completion of the KTP and the final report. How have these come about? What role did the KTP project play?

4. **Explore whether and how the KTP project impacted on the company after it had finished**

   Prompt: did Associate stay on? Further work with the Knowledge Base partner (e.g. another KTP, PhD research, consultancy, commercial spin-off etc.)

   Explore the outcomes of subsequent activities. To what extent did the KTP prompt further engagement with social science? What were the outcomes of this engagement?

5. **To what extent and in what ways did the respondent’s experience with this KTP project help to change their views (or those of the wider organisation) about the potential usefulness of social science for their business?**

6. **Good practice and lessons learnt**

   What would you say were the main factors that contributed towards the KTP achieving the impacts that we have discussed?

   Any other lessons that emerged from the KTP experience (especially in relation to business impact and enhancing the contribution that social scientists can make to the private sector (i.e. not just through KTPs)?