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The question of research relevance: A university management perspective

Dr Basil Tucker School of Commerce UniSA Business School University of South Australia

Distinguished Professor Lee Parker School of Accounting RMIT University Research Professor in Accounting The University of Glasgow

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* Corresponding author: Tel: +61 8 8302 9116; Fax: +61 8 8302 0709 *E-mail address:* basil.tucker@unisa.edu.au

The question of research relevance: A university management perspective

Abstract

Purpose – This study empirically investigates the issue of research relevance from the frame of reference of university leaders. Its specific aim is to gain insights into how 'relevance' is conceptualised, and the underlying assumptions upon which such conceptualisations are based.

Design/methodology/approach –Adopting an inductive approach, our study collects and analyses data from semi-structured interviews with 31 senior research-related university leaders, and archival sources in five Australian universities.

Findings – Research relevance is viewed primarily as a means of responding to government and political imperatives, as a pathway to ensuring university legitimacy, and as a means of generating further resources. We apply this understanding to develop a framework that adopts a nuanced view of relevance that suggests the notion of relevance comprises four general perspectives, represented by the interaction between whether the research is driven by considerations of legitimacy or resource acquisition or seeks to inform academic or nonacademic users.

Research limitations/implications – The evidence-base upon which our study is based represents a relatively small number of university leaders of Australian universities. Moreover, restricting the investigation to a few senior hierarchical levels nonetheless offers insights into high-level organisational drivers hitherto neglected in the accounting research literature on university strategy, governance and accountability. While not addressing perceptions across the university population, this study focusses on and unpacks the social construction of relevance of this select group as research policy-makers.

Originality/value – As one of the few empirically-informed investigations exploring the issue of research relevance from the perspective of University leaders, this study provides insights rather than "answers". Its findings therefore serve as a foundational basis for further empirical and theoretical enquiry.

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1. Introduction

Over the past few decades, the extent to which academic research is, or should be 'relevant' has attracted the attention of numerous commentators from a range of academic disciplines (see, for example, Gautam, 2008; Murray, 2009; Giluk and Rynes, 2012). Indeed, it has been argued that the very legitimacy of academic research depends largely upon its ability to demonstrate its policy and practice relevance (Shapiro et al., 2007). Clearly, reflections on the relevance of academic research raise fundamental questions about its role in private, public and nonprofit sectors and the contribution it makes to society at large.

But what constitutes 'relevant research'? To whom should research be relevant, and how might the concept of relevance be evaluated? These are questions that commentaries by scholars considering the relevance of academic research have addressed to an extent. Such conversations have implicitly situated the concept of 'relevance' as constituting enquiry that informs professional, business and government practice, yet most academic literature leaves the concept undefined, or at best vaguely specified. Indeed, as Nicolai and Seidl (2010 p.1257) note, "the term 'relevance' is very broad and unspecific and can refer to very different things".

The challenges in generating academic research that is in some way 'relevant' are common across disciplines rather than being disciplinary specific (Giluk and Rynes, 2012; Rousseau, 2006). Nevertheless, attempting to conceptualise and (ultimately) operationalise the notion of academic research relevance and the ways in which universities' strategies influence such research is fundamentally a performance measurement and control problem. Management accounting research has developed a considerable inventory of research in performance measurement, as well as in the broad area of and issues relating to control. In view of this established tradition, management accounting as a discipline is well positioned (arguably best positioned) among disciplines to inform this question. Accounting research and researchers have recently turned their attention to empirical investigations of the question of the relevance of academic research in a range of situations (see, for example, Tucker and Lowe, 2014; Tucker and Parker, 2014; Tucker and Schaltegger, 2016; Tucker and Lawson, 2016; Tucker and Leach, 2017), as well as the contextual, political and institutional settings that have brought this issue to the forefront of the agenda of policy-makers, leaders of higher education, and academic researchers (see, for example, Martin-Sardesai et al., 2016, 2017a, 2017b, 2018).

More than merely an interesting question, however, the question of research relevance and emergence of the so-called 'impact agenda' may be seen as a mechanism that is able to capture and demonstrate the 'significance', 'reach' or 'transformative potential' of the academic research they generate (Watermeyer, 2014). Some commentators and researchers have seen the advent of research assessment exercises of various guises in universities across the world, for example in Australia (through the ERA), and the UK (through the REF) (Guthrie and Parker, 2014) as a quest for legitimacy. Such research assessment exercises have implications for universities at both institutional and individual levels (Agyemang and Broadbent, 2015). At the institutional level, the funding implications of the research assessment exercise are important, since achieving a good rating can influence the level of university funding into the future (Agyemang and Broadbent, 2015). At the individual researcher level, although institutional pressures from government accountability and assurance measures have pressured academics to publish more (Villiers and Dumay, 2013), the 'audit culture' regime that has developed as a result (Verbeeten, 2008) has imposed on researchers both an implicit and explicit expectation that the practical significance of academic knowledge production is demonstrable (Pop-Vasileva, Baird, and Blair, 2011) to external organisations on which there is financial dependence (Broadbent, Gallop, and Laughlin, 2010). A number of disturbing consequences have been observed in response. These include the erosion of academic freedom (Guthrie and Parker 2014), manipulation and tactical game playing (Broadbent, 2010), and academics' pragmatically reshaping research and publishing agendas (Northcott and Linacre, 2010).

Thus, in addition to the empirical and literature-based imperative for considering the question of relevance from the frame of reference of senior university leaders, questions of resourcing and public legitimacy remain as normatively posited potential explanations for university leader motivations. While such theories and legitimacy theory and resource dependency theory may intuitively appeal as potential theoretical explanations, in the absence of any available empirical evidence to date, This study adopts the qualitative methodological tradition of seeking to first induce concepts and theory inductively from the field. Thus in the current study, our aim is to develop theory inductively from the qualitative data collected, by identifying and exploring meaningful parameters for the investigation, and a perspective for interpreting the evidence.

One principal stakeholder group that has been largely - and surprisingly - overlooked in discussions of the relevance of academic research is that of senior university leaders. Incorporating the attitudes, opinions and views of this pivotal group of stakeholders within the relevance debate is important - primarily because such a group arguably represents, directly or indirectly, a highly significant and influential stakeholder in decisions by academics about their research focus, priorities and strategies. University leaders exert a major influence on researchers' orientations towards and attention to questions of relevance at both the institutional and individual levels. However, the positions of university leaders as to what constitutes relevant research have, to our knowledge, not been overtly explicated in the relevance literature, yet their views, opinions and expectations are central to the overall research strategies developed and pursued by universities, and directly influence the research priorities of academics at the individual level.

The evidence collected in this study is drawn from five Australian universities comprising a strategic coalition known as the Australian Technology Network (ATN). The ATN was selected as the context for this study based on the established traditions of the five member universities in producing applied research with a strong focus on engagement with, and delivery to the needs of business, industry, community and government. The practical orientation of each of the universities comprising the ATN has been and continues to be a point of differentiation used by these institutions in positioning themselves in the Australian higher education sector. Thus, the understandings of 'research relevance' and the priority afforded to research that engages with and informs public, private and not-for-profit sectors could reasonably be expected to be well developed in such universities by the leaders of these universities.

Motivated by these observations, our aim in this study is to offer an empirically-based investigation of the issue of research relevance from the frame of reference of university leaders. Specifically, this study's central objective is to gain insights into how 'relevance' is conceptualised, and the underlying assumptions upon which such conceptualisations are based. In capturing the views of such individuals, we provide a more complete basis for future research by problematising the underlying assumptions of relevance, both explicit and implicit, from the perspectives of what to date has been a silent, yet nonetheless, central player in this debate. Thus, our intent in this study is to clarify three questions in particular: What constitutes 'relevant research'? Why is it important? How do universities pursue, encourage and cultivate relevant research?

Drawing on 31 interviews with senior research-related university leaders in five Australian Universities, we find that the pursuit of relevant research is explicable in terms of the need for resource acquisition and the necessity to demonstrate legitimacy. Largely driven by funder expectations and attitudes, the concept of relevance is very much dependent upon the frame of reference of the observer. Relevance in research is therefore a relative rather than an absolute concept. From the evidence this paper outlines, we offer a broad and nuanced framework for conceptualising relevance, and one that is not bounded by disciplinary characteristics and idiosyncrasies.

