Organisational Social Responsibilities of University-Industry Research Centres – A Conceptual Framework

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ORGANISATIONAL SOCIAL RESPONSIBILITIES OF UNIVERSITY-INDUSTRY RESEARCH CENTRES – A CONCEPTUAL FRAMEWORK

ABSTRACT:

Growing university-industry engagement (UIE) is a crucial element of Australia’s innovation goals but university-industry research centres (UIRC) with the oil and gas industry are shaped by (1) public notions of “industry-bias (2) oil and gas companies have been at the centre of developments in Corporate Social Responsibility (CSR) (Frynas, 2009) (3) the suspension of university social responsibilities by UIRCs such as open access to publications and staff. Knowing that the knowledge produced in UIRCs will be used in scientific, technical, social and political realms, and that the integrity, relevance and value of knowledge is open to questioning, it is necessary to attend to how UIRCs frame and govern their social responsibilities. This paper presents seven UIRC governance logics and an integrated organisational social responsibility framework that together form a conceptual framework for analysis of UIRCs,

Keywords: corporate social responsibility (CSR), values, governance, sustainability

PAPER TEXT:

GROWTH OF UNIVERSITY-INDUSTRY ENGAGEMENT BRINGS CHALLENGES

University-industry engagement (UIE) is seen as a key element of modernising the Australian economy and higher education system, especially under the current national “innovation nation” policy agenda. Not just in Australia but across the globe, governments seek to stimulate economic productivity and advance social progress by providing incentives to businesses and universities to partner. Three drivers of change will continue and shape UIE for years to come, including (1) the increased scope and cost of the global research enterprise, (2) the proportional reduction in
government spending, and (3) the evolution of national models of research and higher education governance. Project-based joint ventures between university and industry partners – university-industry research centres (UIRCs) - are an increasingly prevalent organisational form that complements the current ‘knowledge economy’. At the same, commentators note that the social responsibilities of organisations are becoming more important across business, political, academic and community settings. Both the UN Sustainable Development Goals (2015) and the Paris COP 21 (2015) point to the need for organisations across the globe to limit the causes and the negative impacts of climate change, especially in the area of energy. Universities are well place to contribute to bringing new knowledge to the ‘wicked problem’ of climate change and educate people and organisations to change their behaviours. Building on the idea that we need to have a more complete understanding of how varying organisational forms across differing context define and create structures to govern their social responsibilities, this paper considers the governance frameworks and organisational social responsibilities of UIRCs.

**Motivation and Research Question**

When looking behind the omnipresent façade that UIE often proves to be, the image of universities tempering the “profit at all costs” motive of business is challenged by exposes of questionable or illegal research and research governance practices. A prevailing notion is that industry-funded research is inherently biased due to unchecked private interests, unless scrutinised by external parties and closely governed. Controversial cases of UIE from the tobacco, pharmaceutical, processed food, nuclear, gambling and agricultural industries have caught the attention of scholars and the broader community (Andereggen, Vischer, & Boutellier, 2012; Andréasson & McCambridge, 2016; Bero, 2005; Bridgman, 2009; Cassidy, Loussouarn, & Pisac, 2014; Casswell, 2013; Radder, 2010; Resnik & Elliott, 2013; Shwed, Sørensen, & Baldassarri, 2015; Ulucanlar, Fooks, Hatchard, & Gilmore, 2014; Young & Markham, 2015).

There is a perennial debate about how universities sustain productive connections with different publics whilst keeping sufficient distance to sustain critical and long-term scientific enquiry. Varying
combinations of knowledge and resources from governments, universities, businesses and civil society are needed to solve ‘wicked problems’. When UIRC seek to solve ‘wicked problems’ at the nexus of the environment, energy, public health and the economy, not only are the underlying systems complex and uncertain but the social values associated with these systems are disputed and challenging. The public confidence in UIRC research cannot be presumed due to the conflicting social values ingrained in research into ‘wicked problems’. Parties external to the UIRC with rights and interests in the research findings are not only interested in accessing the results but also knowing how and why the research was undertaken. How scientific knowledge is produced and utilised by participants in scientific and political debates warrants closer scrutiny of UIRC governance structure. Studying how UIE is organised and governed within this conflicted socio-political context requires a robust theoretical framework. Thus, the research question becomes, what is an effective way to extend our knowledge of UIRCs (a hybrid organisation at the boundary of science and non-science, public, private and national objectives and reaching across scholarly disciplines and professions) and organisational social responsibilities of UIRCs?

