Innovation Caucus

The Current Landscape of Business Engagement with Social Science in the UK

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This Innovation Caucus discussion piece was prepared for the ESRC's Business Engagement Task and Finish Group (BETFG). Its purpose is to provide the BETFG with an overview of the existing landscape of business engagement with social sciences in the UK, through a review of grey literature on university-business collaboration, supplemented by the available academic literature. This discussion piece is not intended to be definitive in nature, nor a statistical analysis. It focuses instead on providing readers a quick outlook on research that has been done on business engagement in academia, and from that, draws out a lens through which we can observe business engagement specifically in social sciences in the UK. The discussion paper is intended as a living document and supplementary insights are welcome. Suggested additional areas of investigation are welcome; please email info@innovationcaucus.co.uk to contribute.

About the Innovation Caucus

The Innovation Caucus supports sustainable innovation-led growth by promoting engagement between the social sciences and the innovation ecosystem. Our members are leading academics from across the social science community, who are engaged in different aspects of innovation research. We connect the social sciences, Innovate UK and the Economic and Social Research Council (ESRC), by providing research insights to inform policy and practice. Professor Tim Vorley is the Academic Lead. The initiative is funded and co-developed by the ESRC and Innovate UK, part of UK Research and Innovation (UKRI). The support of the funders is acknowledged. The views expressed in this piece are those of the author and do not necessarily represent those of the funders.

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Executive Summary

This discussion paper provides a rapid review of the existing landscape of business engagement with social sciences in the UK. The rationale behind the rapid review was to use grey literature that reviews university-business collaborations as a starting point. The grey literature chosen reviews university-business collaborations in all academic disciplines, from which we have taken data of business engagement in social sciences for this discussion paper. To supplement our discussion, academic literature was also used. These initial findings generate preliminary understanding of the types of business engagement that exist in social sciences. More importantly, these findings demonstrate that more comprehensive research should be conducted to gain a fuller understanding of business engagement in social sciences in a way that could inform policy and education in the UK.

The main discussion points are summarised as follows:

- Many academic and grey literatures argue for the value of business engagement with academia. However, literature observing the impact of business engagement with academia mostly focuses on life sciences, computer science, engineering, and/or medical disciplines. Literature that focuses on business engagement with social sciences is limited.
- literature on this subject highlights that it is difficult to trace and measure business engagement with social sciences as traditional metrics such as patents, licenses, spin-offs are more relevant to the sciences, engineering, and/or medical disciplines.
- There is evidence that many social science academics are engaging with businesses in their research. However, the knowledge exchanges are often tacit, informal and mostly present through consultancy activities.
- The available literature points to the value of social scientists being rewarded for their engagement with businesses through reform of incentive mechanisms for university-business engagement.
- Informal collaborations in knowledge exchange and transfer activities are rarely well documented, leading to missed opportunities to capture the full breadth of social science engagement with industry.
- Investment in knowledge translation activities could improve documentation of the practical outcomes of business engagement in social sciences; including longitudinal research and in-depth case studies research on business engagement in social sciences.

"Universities generating cutting edge research and resulting insights may be likened to the tip of an arrow, with the arrowhead behind it representing the economic activity enabled by research-led innovation. Maximising the size of these arrowheads and their economic benefit to the UK, specifically, is fundamental…" (Review Preliminary Findings, July 2013.)

1. Introduction

In 2013, Sir Andrew Witty conducted a review which identified the potential of universities' and academia's contribution to enhancing economic growth.[1] In the report, he expressed that more collaborations should be facilitated between the business and academic communities to enhance the development of the UK's economy. A similar sentiment was shared in a review of business-university collaboration by Sir Tim Wilson, who saw universities as integral to the skills and innovation supply chain to businesses in the UK.[2] The benefits of social science research to businesses was also recognised by Sir Paul Nurse's 2015 review on research councils. In his recommendation, he said, "as well as the natural sciences, technologies, and medicine, the creative disciplines of the arts and humanities, as well as the social sciences, have much to contribute to the commercial sector."[3]

The identification of university-business engagement as key to business and economic growth has had a long history in the UK's policy landscape. Originating from the world wars, the creation of civic universities (universities that have place-based strategy and connection to local community and city developments) instigated the early years of university-business collaborations for economic development. Post-world wars, several key management schools were incepted. This includes the British School of Management in 1954, London Business School, and Manchester Business School in 1965. Throughout the 1970s and 1980s, university-business engagements expanded through commercialisation of research activities, university spinouts, and further development of entrepreneurship education.