2. Relevant prior literature

Prior literature discussing the relevance of academic research to issues of policy and practice are not new (Tushman et al., 2007). They have been prominent for over five decades (Bartunek and Rynes, 2014), and span a diverse range of disciplines including education (Kennedy, 1997), medicine (Denis and Langley, 2002), nursing (Hutchinson and Johnston, 2004), psychology (Hodgkinson et al., 2001), public health (Brownson et al., 2006), social work (Herie and Martin, 2002), speech pathology (Fey and Johnson, 1998), management (Markides, 2011), accounting (Merchant, 2012), finance (Trahan and Gitman, 1995), economics (Ormerod, 1994), marketing (Piercy, 2002), as well as the natural sciences (Rosenberg, 1994).

Such dialogue represents a potentially salient contribution to the broader university research agenda as for most disciplines, contemplations about academic research relevance raises important questions about its role in society and more generally, what it is that for a large part of their time, academics actually do (Scapens and Bromwich, 2010).

However, in spite of the considerable extent to which the use and usefulness of academic research has been debated, the relevance of academic research as a topic of research enquiry in its own right remains in its infancy. We make this claim based on two key characteristics of the articles and book chapters that directly address the relevance of academic research — collectively, the so-called 'relevance literature' (Nicolai and Seidl, 2010). First, whilst the majority of these writings are based on the reflections of senior, learned and respected academics, and offer a point of departure for further thought on this topic, they are nevertheless, essentially speculative (Tucker and Lowe, 2014), predominantly reflect anecdotal perceptions (Tucker and Schaltegger, 2016),and typically adopt an insular, self-reinforcing, and narrow perspective that fail to draw on the experience of other applied disciplines (Tucker and Leach, 2017) in the quest to more effectively connect, engage with and impact constituencies other than academic audiences (Tucker and Parker, 2014). The absence of empirical evidence has direct implications for the cross-validation of findings and ideas across studies, and the prescriptions offered, leading to calls for empirical questioning and substantiation rather than normative opinion on this subject (see, Kieser et al., 2015).

Second, conversations about academic research relevance have generally framed the issue of relevance in terms of the extent to which academic research actually informs or should inform practice. Whilst practitioners clearly constitute an important stakeholder in the relevance debate, by no means is the practice constituency the only 'consumer' or potential consumer of academic research. The 'research-practice gap/schism/divide' as it is variously labelled, is in fact part of a much wider dialogue incorporating a variety of research orientations exhibited by academic researchers, applying to an assortment of users, of which practitioners constitute one group (Tushman and O'Reilly, 2007). In addition to practitioners, other academics, students, professional associations, industry bodies, policy-makers and regulators are all examples of groups that have a legitimate interest in the application of academic research findings (Tucker and Parker, 2014). The positions of stakeholders other than practitioners have rarely been overtly explicated in the relevance literature, yet the views, opinions and

expectations of such actual and potential 'end-users' of academic research are central to not only the research priorities of academics at the individual level, but also the overall research strategies developed and pursued by universities.

One particular stakeholder group that has been largely - and surprisingly - overlooked in discussions of the relevance of academic research is university management. Universities now invariably operate globally and compete for students, research funds, brand recognition and university ranking in an international marketplace (Pfeffer and Fong, 2002). Charged with the responsibility of developing the longer-term profile, resourcing and branding of their university within this competitive environment, this particular stakeholder group necessarily and inexorably exercises a major influence upon individual researchers' knowledge creation and dissemination as well as scholarship generally (Parker, 2013). The development of research policy explicitly signals to any given academic community what constitutes 'acceptable' research, the degree to which academic research 'should' be relevant, and ultimately influences the nature, form and overall intent of research that is valued and encouraged (Uslu and Welch, 2016). The relevance interpretations and expectations of university leaders are arguably central to university research strategies and directly influence the research priorities of academics at the individual level. Incorporating the attitudes, opinions and views of this pivotal group of stakeholders may therefore be considered an indispensable part of the relevance conversation if a more comprehensive understanding of the complexities of research relevance is to be gained.

Our aim in study is to address this lacuna in the relevance literature and specifically, to focus on three research questions in particular from the perspective of senior university management: What constitutes 'relevant research? Why is it important? How do Universities pursue and cultivate research that is in their view, relevant?

3. Research context

3.1 Relevant research: the international imperative

Recent research rating exercises such as the Australian government's ERA (Excellence in Research for Australia), the UK government's REF (Research Excellence Framework), and the New Zealand government's PBRF (Performance Based Research Fund), are becoming an increasingly common fixture in the environment within which public universities operate. This trend has been mirrored in countries such as, Sweden, Denmark, Austria, the Netherlands, Germany and Canada (Parker, 2011). The rating of academic research outputs forms part of an overall national government research management system designed to allocate public funding to universities' research efforts by measuring, monitoring and evaluating academic research 'impact', 'relevance', or 'usefulness'. Such systems signal to university management and researchers the type of research that is valued and rewarded (Wren et al., 2007), and in so doing, directly influence not only the quality and concentration of research endeavours (Middlehurst, 2014), but also universities' quest for reputations and financial inflows.

Although less reliant on public funding than their Australian and European counterparts (Chevaillier and Eicher, 2002), North American Universities are not exempt from the need to fortify their funding sources (Altbach and Reisberg, 2013) and to legitimise their spending decisions (Rousseau and McCarthy, 2007). As with the scenarios in Australasia and Europe, North American higher education institutions are increasingly reliant on private monies for their continued survival (Bartunek and Rynes, 2014). Thus, the production of academic research that is or is seen to be 'relevant' carries with it a financial imperative for universities on both sides of the Atlantic and Pacific (Yang, 2003). Associated with this, research relevance

or impact is seen as a necessary reporting requirement in response to the externally imposed demands of government research assessment exercises (such as those in Australia and Europe) (Martin Sardesai et al., 2017b), as well as market driven imperatives that focus on securing increased funding and rankings (such as in the USA) (Bartunek and Rynes, 2014). It is both an important and timely issue for university leaders, academic researchers and other parties with a stake in the construction and propagation of academic research.

3.2 The Australian higher education sector

The Australian higher education sector (AHES) provides an appropriate national and international context for this study, given the sector's global education and research positioning as a leading educator of international students and a major player in the international research community. Currently comprising 40 Australian universities, two international universities, a private specialist university, and around 130 other higher education providers, this sector employs over 100,000 staff, servicing approximately 1.4 million students, 90% of whom are enrolled in public universities (AEN, 2016). In 2014, total operating revenue for Australian universities was \$27.1 billion (Department of Education and Training, 2015). This revenue is sourced primarily from government grants and student fees and contributions. Research funding is competitive and performance based. Although expenditure on research has increased markedly over the past decade, universities currently remain reliant on government funding for over 60% of their research income. Competition for research funds is intense, and awarded primarily based on prior institutional performance in the volume and quality of publications in peer-reviewed academic journals (ATN-AI Group, 2015). Cross-subsidisation from student fee income represents another significant source of research funding in Australian universities (Ryan, Connell and Burgess, 2017). Indeed, it has been conservatively estimated that as at 2012, \$2 billion or 21 per cent of research expenditure in Australian universities has been financed by teaching revenue (Norton and Cherastidtham, 2015), an increase from 15 per cent in 2008 to 21 per cent in 2012 (Olive, 2017).

Partly in response to this competitive environment, since 1999 four separate coalitions of universities, each with a particular focus have been established to represent different orientations in the university sector¹. An important on-going priority of these coalitions – or strategic alliances of Universities – is to act as mechanisms to lobby the Federal Government on research income allocation policy. Specifically, Australia's recent ranking of 29th of the 30 OECD countries with respect to business and industry collaboration with higher education institutions, and the Federal government's review of university research funding and policy as part of its "Boosting the Commercial Returns from Research" strategy have provided the impetus for much of the conversations about the relevance of academic research and the basis upon which universities are evaluated and supported. Significant media attention and public interest in the accountability of universities for the results obtained from the public funding provided to them, has also added to the topical nature of this issue. This political, economic and public attention has resulted in revisions to the ways in which universities are evaluated and supported. Research engagement, impact and contribution to government, business and community priorities are patently being signalled as part of the developing university

¹ The universities represented by the Group of Eight (Go8) include the oldest and most prestigious mainland universities, and the most research-intensive universities in Australia. This group also receives the most government research funding. The Australian Technology Network (ATN) universities grew out of institutes of technology in the 1980s and 1990s and particularly focus on research in collaboration with industry. The Innovative Research Universities of Australia (IRU) consist of research universities founded in the 1960s and 1970s. The Regional Universities Network (RUN is a network of universities primarily from regional Australia, as well as campuses in the Australian capital cities and some international campuses. This alliance was formed as a response to the regional focus for higher education articulated by the Australian government.

environment, and the days of 'publish or perish' appear destined to be replaced with 'partner or perish'. Universities that are able to demonstrate their relevance and return on research investment will be best positioned to capitalise within this environment (Parker, 2012a).

