

Commercialisation of Research out of Social Science

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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 sciences community, who are engaged in different aspects of innovation research. We connect the social sciences, Innovate UK and the ESRC, by providing research insights to inform innovation policy and practice. We champion the role of social sciences in innovation and enhance its impact. Professor Tim Vorley is the Academic Lead. The initiative is funded and co-developed by the ESRC and Innovate UK.

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Executive Summary

This study reflects on the opportunities and challenges around commercialisation of research out of social science (CROSS). The paper reports on 19 in-depth interviews conducted between January and July 2021 with a range of senior academics and professionals engaged with championing and supporting CROSS. The report is structured around the main opportunities and challenges perceived in commercialising social science research and a corresponding set of recommendations for future development of support in this area. The key opportunities and challenges for discussion highlighted through the interviews were:

- **Culture and Commercialisation in the Social Sciences** – interviewees highlighted that there is not a strong culture of CROSS, and if anything there is a widespread negative perception of the term commercialisation itself and activities related to it, as commonly understood. The central challenge therefore remains promoting awareness of an engagement with opportunities related to the commercialisation of social science research among individuals and their institutions.
- **Early Career Researchers and Commercialisation** – by challenging the established norms and culture in higher education there is scope to enable and empower academics right at the foundational stages of their career to explore commercial opportunities alongside teaching and research. There are opportunities available to raise awareness of and engagement with commercialisation as a route to research impact, through support and training at the PhD and ECR stage.
- **Support Systems** – professional staff operating in Knowledge Exchange (KE), impact and specialist commercialisation type roles are often key intermediaries. Many would benefit from further skills development support given that this is a relatively new area. Alongside skills training, a number of opportunities are explored, such as subsidising HEI recruitment of KE professionals with industry-relevant experience, and provision of seed and scale-up funding specific to social science commercialisation.

In conclusion, it is apparent that there is considerable opportunity to further support academics and institutions with the commercialisation of social science research and realise the wider economic and societal benefits.

I. Introduction

Research commercialisation can be defined as a process of transforming academic theoretical knowledge into a type of marketable, commercial activity or product.¹ The commercialisation of social science could bring considerable benefits, not only in tackling societal issues using market solutions, but in driving growth and increasing productivity.²

Nonetheless, the benefits of social science through commercialisation remain largely untapped. A study commissioned by the Economic and Social Research Council (ESRC) showed that “fewer than 1 in 50 respondents in the social sciences had ever commercialised their work via patents, licensing or spin-outs.”³ Previous research on business engagement in social science conducted by the Innovation Caucus highlighted that, although there is increased activity and interest in this area in recent years, there is still limited research on CROSS.⁴

This discussion paper seeks to address this gap, and develop new insights and perspectives on the challenges and opportunities associated with realising the value of social science research through commercialisation. More specifically, the paper explores the current capability and capacity that social scientists have to commercialise their research in the context of higher education institutions.

In preparing this discussion paper a number of scoping sessions were conducted with colleagues from ESRC and other stakeholders. Subsequently a series of 19 in-depth semi-structured interviews with senior academics and professionals involved with championing and supporting CROSS were conducted. The interviews delved into three main themes:

1. To what extent are academics and institutions aware/engaged with CROSS?
2. Where aware/engaged, what are the opportunities and challenges associated with CROSS?
or
Where not aware/engaged, what are the reasons for this?
3. What support mechanisms are currently available for CROSS? And how could support be improved?

The 19 interviews were analysed alongside supplementary insights gained from several webinars focusing on CROSS which were hosted by the Aspect network and Praxis Auril. Interviewees who support social science commercialisation in their roles as professional services staff (i.e. as opposed to academics) may be referred to in this report as Knowledge Exchange (KE)

¹ Harman, G., 2010. Australian university research commercialisation: perceptions of technology transfer specialists and science and technology academics. *Journal of Higher Education Policy and Management*, 32(1), pp.69-83; Hindle, K. and Yencken, J., 2004. Public research commercialisation, entrepreneurship and new technology based firms: an integrated model. *Technovation*, 24(10), pp.793-803; Spilling, O.R., 2008. On the role of academic staff as entrepreneurs in university spin-offs—case studies of biotechnology firms in Norway. *Entrepreneurship, sustainable growth and performance. Frontiers in European entrepreneurship research*, pp.267-98.

