The Economic Benefits of High-Quality Universal Early Child Education

By Matt Grudnoff, Senior Economist
The Australia Institute

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Summary

The COVID-19 pandemic and resulting recession shone a very bright light on the essential services provided by 200,000 Australians who work in the nation's early child education and care (ECEC) sector. In the early days of the pandemic, when ECEC centres were closed for health reasons, hundreds of thousands of parents were prevented from attending their own jobs because there was no-one to care for their children. Even those who were able to transfer their jobs home, found that trying to juggle child care with home-based work was stressful and unproductive. Australians were thus reminded that ECEC is a vital input to the entire economy – which cannot function to its potential unless parents are able to work. This experience also highlighted the unequal gender impacts of inadequate ECEC. The decline in labour force participation and employment experienced during both the initial lockdowns in early 2020, and the renewed lockdowns later in 2021, were far worse for women than for men. This reflects the importance of ECEC services to female labour supply – as well as the unequal division of child care responsibilities within families, and the pernicious impacts of gender-based wage inequality on family labour supply decisions.

For a short time, the Commonwealth government treated ECEC like the essential public service it proved itself to be. ECEC services were made effectively free (through expanded subsidies to parents), and ECEC work was supported with JobKeeper benefits. But those supports were then cut off quickly and prematurely. In fact, the ECEC sector was the first industry in the entire economy to have JobKeeper benefits stripped away (in July 2020, when the pandemic was still in its early stages). Parents and ECEC providers alike were left on their own to manage the resulting chaotic and patchwork system of care and funding. Australia's economy continues to be held back by relatively poor ECEC provision, and an overreliance on the private sector – both for funding ECEC services, and for delivering them. One result is that female labour force participation and employment outcomes are well below potential: compared to both male outcomes, and female outcomes in other industrial countries. This in turn suppresses overall employment, incomes, GDP, and even government tax revenues. Another result, perhaps even more damaging, is experienced by children. The opportunity to provide them with high-quality early child education and enhanced social development – proven results of high-quality ECEC enrolment – is wasted. This undermines the lifelong participation, employability, income potential, and social success of future generations.

This report reviews several economic aspects of Australia's failure to both allocate sufficient economic resources to ECEC services, and to ensure that those resources are used to provide the best-quality services possible. Ample evidence documents widespread quality failures among private for-profit providers of (publicly-subsidised) ECEC services. Australia's reliance on private for-profit providers not only undermines the quality of services received by children and parents; it also diminishes the macroeconomic and fiscal benefits of the whole system. The main findings of the report include:

- Australia invests less in ECEC services (relative to GDP) than most OECD countries, and far less than the Nordic countries (with their world-leading ECEC systems). But Australian households pay more toward those services (again measured as a share of GDP) than those in other countries (even including Nordic countries). Australians thus pay more, but get less, from an ECEC system that is both underfunded and disproportionately dependent on private contributions (mainly parent user fees).
- Inadequate and expensive ECEC services deter many families from enrolling their children, and this disproportionately suppresses women's paid work activity. Women's labour force participation, which matches male participation until the late 20s, drops off sharply during prime parenting years – falling as much as 17 points below male participation. Australian women of prime parenting age are 25 percentage points less likely to participate in paid work than their Nordic counterparts. They are also far less likely (relative to both Australian men and Nordic women) to take full-time work, even when they are working. For both reasons, Australia's inadequate ECEC system holds back women's employment, with consequent damage to incomes and national GDP.
- If Australian women had the same participation rates and opportunity to work full-time as Nordic women, Australia's GDP would be some $132 billion per year higher. Among many other benefits of that significant expansion of output and income, is the fact that government tax revenue would grow (solely on the basis of existing taxes and tax rates) by some $38 billion per year. Government revenues would rise by more than enough to pay for a universal, affordable non-profit ECEC system in the first place. In other words, high-quality ECEC is a public service that quite literally pays for itself.
- Not all ECEC centres are created equal, however, and another fundamental weakness of Australia's ECEC system is its unusual and growing reliance on private for-profit providers to deliver ECEC services. About half of Australia's ECEC providers are for-private private companies, and all of the growth in the sector in recent years has been captured by for-profit providers. For-profit ECEC centres must pay out profits to their owners (thus diverting resources away from the core goal of service provision), they pay much higher executive compensation, and they

face financial incentives to cut corners (with resulting consequences for ECEC quality). This report reviews evidence from numerous sources showing service levels are inferior in private for-profit ECEC centres, compared to not-for-profit or public providers. This poor quality record arises in large part from the inferior working conditions faced by ECEC workers in for-profit centres: in ECEC, as in other human and caring services, the quality of care directly reflects the quality, training, compensation, and stability of jobs for care providers. The focus of private ECEC companies on cutting costs and maximising profit results in more poorly-paid, insecure jobs for ECEC workers – with resulting consequences for the quality of education and care they can provide.

- Another striking consequence of Australia's over-reliance on for-profit ECEC delivery is the dissipation of many of the potential macroeconomic and fiscal benefits of expanded ECEC services. This report estimates the benefits for employment, GDP, and government tax revenue of the future expansion of ECEC services in Australia, using two broad scenarios: one in which the level and composition of ECEC funding is increased to match the average of other OECD countries, and a more ambitious scenario in which it matches the average of the Nordic countries. In both cases the ECEC expansion provides a major lift to employment, GDP, and government revenues – but in both cases those benefits would be much larger if new funding was focused on not-for-profit and public delivery (rather than being siphoned to support the profits of for-profit firms). With an expansion of funding to Nordic levels, fully channelled into public and not-for-profit centres (rather than private firms), GDP would grow by over $35 billion, and government revenues (at all levels) would increase by over $10 billion. (This is in addition to the macroeconomic and fiscal gains resulting from women's increased employment, discussed above.) The employment benefits of new funding are almost one-third larger when the funds are channelled to not-for-profit and public providers, instead of private for-profit businesses.
- Considering all of these channels of economic benefit, the provision of Nordic-style universal, publicly-delivered ECEC would support a massive expansion in employment, incomes, GDP, and government revenues. The table below summarises the combined impacts on GDP and tax revenues (for all levels of government) from the increase in female labour force participation, the greater opportunity for paid full-time work by women, and the direct and indirect jobs associated with ECEC supply. The combined increase in annual GDP resulting from a Nordic-style program totals $168 billion, generating an additional $48 billion in government revenues – much more than the cost of providing the ECEC services in the first place.