4. Research Methods

4.1 Research Design

Since the question of what constitutes 'relevant academic research' may reflect the social, institutional and sometimes-political nature of organisational practices (Nicolai and Seidl, 2010), the context within which this concept is formed, formulated and interpreted is central to the study. Furthermore, as there has been virtually no prior empirical investigation of the research questions addressed by this study, inductive case study offers a first exploratory step towards identifying and providing an initial level theorising of salient concepts and relationships. Accordingly we employ an inductive, field based exploratory and explanatory case study approach to penetrating and interpreting this phenomenon within its context, specifically focusing upon the 'how' and 'why' questions (Berry and Otley, 2004; Scapens, 2004; Yin, 2013), both of which are central to this investigation. In doing so, this approach also offers the prospect of probing university leaders' organisational contexts as well as their cultural perceptions and understandings (Silverman, 1985; Walker, 1985; Werner and Schoepfle, 1987). Such terms as 'relevance' can be "difficult beasts to theorise" (Malmi and Granlund, 2009, p. 633), not least because they often carry specific meanings for actors employing them. Accordingly, in such a study as this, it is important to focus on university leaders' interpretations of such terms that may reflect their various realities. Rather than privileging a particular informing theory at the outset, when little is known in the accounting research literature about university leaders' constructions of research relevance, it becomes important to undertake an initial investigation that aims to understand their situation holistically rather than pre-emptively engaging in modelling via one particular macro-theory, and instead to provide first level inductive theorising drawn directly from the organisational actors' world (Lofland and Lofland, 1995). In doing so, we place a priority on understanding their definitions, motivations, intentions, and practices (Stake, 2005; Yin, 2013). Employing this inductive case study approach enables identification of unique features of research relevance emerging from among the case study interviewees as well as inducing wider implications for accounting research relevance across universities (Berry and Otley, 2004; Hartley, 2004; Lee and Humphrey, 2017).

4.2 Sample selection

Single in-depth field studies constitute the more common approach to qualitative research (Eisenhardt and Graebner, 2007). They enable a clarification of key empirical phenomena represented by the constructs we use, and interpretation of the social context in which the constructs interact to produce organisational outcomes (Lillis and Mundy, 2005). The current study necessarily compares and contrasts evidence drawn from universities within a single grouping (the ATN). Given our study's focus on research relevance, the ATN was selected because of its tradition of producing applied research with a strong focus on engagement with and delivery to the needs of business, industry, community and government. On this basis, it appeared a valid point of departure for this enquiry, offering the opportunity to broaden our understanding of phenomena by penetrating the socially constructed worlds, cultures, thinking, and attitudes of university leaders about the concept of 'relevance' as framed within the context of the ATN universities in which applied research has been valued, promoted

and pursued. In focussing on university leaders' social constructions, we focus on social construction in the tradition of prior *Accounting, Auditing & Accountability Journal* authors such as Hines (1989), Lee (1994), Parker et al (1998), Lehman (2012) and Parker (2014). The ATN focus also allowed us to focus on one particular publicly recognised university grouping and to drill down through each of its member's top management hierarchy to explore its senior management perceptions and strategies in greater depth than would be possible in a broader sample of universities.

4.3 Data Collection

Semi-structured interviews including open-ended questions (Flick, 2002) were employed as a primary means of data collection in this study. Interview questions are summarised in Appendix A. These questions permitted interviewees to expand upon themes they saw as relevant and important and to offer their perspectives and interpretations (Rubin and Rubin, 2012). In addition, the semi-structured interviews also provided us with the latitude to further probe interesting comments that arose, and to seek clarification and elaboration where necessary. Thus, interviews allowed our exploration of interviewees' perceptions of such terms in an open and flexible manner (Shank, 2006), allowing the researchers to identify both the commonality and variability in interviewees' understandings, and their associated implications (Fontana and Frey, 2000).

This qualitative, exploratory investigation employed a non-random, purposive sampling technique to identify and select participants for the study (Patton, 1990; Parker, 2012b). The sampling strategy is generally characterised by small sample sizes that aim to elicit the richness and deeper understandings of the phenomena under investigation (Parker and Northcott, 2016). Our interviews aimed to identify how academic research relevance is conceptualised, strategised and evaluated. Obtaining such data required the researchers to evaluate the degree to which interviewees could provide information relating to the study's focal phenomena (Uslu and Welch, 2016). University Vice Chancellors (VCs) and other senior university managers were selected as interviewees given their responsibility for formulating, implementing and monitoring research strategy. These individuals are instrumental in developing and enhancing the research standing of their university and have the greatest insight into research funding and policy, and by virtue of their positions, influence research practices, priorities, and outcomes.

VCs were contacted by email and invited to participate in this study. In addition, they were also asked to nominate senior university managers they felt would be suitable informants on the broad topic of academic research relevance, so that we might also canvass their views on the topic of research relevance. Consequently, Deputy Vice Chancellors (Research) (DVCs) and Research Deans (RDs) were also contacted on the advice of VCs. As the interviewees were located across Australia, face-to-face interviews were impractical. For this reason, the majority of interviews were conducted via telephone.

In total 31 interviews were conducted: 8 in person, and 23 via telephone. This sample represents approximately 84% of the senior research-related leaders (VCs, DVCs, and RDs) in the ATN university alliance². Interviews were conducted between February 2016 to July 2016, with 4 VCs, 5 DVCs and 22 RDs (or academics that had previously held the position of RD). To ensure anonymity, the names of the respondents and the institutions in which they work are not published. In addition to the 'de-identification' of comments, interviewee responses are

 $^{^{2}}$ As at the time at which the study was undertaken, there were 38 individuals employed in the capacity of VC, DVC or Research Dean within the ATN universities. Our sample of 31 represents 84% of this total group of senior research-related leaders.

based on their personal experience and reflection rather than an articulation of the 'official' view or policy of their home institution.

Each interview's duration was determined by the interviewee's time available and their length of answers to questions raised. Interview lengths ranged from between 50 and 90 minutes. Due to the potentially sensitive issues involved, and to encourage frank and open discussions, interviews were not recorded. In view of the research assessment exercises and political and public discussion about 'research impact' and the relevance of academic research produced in universities, we considered it necessary to grant anonymity at the outset of the interviews for three reasons. First, to protect the identity of the particular University of the interviewee; second, to each individual participant, to help establish trust; and, third, in order to achieve a higher level of critical evaluation of the interviewees (Miller and Glassner, 2004). Detailed notes were taken in the course of and following interviews. Particular effort was made to make a note of pertinent verbatim quotations. We were particularly attentive in recording (by hand) of pertinent verbatim quotations using a form of shorthand abbreviations and symbols as interviews progressed.

In view of the arduous schedules, workloads and demands on the time of University Vice Chancellors, Pro Vice Chancellors and Research Deans, we did not seek to validate the interview data through debriefing with interviewees. Nevertheless, mindful of the importance of the need to demonstrate credibility in qualitative research (Parker, 2012b), several checks were put in place to promote credibility as well as dependability (Parker and Northcott, 2016). Following Creswell (2009), data credibility checking was performed through peer debriefing. This debriefing essentially sought to separate the gathering of evidence from its interpretation. In this study, promoting credibility involved the critical analysis of each interview in debriefing sessions between the researchers where further notes were made on impressions of the interviewees and developing themes. The researchers then discussed the coding process in an effort to understand the significance of the themes and patterns emerging from the interviews. Dependability was fostered by the transcription of interview notes, and the maintenance of adequate records of contacts, interview dates, times, and venues (Gelman and Basbøll, 2014).

For policy and performance data detail and for triangulation purposes, we supplemented data from interviews with an examination of email correspondence, archival records (including internal university documents covering research policy, research performance, research plans, mission statements, publicity material, and government reporting requirements), and publicly available data, including information from university websites, promotional material, and newspaper articles and other media information. However, it is important to note that these documentary sources very much represented the 'official record' of the Universities and agencies for which they were written. We used them in this study to familiarise ourselves with the official position proclaimed by the organisations and as a platform for further discussion and elaboration in our interviews.

4.4 Data Analysis

Broadly following Eisenhardt's (1989) approach to data analysis, our evaluation of collected evidence entailed data reduction or summarisation, categorisation and interpretation. This involved scrutinising the data and identifying common themes, unique insights, and areas of disagreement. Throughout the analysis, we cross-checked claims advanced by interviewees against archival sources, and used these sources to refine our understanding of issues arising in interviews.