² <https://aspect.ac.uk/resources/the-future-of-social-science-commercialisation/>

³ <https://esrc.ukri.org/research/impact-toolkit/commercialisation/>

⁴ Abdul Rahman, S. 2020. *Existing Landscape of Business Engagement with Social Sciences in the UK*. Working paper for ESRC and Innovate UK.

professionals for simplicity, although it is acknowledged that this may not represent their current institutional title. An anonymised summary of interviewees is provided in Table 1.

Table 1. Interviewees by organisation and role type

1	Independent Research Organisation	Academic
2	Independent Research Organisation	KE Professional
3	Russell Group University	Academic
4	Russell Group University	KE Professional
5	Russell Group University	KE Professional
6	Pre-1992 University	KE Professional
7	Russell Group University	KE Professional
8	Russell Group University	KE Professional
9	Professional Body	KE & Policy Professional
10	KE Intermediary Organisation I	KE Professional
11	KE Intermediary Organisation I	KE Professional
12	Russell Group University	Academic & KE Professional
13	KE Intermediary Organisation	KE Professional
14	KE Intermediary Organisation	KE & Policy Professional
15	Russell Group University	KE Professional
16	Post-1992 University	Academic
17	Post-1992 University	KE Professional
18	Social sciences Start-up	KE Professional
19	Russell Group University	KE Professional

¹ KE Intermediary Organisation refers to non university-based KE practitioners

This study is intended to inform and stimulate further discussion around CROSS, and is not intended to be either representative or definitive in nature. While identifying common opportunities and challenges associated with CROSS, this is not to detract from the diverse array of motivations and practices among academics and across higher education institutions.

2. Existing Support for Commercialisation of Research out of Social Science

Through this study, we have found that there are both challenges and opportunities facing the social sciences community around the commercialisation of research. While this study draws on a series of interviews with key individuals and stakeholders, it is not all encompassing in its focus but does highlight a series of questions and areas for development. The study found that the support system for CROSS is currently at a nascent stage, and differs greatly from one institution to another. On a basic level, we can understand the support system through national and institutional mechanisms.

Looking first at the national level, there are a number of networks in operation which provide support for CROSS. One such network is **Aspect** (A Social sciences Platform for Entrepreneurship, Commercialisation and Transformation), which was launched in 2018 with funding from Research England's Connecting Capability Fund. Led by the London School of Economics (LSE), the network has seven founding partners and four associate members, all of which are HEIs with the exception of Zinc, which is an Aspect-funded company-builder spin-out.⁵ As according to Aspect's official website, the network aims to expand commercialisation in social science activities through i) education via events and meetings to exchange good practices; ii) funding of CROSS projects and pilot new approaches and iii) developing toolkits (including case studies) to share their learning with the broader community.

Another relevant membership-based organisation to highlight is **Praxis Auril**, a professional association for Knowledge Exchange (KE) practitioners established in 2002. According to their official website, Praxis Auril has a global reach including "5000+ active KE practitioners from more than 182 member organisations as well as key sector stakeholders, industry service providers, and business representatives." Praxis Auril's core mission is a key network in developing KE training and connecting their members with good KE practices with the purpose of ensuring that "the UK derives economic, social and creative impact from its world-leading research base."⁶

In response to the formerly predominant focus on technology transfer activities that are more relevant to science, technology, engineering and mathematics (STEM) fields, Praxis Auril has since broadened its focus to promoting best practices in KE across all academic fields. As part of its

⁵ <http://aspect.ac.uk/wp-content/uploads/2020/10/Aspect-Learning-Report-2020-compressed.pdf>

⁶ <https://www.praxisauril.org.uk/about-us>

training programme, Praxis Auril seeks to provide KE practitioners with holistic sets of skills that can be applicable for all academic disciplines. Nonetheless, the association does currently have a training offering specific to KE in the Social Sciences, Humanities and the Arts, although the programme is not explicitly focused on commercialisation activities.

