

SHARING VOICES

1. OPEN SOURCE R SOFTWARE DEVELOPMENT: TRANSLATING METHODOLOGICAL RESEARCH INTO GLOBAL IMPACT – PROFESSOR ROB J HYNDMAN

PURPOSE

The Department of Econometrics and Business Statistics at Monash University recognized a critical challenge in academic research: the gap between theoretical methodological advances and their practical application by researchers and practitioners worldwide. Traditional academic publishing, while essential for peer review and knowledge validation, often leaves innovative statistical methods trapped in academic papers, inaccessible to the broader community who could benefit from these advances. We aim to democratize access to cutting-edge statistical methodologies by translating our research into accessible open-source R packages.

PRACTICE

Over the past decade, our research group has systematically developed nearly 100 open-source R packages, each designed to make complex statistical methodologies accessible to practitioners. Our approach involves parallel development of theoretical research and practical implementation, ensuring that major methodological advances are accompanied by user-friendly software. Key packages include the 'forecast' package for time series forecasting and analysis, 'Ggally' for data

visualization, 'naniar' providing tools for handling missing data, and the 'fable' framework for tidy time series forecasting. Our development process emphasizes rigorous testing, comprehensive documentation, and adherence to tidy data principles, making our tools intuitive for both novice and expert users.

OUTPUT

Our R packages have achieved remarkable reach. The 'forecast' and 'Ggally' packages each average millions of downloads per year, while another 16 packages each have tens of thousands of monthly downloads. We have created comprehensive ecosystems of interconnected packages, such as the 'fable' framework, which provides end-to-end solutions for time series forecasting. Additionally, we have developed educational resources, including data packages that accompany our textbooks, ensuring seamless integration between learning materials and practical tools.

OUTCOME

Primary stakeholders -- researchers, data scientists, and students -- have gained unprecedented access to advanced statistical methods. Users can now implement sophisticated forecasting models, visualize complex data patterns, and conduct robust statistical analyses without requiring deep programming expertise. The packages have transformed how time series analysis and exploratory data analysis are conducted across disciplines, from economics and finance to environmental science and public health.



IMPACT

The broader impact extends far beyond our immediate user base. Our open-source approach has catalyzed a multiplier effect: the accessibility of our implementations has led to thousands of additional citations of our original research papers, amplifying the academic impact of our theoretical contributions. The packages have become foundational tools in university curricula worldwide, shaping how the next generation of statisticians and data scientists approach their work. Furthermore, by enabling reproducible research practices, our software has contributed to the broader movement toward open science and transparent methodology in quantitative research.

2. CO-DESIGNING BIODIVERSITY MARKET POLICY THROUGH RESEARCH-PRACTICE INTEGRATION – DR ANKE LEROUX

Australian environmental markets have faced governance and integrity challenges. The Department of Climate Change, Energy, the Environment and Water's public consultation on the Nature Repair Market offered a valuable opportunity for Monash Business School's Green Lab to contribute addressing this real-world problem. Drawing on interdisciplinary expertise in law, economics, and environmental policy, Green Lab co-developed a set of recommendations aimed at supporting evidence-informed policy design—promoting environmental markets that are robust, equitable, and credible.

Working within the [Net Zero, Nature Positive Australian Companies](#) project, the team drew on policy documents, market design theory and stakeholder perspectives to analyse market mechanisms and identify practical design improvements that could enhance the effectiveness of the emerging biodiversity market. These recommendations centred on strengthening eligibility and additionality standards to ensure the Nature Repair Market delivers measurable improvements in native biodiversity and effectively incentivises new projects. They also emphasised the importance of market transparency—advocating for publicly available pricing information in line with best practice disclosure principles—and the inclusion of mechanisms to support meaningful First Nations participation.

The submission is contributing to the refinement of market rules and governance structures, helping to ensure alignment with both national and global biodiversity goals. The process also strengthened connections with government, NGOs, and industry actors, positioning Monash Business School as a trusted source of policy-relevant expertise. This case demonstrates how rigorous academic research can inform real-world policy development and support the creation of environmental markets that deliver measurable ecological and social benefits.