LITERATURE REVIEW: ORGANISATIONAL SOCIAL RESPONSIBILITIES OF UNIVERSITY INDUSTRY RESEARCH CENTRES (UIRCS)

The social responsibilities of UIRCs differ from that found in corporations, universities, professions or public organisations. UIRCs have different organisational settings and are not just small versions of universities. This notion is spurring a continuing research agenda focussed on the analysis of sub-organisational units within universities including collaborative or cooperative research centres (Boardman, Gray, & Rivers, 2013; Turpin, Garrett-Jones, & Woolley, 2011), technology transfer offices (Hockaday, 2013; Jain & George, 2007); research institutes (Philbin, Jones, Brandon, & Hawkes, 2014) science parks (Albahari, Catalano, & Landoni, 2013) industry liaison offices (Lee, Ohta, & Kakehi, 2010); and centres of excellence (Beerkens, 2009). There is a need to better understand Australian UIRCs that reflects the structure of national economy, which is
dominated by the services and extractives sectors, and the characteristics of the Australian national higher education system.

Whilst the abundant literature on CSR in various organisational contexts has overlooked UIRCs, there is a growing interest in university social responsibility (Bok, 1982; Esfijani, Hussain, & Chang, 2013; Hopenienė, Kunigėlienė, & Minkutė-Henrickson, 2011; Quezada, 2011; Reiser, 2008; Sotomayor, 2012; Wigmore-Álvarez & Ruiz-Lozano, 2012) and university-level sustainability reporting (Alonso-Almeida, Marimon, Casani, & Rodriguez-Pomeda, 2015; Bice & Coates, 2016). Universities are joining global corporate social responsibility standards reporting systems including the Global Compact (GC), International Standards Organisation (ISO) 26000: Corporate Social Responsibility and the Global Reporting Initiative (GRI), as well as university-specific sustainability and social responsibility groups including the Talloires Network, University Social Responsibility Alliance (USRA) and the Sustainability Tracking, Assessment and Rating System (STARS). The array of benefits afforded to universities that self-identify, or are identified as being socially responsible, are not easily quantifiable but it can be assumed that the benefits outweigh the costs and potential reputation risks.

Certain business functions are prominent within the UIE literature and governance arrangements frequently discussed. Of the 971 peer-reviewed articles regarding UIE identified in a search on Web of Science conducted in February 2015 many analysed UIE governance arrangements at different scales. From the sub-university, for example, technical transfer offices (Dill, 1995), case studies of individual universities (Shane, 2002), universities within regions (Gunasekara, 2006) and national higher education system (Woolgar, 2007). Discussion on corporate and university responsibility in the UIE literature is dominated by references to commercialization and only considers the specific context of the nanotechnology (Weil, 2003, McCarthy & Kelty, 2010) and cultural industries (Zukauskaite, 2012). That is in addition to isolated features of organisational social responsibilities, i.e. accountability to funders, ethical decision-making of scientists or
communication and access to research findings (Ankrah, 2013; Perkmann et al., 2013). This conceptual paper lays the foundations for a research project that contributes to both the CSR and the UIE literature, both of which are essentially ‘contested concepts’ commonly shaped by normative debates, with a novel conceptual framework and an empirical study of an outlier case study – a research centre funded by operators of the coal seam gas to liquid natural gas (CSG-LNG) industry.

**APPROACH AND METHODS**

In 2013 I commenced as a PhD student\(^1\) linked to a research project “Research integrity and governance in a contentious policy arena - Guidelines and pathways for the Centre for Coal Seam Gas\(^2\)”\(^.\) As a participant observer of the Centre for Coal Seam Gas at the University of Queensland (UQ-CCSG) from 2013-2016, I observed meetings and activities, interviewed members of the UIRC and other connected parties, analysed administrative, management and research documents and other forms of communication. I approached the collection and analysis of data from the organisational studies perspective of organisational ethnographies in the tradition of Alvesson and Deetz (2000; Pedersen & Humle, 2016). In addition to considering how the UQ-CCSG is organised, the trajectory of knowledge about the coal seam gas to liquefied natural gas (CSG-LNG) industry within Queensland and the nature of other UIRCs focussed on shale gas and tar sands (other significant types of natural gas extracted from unconventional reservoirs) were considered as important contextual ideas. The case study of the UQ-CCSG surfaced various ways in which the goals of the UIRC were framed by participants – (1) research and development, (2) developing communities of practice, (3) engagement with local universities as part of company’s CSR or local procurement strategies, and (4) UIE as meeting the government’s regulatory requirements.

