Submission to the Australian Research Council (ARC)

THE UNIVERSITY OF MELBOURNE

Submission - New Australian Research Council Research Insights Capability Model

Summary

The University of Melbourne welcomes the proposed changes suggested by the Australian Research Council (ARC) to developing a new approach to research evaluation that fosters excellence, promotes open science and reassures stakeholders that public funds are used effectively.

The University outlines here its Institutional-wide views on the proposed Research Insights Capability and is keen to engage with the ARC on further discussions regarding data exchange, pilot participation for dashboard and reporting development, co-design of metrics, and promotion of further discussion with Group of Eight (Go8) colleagues.

In addition, the University's Enterprise Performance Reporting (EPR) Portfolio, which provides a range of expert services across the Institution including data and reporting, has provided a more detailed response to the consultation document that proposes a set of principles to underpin the evaluation, as well as recommending readily available data that could be used to assess and benchmark research performance. This is included as **Attachment 1.**

The University welcomes redefined requirements and a simplified format for narrative reporting and has included a sample 'research impact snapshots' document, developed by its Faculty of Business and Economics, **Attachment 2,** which details the template format and development.

For further information please contact: dvc-research@unimelb.edu.au

Response to consultation questions

1. What is the value of research evaluation to you?

Evaluation is key to understanding capability and the quality of research undertaken within Australian institutions. It is vital for fostering excellence, ensuring transparency, and demonstrating accountability – whether the research is basic, applied, or experimental. It reassures the Australian public, government, and industry that public funds are being used effectively. Research evaluation, however, is nuanced because it requires balancing quantitative and qualitative data, considering specific discipline contexts, and should avoid oversimplification or misuse of metrics.

Evaluation of research capability is different to evaluation of research outcomes. The proposed tool should be clear on into which of these two it seeks to provide insights. The value of research evaluation depends on the parameters, constraints, and type of data gathered and used, and the feasibility of collecting and providing this data.

An effective approach, from our Institutional perspective, would be one that:

- Shares findings widely in ways that offer accessible mechanisms to build collaboration and strengthen a national research culture
- Focuses less on competition for scarce funding and more on joint efforts to address shared societal challenges
- Minimises administrative burden, for both the ARC and Institutions
- Uses elements such as the suggested targeted insights and vignettes to highlight impact in real time, enabling dissemination to audiences beyond academia and creating the potential for feedback loops that improve long-term outcomes and reduce siloed research
- Values a full range of research outputs including publications, datasets, software, and creative and practice-based outputs. This enables increased trust, transparency, reproducibility and reusability of research by exposing the underlying data, workflows, software/code. It also raises the profile of research in creative and practice-based disciplines, where outputs do not always align with traditional academic publishing models
- Supports the retirement of outdated classifications by shifting from assessing isolated artefacts to evaluating coherent programs of research over time and acknowledging evolving inquiries and communities of practice.

2. What are the questions about the research sector would you like a Research Insights Capability to answer?

Additional Statistical Information to enable benchmarking

The University would welcome additional statistical information to enable benchmarking across the sector, and standards need to be applied across the sector in order for benchmarkable data to be produced. While the Go8 does already exchange research data (HERDC, Graduate Research and Staff FTE), this occurs at the organizational level making it difficult to benchmark performance due to different structures across Institutions. Using FoR codes will make benchmarking more meaningful and remove the need for a separate data exchange.

The University also suggests the ARC be more prescriptive in explaining how data should be prepared. For instance, benchmarking research performance from ERA data was difficult as Universities used different methodologies to assign Field of Research (FoR) codes.

The University would appreciate comparative benchmarking data for successful ARC National Competitive Grant Schemes, including: levels of cash and in-kind contributions from partner organisations and universities, gender and broader diversity information, and 'Non-traditional' impact measures, including

influence on public discourse, policy, decision-making, and creative outputs, and trend visualisation information.

Research Partnerships and Engagement

Rather than signaling only where Institutions or the Sector has existing research capacity, the Research Insights Capability should help to better identify opportunities for national and international collaboration, and emerging areas where strategic investment may be required. That is, the Capability would be most useful to identify gaps and underrepresented areas of research where the nation can develop and grow.

Regardless of research type, discipline, or team composition, evaluation should consider how funded research benefits the world, including for under-represented or vulnerable populations. These parameters should not be overly prescriptive, but funded researchers should be able to link their work's value to societal outcomes – whether obvious or less visible. Current ARC grant schemes support this ethos, but there is low clarity (or requirement) on how outcomes are used to build future collaborations, spark new research directions, and deliver lasting impact. The Research Insights Capability approach could help fill this gap by engaging CIs and research teams to show not only *what* was achieved, but *how* those achievements are, or can and will be, carried forward.

For impact data reporting, optional requirements and an avenue to pursue could be identifiers of 'who' the research is being done with, with proactive engagement with research collaborators, next users, end users and community and consumer representatives signifying pathways to impact.

While such data collection would need to initially be optional as it is dependent on the research management systems and processes at research institutions, the ARC could consider making this an optional reporting requirement initially, encouraging research organisations to build in the tracking of this information into their systems in future.

There is a clear gap in appropriate data requirements for recording proper community liaison and engagement outreach, as well as active partnerships on research projects.

The Capability approach should also critically examine Australia's regional partnerships. Our geopolitical alliances (e.g., AUKUS, Partners in the Blue Pacific) perpetuate a colonising posture, to the detriment of genuine, respectful collaboration with our regional neighbours. Embedding requirements for meaningful regional engagement—and valuing the outcomes of such partnerships— would signal a serious commitment to repairing and strengthening relationships in our region.

3. Do you see value in the outputs of the proposed Research Insights Capability?

The University can see value in the outputs depending on the type and source of information and any subsequent impact on the sector. Tools such as data dashboards, in-depth bespoke reports, and state-of-the-research-environment analyses could be powerful, if based on robust, timely, and well-designed data collection.

Key considerations and challenges include:

- Clarifying the intention behind the 'State of the Research Environment report' and how it might be used by current and future governments
- Ensuring that the report demonstrates the fundamental importance of blue-sky foundational research, not just industry collaboration schemes (which may be easier to measure)
- Clarity on the measures used to determine 'sector strengths' and consideration of the feasibility in obtaining data to demonstrate this.
- Articulation of how the Capability will deliver concrete benefits for researchers working within the Australian research system will be critical

- Establishing clear and transparent principles and protocols for data use at all levels will be needed (see **Attachment 1** – Proposed Principles)
- Ensuring dashboards can be meaningfully complemented by qualitative exemplars that capture nuanced forms of impact, for example, in Indigenous research and creative arts to ensure that a full range of impacts are represented
- That tools or dashboards are smart enough to evaluate only areas where there are active contributions. This should be clearly defined, easily understood and minimise opportunities for metric gaming or unintended incentives for institutions to focus on process over outcomes
- Recognising where some impacts of the competitive funding landscape in Australia may lead to skewed outcomes (e.g. heightened focus of some Institutions on entrepreneurship or historically low national research and development investment relative to other OECD nations)
- The need for Indigenous co-design: Frameworks must be co-designed with Indigenous researchers and knowledge holders.

Value of Research Impact Narratives

The University seeks clarification on the source and preparation of vignettes highlighting research impact, to ensure they do not overburden university staff. Case studies have historically incurred significant additional workload across multiple levels of the University.

The University encourages regular case study reporting (for instance, a small number of different FoRs) to highlight distinct research impact successes, rather than large volumes at proscribed compliance schedules. This would provide greater ongoing value to institutions and allow development of case studies to be built into annual planning cycles and mainstreamed into standard processes, rather than as resource-intensive periodic reporting exercises.

Redefined requirements and a simplified format for narrative reporting would also help reduce compliance burden and support a more flexible approach, such as brief 1-2 page 'research snapshots' (as for example developed by our Faculty of Business and Economics, see **Attachment 2,** which details the template development). Use of a brief and succinct format like the snapshots would provide a more consistent and reusable format that could align with institutional marketing initiatives, promotion opportunities, and broader public-facing research communication and translation.

Requirements from previous exercises, such as that the research must have all been completed at a single institution, should be removed or relaxed due to the highly collaborative nature of contemporary research.