Interview transcripts were thematically analysed. After each interview, the authors independently reviewed the notes taken and reached consensus on the issues, points and themes emerging from the interview discussions. The coding scheme was then established until a systematic understanding of the content was accomplished. Commonalities and dissimilarities between and within the transcripts were identified as patterns or themes contained within the data (Silverman, 2006). Data were then categorised, so that these initial themes were reflected by descriptive codes, and the data subsequently reduced to generate initial conclusions (Huberman and Miles, 1998). Thus, from this process, emergent codes formed the foundation for cross-case analysis, which subsequently facilitated the analysis of patterns and themes in the data. This constituted our structured approach to data analysis and interpretation. The qualitative software package (NVivo) was employed in this process, thereby enabling efficient retrieval of interview quotations and facilitating identification of patterns across interviewees' explanations. However, we emphasise that our use of Nvivo was primarily to support and enhance confidence in the findings. The aim in using Nvivo was to confirm the findings rather than to quantify them, which is why our initial independent review of our interview notes was subsequently augmented by our collaborative review of the issues, points and themes emerging from the interview discussions. From this approach, the researchers could induce both unique and common themes that emerged in our discussions.

Interview transcripts were coded using multiple categories, since more than one code might be applicable to a particular discussion. Categories with insufficient supporting data were discarded or incorporated into other relevant emerging categories. We then re-organised the original transcripts and other data around key topics (such as how relevance is conceptualised) and issues (such as how this particular view has been arrived at). In this way, topic's dimensions and associated contexts and meanings were saturated when it became evident that related categories stabilised and incremental information simply reinforced prior accumulated evidence (Glaser and Strauss, 1967). Data coded under a specific category were compared with data previously coded under that same category. Thus along with determining new categories and subcategories, each category was further consolidated and differentiated (Huberman and Miles, 1998).

5. Findings

We were particularly interested in identifying and unpacking how the 'official position' of the universities as reflected in these documentary sources were interpreted by our interviewees. Thus, our review of documentary sources was aimed to provide a point of departure and frame of reference for further exploration in the interviews. Our interview evidence uncovered no significant discrepancies between what was articulated in the 'official position' of the universities investigated in this study, and the ways in which this position was and pursued by the interviewees and their organizations. Although university leaders would be expected to voice views consistent with their university's official position, the findings of our study suggest nuances in interviewee interpretations of the notion of relevance, and particularly how and why these official positions have been arrived at and put into effect, from the perspective of the university leaders.

Drawing on the information collected through our interviews, our findings are structured around the three questions of interest in this study: (i) what constitutes 'relevant research'? (ii) why is relevance important? and, (iii) how is relevance strategically pursued?

5.1 What constitutes relevant research?

We began each interview by asking our interviewees to articulate what the term 'relevance' meant to them. Although a seemingly simple question, responses demonstrated a considerable variation in conceptualisation. What emerged from our discussions are three themes that shape how relevance is perceived. These themes were repeatedly voiced by our interviewees, irrespective of their hierarchical level or disciplinary background. They relate to (1) the composite nature of relevance; (2) relevance as a relative rather than an absolute concept; and, (3) research that constitutes 'exceptions to the rule' (the 'rule' being the basic-applied' taxonomy commonly used as a means of classifying research).

5.1.1 A composite concept

The first theme acknowledges the multidimensionality and complexity of the concept of relevance in the context of academic research. It is sometimes difficult to distinguish between terms such as, 'relevance', 'engagement', and 'impact' in conversations featuring within the relevance literature. This point was explicitly noted by one DVC:

"One of the difficulties in looking at this issue is that there are subtly different terms that describe the landscape – relevance, impact, and engagement – they are variations on a theme but refer to different things" (DVC4)

Broad understandings of these related terms were offered in the course of our interviews:

"Relevant research is research that makes a difference by delivering economic, societal benefits, creating new knowledge and informing public policy" (RD21).

"Impact is a consequence - the ability to bring about change – be it in policy, practice, or theory. Ultimately, impact is about a change in the way we understand things" (RD15)

"Engagement can be thought of as working collaboratively and in participation with non-academics" (RD4)

The problematic nature of the notion of relevance in view of these different terms was identified by one VC:

"the jury is out on how these interrelated concepts collectively present a coherent explanation of what relevance is, and how it might be achieved" (VC1).

Nevertheless, our interviewees made a clear distinction between these terms, providing a fairly consistent view of relevance as a broad overarching term stressing the:

"...usefulness, usability and application of research" (DVC3); engagement as "...an input measure of collaboration which can be an antecedent to the functionality of research efforts, but does not necessarily guarantee what we might term relevance" (RD7); and, impact as "... an outcome of research, designed to evaluate the transference of research from the academic to the consumer of that research" (RD13).

This distinction between the terms, 'relevance', 'impact' and 'engagement' is more than semantic. Separating them underscores the overall view that the concept of relevance is composed of a number of interdependent yet distinct dimensions including input measures such as engagement as well as output measures such as impact with end-users of research. Rightly or wrongly, these (broad) understandings collectively provide the basis upon which university leaders proceed in their consideration, evaluation and strategising in relation to what may be thought of as relevant research.

5.1.2 A relative rather than an absolute concept

The second theme that emerged across our sample was the relative rather than absolute nature of relevance as applied to academic research. As one DVC suggested:

"... one person's meat is another person's poison – the relevance of a particular study depends on who you ask" (DVC5).

The comments by interviewees at all hierarchical levels, notwithstanding their disciplinary background or portfolio, repeatedly stressed the 'propensity to make a difference' as a defining characteristic of research that can be considered relevant:

"Relevance is ultimately, the applicability of research for end-users" (VC3)

As one Research Dean incisively observed however:

"...the real question is to whom the particular research will make a difference" (RD19).

A diverse array of stakeholders and potential 'consumers' of research were identified in our discussions. In addition to the generic groups, 'society', 'the community', and 'taxpayers', more specific end-users of research and the approximate number of interviews in which these end-users were identified by our participants. These end-users included business and industry (90% of interviews), the Government (80% of interviews), policy-makers (78% of interviews), the Public Sector (75% of interviews), academics (70% of interviews), Not for Profit agencies (40% of interviews), professional bodies (40% of interviews), consumers (30% of interviews), students and curriculum (20% of interviews). Thus, it seems apparent that there is perceived to exist a high diversity of end-users of academic research, and the concept of relevance in academic research cannot be discussed independently of the needs, requirements or expectations of these end-users. In short, the concept of 'relevance' appears to be very much contingent on the frame of reference of the observer.

5.1.3 'Exceptions to the rule'

We have labelled the third theme emerging as central to constructing an understanding of relevance as 'Exceptions to the rule'. The 'rule' we refer to is the commonly employed conceptual distinction between research that aims at fundamental understanding (basic research) and research that focusses upon potential use (applied research). The basic/applied distinction was raised in around 90% of our interviews. Although seen as providing some use in assessing the relevance of research, it was nevertheless generally seen as a simplistic taxonomy. The principal limitations of the basic-applied categorisation was perceived to be its failure to incorporate two considerations central to the concept of relevance. It is these two considerations: time and serendipitous outcomes that we refer to as 'exceptions'.

The observation of one DVC succinctly summarised the stance adopted by the many of our interviewees in relation to the effect of time – or more appropriately, timing:

"Traditionally, we have tended to classify research as being either 'applied' or 'basic'. This categorisation has some appeal, but it is limited. Applied research is not necessarily relevant,

and basic research may over time become extremely relevant – even though it might have been thought to be 'blue-sky thinking' at the time it was undertaken" (DVC2)

The temporal limitations in classifying research as basic or applied was elaborated upon in our interviews:

"...the pure/applied distinction is not as helpful as it might be and probably overused. Very often theoretical work necessarily precedes its application in practice. Einstein's work on relativity is a prime example" (VC4)

"Classifying research in this way is black and white – but there are many shades of grey. You don't know what the impact of any given research will be down the track – Today's blue sky research may be very relevant years from now" (RD14)

The failure to incorporate how the interval between the publication of a research study and its ultimate application might moderate conceptions of basic and applied research leads to our contention that relevance cannot be defined independently of time.

The second 'exception' to the basic/applied taxonomy related to research outcomes that another DVC described as:

'...fortuitous findings of things without expressly seeking them' (DVC1).

The general recognition of the importance of research discoveries made by chance as expressed in our discussions was best captured by the following remark from a Research Dean:

"The applied versus practical categorisation of research discounts serendipitous findings and applications of research which was originally seeking answers to quite unrelated questions. You only need to look to the NASA space program in the 60's and all the spinoffs it produced" (RD9)

The findings of such research that has unanticipated applications through chance, luck or providence, then, represents a second 'exception to the rule' and one that requires integration within any explanation or explication of what might constitute 'relevant research'.

