

# Lifting Diversity and Inclusion in Economics: How the Australian Women in Economics Network Put the Evidence into Action\*

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To support broader global efforts to improve diversity and inclusion in economics, this paper provides a statistical picture of the gender composition of the economics profession in Australia and the evidence-based initiatives taken by the Women in Economics Network (WEN) to improve women's representation and recognition. WEN's impact is evaluated across a range of metrics. This includes a case study of WEN's mentorship programme for university students that was delivered as a behavioural intervention and evaluated as a randomised control trial. Drawing on practical experiences in combination with research insights, the paper identifies some of the challenges encountered and the lessons that can be shared with similar organisations globally that are pursuing diversity and inclusion goals.

Keywords: gender equality, economics, diversity and inclusion, discrimination.

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A fuller version of this paper, which includes details on the practical steps taken to create WEN and an analysis of survey results evaluating WEN's impact, is available publicly in the following publication: Cassells *et al.* (2022). [https://esawen.org.au/wen-research-hub-item/34754/wens-contribution-to-gender-equality-research-and-action/?type\\_fr=931](https://esawen.org.au/wen-research-hub-item/34754/wens-contribution-to-gender-equality-research-and-action/?type_fr=931).

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## 1. Introduction

The global observation that women are under-represented in the economics profession is starkly evident in Australia.

Women comprise around one-third of the economics profession in Australia. Women's under-representation in economics is evident across all sectors and stages of career progression yet is most acute at senior ranks including university professorships and heads of government agencies. In 2017, it was observed that:

Australia has never had a female Treasurer. Or a female Reserve Bank Governor. Or Deputy Governor. Or female chair of the ACCC. Or APRA. Or ASIC. Or the Future Fund. Or the Productivity Commission.<sup>1</sup>

This was despite numerous female economists demonstrating their expertise and capabilities in deputy roles in these various agencies.

Women economists receive lower coverage in the media and fewer high profile speaking engagements. This has implications for women economists' potential public influence, as well as the next generation's exposure to relatable role models.

Looking ahead at Australia's pipeline of future economists, female students constitute around 37 per cent of university domestic enrolments in economics in Australia, while females' share of secondary school enrolments in economics is around one-third. However, current economics enrolments in Australia's schools and universities are part of a concerning trend. Not only has the absolute number of school students enrolled in economics been declining for several decades, but females' proportion of student enrolments has also been shrinking (Dwyer, 2017, 2018; Livermore & Major, 2020; Lovicu, 2021). A similar decline in representation within economics has been observed among students from low-socioeconomic backgrounds, which also has implications for the diversity of the profession (Dwyer, 2018; Livermore & Major, 2020).

Women's ongoing under-representation in the traditionally male-concentrated field of economics and in positions of economic leadership reflect, in part, the influence of broader gender biases and norms that prevail across many dimensions of society. However, the observation that several other traditionally male-dominated fields have succeeded in appointing more women to leadership roles – including the appointment of a female Prime Minister, several female Premiers and Chief Ministers, and a female Chief Scientist in Australia – points towards the persistence of exclusionary biases and barriers in the economics profession. The marginalisation of women in the profession is a cost that is not just borne by the under-represented cohort: It jeopardises the capacity for economic policy-makers to deliver robust and responsive outcomes that adequately identify and address the needs of the diverse population they are charged to serve.

It is against this backdrop that the Women in Economics Network (WEN) was established in 2017 in Australia with the broad mission of improving the representation and recognition of women in economics. This mission aims to foster a more gender balanced, equitable and inclusive profession.

This paper contributes to broader global efforts to lift the representation of women and other minority cohorts in the economics profession. We firstly offer a statistical picture of the composition of the economics profession in Australia and the background context in which the network was formed (Section 2). We share the practical steps taken to create WEN (Section 3). The paper then outlines the broad research insights that informed the design of WEN's various initiatives (Section 4)

<sup>1</sup>Quote by Shadow Treasurer Chris Bowen, The Case for Gender Equality, Speech to the NSW Women in Economics Network, 26 June 2017, Sydney. The quote refers to Australia's key public economic, financial and regulatory agencies: RBA refers to Australia's central bank, the Reserve Bank of Australia; ACCC refers to the Australian Consumer and Competition Commission; APRA refers to the Australian Prudential Regulation Authority; ASIC refers to the Australian Securities and Investment Commission; the Future Fund refers to Australia's Sovereign Wealth Fund; and the Productivity Commission refers to the Australian Government's key microeconomics advisory agency.

and shares some evaluations of WEN's impact to date (Section 5). We close the paper with reflections on the challenges faced as well as future opportunities for the network (Section 6).

## 2. Motivation for the Creation of WEN

### 2.1. A Statistical Picture of the Gender Composition of the Economics Profession in Australia

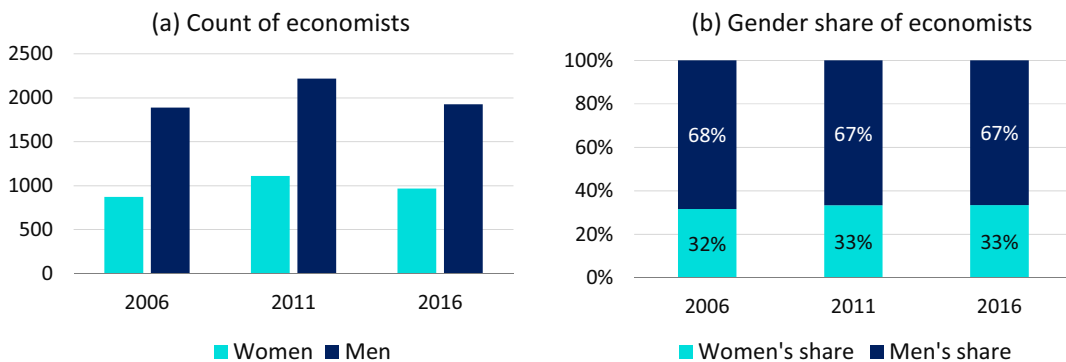
We use several metrics to calculate the representation of women in economics in Australia and how this has shifted over time. Data are reported according to the binary definition of gender, owing to the way that the data were collected: we acknowledge individuals who identify beyond the binary classification of gender and highlight this as an avenue for improvement in future data collection and analysis.

A count of economists can be derived from Australia's Census data for the most recent years available (2006, 2011 and 2016), collected by the Australian Bureau of Statistics (ABS). Based on occupation information, women constitute around 33 per cent of all economists in Australia. This one-third share has been stable across all years of the Census data under analysis (Figure 1). Women comprise a slightly higher share of economists working in the public sector at national government level, relative to their representation within state and local governments and in the private sector, although women's share of private sector economists has risen slightly over time (Figure 2).

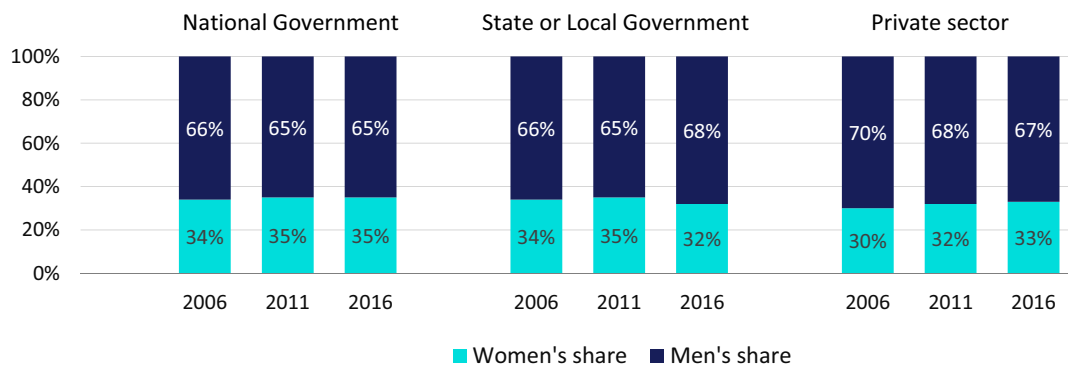
Looking at industry of employment, the industry that is the largest employer of economists in Australia is Public Administration and Safety, where women constitute around 34 per cent of economists, on par with their one-third share of economists across the workforce more widely (Table 1). Relative to this one-third benchmark, women are slightly over-represented in the Education and Training sector at 42 per cent, although still the minority share. Women are relatively under-represented in Professional, Scientific and Technical Services, Financial and Insurance Services and Electricity, Gas, Water and Waste Services, which make up the remaining largest five industries of employment for economists in Australia.

Because it is possible for people to work in an economics or economics-related role, but not in an occupation that is described as an economist (e.g. as a university lecturer, research officer, analyst or manager), we also look at the number of people who hold a post-school economics or econometrics qualification (Figure 3). Based on this field of study information, women constitute around two out of every five people with an economics qualification. This has risen slightly from 2006 through to 2016.

