



Managing and Incentivising Research Impact: Evidence from Australia

Joshua Newman¹

© The Author(s) 2024

Abstract

Views on the impact of academic research are divided, with some voices advocating for more impact and others calling attention to pathologies of the “impact agenda”. One point of interest to most observers is the degree of alignment between academics, who do the research, and university leaders, who control rules and resources relating to research. Using a survey of academics and interviews with university leaders at a large, representative, research-focused university in Australia, this article contributes to the scholarship on research impact by investigating and analysing perceptions of what impact is and how it can be achieved. The study finds that in this case, there was significant disagreement between academics and university leaders on the meaning of impact and how it should be incentivised. These disagreements present a serious obstacle for universities advancing impact strategies and create vulnerabilities for conflict between university management and academic staff as envisioned by critics of the impact agenda.

Keywords Research impact · Impact agenda · Research performance · Australia

Introduction

For better or for worse, universities are increasingly being called upon by governments, funding agencies, and the general public to demonstrate their relevance to society (Gunn and Mintrom 2022: 8). One aspect of this trend is a growing call for researchers to indicate how their research has influenced the world outside the university, in what has been referred to as the “impact agenda” (Smith et al. 2020).

Perspectives on the impact agenda fall into a number of distinct schools of thought. The vast majority of scholarship on research impact discusses the topic unquestioningly, either in search of ways to measure impact (Butler et al. 2017;

✉ Joshua Newman
joshua.newman@monash.edu

¹ Faculty of Arts, Monash University, Menzies Building, Room W419, Wellington Road, Melbourne, Clayton, VIC 3800, Australia

Fryirs et al. 2019; McKenzie et al. 2021), or to encourage or enable it (Matthews et al. 2018; McCormack 2011; Reed et al. 2018). A separate stream of analysis refers to flaws in the impact agenda, but calls on skeptics to embrace the agenda as an opportunity to improve the influence of academic research on society (Francis 2011; MacDonald 2017; Pettigrew 2011). More critical voices present a variety of reasons they believe the impact agenda will inevitably fail, for instance because impact cannot be evaluated over the short time frames required by governments and government funding agencies, or because impact cannot be measured in any way that enables cross-comparison, among other arguments (e.g. McCowan 2018). A significant contingent of scholars argue further that the impact agenda will result in negative outcomes for academia and for society, notably that it will interfere with academic freedom and as a consequence, curtail important "discovery" research (Kidd et al. 2021; Power 2018; Vincent 2015). And finally, many analyses characterise the impact agenda as a "sinister" ploy on the part of governments to drive a wedge between academics and university leadership, disempower and exploit researchers, and defund universities using marketised divide-and-conquer mechanisms (Clarke 2015; Olssen 2016; Rhodes et al. 2018). In general, scholarly views on impact and the impact agenda have become highly polarised, with most analyses either in support or in opposition (Holbrook 2017: 2; see also the dialogue between Pain et al. 2011 and Slater 2012).

Nonetheless, there is at least one concern that spans this divide, which is the degree to which university leaders and academic researchers align on objectives and incentives for research impact. For example, many universities around the world have published impact strategies, which some observers see as being important documents in helping universities deliver their research impact objectives (e.g. Reed et al. 2022). In any big, complex organisation, the success of grand strategies depends on alignment between leadership and staff (Box and Platts 2005; Branson 2008). Key terms need to be defined and communicated to employees across the organisation (Lawrie et al. 2016: 891–892). Tasks must be assigned clearly and appropriately (Yun et al. 2007). Rewards and incentives must be carefully designed and distributed (Morrell 2011). For supporters of the impact agenda, the success of the endeavour depends on whether or not university leaders, who design the rules and allocate the resources, and academics, who do the actual research, agree on what to do and how it should be done. Conversely, critics often discuss the impact agenda in terms of power imbalances between university leadership (i.e. management) and researchers (i.e. staff), especially in terms of the capitalisation of knowledge production at the modern neoliberal university (Parker 2024). For scholars writing from this critical perspective, the impact agenda represents another instrument for perpetuating a divisive employer–worker relationship between universities and academics, further driving academics away from active direction of the research enterprise.

However, there are little empirical data available on how institutional leaders and researchers compare in their understanding of and approach to research impact. Numerous studies have used surveys and interviews to learn about academic perceptions of impact and the impact agenda (e.g. Chubb and Reed 2018; Kidd et al. 2021; Thomas 2022 to name but a few), but the perspectives of university leaders

are usually overlooked. Upton et al. (2014) report results from a survey of UK academics and interviews with senior university leaders, but their interview subjects and survey respondents worked at different universities, and the two datasets were collected at different times as part of separate projects. Thus, there is still a gap in our understanding of how academics and university leaders at the same institution compare in their views on research impact.

In this article, I present data taken from a case study on research impact at a large, representative, research-focused Australian university. Using a survey of 430 academics, and interviews with university leaders including seven faculty deans, the Provost, the Vice-Chancellor, and several other senior leaders, I find that significant disagreement exists between university leaders and research academics on what impact means and how it should be incentivised. For supporters of the impact agenda, these disagreements represent a barrier to the institution-wide pursuit of research impact. For critics, disagreement between researchers and institutional leaders can be interpreted as evidence of the impact agenda's divisive effects on an industry that is arguably already seeing increasing antagonism between staff and leadership in many jurisdictions (Kenny 2018).

Questions About Impact

Three questions dominate the literature on research impact, across studies in support of and critical of the impact agenda. Consequently, these are the questions I focus on in this study. It is important to note that I am not purporting to answer these questions, but rather to determine what differences might be evident in how academics and university leaders understand these questions and how they themselves might answer them.

What is Impact?