Combined Macroeconomic & Fiscal Benefits of Nordic-Style Universal ECEC		
	Impact on GDP ($bil)	**Impact on Government Revenue[1] ($bil)**
Increased female labour force participation	$64.0	$18.4
Increased incidence of female full-time work	$68.2	$19.6
Direct and indirect jobs in ECEC provision[2]	$35.6	$10.2
TOTAL	**$167.8**	**$48.2**

Source: Author's estimates as described in text.
1. Received by all levels of government.
2. Incremental funds directed fully to public and not-for-profit providers.

In sum, expanded ECEC services would provide a badly-needed boost to Australia's economic recovery from COVID-19. Matching the ECEC investments of other industrial countries would create hundreds of thousands of new jobs in child care centres and related industries, tens of billions of dollars in new GDP, and billions of dollars in government tax revenue. It would facilitate the expanded paid work effort of hundreds of thousands of Australian women, and help to close the gender income gap that so constrains their life chances. However, expanded ECEC must be done right, to maximise these potential economic and social benefits. That means channelling new resources into not-for-profit and public centres which put top priority on quality – rather than maximising the returns to private investors in an ECEC system which views children as an avenue for profit, rather than economic and social development.

Better government funding alone is not the only requirement for achieving a top-quality ECEC system: Australia must also develop strong labour force and industrial relations measures to ensure that ECEC workers can be recruited, retained, trained, and compensated in line with the high standards envisioned for this sector. Some specific parameters of a universal, affordable, and publicly-delivered ECEC system were mapped out in the plan for national post-COVID reconstruction recently advanced by the Australian Council of Trade Unions (2020). That program described how Australia could transition from its current inadequate patchwork of ECEC arrangements, toward a more equitable and consistent system:

- Reintroduce the free childcare crisis arrangements that were in place earlier in the pandemic, for a 12-month period. Increase the minimum funding rate to providers from 50% of fee income to 60%-65%.

- Design and implement a new free universal public ECEC system within that 12-month period. The new system should include permanent ongoing funding for preschool education for all 3- and 4-year-old children.
- Construct new high-quality publicly-funded not-for-profit ECEC facilities. An initial capital endowment allocated over three years would create thousands of jobs in construction, and make a significant contribution to alleviating capacity constraints in ECEC as women return to paid work after the pandemic.
- Extend the current 25% wage subsidy for ECEC workers to support the ongoing employment of staff, with the level of support increased to 30-35% of fee revenue.
- Address gendered pay discrimination in ECEC, with increased funding targeted at delivering wages at a level consistent with the attainment of pay equity relative to the market value of equivalently skilled workers in mostly male industries.

A universal ECEC system should be viewed as a fundamental goal for the future Australian economy. Achieving the superior quality and economic benefits of the Nordic systems cannot be done instantly, of course. But our ECEC policies should be reoriented and expanded, with a universal, publicly-delivered, high-quality, and affordable system akin to the Nordic benchmark as its end goal. That will require more substantial investments in ECEC funding, and its reallocation toward the not-for-profit and public facilities which deliver the best quality, and the largest economic benefits.

Introduction

The enormous economic disruptions associated with the COVID-19 pandemic have once again reminded Australians that reliable, high-quality, and safe early child education and care (ECEC) is an essential input to all other economic and social activity. The closure of ECEC facilities during the first lockdowns in early 2020 forced hundreds of thousands of Australian workers (mostly women) to stay home from work. This amplified the spill-over consequences of the lockdowns for other industries. It also magnified the financial and social stresses experienced by families and children. The Commonwealth Government recognised the vital nature of ECEC services – but only temporarily. It extended emergency subsidies to parents, to fully offset the cost of ECEC services: a historic recognition that early learning is indeed an essential service and should be treated as such. But then, inexplicably, it quickly and prematurely cancelled those subsidies, when the pandemic (in retrospect) was still in its early stages. Worse yet, after initially including the ECEC sector in the JobKeeper wage subsidy, it later singled it out and arbitrarily excluded it entirely from the $80 billion program.[1] Unfortunately, it seems that the government's recognition of the importance of ECEC to Australia's overall economic and social well-being was just a 'passing phase.'

At time of writing, Australia is still facing continued COVID contagion (including associated with new variants of the virus) and associated impacts on travel and economic activity. The initial economic recovery posted from mid-2020 to mid-2021 was followed by a 'double dip' downturn. Hundreds of thousands of jobs disappeared once again. And once again, the impact was disproportionately felt by women: in part because of their concentration in sectors (like hospitality and retail) most immediately affected by closure orders, in part because of their greater exposure to casual employment and other insecure working arrangements, and in part because they continue to shoulder the main burden of family caring responsibilities amidst all the economic disruption around them. Thee continuing waves of job losses and dislocation painfully highlight that high-quality, accessible, and ultimately publicly delivered ECEC services must be a core element of Australia's recovery and reconstruction strategy.

While the pandemic has increased public awareness of the importance of ECEC, the economic arguments for a universal, high-quality, public program were well-known long before the COVID-19 virus hit our shores. International comparisons and historical

[1] A detailed account of these policy reversals by the Commonwealth government, and their impact on women's economic and social conditions, is provided by Australian Council of Trade Unions (2021).

experience have long confirmed the value of universal ECEC in supporting full participation by women in economic life, including the labour market. Moreover, as a value-adding service activity, the ECEC sector itself directly contributes to Australian output, employment, and incomes. Expanding ECEC, as part of a broader strategy to strengthen labour force participation, would add momentum to the post-COVID recovery – creating tens of thousands of new jobs in ECEC centres and associated supply industries. For all these reasons, the Commonwealth Government must finally take the necessary steps to create a universal, stable, accessible, and high-quality national ECEC system. Australian families need much more than the temporary half-measures implemented earlier in the pandemic, which were ripped away as soon as the government's focus shifted back to fiscal austerity (rather than supporting Australian families through the continuing crisis). We need a systematic and consistent plan to ensure that ECEC is provided accessibly, in adequate quantity, and with top-notch quality, so that Australia can catch up to other industrial countries in the investments it makes in early learning and achieve comparable levels of women's economic participation.