Profiling economics qualification-holders according to their age shows that the gender disparity in economics qualifications is starkest among older age groups (Figure 4). In part, this reflects the more



**Figure 1.** Gender Composition of Economists in Australia, 2006–2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2006, 2011, 2016). [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

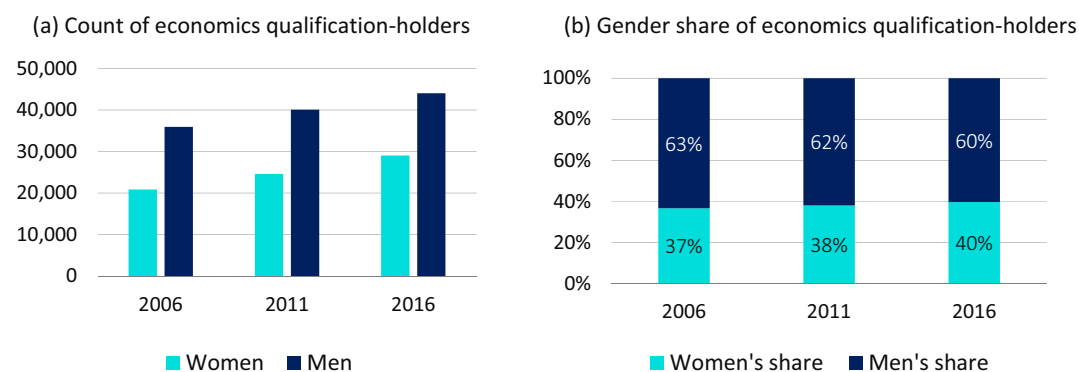


**Figure 2.** Gender Composition of Economists in Australia, by Sector of Employment, 2006–2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2006, 2011, 2016). [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

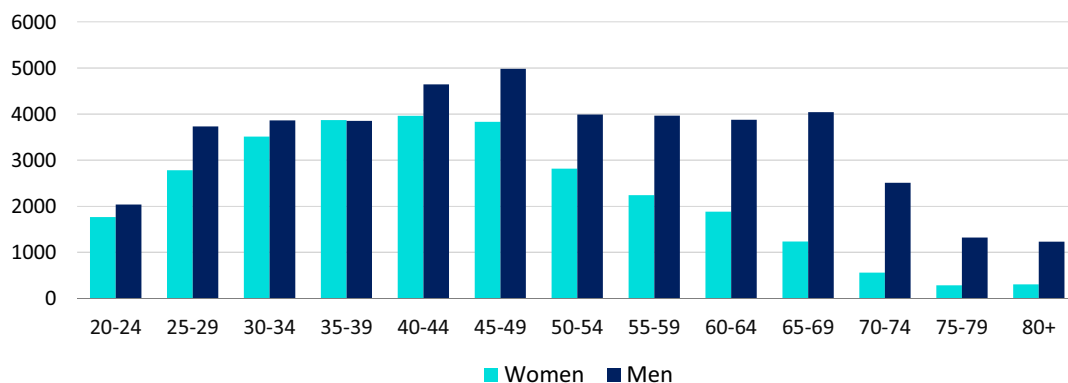
**Table 1.** Gender Composition of Economists in Australia, by Industry of Employment, 2016

Industry	Total economists in industry	Women's share (%)	Men's share (%)
Public Administration and Safety	985	34	66
Professional, Scientific and Technical Services	814	29	71
Financial and Insurance Services	407	30	70
Education and Training	162	42	58
Electricity, Gas, Water and Waste Services	83	25	75

Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2016). Only the five largest industries of total employment for economists are listed.



**Figure 3.** Gender Composition of Economics Qualification-Holders in Australia, 2006–2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2006, 2011, 2016). Post-school educational qualifications include qualifications in the field of economics or econometrics. [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]



**Figure 4.** Count of Economics Qualification-Holders by Age and Gender, Australia, 2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2016). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1479-3441.12867)]

limited educational opportunities that older generations of women were offered throughout their lifetimes. While the gender disparity generally narrows progressively among younger cohorts, it also displays an exception in one age cohort. The gender gap in economics qualification-holders narrows completely to reach parity within the cohort aged 35–39 years in 2016 (that is, those who were born between 1977 and 1981).

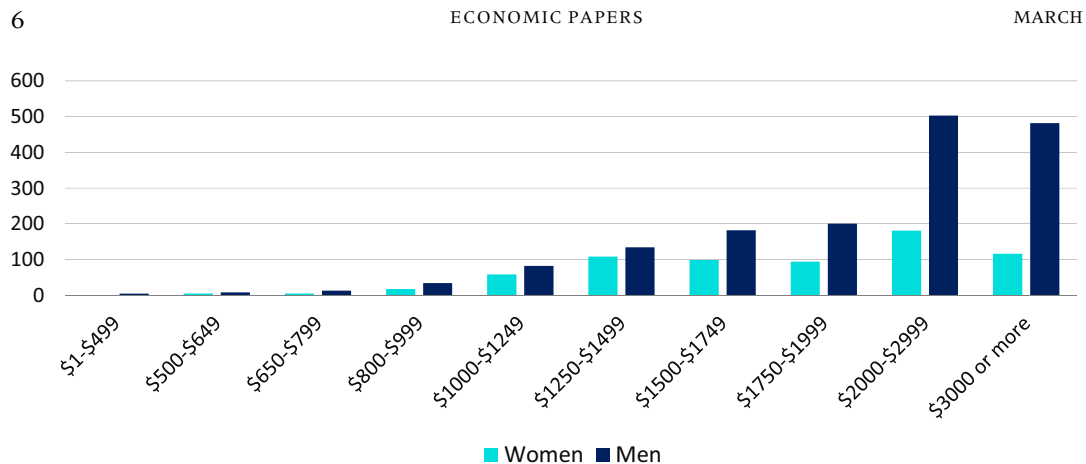
A profile of the full-time weekly earnings of economists and economics qualification-holders shows strong gender differentials, with men over-represented in the highest earning brackets (Figures 5 and 6).

Analysis of economic academics within Australia's universities is of particular interest, as this is the cohort who have responsibility for the design and delivery of economics courses at university level, and therefore the capacity to significantly influence students' experiences and career decisions. An analysis of academic appointments in economics in Australian universities, that was commissioned by the ESA in 2016, found that women made up around 21 per cent of economists employed in university economics departments. Women's under-representation was starkest among senior levels, at 12 per cent of Professors and 18 per cent of Associate Professors (Figure 7).

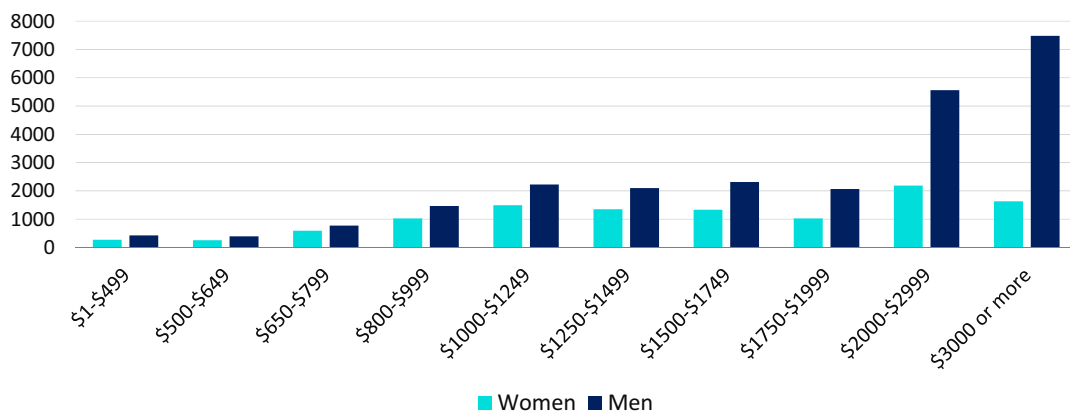
Feeding into the low proportion of women in the economics profession is the under-representation of female students in the education pathways that lead to economics careers. Data on school student enrolments reveal that female students are in the minority in economics classrooms and that this share has generally been shrinking over time (see data reported in Cassells *et al.*, 2022). However, data extending back to the 1990s reveal that it has not always been this way, as Queensland school enrolments show that female economics students outnumbered their male counterparts during the 1990s.

There are multiple factors that potentially explain the decline of school students' enrolments in economics over time. This overall decline in economics enrolments coincides with a noticeable rise in the offering of business studies, presenting a competitive substitute choice of subject for prospective students. It is apparent that business, finance and commerce subjects have been effective in reaching prospective students through clearly communicating the type of job opportunities that these fields can lead to, explaining the practical usefulness of studying these subjects, and relating the subject content to the issues that students care about. The general perception that business studies is associated with strong and secure job prospects is also likely to be a factor for students, as well as for parents who can have influence over their children's vocational choices.

Similarly, recent decades have seen concerted efforts by governments, industry and education bodies to lift the representation of women in STEM (Science, Technology, Engineering and Mathematics). This includes dedicated investments by government departments to increase skill acquisition



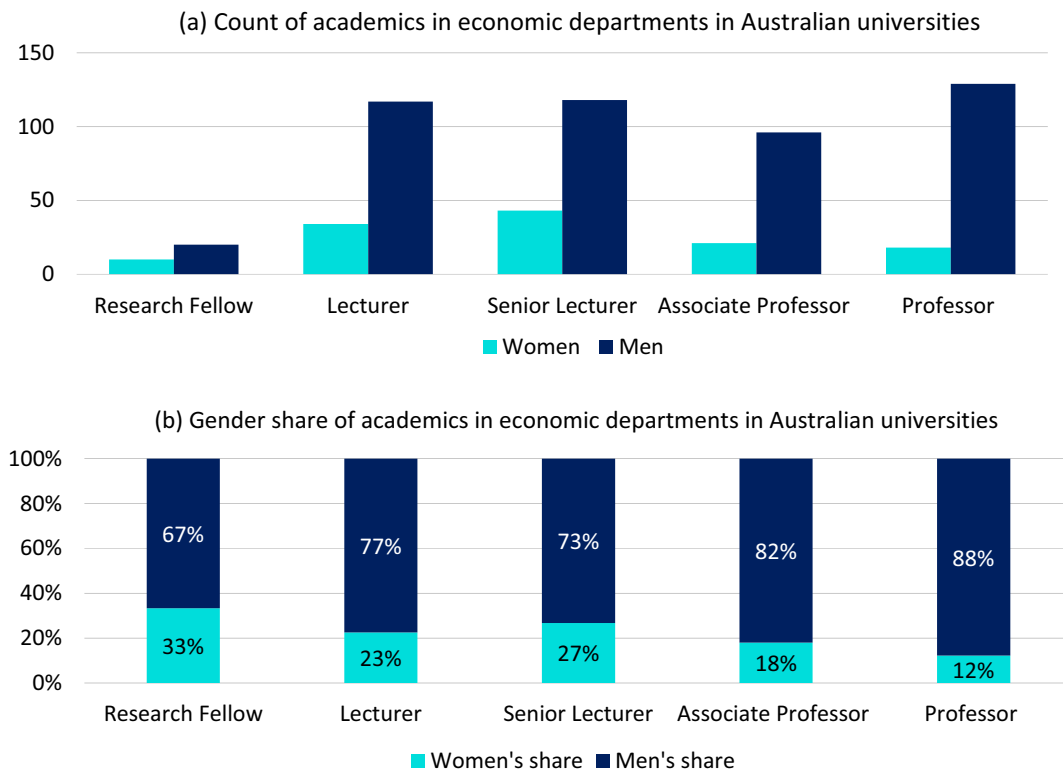
**Figure 5.** Count of Full-time Employed Economists, by Weekly Income and Gender, Australia, 2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2016). Weekly income reported for full-time employed only. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]



**Figure 6.** Count of Full-time Employed Economics Qualification Holders, by Weekly Income and Gender, Australia, 2016. Source: Authors' calculations using ABS Census of Population and Housing, TableBuilder (2016). Post-school educational qualifications include qualifications in the field of economics or econometrics. Weekly income reported for full-time employed only. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

among women in these fields and fund gender equality initiatives such as Athena Swan accreditation.<sup>2</sup> While these efforts are important for addressing women's under-representation in these male-concentrated fields, the rising appeal of STEM to female students also presents a competitive substitute for prospective economics students (Dwyer, 2017). This particularly applies to students with strong mathematical aptitude and an orientation towards problem-solving, given that these are distinctive characteristics across both STEM and economics fields. There are also observations that the number of schools offering economics as a subject has been declining in recent years, and that a

<sup>2</sup>For example, see <https://www.sciencegenderequity.org.au/the-athena-swan-accreditation-framework/>.