Thus, based on our evidence, what becomes apparent is that the concept of relevance is neither clear-cut, nor immediately discernible. As commonly perceived by our interviewees, relevance is both a multi-dimensional and complex construct, contingent upon the frame of reference of end-users, of which there are many. These end-users include stakeholders such as 'practice', 'practitioners', 'business' and 'industry'. However, the potential users of academic research are seen to be more broadly defined to include such diverse constituents as government policy-makers, students, other academics, curriculum designers, and future researchers. What may be regarded as 'relevant research' is also tempered by time, and by applications not originally envisaged at the original conception of the research, in terms of its purpose, or its design.

5.2 Why is relevance important?

As to our second question of interest in this study, it should be said first and foremost, that all interviewees without exception felt that the production of research that is relevant is a principal goal towards which universities should aspire. Interestingly, as with the definition of relevance, we did not discern particular trends or patterns distinguishing between the

perceptions of VCs, DVCs or Research Deans in their explanations for why relevance was important. However, the explanations advanced in favour of a pursuit of relevant research converged to three predominant themes: (1) Government Policy and Political considerations; (2) Legitimacy; and, (3) Resource acquisition.

Government policy and political considerations appear to drive the importance that is afforded to relevant research. Simply, research that is encouraged by recent and current Government policy is that which informs and is recognised by business and industry partners. The relevance of such research is provided by the provision of research grants and funding:

"Research that is funded is what is considered to be relevant. How research funding is allocated is invariable politically driven as there is a need to account for funding" (VC1)

"It's unlikely that research that isn't published in the top journals, or cited a lot, or funded will be considered as relevant – so relevance is important because it is a proxy for what universities are supposed to be about: generating premier-level research" (RD20)

The production of academic research that informs (and is informed by) a 'real-world need' was seen to legitimise the research efforts of universities, regardless of faculty, discipline or area of specialisation. That is, relevance and legitimacy are essential regarded as synonymous terms. This view was encapsulated in the observation of one RD:

"If research is credible, it gets noticed, and if it is noticed enough it will be used. From this perspective I think we can say that relevance is important because it reflects good research, and legitimises our research efforts" (RD10)

The attraction of funding is also a considerable incentive to produce 'relevant' research:

"...relevant research is funded, so the pursuit of funding is a measure of the relevance of the particular research" (RD12)

"To push the boundaries of knowledge with no meaning results in a poor ROI, a poor use of resources. This is particularly important given that resources for research are scarce. Demand far outweighs supply, and competition for research funds is fierce" (RD8)

These three motives – Government Policy, legitimacy, and resource acquisition - are interdependent. On first inspection, they appear tautological: on the one hand, legitimacy leads to funding which is a reflection of the extent to which research may be considered relevant; on the other hand, research that is funded is seen to be legitimate, and therefore, relevant. However, as depicted in Figure 1, the relationship between these motives constitute two pathways to relevant research. Importantly, the role of Government Policy is instrumental and drives both pathways.

Insert Figure 1 here

5.3 How is relevance strategically pursued?

Having obtained a sense of how university leaders perceive the concept of relevance in academic research, and why it is important, our attention in the interviews turned to how

relevance is strategically pursued within the ATN. In very broad terms, our findings indicate that responses to this question converged to two explanations: (1) explanations offered to explain disciplinary differences in the need for relevance; and, (2) the metrics used to evaluate relevance in research.

5.3.1 Relevance between disciplines

Two views were expressed about the extent to which the concept of relevance was applicable to all disciplines:

"Every discipline likes to think it is different – but they are not. When you boil it down to its core elements, it's a fallacy to think disciplines are unique when it comes to relevant research. All disciplines need to look at undertaking research that benefits society. There is no difference between disciplines in this regard" (DVC5)

"Relevance for all disciplines is the same – all require an argument to justify and demonstrate the impact that the research will have" (RD3)

Proponents of this majority view included all three hierarchical levels of university leaders. However, a qualification to this stance was expressed in how relevance might be demonstrated in the 'hard' disciplines of science, technology, engineering and mathematics (STEM), as distinct from the 'soft' disciplines comprising social sciences and humanities:

"Different disciplines will measure relevance differently – but it is a concept applicable to all of them. In the Arts and Humanities it is far more difficult to measure or assess than in the sciences or in health – but relevance is still important. Society for example makes a substantial investment in things like Art Galleries, Museums, Performing Arts – these areas like other disciplines are fighting for scarce research funding" (RD11)

"The concept of relevance and its importance probably doesn't vary between disciplines – the arguments are going to be the same for all disciplines. It's the way in which relevance or impact is measured that is different" (RD2)

Despite the emphasis afforded to the need to demonstrate relevance in all research, a minority of our interviewees did, however, draw attention to the fact that expectations of relevance are not homogeneous across disciplines:

"Variation certainly exists at a discipline level – Arts/Humanities for example do not attract as much funding as medicine, health sciences, engineering, business and social sciences" (RD19)

"One important factor that distinguishes how relevance may be conceptualised between disciplines is that of time or the immediacy of how benefits may be demonstrated: the physical sciences often (but not always) tend to have a shorter payback. In the Social Sciences, this payback period is generally longer" (RD17)

Indeed, more than the recognition that non-STEM research is not recognised in the same way as STEM research (as reflected in the funding that is attracted), some interviewees stressed the opinion that assessments of relevance of research undertaken in the Arts, Humanities and Social Sciences *cannot* and *should not* be obligatory. This was argued to be because of the

intrinsic nature of these disciplines, and the value contributed by these fields. One comment in particular captures the essence of this perspective:

"The relevance or utility of academic research in the health and sciences can quite readily be appreciated – but research in the Arts and Humanities can also be seen to be relevant and valuable. For example, music, theology, art are areas which can and do make a very significant contribution to society – one that can improve the human condition - and as such, should not be regarded as second-class research which fails the relevance test" (RD6)

It is worthwhile noting that the perceived legitimacy between the STEM and non-STEM research and the respective capacity of these disciplinary areas to attract funding has particular implications for the accounting discipline. Accounting research has traditionally been notable for its failure to attract public funding. For example, in 1990, of the \$90 million available for research funding, a very small fraction (\$250,000) was devoted to research projects in the four disciplines of economics, economic history, econometrics and accounting (Tippett, 1992). In 1999, the amount allocated to the accounting, banking, finance and investment for large ARC grants was still only \$1.525 million out of total funds allocated of \$152.743 million (Hodgson, Iselin, and Martin, 1999). As highlighted by Clarke et al. (2011) accounting research in Australia has in both absolute and relative terms lagged far behind both STEM, non-STEM, and indeed other business-related disciplines in securing government funding from the ARC for either Discovery or Linkage projects. For the period 2000-2008, a mere 0.32 per cent of total Discovery grants and 0.45 per cent of total Linkage grants were awarded to accounting The successful applications were submitted by "69 individual accounting research. researchers" (Clarke et al., 2012, p.65), representing 8 per cent of accounting academics employed in Australian universities (Wiley, 2004) from a total of 11 universities (Clarke et al., 2012, p.65). Although marginally improving, funding attracted by accounting research remains relatively meagre. Over the period 2013 to 2014, accounting research was awarded \$13.2 million (ARC, 2016a, pp. 159-161) - or 0.87 per cent - of the total \$563 million of National Competitive Grants Program (NCGP) funding awarded by the ARC (ARC, 2016b, p.4). The net result of this comparatively low success rate in gaining total competitive research grants is portentous. The potential longer-term threat to accounting schools and departments across Australia generally is that they fail to break out of this minimal research funding success and associated poor research reputation within the university community (almost regardless of whatever research publications and research related outcomes they may achieve). Consequentially they risk a further deterioration of available university research funds that are redirected to other Faculties (de Lange et al., 2010).

5.3.2 Metrics used to operationalise relevance

A perception that the use of measures or metrics as pivotal to the way in which relevant research is encouraged, cultivated and pursued is, in and of itself unsurprising. Linking strategic objectives with outcomes through the selection of particular performance measures is an established means managers use to infer organisational effectiveness. Table 1 presents a range of 28 performance measures our interviewees cited as a means by which relevance as an outcome of research is routinely evaluated.

Insert Table 1 here

The significance of attempts to operationalise relevance through the adoption of metrics as shown in Table 1 lies not in the measures or their application per se, but rather in the *attitudes relating to measurement* as expressed by our interviewees. The use of metrics are used calculatively to promote research that engages with particular targeted end-users, as reflected in the comment of a DVC:

"The pigeons move to where the wheat is" (DVC1).