Moreover, it is not just that Australia needs ECEC services that are available and affordable. The *quality* of those services is just as important as the *quantity*. This is especially important with respect to the widely recognised effects of high-quality ECEC on children's cognitive and social development. Abundant empirical evidence from a range of disciplines has found that high-quality group care and schooling in the early years of a child's life contributes to brain development, social skills, and learning capacity that then enhances their employability, earnings, and life chances through the rest of their lives. That, in turn, underpins broader social and fiscal benefits arising from higher incomes, reduced poverty, reduced social dysfunction and criminality, and other important outcomes.[2] The goal, then, cannot be to simply 'warehouse' children in group settings to allow their parents (and their mothers, in particular) to go to work. The goal must be to provide those children with the best possible education and care, to maximise the benefits of high-quality ECEC for them and their families.

And on that score, the quality of education and care received by children depends crucially on the policy framework for ECEC. In particular, the connections between quality of ECEC care, and quality of the jobs in that industry, are powerful and obvious. ECEC is delivered most effectively by well-trained, well-supported professional educators and support staff, working in stable jobs that allow them to maintain stronger relationships with colleagues and children. Low child-to-staff ratios,

[2] Surveys of published literature on the long-run benefits arising from children's' improved educational and social capacities through ECEC are provided by Cascio and Schanzenbach (2013), Executive Office of the U.S. President (2015), and Stanford (2020).

manageable workloads, support for staff, and appropriate pay are all critical to ensuring top quality care and safety. Reducing job turnover and improving retention are also vital for enhancing the quality of education and care. These goals are better achieved in systems characterised by healthy funding, strong regulations on qualifications and working conditions, and unionisation.

Finally, all these outcomes are also best achieved through the provision of ECEC in non-profit or public facilities. When ECEC is delivered on a for-profit basis, private businesses are naturally guided by the incentive to cut costs and expand profit margins. This results in lower staffing, lower wages, more staff turnover, fewer support services – and hence lower quality care. Delivering ECEC services through a private, for-profit system (even one which depends on expensive public subsidies for its viability) will inevitably squander many of the long-run economic and pedagogical benefits which a universal ECEC program hopes to achieve.

This report considers several of the economic dimensions to be considered in designing Australia's future ECEC policy – at a moment in history when the importance of this vital service is more obvious than ever. The first section documents the inadequate funding base for ECEC services in Australia. It shows that overall funding is lower than the average of other industrial countries – and dramatically lower than the Nordic countries (which have very strong public ECEC systems). Moreover, Australia's funding base is uniquely dependent on private payments (mostly from households): Australian households pay more for ECEC services than their counterparts in other industrial countries, but get less. The next section considers evidence regarding the link between ECEC and women's employment, comparing Australia's laggard performance on both indicators to best practices in other industrial countries (and the high-achieving Nordic countries in particular). The third section traces the benefits of expanded female labour force participation and full-time employment (which would result from a stronger ECEC system) for overall macroeconomic and fiscal performance. By supporting the expanded participation and employment of hundreds of thousands more Australian parents, a top-quality ECEC roll-out would add considerable momentum to Australia' post-pandemic economic trajectory. Moreover, the tax revenues automatically generated by that expansion would more than offset the cost of providing ECEC services in the first place – confirming that ECEC services literally can 'pay for themselves'. The fourth section of the report evaluates the quality of work in the ECEC sector. It confirms that due to inadequate funding, and an overreliance on private provision, wages and conditions in the sector are sadly inadequate. This undermines the quality of services delivered to Australian children and families, negating many of the potential long-run economic and social benefits of a higher-quality system.

Finally, the last major section addresses the critical issue of ECEC quality, and the benefits of ensuring that expanded ECEC services are delivered through a high-quality public and non-profit system – rather than by offering heavy public subsidies to private facilities that are shown to scrimp on staff ratios and other vital criteria of quality service. We conduct economic simulations of the effects of increased ECEC provision on employment, GDP, and government tax revenues. We show that by channelling future support through public and non-profit providers, the economic benefits of a universal ECEC system can be supercharged: the employment effects of increased ECEC provision are almost one-third larger when funding is directed to not-for-profit and public providers, rather than for-profit private firms.

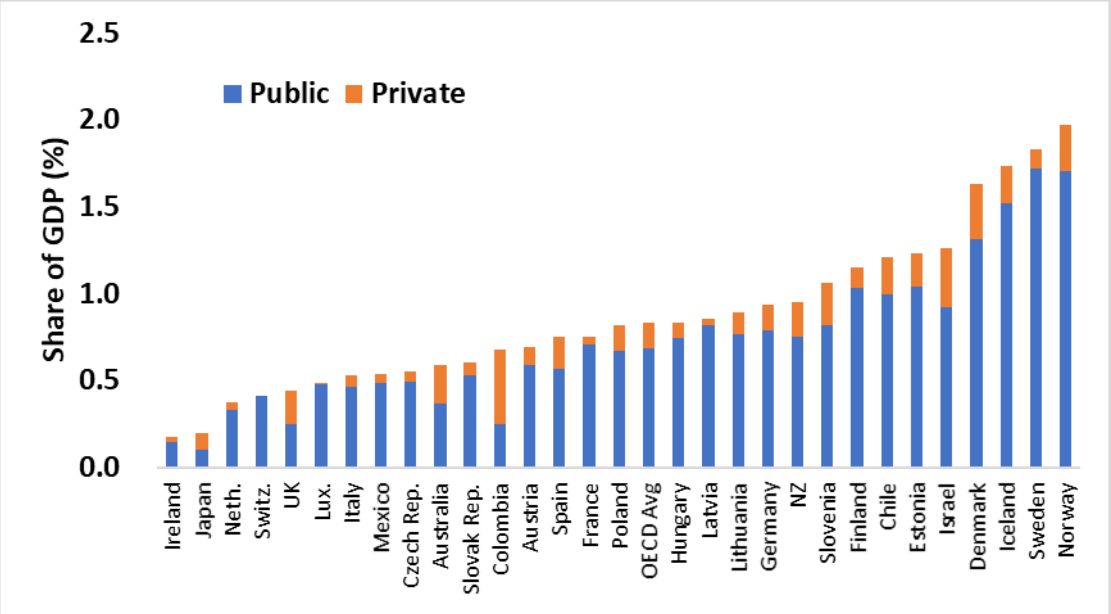
The conclusion of the report summarises the key findings and recommends that the Commonwealth government move quickly to implement a universal high-quality ECEC system that would facilitate women's economic participation and enhance the long-term cognitive and social development of Australian children. That goal is best achieved by prioritising public and non-profit modes of service delivery.