Despite extensive interest in the subject, there is no definition of research impact that is widely agreed upon (Alla et al. 2017: 2; Greenhalgh et al. 2016). Many authors cite the Higher Education Funding Council for England (HEFCE)'s definition of impact as "an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life beyond academia" (e.g. Arnold et al. 2021; Bannister and Hardill 2013; Matthews et al. 2018), in part because this is how the UK's research funding bodies define impact for the purposes of the Research Excellence Framework, that country's periodic national research assessment exercise in which impact plays a direct role in university funding. But Kelly (2022: 7), acknowledging the HEFCE definition, advocates for a simpler definition of impact as "the change out there in the world that your research can help generate". Chandler (2014: 2) also recommends setting aside the HEFCE definition in favour of the much simpler, "making a difference".

These definitions are intentionally vague. They are designed to support a narrative method of documenting the influence or contribution of research (Wróblewska

2021), rather than an alternative system based on, for example, more precise quantitative metrics. Quantitative metrics for assessing research impact are notoriously hard to design (Gaunand et al. 2022), but the choice of narrative over metrics is also meant to prevent researchers from "manipulating their metrics" (Edwards and Roy 2017: 52) to score career-advancing points rather than knowledge-advancing research (although note that narratives can be easily gamed as well, as will be discussed below). One result of this choice is that the precise details of what constitutes impact, and how it should be demonstrated, are never fully described, resulting in much confusion about what exactly research impact is and how it ought to be discussed.

From a more critical perspective, the absence of a clearly understood definition of impact means that the impact agenda can never be fulfilled or achieved—and may result in perverse outcomes, especially by incentivising activities that are antithetical to the purposes of academia, such as tailoring research to the demands of funders rather than the curiosity-driven exploration of scientific questions (Power 2020).

Who Should Do Impact?

Even if a consensus definition of impact were to be adopted, it is still unclear who is expected to do the work required to generate impact. Asking researchers to derive impact from their own research could be justified on the grounds that, being closest to the work itself, they are best placed to know who the "real-world" end users might be and what kind of impact the research ought to have. However, there are two main problems with this strategy: first, assigning researchers to achieve impact from their research creates a principal-agent dilemma for institutional leaders, in which institutions would need to rely on researchers to do the impact work and also to report how successful they have been at it. Given the preference for narrative-style reporting of impact achievements mentioned above, the door is wide open for performative displays of exaggeration and self-congratulation, or "impact sensationalism" (Chubb and Watermeyer 2017). Secondly, researchers, who are by trade academic specialists in very specific knowledge fields, whose livelihood is based on lab work, concentrated reading, and individual or small-teams-based study, are notoriously bad at communicating to non-academic audiences (Sharon and Baram-Tsabari 2014). Academics with typical workloads consisting of research, teaching, and service spend little time cultivating relationships with non-academic actors outside the university. Academic researchers, by the nature of their occupation, may therefore not have the skills required to pursue and achieve impact.

Accordingly, a scholarship has emerged investigating how third parties might do the impact work that universities need but for which academic researchers are not the appropriate vector. This concept has many terms associated with it, including "knowledge brokering" (Meyer 2010), "boundary spanning" (Williams 2002), and others. The general idea is that there might be skilled agents who can be tasked with connecting research with users outside the university, in government, business, or society, and that their service is required to achieve research impact. Debates often concern technical details about how this work might be done, but also where these agents sit, whether

within the university, closer to the end user, or as independent, entrepreneurial actors (e.g. Hering 2016).

Critics of the impact agenda might question the very possibility that academics or anyone connected with academic institutions could achieve impact from research. They can do "engagement", in which they attempt to broadcast knowledge, communicate directly with interested parties, and establish connections with end users. But these activities do not necessarily constitute impact; impact requires the active participation of actors outside the university, over which researchers and knowledge brokers have no control (Watermeyer 2012).

How Can We Incentivise Academics to Do Impact?

If, on the other hand, researchers are required to do their own impact work, how can they be motivated or incentivised to do it? Academics working at universities are still largely activated by the traditional standards of research performance: publications, grant income, and PhD student supervision and completion (Alperin et al. 2019). In Australia, as in many other countries (though not, as mentioned, the UK) there are no formal or widely available funding mechanisms linked to research impact. Furthermore, research is only one aspect of academic performance, and it is usually evaluated in addition to separate teaching and service performance measurements. These concurrent evaluations often create a pressurised working environment in which researchers can feel squeezed by increasing workloads (Kenny and Fluck 2022). Adding impact to performance requirements would likely be seen as an extra burden, unless it is carefully accounted for and appropriately rewarded.

An alternative perspective sees impact work as the personal responsibility of any researcher, because having a broader impact on society is, according to this perspective, the very reason why research-minded individuals choose an academic career over one in the private sector (Blagden 2019). Accordingly, instead of performance metrics or career incentives, observers writing from this point of view argue that what is really needed to encourage academics to do impact work is a change in attitude or culture to one where the "moral prerogative" (Jessani et al. 2020: 4) to achieve impact is understood and appreciated.

On the critical side of the debate, incentives and rewards for research impact are symptoms of a greater problem of increasing focus on performativity and managerialism at universities, in which researchers are called on constantly to enumerate their achievements and justify their own existence—a practice that works against the notion of an independent knowledge sector (Olssen 2016). From this perspective, incentives and rewards for research impact cannot aid in achieving or improving impact but are a means of institutional control over the research agenda and a source of tension between academics and university leaders.