4. Do you have data that could be shared with the ARC, or are you aware of a data asset, which could be useful to the ARC?

The University's source of truth for research outputs data is an instance of Symplectic Elements. The University has a high level of ORCID uptake and integration within Elements and welcomes a national approach that encourages the use of persistent identifiers.

The University currently has two institutional repositories, a DSpace (Digitised-Collections) and Figshare instance. These are not comprehensive repositories of research outputs and would need to be supplemented with other sources.

However, the University would welcome any national prioritisation to support an uplift in repository infrastructure and connectivity. The ARC's proposed Research Insights Capability has the potential to become a national infrastructure to both understand our own self-evaluation as a field, as well as decrease reliance on commercial publishers for basic academic management and coordination. The development of research infrastructure should take into account a wide range of indicators and ensure that data sources are inclusive. Moreover, it is crucial to ensure metadata and tracking systems are well-suited to non-linear, multi-modal, and interpretive research methodologies. This approach is essential to prevent the inadvertent marginalisation of specific academic disciplines.

The University notes that most research output data is either reported as part of annual submissions to the Federal Government (HERDC, HEIMS submissions) or can be sourced from external sources (such as SciVal). In terms of assessing the breadth of research output, Universities could populate their research repositories or provide metadata via another mechanism.

The University also encourages the ARC to consider using Australian Business Register Data and/or an Identity Management Tool such as Ringgold to further understand how the sector is collaborating with various industries. Using a standard approach to customer management across the sector would allow this. A range of data and data assets to be considered could include:

- *Modifications to the Higher Education Research Data Collection (HERDC)*: The HERDC submission could be amended and leveraged to provide an opportunity for the ARC to gather the quantitative data for this exercise if the parameters of the submission were made sufficiently granular. This change in HERDC submission would remove the need for a separate reporting exercise on research income. HERDC is reported on an annual basis, but it is not reported with FoR codes. If this was the case, the data required for the HERDC component of ERA would be already available for the ARC.
- *The SCOPR® Survey of Commercialisation Outcomes from Public Research*: is conducted annually by Knowledge Commercialisation Australasia (KCA) and could be leveraged and accessed to feed into the Insights activity.
- *UCube Student Load Data Cube*: The Higher Education Statistics Data Cube (**uCube)** maintained by the Department of Education provides access to data on student load, specifically Equivalent Full-Time Student Load (EFTSL), across all higher education providers. Users can create customized tables with breakdowns by institution, field of study, and student demographics. **uCube** provides access to multi-dimensional time series data based on selected data collected through the Higher Education Statistics Collection.
- Refer to **Attachment 1** for more detailed comments on data and methodology suggestions.

However, note that the University has concerns about some commercial tools and platforms for measurement and evaluation of academic performance such as Google Scholar, where there is no academic oversight or governance of the commercially motivated intermediation of the scholarly economy by these platforms.

Reduction in administrative burden is critical. Requests to contribute data that creates an administrative burden on institutions should be avoided and the reporting burden for research institutions should be reduced by requiring information to be reported only once. This may mean aggregating data that has already been supplied by research organisations via other means.

Any use of data should also align with any data related recommendations in the Strategic Examination of Research and Development.

Reciprocity of data sharing should be considered. The ARC and NHMRC already have complete data on applications and awards to the programs and schemes they administer through RMS and Sapphire. However, while successful grant outcomes are announced on websites, there is inconsistency in the information included, how it is formatted, use of different web locations, and whether success rates and application numbers are shared and when the data is uploaded. This makes it a manual exercise for each institution to compare themselves to past performance – and requires establishing informal information sharing practices between institutions to compare success rates and learn from the data. The ARC and NHMRC are asked to adopt a practice of consistent, usable sharing of awards and success rates by institution, round, and scheme (preferably by a real-time, web-based data-cube).

Other Comments:

Trust, Openness and Integrity

Australia is behind the United Kingdom (UK), Europe and the United States of America in the proportion of journal articles that are published Open Access (OA). The UK is a model example of what an open access policy tied to national assessment can achieve, with many institutions at 90% OA.

A national approach that mandates open access publishing and encourages a broader framework of open research/science will help support wider goals of research integrity and building trust in research outcomes.

The values of trust, openness and integrity should also be brought to any AI capabilities that are built in order to achieve the research insights capability as proposed.

The University of Melbourne is very supportive of the FAIR Data principles and see the ARC Research Insights Capability making an important contribution by highlighting FAIR Data practices as a key lens on research outputs in Australia. This aligns with the Sorbonne Declaration on Research Data Rights (signed by the Group of Eight), which advocates for recognition for researchers who make their data FAIR and share it with appropriate open data licences. The University would also like to see CARE principles for Indigenous Data Governance recognised as part of this capability. FAIR Data and CARE Principles complement other initiatives such as the UNESCO recommendation on Open Science which emphasises the importance of access to scientific knowledge is a fundamental human right.

Alignment of proposed approach with responsible research assessment principles

The University welcomes the move away from ranking, scoring or rating institutions and emphasises the need for any evaluation to comply with the San Francisco Declaration on Research Assessment (DORA) of which the University is a signatory must be paramount. It should also align with the Leiden Manifesto for Research Metrics and the Hong Kong Principles for assessing researchers (Fostering research integrity).

By embracing these principles and declarations the ARC Research Insights Capability can foster a more open and collaborative research culture that maximises the value and impact of all research outputs.

The University is strongly supportive of the ARC's intentions to prioritise open data sources such as Curtin Open Knowledge Initiative and OpenAlex and would be happy to support investigations into the degree of overlap of open data sources.

Prepared by Enterprise Performance Reporting
Authored by Jim Lewis (Manager, Research Assessment) and Geoff Johnson (Research Data Officer)

Response to Consultation Draft - New Australian Research Council Research Insights Capability