**Figure 7.** Gender Composition of University Economics Departments, Australia, 2016. Source: Economic Society of Australia. Data compiled in 2016 from a survey of 41 Australian university economics departments. 18 economics departments responded to the survey, comprising four departments from the Group of 8 (Go8) and 14 from non-Go8 universities. Data for the remaining Go8 were added from the university websites. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

notable proportion of teachers who have been assigned responsibility for delivering economics courses are teaching “out-of-field” without a qualification in economics (Dwyer, 2017). The observed decline in economics enrolments is therefore likely to reflect a combination of these demand-side and supply-side pressures.

The gender disparity in student enrolments is also apparent at university level (Mackey, 2019). Based on data made available to the authors by the Grattan Institute, women comprised around 38 per cent of undergraduate students enrolled in economics courses in 2016 (the most recent year of data available), and this share has been declining over the past three decades. Women’s share averaged 37 per cent during the 2010s, falling from an average of 39 per cent during the 2000s, and from 40 per cent during the 1990s. Although overall enrolment numbers in economics at university climbed during the 2000s, the rate of increase among male students outpaced that of female students, contributing to a shrinking female share. Women’s share of post-graduate enrolments in economics has been smaller than their undergraduate share, averaging 35 per cent during the 2010s.

Another indicator of gender disparities in economics is the under-representation of female economists cited by the media. The composition of economists who are given a voice in the media matters not only as a marker of women’s under-representation, but also because it contributes to women economists’ weaker capacity to have public influence and reflects societal attitudes about whose



voices are most credible. A 2018 gender analysis of mainstream Australian media identified an under-representation of women's voices in the areas of the media where economists are expected to feature. Women constituted a mere 18 per cent of direct sources cited in business and finance articles and 32 per cent of direct sources in articles on government and politics (Price & Payne, 2019). Female journalists are also in the minority within these field of reporting, constituting 40 per cent of the journalists working in these areas.

Overall the statistical picture of women's under-representation in Australia's economics profession is largely consistent with broader gender disparities in economics that have been well documented internationally (Ginther & Kahn, 2014; Bayer & Rouse, 2016; Tenreyro, 2017; Lundberg & Stearns, 2018; American Economic Association Committee on Equity, Diversity and Professional Conduct, 2019; Auriol *et al.*, 2019; Boustan & Langan, 2019; Gamage *et al.*, 2020; Liu *et al.*, 2020; Megalokonomou *et al.*, 2021).

## 2.2. Why Women's Under-Representation in Economics Matters

The persistent under-representation of women in the economics field is not just a matter of inequity. It also has implications for the capacity of the profession to perform its role and contribute meaningfully to society.

There are multiple channels through which greater diversity and broader demographic representativeness can enhance the effectiveness of a profession. In many respects, the benefits of women's increased representation reflect the positive impact that greater diversity brings to a team, workplace or any decision-making setting, as has been documented in the broader research literature on diversity and inclusion. Firstly, the gains of expanding women's involvement in a field can be productivity-based, reaped through a more resourceful deployment and matching of workers' skills and capabilities to the tasks at hand. Secondly, the gains can be cognitively-based, derived from the broader diversity of thought, knowledge, innovations and ideas that greater gender balance offers, generated through the different perspectives and insights that men and women can bring as a result of their different life experiences. Thirdly, gains may be representation-based, where women's involvement in decision-making processes and the design of products, services, policies and legislation serves as a conduit through which women's specific needs can be more effectively heard and acted on (Risse, 2019). All of these channels have relevance to the field of economics, including across research, policy, industry and educational outputs.

Research attests that combining people who bring a diversity of skills, ideas, perspectives and cognitive approaches can give rise to a broader pool of knowledge, more innovative ideas, a more robust scrutiny of different proposals, and more creative approaches to problem-solving (Díaz-García *et al.*, 2013; Page, 2019; Turban *et al.*, 2019).

Through diversifying its people, economics can draw upon a broader scope of capabilities, insights and lived experiences, which in turn has the potential to enhance the numerous processes and outputs that the profession is responsible for generating. A more diverse profession lifts the profession's capacity to detect and diagnose real world problems, to respond to the needs of the population, to interrogate evidence and to consider various possible ways of interpreting analytical results. A more diverse profession strengthens the robustness of debate and the breadth and comprehensiveness of issues that are placed on the research and policy agenda. A more diverse profession can influence the weighting assigned to competing topics in editorial, grant and funding decisions, and bring into scope topics that may have been previously discounted in importance and relevance. Significantly, the diversity of the economics profession affects the profession's capacity to deliver teaching, learning and academic supervision to an increasingly demographically diverse body of students. As the WEN National Chair has observed, "investing in diversity can be considered an investment in the profession's cognitive infrastructure" (Risse, 2019, p. 22).

While male and female economists can be trained to acquire the same theoretical knowledge, analytical capabilities and practical skillsets, differences in male and female economists' life experiences matter for the profession's outputs. As a knowledge-based industry, the generation of economic research, policy analysis and evaluation not only requires cognitive and technical skills, but also



involves observing human behaviour, processing and interpreting information through existing bodies of knowledge, and making decisions about which issues to focus on, which methodologies to adopt, and which policy interventions to test. The work of economists ultimately involves subjective decision-making.

Providing some indication of the extent to which differences in men and women's life experiences matter for economics, research shows that economists' positions on various issues systematically differ on the basis of gender. In surveys of economists in the United States and Europe, statistically significant differences have been detected between male and female economists' perspectives across a range of economic issues (May *et al.*, 2014, 2018). Male economists are found, on average, to express stronger support for austerity measures, limited redistribution and the superiority of market solutions over government interventions. Female economists generally express stronger support for the need for environmental protection policies and a view that gender inequalities exist in the labour market. While there will be individual variation in these opinions, these broad gender-patterned findings imply that a profession that is unbalanced in gender is likely to steer its focus and policy prescriptions towards one end of the thought spectrum. Diversity on the basis of gender helps protect the profession against the fallibility of homogenous thinking (Levine *et al.*, 2014; Keck & Tang, 2017).

Lifting women's representation in the economics profession has the potential to moderate the risks associated with economists' overconfidence in their policy forecasts and recommendations. Research has linked overconfidence to poor decision-making and detected that men in general have a higher tendency towards overconfidence, or at least a stronger level of confidence and self-conviction than women, in their judgements and predictions (Barber & Odean, 2001; Moore & Healy, 2008; Sarsons & Xu, 2015; Invernizzi *et al.*, 2016). Given that economics is a profession that is called upon to provide important policy recommendations on the basis of forecasts and predictions, the liabilities associated with overconfidence matter.

Beyond the role of the economics profession in society, women's declining engagement in the study of economics has implications for women's levels of financial literacy within the broader population. This has potential repercussions for gender equality, in terms of widening gender gaps in economic security and lifetime earnings. Concerns about Australia's financial literacy rates, as well as the declining diversity of the economics profession, also contributed towards Australia's central bank, the Reserve Bank of Australia (RBA), investing further in its public education programme and motivated its efforts to better understand the factors that influence students' engagement with the subject (Dwyer, 2018; Livermore & Major, 2021).

### 2.3. A Wider Reckoning

The Women in Economics Network's efforts to spotlight and address the issue of women's under-representation, under-recognition and marginalisation in economics in Australia has taken place in the context of the wider cultural changes in the gender equality space that have occurred in recent years.

While women's under-representation in economics has been an ever-present issue, focus has been sharpening internationally on the prevalence of gender inequality and sexism in the economics profession, particularly spurred on by a wave of economic research investigating gender biases in economics academia in the United States. These economic analyses detected systemic and cultural biases in how women are treated and evaluated in the profession. These inequities include women encountering more hostile and patronising questions in academic economic seminars (Dupas *et al.*, 2021), women economists being held to higher standards of quality in paper submissions (Hengel, 2021), gender gaps in publication and co-authorship opportunities (Boschini & Sjögren, 2007; Hamermesh, 2013; Ghosh & Liu, 2020), women's contributions being valued less than that of their male colleagues (Sarsons *et al.*, 2021), female educators being scrutinised more strongly in students' evaluations (MacNell *et al.*, 2015) and the persistence of an intensely misogynistic culture in informal forums within the economics community (Wu, 2018). Although academic research on gender differentials in economics has concentrated on gender differentials in academia, the literature on gender biases and inequities in the labour force more widely can also help explain the gender inequities

encountered by female economists in other institutional settings, including in government, private businesses, politics and the media. From among an enormity of possible research examples to cite, some relevant examples include evidence that CVs with male names are more likely to be rated favourably than identical CVs with female names (McGinn & Tempest, 2010) and findings that social expectations pressurise women to take on the voluntary and administrative tasks in the workplace that do not count for much in performance evaluations and job promotions, in ways that are not experienced by men (Babcock *et al.*, 2017).