[1] Witty (2013).
[2] Wilson (2012).
[3] Nurse (2015, p. 3).

2. Business Engagement with Social Science

While Sir Witty's report brought a new wave of focus on university-business engagements, it should be highlighted that there is minimal research identifying disciplinary focus in this space. This literature review aims to identify some of the existing studies that have attempted to fill this gap.

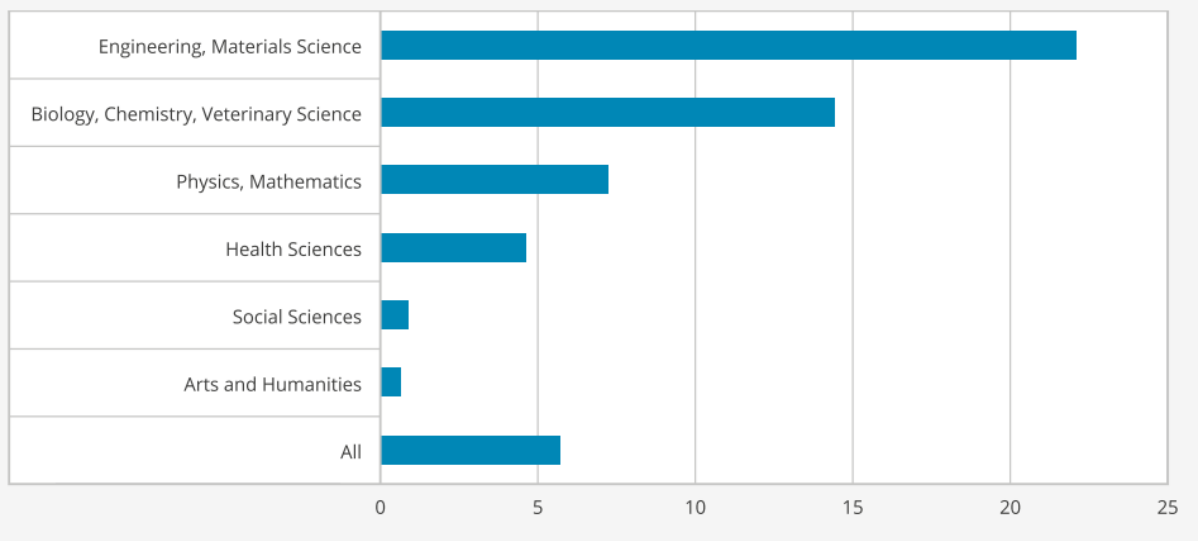
From a UK perspective, a 2013 study by D'Este and his team of researchers identified business engagement in different disciplines through industry funding to consider whether academic excellence and business engagement can be achieved simultaneously.[4] The study found that engineering, biomedical and hard science disciplines typically generate 10-30% more industry funding relative to departmental funding than social sciences. The study also found that social sciences disciplines tend to face difficulties in measuring the impact of business-university engagements as business activities such as patenting, licensing, and spinoffs are not common in their academic disciplines. Furthermore, the study found that the incentive for social sciences to collaborate with businesses could be deterred by limited financial and career incentive systems that positively reward business-university engagement in their disciplines.[5]

In 2009 and 2016, the National Centre for Universities and Business (NCUB) conducted two of the largest surveys on UK academic organisations' engagements with external organisations that generated 22,000 and 18,177 responses respectively.[6] The reports, which inform knowledge exchange activities in UK universities measured research orientation, application, and commercialisation (among other factors) of UK academics, dividing them based on disciplines. The report found that only 30% of academics interact with private businesses, with science and engineering making up most of the interactions, having 50% science and engineering respondents reporting some engagement in the last three years. Nonetheless, respondents regardless of disciplinary backgrounds identified the importance and value of engaging with businesses.