A new method of assessing research performance

19 August 2025

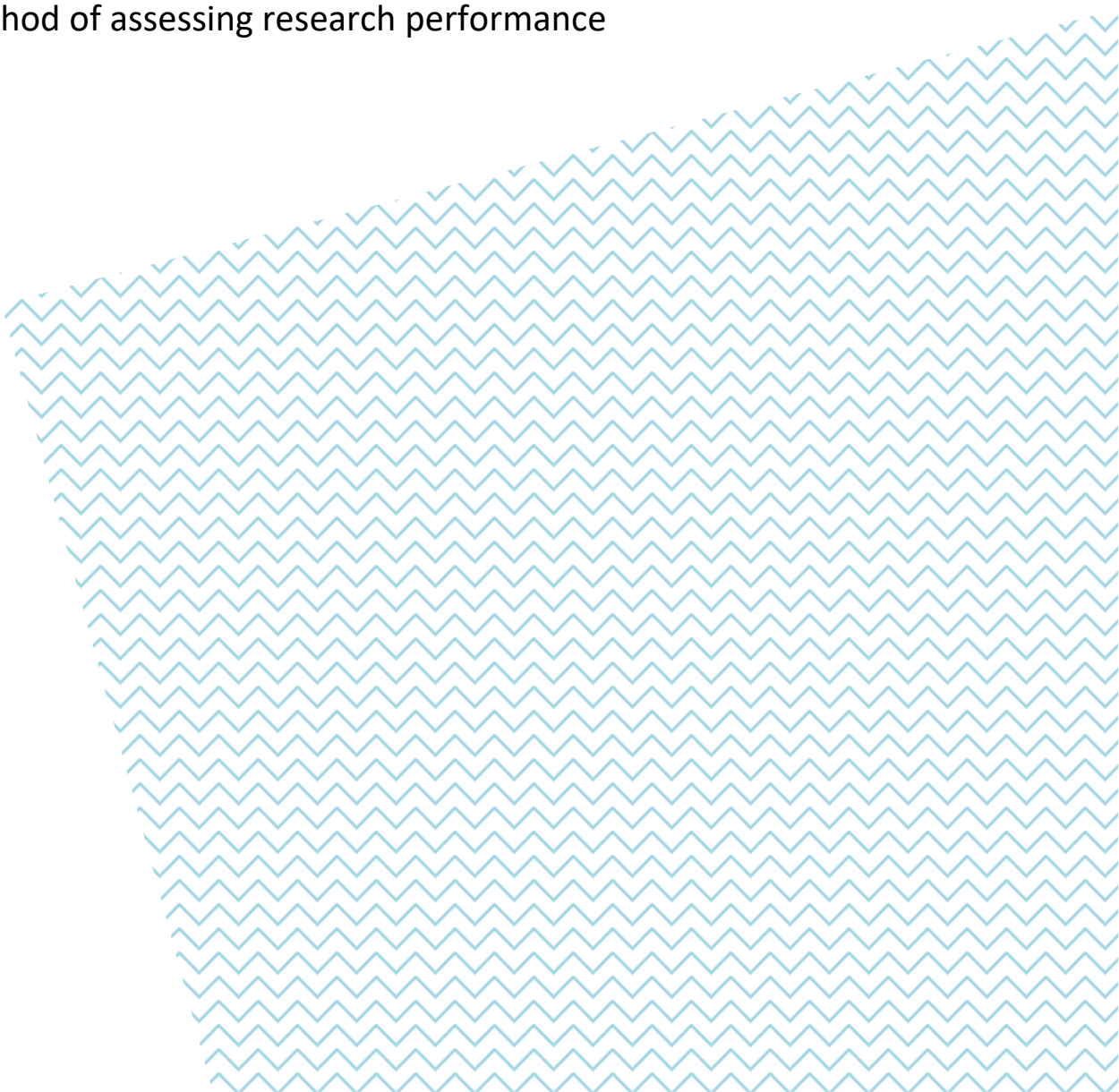


Table of Contents

Introduction

The Enterprise Performance Reporting group welcomes the proposed changes suggested by the ARC. Excellence in Research Australia (ERA) was an expensive and burdensome process which, while yielding useful data and insight was not commensurate with the effort expended to produce the data. Many of the business rules in ERA were arbitrary (see for instance, having to provide the name of every single author on an output). We believe that similar results can be achieved utilizing existing processes and data sources.

We also believe that principles are required to ensure that the data is correct, useful and reliable.

Basic foundation of research assessment

- All data should be reported at an institution and Field of Research (FoR) code level.
- Multiple data points must be collected for each FoR code.
- Inter-disciplinary differences in research need to be acknowledged. Although citation performance data can be used for HASS areas, it might not be the best method for assessing research capability.
- The ARC should be more prescriptive in explaining how data should be prepared. For instance, Universities were required to provide FoR codes against staff but no instructions were given on how to do so. As a result, Universities used different methodologies to assign FoR codes which makes benchmarking difficult.
- Standards need to be applied across the sector in order for benchmarkable data to be produced. For instance, ensuring a standard classification of research output types if the full breadth of research is to be considered.

Data to be provided

We believe the following data could be used to assess and benchmark research performance and is readily available. All of this data can be reported at the Institution and FoR code level.

- HERDC Research Income
- Papers Indexed in Scopus
- All Research Output Types (including metadata such as publisher name)
- Graduate Research Enrolments
- Graduate Research Completions
- Field Weighted Citation Impact
- Papers in Top 10% Cited Quartiles
- International Collaboration
- Industry Collaboration
- Staff FTE by academic level and function (Teaching and Research, Research Only)
- Commercialisation Income

Other than All Research Output types this data is either reported as part of annual submissions to the Federal Government (HERDC, HEIMS submissions) or can be sourced from external sources (such as SciVal). In terms of assessing the breadth of research output, Universities could populate their research repositories or provide meta data via another mechanism.

We would also very heavily encourage the ARC look at using Australian Business Register Data and/or an Identity Management Tool such as Ringgold to further understand how the sector is collaborating with various industries. Using a standard approach to customer management across the sector would allow this.

Proposed Principles

1. Data should only be provided once

Any data provided by Universities as part of any statutory reporting process (eg HERDC, HEIMS) should only be provided once. While this may require adding additional fields such as Field of Research to existing data submissions, this will in the long term result in efficiency and consistency across the sector.

2. Assessments should provide reliable results

Any assessment should produce reliable and repeatable results. A paper should be assessed in the same manner regardless of which institution reports it. This has not been the case in previous ERA rounds.

3. Should not be used to create league tables

Any assessment should aim to benefit the sector and not put it into competition. Scoring universities and FoR codes encourages institutions to model and maximise their performance rather than aiming to have an honest appraisal of its research quality. At the conclusion of previous ERA rounds, several universities put out claims about being the highest ranked university (when there was no such ranking) or having the best results (when there was no agreed methodology for making that claim). This is further exacerbated by reporting in mainstream media, most notably The Australian who have created league tables with some rather superficial analysis of the data. EPR welcomes the commitment to not rank, score or rate institutions

4. Should be equitable regardless of discipline

There was a large discrepancy between citation-based codes and peer review codes in terms of the number of five (Well above world standard) ratings. More striking, is the growth in five ratings is much greater in the citation-based disciplines than the peer-reviewed disciplines.

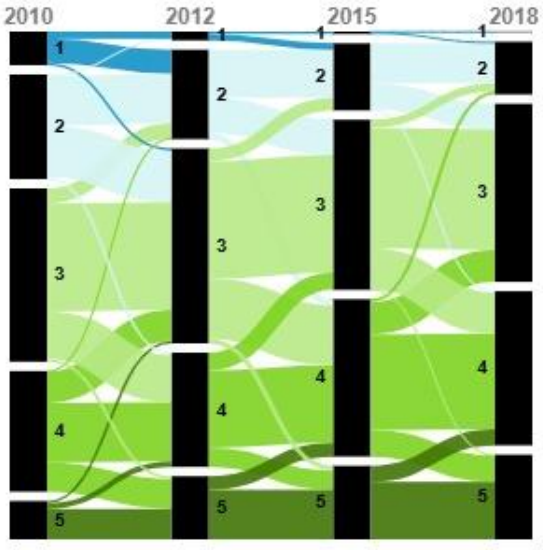


Figure 1. Change in ratings for peer review based disciplines

The figure clearly shows an increase in the number of ratings of five and a decrease in the number of ratings of two for peer-review disciplines. However, the pattern is much stronger in the citation-based disciplines.

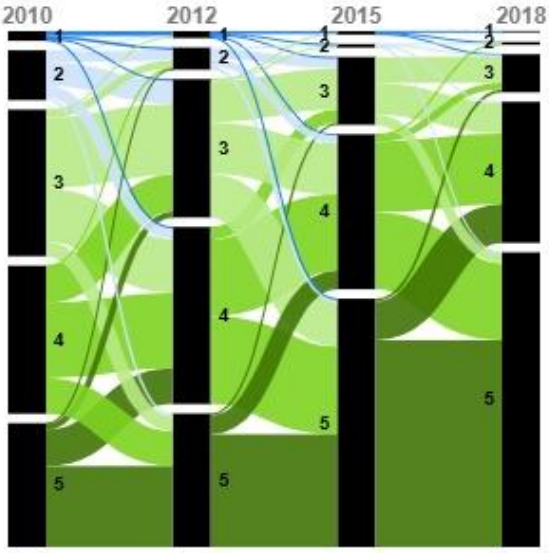


Figure 2. Change in ratings for citation-based disciplines

As can be clearly seen by in Figure 2, by ERA 2018, ratings of five were the most common assessment with a very small number of ratings of three and below. The fact that growth is so strong in the citation-based disciplines points more to the ability to model the citation-based disciplines using the citation benchmarks (either provided by the ARC or external providers) rather than an increase in the quality of research being produced by Australian universities. An analysis of Field Weighted Citation Impact (FWCI) taken from Scival (see Figure 3) shows minimal movement for the nation over the past 12 years – the results of ERA do not correlate with a well-known and validated measure of citation performance.

This suggests Australian institutions are becoming better at playing the ERA game rather than an increase in research quality over time.