Nevertheless, what was apparent in our discussions was the recognition that metrics and their use are regarded as indicative and not definitive of the complex nature of evaluating relevant research at a point in time. A sense of these attitudes is conveyed by the following observations:

"It's important to note that metrics should be designed to reflect progress towards the goal of producing relevant research – the metrics are a means to an end. They are NOT an end in themselves" (VC2)

"Ultimately, however, relevance, engagement and impact are measured/assessed by proxies, and due to the peer/panel review process, will necessarily be subjective" (RD1)

"It's not possible to measure impact. Measurement implies metrics, and there is no single set of metrics that can adequately capture the impact of research" (RD18)

It was clear that the majority of our interviewees held reservations about the unqualified use of metrics by which relevance (and engagement and impact) might be determined. One principal reservation expressed related the challenges in attributing causality:

"We need to be very careful in the use of metrics because it is extremely difficult to attribute causality. How can we be certain that a given piece of research was instrumental in resulting in a change?" (RD22)

Another reservation concerned the perceived dangers in reducing an assessment of relevance to an exclusive preoccupation with quantitative measures:

"What we need to keep in mind is, as Einstein said, "Not everything that can be measured counts, and not everything that counts can be measured" (RD16)

The subjective nature of metrics – particularly in applying a static evaluative tool to what was recognised as a dynamic phenomenon – was recurrently raised by interviewees, and exemplified in the words of a DVC:

"In the final analysis, any assessment of relevance is a matter of judgement, and therefore highly subjective – Van Gough's works were not recognised until after his death. It sometimes takes time to fully appreciate the importance and significance of some research. There's an important time lag effect here" (DVC5)

Thus, although an important tool for shaping, assessing and supporting the relevance of research, the message that was conveyed in our interviews was clear: metrics used to assess relevance are not the 'be all and end all' in the assessment of research. The complicating factors of attributing causality, time between publishing/completing research and its uptake, and the inherent limitations associated with quantitative measures were widely acknowledged.

This message, however, begs the question of why metrics are employed at all. If, as has been commonly argued in the performance measurement literature that 'what gets measured is what gets done' - and by inference, 'what does *not* get measured, does *not* get done' - then reconciling the use of particular measures and how they might be interpreted by those measured represents an interesting question. It is a question we shall return to later in this paper.

6. Discussion

In interpreting the evidence presented in the preceding section, we draw attention to two points relating to the implications it holds for this particular inquiry. First, in this section, we have capitalised upon the tradition of qualitative research by "offering the ability to capture actors' perceptions, constructed realities and behaviours from the inside (Parker, 2014, p.14) in which "the liberal use of quotes is essential in order to allow the reader to hear the interviewees' voices" (O'Dwyer, 2004, p.403). Thus, although some quotes may appear to be opinion-like claims and speculations, they nevertheless constitute the 'voices' of our interviewees, and it is the very articulation of these views and understandings that we seek to capture in this study.

Second, the homogeneity in opinions offered by our interviewees was notable. We did not discern particular trends or patterns distinguishing between the perceptions of VCs, DVCs or Research Deans in their understandings of relevance, nor in their explanations for why relevance was important. In addition to the hierarchical level of the interviewee, no appreciable differences in views were apparent between the universities of the interviewees, or in the disciplinary backgrounds of Research Deans. The observed homogeneity in views is largely unsurprising. We are unaware of any evidence to suggest any likelihood of distinctions in opinions based on hierarchical level (at the level of VC, DVC or Research Dean), or disciplinary background. Nor would we expect such distinctions to be pronounced given the high-level development of research policy for these individuals are responsible. This is especially so given that although their current responsibilities are primarily managerial; they all have academic backgrounds and have been research active in their academic careers. Indeed, the 'applied research focus' characterising the ATN strategic alliance would suggest a likely degree of convergence on matters relating to research relevance.

In view of this context, the first lesson offered by our findings is that relevance is very much in the eye of the beholder. This observation has not gone unnoticed in the literature. For example, Kieser et al. (2015, p. 189) note, the diverse forms and meanings associated with the term, relevance "is not very well defined". Jarzabkowski et al. (2010, p. 1200) observe, "...the concept of 'relevance' is seldom defined precisely". Butler et al. (2015, p. 733) contend, "The precise definition of 'relevance' is rarely explicated in detail by commentators", and indeed, "...what counts as 'relevance' is fiercely contested" (ibid, p. 741). More than an interesting intellectual musing, these concerns have a particular sting in the tail for academic research undertaken in all disciplines in view of the debate generated on this issue in terms of how the aim of relevance may be attained.

The classification of academic research as either 'basic' or 'applied', or along a continuum of 'basic' to 'applied', is often used as a surrogate or proxy for 'relevant' research (Tucker and Parker, 2014). Our findings, however, suggest that, at least through the eyes of university leaders, such a categorisation is seen to be of limited usefulness, and somewhat simplistic. Based on our evidence, it would seem as though *all* academic research can be considered relevant. The key question, however, is 'relevance to whom'? Our interviewees clearly

identify practitioners in business and industry as stakeholders who should be primary beneficiaries of academic research. If research questions and answers to these questions satisfy the needs and expectations of this particular group, research is seen to clear the hurdle of relevance. However, defining relevance in terms of 'business and industry' has been argued to be overly restrictive (Harrison et al., 2007).

Numerous additional parties also have an interest or potential interest in academic research findings. They include policy makers, not-for-profit organisations, government agencies, other academics, curriculum designers, and students who are all potential end-users and to various extents, funders of academic research. While not as prominent as 'business and industry', nevertheless they arguably should not be excluded from determinations of what does or does not represent research that is of relevance. These diverse stakeholders have similarly diverse needs, expectations, applications and requirements of research outcomes. Moreover, our evidence clearly points to an overall perception and expectation that research needs to be relevant in all disciplinary areas. In a sense, disciplinary relevance is equifinal – there are many paths to relevance depending on the end-user, and the nature of the discipline. Thus, from this inductive case study we can theorise research relevance as variably conceived not in terms of traditionally employed categorisations such as 'basic' and 'applied', but in terms of (potential) usefulness to potential end-users. However, the constitution of a concept of relevance is then a 'moving feast' subject to end user identity and attitudes.

6.1 Legitimacy and resource acquisition as pathways to relevance

Our finding that there are two primary pathways to relevance and inductively theorised from our data in Figure 1, is consistent with the argument that 'relevance' is by no means a neutral term, but rather "...one that is leveraged to pursue particular – sometimes conflicting – agendas in the university" (Butler et al., 2015, p. 733). Based on our discussions, two such agendas, driven by stakeholder expectations, emerge as apparent: (1) the need for research to gain a status of legitimacy (so that it can attract funding); and, (2) the need for research to attract funding (so that it gains the status of legitimacy). Although seemingly tautological, the pathways of legitimacy and of attracting funding are quite distinct and understandable from the perspective of university management.

The increased attention directed to the basis upon which University research is funded and the competition this invokes, resonates directly with the argument that Universities are rational entities competing for resources. To survive and prosper, they must acquire access to critical (scarce and valued) resources. Hence, it is crucial for universities to direct their orientation and activities towards the sustained access to those resources. In the current environment in which Australian Universities and many of their international counterparts operate, the critical resource is funding. In Australia, Federal and/or State Governments provide a sizeable amount of such funding. In this context, research assessment exercises in which the extent and quality of research activity is formally evaluated, constitute the 'rules of the game' for Universities in their ability to secure a considerable proportion of their funding. The ability to demonstrate 'research relevance' is therefore central and critical to playing and winning the funding game (Teelken, 2012; Ashwin et al., 2016).

However, although the need to acquire resources can assist in interpreting the researchbased competition between universities, it does not explicate the causal logic underlying governments' allocation of particular funding to particular Universities. In order to understand *how* Universities are rewarded for their research performance and outcomes, we turn to their need to demonstrate legitimacy or credibility of research that is generated. The pivotal criterion underpinning funding allocation (irrespective of the source of this funding) is arguably the return on investment Universities can achieve as recipients of such monies. As we have seen, in the current politically charged higher education environment the 'relevance', 'end use' or 'applicability' of research is of principal concern to funders. The capacity to achieve a return on funding investment can be understood in terms of a position that maintains that the means by which organisations obtain and maintain resources, is legitimacy (Oliver, 1991; Deem, 1998). Legitimacy as applied to the current study is thus predicated on the assumption that research relevance is 'socially desirable, proper or appropriate' within the politically constructed national perception of what research should provide. This stance labelled by Deephouse et al., (2017) as 'moral legitimacy', is one that affirms institutional fit with collectively valued purposes, means, goals and values in society. The moral legitimacy or credibility of research outputs then, is integral in attempts to secure funding.

