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Bridging the gap between domain of research and locus of impact: An examination of the UK's research excellence framework

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Abstract

- Purpose

This paper examines the relevance of academic research in business and management studies stream to various stakeholders. Stakeholder theory is used to examine the influence of research on various key beneficiaries and investigate the link between the domain of research and locus of impact.

- Design/methodology/approach

Research Excellence Framework 2014 (REF 2014) conducted in the UK provides a useful context and data for our research as REF 2014 encouraged universities to submit the information on research activities and their beneficiaries. This information is in the form of impact case studies which details the research, location of research and beneficiaries.

- Findings

The findings suggest that research with an international focus has a positive impact on industry stakeholders, especially multinational corporations as well as non-governmental organizations. Secondly, it shows how research has made a commercial impact in innovation and small and medium enterprises' growth while having limited impact on other domains such as social, legal, political and healthcare. More broadly, the findings indicate the degree of regional diversity. Also, the wider results-driven agenda in the UK can overestimate the research contribution to some stakeholders in the society.

- Research limitations/implications

Self-selection bias as universities might submit only few case studies.

- Practical implications

For research to generate long-term benefits for the wider society, it needs to engage more deeply with the whole range of stakeholders.

- Originality/value

This study contributes to understanding how research is consumed by stakeholders. The results indicate that while locally relevant research encourages local consumption; it is not assimilated across various stakeholders.

Keywords – research impact, rigor-relevance, stakeholder theory, practice

Introduction

In this paper, we examine the relevance of academic research in business and management studies stream to various stakeholders. We focus on the UK's Research Excellence Framework 2014 (REF 2014) and analyze the Business and Management Studies' impact case studies (ICSs) to determine the key knowledge consumption patterns between various stakeholders. Research Excellence Framework is the system for assessing the quality of research in UK higher education universities. Using stakeholder theory as its theoretical underpinnings (Freeman, 2010), this paper seeks to extend extant examination of the locus of business research activity and its possible impact on various stakeholders. The paper further aims to contribute to existing debates regarding the relevance of research for practitioners (Zahra and Newey, 2009).

Within the realms of the social sciences, scholars have emphasized that theory building combining across domains should take center stage in developing novel impact research (Colquitt and Zapata-Phelan, 2007). However, increasingly, there have been calls (Bartunek et al., 2006) for research excellence to be valued not only according to underlying theory development, but also in relation to how relevant and impactful are the research's conclusions. In a similar vein, Zahra and Newey (2009: 1060), suggest that theory building should impact five domains- theories, fields, disciplines, research communities, and key external stakeholders. This paper directly engages with the hitherto under-researched (Courpasson, 2013) fifth domain and focuses its attention on the impact of UK Business and Management schools on wider stakeholders. Within the UK, over the past decades, science has come under increasing pressure to become more relevant to society (Nightingale and Scott, 2007), and correspondingly, more accountable to the general taxpayer. The Research Excellence Framework (REF) being introduced for the 2008-2014 cycle (Pidd and Broadbent, 2015).

Crucially, a new 'impact' component seeks to assess more explicitly than before the cultural, political, economic and social 'impact' of research on wider UK society.

Firstly, this paper examines the theoretical and contextual background of the paper, in which it outlines a review of relevant literature and proposes the utility of using stakeholder theory to underpin the paper's empirical focus and findings. Subsequently, the paper elaborates the methodology and analysis of data gained from the REF 2014 impact case studies across the UK. The discussion of the findings and conclusions then follow.

Capturing 'impact': a review of relevant literature

Within the UK academic landscape, there exists an implicit awareness that academics, engaging in publicly funded research have a clear responsibility to seek to make some contributions to UK society. Seminal studies have focused on the relevance of academic research (Starkey and Madan, 2001), its impact (Smith et al., 2011), and moreover, the barriers which exist for academic research to be used in practice. Recently, there have been increasing calls for attempts to bridge the relevance gap, calling for increased collaboration between academics and practitioners (Rynes et al., 2001; Starkey and Madan, 2001) in an effort to create, exchange and utilize knowledge which is relevant and meaningful for a whole range of stakeholders (Boyer, 1997).