A European-equivalent of Praxis Auril is **A World of Knowledge Transfer** (ASTP) network, established in 2000 and based in Leiden, Netherlands. It is also a member-based organisation that focuses on training and developing best practices “to shape the future profession of knowledge and technology transfer.”⁷

It has not been the focus of this study to present a detailed portrait of current social science research commercialisation practice across institutions, although an initial desk-based review of HEI provision coupled with our interviews found that support at the HEI-level is uneven. Most HEIs’ effort on CROSS forms part of a wider effort to encourage entrepreneurship among students and staff, regardless of academic disciplines. There are some HEIs who are more well-known for advancing support for CROSS, which include Oxford University, Cambridge University, and more recently, LSE through their commitment to the Aspect programme. Many other institutions are at a nascent stage in their social science commercialisation journey and are exploring support relevant to their size, strategy and capabilities.

3. Insights and Discussion

This section of the discussion paper identifies some of the key themes emerging from the interviews, first focusing on ‘Culture and Commercialisation in the Social Sciences’, second on ‘Early Career Researchers and Commercialisation’, and third on ‘Support Systems’. Each section captures the key opportunities and challenges raised in the interviews, as well as sharing the types of interventions interviewees identified as having the potential to develop social science research commercialisation capacity.

3.1 Culture and Commercialisation of Research out of Social Science

The academic culture in social science has been cited by all interviewees as causing a potential barrier to research commercialisation. Due to the celebration of fundamental research and a tradition of producing academic outputs above all else, there is presently a **reluctance** among social scientists to engage with commercialisation activities. KE professionals who have worked in this area described two characteristics of social science research that may deter their involvement with commercialisation:

- i) The majority of social scientists conduct research focusing on understanding and improving society; *and*
- ii) The majority of social science research is more abstract than applied, making it difficult to find commercialisable value

⁷ <https://www.astp4kt.eu/about-us/>

The two types of research create different barriers. The former creates a mind-set barrier to commercialisation. The result of this mind-set barrier often can result in the second barrier: the difficulty in finding commercialisable value in abstract social science research. These are discussed next.

3.1.1 *Mind-Set of Social Scientists*

Our study captured that the mind-set of social scientists towards commercialisation greatly affects the way they consider commercialisation as a valid pathway to research impact. A KE professional interviewee who has experiences with commercialisation activities across various disciplines explains this particular mind-set:

“The mind-set of people not really understanding what commercialisation is. [...] (Social scientists) don't like the word profit, we don't like to use it either.” (Interviewee 4)

The quote above highlights the present mind-set of many social scientists that find the term “commercialisation” as being problematic and clashing with their moralities and ethics as social scientists. A number of other KE professionals interviewed enlarged on the theme of perceived aversion to profit-making and the clash with the more “socially-conscious” motivations that social scientists tend to embody. Reflecting on this perceived culture clash interviewees said:

“The problem we've got with social sciences is that the term commercialisation is a pejorative.” (Interviewee 6)

“By their nature, social scientists go into social sciences for the betterment of society, and fit within that faculty or within that discipline. I put across that I was open to ways of looking at developing their research in a way that could be monetised either for profit, or as a social enterprise model, or whatever it might be. But I've been working with them, telling them that they didn't really have to sell their soul to the devil in order to do that. Which I think was a perception that many academics had.” (Interviewee 7)

The above quote by Interviewee 7 also highlighted the present role that KE professionals play in spreading awareness on commercialisation to social scientists. Just like Interviewee 7, several other interviewees in the same profession explain that much of their work is spent on explaining to social scientists that commercialisation does not have to be a capitalistic endeavour that clashes with their moralities and ethics as academics and individuals. We have found that all interviewees working in KE and commercialisation with social scientists avoid using business-related terms, thus potentially avoiding some of the aforementioned negative associations. This illuminates that presently there is still a lack of understanding by social scientists that engaging businesses does not mean that their academic integrity will be jeopardised. Nonetheless, interviewees have had to work around the usage of the term “commercialisation” to attract social scientists into becoming familiar with commercialisation. As Interviewee 9 said:

“When I first had to present on [commercialisation to social scientists], I was like, what does this word mean? So it is a terrible word, to be honest. I would actually say business is also a poor word. So I try to use venture. And often I flag out really early that social ventures are an option, and usually then their eyes light up at that point.” (Interviewee 9)

This finding demonstrates the importance of language in spreading awareness on commercialisation among social scientists.