ECEC Funding Comparisons

The economic benefits of high quality affordable ECEC are well established.[3] These include the lifelong economic benefits that flow from children's stronger educational and emotional outcomes, as well as the economic benefits from higher workforce participation by parents (especially women).

An important factor in decisions by parents about performing paid work after the birth of a child is the availability and affordability of high quality ECEC. If it is available, high quality, and affordable, then a family can make the decision to return to work more freely. Evidence suggests that when faced with a genuine choice, more families make the decision for parents to return to work.[4] Available and affordable high quality ECEC is thus shown to lift labour force participation rates, especially for women.

Figure 1. Total Spending on Early Childhood Education, OECD Countries, 2020



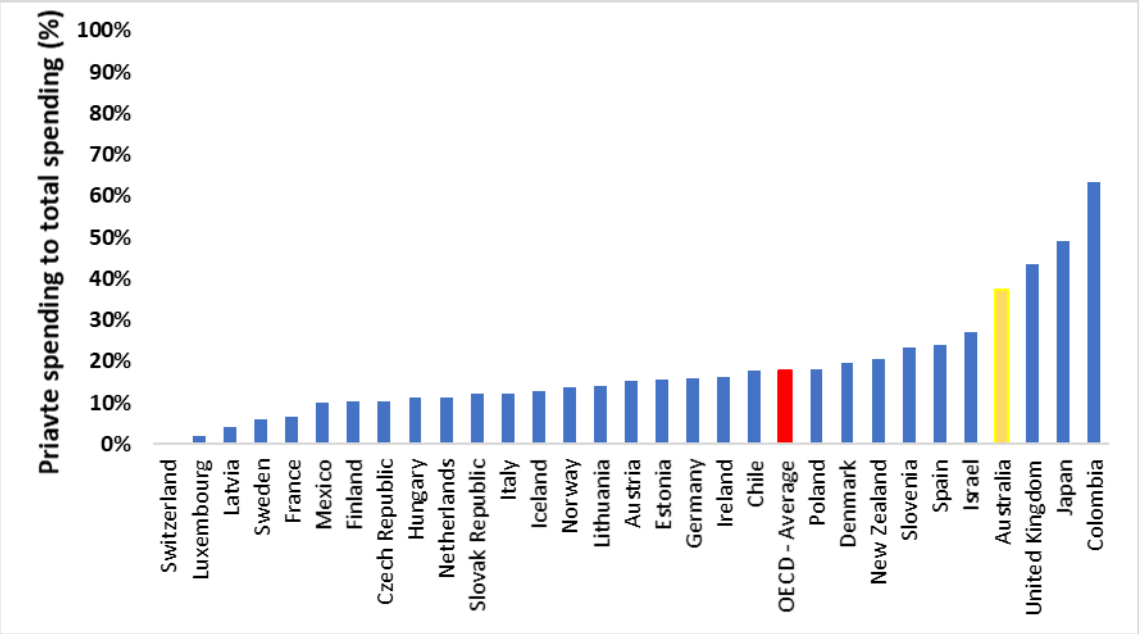
Source: OECD, "Total expenditure on early childhood education, public and private," OECD.Stat.

[3] Other published research on the economic benefits of ECEC for participation, employment, and government revenues in Australia and other countries is surveyed by Barnett (2008), Child Care Human Resources Sector Council (2008), McCain *et al.* (2011), Bivens *et al.* (2016), Executive Office of the President (2015), Calman and Tarr-Whelan (2005), Duncan and Magnuson (2013), Alexander and Ignjatovic (2012), and Australian Institute of Health and Welfare (2015).

[4] This could include both parents returning to paid work in two-parent families, and sole parents working outside the home.

The increase in workforce participation from high quality affordable ECEC is most pronounced in women with young children. This can be documented by comparing workforce participation rates by age and gender in Australia with those of other industrial countries. Our analysis compares Australia to both the broad set of industrial countries (the OECD), and the five Nordic countries – which have the best developed ECEC systems. Australia underspends on ECEC relative to both the OECD as a whole, and more dramatically in comparison to the Nordic countries (see Figure 1). Ranked by total spending on ECEC (from both government and private sources) as a percentage of GDP, the top four OECD countries are all Nordic countries (Norway, Sweden, Iceland, and Denmark). The remaining Nordic country, Finland, comes in seventh. By comparison, Australia ranks 21st: spending just 0.59 per cent of national GDP on ECEC (from all sources), barely two-thirds of the OECD average (0.83 per cent).

Figure 2. Private Proportion of Early Childhood Education Spending, OECD Countries, 2020



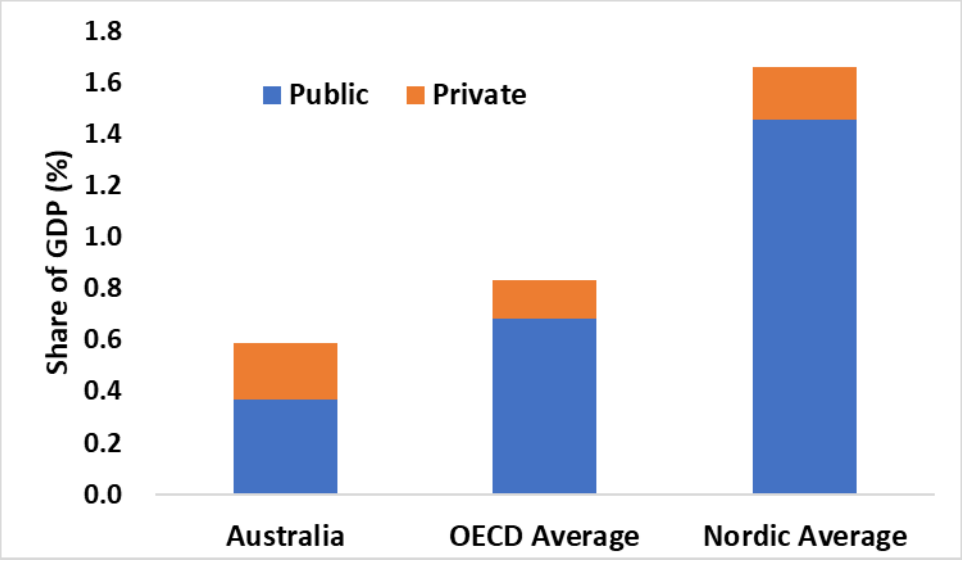
Source: Author's calculations from OECD, "Total expenditure on early childhood education, public and private," OECD.Stat.