In order for an engaged methodological approach to a research project to work effectively, there is a necessity for the development of sustained and involved academic-practitioner relationships (Van de Ven, 2007). It involves 'grounding' the research issue in practitioner and academic domains; continuous interaction with people with different views and approaches; and an active interest in addressing practitioner issues, as well as advancing academic knowledge. Similarly, whilst it is often argued that the rigor (required within academia) is mutually exclusive to the relevance (required for practitioners), other voices have argued for the complementarity of rigor and relevance (Vermeulen, 2005).
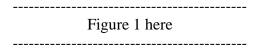
Zahra and Newey (2009) attempted to systematically capture the relationship between modes of theory building at the intersection and various impact domains within their depiction of an impact wheel. This paper focuses on their final domain, external stakeholders. In essence, business research by proactively staying in touch with the environment in which they exist, can develop new theories and fields of academic study, co-evolved in collaboration with external stakeholders (i.e., **businesses, industry, society, NGOs and public -sector organization**).

The appreciation of the need for Business schools to interact with a whole range of stakeholders is clearly positive, and aligns with the broader objectives of the REF process within the UK's Higher Education. There is still a need to fully appreciate the no-less important role of critical management research, which seeks to nurture wider forms of social change through engagement with diverse societal actors. However, until now, existing studies have not explored in depth the different types of impact the business research has made. The above discussions illustrate the importance of linking research relevance with the locus of knowledge creation and examining whether knowledge created in certain locations can generate wider impact than those in other areas.

Stakeholder theory: A useful lens through which to capture impact

As stated above, in recent years, UK Higher Education institutions, as organizations receiving large amounts of public money, increasingly have had to seek to become more relevant (Nightingale and Scott, 2007) and accountable to wider society. In order to examine the dimensionality of impact and also how to evaluate impact within our analysis of the empirical data in the next section, this section highlights the utility of using stakeholder theory (Freeman and Phillips, 2002; Freeman et al., 2010) as the paper's underpinning theoretical lens. Our goal in this paper is not to provide a comprehensive review on stakeholder-based view (cf., Post et al., 2002; Freeman et al., 2010; Park et al., 2014 for a review), but rather to demonstrate its value for understanding the impact of research on variety of stakeholders.

Stakeholder theory considers stakeholders as groups and individuals who can affect, or are affected by, the achievement of an organization's mission (Freeman and Phillips, 2002; Freeman, 2010). The stakeholders play a vital role in influencing the strategies undertaken by the organizations, and they have to pay attention to their stakeholders rather than maximizing profits for their shareholders (e.g., Post et al., 2002; Freeman et al., 2010). Primary stakeholders, for example, may include those relationships 'which are crucial for the organization to realize its mission in producing goods or services' (Park et al., 2014: 968). For a firm these may include the firm's managers and employees, business collaborators, suppliers and consumers. Secondary stakeholders meanwhile may include the local government, media, community and NGOs. In order to avoid criticisms relating to the breadth of the stakeholder concept, for the purposes of this study, we outline the dimensions of impact examined in our study. The interplay between research impact and locus of knowledge creation is depicted in Figure 1, which includes an appreciation that research outputs from UK HE institutions may take place in the UK, abroad or in both locations.

Figure 1 here

In this context, as derived from REF 2014, commercial impact research relates to the growth of firms including SMEs and MNEs, whilst social impact research incorporates research that focuses on issues such as poverty alleviation, unemployment, ageing population and climate change. Legal and political impact research relates to how research can change legal systems, (through initiating or formulating legal regulations for example) and change political systems (by feeding into policy recommendations) respectively. Finally, research that impacts on healthcare consists of work which, for example, evidences the impact of regulatory changes (e.g. effects of smoking bans on health). The location of research projects conducted

by universities will have clear linkages with locus of impact and certain stakeholders will derive higher impact from certain types of research than others.