KE professionals interviewed spend much time convincing social scientists that commercialisation can have societal benefits by ensuring that their research knowledge is applied in one way or another. When social scientists are given awareness and education; they are more likely to soften up to the idea of commercialisation. Interviewees have said that key to promoting engagement in CROSS is in spreading awareness of the breadth of what commercialisation entails, thereby constructively challenging pre-conceived interpretations of incompatibility. KE professionals often spoke about the importance of explaining that commercialisation as an endeavour can be undertaken in a manner that is consistent with the commonly held sense of academic ethics and individual morality.

Once reluctant social scientists realise there are profit-, or rather, revenue-bearing avenues that better align with their individualistic objectives as researchers, such as through the social enterprise/venture route, they are more likely to accept research commercialisation. Social scientists also tend to soften to the idea of commercialisation if they understand that one of the methods in sustaining research impact to the society is to ensure its sustainability, and commercialisation is one of the methods to do so. Cultural difference as a challenge in CROSS has been recognised by Aspect who point to the need to better align commercialisation with social scientists' values.⁸

It should be noted too that there is presently a barrier at HEI level in understanding the value that social sciences can bring to commercialisation. KE professionals described many HEIs do not see commercialisation as an important pathway to research.

We take note of recent advancements made to promote and normalise different pathways of research beyond academic outputs such as the development of the Knowledge Exchange Framework (KEF).⁹ However, KE professionals mentioned that at the HEI level, the role of KEF is still marginalised in comparison to the Research Excellence Framework (REF), which has a much greater influence on HEIs' management and therefore overall academic culture of higher education. Furthermore, even in HEIs that celebrate commercialisation of academic research, there is presently a lack in the amount of support given to social scientists as the value of CROSS is much more difficult to capture using present metrics. This is explained next.

3.1.2 Difficulty in Assessing the Value of CROSS

The second barrier to commercialising social science research is the difficulty in finding the value of CROSS using present metrics. The majority of social science research is abstract in nature, making it difficult to produce patentable and/or licensable outputs such as widgets, applications, or programmes. In fact, at HEI level, and sometimes even departmental level, the definition and perceived value of CROSS can greatly differ, demonstrating that the goal for social science commercialisation varies. Externally, interviewees have also found that there are certain areas of social sciences that are better understood by the industry in its commercialisation value, such as business and management or economics.

⁸ <http://aspect.ac.uk/wp-content/uploads/2020/10/Aspect-Learning-Report-2020-compressed.pdf>

⁹ <https://re.ukri.org/knowledge-exchange/knowledge-exchange-framework/> .

The lack of understanding on the value of CROSS results in KE professionals often finding themselves using varying (and sometimes ad-hoc) definitions of commercialisation that best help them attract social scientists towards commercialisation in the first place. These definitions include:

- To create IPs, licenses, and start-ups based on research;
- To create ventures based on research;
- To create any marketable and economic-bearing activities from research;
- To create non-academic outputs for the betterment of the society;
- To find different pathways of research impact;
- To generate revenue for research in order to make the research more sustainable;
- To generate any forms of revenue using research (which includes consultancy activities);
- To become entrepreneurial using research ideas, including through the social entrepreneurship route.

The existence of varying definitions of CROSS in the social science space demonstrates the lack of coherent understanding of the commercialisation value that social sciences bring using current metrics. As previous study by Innovation Caucus has also suggested, informal KE activities that may be economic-bearing are rarely well documented, leading to missed opportunities to capture the full breadth of CROSS.¹⁰ Metrics used for commercialisation activities should be reconsidered to take into account tacit, informal activities such as consultancy as well as hard, quantifiable evidence such as start-ups, spinouts, licenses, and IPs.

Discussion around this issue can be summarised as three key areas that are still expanding in the spaces of CROSS. These areas are:

1. Recognition on whether the term “commercialisation” is the right term to use when approaching social scientists, and if it should be replaced?;
2. The need to expand the term “commercialisation” in academia so that it reflects the not-for-profit avenues; *and*
3. The need to capture non-venture-making activities as commercialisation activities, as long as they bear income, such as in the case of consultancy

In order to promote the prevalence of commercialisation among the social sciences community, we believe the highlighted key areas above can be developed with new interventions and provision of additional support, which is described next.