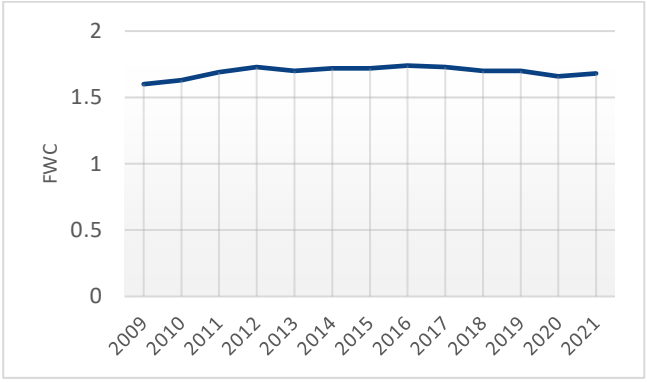


Figure 3. Field Weighted Citation Performance – Australia

EPR welcomes the move away from ranking, scoring and rating institutions. Having a single source of

5. External data should be used where possible

There have been many advances in the bibliometric space since ERA was introduced in 2009. The use of Digital Object Identifiers (DOIs) is now common-place. Asking Universities to provide metadata to the ARC, when the ARC could extract this data themselves is a large waste of effort across the sector. The ARC did contact Universities in previous rounds to note where the metadata reported by the Institution did not match up to the data extracted via DOI. If the ARC has the required metadata, why ask Universities to provide it back to them?

6. Academic involvement should be minimal

We pay our academic staff to use their expertise to conduct research and to impart their knowledge via teaching. ERA was an academic intensive exercise. The expectation of a Research Evaluation Committee (REC) member was to give up 36 days of their time to participate in the panel. For a REC Chair, the commitment expected was 42 days. That is a huge amount of time for our best academics (the ARC requires leaders in their fields to be members of the RECS) to be taken away from their core activities. The expectation for international members includes spending a week in Australia – upon learning of this requirement the sole University of Melbourne nominee withdrew their application. In a post-pandemic world, the requirement to physically be in Australia seems archaic. The University was only able to nominate 10 potential REC members – the reason most cited for non-participation was the large time commitment.

7. Assessments should be of use to universities

When ERA results are released, Universities receive their ratings without any context or commentary. A rating of five doesn't require commentary – however, any other rating should be accompanied by suggestions for improvement, where other Australian universities are performing better, etc. If the intention of ERA is to increase the quality of research across the sector, simply providing a rating does not do much to address this goal.

It must also be pointed out that for the most part, universities are investigator-driven institutions. They are very different to mission-driven institutions such as the CSIRO. There must be acknowledgement of this fact and any assessment of research quality must take this into account. This includes Universities training younger researchers – a tail of low-cited outputs does not mean that the discipline is underperforming. This might reflect a strong culture of developing the next generation of world-leading researchers. Having a tail of lower rated or lower quality outputs should not detract from world leading research. Be aware of regressing to a mean when it is not appropriate.

8. Assessment should focus on measuring research quality, not compliance

According to the ARC, ERA was intended to provide feedback to universities on their research excellence as well as providing the ARC with useful information regarding the research effort in the sector. However, universities are also asked to provide information on the open-access availability of the outputs. This is a compliance issue, not one of research excellence. There are better methods for measuring open-access compliance than ERA.

However, it is worth noting that should the ARC move to an annual submission of publication/output data, then there would be scope to provide this information. An annual publication collection could meet several needs (including ERA), but there would need to be an overhaul of the metadata required. For instance, there is nothing in the ERA data that links an output to its funding source – this would be of particular interest to the ARC, in terms of understanding how much open-access research is generated via ARC funding.

9. IT Systems should not dictate business rules

ERA was introduced to the sector in 2009 and the fundamental approach has not changed since then. Universities were still expected to produce a single XML file for ingest and validation. When ERA was introduced, large author lists were not common. The research landscape has changed dramatically since then. For instance, the University of Melbourne was going to report over 1,205 publications with over 50 authors – 359 of these outputs had over 1,000 authors. It is technically very difficult to de-normalise this data using Oracle SQL (the language required to extract data from the ERA application). The listagg function (which is required to loop through the data) stops working at 4,000 characters. The alternative is using the XMLAGG function which does not have a character limit. However, this will create the list of contributors as a clob field which cannot be exported from Oracle Developer. It needs to be copied and pasted into a text editor and have all non-printing characters removed. As the data is already normalised at source, having to de-normalise the data is wasted effort and technically complex. The data could have been uploaded table by table which would not have required a complicated

XML schema. It is worth noting that the tagging service provided by Clarivate as part of the exercise did allow upload of data via flat file rather than using a complicated XML schema.

10. Only useful data should be provided

Reporting on all authors on a paper or assigning FoR codes to academic staff who are not research active is not useful. These were requirements of the previous ERA submissions.

11. Data should not be used for advertising or promotion

Data should only be used for internal planning and assessment to ensure

Possible Solution: A Methodology for Future Assessments of Research

Citations

Since the introduction of ERA in 2009, there has been many advances in the bibliometric space which allow organisations to benchmark their citation performance, not only nationally, but internationally. Both major providers of citation data (Scopus and Web of Science) have tools that allow for benchmarking at a discipline level. The following analysis is conducted as an example of the sort of data that can be extracted from these systems. SciVal data has been used to analyse data from the 2018 round of ERA, using 06 Biological Sciences as a case study.

Rating	Universities
5	The University of Adelaide; The Australian National University; James Cook University; La Trobe University; The University of Melbourne; Monash University; Macquarie University; The University of Newcastle; The University of New South Wales; The University of Queensland; University of Tasmania; The University of Western Australia; Western Sydney University
4	Charles Darwin University; Curtin University of Technology; Deakin University; Edith Cowan University; The Flinders University of South Australia; Griffith University; Murdoch University; Queensland University of Technology; Southern Cross University; The University of Sydney; The University of New England; University of South Australia; University of the Sunshine Coast; University of Technology Sydney; Victoria University; University of Wollongong
3	Central Queensland University; RMIT University; Swinburne University of Technology; University of Southern Queensland
2	University of Canberra; Charles Sturt University
1	Federation University Australia

Table.1 Biological Sciences ERA 2018 Ratings

The table above shows the ERA ratings by band. The vast majority of Universities in ERA 2018 received a rating of four or five. There was however a small number of institutions that received lower ratings. Could this same pattern of results be replicated using an external source of information? Figure 5 was created using data from SciVal with three dimensions: number of outputs, field weighted citation impact and percentage of outputs in the top 10%. Data was selected for the same time period as ERA 2018: 2011-2016.

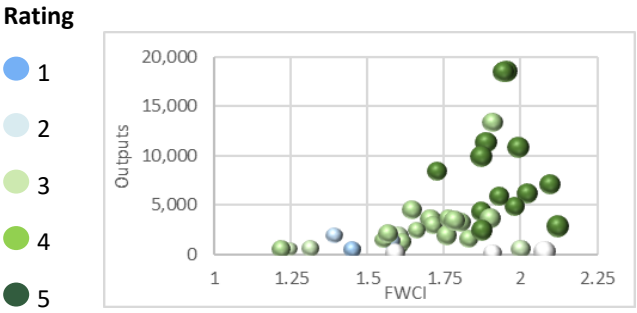


Figure 5. Biological Sciences Outputs vs Field Weighted Citation Impact vs percentage of outputs in the top 10% cited

The number of outputs is plotted on the y-axis, field weighted citation impact is plotted on the x-axis and percentage of outputs in the top 10% of cited articles is the bubble size. As can be seen the data, the universities rated as five are clustered to the right of the figure, while those that were rated lower are to the left of the figure. It is worth noting that several universities with lower number of articles (such as Western Sydney University) still perform well in this analysis due to their strong FWCI and high percentage of outputs in the top 10% cited.

It should be noted that similar patterns are evident for non-peer reviewed ERA disciplines such as Human Society.

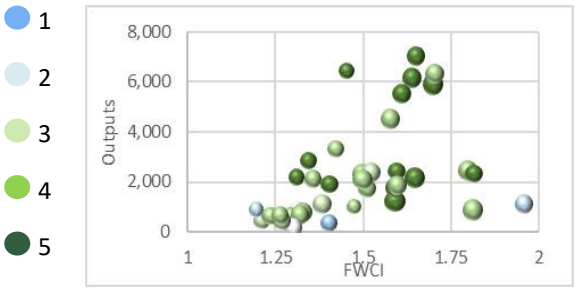


Figure 6. Human Society Outputs vs Field Weighted Citation Impact vs percentage of outputs in the top 10% cited

This illustrates the strong relationship between ERA ratings and well-established bibliometric measures. In other words, information on the relative strengths of citation performance disciplines can be gleaned from external sources.