It is not just that Australia spends less in total on ECEC services than other countries. It also generates a far larger proportion of its (inadequate) ECEC spending from private sources (mainly households), compared to other industrial countries. 37 per cent of Australia's total ECEC funding comes from private sources (mostly fees paid by parents). That is the fourth highest private funding share of the 30 OECD countries reporting data on this indicator (see Figure 2).

In short, Australia spends less than the average for OECD nations on ECEC, but Australian households pay more. Of Australia's total spending on ECEC (0.59 per cent of GDP), households pay over one-third (or 0.22 per cent of GDP). The OECD average for total spending on ECEC is higher than Australia (at 0.83 per cent of GDP), but private sector spending is lower than Australia – both as a share of total spending, and as a share of GDP (0.15 per cent).

Australia fares even worse when compared with the Nordic countries, which have the most developed and well-funded ECEC systems. The average total spending on ECEC by the Nordic countries is 1.66 per cent of GDP (almost three times Australia's share). Yet Nordic households pay 0.21 per cent of GDP toward that care – slightly less than the 0.22 per cent of GDP collected in Australia (see Figure 3). Incredibly, then, Australian households pay more to a system of inadequate early child education and care than people in the Nordic countries, even though the latter benefit from a system that in total is three times better funded. A similarly unfavourable (if less dramatic) conclusion comes from comparing Australia to the broader OECD average: Australian households pay more for ECEC, but get less. This disproportionate reliance on private funding is matched by disproportionate reliance on private delivery of ECEC services, with consequences for the quality of care (and the quality of work) in the ECEC sector that will be considered in detail below.

Figure 3. Total Spending on Early Childhood Education, 2020



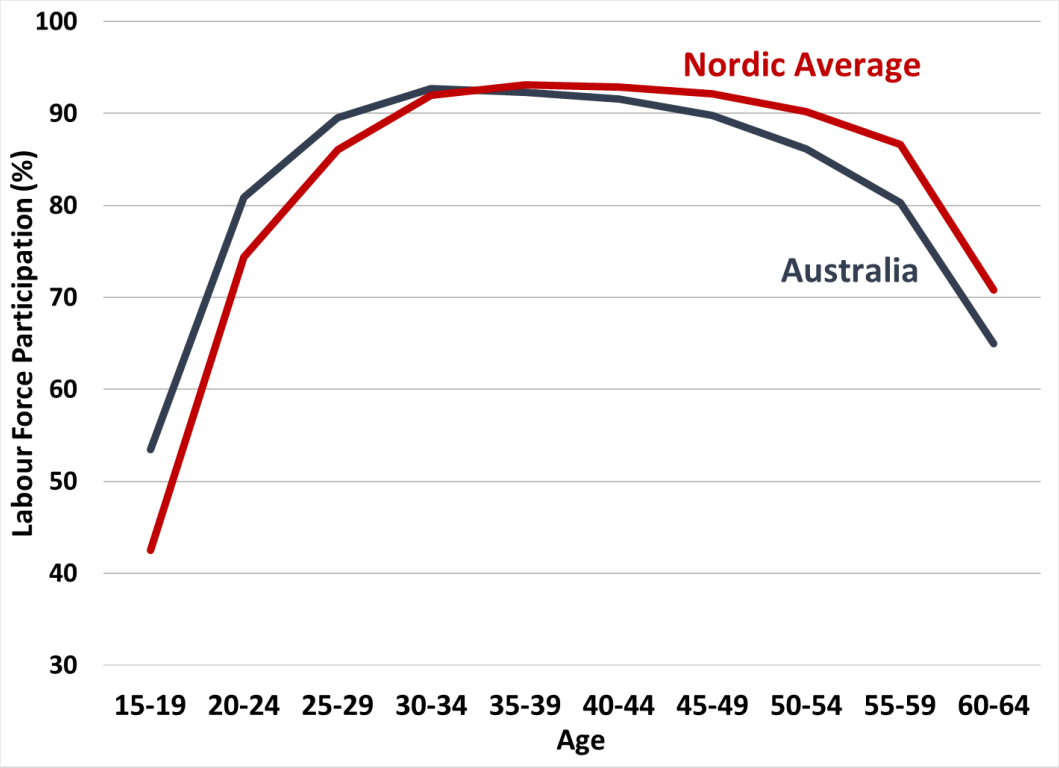
Source: Author's calculations from OECD, "Total expenditure on early childhood education, public and private," OECD.Stat.

ECEC and Labour Force Participation

Increased labour force participation generates many important economic, social and fiscal benefits. By facilitating higher employment (especially among parent-age women), it supports higher incomes, spending, production, employment and tax revenue. All this contributes to stronger economic growth and higher incomes.

Other industrial countries – and the Nordic countries in particular – spend significantly more on ECEC than Australia. This has a large effect on female workforce participation, particularly for those age groups most likely to be raising young families. This can be confirmed by comparing male and female participation rates by age.