3.1.3 Opportunity to Develop Engagement and Awareness Activities to Challenge Existing Culture in the Social Sciences

While the notion of the entrepreneurial university has become much more widely accepted and understood, levels of awareness and engagement with CROSS remain relatively low. As the role of universities continues to evolve, including greater expectations around their economic and societal impacts, this represents a considerable opportunity for the social sciences. This study further

¹⁰ Abdul Rahman, S. 2020. *Existing Landscape of Business Engagement with Social Sciences in the UK*, Working paper for ESRC and Innovate UK.

demonstrates that knowledge exchange (KE) activities could be key to spreading awareness on the value of commercialisation among social scientists.

The McMillan Group's report on University Knowledge Exchange Framework in 2016¹¹ and the more recent launching of the Knowledge Exchange Concordat¹² (KE Concordat) have shown that there is indeed a growth of KE activities in the UK. They also highlight that there is not one formula of KE that is appropriate to all HEIs. While this has posed challenges, we believe that the uniqueness of KE activities should be celebrated and made aware not only among the KE community itself, but also externally, especially among industry actors. Interviewees have informed that for many of them, commercialisation activities can be quite an isolated endeavour, with many of them learning through trial and error. This shows that there is an opportunity to facilitate a network of KE professionals doing commercialisation activities, who can learn from the insights of one another, to better facilitate their skills development in CROSS.

In terms of spreading awareness of CROSS, there is an opportunity to highlight good practices in promotional material delivered in the form of in-depth case studies. These case studies should not only include successful commercialisation stories, but also describe learning experiences from failed activities which have led to positive development of commercialisation practices. Promotional materials could be used by KE professionals to not only spread awareness about commercialisation to social scientists but also to potential industry partners.

Furthermore, several interviewees mentioned that the value of social sciences commercialisation may take a longer time to be realised, compared to more technologically-driven fields, or that such values may be incidental, for example, through cost savings rather than in the creation of new products and ventures. There is potential value in tracing the impact of CROSS via a longitudinal manner and through in-depth case studies. Further investigation in the area of appropriate metrics and recording of impact and the relationships with incentives would be valuable to supporting a form of commercialisation suitable to the social sciences. Capturing those values through reimagined metrics are not only useful data to understand CROSS, but could assist KE professionals in promoting commercialisation to social scientists by appreciating the differences that these academics could bring to commercialisation activities.

3.2 Early Career Researchers and Commercialisation

Our second finding relates to the opportunity to focus on Early Career Researchers (ECRs) as a key demographic through which the potential value of commercialisation could be promoted. Interviewees explained that although there is reluctance among social scientists to pursue commercialisation, academics at an earlier stage in their career are more likely to be open to the idea of commercialisation as an academic pathway to impact or even a way to pursue their interests outside of academia:

“My impression is that I think it's easier now for us to work with young academics. I think they're just more switched on, and, you know, more willing to engage with us and learn and do even a bit of everything.” (Interviewee 4)

¹¹ https://www.praxisauril.org.uk/sites/praxisunico.org.uk/files/2016_McMillan.pdf

¹² <https://www.keconcordat.ac.uk/about/>

“Some ECRs recognise that the academic career might not be for them, or is just quite tough. And they're keen to develop both additional skills, but also additional opportunities that might take them out of academia but still maintain a link with what their original research was, which obviously, if you created a spin out, that could be a good mix of the two” (Interviewee 9)

The above quotes are representative of discussions elicited with interviewees on why ECRs could be a focus target group for spreading awareness on research commercialisation. Interviewees elicited discussion on how academics that are further along in their careers tend to be “stuck in their ways” due to the traditional culture of academia that prioritises academic outputs above all else. These academics also tend to have much more teaching and research responsibilities which may not give them the agility and flexibility needed to consider research commercialisation. As such, KE professionals find targeting ECRs as an opportunity for engagement in commercialisation as ECRs are not only more flexible, but they are also at the stage where they are deciding career paths that might not be purely academic in nature.