NCUB's report recognised that there is room for improving university-business engagement in social sciences if indicators of engagement impact can be better identified and used. For example, the direct indicators that have been used in measuring commercial involvement in academia are patenting, licensing, and spin-off activities (Figures 1, 2, and 3). These mechanisms are not as relevant in social sciences, where the knowledge exchange is often nuanced, qualitative in nature, and not always captured by "hard science". Nevertheless, the NCUB report showed that social scientists have clear impacts on the business community through consultancy via research (Figure 4).

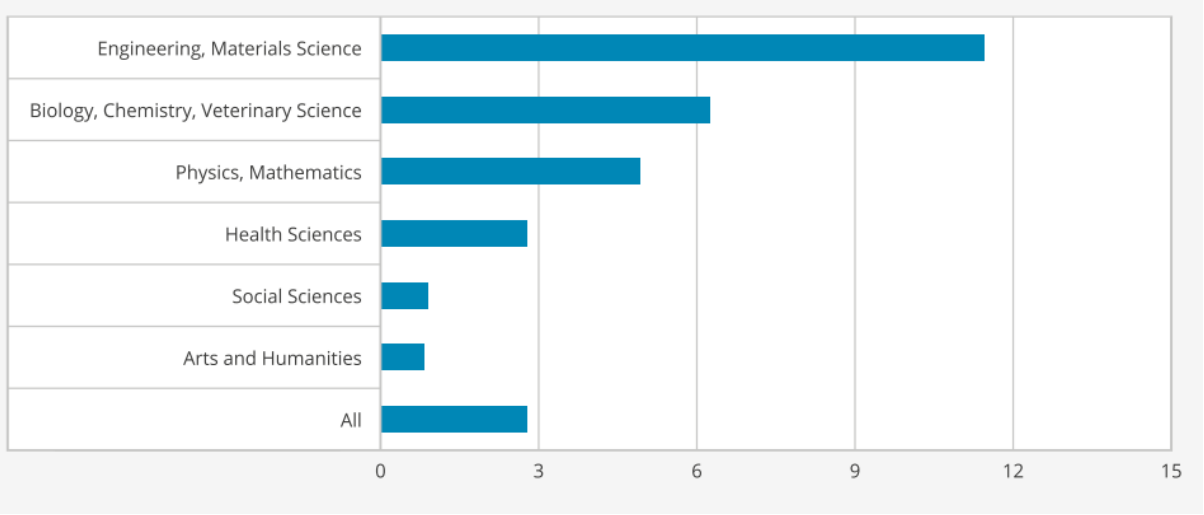
[4] D'Este et al. (2013).
[5] Ibid.; Siegel, Waldman & Link (2003).
[6] Hughes et al. (2016, p. 42).

Figure 1. NCUB 2016 survey response to academics taking out a patent in the last three years (% of respondents)



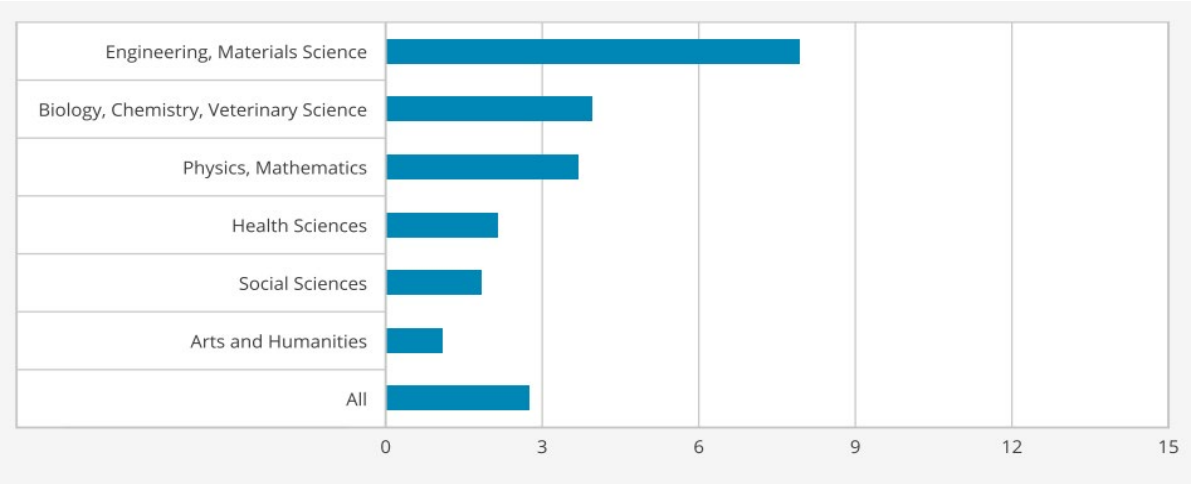
Source: NCUB (2016)