Figure 4. Male Labour Force Participation, Australia and Nordic Countries, 2018



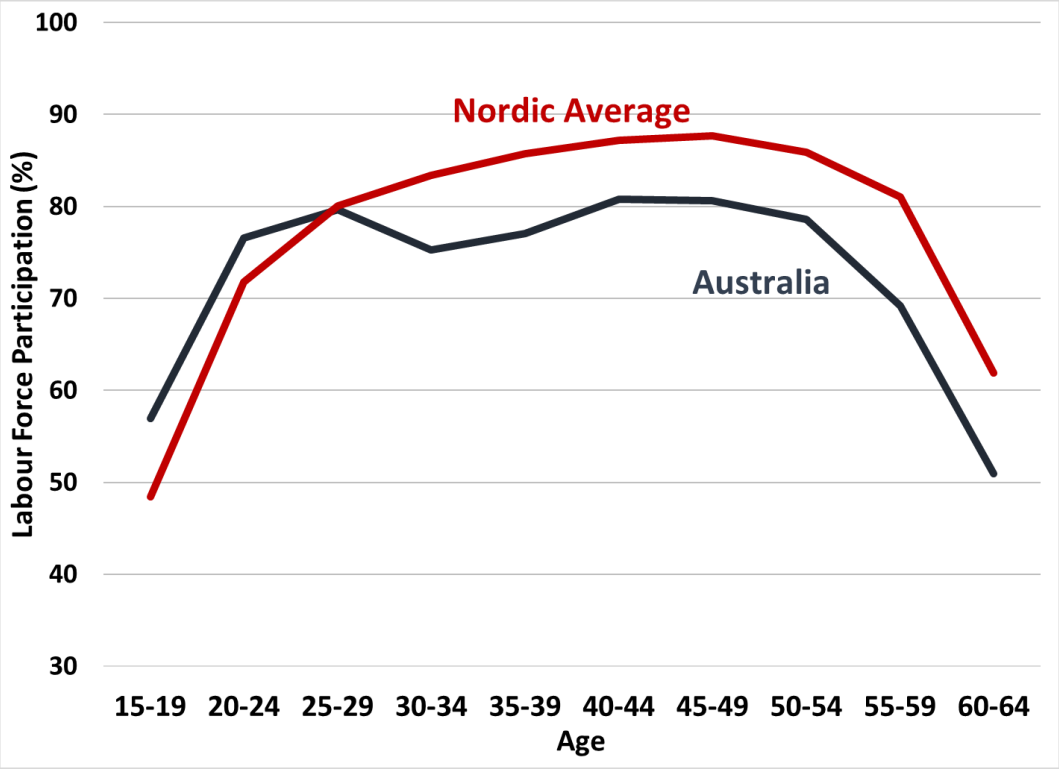
Source: OECD, "Labour force statistics by sex and age," OECD.Stat.

For men, participation rates in the Nordic countries are similar to those for Australia (as illustrated in Figure 4). Australia's male participation rates are slightly higher for

those under the age of 35, while Nordic participation rates[5] are slightly higher for those over 35. In both cases, participation reaches peak levels (of around 90%) by age 30, and then starts to decline after the mid-50s.

However, female labour force participation differs greatly between Australia and the Nordic countries (Figure 5). For Australia, female participation rates rise for women until their late 20s. But then they dip starting in the early 30s – the prime parenting years. The participation rate doesn't recover until women are in their 40s. For Nordic countries, no such dip occurs. The female labour force participation rate rises with age until it peaks in the late 40s, before plateauing and eventually falling when women begin retiring in their late 50s.

Figure 5. Female Labour Force Participation, Australia and Nordic Countries, 2018



Source: OECD, "Labour force statistics by sex and age," OECD.Stat.

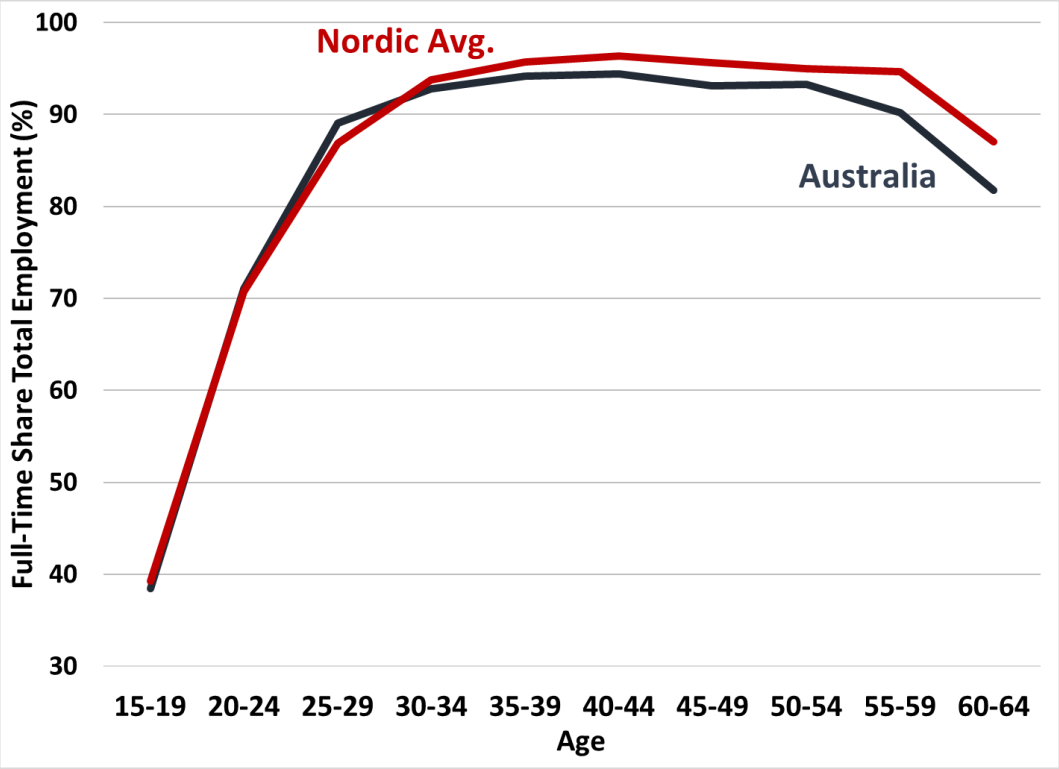
High-quality affordable ECEC also influences decisions on whether to work part time or full time. In Australia, a 'second' income earner (in two-parent families) often faces very high effective marginal 'tax' rates for additional days of work beyond the first three, because of the increasing expense of childcare. As a result, many Australian women (who are more likely to be considered the family's 'second' income earner, due

[5] Nordic participation and full-time employment rates in this section are calculated as unweighted averages of Denmark, Finland, Iceland, Norway and Sweden.

to the large and persistent gap in earnings between men and women as well as traditional sexist attitudes within families) choose to return to work part time rather than full time – if they return to work at all.