An addition to the large reduction in workload, using a third-party provider will address many of the issues associated with "gaming" the system. There were issues of equity in previous iterations of ERA. Using a third-party provider takes care of these issues:

- Universities cannot "model" or "game" the system.
- The data is reliable as an output authored by academics at different institutions will be treated in exactly the same way.
- No university is penalised for being too large or too small, either in terms of workload or performance (as illustrated by the University of Western Sydney's strong performance on measures of quality).
- Providing data in a graphical/visual format will markedly reduce the chances of league tables being created.
- The source is external, reducing workload across the sector.
- Academic involvement is minimal as there is no need to "model" the data.
- The data should be of more use to a university than simply providing a rating – seeing where the institution sits relative to other Australian Universities on a number of dimensions is much more use than a simple Likert rating.
- This approach would allow benchmarking against international leaders in the field without requiring a separate approach or rating scale.
- Using a third-party tool would encourage the maintenance of bibliometric profiles and the appropriate use of affiliations, ultimately having an impact on international rankings that also source this data.

Volume, Type of Output and Inter-disciplinarity

Universities could still provide data on the different output types: books, book chapters, journal articles, conference publications and non-traditional research outputs. However, reducing the metadata requirements would substantially reduce the workload on universities – for instance, using DOIs to extract all of the relevant metadata should be explored. More importantly, as the citation analysis would be a separate exercise, the incentive to report journal articles under one FoR code with an apportionment of 100% would be removed. This would allow the ARC to get a much clearer understanding of the inter-disciplinarity of Australian research.

In terms of standardising publisher names, there were over 10,000 different publishers listed in the ERA Publisher List. However, the vast majority of the books and books chapters in the University of Melbourne data were concentrated around 60 publishers. Standardising the most common publishers would be enough to provide information on the publishing patterns of a discipline. As can be seen in Figure 6, there is a massively long tail of outputs where only one publisher is evident in the dataset. The value of standardising every small publisher is not clear.

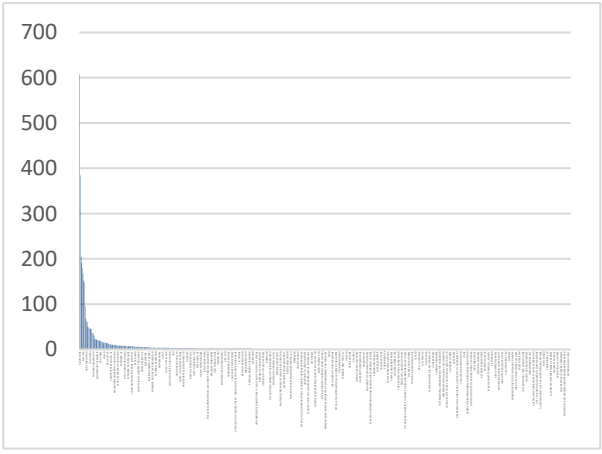


Figure 7. University of Melbourne Books and Book Chapters by Publisher

Similarly, standardising the name of every conference is not required. Conferences are most relevant to the Computer Science and Engineering Disciplines. Standardised naming of the conference organiser (e.g. IEEE) rather than standardising the name of every particular conference should be enough to ascertain the publishing patterns in these disciplines. Conference name is not in any way standardised and a huge amount of work goes into standardising the names for ERA purposes. Again, the value of doing this is not clear.

In terms of frequency, an annual upload of affiliated data to a central ARC database would spread the workload as well as providing the ARC with more timely information on research output patterns.

Research Income

HERDC income is a core part of the ERA process. HERDC is reported on an annual basis, however it is not reported with FoR codes. If this was the case, the data required for the HERDC component of ERA would be already available for the ARC.

Graduate Research

Graduate Research data (enrolments, commencements and completions) are reported annually as part of the HEIMS process. Adding FoR code to all data submitted would allow benchmarking of Graduate Research outcomes.

Engagement and Impact (EI) incorporated into any Research Assessment

Much of the data required for an assessment of engagement can be found in existing ERA data. For instance, Category 2 and 3 research income and research reports are two metrics that can be easily derived from the data. In addition, tools such as SciVal can provide data on Academic-Corporate Collaboration in the publication space. The qualitative aspect of engagement could be addressed in the Explanatory Statement.

Measuring impact is a difficult and subjective task. Altmetrics provide some data, but our initial (admittedly anecdotal) analysis has shown that publications with high citation rates also have high Altmetric attention scores. The ARC's approach of using case studies is a good method of demonstrating impact, however the question must be asked: is allocating an subjective and arguably unrepeatable rating score to case studies, the best method of doing this? The system must be careful to ensure that it is the impact that is being measured and now how well-written a case study is. Within the sector, there have been informal comments made suggesting all the EI exercise measured was an institution's ability to hire professional writers. It should be enough to note that impact was demonstrable within the FoR code.

If one of the aims of EI is to showcase the impact of the research conducted by Australian universities, perhaps using the case studies provided to create various media presentations may be an avenue worth pursuing.

Commercialisation and IP

Commercialisation and IP were part of early ERA rounds. They were removed as metrics because they are not measures of quality. However, they are still an important part of the research lifecycle: if the aim of the ERA exercise is to get an overall picture of the research landscape at a discipline level, then commercialisation and IP disclosures should be reported to the ARC. This should be done in the same way that HERDC research income is reported, via an annual collection.

Conclusion

ERP welcomes the opportunity to comment on the Draft Research Evaluation. Our analysis has shown that ERA results correlate very highly with known measures of research performance. Moving towards a benchmarking approach where data across the sector is made available makes sense in this light. We believe that the principles underlying the evaluation need to be made public. Data should only be reported once to any government agency. Data standards are required to ensure the integrity of the data being benchmarked.

While the University of Melbourne is in a place where most, if not all, of this data could be provided, other institutions may not be as well placed to do so. A staged introduction may be necessary.

It is worth noting that the Go8 data does already exchange research data (HERDC, Graduate Research and Staff FTE). However, this is done at an organizational level and it is difficult to benchmark performance due to different structures across the institutions. Using FoR code will make benchmarking more meaningful and remove the need for a separate data exchange.


POSTERA CRESCAM LAUDE
THE UNIVERSITY OF
MELBOURNE

Attachment 2: Research Snapshots example (as developed by the Faculty of Business and Economics)

THE UNIVERSITY OF MELBOURNE

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi-wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

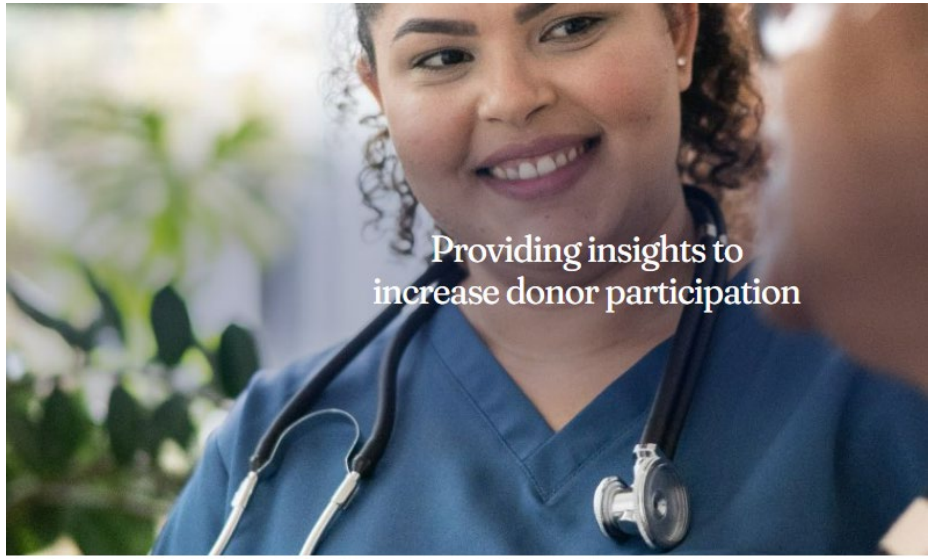
We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

The University of Melbourne (Australian University)
PRV12150/CRICOS 00116K

Faculty of Business and Economics (FBE) Research Snapshots

Bianca Durrant, Manager, Research and Industry
Tess Ritchie & Chelsea Harris, Research Impact Coordinators



Through in-depth interviews with 52 blood donors, this study offers a new mechanism for conceptualising donor identity and behaviour that can help increase uptake.