Figure 2. NCUB 2016 survey response to academics licensing research outputs to a company in the last three years (% of respondents)



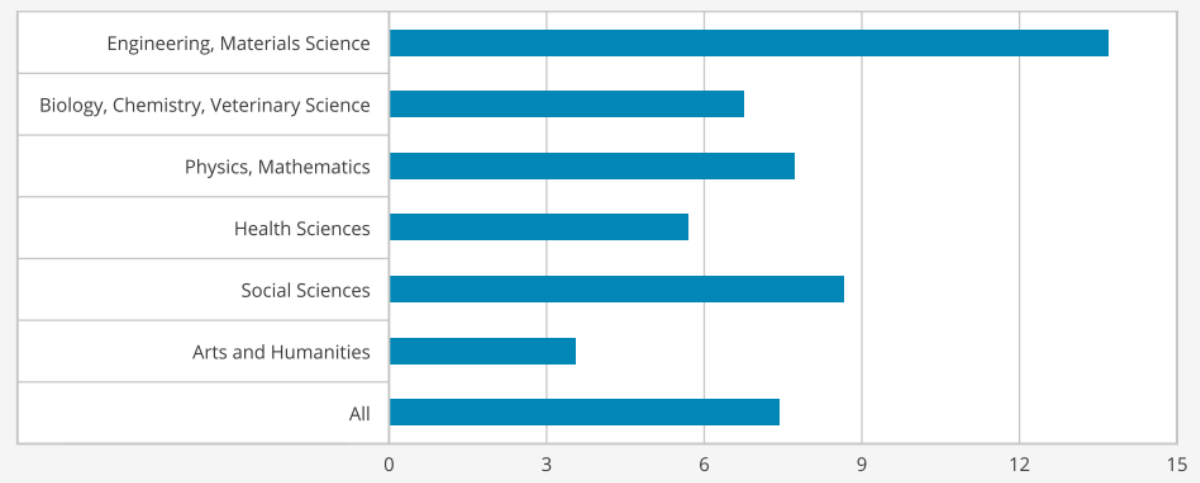
Source: NCUB (2016)

Figure 3. NCUB 2016 survey response to academics forming a spin-out company in the last three years (% of respondents)



Source: NCUB (2016)

Figure 4. NCUB 2016 survey response to academics forming or running a consultancy via research in the last three years (% of respondents)



Source: NCUB (2016)