This recent wave of research coincided with the global “me too” movement that highlighted the prevalence of sexual harassment and abuse in workplaces and wider society. The “me too” movement had its origins in community-based initiatives in the United States designed to support victims and survivors of sexual violence, before evolving into a global campaign that spotlighted the ways that men in positions of institutional authority could continue to wield power and perpetuate gender inequities (Gieseler, 2019). While the original movement created by Tarana Burke focused on facilitating healing and justice for survivors, the movement also contributed towards a push for organisational change to create safer workplaces for women and minority groups (Gupta *et al.*, 2019). It is likely that these global movements contributed to putting the issue of gender equality on the radar of many in the economics profession.

Also in recent years, female leaders in economics have been more vocal about the issue of women’s under-representation, and the lack of diversity more broadly, within the economics profession. Former Chair of the US Federal Reserve and current Secretary of the US Treasury Janet Yellen has appealed to the importance of gender equality for the effectiveness of the profession:

If economists are mainly of one gender or race, they are likely to miss things that matter. Underrepresentation of women likely constrains the range of issues addressed and limits our ability to understand familiar issues from new and innovative perspectives.

(Yellen, 2019, online article)

Former Managing Director of the IMF and current President of the European Central Bank, Christine LaGarde has spoken out about the gender disparities in voices of economic influence:

In the finance world, I don’t know whether you would call it discrimination, but there is certainly disparity between men and women . . . If you look at the venture capital world, it’s the same. If you look at CEOs of large, international banks, it’s the same. If you look at parliament, you have a much lower representation of women than there are women in society. So something is not working.

(LaGarde, cited by Bosley, 2021, online article)

Although some observers internationally have described the recent intensification of focus on gender biases and sexism within economics internationally as a moment of “reckoning” for the profession, it is important to acknowledge that feminist economists have long been pointing to the entrenched gender biases within the profession and in mainstream economics thinking itself (Waring, 1999; Benería *et al.*, 2011) and that there have been previous attempts in past decades to raise awareness about these inequities (Chassonnery-Zaïgouche *et al.*, 2019).

In the Australian context, gender inequality persists as a confronting social, economic and political issue across many dimensions of society. In 2021, Australia slipped to 50th position overall in the World Global Gender Gap rankings (World Economic Forum, 2021). Despite ranking equal first in women’s educational attainments, Australia was ranked 54th in women’s political empowerment, 70th in economic participation and opportunity and 99th in women’s health and survival. While history was made with the appointment of Australia’s first female Prime Minister, Julia Gillard, in 2010, the hostile treatment of women in politics in Australia continues to make headlines. Public outrage over enduring gender inequities, sexism, abuse and violence against women within Australian Parliament and wider Australian society, and frustration over the government’s muted response, was expressed in the form of large-scale marches and protests throughout 2020 and 2021 including “March for Justice” rallies on the outdoor grounds of Australia’s Parliament House (Zhuang, 2021).

### 3. WEN's Scope and Structure

To address the gender disparities and inequities in the economics field, WEN was established in 2017 as a nationwide, multi-sectoral association for female economists in Australia.<sup>3</sup> It was formally created as part of the Economic Society of Australia (ESA), which is the professional organisation for economists in Australia whose origins hark back to 1915.<sup>4</sup> In this respect, WEN fulfils a similar role to the Royal Society of Economics' Women Committee in the UK, the European Economic Association Committee on Women in Economics, the Canadian Women Economists Committee (CWEC) which is part of the Canadian Economic Association, and the Committee on the Status of Women in the Economics Profession (CSWEP) which is part of the American Economic Association.

The idea for the creation of a group to support women in the economics profession in Australia grew out of mentoring retreat hosted by the ESA in 2016. The ESA was cognisant that membership numbers were on the decline and females were under-represented within the profession. Following the 2016 retreat, a small group of mid-career economists who attended the retreat took the idea of forming a women's group and turned it into action. The group put out the call for new members and an initial article in mainstream media about the formation of the network, written by economics journalist Jessica Irvine, helped to build WEN's reach, attract volunteers from around the country, and bolster the credibility of this new venture (Irvine, 2016). With the support of the ESA, WEN was launched in March 2017. In her address at the national launch of WEN, Assistant Governor (Economic) of the RBA Dr Luci Ellis remarked on the importance of gender equality in economics:

Equality of the sexes is essential if we are to achieve our economic potential as a nation. When someone faces bias or artificial obstacles, it holds all of us back. Overcoming those biases and unmaking those obstacles won't be easy, either in the [economics] profession or in other workplaces. But it is certainly worth doing, for both males and females, now and in future.

(Ellis, 2017, RBA website)

The volunteer committee who created WEN were cognisant that previous attempts to form a women in economics group in earlier decades were challenged by numbers being too low to make the group viable, as well as a broader perception held by some in the profession that such a group was "not really needed". These observations point to the need for there to be genuine support from among the economics community, and the achievement of a critical mass in size, if a group such as WEN is to be built, adequately resourced and sustained at a viable level of operation over time.

The Women in Economics Network's activities, services and membership eligibility extends to economists in the public sector, private sector, not-for-profit organisations and the education sector. While it has been observed that some similar groups internationally have tended to place stronger focus on the academic sector, WEN has been cognisant of nurturing and sustaining its multi-sectoral scope. This multi-sectoral reach has proven to be one of WEN's strengths. A dynamic blend of sectors has contributed to building more diverse and expansive networks for members, a more productive sharing of knowledge across research and policy, and opportunities for cross-fertilisation and collaboration between members from different sectors. A multi-sector approach also provides a supportive environment for economists who move between sectors throughout their careers, recognising the transferability of their skills and the value of their experiences in other sectors.

Under its broad remit to improve gender equality in the economics profession, WEN articulated four operational objectives in its governance arrangements to guide its mission and activities: (i) to professionally connect and support women in economics in Australia; (ii) to improve the representation of women at all levels of the economics profession; (iii) to promote public contributions by female economists; and (iv) to encourage more young women to study economics. These objectives work holistically to not only directly support women who are currently in the profession but also to bring about the broader systemic and cultural change that is needed to foster a gender equitable profession and to look ahead at nurturing the pipeline of economists in the future.

<sup>3</sup>Further information about WEN can be found on the network's website: <https://esawen.org.au/>.

<sup>4</sup>See Economic Society of Australia: <https://esacentral.org.au/about-us-item/16558/history-of-the-esa>.

The Women in Economics Network's governance and structure mirrors the ESA's Federal structure, where State and Territory branches deliver localised activities and initiatives to members in their respective jurisdictions and the National Committee co-ordinates, administers and promotes the activities of the network at a national level. Representation on WEN committees is drawn from all sectors, including high school economics teachers who bring expertise to guide WEN's educational outreach activities. WEN's funding largely comes from membership fees and funding allocation from the ESA, supplemented by sponsorship from support organisations or through community grants that are tied to particular events or purposes.

Membership with WEN is open to women and all female-identifying individuals, as well as to men and any individuals who identify beyond gender binary classifications. Men are encouraged to join as a way of showing their allyship and support for WEN's objectives. In forming the network, the Committee was cognisant of creating an inclusive environment where men's role in the pursuit of gender equality is also recognised and promoted. The wider research shows that the achievement of gender equality requires a shift in attitudes and behaviours among men too. The reality is that many of the leaders in organisations, who have the capacity to make the institutional and cultural changes that would foster more inclusive and equitable workplaces, are men.

Men, including male school students, are welcome to attend WEN events, where they will see female economists demonstrating their expertise on economic issues. This serves to normalise women's equal involvement in economics through the eyes of men. Men's attendance and involvement at WEN events also enables men to be exposed to a wider range of economics topics than they might otherwise encounter, including hearing female perspectives which can enhance their understanding of the issues that might be more likely to be faced by women. Many of WEN's activities are open to the wider public, which has been an important mechanism for shifting public perceptions of economists and activating a broader interest in economics.

#### 4. WEN's Evidence-Based Initiatives

WEN's initiatives span a wide range of outputs and activities, aligned to the network's four key objectives. In the design and delivery of these initiatives, WEN adopted an evidence-based approach and was guided by research insights.

##### 4.1. Improving Perceptions of Economics

Misperceptions about what economics is about – and the common assumption that economics is all about money, profit and stock markets – present a potential deterrent to attracting a wider demographic spectrum of people to the field. In part, a narrow perception of “what economists do” and “what economics is about” is not unfounded: feminist economics has long critiqued mainstream economics for being built around a male's experience of the world. Analyses of educational resources point towards the content of economics textbooks lagging behind frontiers in economic knowledge and overlooking the issues that resonate most with younger generations of students, such as issues of environmental sustainability, climate change, inequality, global poverty and disadvantage. This has clear implications or attracting a more diverse student cohort. (Bowles & Carlin, 2020).

As part of its package of initiatives, WEN created new resources that more clearly instil a human perspective and problem-solving dimension into the purpose of economics. WEN's resources for students communicate the message that economics is about understanding human behaviour, how to improve human well-being, and how to address pressing real-world issues such as climate change and inequality. It impresses the message that economists are ultimately motivated to make a positive difference to society. In its outreach to students, WEN invested in the creation of several resources that are aimed to reach students at school and university level to inform them about the wide range of career opportunities that the study of economics can lead to, and the broad usefulness of learning economics as a life skill. These resources included a short video “Economics – Understand the World

Around You”<sup>5</sup> and an online booklet “What is economics all about? And where can it take you?”<sup>6</sup> These resources are freely available via the WEN website, and are designed for teachers, educators and career guidance officers to use in their engagement with students and promotion of the subject too.

These educational resources canvas the wide range of issues that economics can be applied to, which extend far beyond monetary concepts. For example, WEN’s booklet for students, “What is economics all about? And where can it take you?” explains:

Studying economics equips you with a toolkit to understand the world around you. Economics focuses on human behaviour. Economists are interested in figuring out what incentivises people to behave the way they do.

Economics is more than just understanding the world – it gives you tools to help improve the world. By analysing information and testing the impact of policies, the job of economists is to come up with solutions to tackle real world problems, improve society and enhance people’s quality of life.