Table 1 Student populations and academic staff profiles—Monash University compared to other universities in Australia, 2021. Source: author's calculations, based on most recently available Higher Education Statistics data from the Australian Department of Education: <https://www.education.gov.au/higher-education-statistics>

	Monash University (%)	Group of eight universities (%)	All Australian universities (%)
Student population by degree			
Bachelor degree	64	57	63
Master degree by coursework	24	29	19
PhD	6	6	4
Other	6	8	14
Student population by gender ^b			
Female	56	54	57
Male	44	46	43
Student population by enrolment			
Domestic ^c	56	62	73
International	44	38	27
Academic staff by rank ^d			
Level A (postdoc/research fellow)	20	22	17
Level B (lecturer)	30	26	30
Level C (senior lecturer)	21	21	23
Levels D and E (associate professor and professor)	29	31	30
Academic staff by gender ^b			
Female	48	46	48
Male	52	54	52
Academic staff by employment status			
Permanent	53	56	63
Limited contract	47	44	37

^aPercentages may not add up to 100% due to rounding

^bCategories other than female or male represented small fractions of a percent and are not shown here

^cIncludes New Zealand

^dLecturer and senior lecturer are standard tenurial academic positions, equivalent to assistant professor in the North American system

Method

Monash University is a large public university in Melbourne, Australia. It is a member of Australia's "Group of Eight" association of research-intensive universities. Perennially listed among the top 100 universities in the world on a variety of ranking systems, Monash is fairly representative of research-intensive universities in terms of both student populations and academic staff profiles (see Table 1). Monash also does not specialise in any particular research area, and produces world-class research outcomes in fields as diverse as music, medicine, philosophy, and astrophysics.

Because of its broad representation and diverse range of research areas, Monash University is a good candidate for a case study on research impact.

Over 2021 I interviewed 14 out of a pool of 20 senior university leaders identified as having leadership roles relating to research impact at Monash University, including the Provost, the Vice-Chancellor (equivalent to President of the University), one deputy vice-chancellor, four non-executive senior leaders with "Director" roles within the Research and Enterprise portfolios, and 7 faculty deans. Of the remaining 6 interview candidates, two declined to participate, three did not respond to the invitation, and one agreed to an interview but was subsequently unable to find a time in their schedule to meet. Interviews were semi-structured, averaged about 45 minutes each, and were conducted in person (7 interviews) or by video conference (7 interviews); 13 interviews were recorded and the recordings transcribed verbatim. One interviewee declined to be recorded, so for that interview, notes were taken by hand. Transcriptions (and notes for the interview that was not recorded) were analysed for thematic content, revealing 11 themes relating to research impact, such as "Who should be the ones to do impact?" and "Can all research have impact?" Due to the small number of potential interview candidates, quotes will be presented here without identifying characteristics, so as to avoid inadvertently identifying respondents.

In November 2021, I sent out an invitation to participate in an electronic survey on research impact to every regular academic at Monash University with a public-facing researcher profile, 2783 in all. Profiles with adjunct or emeritus status, and PhD students without a standard academic appointment, were not included. Follow-up reminders were sent out in December 2021, February 2022, and March 2022. At the close of the survey in March 2022, 430 completed surveys had been returned, for a completion rate of 16%. Full ethics approval for both survey and interview research was obtained from the Monash University Human Research Ethics Committee (Project ID: 27378).

Survey-based research is, of course, susceptible to self-selection bias. In this case, however, the sample of completed surveys includes representation from a wide range of categories, which may mitigate some of the possible effects of self-selection. Furthermore, the research backgrounds of survey participants almost exactly mirrors the research backgrounds of those on the original invitation list (see Table 2).

Results

What is Impact?

Every interviewee was asked: "How would you define research impact?" I did not offer a definition or make suggestions until after the interviewee had a chance to formulate their own response.

Six out of 14 interviewees struggled tremendously with this question. Several interviewees seemed to be surprised that they might be asked to define impact, as if they had not expected the question at all. Some respondents were fairly insecure on this point, such as the one who provided the following definition:

Table 2 Descriptive characteristics of survey respondents

	Participants (<i>n</i> = 430)	
	<i>n</i>	%
"What gender do you identify with?" ^a		
Woman	215	50
Man	199	46
Non-binary or gender diverse	3	0.7
Prefer not to say	13	3
"In what year were you born?"		
Pre-baby boom (<1945)	2	0.4
Baby boom (1945–1964)	105	24
Generation <i>x</i> (1965–1979)	213	50
Generation <i>y</i> /millennial (1980–2000)	109	25
Generation <i>z</i> (>= 2000)	1	0.2
"What is your current level of academic appointment?"		
Level A (postdoctoral research fellow)	21	5
Level B (lecturer)	94	22
Level C (senior lecturer)	120	28
Level D (associate professor)	89	21
Level E (professor)	102	24
None of the above	4	1
"If you have completed a PhD, in what year was your PhD conferred?"		
< 1980	4	1
1980–1989	19	4
1990–1999	67	16
2000–2009	137	32
2010–2019	174	40
> 2020	12	3
"I have not completed a PhD"	17	4
"Irrespective of the research you are currently doing or have done in the past, which discipline is closest to the school/department/faculty/institute that you are currently primarily affiliated with?"		
Medicine/nursing/health sciences	31	33
Science/maths/information technology	18	21
Business or commerce	14	14
Engineering	8	10
Social sciences	8	4
Arts and humanities	7	7
Education	7	5
Creative arts, design, or architecture	3	3
Law	3	2

^aThis is the approved phrasing of this question that is required by the Monash University Human Research Ethics Committee

^bPercentages may not add up to 100% due to rounding.

I mean so... I see impact as impact on understanding and [long pause] what I'd call rules and regulation policy et cetera. And behaviour. Which includes practice. Um... As important. There.

Another interviewee said,

I think impact is something that translates our research outcomes into tangible, realizable... how would you say it? I sort of go back to the same point of outcomes, but an outcome that actually then... Yeah, look. How do you go about... It's an impact! It's a circular kind of problem, right?

And another responded,

It's a very interesting point. And I don't actually have a direct answer what is impact. Because I don't think we – let alone society – knows what impact is.

Another interviewee appeared to be channelling the US Supreme Court decision in *Jacobellis v. Ohio*:

...impact happens in so many different ways, that it's very hard to say what it isn't... it's actually quite... I always think it's quite easy to say when you see it.