Methodology and Data

Background

We use data from REF 2014 to conduct our analysis. It was the seventh occasion that UK universities had undertaken a formal assessment of research. Within this process, universities had the opportunity to select which staff to include in their REF submission and under which discipline. REF 2014 included sub-profiles for outputs (65%), research impact (weighted at 20%) and research environment (15%). In total, 101 institutions returned a submission within the 'Business and Management Studies' classification, with the results highlighting an increase in the quality of research since 2008 being undertaken within this discipline.

Data

The REF 2014 data was coded primarily by one of the researcher involved in this study. The quality constraint was provided by interrater reliability. To provide internal validity of data collection (Cook and Campbell, 1976), we used two phased approach to test the robustness of our data coding. Prior to this robustness test, it was decided that Intraclass Correlation Coefficient 0.70 can be considered satisfactory and those above 0.80 good. In the first phase, a sub-sample of the ICSs were independently coded by two other researchers involved in this study, and we obtained Intraclass Correlation Coefficient of 0.80. To further test the robustness of coding used in this research, in phase two of robustness test, we provided these sub-sample of ICSs to two academics (one involved in regional studies and one involved in social enterprise studies) who were not part of this project and not aware of the research questions. The Intraclass Correlation Coefficient was 0.75 in this case. This is within the tolerance levels for divergence of results.

Using university and city-level information on the research impact submission, firstly, we examined the regional focus of the projects. These submissions can present research

activities being carried out in the UK, abroad as well as those projects including both domestic and international collaborations. For example, one case study states that "The study in India (2010a), based on a nation-wide sample, addressed the impact of microfinancial services on household poverty, ... We have found evidence (2010b, 2012a) in Sri Lanka that microinsurance has ..." Clearly here the locus of knowledge creation is in a foreign context.

Similarly, some case studies have a close links to the local business and policy ecology, "...their continued involvement with the production of TSAs for Wales has contributed to a change in the international landscape of how governments evaluate and manage tourism, ...". Thus, we classify all the submissions into these three categories based on the location of the research activity.

Table 1 shows the regional distribution of the research projects across the UK, showing the location of the universities that are creating the knowledge from local, international or both local and international projects. London, which has a considerably larger number of universities than other cities in the UK had the largest number of submissions followed by Manchester. Edinburgh and Glasgow are powerhouses of impact case study creation in Scotland, whereas, Cardiff has the highest number of case studies from Wales. Next, we considered the stakeholders who are primary consumers of the research activities as indicated in the impact case studies. We determined that the stakeholders who consume this research output are – industry stakeholders who derive commercial outputs (including MNEs and SMEs), and NGOs (social impact), political bodies (political impact), legal organizations (legal impact) and healthcare sector (healthcare impact).

Insert Table 1 here

When the impact case study stated that its primary locus of influence was on the social benefits and social causes, we classified the impact case study as creating social impact. For

example, "… provided advice that contributed to shaping policy on social enterprise at a national and local level, as well as shaping the wider environment on social enterprise…"

We classified the impact case study as creating political impact when the narrative in the submission focused on political outcomes. For example, one impact case study states that "the research conducted by the CLRGR directly influenced policy in Wales and informed the approach adopted by the Coalition Government in England. The direct beneficiaries of the research include senior politicians, special advisers, civil servants, local government officers and councillors."
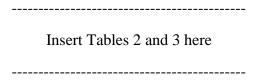
Similarly, submissions like these – "... co-founded the Tax Justice Network in 2003 and since then has been a senior adviser to their campaigns to analyse and communicate the mechanisms of tax avoidance and offshore finance to the general public" - were classified as legal impact case studies.

And finally, impact case study with discourse like – "This research has had a direct impact on national policy debates relating to the use of HCAs, the appropriate staffing and management of the HCA workforce, as well as its training [Section 5: C9, C11]." – were classified as healthcare studies. Also, invariably the universities and governmental organizations involved in these projects will also be the key recipients of these research activities. As such, we use government as a control variable in our analysis.