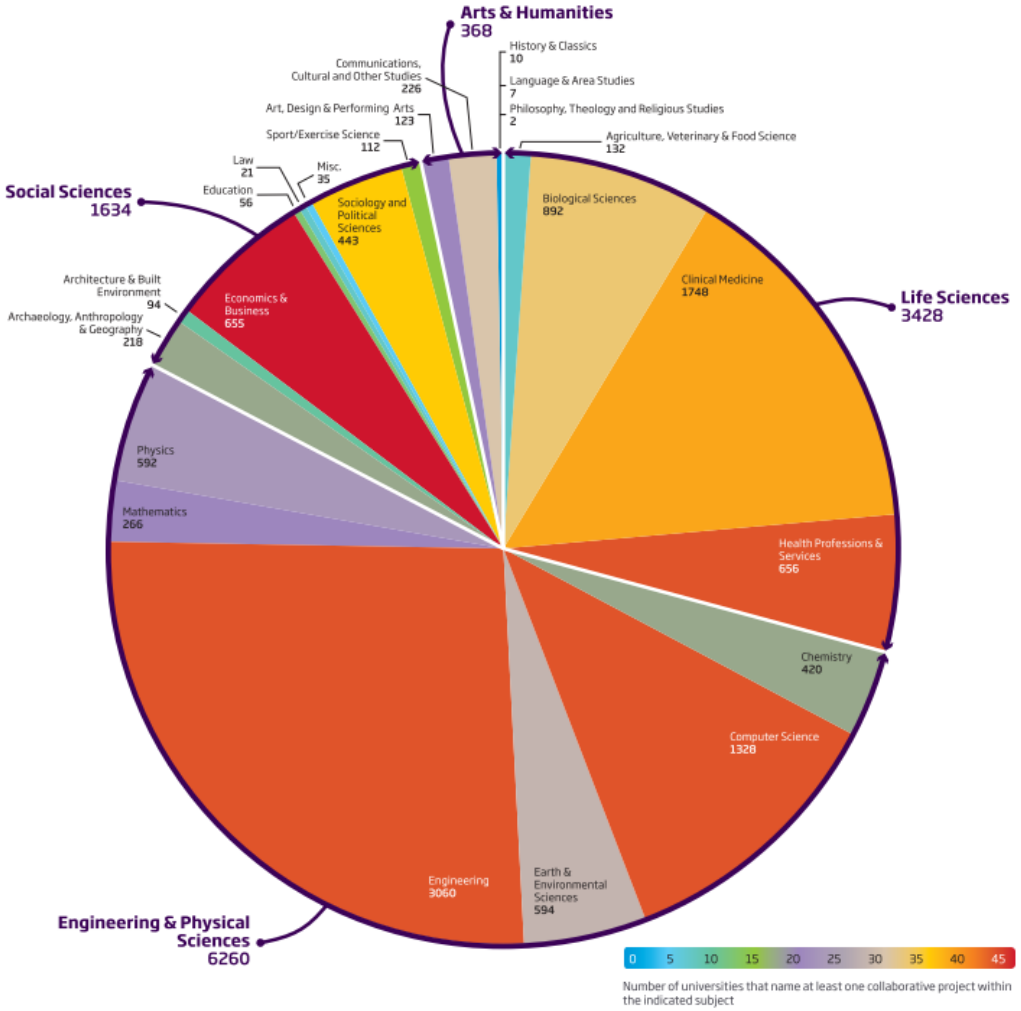
An independent review by Professor Dame Ann Dowling on university-business relationships formed an integral part of the government's science and innovation strategy in 2014.[7] Completed in 2015, the Dowling Review included surveys sent to 91 universities across the UK, of which 68 provided meaningful data for analysis. In the survey, universities were asked to report their collaborative research projects with businesses, including the departments where the research projects took place. Out of 12,240 collaborative projects, 1,634 had been identified as social sciences (Figure 5). Out of 63 universities, 45 reported instances in which their social science department is engaging with one research project or more conducted in collaboration with businesses. This is the highest number of universities reporting business collaborations segregated by university departments; higher than Engineering, Computer Sciences, and Health Professions & Services.

This finding shows a clear interest from social science researchers to participate in collaborative projects with businesses. In addition to the Dowling Review, a study commissioned by the Economic and Social Research Council (ESRC) in 2016 looked at knowledge exchange in social sciences.[8] The report showed that social scientists are currently already engaging with businesses although they are less likely to see their research as having commercial interest. Within social sciences itself, business and management academics are more likely to see their research as important and relevant to businesses. Currently, only one third of social scientists think that their work has commercial interest relevance, although many social scientists who are engaging with businesses are also engaging in consultancy activities.

Further, it is worth noting that there is currently limited research on the impact of the Research Excellence Framework (REF) segregated by disciplines. As Richard Watermeyer and Jennifer Chubb noted in their study of evaluating impact in REF,[9] there is a rarity of research focusing on the evaluation of the impact of social science and humanities.[10] A quick analysis of the REF impact case studies can, however, generate interesting insights into the landscape of business engagement in social sciences.