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\(^2\) The UQ-CCSG receives its funding from the gas industry and the University of Queensland. Further details can be found at [www.ccsgr.uq.edu.au](http://www.ccsgr.uq.edu.au)
To make sense of the large amounts of data and to steer my project away from other scholars working in similar fields, the focus of my work became the governance of UIE addressing ‘wicked problems’ and still further focussed, the framing and governance of organisational social responsibilities by UIRCs. Few generalizations are currently possible about the social contract between UIRCs and society, and how UIRCs engage with the broad array of stakeholders, owing to a lack of common terms and concepts with which to compare the wide range of practices employed. This paper proposes a conceptual framework and typology based on UIRC governance logics and an integrated organisational social responsibility framework. The traditionally under-represented social responsibility values in UIE governance structures including public engagement and social justice, accountability beyond funder and regulator, the role of the university in stewarding sustainability and science education are brought to the fore (Trencher et al., 2014).

The objective of this paper is not to devise a universal theory but devise a conceptual framework situated within a context (UIRC) that provides a plausible explanation for UIRCs engaging in ‘hot button’ issues or ‘wicked problems’. In conjunction with empirical studies of UIRCs operating in controversial arenas, the conceptual framework presented not only contributes to the CSR and UIE scholarly literatures but to contemporary Australian innovation policy and university management strategies.

PART ONE OF THE CONCEPTUAL FRAMEWORK - GOVERNING UNIVERSITY-INDUSTRY RESEARCH CENTRES

Governance is conceptualised as being the structures and practices that frame how leaders and managers coordinate and control agents and prioritise the competing claims of organisational stakeholders. Despite the volume of scholarly and policy work related to the governance of UIE, the types and patterns of UIE do not appear to assume typical forms or sets of arrangements (Bozeman, Fay, & Slade, 2013; Katz & Martin, 1997; Thune, 2007). Understanding UIE begins with an appreciation of how a contemporary university environment operates; that is, where academic, political and industrial activities can and do overlap and occupy a ‘hybrid space’. In this space in
science, politics and industry mingle, and the components may or may not embody elements of some or all of these activities (Tuunainen, 2005; Tuunainen & Knuuttila, 2009).

UIRCs are characterised by ‘polycentric governance’, undertaken by both state and non-state actors rather than a single dominant and authoritative regulator (Black, 2008). A mix of regulatory strategies ranging from legal enforcement to persuasion and incentives steer the practices (Ayres and Braithwaite, 1992). Contemporary universities are party to a number of governance and reporting frameworks that are devised outside of the academe, which points to how important it is for universities, and all of the constituent units, to identify and manage a broad and dynamic set of stakeholders. This paper adds to the rich tradition of conceptualising dynamic university organisational structures from a stakeholder perspective (Acworth, 2008; Alarcón-del-Amo, Casablancas-Segura, & Llonch, 2015; Alonso-Almeida et al., 2015; Aula & Tienari, 2011; Bartlett, McDonald, & Pini, 2015; Benneworth, de Boer, & Jongbloed, 2015; de Lange, 2013; Frasquet, Calderon, & Cervera, 2012; Geryk, 2011; Miller, McAdam, & McAdam, 2014; Rod & Paliwoda, 2003; Tetřevová & Sabolová, 2010; Zaharia, Stancu, & Diaconu, 2010)

Universities and all their constituent parts including UIRCs continue in a state of flux balancing multiple stakeholder influences. The conflicting stakeholder groups (i.e. academics, students, governments, businesses, technology transfer offices, administrators) shape governance structures and processes that are not co-produced but rather a series of transactions and transitions (Barnett, 2016; Frost, Hattke, & Reihlen, 2016; Miller et al., 2014). UIRC are also shaped through government policy and regulatory initiatives focussed on shaping specified features of the economy and industrial, innovation, science and higher education systems (Popp Berman, 2012). The governance structures of UIRC are continually shaped by multiple stakeholders depending upon their influence and saliency. Contemporary universities are governed by partially competing logics that can be differentiated along two dimensions. These logics are reproduced within UIRCs albeit it with differing levels of emphasis (Frost et al., 2016). Table 1 provides a template of UIRC governance logics. In this table, columns define the origin of the UIRC’s espoused goal system, while rows define the scope of the participatory
involvement of stakeholders. Each of the seven identified governance logics – peer, professions, New Public Management (NPM), market, research topic governance/regulator, committee-based and community/society engagement - encompasses specific and internally consistent forms ensuring that it is impossible to reduce the ‘modus operandi’ of universities to a single governance framework.