Again, this effect can be documented by comparing the incidence of full-time employment across genders and age categories. The proportion of males working full-time by age is almost identical for Australia and Nordic countries (as shown in Figure 6).[6]

Figure 6. Male Incidence of Full-Time Employment, Australia and Nordic Countries, 2015

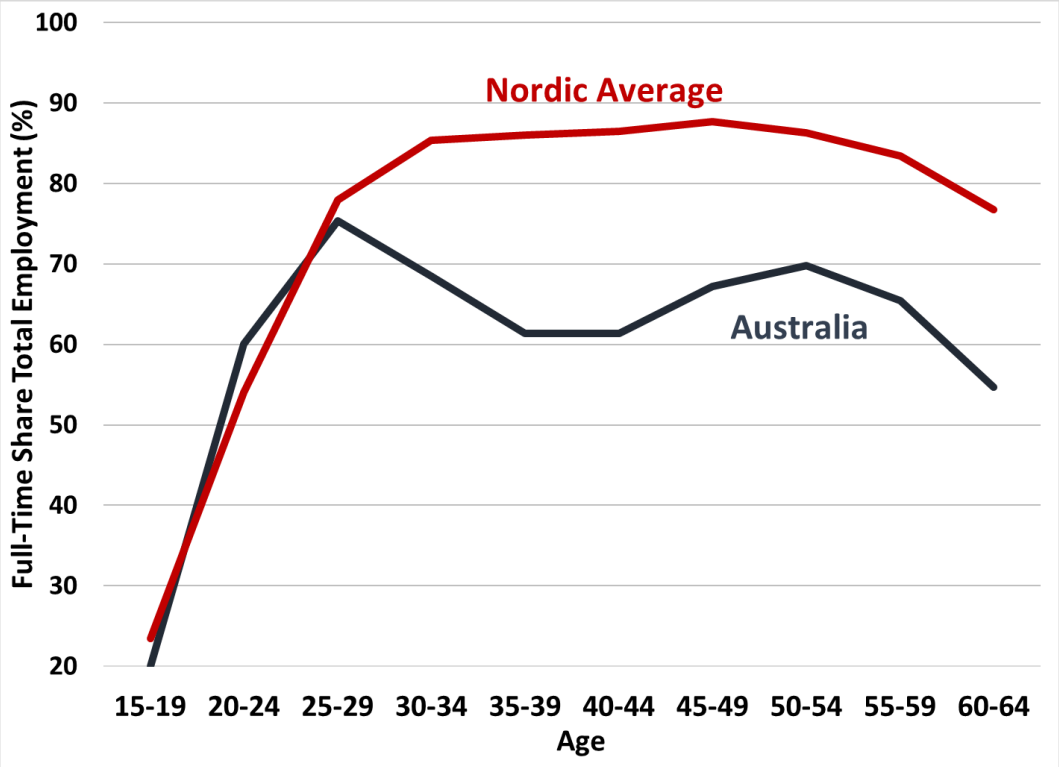


Source: OECD, "Full-time part-time employment - common definition: incidence," OECD.Stat.

Again, however, the proportion of females working full-time by age is very different in Australia compared with the average for Nordic countries (see Figure 7). Beginning in the early 30s, the proportion of women working full-time in Australia falls dramatically until their mid-40s. No such decline in the incidence of full-time work occurs for women in Nordic countries: not only do they stay in the workforce (as indicated above), but most continue working full-time.

[6] Data in Figures 5 and 6 are for 2015, the most recent year for which complete data on full-time employment incidence is available for all five Nordic countries.

Figure 7. Female Incidence of Full-Time Employment, Australia and Nordic Countries, 2015



Source: OECD, "Full-time part-time employment - common definition: incidence," OECD.Stat.

At its widest, the gap between female full-time employment incidence in Australia and the Nordic countries is over 25 percentage points. And the proportion of Australian women working full-time never recovers back to the peak recorded by females in their late 20s. While the proportion of females working full-time does increase slightly in their late 40s and early 50s, it still remains significantly lower than females in their late 20s. In contrast, the proportion of females in full-time work in Nordic countries follows a similar shape to that of males in Nordic countries and males in Australia. It increases until females are in their 30s, and then flattens out before finally declining in the 60s.

These large differences in female labour force participation and hours of work have significant effects on many aspects of women's working lives. The larger reliance on part-time work means that females earn significantly less over their lifetimes: both because they work less hours, and because hourly compensation tends to be lower for part-time workers. Working part-time impacts women's ability to gain promotion and advance to higher-paying roles. Lower lifetime earnings also flow through to retirement, as women accumulate significantly smaller superannuation accounts.

Access to high quality and affordable ECEC helps equalise male and female participation and the incidence of full-time work. Women in Nordic countries have

similar participation as men across all age groups. Female participation rates are only slightly lower in Nordic countries when compared to males, but those differences are very modest compared to the large gender gaps in participation rates in Australia.

Similarly, the differences between the proportion of males and females at various age groups working full-time in Nordic countries are also relatively modest. Females are about 10 percent more likely to work part-time than males; that difference is consistent across all age groups. In contrast, the difference between the proportion of males and females working full-time in Australia is much more significant. The female proportion falls rapidly while the male proportion continues to steadily rise. At its widest (in the early 40s), there is a 33-percentage-point gap between the incidence of full-time work for men and women.

Macroeconomic and Fiscal Impacts of Greater Female Labour Supply

Women's reduced participation and incidence of full-time work do not just suppress female and household incomes. They also have a significant impact on national economic performance, including GDP, aggregate demand, and the fiscal performance of governments. If female labour force participation rates were higher and women had more opportunity to work full-time, women's employment would increase and the country would produce more goods and services. The size of this effect can be illustrated by estimating Australian employment and GDP if the labour force participation and full-time employment incidence of women matched the rates demonstrated in the Nordic countries (where extensive, affordable, and mostly publicly funded ECEC services constitute a key element in their social welfare systems).

Table 1
Incremental Female Labour Supply and Output from Expanded ECEC

Age Group	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	**Total 15-64**
Additional Participation											
Australia Female Participation (%)	57.0	76.6	79.7	75.3	77.0	80.8	80.6	78.6	69.2	50.9	
Nordic Advtge. (% pts)	-8.5	-4.8	0.4	8.1	8.7	6.4	7.1	7.4	11.8	11.0	
Australia Female Population (000)	721.2	785.5	909.4	969.8	940.9	830.4	830.8	821.5	786.1	750.7	
Extra Labour Supply (000)	-61.5	-37.7	3.4	78.5	82.0	53.2	58.7	60.5	93.1	82.3	**412.5**
Extra GDP ($b)[1]											**$64.0**
Extra Govt. Revenue ($b)[2]											**$18.4**
Additional Full-Time Work											
Australia Female FT Incidence (%)	20.0	60.0	75.4	68.5	61.4	61.3	67.2	69.8	65.4	54.7	
Nordic Advtge. (% pts)	3.4	-6.0	2.6	16.8	24.6	25.1	20.5	16.6	18.0	22.0	
Australia Female Emplmt (000)	359.5	571.2	695.7	728.4	722.2	645.6	659.4	622.6	538.5	384.4	
Extra Labour Supply (000 FTE)	6.2	-17.1	9.0	61.2	88.9	81.0	67.5	51.5	48.6	42.3	**439.1**
Extra GDP ($b)[1]											**$68.2**
Extra Govt. Revenue ($b)[2]											**$19.6**

Source: Author's calculations from OECD and ABS data. 1. Assumes 5% unemployment rate and average productivity at 2021 level ($163,400/employed). 2. Assumes tax share of GDP equal to 2018-19 financial year (28.7%).