Interviewees who were able to articulate a definition suggested many different forms of impact, such as

- Advances in knowledge or understanding
- Highly-cited publications
- Partnerships with industry
- Commercialisation
- Patents
- Contract research
- Reports for government
- Changes to public policy
- Secondment of academics to government or industry
- Changes to practice
- Education
- Influence in the community or society

Some interviewees did not settle on any one element or variety of impact, citing multiple possible forms. And according to one interviewee, impact may in fact be a broad umbrella term, with a precise definition perhaps impossible to attain:

...how do you define it? Because impact to me is different depending on the nature of work that's being achieved. And it can be different for each institution, too. So what we define as impact for Monash is different to what is defined at another university, to, let alone a research institute or even from industry and government. Impact can be very broad... impact can be different for each individual.

Survey responses presented a very different point of view, in that respondents seemed to be much more clear on what research impact meant to them. The survey did not offer a definition of impact. Nevertheless, survey respondents overwhelmingly had a clear enough personal definition of impact to know that they want their own research to achieve it. On a Likert scale from 0 (strongly disagree) to 4 (strongly agree), 90% of respondents agreed or strongly agreed with the statement, "I want my own research to generate real-world impact", with a mean of 3.4. Many survey respondents also claimed to be confident that they knew what the university's definition of impact was: on the same Likert scale as above, 44% agreed or strongly agreed with the statement, "I clearly understand what kind of impact my university wants or expects me to achieve", 32% disagreed or strongly disagreed with this statement, and 25% neither agreed nor disagreed, with a mean of 2.1. These responses are in spite of the difficulties that university leaders had in reaching a consensus, or even, for many interviewees, in articulating a definition that would be meaningful to academics. More pointedly, for these questions, there were no statistically significant differences across career stage, disciplinary background, or generational cohort. Women were statistically more likely than men to say they want their research to have impact and that they understand the university's definition of impact, but in practical terms this difference was small. These results are presented in Table 3.

It is possible that the answers to the above questions are a result of a form of response bias, where respondents are giving an answer they believe is what the survey might be expecting. However, for other questions on the survey, there was no shortage of non-conformist and contrarian responses. For example, in an open question asking for additional comments, numerous participants provided responses that challenge the impact agenda, the university's strategy, and the perceived purpose of the survey itself. Examples of these comments include:

Your questions appear to define research impact VERY narrowly. For example, there is plenty of scientific research that takes a long time to develop and mature, but which only pays dividends after many years...

Research impact cannot be numerically measured as it is NOT a quantifiable matter.

Garnering research impact seems to be considered in this survey as finding new ways to 'push' your message out. This is not impact, this is communication.

It is impossible to evaluate future impact. Indeed, the very structure of scientific enquiry precludes this possibility.

Since a definition of impact was not provided in the survey, the numerous respondents who commented that the survey had defined impact "incorrectly" were effectively further indicating that they had a particular definition in mind.

Table 3 Academics' understanding of research impact

To what extent do you agree with the following statement?

I want my own research to generate real-world impact.

(0—strongly disagree, 1—disagree, 2—neither agree nor disagree, 3—agree, 4—strongly agree)	Mean	Sig. test used	<i>p</i> value
Overall	3.4		
Women	3.5	Difference of means <i>t</i> -test	0.005
Men	3.3		
Baby boomers (born 1945–1964)	3.4	Kruskal–Wallis	0.705
Generation <i>x</i> (born 1965–1979)	3.4		
Millennials (born 1980–1999)	3.5		
Level A (postdoc/research fellow)	3.4	Kruskal–Wallis	0.939
Level B (lecturer)	3.4		
Level C (senior lecturer)	3.4		
Level D (associate professor)	3.4		
Level E (professor)	3.4		
Science-based researchers ^a	3.5	Difference of means <i>t</i> -test	0.165
Arts-based researchers ^b	3.4		
Years since PhD conferred		Kendall's Tau	0.115
<i>To what extent do you agree with the following statement?</i>			
I clearly understand what kind of impact my university wants or expects me to achieve.			
Overall	2.1		
Women	2.3	Difference of means <i>t</i> -test	0.025
Men	2.0		
Baby boomers (born 1945–1964)	2.1	Kruskal–Wallis	0.973
Generation <i>x</i> (born 1965–1979)	2.1		
Millennials (born 1980–1999)	2.1		
Level A (postdoc/research fellow)	2.1	Kruskal–Wallis	0.878
Level B (lecturer)	2.2		
Level C (senior lecturer)	2.2		
Level D (associate professor)	2.0		
Level E (professor)	2.2		
Science-based researchers	2.1	Difference of means <i>t</i> -test	0.753
Arts-based researchers	2.1		
Years since PhD conferred		Kendall's Tau	0.938

^aMedicine/nursing/health sciences, science/maths/information technology, and engineering

^bBusiness or commerce, social sciences, arts and humanities, education, creative arts, design, or architecture, and law

Who Should Do Impact?

Many interviewees said they believed that academics are poor science communicators—good at conducting research, but bad at communicating it to a non-academic

audience. One interviewee, recalling a departmental newsletter at another institution they had previously worked at, said,

...if you ask academics to write it, it was like we were all trying to compete to see who could write the most unreadable, technical, you know... we couldn't come to the essence of what... so we got a writer, and it was much more pleasant, and much more humorous, and much more interesting.

And another commented that researchers don't speak the language of industry:

... it's very different between the language of the industry or investors, versus the language of researchers. Even those who are focused on problems that are relevant to industry.

And another put it simply,

I think one of the things we have to get better at, is how do we do good research communications.

Nevertheless, all of the 12 interviewees who weighed in on this question suggested that academics should be the ones to generate impact from their own research. None of the interviewees expressed confidence in the idea that someone other than the primary researcher might be able to generate impact from university research. Consider this exchange, for example:

INTERVIEWER: ...if the university were to invest in what we call "knowledge brokers" -- people whose job it is to take existing university research and translate it to the real world... not in a commercialisation way but in an impact way -- would that be better than having individual academics, you know, tweaking the KPIs in a way that motivates individual academics?