Table 2 shows the distribution of projects according to their regional focus (UK and/or abroad) and the impact of their research activities. We observe that 153 impact case studies emerging from local UK research discuss that industry participants are one of their key stakeholders in terms of research impact. Also, around 20% of the industry stakeholders are SMEs. This result is revealing and aligns with several recent funding and policy initiatives (Cowling, 2016) that have been directed towards improving the contribution of SMEs to UK

economy. For example, creation of the Local Enterprise Partnerships (LEPs) is one such initiative in the UK.

Interestingly, MNEs are the smallest group of stakeholders in the impact case studies. This is again interesting given the importance of MNEs to the UK economy. One of the explanations for this low engagement with MNEs could be the fact that unlike other faculties such as Engineering, the MNEs' participation in business studies might not be directly addressable in impact case studies. Since, there are too few observations for legal, political and healthcare impact; at this stage, we decided to exclude these impact case studies from our empirical analysis. We also control for the possible effects of government involvement in the project and for a large city effect, which London may generate owing to its dominance of political life in the UK. Therefore, we have two control variables, Government = 1 if government is involved in the project or 0 otherwise, and London = 1 if city is London or 0 otherwise. Table 3 presents the correlation matrix and summary statistics. We observe no multicollinearity issues in this study.

Insert Tables 2 and 3 here

Methodology and Results

To test our hypotheses on links between locus of research and the potential impact on different external stakeholders such as public and private sector organizations and NGOs which benefit from the universities' research, we employed a Probit model since our dependent variable is a dummy variable. Table 4 reports the results of the Probit regression models. Model (1) in Table 4 tests whether UK based projects and international project are positively related to the commercial impact on the stakeholders mentioned in the impact case studies. We observe that international projects have positive and significant effects on the commercial impact of the stakeholders (coeff. 0.371, sign. 5% level). Also, from model (3) we see that international

projects have positive and significant effects on the commercial activities undertaken by MNEs (coeff. 0.799, sign. 1% level). Similarly, we observe from model (4) that international projects have positive and significant effects (coeff. 1.073, sign. 1% level) on the social impact observed in impact case studies.

Insert Table 4 here

Among the control variables, we observe that government involvement in the project is likely to have a negative effect on the commercial impact observed on the MNEs. Yet, on the other hand, we see no impact of government involvement on the SMEs' commercial impact. One explanation for this could be that government's involvement could indicate future policy effects, but not necessarily, direct short-term commercial gains for the SMEs involved in the project or present in the regional context.

Also, the results of our analysis indicate that London has a negative effect on the research geared towards SMEs, and for universities based in London, their research's commercial impact is negative. This is an interesting result since London's SMEs are drivers of UK's creative and export-oriented industries. This region has been classed as a creative city by several authors (Pratt and Hutton, 2013). This result could indicate that the value research is higher in regions where there are no external drivers of growth. Hence, research impact is higher in these areas. Pratt and Hutton (2013) reflect in their work that cities like London will be sustained by private spending, whereas, others require higher degree of public spending in their regeneration and growth activities.

Discussion

In this paper we examined the impact of business research within the UK on a wide range of stakeholders by examining the impact case studies submitted to REF 2014. There have been

calls to bridge the theory-practice gap (Bartunek, et al., 2006; Zahra and Newey, 2009). We still do not know much about the impact the business research can have on stakeholders, including policymakers and practitioners. The collaborative partnerships between practitioners and academics have been suggested to be the key element for the business studies to make influential impact. The analysis of the impact case studies offers us the opportunity to look into the impact of business research in the UK (Pidd and Broadbent, 2015).

Our first finding is that having local and international projects are important for making the impact not only on local stakeholders, but also on international stakeholders such as MNEs. Our findings indicate that NGOs also play an important role in creating an international impact of UK based research. The business and management research projects which have international focus would benefit the NGOs and MNEs more than local stakeholders. Hence, we propose that:

Proposition 1: The location of research projects conducted by universities will have clear linkages with locus of impact, and higher impact will be generated from international projects.

Another key finding is that we identified regional variations in impactful research originating within the UK, for instance we find that the impactful research is being driven by the powerful hubs of universities such as London and Manchester with limited impactful research originating from so-called polytechnic universities and peripheral based universities.