One way in which universities have sought to demonstrate their credibility in general, and of their research efforts in particular, is through their positioning on university rankings such as the Academic Ranking of World Universities (ARWU), QS World University Ranking, or Times Higher Education World University Ranking (Hazelkorn, 2011). Such global 'league tables' have become widely cited and used by public agencies, governments, funding bodies, stakeholders of higher education, academic decision makers and informally in the tertiary education marketplace as a means of identifying the 'best universities in the world' (Agasisti and Johnes, 2015). Positioning in the global university hierarchy brings with it considerable prestige and reputational advantages that in turn, "directly feeds into the revenue and funding streams that the university is able to create and develop" (Parker, 2013, p.17). However, standings on these ranking lists are often taken at face value (Altbach, 2012), and as an instance of goal displacement, progression up the league table(s) has, for many universities, become an end in itself (Gray et al., 2002; Neumann and Guthrie, 2004) reconstituting what is arguably the more fundamental raison d'être of universities - the generation of knowledge (Parker, 2013). The privileging of STEM research which tends to generate the most articles, citations, and research funding (Altbach, 2011), a bias towards Anglophone universities (Agasisti and Johnes, 2015), and the inconsistency associated with different rankings systems that are driven by different purposes, use different methodologies and are often based on different notions of what constitutes university quality (Marginson, 2007), are some of the criticisms levelled at such measures of prestige. Nevertheless, rankings play an influential role in shaping the academic and university landscape across the world, both in terms of 'demonstrating' credibility and securing resources. They have been and are likely to remain a fact of higher education life for the foreseeable future (Altbach, 2011), as well as a determinant of what is or is not considered to be 'legitimate' research 'worthy' of funding.

On the basis of the conceptual and practical relationships between legitimacy and resources that have emerged from our inductive case study, we argue that the need to acquire resources coupled with the need to demonstrate legitimacy - despite the potential problems in these criteria as proxies for relevance - can provide complementary insights into the positions adopted by senior university management. The need to acquire resources for research can illuminate *why* the issue of research relevance is firmly on the University agenda; the need to demonstrate legitimacy speaks to *how* various conceptions of relevance are formulated and enacted by universities. Neither position is necessarily privileged in explaining what constitutes relevance. Rather, both legitimacy and resourcing standpoints can contribute to a deeper understanding of what relevance may mean when applied to the context of academic research.

6.2 Reframing the concept of relevance

Relevance when viewed through the lenses of resource acquisition and legitimacy, provides a plausible explanation of our findings; expectations of what stakeholders deem is considered to be 'legitimate research' and *ergo*, research that is funded. At the same time, research that is funded is deemed to be legitimate. In other words, from our case study analysis, we induce that the concepts of legitimacy and resource acquisition may be considered primary drivers of relevance in accordance with the needs, expectations or requirements of defined and distinct stakeholders. Further, the influence of time as well as unanticipated outcomes of research calls for a more dynamic understanding of research than the static basic-applied classification.

In response to such calls, we inductively theorise a more nuanced and granulated framework for conceptualising research relevance by juxtaposing the primary drivers of research relevance: legitimacy and resource acquisition, with the expectations of stakeholders: broadly delineated between academic and non-academic consumers. Our proposed theoretical typology is portrayed in Figure 2.

Insert Figure 2 here

Figure 2 suggests that the notion of relevance comprises four general perspectives, represented by the interaction between whether the research is driven by considerations of legitimacy or resource acquisition (as represented by the horizontal axis) or seeks to inform academic or non-academic users (as represented by the vertical axis).

According to this framework, 'conceptual relevance' as represented in the lower left hand quadrant, is research driven by considerations of credibility or legitimacy and directed towards other current and future academics, curriculum designers, and students. Conceptual relevance accommodates research that may become relevant over time and all quadrants tolerate the possibility of serendipitous outcomes. Academic research published in peerreviewed academic journals is the typical example of this type of research.

'*Functional relevance*' as denoted in the upper left-hand quadrant is research directed at all other end-users (for example, business, industry, policy-makers, Government agencies, Not-for-Profit organisations, and the general public). This form of relevance is derived from the technical expertise and specialist knowledge that resides within the specific province of universities. Academics are sought to undertake such research by virtue of their knowledge of a particular field and the credibility they possess in undertaking objective and rigorous research projects. Much of the research that would fall within this classification of relevance would be considered exploratory, or confirmatory. It would typically include leading-edge, innovative studies and trials in STEM and Health Science disciplines. The defining characteristic of this form of relevance, however, is the requirement for credibility and trustworthiness in the research process and research outcomes.

Where research is driven by the need to acquire resources, our framework recognises that funding providers may be either public (that is funding grants from the Federal Government) or private (that is, non-Government funders). The lower right-hand quadrant is labelled to '*public funding*'. This type of research is directed to academics (who ultimately make resource allocation decisions in the peer-review process for grant applications), but with

the intent of securing public funding. In Australia, the Australian Research Council and the National Health and Medical Research Council funding is awarded for this form of relevance in research.

Finally, the upper right hand quadrant signifies *sector relevance* - research that is considered relevant by non-government funders and is directed at the needs of non-government constituencies. Such research is designed to directly answer a specified question, for a specific purpose, within a given timeframe. Examples of this form of relevance include contract research, consultancies, or research commissioned for a given purpose.

This inductively derived conceptual framework is empirically grounded in the evidence that has formed the basis for this study. In addition to penetrating a deeper understanding of what constitutes relevant research, in this context Figure 2 offers the opportunity to more deeply understand and appreciate the forms of relevance that academic research might assume, and the implications such forms may have for research practice, priorities, and policy. Within this framework, 'relevance' is a broad, multidimensional notion, one not solely regarded as the applicability to practice or practitioners.

6.3 Implications for university management

Our reframing of the concept of relevance has two immediate practical implications for university management in their strategic pursuit of relevance in research. First, adoption of the nuanced view of relevance as advanced in Figure 2 provides a very clear point of differentiation of the ATN vis-à-vis its competitors in the AHES. Thus for universities generally, embracing a view of research such as that proposed in our conceptual framework would signal to both public as well as non-public funders, the importance that this issue has received, the position in the education 'market' that the ATN has chosen to pursue, and how this position has been arrived at. Second, in addition to signalling to external stakeholders, a university's adoption (or an adaptation) of this more nuanced view of relevance would convey to academics how the issue of relevance is conceptualised, and clarify what constitutes relevance, why it is important and how it is viewed by senior university leaders.

An attempt at predicting the strategies of the ATN and its competitors to how they might respond to such a reframing as posited here is beyond the remit of this study. Nevertheless, drawing on some of the more recent literature in the light of Australian universities' deliberations in response to the ERA and especially the a shift towards relevance and impact of university research (Martin- Sardesai et al., 2016), the isomorphic trends exhibited by non-Go8 universities (De Lange et al., 2010) appears inclined towards an ongoing trajectory. This is based on the premise that universities will seek to maximise their ERA performance for at least four reasons. First, to maintain or enhance their prestige (Norton and Cherastidtham, 2015); second, to forge links with high-quality international research collaborators and increase their positions in world rankings (Meek and Davies, 2009); third, to leverage the funding dividend that high performance brings (Coaldrake and Stedman, 2013); and fourth, to maintain their ability to supervise masters by research and doctoral candidates (Diezmann, 2018). In this event, although Go8 universities have enjoyed a substantial advantage in research because of their "expertise and track record to compete successfully" (Hazelkorn, 2004, p. 133), this position may become threatened if the ATN momentum of demonstrating the collective impact of research efforts (Wright, Curtis, Lucas, and Robertson, 2014) continues. The advantage enjoyed by the Go8 has been primarily achieved through the production of pure research (Diezmann, 2018). In contrast, as noted earlier, ATNs have a tradition of applied research. The track record they have achieved may position them favourably vis-à-vis the Go8 to capitalise

upon this applied research tradition that has as its aim a direct engagement with and impact on practice.

Some non-Go8 university alliances may continue to experience a comparative disadvantage due to limited resources, a higher priority on teaching, and challenges in attracting and retaining top researchers (De Lange et al., 2010). This might conceivably lead to an indifferent ERA performance. However, in positioning themselves as generating research specifically related to practice, their research performance may nonetheless have positive ongoing potential.