The problem

Identity is a useful lens to understand donor behaviour, but studies have typically cc
generic. When it comes to attracting new donors, this over-simplification means mis
whose motivations fall outside this picture.

The research

Through in-depth interviews with 52 blood donors, this study discovered a more cor
identity and the implications for marketing communications around donation of the
team came up with four identities: Savior, Communitarian, Pragmatist and Elitist (ur
giving, sharing, pragmatism, signalling), and showed that aligning messages with th
results. The Savior, for example, understands their contribution as a 'gift of life', and
vein; for pragmatists, it's 'just what you do'.

The impact

The study offers a new mechanism for conceptualising donor identity and behaviou
framework for why different messages work, or don't, with certain people. This can i
and engage with potential donors to increase uptake, while also validating marketin

Researchers

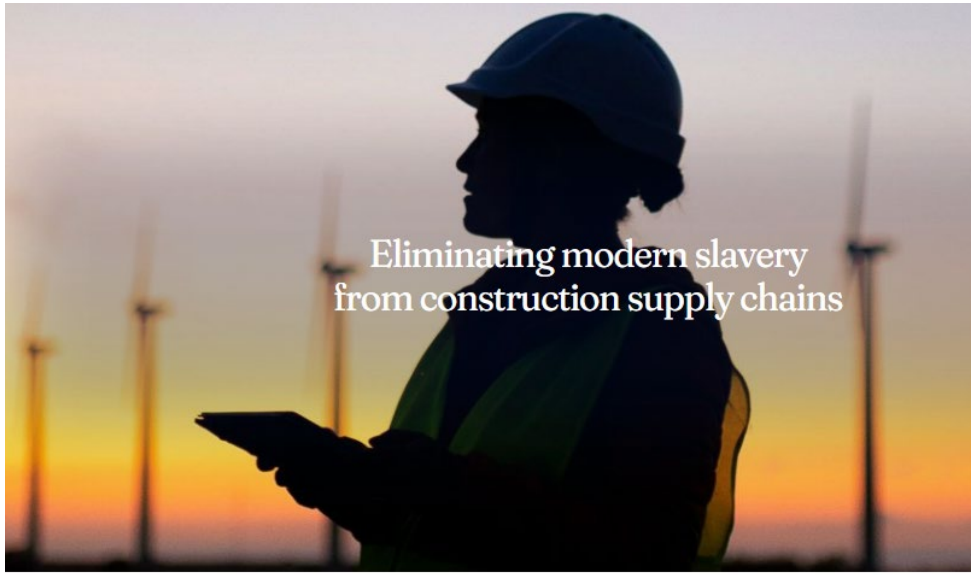
Liliana Bove
Professor
lbove@unimelb.edu.au

Danielle Chmielewski-Raimondo
Senior Lecturer in Marketing
dchmi@unimelb.edu.au

Ben Neville
Deputy Director, Engagement MoT
banevi@unimelb.edu.au

Anish Nagpal
Associate Professor in Marketing
anagpal@unimelb.edu.au

Jill Lei
Head of Department
leij@unimelb.edu.au



THE UNIVERSITY OF MELBOURNE

New research by Dr Medo Pournader and her colleagues puts the construction industry in the spotlight, demonstrating the impact procurement managers can have on eliminating modern slavery.

The problem

The construction industry in Australia is a high-risk sector for modern slavery. Unfortunately, some managers persist with traditional risk management measures that have been demonstrated to be ineffective.

The research

Dr Medo Pournader and her colleagues conducted interviews with employees of 5 medium-to-large construction firms and 14 suppliers to how they manage risks, their efforts both now and in the past, and what their company's response would be if a violation was discovered.

The research found procurement managers tended to favour audits and put an emphasis on compliance, which discourages suppliers from reporting incidents and closes off the opportunity to act. Sustainability managers, on the other hand, tended to seek good supplier relationships and use innovative data collection techniques to develop

Researchers

Vikram Bhakoo
Professor, Supply Chain Management
vbhakoo@unimelb.edu.au
+618344 5320

Medo Pournader
Senior Lecturer
medo.pournader@unimelb.edu.au

Sustainable Development Goals



FBE Research Professional Services Unit | research snapshots for Research Impact Forum

Context

- Origin of research snapshots
- FBE research identity among the University of Melbourne and beyond
- To build awareness of our researchers and their research beyond the Faculty
- Show that research at FBE is diverse, relevant, high-quality, impactful

Developing the FBE research snapshots

THE UNIVERSITY OF MELBOURNE

Developing the snapshots

- **Call out to HoDs to nominate outstanding research** – from fundamental research at the leading edge, inspiring research impact, everything in-between
- **Analysed and selected examples –** ensuring breadth and diversity across: UoM Research Impact Framework areas, SDGs, gender, research area, departments

Department	Academic	Gender	Research area	Research	Impact/outcomes ie how the research benefits the economy, society, culture, health, the environment or quality of li
Economics	Siqi Pan	F	Education and equity	**Closing the Education Gap: Information Provision to Disadvantaged Youth** This project aims to address the persistent gap in higher education enrolment between advantages and disadvantages Australians youth, and between rural/regional Victorian students and metropolitan	So far, the study has created awarenes high-school students about University- them to fulfill their potential while alsc econonomy by nudging those students jobs.
Management and Marketing	Vikram Bhakoo Michal Carrington Daiane Scaraboto Kanika Meshram	Both	Modern slavery	**2023 Report: Australia's Modern Sla For Purpose?** This is the third report released in a collaborative project evaluating cor Australia's modern slavery reportin earlier reports Broken promises anc The research investigated company	
Economics	Aaron Barkley	M	Collusion and health outcomes	For his work on **collusion**: This rese how effective market design can ov competition regulation and significa	

Impact area 1	Impact area 2	SDG area 1	Main prese
Media and Culture	Policy Politics and Law	Education	Med
Policy Politics and Law	Processes and Practices	Reduced inequalities	Polic
Policy Politics and Law	Processes and Practices	Health and wellbeing	Polic

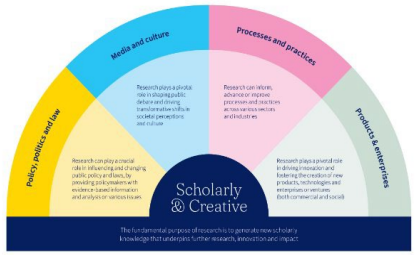


Figure 1. University of Melbourne Research Impact Framework - five facets: adapted from Williams, K and Lewis, JM (2021) 'Understanding, measuring and encouraging public policy research impact', Australian Journal of Public Administration 80 (3), 554-564. (see above for full paper)

Developing the snapshots

- **Discussed selected research with academics** – positive response
- **Developed template** – to communicate key information clearly, highlighting impact, suitable for various uses

Tracking the economy over booms to busts

The problem
Official statistics about the state of the economy are released with a lag. But businesses and government need timely information to inform decision making. Is unemployment high and expected to remain high? Will inflationary pressures push up cost of living? Are we heading towards recession?

The research
CASiE – a survey of Consumer Attitudes, Sentiments and Expectations, has been tracking the economy for over 45 years. It provided information about how Australians were affected during the GFC, COVID pandemic and most recently during a period of high cost-of-living. With other monthly releases (such as retail sales and housing approvals), this information is combined into a Nowcasting model to provide an indication of the state of GDP now.

The impact
Data about how consumers perceive their finances and the economy provide valuable information about the likely trajectory of consumption and economic growth. Monthly release of Indexes – on unemployment expectations to inflationary pressures – provide timely information and are closely monitored by government and private enterprises to inform decision making. In 2021, for example, their value was especially evident, appearing in Treasury Budget Paper No.1 and the RBA Statement on Monetary Policy.