3. SHARING OUR FOOD WASTE RESEARCH WITH THE MEDIA: RAISING COLLECTIVE LEARNING – DR ALKA NAND, DR ANANYA BHATTACHARYA, PROFESSOR AMRIK SOHAL, PROFESSOR DANIEL PRAJOGO, DR THARAKA DE VASS

PURPOSE

Food waste is a significant global issue, with Australia discarding 7.6 million tonnes annually—16% from food service businesses (FSB). To support the National Food Waste Strategy to halve waste by 2030, we researched on food waste in FSBs and shared the findings with the media to promote practical solutions about food waste. Practice—We interviewed staff across 20 FSBs—from fast-food outlets to fine dining—to capture diverse perspectives from managers, owners, front-of-house staff, kitchen hands, and chefs.

OUTPUT

We shared the findings through various media platforms, including Monash Lens, Dirty Linen and The Joyful Frugalista, and Canberra's 2CC Radio, to broaden public engagement and awareness.

OUTCOME AND IMPACT

The research offered practical strategies for FSBs/consumers to adjust their practices in reducing waste. These insights have sparked interest across media platforms to foster a culture of collective learning and sustainable action.

4. CLIMATE CHANGE AND SUSTAINABILITY STANDARDS – ASSOCIATE PROFESSOR MUKESH GARG

Associate Professor Mukesh Garg has played a pivotal role in advancing climate change and sustainability reporting through rigorous research and influential submissions to key standard setters and regulators, both nationally and internationally. His contributions demonstrate a commitment to ensuring that financial reporting frameworks evolve in ways that enhance transparency, comparability, and accountability, thereby supporting more responsible business outcomes in the face of climate challenges.

PURPOSE

Associate Professor Mukesh Garg's work is driven by the challenge of ensuring that financial and sustainability reporting frameworks evolve to meet the pressing demands of climate change. His purpose is to enhance transparency, comparability, and accountability in corporate disclosures so that investors, regulators, and society can make better-informed decisions. He aims to address the inconsistencies, vagueness, and lack of quantification in current voluntary reporting and to support the transition toward responsible, mandatory, and internationally aligned sustainability reporting. His research also aims to examine the costs and benefits of both voluntary and mandatory climate change reporting practices and their disclosures.

PRACTICE

Mukesh has undertaken rigorous empirical research and policy engagement across multiple contexts and stakeholder groups: Conducted studies using ASX-listed firms' data (2018–2022) to examine how climate and sustainability risks affect financial reporting, asset valuation, and audit effort; Co-authored submissions to the AASB on sustainability-related financial disclosure exposure drafts, advocating for mandatory, decision-useful reporting aligned with global frameworks like the TCFD; Prepared a report for the AUASB, highlighting the financial reporting and assurance implications of climate disclosures, and presented findings at the AUASB and IAASB Research Forums; Contributed to the IAASB's ISSA 5000 consultation, stressing phased adoption, clarity on assurance levels, safeguards against greenwashing, and the inclusion of double materiality; Engaged with the Australian Federal Treasury on climate disclosure frameworks, advocating for mandatory, digitally enabled reporting; and Collaborated on a biodiversity disclosure study for Australian local councils, supported by a travel grant from IFAC and IPSASB, to be presented internationally at the IPSASB Board meeting and Public Sector Standard Setters' Forum in Lisbon.

OUTPUT

Mukesh's work has resulted in tangible engagements and dissemination activities that advance his purpose: Submissions to national regulators and standard setters (AASB, AUASB, Treasury); International academic and professional contributions to IAASB, IPSASB, and IFAC consultations; Presentations at AUASB and IAASB Research Forums (2024) to share empirical findings with

practitioners and regulators; Evidence-based recommendations highlighting the real effects of climate risk reporting on asset values, audit fees, and investor trust and; Dissemination of biodiversity reporting findings to global public sector standard setters, encouraging cross-council collaboration in Australia.

OUTCOME AND IMPACT

Outcome for primary stakeholders (standard setters, regulators, and professional bodies): Mukesh's recommendations have influenced debates on mandatory sustainability reporting, assurance standards (ISSA 5000), and biodiversity disclosure. His work has highlighted gaps in current frameworks and provided evidence-based pathways for regulatory reform. Regulators and professional bodies are now considering clearer, more consistent, and internationally aligned requirements for sustainability reporting and assurance, including the inclusion of illustrations on climate reporting based on industry needs; Impact on broader stakeholders (businesses, investors, governments, and society): Mukesh' contributions through published papers strengthen investor trust, promote responsible corporate accountability, and improve the reliability of sustainability disclosures. Businesses gain clarity on reporting expectations, while governments benefit from evidence to guide climate-related policy. Society at large gains from enhanced transparency in corporate sustainability performance, stronger biodiversity investment, and more resilient financial systems prepared to manage climate risks. Mukesh has made national and international presentations to various stakeholders, including the members of the IFRS Sustainability Alliance academic series on "Firm performance, valuation and sustainability practices during the

Covid-19 pandemic" and the Herald Sun in the article "Sustainability saves small businesses some cheddar this tax season". His work informs standard-setters, regulators, and practitioners, including investors, on the costs and benefits of both voluntary and mandatory climate change reporting practices and their disclosures. He also brings his research into the classroom and helps students understand and navigate the challenges related to climate change.