INTERVIEWEE: I think that you'd have to have the key academics involved and helping with that, in order for the person doing the translation to do it well and efficiently and faithfully in some way. So I don't think you can pretend that it would be a straight handover. I just think that would be unrealistic.

And according to another interviewee,

I don't need anybody else coming in as a consultant for me or my people to identify what kind of knowledge transfer and expertise sharing do the research audiences for [my discipline] value. I don't have any problem identifying that.

A third interviewee expressed concern that dedicated knowledge brokering would be an undesirable job with lower status than researcher:

Because what would the work plan of that individual look like? ... Because you don't want them to suddenly look like they're quasi-professional staff because they do facilitation...

Many survey respondents agreed with interviewees that academics should be the ones to derive impact from their own research. On the same Likert scale as above, 44% of respondents agreed or strongly agreed with the statement, "I am the best

Table 4 Academics' perceptions of who should generate impact

To what extent do you agree with the following statement?

I am the best person to generate real-world impact for my research.

(0—strongly disagree, 1—disagree, 2—neither agree nor disagree, 3—agree, 4—strongly agree)	Mean	Sig. test used	<i>p</i> value
Overall	2.4		
Women	2.5	Difference of means <i>t</i> -test	0.014
Men	2.2		
Baby boomers (born 1945–1964)	2.2	Kruskal–Wallis	0.075
Generation <i>x</i> (born 1965–1979)	2.4		
Millennials (born 1980–1999)	2.5		
Level A (postdoc/research fellow)	2.5	Kruskal–Wallis	0.205
Level B (lecturer)	2.5		
Level C (senior lecturer)	2.2		
Level D (associate professor)	2.4		
Level E (professor)	2.4		
Science-based researchers	2.4	Difference of means <i>t</i> -test	0.969
Arts-based researchers	2.4		
Years since PhD conferred		Kendall's Tau	0.123

person to generate real-world impact for my research", 37% neither agreed nor disagreed with that statement, and only 18% disagreed or strongly disagreed, with a mean of 2.4. As before, there were no statistically significant differences among age groups, career stages, or disciplinary backgrounds, and again, women were marginally more likely to say they thought they were the best person to generate impact from their research. These results are shown in Table 4.

Furthermore, when asked to rate various methods of generating research impact, individualised activities were rated much higher than institutionalised activities, with, for example, publishing research open access ranked first on the list and "having a central university office dedicated to improving the impact of university research" ranked 7th out of 8, just ahead of "public advertising campaigns run by the university". When broken down by gender, age, and career stage, no differences are notable, with university-run activities ranking 7th and 8th across all categories (see Table 5).

How Can We Incentivise Academics to Do Impact?

The topic of motivating researchers to generate impact from their research was highly charged for many interviewees, and there was significant disagreement among them. The main point of contention related to whether or not specific incentives were required to motivate academics to do more impact-generating activities, and if so, what kind.

Table 5 Academics' ranking of methods of generating research impact
How do you rate each of the following methods of generating research impact? (not at all effective/somewhat effective/very effective/don't know or no opinion)

Method	Rank order (by percent of respondents selecting "somewhat effective" or "very effective") ^a										
	Overall	Women	Men	Baby Boomers	Gen X	Millennials	Level A	Level B	Level C	Level D	Level E
Publishing articles, books, book chapters, etc. as fully open access	1	2	1	1	1	4	1	1	1	4	2
Researchers participating in interviews or delivering statements to news organisations (e.g. print, radio, television, internet)	2	1	2	2	2	1	4	3	2	1	1
Publishing plain-language reports for public distribution	3	3	3	2	3	3	1	2	3	5	2
Public outreach or educational events (e.g. science fairs, public lectures)	4	4	5	4	4	1	1	3	4	2	5
Having deeper institutionalised connections with government or industry (for example, through a steering committee)	5	6	3	5	5	5	5	6	5	3	4
Social media	6	5	6	6	6	6	6	5	6	6	6
Having a central university office dedicated to improving the impact of university research	7	7	7	7	8	7	7	7	8	8	7
Public advertising campaigns run by the university	8	8	8	8	7	8	8	8	7	7	8

^aRepeated ranks indicate a tie

Five interviewees were adamant that academics are not currently adequately rewarded for pursuing research impact, because performance standards and promotion criteria across the university tend to reward traditional measures such as publication in top-ranked journals, grant income, and PhD student completion. According to these interviewees, if the university wants academics to generate more research impact, rewards and incentives need to be changed to encourage this activity. The most commonly mentioned way of doing this was to increase the reward for "non-traditional research outputs", which could include outreach to government or community, writing widely used textbooks or other reference material, participation in public commissions or inquiries, or any of a variety of other outputs and activities that are not currently recorded as academic publication.

Five other interviewees were highly antagonistic to the idea of using material rewards or incentives to motivate academics to pursue impact. Two interviewees separately referred to this idea as "rubbish".¹ Four interviewees said that rewards for impact activities are already in the criteria for promotion for academics used across the university, and that what is required instead is cultural or attitudinal change among academics to accept their responsibility to connect their research to the outside world. Four interviewees pointed to general external demands for universities to demonstrate impact and said they believed that academics demonstrating their own impact achievements would, sooner or later, simply become the standard.

One of the problems identified here, by interviewees from both camps, was the difficulty in measuring impact. Eight interviewees said that they believed current university metrics for research performance do not adequately capture impact. One interviewee went as far as to say that no one anywhere currently knows how to measure impact:

I don't think anyone... I can't see any evidence of it, where, at the system level, there's really been a structured conversation of what the appropriate measures of impact are.