The student resources created by WEN contain first-hand quotes from female economists describing economics in their own words. This is accompanied by photos of the economists, to strengthen the chances that students will be inspired by hearing from role models who they can relate to. WEN aims to present its resources for students in a vibrantly modern and attractive way. Several WEN branches have also hosted events with students, where students participate in lively and interesting activities, such as interactive behavioural economics experiments, and can meet and talk to economists in real life.

The Women in Economics Network’s efforts to improve perceptions of economics extends to shifting actual practices within the field to reflect gender equity principles. An example of this is WEN’s advocacy for the application of a “gender lensing” approach to economic analysis and policy-making, such as through the adoption of Gender Responsive Budgeting. This approach towards policy-making acknowledges that a given policy that seems gender-neutral can still have different implications and impacts on men and women, and reflects the goal of ensuring women’s voices and experiences are taken into account in economic policy-making. WEN has hosted masterclass workshops on the practice of gender lensing to help equip economists with these skills and raised awareness about the importance of conducting gender-disaggregated analysis in wider public forums, including speaking about this issue at the Women in Economics Budget Address held at the National Press Club. The need for gender-disaggregated analysis was particularly pertinent in the wake of the COVID-19 pandemic, with women in Australia shouldering the brunt of the economic impacts in the form of job losses, declines in workforce participation, intensified pressure and burnout in female-dominated industries, and women carrying a disproportionate share of home-schooling and unpaid care responsibilities (Risse & Jackson, 2021; Wood *et al.*, 2021). WEN has provided a platform for economists with expertise on this issue to raise awareness about this gender dimension in economic analysis and policy-making.

#### 4.2. Improving Perceptions of Economists

Misperceptions about what economics is about spill over into misperceptions about economists (Yengin, 2018). Reflecting the historical dominance of men in the field, the traditional male stereotypical image of economists can discourage females by reinforcing the impression that they do not belong in the field. The ongoing over-representation of male economists in the media, and their higher visibility in economic leadership and positions of influence, contributes to the connotation that economists are typically men. Even if attitudes towards gender equality are changing, the perception that

<sup>5</sup>The WEN video is available on YouTube <https://www.youtube.com/watch?v=AtOU-DAVch0>.

<sup>6</sup>Available via the WEN website <http://esawen.org.au/440/images/WENEconomicsBookletforStudentsoptimized.pdf>.



economics is the domain of men still heavily infuses the education materials that students are presented with: content analyses of mainstream economics textbooks has detected not only a systemic under-representation of women but also a perpetuation of outdated gender stereotypes that associate men with positions of control and decision making and relegate women to mundane and subservient roles in society (Stevenson & Zlotnick, 2018). These images can have the effect of not only deterring women but also reaffirming the message to men that they are expected to assume dominant roles and positions of authority.

Role models can combat the effects of gender stereotypes, including the effect of stereotype threat that can impede women from reaching their potential and dissuade them from considering a full range of study and career possibilities. Exposing female students to motivating female role models with whom they identify has been shown effective in increasing gender representation in economics classroom settings. For example, Porter and Serra (2020) show that exposing female students in introductory economics classes to successful and charismatic women who majored in economics at the same university increased the likelihood of female students majoring in economics by 8 per cent. Similarly, Breda *et al.* (2020) detected a significant positive impact of external women role models on student enrolment in STEM fields, based on a random assignment of classroom interventions carried out by women scientists interacting with secondary school students. Findings such as these informed WEN's creation of a student-targeted video and other career resources that can be used in student outreach activities.

The positive impact of mentoring programmes for women in economics, in terms of lifting women's research outputs and advancing their career progression, has also been documented by Ginther *et al.* (2020). These positive impacts can be borne out not only via the support, career advice and role modelling effect of mentees' interaction with senior mentors. Through bringing together women facing similar challenges, mentoring programmes can also have the effect of providing women with the reassurance that they are not alone in their challenges and the opportunity to find solidarity with others in the profession with whom they can relate.

The Women in Economics Network's efforts to broaden public perceptions of economists extend to initiatives that promote the voices and visibility of female economists in wider public debate, including in the media. With the support of the National Press Club of Australia, WEN has presented an annual Women in Economics Budget Address, with a panel of female economists offering their expert assessment of the Federal Budget and highlighting areas for policy consideration. The address has been held in most years since WEN's creation and broadcast across national television channels. In the first year that WEN's Budget Address was delivered, it was the first time that the National Press Club had ever hosted an all-female panel to speak about the Federal Budget.

### 4.3. Determinants of Students' Study and Career Choices

Research insights from the vocational and education space have informed WEN's understanding of the factors that motivate female students' study and career choices, and how this differs to that of male students. A survey of Australian secondary school students detected a point of difference in the factors that were most important for males' and females' career aspirations: female students ranked "helping others" as a more important reason than male students (Fitzsimmons *et al.*, 2018). These insights were consistent with secondary school student surveys conducted by the RBA that also identified that, relative to males, female students' interest in economics is more strongly motivated by wanting to identify and solve problems, and an interest in societal issues such as globalisation and climate change (Livermore & Major, 2020, 2021). In contrast, male students expressed a stronger overall interest in the share market and production decisions as economics topics.

Gender differences in students' perception of economics as a subject were also detected as a potential explanation for fewer female students opting for the subject. The RBA study detected that female students were less likely than males to feel that they had good understanding of what economics is, to find economics interesting, or to want to know more about the subject. Females' perceived ability to perform well in the subject was also a factor. According to the RBA survey, female students were less likely than males to believe "I could do well in economics if I put my mind to it" or to "have a

clear idea of whether I would be good at economics.” Female students were more likely than males to perceive business studies as easier, more useful and more interesting than economics (Livermore & Major, 2021).

These findings suggest that the clarity and relevance of information communicated to students makes a difference to their understanding and impression of the subject, which can consequently impact their likelihood of opting for the subject or not. Teachers, schools and career guidance officers also have a role here: female students perceived that their teachers were less likely to promote economics as a subject. The findings of the RBA survey align with the reasoning that a lack of accessible information about economics and economics careers among female students has been one of the reasons for female students’ weak interest and declining enrolments. WEN’s initiatives, such as the student video, were created to help address these factors. This approach is also substantiated by other interventions in the economics field that focus on the role of information (Bayer *et al.*, 2019).

Encouragingly, the RBA survey suggests that the gender inequities that prevail in the economics field do not appear to be overtly salient to female students during their educational experiences. When asked whether they believe that “economics is a career option for men more than women”, female students were *less* likely than male students to agree with this statement (Livermore & Major, 2021). However, this finding also implies that male students are more likely than females to believe that economics is a career that is better suited to men. This finding illustrates that achieving gender equality in economics also requires shifting attitudes and beliefs among men. Promoting the contributions of female economists and presenting a balanced picture of gender equality to the next generation of students is not just important for female students: it is also critical that male students and men in the profession begin to more fully include, recognise and respect women as equal participants in the field.

The Women in Economics Network incorporated many of these elements in its materials for students. In its overarching approach, WEN has highlighted the capacity for economists to contribute meaningfully to society and help to identify solutions to real-world problems. When aiming to inspire more female students to study economics and pursue a career in the field, WEN has intentionally *not* focused on economists’ prospective earnings: this is informed by research that has detected that attempts to encourage more female students into economics on the basis of economists’ high salaries had limited effectiveness and could even backfire. Pugatch and Schroeder (2020, 2021) found that university departments’ attempts to motivate prospective students by mentioning the high earning prospects of economists had a positive effect among male students, but actually dissuaded female students. It is possible that this approach backfired because it simply accentuates the misconception that “economists only care about money,” and fails to inspire a broader spectrum of students who are motivated by other goals and aspirations.

The importance of designing an economics curriculum to which students can meaningfully relate is amplified by the fact that most students first have the opportunity to engage with economics when they are reaching the age of young adults. In contrast to pedagogical approaches (the teaching of children) which centre on imparting new knowledge and the acquisition of new skills, andragogical approaches (the teaching of adults) centre on the practical application of knowledge and emphasise the importance of providing educational contexts where students can integrate real-world applications and their own life experiences into their learning processes (Kesley, 2018). As students’ first exposure to the subject of economics generally occurs throughout their upper secondary education or tertiary education, when they are past their childhood years, elements of andragogical teaching matter for the teaching of economics. This distinction implies that the content used in economics curriculum, such as examples of practical application of economic concepts, needs to be intentionally diverse in nature if it is to be relevant and engaging for a diverse student cohort. Andragogical teaching practices also emphasise the importance of providing opportunities for students to actively apply their knowledge to problem-solving scenarios and channelling students’ intrinsic motivations to learn, such as a desire to make a difference to society.

The Women in Economics Network has integrated these insights across its initiatives, including hosting special sessions on these topics at the Australian Conference of Economists, contributing to



the Australasian Teaching Economics Conference and promoting new curricula such as the CORE Project that prioritise diversity, inclusivity and practical applications in the teaching of economics.<sup>7</sup> The CORE Project is also an example of a modern economics curriculum that taps into students' intrinsic motivation to address the real world problems that they are witnessing and care about, such as climate change and poverty, which aligns with the andragogical teaching practices that befits their stage of education.

In WEN's outreach to students, WEN activities have been inclusive of male students so that the next generation of male economists become more accustomed to seeing female economists actively participating in the field and contributing to positions of influence. In panels of economists at student events, for example, WEN has included male economists though retains a female majority in the overall composition. Inverting the traditional gender composition helps to shift stereotypes and perceptions, while still promoting inclusivity and belonging among all.

#### 4.4. Gender Inequalities in Workforce Opportunities and Outcomes

In its design of gender equality initiatives, WEN looked towards research on policies aiming to reduce barriers and biases against women's engagement and progression in the workforce, including identifying evaluations of interventions to discern what works and what does not. Informed by the research, WEN's approach to instilling greater gender equality in the field of economics is to go beyond placing the onus on women to change or behave differently, which implies a capability deficit, but to instead highlight the inequities within the system that implicitly advantage and elevate men and the dominant cultural group.