5. CONDUCT OF CROSS-BORDER TRADE INCLUDING INTERNATIONAL GOODS TRADE, AND INTERNATIONAL DISPUTE RESOLUTION – ASSOCIATE PROFESSOR BENJAMIN HAYWARD

Associate Professor Benjamin Hayward's research addresses legal issues affecting the conduct of cross-border trade including international goods trade, and international dispute resolution. Dr Hayward has used this research as a basis for engaging with Australian and international law and rule reform processes. Dr Hayward's submission to an Australian parliamentary enquiry led to his views being reflected in the relevant Committee's report and recommendations; his submissions to enquiries conducted by the Law Commission for England and Wales have been noted in advice documentation prepared by that Commission; his submission to an enquiry conducted by the International Institute for the Unification of Private Law led to amendments being made to the text of that Institute's principles regarding digital assets; and his submission to a House of Lords committee examining proposed UK legislation addressing digital assets was referred to in UK Parliament.

MUKESH' CONTRIBUTIONS THROUGH PUBLISHED PAPERS STRENGTHEN INVESTOR TRUST, PROMOTE RESPONSIBLE CORPORATE ACCOUNTABILITY, AND IMPROVE THE RELIABILITY OF SUSTAINABILITY DISCLOSURES.

6. MONASH CENTRE FOR FINANCIAL STUDIES (MCFS) MODERN SLAVERY RESEARCH PROJECT - ASSOCIATE PROFESSOR NGA PHAM, DR BEI CUI, AND ASSOCIATE PROFESSOR UMMUL RUTHBAH,

Monash Centre for Financial Studies (MCFS) Modern slavery research project started in 2020 when the reporting requirements under Australia's Modern Slavery Act were enacted.

Modern slavery is a global challenge, accentuated due to COVID, conflicts, and climate change. The MCFS researchers designed the Modern Slavery Disclosure (MSD) scoring framework to measure the quality of modern slavery statements submitted by the largest companies on the Australian Securities Exchange (ASX). Due to its originality, transparency, and rigorous assessment process, the MSD framework has become an industry benchmark for modern slavery reporting, adopted by several large ASX companies. The team engages with the government, companies and investors via meetings, presentations, panel discussions,

participation in industry working groups, responding to government consultations, and executive education. The research informs investors' investment and stewardship decisions, evidenced in TelstraSuper's acknowledgement of using Monash's research for ESG screening for investment in their newsletters, State Super's MOU with Monash, substantial engagement with the Australian Superannuation Investors Council, AllianceBernstein, Macquarie, UniSuper, REST Super, HESTA, Invesco, and some other super funds and asset managers.

The research team also engaged directly with the Commonwealth government to improve its modern slavery report. Apart from the MCFS response to the Australian Government's public consultation on reviewing the Modern Slavery Act, 24 other organisations cited Monash's research in their submissions. The research has generated impacts beyond academia, including improvements in corporate reporting quality and accountability, more informed investment and stewardship decisions by investors, and strengthened modern slavery regulations, all of which contribute to Australia's efforts to combat modern slavery. The research team, comprising

A/P Nga Pham, Dr Bei Cui, and A/P Ummul Ruthbah, received the Impact Acceleration Grant Scheme in 2023 and was awarded the Dean's Award for Excellence in Research Engagement and Impact in the same year. Additionally, they were nominated for the university's Vice Chancellor Award in the same category.

The research aligns with Monash's Impact 2030 of climate change, geopolitical security and thriving communities, contributing to the University's effort to deliver the United Nations' SDGs.

DUE TO ITS ORIGINALITY, TRANSPARENCY, AND RIGOROUS ASSESSMENT PROCESS, THE MSD FRAMEWORK HAS BECOME AN INDUSTRY BENCHMARK FOR MODERN SLAVERY REPORTING.