Four interviewees gave a spirited endorsement of using narratives to capture impact. According to one interviewee,

You should have impact at an international level. I don't tell you how that impact is. But if you can't tell me how people are using your stuff – whether it's in practice, whether it's papers, whether it's driving new companies, or whether it's, you know... Give me evidence of how you're leading at a national level.

And according to another interviewee, using narratives to assess impact will actually work to motivate academics to pursue it:

¹ The actual word used here on both occasions was "bullshit". In addition, a third interviewee said that *not* using research performance metrics to encourage academics to pursue impact was "bullshit". As already mentioned, this part of the discussion was highly emotive for many participants.

Table 6 Academics' perceptions of reward for research impact*To what extent do you agree with the following statement?*

I am adequately rewarded by my university for the impact activities that I do.

(0—strongly disagree, 1—disagree, 2—neither agree nor disagree, 3—agree, 4—strongly agree)	Mean	Sig. test used	<i>p</i> value
Overall	1.5		
Women	1.6	Difference of means <i>t</i> -test	0.917
Men	1.5		
Baby boomers (born 1945–1964)	1.5	Kruskal–Wallis	0.279
Generation <i>x</i> (born 1965–1979)	1.5		
Millennials (born 1980–1999)	1.7		
Level A (postdoc/research fellow)	2.1	Kruskal–Wallis	0.009
Level B (lecturer)	1.5		
Level C (senior lecturer)	1.4		
Level D (associate professor)	1.4		
Level E (professor)	1.7		
Science-based researchers	1.7	Difference of means <i>t</i> -test	0.001
Arts-based researchers	1.4		
Years since PhD conferred		Kendall's Tau	0.934

...every output, and the impacts that people achieve, are actually what this is about. So we're not statistically saying, ok, we've got \$50 million of funding a year – but, we have \$50 million of funding supporting X projects that are delivering on this, this, and this. So that it's part of a much richer narrative. And people are then focused on, and motivated more by those outputs and impacts than the inputs.

Survey respondents also had strong feelings on this issue. On a Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree), only 18% agreed or strongly agreed with the statement, "I am adequately rewarded by my university for the impact activities that I do". This sentiment cut across categories of gender, age, disciplinary background, and career stage, with the only statistically significant relationships being that postdoctoral research fellows were slightly more likely than not to agree that they are adequately rewarded for impact, and arts-based researchers were statistically even less likely to agree with this statement than science-based researchers (see Table 6).

Open comments from the survey illustrating this point, while not statistically representative, were numerous. Some examples include:

There is no recognition of research impact in our department. It counts for far less than journal publications for promotion. It's not counted towards either workload or market loading.

Universities pay lip service to impact. This is clearly evidenced by weightings in promotion criteria which is biased towards traditional research outputs.

There is no acknowledgment of real impact – just a very tired, old world view of 'top tier' discipline specific journal articles as the sole criteria for successful research.

There is a mis-match (even contradiction) between our goals of impact and communication with our communities and the elitist journal ranking / rigid publication quality metrics used.

Notably, there were zero comments in the open survey question referring to cultural change or change in attitudes among academics as a useful strategy for achieving impact.

Discussion

What kind of alignment, if any, do researchers and university leaders have on the three main questions relating to research impact? In this case study, there was significant disagreement about how impact work should be rewarded. University leaders were split on using material rewards to incentivise impact, and no united strategy was apparent. While some university leaders felt that rewards for impact activities were already available, the general sentiment among academic survey respondents was that they are not rewarded enough for the impact activities they are already doing. These results were pervasive and cut across gender, generational cohort, career stage, and disciplinary background.

More fundamentally, university leaders and academics did not agree on what impact means. University leaders did not converge on a unified definition of research impact at all -- with many interviewees struggling to convey their own personal understanding of the concept. Conversely, academics were, on the whole, confident that they understand what impact is and what university leaders think impact is. Somewhere, communication between university leadership and academic staff has broken down: for instance, even though university leaders had not, at the time this study was conducted, created, or broadcasted an official message about the university's interpretation of impact, researchers at the university had formed and were operating under their own preconceived notions.

Nonetheless, both university leaders and academics in this case study largely agreed that academics should do their own impact work. The concept of knowledge brokering was not well received by either group. Academic survey respondents ranked individual impact activities well above university-led activities, and while women were slightly more likely than men to see themselves as the best person to derive impact from their work, again there was no statistical difference between age groups, career stages, or disciplinary backgrounds.

This last point suggests a serious vulnerability within the impact agenda for conflict between university leadership and academic staff. In many jurisdictions, especially Australia (but also including European contexts such as the UK), workload models attempt to account for and reward micro aspects of academic work, in response to which academic staff members expect to be rewarded in proportion to logged workload points (Kenny 2018). In this case study, leaders and academic

staff mainly agreed that academics should do impact work. And yet, incentives and rewards for doing this work were not properly formulated, university leaders could not agree on what incentives and rewards for impact work might look like, and many academic respondents were already aggrieved that their impact work to date had not been recognised or rewarded adequately by the university. More importantly, widespread disagreement about what "impact" might actually refer to would present a significant challenge to any attempt at accounting for impact activities in the first place, let alone incentivising or rewarding them.

The broader implications of these results depend on one's normative position in relation to the impact agenda. For those who believe that universities have an obligation to improve the impact of their research, and that a structured campaign of incentive, assessment, reward, and evaluation are the components of a successful strategy in this regard, misalignment between university leaders and academic staff is a major impediment to success. If academics are not clear on what impact work entails, or if they feel that any reward on offer is not worth the effort, university leaders will have a hard time achieving their research impact goals. Admittedly, this barrier could be overcome by force or through generational change as effectively as could be accomplished by cooperation or through negotiation, but from this perspective, disagreement between leadership and research staff on the basic elements of the impact agenda would need to be rectified before advances could be made.