[7] Dowling (2015).
[8] Bullock & Hughes (2016).
[9] Watermeyer & Chubb (2019).
[10] Donovan (2009); Samuel & Derrick (2015).

Figure 5. The Dowling Review Collaborative Projects by Subject



Source: Dowling (2015)

It is possible to observe research impact case studies based on research subject area using the REF 2014 Impact Case Studies website. According to REF's official website, four main panels oversee the REF assessment criteria and ensure that the REF assessment and standards are consistently applied. The four main panels are segregated based on subject disciplines and categorised as:

- Main Panel A: Medicine, health and life sciences
- Main Panel B: Physical sciences, engineering and mathematics
- Main Panel C: Social sciences
- Main Panel D: Arts and humanities

It is also possible to observe impact case studies based on type of impact: political, health, technological, economic, legal, cultural, societal, and environmental. There are 6,637 case studies in REF 2014's Impact Case Studies' website, with 1,965 case studies categorised under Main Panel C (approximately 30.0% of total case studies).[11] A search for impact case studies for Main Panel C and based on economic impact generated 232 results (3.5% of total case studies and 11.8% of total Main Panel C case studies). However, an academic analysis of these REF impact case studies, tracing trends of impact specific to social sciences, has not yet been conducted. Despite this, it is worth noting that there are studies specific to REF impact case studies in different subject areas in social sciences, albeit minimal.[12] In addition, improvements could be made to the classifications of REF impact case studies, as physical science research projects, including mathematical sciences, chemical sciences, and environmental sciences, have been included in the search results for case impact studies on social sciences.

Nearly 50% of the 232 Main Panel C case studies based on economic impact (124 case studies) fall under the subject areas of commerce, management, tourism and services. The prominence of management studies' research and business engagement is due to the nature of the subject areas, which prioritise and encourage business engagement at an academic level. The existence of associations such as the Chartered Association of Business Schools (CABS) also helps in understanding the impact of management studies' research on businesses. Take, for example, the CABS' report on "Business Values Delivering Values to Local and Regional Economies" which shows the impact of business schools' research to driving regional growth, developing business support infrastructure, engaging small and medium-sized enterprises (SMEs), among others.[13] The inclusion of business engagement case studies on CABS' official website also helps to build an understanding of the landscape of business engagement in management studies subject area.[14] Similar efforts that observe social sciences as a whole are largely limited, although it is worthwhile to mention the recently published Academy of Social Sciences Vital Business' report on "The Essential Role of the Social Sciences in the UK Private Sector". This report focuses on a selection of case studies, covering a range of sectors and firm sizes, which demonstrate how social science knowledge and skills have been used to run and grow businesses in the UK.[15]

In addition to the above, another area to consider while observing business engagement in social sciences is the Knowledge Exchange Framework (KEF). The development of KEF began in 2017 with the commissioning of Higher Education Funding Council for England (HEFCE) by the Minister of State for Universities, Science, Research and Innovation to understand the achievements of UK higher education providers in "serving the economy and society for the benefit of the public, business and communities."[16] The main aim of the framework is to

[11] REF (2014).
[12] For example Hughes, Webber & O'Regan (2019); Kelly et al. (2016); and Moran & Browning (2018).
[13] CABS (2016).
[14] CABS (n.d.a) and CABS (n.d.b).
[15] Academy of Social Sciences (2020).
[16] Research England (2020).

increase efficiency and effectiveness in public funding usage for knowledge exchange. The KEF will also be used to provide a guide for universities to better understand and improve their performances in line with a set of **seven perspectives** and **seventeen key metrics** agreed upon based on consultations with UK higher education institutions (HEIs).

Relevant to this discussion paper is the second perspective: working with business. Based on Research England's KEF Framework Consultation Report, the proposed metrics to evaluate a HEI's efficiency in working with businesses include: 1) Innovate UK income (Knowledge Transfer Partnerships and grant) as proportion of research income (Innovate UK) 2) Contract research income with businesses per academic full-time equivalency (FTE) and 3) Consultancy income with businesses per academic FTE.[17] The outcomes of Research England's consultation and pilot exercise with UK HEIs to test the proposal of KEF perspectives and metrics generated interesting findings for the working with business perspective in the framework. HEIs recognise that the metrics suggested for working with a business perspective do not reflect the full breadth of knowledge exchange activities undertaken with businesses in HEIs.