7. Conclusion

In this paper, we contribute to prior commentaries and research that have been directed to considering the relevance of academic research to clarify three questions: (1) what constitutes 'relevant research'; (2) why it is important; and, (3) how Universities pursue, encourage and cultivate relevant research. Investigating the views of 31 university leaders from a strategic coalition of five Australian universities has provided additional insights into the complexities, nuances and variances associated with the concept of 'relevance'. From the attitudes and discourse of university leaders, the concepts of legitimacy and funding inductively emerge as the two interwoven criteria that constitute central features of the concept of relevance. Relevance itself becomes defined in both functional and conceptual terms, while funding and funding providers play key roles in constituting how relevance is conceived. In explicating relevance from the university leader perspective, our study broadens the commonly used yet equivocal concept of relevance considerably, presenting it as a multifaceted notion and challenging much of the 'conventional wisdom' surrounding the relevance debate that has occurred in the 'relevance literature. This paper's theoretical contribution has addressed an issue about which empirical evidence has been hitherto unavailable, and hence its theoretical modelling has emerged inductively from the field data generated through university leader interviews. Having established the emergent nature of relationships between legitimacy and resourcing, and laid foundations for our understanding their joint formation of the concept of research relevance, further research into this issue may benefit from future researchers drawing upon legitimacy and resource dependency theories, with a view to expanding both university managements' and accounting researchers' understanding and pursuit of this dynamic stakeholder determined notion.

In addition to providing much-needed empirical evidence on responses of individual universities to the requirements of research assessment exercises (Northcott and Linacre 2010; ter Bogt and Scapens, 2012; Guthrie and Parker, 2014; Agyemang and Broadbent, 2015; Martin Sardesai et al 2017b), this study contributes to an understanding of university leaders' perceptions influencing their efforts to formulate research policy and strategy in response to increasing demands for accountability for university research efforts. In addition, from the management accounting perspective of control and performance measurement, it also provides useful insights for the structures, processes and systems of universities in their continuing endeavours to maintain legitimacy and acquire necessary resources. By highlighting the nuances, subtleties and complexities associated with the notion of 'relevance in research', the findings of this study will inform government regulators, policy makers, and senior university leaders in responding to the challenge of managing, measuring and evaluating the 'impact' that research can potentially assume, beyond the obvious and immediate use and usefulness to any particular constituency. What this study also does, is offer a clearer articulation of the malleability of the notion of research relevance, thereby offering university researchers, leaders and policymakers opportunities to recast their understandings of research relevance in different ways that can fit different situations and audiences. Furthermore, it presents a more nuanced understanding of the justifications that can be advanced for research relevance and some indications of how research relevance might be operationalised in both the conduct and dissemination of research.

Although arguably pertinent to most academic disciplines, in view of recent commentaries on the extent to which research in accounting speaks to practice, at least three immediate implications for accounting researchers can be drawn from the findings of this study. First, as argued at the outset of this paper, the topic of assessing the relevance and value of research is intrinsically entwined with the questions of management control and performance measurement – both of which are well within the ambit of accounting research. It is therefore a topic with which accounting researchers can – and we believe, should - engage to a greater extent, and one area in which accounting research can demonstrate its theoretical significance and practical value to university decision-makers.

A second implication of this studys' findings is that, as a practical discipline that also engages with theoretical, analytical and empirical investigation, accounting research can be framed from any of the quadrants depicted in our conceptual framework. This suggests that accounting studies exploring research relevance can be oriented to both academic as well as non-academic audiences, and that the primary drivers of legimacy and the attraction of resources can be used as a valid point of departure for such studies. In short, accounting research relevance. Such studies can adopt a theoretical or practical lens in examining research relevance. Such studies can adopt and embrace practitioners, academics, public funders, or business/industry/not-for-profit standpoints, offering a diverse and rich field for accounting research and practice.

A third implication for accounting research is a corollary of this point. To overcome the oftenvoiced argument of the (in)coherence in which academic accounting research is articulated, researchers need to carefully consider the audience to whom the research is addressed, the story that is being told, and the message that is to be conveyed. In doing so, accounting researchers will need to purposively tailor their writing accordingly if their research itself is to be considered relevant.

This study is subject to limitations that require consideration when drawing conclusions from the results. First, although the sample under investigation comprised around 84% of the senior research-related leaders in the ATN University alliance, this sample nevertheless represents a relatively small number of university leaders of Australian universities. Moreover, our investigation has been based on an Australian context. While not setting out to produce generalisable statistical outcomes, this study offers a provisional understanding of key concepts, processes and motivations from the perspectives of the actors involved. Although we see no reason why many of our findings cannot be extrapolated to the broader international university sector, it is nevertheless acknowledged that further research in the form of extending this study into different countries, and with a larger sample of respondents, can potentially add to the understandings presented here.

A second related limitation is that only the views of university leaders informed this study. Restricting an investigation to a single or few hierarchical levels may be criticised on the basis that it weakens the trustworthiness of the findings because a limited level of analysis often cannot reasonably reflect the beliefs of an entire organisation. However, as an exploratory investigation, the very aim of the current study is to unpack the social construction of relevance of this select group as research policy-makers. To be sure, extending the level of analysis downward to include academics from a range of disciplinary areas would provide a more holistic view of relevance in academic research. Further studies of this nature would

provide interesting opportunities to compare and contrast the positions outlined in this investigation.

Appendix A: Interview questions – broad areas of inquiry

- 1. How do you define 'relevance' in relation to research?
- 2. What constitutes 'relevant' research?
- 3. To what extent should academic research be relevant?
- 4. Why?
- 5. To whom should research be relevant?'
- 6. How important is 'relevant' research in priority relative to other areas of academic activity?
- 7. What criteria do you and your university apply in assessing relevance?
- 8. How might the concept of relevance, and its importance vary between disciplines?

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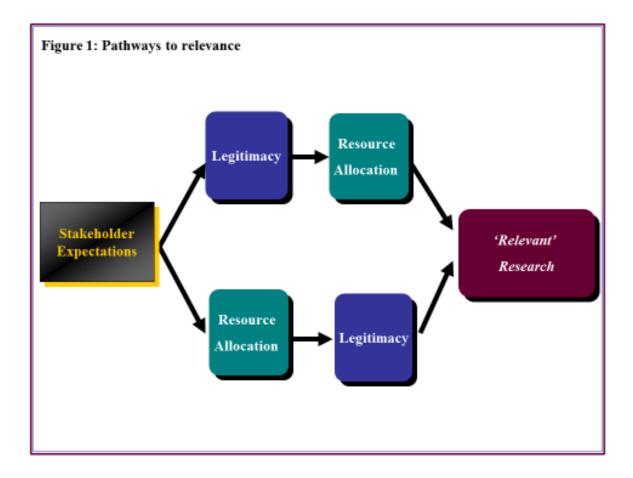
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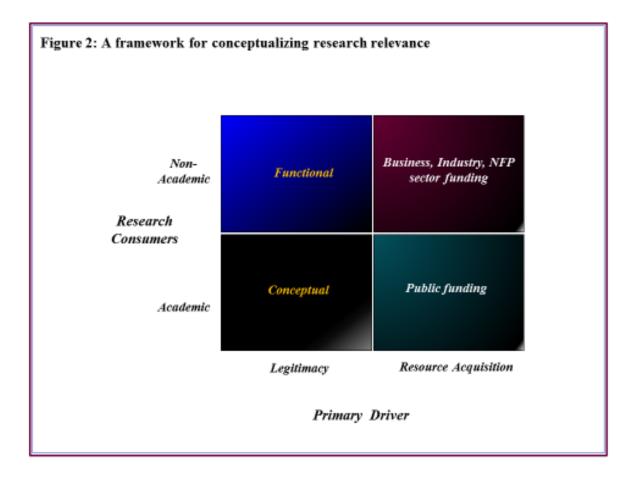


Table 1: Criteria used to evaluate relevance

Metrics cited	
1. Research Income (of all Categorie	es) 15. Academics as members of Advisory Boards
 ERA publications No. of co-authored publications (irrefereed conference papers) National and international collaborations with other universibusiness, government, community research organisations Number of projects of high social value involving non-Government 	onal ties, and17. Number documents/Hansard research (e.g. legislation, reports)18. No. of reports/ submissions to Government
 organisations (NGOs) 6. Case Studies 7. Peer Reviews 	21. Customised Education22. The extent to which academics have on- going projects with particular industry
 8. Industry-funded postgraduates 9. Consultancy income generated 	partners 23. Contributions to changes in Government Policy
10. Number of research partners11. Involvement of end users in the e stage of the research	 24. Number of HDR/PhD supervised 25. No. of HDRs undertaking work placements in industry (minimum 8
12. Public sector/Not-for-Pr collaborations	rofit weeks) 26. No. of HDR candidates on industry/end user supported programs
13. Academic citations in the pa literature14. Patents granted	27. Interdisciplinary research collaborations 28. New social policies and practices