On the critical side, the results of this study lend empirical credence to the theoretical concerns that many authors have expressed about the consequences of the impact agenda. Holbrook (2017), for instance, asserts that the impact agenda is a direct result of a neoliberal philosophy of university management and is ultimately just another way of regulating researchers and the research industry through transactional accounting mechanisms. Many authors have pointed directly to the increasing burdens on the already stretched, stressed, and over-evaluated research academic workforce, with negative consequences for job satisfaction (Weinstein et al. 2023), career progression (Dibb and Quinn 2010), and mental health (Bunds 2021). From this perspective, the results of this study—in which university leaders wanted academics to pursue and account for impact from their own research, personally, and yet could not describe what impact means or how it should be measured—describe a real-life example of the pathologies of the impact agenda in action.

Conclusion

This study is based on a single case and, as always with single cases, generalisation is not automatic. However, Monash is a large university with a diverse workforce, a diverse student body, a wide range of research expertise, and a dense bureaucratic structure. In many ways, it is similar to other research-focused universities in Australia and around the world. It is entirely plausible that the results found in this study would obtain at other universities, and future research should expand this investigation across other institutions to determine how widespread the problem of disagreement about research impact between university leaders and research academics might be.

In 2022, Monash launched a new strategic research plan with the word "impact" in the title. Although the 2022 research plan did not elaborate a precise definition of impact, metrics for measuring or evaluating impact, or a system of obligations, rewards, or incentives for academics pursuing impact from their own research, many university leaders I interviewed for this study spoke with confidence about the effect this new plan would have on achieving the university's research impact goals. While it is too early to evaluate the influence of the 2022 plan, it is clear that previously, academic staff at Monash were not clear on what impact is supposed to mean or how they should incorporate impact activities into their existing workload. For supporters of the impact agenda, the new strategic plan (or any future plan) will need to address these issues if it is to succeed. For critics, no strategy related to improving the impact of research can succeed as long as managers and academics are driven by different value systems that produce conflicting expectations.

Funding Open Access funding enabled and organized by CAUL and its Member Institutions.

Declarations

Conflict of interest The authors report there are no competing interests to declare.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Alla, K., Hall, W.D., Whiteford, H.A., Head, B.W. and Meurk, C.S. (2017) How do we define the policy impact of public health research? A systematic review. *Health Research Policy and Systems* 15(1): 1–12
- Alperin, J.P., Muñoz Nieves, C., Schimanski, L.A., Fischman, G.E., Niles, M.T. and McKiernan, E.C. (2019) How significant are the public dimensions of faculty work in review, promotion and tenure documents? *Elife* 8: e42254
- Arnold, J., Dries, N. and Gabriel, Y. (2021) Enhancing the social impact of research in work and organizational psychology—Beyond academia. *European Journal of Work and Organizational Psychology* 30(3): 329–338
- Bannister, J. and Hardill, I. (2013) Knowledge mobilisation and the social sciences: dancing with new partners in an age of austerity. *Contemporary Social Science* 8(3): 167–175
- Blagden, D. (2019) Politics, policy, and the UK impact agenda: The promise and pitfalls of academic engagement with government. *International Studies Perspectives* 20(1): 84–111
- Box, S. and Platts, K. (2005) Business process management: establishing and maintaining project alignment. *Business Process Management Journal* 11(4): 370–387
- Branson, C.M. (2008) Achieving organisational change through values alignment. *Journal of Educational Administration* 46(3): 376–395
- Bunds, K.S. (2021) "Please let it stop": Fear, anxiety, and uncertainty on the neoliberal tenure track. *Qualitative Inquiry* 27(8–9): 1040–1047