However, interviewees also claim that there are also challenges in this area. Depending on HEI support and training and given the present academic culture, many ECRs, just like the academics who are further along in their careers, still lack awareness on the different pathways of research beyond producing academic outputs. It is important to ensure that ECRs in the social sciences have access to training that supports their wider employability, which includes the skills to anticipate and prepare for a career beyond academia and/or choosing impact pathways that go beyond traditional academic routes. As Interviewee 6, a KE professional mentioned:

“The current [PhD skillset] training system is very dependent on teaching assistant roles, which allows PhDs to move into an acceptable form of employment in academia. [...] But the PhDs need to know about the market and where it's at now, the same way as undergraduates are trained. [Their training] needs to be just as robust!” (Interviewee 6)

The above interview highlights an opportunity of redeveloping the training system in social sciences at the PhD and the ECR level to ensure that earlier level researchers know what to expect in pursuing an academic career. The specific interviewee cited the Higher Education Policy Institute report in 2020, where it was found that “67% of PhD students want a career in academic research but only 30% stay in academia three years on.”¹³ The interviewee, who has worked on commercialisation activities across different disciplines, explained that the precariousness of employability among ECRs in academia as a core reason to ensure that social scientists are well-prepared for approaching different research pathways. According to the interviewee, this could be a more pressing matter for social scientists as commercialisation activities are much less normalised or even understood compared to more science- or technology-based disciplines.

¹³

<https://www.hepi.ac.uk/2020/07/16/new-report-shows-67-of-phd-students-want-a-career-in-academic-research-but-only-30-stay-in-academia-three-years-on/#:~:text=to%20higher%20education.-,New%20report%20shows%2067%25%20of%20PhD%20students%20want%20a%20career,in%20academia%20three%20years%20on>

In a report on social sciences ECRs' training,¹⁴ it is found that the majority of HEIs in the UK adhere to Vitae's Researcher Development Framework (RDF).¹⁵ The RDF is a framework for planning, promoting and supporting the personal, professional and career development of researchers in higher education. The RDF articulates the knowledge, behaviours and attributes of successful researchers. While it includes a form of enterprise skills training, the training is often transferable (such as skills in leadership, career management, teamwork, communication, self-reflection, etc.) and not focused on commercialisation skills. Out of 78 universities reviewed in the ECR training report, the majority had used the RDF in preparation of researchers with a strictly academic focus. There was a rarity in HEIs who trained their academics to have the mind-set on the different pathways of research impact. The majority of HEIs also required academics to take the initiative to participate in commercialisation training.

Interviewees explained that established norms and routines could create a significant barrier in changing the mind-sets of social scientists to think about pathways beyond traditional academic routes. Such established mind-sets could also be passed on to younger academics through PhD supervision and training. Furthermore, there are challenges for ECRs to secure their academic positions if they are not producing academic outputs. Alongside their teaching duties, it is possible that many ECRs would find themselves unable to consider commercialisation more seriously, against the pressure of sustaining their academic careers.

3.2.1 Empowering Early Career Researchers

A rapid review of the PhD in Social Sciences found that PhD holders are increasingly finding work in non-academic sectors, and that the number of graduates entering non-academic careers are considerable.¹⁶ With the existing culture in social sciences which prioritises academic excellence, there is a timely need to address ways of changing the mind-set of social scientists starting from the ECR level. There are two opportunities through which this could be done.

Firstly, there is an opportunity to review research training frameworks at a national level which reflects on the different pathways of research. Some institutions have already, or are in the process of, building in specific commercialisation training. Therefore, there is potential for shared learning to improve provision across the social sciences, as is currently taking place through national networks such as Aspect, Praxis Auril, and other membership organisations. Consideration could also be given to drawing further attention to the RDF existing inclusion of commercialisation within the "Engagement and Impact" domain, providing backing to the area as a necessary skill set for the effective researcher.

Secondly, at the ECR level, there is an opportunity to encourage HEIs in developing social sciences PhD research areas that are more contemporary, and industry relevant. Research areas could be co-developed with the industry, through which potential PhD candidates could garner industry-relevant experiences by conducting research in the industry. Such opportunities would be invaluable in providing ECRs hands-on training that could tap their ideas into thinking about commercialisation as early as possible in their academic careers.

¹⁴ Abdul Rahman, S. 2020. *Review for Enterprise & Entrepreneurship Skills Training for Social Scientists*. Working paper for ESRC and Innovate UK.