Behavioural economics, which draws upon insights from psychology, highlights the need to understand the influence of unconscious and implicit biases in shaping gender gaps in workforce outcomes, and how nudges and changes in organisational practices can foster more equitable opportunities, outcomes and treatment (Bohnet, 2016). Insights from the field of sociology that shed light on the power of societal norms, and the mechanisms that embed and perpetuate inequities in power and decision-making within institutional structures, are also relevant to the economics field and its institutions. WEN has contributed to disseminating these research insights and highlighting how to apply this knowledge in practice through its various activities, including the annual Australian Gender Economics Workshops (AGEW) which brings together the latest research on gender equality and convenes a policy symposium with representatives from business, government and community organisations.<sup>8</sup> WEN has also invested in not only collating but also communicating and disseminating the policy implications of the latest economic research on gender equality in a way that is accessible to policy-makers who the capacity to put it into action.<sup>9</sup>

Frontiers in gender equality research highlight the need to apply an intersectional lens to understand the experiences of women from socio-demographic cohorts who face intersecting and compounding barriers and biases. In Australia, this especially applies to Aboriginal and Torres Strait Islander women, women who identify as LGBTQI, women with disabilities, and women from minority cultural and linguistic backgrounds. WEN has been cognisant of incorporating a culturally diverse picture of economists in its educational resources and composition of speakers at WEN events, and used its events to raise awareness about the issue of intersectionality, though there is scope to improve and do more as WEN grows over time. Given that WEN's membership base includes many women with parental or other caring responsibilities, it was essential for WEN's activities to accommodate the needs of this cohort, through for example hosting events at family-friendly times. Prior to WEN's formation, it was not clear that the planning of ESA events generally factored in these gender-

<sup>7</sup>The CORE (Curriculum Open-access Resources in Economics) Project is a new approach to the teaching and learning of economics, led by Wendy Carlin and Samuel Bowles. See: <https://www.core-econ.org/about/>.

<sup>8</sup>For more information about AGEW, see <https://esawen.org.au/content/858/australian-gender-economics-workshop>.

<sup>9</sup>For example, see the AGEW 2018 Policy Brief prepared on behalf of WEN <https://esawen.org.au/440/images/AGEW2018PolicyBrief.pdf>.

patterned considerations. The conversion to virtual events during the COVID-19 pandemic has actually helped facilitate this inclusivity and accessibility, including by helping to overcome the barriers of geographic distances and expanding the reach of WEN's activities to participants located in more remote locations or unable to travel for other reasons such as disability. It is likely that WEN will retain a mix of in-person, virtual and hybrid event formats in the future. WEN also investigated the feasibility of providing or subsidising childminding services to facilitate women's attendance at conferences, and was able to provide a parents' and carers' room at the most recent Australian Conference of Economists.

#### 4.5. Converting Research Insights into Practical Initiatives

Guided by the research insights, WEN developed a range of initiatives to tangibly work towards its objectives. While several have already been cited above, a summary of WEN's initiatives and how they align to WEN's objectives, are outlined in Table 2.

To provide further details on one of WEN's key initiatives, WEN produced a student-targeted video, titled "Economics – Understand the World Around You," to promote the study of economics among prospective students and provide the wider public with a clearer idea of what economics is about. WEN was guided by research detecting that low female enrolments in economics is in part influenced by a lack of role models with whom female students can relate. It was also motivated by emerging research being undertaken by the RBA that detected that women, as well as students from low-socioeconomic backgrounds, are less likely to have a clear idea about what economics is about, due to having weaker contact and exposure to the people working in the field (Dwyer 2017, 2018).

Guided by these research insights, the video aimed to overturn traditional stereotypes about economists by showcasing a diversity of real-world economists, especially women, working in the field. Further, it aimed to broaden audience's understanding of economics and its relevance to solving contemporary real world challenges that are highly salient to students, such as climate change, poverty and war. The video features excerpts of interviews held with a range of professional economists, the majority of whom were female, who shared their career stories. These interviews aim to ignite enthusiasm and interest among prospective students as the economists talk openly and authentically about what they love about their jobs and what a career in economics can look like. The seven-minute video, subtitled for accessibility, is freely available online via YouTube and the WEN website for teachers and other educators to use in offering career guidance to students.<sup>10</sup>

### 5. What Has Been WEN's Impact?

To evaluate the impact of WEN's initiatives, WEN has tracked a range of numerical metrics as well as qualitative feedback from the economics community. It is acknowledged that at the same time that WEN has been implementing its initiatives, various other organisations have also enacted initiatives with the shared goal of improving diversity and inclusion within economics. This includes for example, the RBA launching a public education programme to support economics educators and students at both school and tertiary level, various universities investing in outreach programmes, and several organisations that employ economists implementing internal gender equality targets and action plans for their own workforce composition. Government agencies have also been raising greater awareness on issues of gender equality more broadly, such as through the Workplace Gender Equality Agency and the setting of targets for some government boards.

#### 5.1. Women's Share of ESA Membership and Executive Roles

The creation of WEN led to a substantial and sustained rise in the number of female economists opting to join the Economic Society of Australia (ESA) (Figure 8). ESA membership is the avenue through which people become members of WEN and gain access to many of the services and activities that WEN offers. We can also interpret ESA membership as a representative measure of the extent to which people feel affiliated with the field of economics and a sense of belonging to their profession.

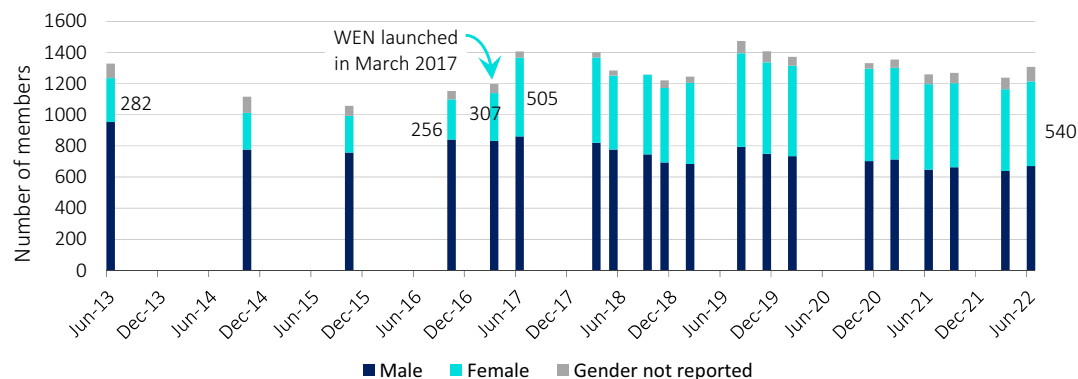
<sup>10</sup>The YouTube link is <https://youtu.be/AtOU-DAVch0>.

**Table 2.** *Summary of WEN's Initiatives*

Objective	What this meant in practice	Examples of initiatives
(1) To professionally connect and support women in economics in Australia	<ul style="list-style-type: none"> <li>• Providing supportive spaces for women to connect with each other</li> <li>• Nurturing women's career development</li> </ul>	<ul style="list-style-type: none"> <li>• Mentoring programmes including annual WEN Mentoring Retreat for junior and mid-career female economists, and ANU-BETA-WEN Mentoring programme for female university students</li> <li>• Professional development workshops focused on capacity building (e.g. effective communication workshops)</li> <li>• Hosting regular events (in-person or online)</li> <li>• Provision of career information and supportive resources on WEN website</li> <li>• Newsletter articles which profile the work of WEN members and provide a voice for women to share their professional experiences, challenges, and solutions with other women</li> </ul>
(2) To improve the representation of women at all levels of the economics profession	<ul style="list-style-type: none"> <li>• Improving visibility and recognition of female economists</li> <li>• Nurturing women's career development</li> <li>• Raising awareness about gender biases and inequalities in organisational structures and practices</li> </ul>	<ul style="list-style-type: none"> <li>• Media and public speaking register for female economists to connect journalists and event organisers with female speakers and subject experts</li> <li>• All-female panel annual Budget Address at National Press Club</li> <li>• Nomination of female keynote speakers for economics conferences</li> <li>• Promote profiles of female economists on social media</li> <li>• Promoting research and evidence-based policy on gender inequality within economics and wider organisational practices and societal norms, at annual Australian Gender Economics Workshop</li> </ul>

**Table 2.** (Continued)

Objective	What this meant in practice	Examples of initiatives
(3) To promote public contributions by female economists	<ul style="list-style-type: none"> <li>Highlighting the research outputs, teaching contributions, industry engagements, contributions to policy and public debate, and wider professional achievements of women at all levels of the profession</li> </ul>	<ul style="list-style-type: none"> <li>Nomination of female candidates for ESA Awards and other honours</li> <li>Convene special sessions at Australian Conference of Economists with female role models and addressing economics topics relating to gender equality</li> <li>Promote the outputs of female economists in WEN newsletter, blog articles, and social media</li> <li>Share announcements about appointments of female economists in positions of leadership</li> </ul>
(4) To encourage the next generation of young women to study economics	<ul style="list-style-type: none"> <li>Informing and inspiring students to consider studying and pursuing a career in economics</li> </ul>	<ul style="list-style-type: none"> <li>Creation of information resources for prospective students illustrating career opportunities and broad usefulness of studying economics:               <ul style="list-style-type: none"> <li>“Economics – Understand the World Around You” YouTube Video</li> <li>“Pathways to Economics” information booklet</li> <li>“Career Journeys of Australian Economists” booklet and social media tiles</li> </ul> </li> <li>Hosting student outreach events giving students the opportunity to meet female economists and hear about career experiences               <ul style="list-style-type: none"> <li>Exposing students to relatable and inspiring role models, by sharing profiles of female economists on social media</li> <li>Supporting progressive and more inclusive curriculum development in economics, through participation in the Australasian Teaching Economics Conference and promoting relevant research and new education initiatives</li> </ul> </li> </ul>