- Butler, J.S., Kaye, I.D., Sebastian, A.S., Wagner, S.C., Morrissey, P.B., Schroeder, G.D., et al. (2017) The evolution of current research impact metrics. *Clinical Spine Surgery* 30(5): 226–228
- Chandler, C., 2014. What is the meaning of impact in relation to research and why does it matter? A view from inside academia. In *Achieving Impact in Research*, edited by Pam Denicolo, pp.1-9. Sage.
- Chubb, J. and Reed, M.S. (2018) The politics of research impact: academic perceptions of the implications for research funding, motivation and quality. *British Politics* 13(3): 295–311
- Chubb, J. and Watermeyer, R. (2017) Artifice or integrity in the marketization of research impact? Investigating the moral economy of (pathways to) impact statements within research funding proposals in the UK and Australia. *Studies in Higher Education* 42(12): 2360–2372
- Clarke, P. (2015) The Impact Market: The complicity of practitioner-researchers in ‘the spread of the university beyond the university.’ *Performance Research* 20(4): 112–121
- Dibb, Sally, and Quinn, Lee. (2010) Debate: Research impact or career progression? *Public Money & Management* 30(6): 326–328
- Edwards, M.A. and Roy, S. (2017) Academic research in the 21st century: Maintaining scientific integrity in a climate of perverse incentives and hypercompetition. *Environmental Engineering Science* 34(1): 51–61
- Francis, B. (2011) Increasing impact? An analysis of issues raised by the impact agenda in educational research. *Scottish Educational Review* 43(2): 4–16
- Fryirs, K.A., Brierley, G.J. and Dixon, T. (2019) Engaging with research impact assessment for an environmental science case study. *Nature Communications* 10(1): 4542
- Gaunand, A., Colinet, L., Joly, P.B. and Matt, M. (2022) Counting what really counts? Assessing the political impact of science. *Journal of Technology Transfer* 47(3): 699–721
- Greenhalgh, T., Raftery, J., Hanney, S. and Glover, M. (2016) Research impact: a narrative review. *BMC Medicine* 14(1): 1–16
- Gunn, A. and Mintrom, M., 2022. *Public Policy and Universities: The Interplay of Knowledge and Power*. Cambridge University Press.
- Hering, J.G. (2016) Do we need ‘more research’ or better implementation through knowledge brokering? *Sustainability Science* 11: 363–369
- Holbrook, J.B. (2017) The future of the impact agenda depends on the reevaluation of academic freedom. *Palgrave Communications* 3(1): 1–9
- Jessani, N.S., Valmeekananathan, A., Babcock, C.M. and Ling, B. (2020) Academic incentives for enhancing faculty engagement with decision-makers—considerations and recommendations from one School of Public Health. *Humanities and Social Sciences Communications* 7(1): 1–13
- Kelly, W., 2022. *Impact Primer: The What, Why and How of Impact*. In *The Impactful Academic*, edited by Wade Kelly, pp.1-12. Emerald Publishing Limited.
- Kenny, J. (2018) Re-empowering academics in a corporate culture: An exploration of workload and performativity in a university. *Higher Education* 75: 365–380
- Kenny, J. and Fluck, A.E. (2022) Emerging principles for the allocation of academic work in universities. *Higher Education* 83(6): 1371–1388
- Kidd, I.J., Chubb, J. and Forstenzer, J. (2021) Epistemic corruption and the research impact agenda. *Theory and Research in Education* 19(2): 148–167
- Lawrie, G., Abdullah, N.A., Bragg, C. and Varlet, G. (2016) Multi-level strategic alignment within a complex organisation. *Journal of Modelling in Management* 11(4): 889–910
- MacDonald, R. (2017) “Impact”, research and slaying Zombies: The pressures and possibilities of the REF. *International Journal of Sociology and Social Policy* 37(11–12): 696–710
- Matthews, P., Rutherford, R., Connelly, S., Richardson, L., Durose, C. and Vanderhoven, D. (2018) Everyday stories of impact: interpreting knowledge exchange in the contemporary university. *Evidence and Policy* 14(04): 665–682
- McCormack, B. (2011) Engaged scholarship and research impact: Integrating the doing and using of research in practice. *Journal of Research in Nursing* 16(2): 111–127
- McCowan, T. (2018) Five perils of the impact agenda in higher education. *London Review of Education* 16(2): 279–295
- McKenzie, K., Murray, A., Murray, G. and Martin, R. (2021) The use of an impact framework to evaluate the impact of research on policy and practice: Screening questionnaires for intellectual disability. *Research Evaluation* 30(2): 141–153
- Meyer, M. (2010) The rise of the knowledge broker. *Science Communication* 32(1): 118–127
- Morrell, D.L. (2011) Employee perceptions and the motivation of nonmonetary incentives. *Compensation & Benefits Review* 43(5): 318–323

- Olsen, M. (2016) Neoliberal competition in higher education today: research, accountability and impact. *British Journal of Sociology of Education* 37(1): 129–148
- Pain, R., Kesby, M. and Askins, K. (2011) Geographies of impact: power, participation and potential. *Area* 43(2): 183–188
- Parker, L.D. (2024) Public university research engagement contradictions in a commercialising higher education world. *Financial Accountability & Management* 40(1): 16–33
- Pettigrew, A.M. (2011) Scholarship with impact. *British Journal of Management* 22(3): 347–354
- Power, M. (2018) Creativity, risk and the research impact agenda in the United Kingdom. *European Review* 26(S1): S25–S34
- Power, M. (2020) 'Playing and Being Played by the Research Impact Game', in M. Biagioli and A. Lippman (eds.) *Gaming the Metrics: Misconduct and Manipulation in Academic Research* MIT Press, pp. 57–66.
- Reed, M.S., Bryce, R. and Machen, R. (2018) Pathways to policy impact: a new approach for planning and evidencing research impact. *Evidence & Policy* 14(03): 431–458
- Reed, M.S., Gent, S., Seballos, F., Glass, J., Hansda, R. and Fischer-Møller, M., 2022. How can impact strategies be developed that better support universities to address twenty-first-century challenges? *Research for All*, 6(1).
- Rhodes, C., Wright, C. and Pullen, A. (2018) Changing the world? The politics of activism and impact in the neoliberal university. *Organization* 25(1): 139–147
- Sharon, A.J. and Baram-Tsabari, A. (2014) Measuring mumbo jumbo: A preliminary quantification of the use of jargon in science communication. *Public Understanding of Science* 23(5): 528–546
- Slater, T. (2012) Impacted geographers: a response to Pain. *Kesby and Askins. Area* 44(1): 117–119
- Smith, K.E., Bandola-Gill, J., Meer, N., Stewart, E. and Watermeyer, R., 2020. *The impact agenda: Controversies, consequences and challenges*. Policy Press.
- Thomas, R. (2022) Affective subjectivation or moral ambivalence? Constraints on the promotion of sustainable tourism by academic researchers. *Journal of Sustainable Tourism* 30(9): 2107–2120
- Upton, S., Vallance, P. and Goddard, J. (2014) From outcomes to process: evidence for a new approach to research impact assessment. *Research Evaluation* 23(4): 352–365
- Vincent, A. (2015) The ideological context of impact. *Political Studies Review* 13(4): 474–484
- Watermeyer, R. (2012) From engagement to impact? Articulating the public value of academic research. *Tertiary Education and Management* 18: 115–130
- Weinstein, N., Haddock, G., Chubb, J., Wilsdon, J. and Manville, C. (2023) Supported or stressed while being assessed? How motivational climates in UK University workplaces promote or inhibit researcher well-being. *Higher Education Quarterly* 77(3): 537–557
- Williams, P. (2002) The competent boundary spanner. *Public Administration* 80(1): 103–124
- Wróblewska, M.N. (2021) Research impact evaluation and academic discourse. *Humanities and Social Sciences Communications* 8(1): 1–12
- Yun, S., Takeuchi, R. and Liu, W. (2007) Employee self-enhancement motives and job performance behaviors: investigating the moderating effects of employee role ambiguity and managerial perceptions of employee commitment. *Journal of Applied Psychology* 92(3): 745

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.