In terms of influence of London universities, we observe that research originating from this region has made more impact on policy and governance issues compared to topics relevant for SMEs' growth and innovation, thus, our study points to an important regional variation of topics and impact on different stakeholders. We further find that knowledge that is locally relevant can encourage local consumption; however, it might not be strongly assimilated across various stakeholders. We argue that impact case studies and such results driven research can

overestimate the influence and contribution of some stakeholders in the society. Yet, long-term benefit of research requires contribution and consumption by different stakeholders.

We also find that most of the business research has made more commercial impact such as in the domains of innovation and SMEs and growth, and the business management has limited effect on other domains such as social, legal, political, and healthcare. These findings lead us to propose that:

Proposition 2: Certain stakeholders are likely to derive higher benefits from certain types of research than others.

We observe that the topics that have direct relevance to the ongoing economic/commercial, social and political issues are most likely to be researched, yet we observe absence of topics related to demographic change and EU-UK or US-UK relationship. In other words, the business research is silent on aging population or the UK-EU regional partnership. One caveat to this observation could be that research and dissemination takes time and much of the work in this area, potentially funded by Horizon 2020 research grants, are still under development and unlikely to have been included in the last REF.

We see that there is limited and negative impact of research undertaken in London on the SMEs, thus, highlighting the focus and importance of academic stakeholders in other regions on study of SMEs. London has historically had higher number of export-oriented and high-growth industries. Hence, research with local flavour is essential for growth in other regions. Much of the government policy has been geared towards this and is essential to the industrial policy of the UK government. This is especially true since much of the investment in regeneration in Wales (Dicks, 2014) and Northern Powerhouses (Haughton et al., 2016; Martin et al., 2016) have been limited, problematic and slow in coming by.

The findings of this paper will be valuable for both academics as well as higher education funding organizations as our findings highlight the narrow scope of the research

being submitted, not necessarily carried out, in the business schools. Though multidisciplinary research can contribute to solving social challenges, our study shows that it is not necessarily championed by business schools in their impact case studies.

Overall, we note that submissions do not imply this is the complete information on research being carried out at the university, but, being included in the REF implies that the universities consider the research to be of value to some of their stakeholders. Also, future studies can examine the knowledge sharing mechanisms used in the research projects.

Conclusion

In summary, we have provided a broad picture of the impact of business research on different stakeholders by examining all the impact case studies submitted for REF 2014 and find interesting patterns of impact from commercial, social, legal and political area. We highlight the impact such research has on the international stakeholders such as MNEs and NGOs. We observe that internationally focused research will have positive influence on multinational corporations as well as non-governmental organizations. Also, we find that business research has made a commercial effect on innovation and in small and medium enterprises' growth. Yet, business research has limited impact on other areas. Our research can be generalized in other countries where research in business school has impact driven agenda along with priority for solving business challenges.

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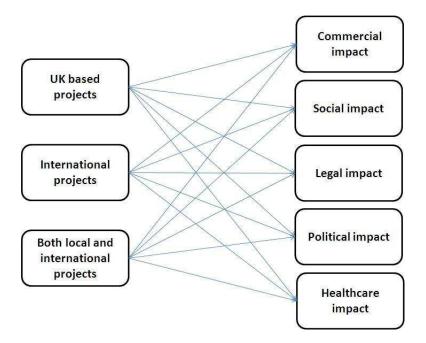
Figure 1. Locus of research activities and its influence on various stakeholders