HEIs also argue that income does not always act as an appropriate proxy for impact as across all disciplines, including that of social sciences, "a significant proportion of knowledge exchange activity is not monetised."[18] This finding reiterates earlier discussions made in this discussion paper that currently, there continues to be a difficulty in identifying the correct metrics, which could better measure the value of business engagements with academics. This challenge is much more prominent in disciplines that do not often generate research impact and that are easily quantifiable, such as social sciences. Further developments in this area should be considered, especially in light of the KEF's decisions for its first iteration report, which should be available later this year.

Wider research on the landscape of university-business collaborations in social sciences external to the UK generated the same limited findings. A report supported by the Innovation Caucus, which focuses on the role of the arts, humanities, and social sciences disciplines in innovation, recognised that there have been few countries with interesting experiences in operationalising social sciences engagement with businesses and innovation.[19] An analysis of university-industry collaborations in China and the USA using co-authored publications indexed in the Web of Science (WoS) showed similar findings to those in the UK.[20] There is a greater number of university-industry collaborations score among life sciences, mathematics, computer sciences, and engineering fields compared to social sciences indexed in the WoS. The reason for this is that journal articles considered in the WoS are less likely to feature qualitative methodology studies that are prominent in social science studies.

[17] Research England (2019).
[18] Research England (2019, p. 22).
[19] Linton (2018).
[20] Zhou, Rijssen & Leydesdorff (2016).

3. Reflections

The review of the available literature on business engagement in the social sciences suggests that there is value in identifying the right impact measurements to adequately reflect on social scientists' contribution to businesses. The available literature points to the value of social scientists being awarded for their engagement with businesses through reform of incentive mechanisms for university-business engagement. Furthermore, the literature suggests that there is room for universities to take note of social scientists' business engagement efforts, even if the commercial impact is delivered through tacit knowledge rather than hard, quantifiable evidence such as patents, licenses, and spin-offs.

Presently, impact studies on university-industry collaboration focus on a limited range of documentable formal activities as they are much more visible and traceable compared to activities not bounded by a legal contractual instrument. This means that informal collaborations in knowledge exchange and transfer activities are rarely documented.[21] These informal exchanges may include a broader range of activities such as technical reports, presentations at seminars, participation in roundtables or committees, exchanges between firms and individuals within research settings without formal agreements involving the university. To adequately capture the full breadth of social science engagement with industry, more efforts to document informal exchanges will likely be needed

There is also a possibility that there is a lack of funding for research that focuses on the impact of university-business collaborations in social sciences in comparison to science, technology, engineering and maths (STEM) disciplines. For example, there are currently no studies that analyse the impact of the REF in social sciences specifically. Universities should be encouraged to consider, for example, business reports written by academics as valuable in measuring academic excellence comparable to academic journal article outputs. At the business level, universities' technology transfer officers (TTOs) play an important role in educating businesses about the value of social science research. NCUB 2016 report mentioned that TTOs are "beneficial in providing contractual frameworks for the interaction between academics and external partners especially where monetary exchanges are concerned."[22] They also highlighted that currently, TTOs have often been associated with technology and science-based connections and commercialisations, which shows a lack of focus on non-hard-science disciplines. A review on TTOs' skills is therefore necessary for highlighting the relevance of social sciences in business engagement.

Finally, even if business engagement with social science generates clear outputs by current metrics, the impact is not always immediate, in the same way that social science studies do

[21] Olmos-Penuela, Molas-Gallart & Castro-Martınez (2014).
[22] Hughes et al. (2016, p. 42).

not necessarily generate immediate impact to policy.[23] There needs to be an investment in knowledge translation activities that documents the practical outcomes of business engagement in social sciences; including longitudinal research and in-depth case studies research on business engagement in social sciences.

[23] Cherney (2015).

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