¹⁵ <https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework>

¹⁶ <https://esrc.ukri.org/files/news-events-and-publications/news/review-of-the-phd-in-social-science/>

3.3 Support Systems

The third challenge we have found is the dichotomy between larger versus smaller HEIs. Interviews illuminated that the conversation around social sciences commercialisation has been growing in recent years courtesy of research councils' and the Research Excellence Framework's (REF) requirement for HEIs to demonstrate the impact of their research funding beyond academic outputs. Prior to this conversation, some larger universities have already been engaged in CROSS. Due to how long they have engaged in these activities, coupled with their bigger resource pools (in terms of finance but also in terms of greater number of social scientists in general), they are able to develop CROSS in a much more advanced manner, sometimes having a dedicated personnel or a team for this area of commercialisation. Therefore, efforts on CROSS greatly varied between larger and smaller HEIs.

This finding is not unsurprising, given the diversity of the UK higher education sector as a whole. However, we have found more nuanced consequences to the dichotomy between larger and smaller HEIs' activities in CROSS. Findings suggest that smaller HEIs whose focus on CROSS is largely driven by requirements of research councils and/or the REF have a much more limited knowledge on ways to commercialise specific to social sciences. KE offices in smaller universities are much smaller in comparison to larger, more mature universities. KE professionals in smaller universities also tend to not have specialisation in commercialisation. Rather, they are responsible for doing a variety of KE activities; thus, the development of CROSS in these universities are much more limited.

Due to the difference in resource pools between larger and smaller HEIs, we have found that the approach to social sciences commercialisation has also been different. HEIs with deeper resource pools are able to approach commercialisation from a more traditional sense; that is in terms of venture/enterprise building. They also tend to discuss commercialisation using traditional metrics such as licensing and intellectual properties (IPs) and mentioned that their approach to CROSS is in finding workarounds when social sciences research is unable to be licensed or could produce IPs. Larger HEIs are also able to do this by employing KE professionals with backgrounds in industry. Such actors may be able to think more broadly about the application of research findings in the industry.

For smaller HEIs, while the objective to develop ventures/enterprises is present, these activities are challenging due to lack of resources. Smaller HEIs therefore tend to prioritise other types of economic-bearing commercial activities, such as consultancy services; or non-economic bearing, but categorised under impact-bearing activities, such as policy advisory services. KE professionals interviewed also mentioned that greater awareness among social scientists is needed to convince them to realise the value of different types of research pathways, including that of commercialisation. However, resources are needed for these types of activities, which they often lack. Interviewee 17's quote illuminates the dichotomy between larger and smaller HEIs in the context of CROSS:

"If you look at what we do, we have a small number of invention disclosures or patent filings each year. Under ten for sure, probably less than that. And then you compare that with [University of] Birmingham or [University of] Oxford [...] where you're talking about 300-400 disclosures a year and then they can cherry pick the ones that they want to patent and then commercialise. [...] The difference in opportunity that we have compared with [larger universities]. I mean they have resources that we can only dream

about, not only in money but also in personnel, you know they have depth in their research teams and you could see why.” (Interviewee 17)

The interview above gave nuances into the differences in resource pools between larger and smaller HEIs. Nonetheless, our findings also captured that KE offices of larger HEIs could also face resource issues when there is a lack of appreciation on the value of social sciences commercialisation at the HEI-level. For example, one interviewee who has worked in two large HEIs in the commercialisation space mentioned that HEI strategy in approaching commercialisation can greatly influence the amount of support that KE offices could get from the central university for commercialisation activities. When there is no strong culture of identifying commercialisation as a valid research pathway at the HEI level, the KE offices would meet great challenges in engaging social scientists for commercialisation:

“I think that’s probably where universities experienced the biggest difficulty. They are not able to fund entrepreneurial centres at the level that it should be funded at. You know, to push good ideas, and to really support them and know what it takes to build a knowledge partnership, for example. An average knowledge partnership can take anything up to three years. [...] When a head of department tells you that he or she has spent, you know, the day in the city going to lunch with various potential investors, there’s always a sense of; Yeah, let’s just have some fun. Just doing stuff. When in fact, that’s how business is done.” (Interviewee 6)

Similarly to Interviewee 6, other KE professionals interviewed also mentioned that support from senior academics and senior management is integral in terms of appreciating the time allocation needed by their colleagues (often at a more subordinate level) who want to commercialise their research:

“In some cases, particularly senior academics, you know, in more management sort of levels, they don’t understand the time that’s involved in [commercialisation activities]. [...] I think maybe that’s, again, just a cultural difference between social sciences and other departments where there’s more tradition of that kind of working together and spending time to build those relationships.” (Interviewee 5)

The quotes above demonstrate that through these real-life challenges, there is an opportunity to further develop support for the support system in social sciences commercialisation, which is explained next.