PART TWO OF THE CONCEPTUAL FRAMEWORK - ORGANISATIONAL SOCIAL RESPONSIBILITIES OF UNIVERSITY-INDUSTRY RESEARCH CENTRES

The Framework for University-Industry Engagement with Social Responsibility (FUIESR – pronounced ‘fuser’), can be seen as a product of the social and intellectual challenges that universities have been facing, which are sometimes construed as crises. The intellectual challenges are associated the uncertainties of the postmodern condition, the changing boundaries of social institutions, growing centrality of knowledge within society and the resultant changes in how universities operate. There are implications for the way in which universities engage with industry. The FUIESR presented in Table 2 draws together the Corporate Social Responsibility (CSR), University Social Responsibility (USR), Responsible Research and Innovation (RRI) and Value-Centred Design (VCD) frameworks that are pertinent to UIE. That is, the frameworks used to categorise the social responsibilities of firms, universities, research processes and industrial design. The normative and prescriptive social responsibility frameworks have emerged from various fields placing emphasis on different social responsibility values. The polycentric governance logics as outlined in Table 1 suggest that governance and social responsibilities are not stable, nor clearly articulated when brought together in the hybrid organisation of a UIRC. The process of articulating and anchoring key social responsibility values should support not only closer engagement with the UIRC members, but also the UIRC and their wider groups of stakeholders. The FUIESR draws heavily upon the ISO26000
framework for several reasons: most sections are relevant to UIE practices, the language is understood by practitioners and academics, is globally recognised, the four gas operators report using it as it is prevalent in the petroleum industry and MNCs and controversial industries are more likely to CSR/sustainability reporting.

Insert Table 2 about here

DISCUSSION

The challenge for the leaders of UIRCs is to keep balancing the demands of many stakeholders with objectives that are diverse – the advancement of science, social progress, environmental and sustainability, profit, national interests and other goals - whilst maintaining access to resources and funding. Most UIRCs are not of interest to those beyond the network of members. However when the research is of produced for ‘hot button’ topics that are contemporary, unfolding and contentious, how UIRCs are governed and how the rights and interests of the community becomes significant. While UIRCs are not a new phenomenon and are some academic disciplines that traditionally have strong UIE, what is more recent is the notion of quantifying social responsibilities and impacts.

Currently most ‘responsible research’ initiatives in Australia are centred around research integrity and ethics frameworks, focussed on limiting misconduct through building the capacity of individual researchers and enacting compliance arrangements. How socially responsible research practices, i.e. increasing community involvement in the ‘research enterprise’ through meeting community expectations of accountability, participation and extending people’s knowledge of science, are embedded in to the organisational structures and decision-making mechanisms of universities are on the periphery or overlooked entirely. Undoubtedly, how UIRCs are socially responsible contributes to how contemporary research-intensive universities, and the knowledge they produce, continue to be legitimate and relevant in a rapidly changing society. The question then becomes how do universities,
and all the constituent units, prioritise the production of socially responsible research? That is research that has positive impacts on communities or the environment, or both.

In Australia, most universities receive the majority of their income from governments. The governments have moral and legal obligations to meet the objectives of the UN Sustainable Development Goals (2015) and the Paris COP 21 (2015) arrangements, and as publically-funded education institutions, universities have a correlated mission to promote sustainable development through research and teaching, and the creation and dissemination of knowledge. In consideration of the significance of sustainable development, the social responsibilities of universities, especially the industry-facing UIRCs, is worthy of consideration.