Department	Melbourne Institute (MI)
Researcher	Prof Guay Lim; A/Prof Viet Nguyen; A/Prof Sam Tsiaplias; Dr Tim Robinson
Area	Macroeconomics
Impact	Scholarly and creative; Policy, politics and law

Page [17]

Developing the snapshots

- **Made PowerPoint pack** featuring 15 initial case studies (internal and external versions to share freely with stakeholders)

Advancing gender equality in corporate boardrooms

The problem
Women make up less than 20 per cent of corporate board members globally. While gender quotas are an increasingly important way to redress disparity, they're often met with criticism and negative response in the stock market – interpreted as shareholders' concerns about availability of qualified women.

The research
Dr Gertsberg's research examines the idea that shareholders oppose gender quotas by analysing their attitudes and voting patterns. In *Gender Quotas and Support for Women in Board Elections*, they show shareholders actually support female directors over male, while representation of women on boards remains low. This suggests incumbent directors often act as gatekeepers.

The impact
The study's potential lies in its ability to challenge existing beliefs, shed light on gatekeeping behavior, guide policy decisions, and advance gender equality in boardrooms. Already gaining visibility in policy and academic circles, including selection by Harvard Law Corporate Governance Forum, NBER Digest and Politico, its potential to transform policies and practices for affirmative action and gender diversity is promising.

Department	Finance
Researcher	Dr Marina Gertsberg
Area	Gender bias and quotas
Impact	Scholarly and creative; Policy, politics and law

Page [14]

Improving healthcare through market design policies

The problem
Despite recent attention in developed countries on how competition – or lack thereof – in markets can negatively affect health outcomes, little is known about how it hinders access to quality care in lower-income countries.

The research
Dr Barkley's research demonstrates how effective market design can improve health outcomes in lower-income countries. Looking at collusion around the provision of insulin in Mexico's pharmaceutical sector and the subsequent policy changes made by health authorities, the study shows simple policy adjustments significantly improved health outcomes for diabetes patients. Through policy interventions, the group of colluding firms was stopped, reducing insulin prices by 78% and increasing availability by 149%. And after the cartel's collapse, diabetes deaths declined by 971 per year.

The impact
The Human Cost of Collusion: Health Effects of a Mexican Insulin Cartel provides new insights for policymakers in developing countries grappling with anticompetitive conduct and weak regulatory institutions. It can be a powerful tool in improving healthcare quality.

Department	Economics
Researcher	Dr Aaron Barkley
Area	Collusion and health outcomes
Impact	Scholarly and creative; Policy, politics and law

Page [8]

Using the FBE research snapshots

THE UNIVERSITY OF MELBOURNE

Key stakeholders and project advocates

University stakeholders

- Bianca Durrant, Manager, Research and Industry (project sponsor)
- Central Marketing and Advancement teams – initial meeting to present strategic objectives of FBE research and share research output to inform marketing plans
- Associate Dean Research, Associate Professor Michal Carrington
- FBE and MBS Deans and Heads of Departments
- FBE Editorial committee
- Other faculty teams: Accreditation, Strategic Communications team (including Research Communications)
- Central teams: Research/*Pursuit* team, Chancellery (Government Advisor)
- FBE Business Development Manager, Dominique Goodwin
- Featured FBE researchers
- FBE Enterprise Professors

Internal and external use and promotion

- FBE's Business Development Manager, Dominique Goodwin
  - Internal: uses to help other faculties understand the breadth of expertise and impact FBE research can bring to a collaboration
  - External: demonstrate expertise and impact of FBE research and seed ideas for working together eg international delegations, prospective partners
- Victorian Government Research Roundtable, coordinated by ADR (Oct 2024)
- Gender Equality Commission

Internal and external use and promotion

- University-wide communication channels: Viva Engage, Staff News
- FBE Research News, fortnightly e-newsletter
- FBE Research website, tagged to appear on departmental webpages (integral to 2024 website refresh positioning Faculty as high-quality impactful research)
- Researchers, LinkedIn profiles
- Reporting
- Media enquiries
- Direct communications from FBE Deans

Digital presence – FBE research website

A fair, prosperous and sustainable future means thinking about what matters to us as a society.

What do we value and how much? What risks are we prepared to take? What willing to give up so that we can all have what we want and need?

Our researchers – the economists, actuarial analysts, specialists in finance a accounting, and experts in marketing, consumer behaviour, management, c and employment – are dedicated to these questions, bringing unique persp on the difference business and economics can make to our lives – as individ and collectively. Through diverse expertise, an outward focus, and strong cu of collaboration, we carry out fundamental and applied research to help imp the world around us.

Our research at a glance

Explore some of the ways our researchers and their collaborators are improving the world around us and informing the discipline for future change.

Indigenous Economic Power Project (IEPP) - Snapshot annual reports

IEPP identifies Indigenous businesses and corporations, tracking their characteristics and measuring their impact on the Australian economy.

Anti-competitive laws improve economic outcomes

Research by Associate Professor Volkova and her colleagues provides insight into the real effects of anti-competitive laws which has been made available to researchers around the world.

Uncovering why consumers resist sustainability interventions

The transition to a sustainable, net zero society relies on dramatic shifts in consumer behaviour. This research on consumer attitudes provides valuable data for policymakers.

Consumers as 'de facto' regulators of the gig economy

Research into the gig economy and its precarious workplace conditions indicates that consumer attitudes towards often vulnerable workers are still largely influenced by platform providers.

Green transition: distinguishing the walk from the talk

Dr Shuang Chen's research examines the relationship between green marketing and investment behaviour,

Data enabling excellent research in social sciences

Discover the ways in which Melbourne Institute researchers are using data visualisations and services to investigate the big issues facing Australians today

Understanding the origins of contemporary masculinity norms

Associate Professor Victoria Baranov and her colleagues have been investigating the historical impact of

Making farming more productive in less developed countries

Research into land markets in developing countries highlights the ways in which a better-functioning and

FBE research website

Professor Bapuji's research looks at the impact of the caste system on work and organisations, extending the field and broadening understanding of inequality in the workplace.

The problem

The caste system influences the lives of nearly two billion people worldwide and subjects over 300 million to severe socioeconomic discrimination. As with other areas of life, caste has implications for work. It remains strongly ingrained within companies in South Asia, as well as firms with South Asian-origin employees. Yet, we do not know how caste affects organisations and management.

The research

Professor Bapuji studies the impact of caste on work and organisations. He argues that caste is an informal institution distinct from race, class and gender and should be addressed like other systems of inequality. His work shows that overlooking caste risks compromising economic growth and dehumanising hundreds of millions of people. He has

The impact

Professor Bapuji's research is extending the field while broadening general understanding of inequality in the workplace. He is the most prolific and cited scholar on topics related to societal inequality and business; listed among the most influential scholars globally for social issues (ThinkList, University of Bath); and often invited to speak on inequality. He is co-founder of **Action to Improve Representation**, an initiative helping South Asian scholars from marginalised backgrounds, and co-editor of **Business & Society**, a leading journal dedicated to issues of business and society.

Department: Management and Marketing
Area: Caste, inequality, work, organisations and modern slavery

→ Read more

Read an article on **What Managers Everywhere Must Know About Caste** in the MIT Sloan Management Review.

Researchers

Hari Bapuji

Professor in Management

hari.bapuji@unimelb.edu.au

Sustainable Development Goals

*We align our research activity with the United Nations' **Sustainable Development Goals (SDGs)**.*

Social media

The University of Melbourne
Nov 4, 2024 • @2
Seen by 1,318

Are green investors investing in activities that benefit the environment or merely claim to benefit it? With most information self-reported by a company, it's difficult for outsiders to see what companies are actually doing. Dr Shuang Chen's research examines the relationship between green marketing and investment behaviour, highlighting the impact of tightening regulations on the market.

Full story

Like

Chelsea Harris
Oct 25, 2024 • @1
Seen by 748

At the Faculty of Business and Economics, we're excited to share our new Research Snapshots, highlighting just some of the impactful research happening across the Faculty Our researchers and their collaborators are working to improve the world around us through their research interrogating consumer attitudes towards sustainability interventions, progress on the elimination of modern slavery in the construction industry, the origins of masculinity norms, the contribution to the economy of First Nations businesses and more.