3.3.1 Supporting KE for CROSS

Our findings demonstrate that KE professionals are key intermediaries that can facilitate and develop successful CROSS. Sentiment was shared that KE and CROSS research is only starting to be recognised as an area of expertise or a career choice in its own right. Professional services personnel play a vital role in the commercialisation landscape, through the provision of specialist support from an understanding of business models and markets, to technical knowledge such as licensing and through their link role to wider internal and external networks.

The interviews highlighted two key areas where there is an opportunity to tailor support to better realise the value of social sciences research through commercialisation. Firstly, there is value in understanding the differences associated with CROSS in comparison to more scientific and

technological fields. This will illuminate the difference in the types of KE professional employed and/or help HEIs understand the amount of resources (whether in time, people or finance) is needed to support successful commercialisation activities specific to social sciences.

KE in general is a career path that is still developing, and as such, providing support to these key actors could be beneficial for the successful development of CROSS. Due to small numbers of individuals aligned directly to social sciences within institutions, there can be limited opportunities to learn from colleagues and potential for individuals to feel isolated, especially given the pre-identified differences in CROSS compared to more scientific and/or technologically-driven fields. Therefore access to external networks and training could be greatly beneficial to increase capacity in this area. At a national level there could be opportunities for greater provision of this training specifically for those in social sciences supporting roles.

Secondly, as described above nearly all interviewees said that funding available to commercialise social sciences is extremely limited. Given that social sciences research can rarely be patented or licensed, securing funding from research councils could be hard because such requirements are often needed in funding applications. KE professionals who are not from the industry, and thus are not networked well, explain that they face difficulties in raising funds from private investment communities to support the seed and/or scale up of social sciences start-ups. Without relevant industry background or proper industry network, KE professionals have also suggested that it is particularly challenging for them to provide a viable business plan for the application of social sciences research at industry level is often difficult and much more tacit than scientifically- or technologically-based research.

There may be a role for external bodies to play in providing additional funding for social scientists in several areas. Firstly, funding could be used to subsidise the recruitment of experienced KE professionals with industry background. They could either have the practical skills needed to mentor academics in developing an enterprise, industry experiences to know the value and application of social sciences research to the industry, or valuable networking needed for these purposes. External bodies could also play a role in providing seed and/or scale-up funding specific to CROSS, and/or facilitate collaborations with industry stakeholders that would be interested in the value of social sciences research.

4. Conclusion & Next Steps

In conclusion, as the report has identified, there is a need to further support academics and institutions with CROSS research. The three thematic opportunities and challenges identified in this report are interlinked with each other. Firstly is the challenge of culture, through which we identified a traditional mind-set among social scientists who have misunderstood commercialisation and resisted its potential as a valid research pathway. Secondly, we discussed ECRs as a potential target

focus group of academics to foster a change in the culture and mind-set needed among social scientists to approach commercialisation. Lastly is the recognition of how important KE professionals are in championing and promoting the existing and future development of CROSS.

Moving forward, we have summarised the potential next steps that could be approached to further develop support in CROSS:

- Create promotional materials to highlight in-depth case studies that demonstrate insights, challenges, and opportunities of CROSS.
- Further investigation in the area of appropriate metrics and recording of impact and the relationships with incentives would be valuable to supporting a form of commercialisation suitable to the social sciences.
- Review research training frameworks at a national level which reflects on the different pathways of research. Consideration could also be given to drawing further attention to the RDF existing inclusion of commercialisation within the “Engagement and Impact” domain, providing backing to the area as a necessary skill set for the effective researcher.
- Support ECRs as a focus group of CROSS by encouraging HEIs to develop social sciences PhD/ECR research areas that are more contemporary and industry-relevant
- Facilitate a network of KE professionals on CROSS, in order to share insights and best practices and develop KE skills specific to this area.
- Create access to external networks and training for KE professionals in CROSS to increase capacity in this area. At a national level there could be opportunities for greater provision of this training specifically for those in social sciences supporting roles.
- Develop funding specific for CROSS, including for translational and KE activities; to support the seed and/or scale up of social sciences start-ups and to support recruitment of experienced KE professionals with industry background.

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