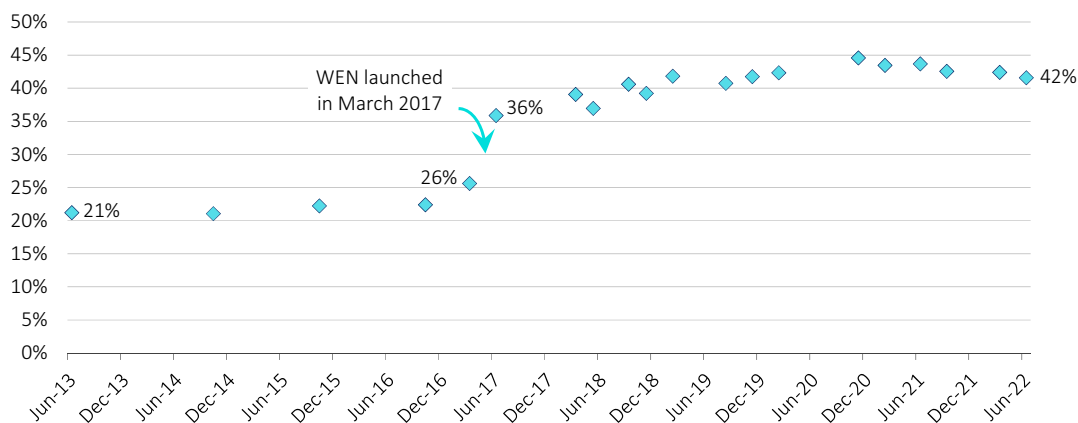


**Figure 8.** ESA Membership by Gender, 2013–2022. Source: Economic Society of Australia. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1479-3441.12867)]

In the four years preceding the creation of WEN, women constituted a little over 20 per cent of total ESA membership. Within three months of WEN's creation, women's share of ESA membership had risen to 36 per cent of all members. Within eighteen months of WEN's creation, this share had reached 40 per cent and has steadily stayed above 40 per cent since then (Figure 9).

In the months immediately preceding WEN's launch in March 2017, women's ESA membership numbers were at 256. Women's ESA membership numbers, as at July 2022, had risen to 540, effectively doubling since WEN was established. Compared with a share of 26 per cent in the months immediately preceding WEN's launch, as at July 2022 women made up 42 per cent of all ESA members. Had it not been for this rise in female members, ESA memberships would have overall declined during this time.

This rise in ESA membership numbers constitutes a boost in the ESA's visibility and presence, as well as a boost in ESA revenue in the form of membership fees. The creation of WEN has also attracted significantly more sponsorship funding and in-kind support for ESA and WEN activities. Aiding WEN's growth, organisations within the economics community who support WEN's cause, and the values that WEN represents, have generously demonstrated their support through funding,



**Figure 9.** Female Share of ESA Membership, 2013–2022. Source: Economic Society of Australia. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1111/1479-3441.12867)]

sponsorship, in-kind resourcing and collaborations. The attraction of sponsors to women's causes, and the goal of equality and diversity more broadly, has been beneficial for WEN, as well as for the ESA and the wider economics community.

Men are welcome to join WEN as an indication of their allyship and support for WEN's cause. Men comprise around 12 per cent of all WEN members, and this fraction has stayed steady for all of the years that WEN has been in existence.

The creation of WEN has occurred alongside a higher representation of women among the executive roles on the ESA Central Council. In the 95-year history of the ESA, there had never been a female President of the ESA Central Council until 2019, when Danielle Wood was nominated and elected to this executive role. At the end of Wood's three-year term as President in 2022, Catherine de Fontenay became the second woman elected to the role.

## 5.2. Women's Representation in ESA Awards

The impact of WEN has also been significant in lifting female economists' visibility and acknowledgement of their achievements in the profession. Each year the ESA recognises and honours the contributions of highly accomplished and esteemed economists in Australia through the ESA awards. Nominations are put forward by ESA Committee members and the final deliberation is made by a selection panel drawn from members of the ESA Central Council. Efforts by the WEN Committee to ensure that deserving female economists have been among the nominees shortlisted for awards has translated into a marked improvement in the female share of award recipients (Table 3).

The ESA Distinguished Fellow Award was first presented in 1987 to honour distinguished Australian economists for their contribution to the development of economics. Up until the creation of WEN in 2017, only two out of a total twenty-nine recipients were women, equivalent to 7 per cent. Since WEN's establishment in 2017, three of the six awardees have been women. As of 2022, women

**Table 3.** *Recipients of Economic Society of Australia Awards*

Award	Distinguished Fellow Award	Distinguished Public Policy Fellow Award	Honorary Fellow Award	Young Economist Award
Year first awarded	1987	2014	2006	2007
Before 2017				
Number of female recipients	2	0	0	0
Total number of recipients	29	3	11	5
Female share (%)	7%	0%	0%	0%
Since 2017				
Number of female recipients	3	2	1	4
Total number of recipients	6	6	6	5
Female share (%)	50%	33%	17%	80%
All years (up to 2022)				
Number of female recipients	5	2	1	4
Total number of recipients	35	9	17	10
Female share (%)	14%	22%	6%	40%

Source: Economic Society of Australia. Count of award recipients up to 2022.

comprise five out of the thirty-five recipients of this award, effectively doubling women's share of recipients to 14 per cent.

The ESA Distinguished Public Policy Fellow Award was first presented in 2014 to recognise contributions by economists to public debate on policy issues. Before the establishment of WEN, no women had been among the recipients of this award. Since WEN's creation, two out of the six recipients to date have been women. This has lifted women's share of recipients from zero to 22 per cent.

The ESA Honorary Fellow Award was first presented in 2006 to acknowledge ESA members who make a significant and substantial contribution to the ESA. Prior to WEN's establishment, no women had been awarded this honour. Since WEN's creation, one woman has been among the six recipients to date, which has lifted women's share of total recipients from zero to 6 per cent.

The ESA Young Economist Award was first presented in 2007 to recognise Australian economists under the age of 40 who are deemed to have made a significant contribution to economic thought and knowledge. The age criterion that applies to this award meant that it is based on the career outputs that a candidate accumulates before turning forty years of age. WEN identified that this criterion has long created an inequitable hurdle to women who are more likely than men to experience interruptions to their careers due to childrearing and other care responsibilities throughout their working lives. Once the network was formed, WEN proposed to the ESA Central Council that the criteria applying to the Young Economist Award be modified to account for the effects of career interruptions. The criteria were consequently amended to "The Society will consider nominations of individuals over the age of 40 who have had career interruptions, which when taken into account, would qualify them for nomination." Before WEN's creation, there had been no female recipients of the Young Economist Award. Since WEN was formed and the criteria were amended, four out of five recipients have been women. This has increased women's share of recipients of this award from zero to 40 per cent in total to date. A full list of female recipients of all ESA awards is available in Cassells *et al.* 2022.

### 5.3. Women's Representation among Keynote Speakers

The Australian Conference of Economists (ACE) is the premier conference for economists in Australia, organised annually by the ESA. First held in 1970, each year ACE attracts top academic, policy and industry economists to present their research, share their expertise on timely policy issues and interact with the wider economics community. The conference features both Australian and international speakers. With input and support from the Central Council, the organisation of the conference is hosted by an ESA State or Territory branch on rotational basis over time. Since WEN's creation, WEN Committees have contributed their input towards the design of the conference programme including the nomination and selection of keynote speakers.

Earlier records of ACE programmes, which are intermittently available, indicate that female keynote speakers were significantly outnumbered by the male counterparts: the 2005 ACE featured one female and eight male keynote speakers (equivalent to a female share of 11 per cent) and the 2008 ACE featured one female and six male keynote speakers (equivalent to a female share of 14 per cent). Since WEN's creation, women's representation among ACE keynote speakers has generally risen and even reached parity in some years (Table 4). The 2018 conference, hosted by the ACT Branch of the ESA, stands out for being the first ACE to feature a majority of female keynote speakers.

**Table 4.** Gender Composition of Keynote Speakers at Australian Conference of Economists, 2014–2022

Year	2014	2015	2016	2017	2018	2019	2021	2022
Number of female speakers	2	1	1	1	3	1	2	1
Total number of speakers	8	5	4	2	4	2	4	4
Female share (%)	25%	20%	25%	50%	75%	50%	50%	25%

Source: Economic Society of Australia. ACE was not held in 2020 due to the COVID-19 pandemic.



#### 5.4. Case Study Evaluation of WEN's Mentoring Program

As part of its efforts to nurture women's career development, WEN facilitates regular professional development workshops, an annual mentoring retreat, and mentoring programmes. A case study of a specific initiative is a mentorship programme for university students that the ACT Branch of WEN formulated in conjunction with the ANU (Australian National University) Department of Economics. Targeted at female students enrolled in undergraduate economics, this behavioural economics intervention was implemented as a randomised control trial and evaluated jointly by the Behavioural Economics Team of the Australia Government (BETA), WEN and the ANU. Undergraduate students in their first and second year of their university degree were targeted, because this was identified as the stage of a student's educational journey where women were at risk of disengaging from the subject. Namely, it had been observed that the transition from second to third year economics studies had the greatest attrition rate. A similar targeted approach was adopted by Avilova and Goldin (2018) in their design of the Undergraduate Women Economics (UWE) Challenge implemented in US universities.

The Women in Economics Network's mentoring programme was designed to provide female students greater access to and interaction with role models, broadening their perspective on career options and practical applications of economics, with the ultimate goal of inspiring more women to continue with their economics studies. Mentors were approached through the network and included a diverse group of experienced economists working across government, academia and the private sectors. Core to the programme design was a matching process, where information about mentees' interests and their mentor preferences were factored in to facilitate a mentor-mentee match that would have a greater chance of success. Guidance materials and networking events also helped bring participants together, with the networking events serving as an additional exposure of mentees to role models. The programme operated for twelve months, with on average three mentor-mentee meetings, although with wide variation across the group.

The study found evidence to support the effectiveness of tailored mentoring programmes for female university students, in terms of lifting their economics study and career intentions (BETA, 2021). Specifically, using administrative data, the trial found that substantially more mentored students continued on with their economics studies: 46 per cent compared to 33 per cent in the control group. Those in the treatment group also had a slightly higher grade point average compared with the control group. Although these results were not significant using conventional statistical benchmarks, additional indications of the programme's relative success were drawn from survey data. Qualitative responses from an end-line survey saw 70 per cent of mentored students agreeing that they were more likely to pursue a job in economics due to the programme, and 77 per cent said they were better able to understand the practical applications of economics due to the programme (BETA, 2021).