Table 1. Regional distribution of research projects across UK

City	UK based projects	International projects	Both local and international projects
Aberdeen	5	1	0
Aberystwyth	3	0	0
Bangor	1	0	3
Bath	7	0	0
Belfast	3	0	3
Birmingham	9	0	4
Bournemouth	1	0	1
Bradford	3	0	0
Brighton	6	0	1
Bristol	6	0	0
Cambridge	4	0	2
Canterbury	2	2	1
Cardiff	7	0	3
Carlisle	1	1	0
Chester	1	0	1
Colchester	5	1	0
Coventry	9	0	4
Cranfield	3	0	0
Derby	2	0	0
Durham	5	0	0
Edinburgh	9	0	4
Exeter	3	0	1
Glasgow	11	1	0
Guildford	5	0	0
Hamilton	2	0	0
Hatfield	1	0	1
High Wycombe	1	1	0
Huddersfield	2	1	0
Hull	2	2	1
Keele	3	0	0
Kingston upon Thames	3	0	0
Lancaster	12	0	0
Leeds	8	1	0
Leicester	5	1	2
Lincoln	2	0	0
Liverpool	4	1	1
London	60	9	9
Loughborough	6	0	1
Luton	1	0	1
Manchester	12	1	4
Middlesbrough	2	0	0
Milton Keynes	3	0	0

Nethergate	2	0	0
Newcastle	10	0	0
Northampton	1	1	0
Norwich	1	0	2
Nottingham	12	0	1
Oxford	3	1	4
Plymouth	3	0	1
Portsmouth	4	0	1
Preston	1	1	0
Reading	4	0	1
Salford	2	0	1
Sheffield	5	0	1
Southampton	3	1	0
St Andrews	3	0	0
Stirling	5	0	0
Stoke-on-Trent	1	1	0
Swansea	3	0	1
Ulster	1	0	2
Uxbridge	6	1	0
Worcester	2	0	0
York	4	1	0
Grand Total	**316**	**30**	**63**

Table 2. Locus of knowledge creation and sphere of influence*

	Commercial impact	Commercial impact - SMEs	Commercial impact - MNEs	Social impact	Legal impact	Political impact	Healthcare impact
UK based project	153	34	12	31	10	10	21
International project	16	4	6	8	0	0	1
Both local and international projects	39	10	9	3	1	1	1

* total number of these impacts are greater than our sample as some impact case studies overlapped considerably into two impact areas and could not be assigned into single impact area.

Table 3. Correlation matrix and summary statistics

	Mean	S.D.	Commercial impact	Commercial impact - SMEs	Commercial impact - MNEs	Social impact	UK based project	International project	Both local and international projects	Government	London
Commercial impact	0.5085	0.5005	1.0000								
Commercial impact - SMEs	0.1246	0.3307	0.2970*	1.0000							
Commercial impact - MNEs	0.0660	0.2486	0.2417*	0.1083	1.0000						
Social impact	0.1026	0.3039	-0.0380	0.0430	-0.0575	1.0000					
UK based project	0.9266	0.2610	-0.0139	-0.0074	-0.1518*	-0.1520*	1.0000				
International project	0.2273	0.4196	0.0899	0.0424	0.2082*	0.0279	-0.5186*	1.0000			
Both local and international projects	0.1540	0.3614	0.0943	0.0440	0.1321*	-0.0774	0.1201	0.7866*	1.0000		
Government	0.7237	0.4477	-0.2683*	-0.0151	-0.2101*	0.0289	0.0149	0.0091	0.0213	1.0000	
London	0.1907	0.3933	0.0041	-0.1267	-0.0539	-0.0207	-0.0783	0.0039	-0.0520	-0.0341	1.0000

Correlation significant * $p < 0.1$

Table 4. Analysis of focus and sphere of influence of knowledge created with different locational focus.

	(1) Commercial impact	(2) Commercial impact - SMEs	(3) Commercial impact - MNEs	(4) Social impact
UK based project	0.261	-0.162	-0.220	0.378
	(0.294)	(0.212)	(0.344)	(0.290)
International project	0.371**	-0.0382	0.799***	1.073***
	(0.184)	(0.351)	(0.249)	(0.373)
Government	-0.795***	-0.0743	-0.896***	0.118
	(0.148)	(0.180)	(0.211)	(0.198)
London	0.000741	-0.707**	-0.397	-0.172
	(0.157)	(0.277)	(0.296)	(0.223)
Constant	0.911***	-0.879***	-0.426*	-1.729***
	(0.213)	(0.231)	(0.242)	(0.320)
Pseudo R2	0.0613	0.1353	0.1727	0.0458
Prob > chi2	0.0000	0.0294	0.000	0.0367
Observations	409	409	409	409

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1