As noted, Australian research integrity frameworks focus on the potential harms of specific research programs on individuals’ health and wellbeing, overlooking the cumulative impacts of the ‘research enterprise’ on communities and the environment. In one way, universities are becoming more accountable to the government through mission-specified funding arrangements and associated reporting. In another way, the increased attention on research commercialisation ensures that some new knowledge produced by universities is codified, costed and shared in confidence with funders making universities less accountable to stakeholders. The tensions between private, public and national interests within universities, and the public controversies that sometimes accompany them, point to the need for university leaders to define what the social responsibilities of all university units are. Universities have multiple missions that need to be balanced across a variety of settings. The university mission of creating new knowledge and educating people, while complying with government, funder, community and academic expectations about how and what research is undertake, is a difficult balancing act. The language and framing of organisational social responsibility provides a conceptual framework to explore how universities engage with industry partners, the government and communities on matters of public interest.
CONCLUSION

The UQ-CCSG engagement with the nascent CSG-LNG industry illuminates some of the tensions facing UIE involving new industries, new technologies and public institutions’ involvement in public debates; the future of UIE; and the role of UIRC in quantifying, stabilising and legitimising new industries. Recognising how well CSR practices are understood in the oil and gas industry, the conceptual framework was developed to be appreciated not only by the researchers and professionals involved in the university partnership with the CSG-LNG firms at the centre of the research project, but university administrators and higher education policy makers more broadly.

This research seeks to augment the highly normative and frequently uncritical UIE literature with an empirical study of the, often intangible, social dimensions of the UIE participating in public debates. Heeding cautions from scholars of anthropology and Critical Management Studies (CMS) to challenge underlying “root metaphors” of phenomenon presented in the existing literature, this research seeks to problematize the institutionalization of UIE engagement (Alvesson & Sandberg, 2011; Brown, 2016; Shore & McLauchlan, 2012). That is, question whether the drive to expand UIE across all industry sectors is socially responsive and responsible, and whether the public-funding and legitimising of some industry sectors or industrial processes is detrimental to broader social goals.
REFERENCES


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Table 1: Template of Contemporary UIRC Governance Logics

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>System of Missions and Goals</th>
<th>Defined within Universities</th>
<th>Defined by the Academe</th>
<th>Defined outside the Academe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homogeneous</td>
<td></td>
<td>X</td>
<td>UIRC as self-governing scientific community</td>
<td>UIRC as unit of profession Governance of Professions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>Peer Governance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>UIRC / University as instrument for political goals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>New Public Management Governance</td>
</tr>
<tr>
<td>Diverse</td>
<td></td>
<td>University as representative democracy</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Committee-based (Group) governance</td>
<td></td>
<td>University as market-orientated service provider</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Market Governance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>University as instrument for regulatory missions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Research Topic Governance / Regulator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>University for instrument for social progress and public health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Community /Social Engagement Governance</td>
</tr>
</tbody>
</table>

(Adapted from Frost et al., 2016:3; Seeber et.al, 2015)
Table 2: Framework for University-Industry Engagement with Social Responsibility

<table>
<thead>
<tr>
<th>Key Principles</th>
<th>Corporate Social Responsibility</th>
<th>University Social Responsibility</th>
<th>Responsible Research and Innovation</th>
<th>Value Centred Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Accountability</td>
<td>✓</td>
<td>Positive Influence and Impact on Society</td>
<td>Open Access: transparent and accessible</td>
<td>✓</td>
</tr>
<tr>
<td>2 Transparency</td>
<td>✓</td>
<td>X</td>
<td>Informed Consent for participation &amp; usage</td>
<td></td>
</tr>
<tr>
<td>3 Ethical Behaviour</td>
<td>✓</td>
<td>✓</td>
<td>Freedom from bias; Ability to have autonomy</td>
<td></td>
</tr>
<tr>
<td>4 Respect for Stakeholders</td>
<td>✓</td>
<td>Coordination of Stakeholders</td>
<td>Engagement through joint participation of all societal actors</td>
<td>Rights to Privacy; Trust; Courtesy; Respect of changing Identity; Objective of Calmness</td>
</tr>
<tr>
<td>5 Respect for Rule of Law</td>
<td>✓</td>
<td>✓</td>
<td>X</td>
<td>Rights to Ownership</td>
</tr>
<tr>
<td>6 Respect for international norms of behaviour</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>Universal Usability</td>
</tr>
<tr>
<td>7 Respect for Human Rights</td>
<td>Respect for Human Rights</td>
<td></td>
<td>Gender Equality</td>
<td>✓</td>
</tr>
<tr>
<td>8 Sustainability</td>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
</tr>
<tr>
<td>9 Science Education</td>
<td>X</td>
<td>X</td>
<td>Give people knowledge and tools to participate in research &amp; innovation</td>
<td>X</td>
</tr>
</tbody>
</table>

(Adapted from Vallaeys, 2012; ISO 26000; Owen et.al, 2013; Friedman et.al, 2013)