As the study attests, a number of lessons for future programmes can be gained, including the benefits of narrowing the participant scope to only those enrolled in an economics degree and front-loading the programme with networking events to accelerate the mentor-mentee relationship. Both the duration and timing of the programme were also identified as considerations for future programmes. Optimising the intervention at key decision-making periods in the academic calendar and condensing the programme to a shorter period were put forward as ways in which the programme could be both more effective and efficient.

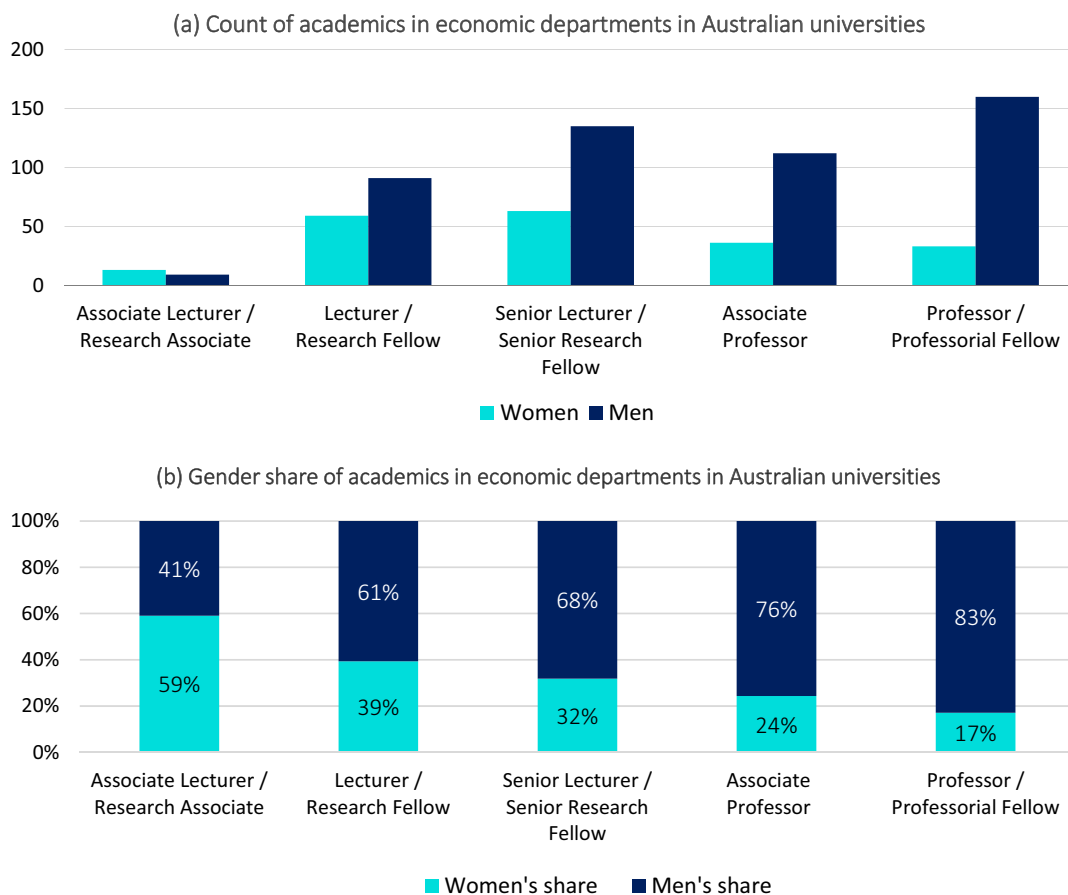
This mentoring programme provides evidence to illustrate how well-designed interventions can increase the pipeline of female economists, offering instructive insights for similar programmes that might be implemented in the future elsewhere.

#### 5.5. WEN's Contribution to Data Collection and Collation of Research

Prior to WEN's creation, data collection on women's representation in the economics profession in Australia had been largely *ad hoc*. Since WEN's creation, the gender composition of ESA membership has been calculated more systematically by ESA administration and reported in ESA Central Council meetings. This keeps the issue of gender equality a salient one for the ESA Central Council and enables the ESA to track changes in women's representation over time.

The Women in Economics Network has invested in collating statistics and research insights that are relevant to understanding women's under-representation in the field, and makes this material openly available on WEN's website. These research insights include academic studies and evidence-based insights that have guided WEN's initiatives and can also guide other organisations aiming to improve equality, diversity and inclusion in their respective fields. Many of these studies have been cited throughout this paper.

Following the gender audit of university economics departments that the ESA commissioned in 2016 (reported earlier in Figure 7), WEN undertook a gender audit of economics departments in Australian universities in 2022 (Figure 10). This analysis found that, in 2022, women made up 29 per



**Figure 10.** Gender Composition of University Economics Departments, Australia, 2022. Source: Women in Economics Network Australia. Audit was based on university website information over the period April to July 2022. The data are based on the staff profiles of 29 universities that have an economics department and for which data on academic staff is available on the university's website. For comparability to the ESA 2016 data reported earlier in Figure 7, data are based on university economics departments and excludes other research centres. Further analysis that includes academic economists working in non-teaching research centres, and also disaggregated by university institution, is available in Cassells et al. (2022). [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

cent of academic economists in Australia's economic departments – a marked increase from women's 21 per cent share in 2016. Women's representation has increased at all academic ranks, although women are still over-represented among lower ranks and under-represented at higher ranks. From 2016 to 2022, women have risen from 12 per cent to 17 per cent of Professors, and from 18 per cent to 24 per cent of Associate Professors, in Australia's economics departments. However, disaggregation by institution shows there are numerous university economics departments that have no women at Professor or Associate Professor level, and some universities have no women at all among their economics academic staff (Cassells *et al.*, 2022).

The Women in Economics Network's investment in gender equality research and evidence points towards the need for systemic and cultural change. Informatively, survey feedback from WEN members identified that "promoting more gender equitable practices in the institutional policies and procedures of organisations where economists work and study" was the area that WEN members also identified as the most useful area for WEN to concentrate on. Investing in this type of "institutional change" was rated as more valuable for WEN members than "improving services and resources for paid members." This implies that members recognise the value of WEN's advocacy for improvements in wider culture, systems and structures as the mechanisms for achieving greater gender equality and inclusion in the field. This approach is consistent with the emerging literature of "what works" in the gender equality space that points towards the need for organisation-level change to eradicate systemic biases and inequities, rather than an individualised focus or deficit-based approach that places the onus on women to improve themselves to fit into the existing system (Bohnet, 2016).

## 6. Challenges and Future Directions

While much has been achieved in the first five years of WEN's existence, there are still challenges and limitations to be addressed and scope for WEN to continue to improve. A particular area is for WEN to continue to nurture and promote diversity and inclusion across intersecting dimensions of identity, including through initiatives to improve the representation and inclusion of First Nations women, women who come from low socioeconomic backgrounds or remote geographic areas, women living with a disability, LGBTQI women and individuals who identify as non-binary, and women from under-represented cultural backgrounds.

Investing in ongoing data collection and evaluations of WEN's initiatives will be important for guiding WEN's future activities and for generating the evidence base needed to sustain the viability and relevance of the network. There is scope to invest more systematically in WEN's data collection and analysis, including by incorporating an intersectional gender lens and designing more robust ways to test and evaluate the impact of WEN's initiatives.

Logistically, one of the largest hurdles impeding WEN's capacity to deliver on its objectives are resourcing constraints. WEN Committee members serve in a volunteer capacity, in addition to their paid job or studies and often alongside parental and other caring responsibilities. Designing, coordinating and delivering WEN's initiatives requires not only an intensive investment of time and effort but also an investment in the research knowledge base to ensure that initiatives are designed and implemented in responsible and well-informed ways. In her summary of the evidence on gender equality initiatives that are applicable to the economics field, Buckles (2019) similarly identified the extensive costs and resourcing demands that fall upon the groups and individuals who take responsibility for delivering these gender equality initiatives. One way to address this demand on volunteer time is to promote an organisational practice where managers and employers more fully recognise the contributions of their employees who voluntarily give their services to professional groups such as WEN.

As expected with any social change initiative, the creation of a women's network has been met with some scepticism, resistance and opposition. Research insights equipped WEN Committee members with a realistic understanding that not all individuals within the economics community would be ideologically supportive of diversity and inclusion initiatives, particularly those who perceive these

initiatives as a limitation on their own opportunities (VicHealth, 2018; Anglim *et al.*, 2019). Cognisant of these potential reactions from within the economics community, WEN focused on communicating the collective benefits of WEN for the profession overall.

It is one thing to create a network: it is another for the network to sustain its momentum and endure over time. The sustainability of WEN is a matter for strategic consideration that requires commitment, support and resourcing from the organisations and institutions that benefit from WEN's contribution. Sustaining momentum also entails expanding responsibility and accountability for achieving gender equality and diversity in the field beyond the job of women's groups and minority cohorts. There is also a need to not only focus on improving numerical measures of equality of representation and the diversity of the profession's composition, but also to foster a culture where all individuals in the field feel a genuine sense of inclusion and belonging to the profession and respect by their colleagues and peers. Expanding responsibility for gender equality, diversity and inclusion to be a collective mission for the profession would be an important step towards mainstreaming gender equality and expediting these goals. WEN has a number of allies in this respect, and it will be important for the network to continue to draw on, integrate and partner with allies to expand this responsibility.

The research evidence on diversity and inclusion affirms that the mission to close gender gaps in economics cannot be placed in the hands of women's groups alone: The economics profession is a microcosm of wider society where the undoing of systemic inequities requires collective effort and systemic change. WEN's initiatives exemplify how we are using our economics toolkit, combined with insights from complementary disciplines, to optimise opportunities and outcomes within our own profession and ultimately contribute towards building a more equitable and effective economics community for all. We hope this paper helps inform, inspire and empower others in the economics profession to join this global cause.

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