Andreas Pekarek, PhD • 1st
Senior Lecturer at University of Melbourne
3mo •

I'm pleased to share that my recent research with Joshua Healy into the precarious conditions of gig economy workers has been profiled on the Faculty of Business and Economics' Research page. In my Research Snapshot you can read about our research which argues that consumer attitudes are an important but overlooked factor in improving conditions for gig workers in an industry known for unsafe conditions, low pay and the exploitation of vulnerable workers. Our research suggests policymakers need to remain attentive to consumer attitudes and mindful of platform companies' power to influence them.

Learn more: https://lnkd.in/gEamprcw

Interested in reading further? Read our recently published open access article in New Technology, Work and Employment here: https://lnkd.in/gsCCSHjH

"Thank you for connecting on LinkedIn and for sharing my research. Financial news media is relevant. I believe my research could resonate with their readers and might capture their interest. Thank you again for your support!" – ***Featured researcher 2024***

Outcomes and impact so far

THE UNIVERSITY OF MELBOURNE

Outcomes and impact

Greater understanding of and interest in FBE research among University

- Affirmed by feedback from key internal stakeholders
- Commitment to using the snapshots in various contexts
- Service improvement to Faculty (eg Advancement, RIC)

"There are some great case studies here…it's helpful to have these case studies to hand when we're talking to government about research impact." ***Global, Culture and Engagement***

"Efficient tool... great to have to hand when I don't know who exactly is going to be in the room... flexibility, ease of it. Helps me understand what is happening at the Faculty and connect the dots." ***FBE BDM***

Excellent work – helpful for changing the limited perception of research that FBE spoke about when we met earlier this year. ***Strategic Communications (Research)***

"Thanks so much for organising the presentation for us on Tuesday. The team were so inspired by it.… [and] are really interested in learning more about some of the big topics presented, ie Prof Hari Babuji's work." ***UC&M Business Partner***

Outcomes and impact

Collaboration for FBE academics on University-wide research projects

- Dr Karinna Saxby (Melbourne Institute) is participating in a University-wide Medical Research Future Fund (MRFF) bid 'Improving the Health Outcomes of People with Intellectual Disability' via BDM awareness via the snapshot pack.

Improving population health

The problem
Healthcare is the largest sector of the Australian economy and largest employer. Like many other countries, Australia grapples with challenges such as an ageing population, escalating healthcare costs and fiscal limitations. In this context, research in health economics assumes an increasingly vital role in shaping health policy and maximising the efficient use of limited resources.

The research
Professor Zhang and others are at the forefront of developing and evaluating innovative strategies to improve population health and optimise efficiency of the healthcare system. Their research examines the interplay of economic and behavioural factors that influence individuals and organisations, encompassing stakeholders from patients to insurance companies, and focuses on crucial aspects including the organisation, funding, and reducing health disparity.

The impact
The research has informed and advised government agencies, including the Australian Government Department of Health and Aged Care, the Australian Victorian's Department of Health, and the US Centers for Medicare and Medicaid Services. These collaborations have helped design innovative funding models for aged care, promote equitable access to medications, and improve resource allocation and workforce management.

Department	Melbourne Institute (MI)
Researcher	Prof Yuting Zhang; A/Prof Jongsay Yong; Dr Susan Mendez; Dr Ou Yang; Dr Karinna Saxby
Area	Healthcare and population health
Impact	Scholarly and creative; Policy, politics and law

Page [10]

Medical Research Future Fund

Outcomes and impact

Supporting teams and faculties across the University to communicate research impact by adopting our model

- Template used by Chancellery Research and Enterprise to highlight research impact across the University at 2024 Melbourne Leadership Conference
- Melbourne Institute replicated template to showcase their Research programmes.

Improving the eyecare experience for people living with dementia

The problem
Good eyesight is critical for people with dementia to live independently for longer, by supporting improved spatial navigation and interaction with visual memory aids like calendars and smartphone apps. It also supports their wellbeing by making it easier to engage with visiting family members, and hobbies like gardening, art classes, or exercise.

The research
To break down barriers to eyecare for people living with dementia, Dr Marianne Coleman and Dr Bao Nguyen from the Department of Optometry and Vision Sciences at the University of Melbourne are making regular eye tests easier, more comfortable and more accessible for people living with dementia and their support person/s through several avenues. Upskilling the optometry workforce and sharing this research widely (e.g., Dementia Action Week) helps carers and health professional to understand the vital importance of disclosing their diagnosis so that care can be adjusted.

The impact
Optometry Australia has modified their 'Find an Optometrist' search tool to include 'dementia-friendly' as an option, and through a social media campaign has encouraged professionals to update their profiles.

UoM Newsroom QR link:

MDHS/Department	Optometry & Vision Sciences
Researcher	Dr Marianne Coleman and Dr Bao Nguyen
Area	Improving the eyecare experience for people living with dementia
Impact	Scholarly and creative; products & enterprises

Page [10]

Outcomes and impact

Broader audience for FBE research

- Achieved via collaboration with other communications teams and expanding snapshots for their platforms eg
- 'Making an Impact' on University's central research site (FBE previously underrepresented)
- FBE Newsroom

"There are some great stories here and we agree some would be a good fit for the Making an Impact page." ***Research and Pursuit, Strategic Communications***

Researchers from the University of Melbourne and University of Waterloo have devised new methods to measure and manage the unpredictability of wind conditions, which could boost investor confidence in wind power.

The research was published by Ms Giovani Gracianti, Dr Rui Zhou and Dr Xueyuan Wu from the University of Melbourne, and Dr Jonny Siu-Hang Li from the University of Waterloo in the Annals of Actuarial Science (Cambridge University Press) in September 2023.

"Wind power is a vital component of the global transition to clean and renewable energy sources, but harnessing the power of the wind is challenging, mainly due to the unpredictable nature of wind conditions," said Ms Gracianti, who is undertaking a PhD under the supervision of her fellow authors.

"These challenges lead to uncertainty in revenue generation for energy producers, making wind power investments less attractive to potential investors. This ultimately is slowing down the world's transition to renewable energy," she said.

The role of 'wind derivatives'

Derivatives are a tool used in the financial sector designed to mitigate losses when adverse conditions make it difficult to predict the performance of future investments. Wind derivatives are used by wind farms to manage the financial risks associated with the variability of wind speed and offer a financial safety net to energy producers, ensuring they receive compensation when low wind power production leads to reduced revenues.

"Wind derivatives are important because this financial protection stabilises operations and revenues for energy producers, making renewable energy projects more enticing to investors and helping the global shift toward cleaner energy sources," said Dr Zhou.

"Our latest research details ways to refine the calculations and models that determine derivative pricing, recognising the imperfections in current methodologies," she said.

A new exchange platform that allows farmers to trade and consolidate land will lead to more efficient, productive farming.

The need

Fragmented farms – where an owner has many small plots, spread over a wide area – are common in less developed countries.

The fragmented farms arise naturally over time from multiple causes, such as the passing of land between generations, limited adjacent land for sale for farmers ready to expand, and because splitting land can act as insurance from weather shocks when suitable insurance markets are missing.

Fragmentation is costly and inefficient, however.

"Farmers are walking multiple kilometres a day between their plots," says Professor Tom Wilkening from the Department of Economics at the University of Melbourne.

"And they can't use any sort of mechanisation, like tractors, because it isn't efficient in terms of scale in a fragmented environment."

Future opportunities

- Build up research FBE case studies on 'Making an Impact' webpage, in collaboration with Research/Pursuit colleagues
- With next set of snapshots (up to third cycle), create packages of content for various platforms and activities eg FBE website, 'Making an Impact', social media and other communication channels
- Formalise communications planning based on lessons learnt
- Closer collaboration with researchers to reach existing and new industry and public sector stakeholders
- Potential for aligning snapshots with new branding and marketing resources.

The University of Melbourne

Grattan Street, Parkville, Victoria 3010 Australia

t 13 MELB (13 6352)

+61 3 9035 5511 (International)

unimelb.edu.au