Table 1 reports the difference in labour force participation rates by age group for women in Australia, compared to the average of the Nordic countries. For women under 25, participation rates are higher in Australia (due to increased paid work participation by school-goers). For all other age categories, participation rates are lower. Across the full 15-64 working age population, if Australian women had the same labour force participation as their Nordic counterparts,[7] an additional 412,500 women would be in the labour force. 80% of this additional labour supply is generated within the prime parenting ages of 30-55.

More labour supply will translate into increased employment, output, incomes, and tax revenues for government. We assume the same unemployment rate (about 5%) for this incremental labour supply as exists for women in the labour market. We also assume equivalent productivity per worker as is presently demonstrated in the broader economy. On this basis, achieving equivalent labour force participation as the Nordic countries would boost Australian GDP by $64 billion per year, or around 3%.

Based on government's normal revenue share of that incremental GDP (derived solely from existing taxes and tax rates, not new levies),[8] that additional output and income would then translate into an additional $18.4 billion in tax revenue.[9] That incremental revenue alone would be sufficient to cover most of the cost of a high-quality universal ECEC program.

However, there is a second large channel of economic and fiscal benefits that would be unlocked by universal ECEC. With quality child care support, more women could work normal full-time hours, instead of restraining employment to try to juggle family responsibilities. Ideally, this should be complemented by a more equal division of unpaid labour at home (to further ratify women's increased paid work). In 2019, the last full year before the COVID-19 pandemic, almost half of employed women worked part-time hours (versus less than one-fifth of men). By allowing women to work longer

[7] The gap between Australia and the Nordic countries is widest for women in prime parenting years, but the suppression of female labour supply during those years would reasonably be expected to carry on through later age cohorts: women's absence from work during prime parenting years would restrict their options for employment and promotion in the remaining years of their careers. Since male labour force participation in Australia is very similar to the Nordic countries, this suggests that other national characteristics (such as industrial relations laws, tax settings, etc.) cannot explain reduced female participation; this difference is mostly attributable to gender-specific factors.

[8] In the last financial year before the onset of the COVID-19 pandemic and recession, the general government sector collected tax revenue equal to 28.7% of GDP.

[9] That revenue is shared across all levels of government, with about two-thirds flowing to the Commonwealth.

hours, universal and affordable ECEC would support additional gains in hours worked, total output, incomes, and government revenues.

Indeed, this gain in female labour supply resulting from greater incidence of full-time employment exceeds the increase resulting from higher participation. As shown in the lower half of Table 1, additional labour supply equal to 439,000 full-time equivalent (FTE) female workers would be mobilised if the full-time employment incidence of employed Australian women rose to match the average in Nordic countries.[10] That new labour supply (employing the same assumptions noted above regarding unemployment and average productivity) would facilitate incremental GDP of $68.2 billion per year, and additional tax revenues (across all levels of government) of another $19.6 billion. The benefits of child care for facilitating full-time paid work by women are thus slightly larger than the benefits of facilitating more labour force entry. In addition, greater access to full-time work could have additional flow-through benefits resulting from an eventual reduction in the gender wage gap experienced by women – since full-time work offers for opportunities for career advancement and graduating to higher hourly pay rates.

Across both of these channels, therefore, the provision of high-quality, affordable, and (preferably) publicly-delivered ECEC services would unlock an enormous reservoir of female labour supply, leading to large gains in output, income, and government tax revenue.

[10] This estimate assumes female part-time workers on average work half as many hours per year as female full-time workers. This is a conservative assumption: in 2019, female part-time workers worked an average of 900 hours, slightly less than half the average annual hours of full-time employed women (1900 hours), hence the increase in FTE labour supply from higher full time incidence could be even higher than indicated in Table 1 (author's calculations from ABS Labour Force data). Furthermore, this estimate applies higher full-time incidence only to Australia's *current* female workforce – and not to the expansion of that workforce resulting from higher labour force participation. For both reasons, therefore, this estimate likely understates the true potential gain in labour supply from harmonising full-time incidence with the Nordic countries.

Work in the ECEC Sector

The ECEC workforce in Australia is relatively young, composed overwhelmingly of women, and concentrated in part-time, often casual roles. Workers in this sector are keen to improve the quality of their jobs, including through more training and qualifications, opening up improvements in career pathways, job stability, and earnings potential. The sector boasts a large and growing workforce of almost 200,000. But they receive wages that are well below the Australian average, and many workers feel the industry lacks opportunities for promotion.

According to the 2016 Early Childhood Education and Care National Workforce Census, a total of 195,000 staff were employed in the ECEC sector during the reference week.[11] This was an increase of 27 per cent from the 2013 census.[12] ECEC is thus one of the fastest-growing sources of employment in the whole economy.

The industry's workforce is overwhelmingly female: over 90 percent of the sector's workers are women, and this intense feminisation of work has been true for decades. The ECEC workforce is also relatively young: the median age for female workers is 34 years, and for male workers it is 28 years.[13] This is largely unchanged from previous censuses.

More than half of the ECEC sector works part-time (56 per cent), with 27 per cent working very short part-time hours (less than 20 hours per week) and 29 per cent working long part-time hours (20 to 34 hours per week). Only 44 per cent worked full-time; one-quarter of those (or 11 per cent of the entire workforce) worked long hours (41 hours or more in the reference week).

ECEC workers are relatively well qualified, and the average level of qualifications continues to rise. Some 85 per cent of the workforce held an ECEC-related qualification in 2016, with 12 per cent holding a bachelor's degree or higher. More than a quarter of the workforce were studying while they worked. And the level of qualification in the workforce is increasing steadily: the share of paid "contact staff" (ie. those providing direct care for children) without a formal ECEC qualification declined by about 5 percentage points to 15 per cent) since the 2013 census. The share of those qualified

[11] Social Research Centre (2017). The fourth census in this occasional series was conducted in early 2021, but no published results were available at time of writing.

[12] Social Research Centre (2017).

[13] The median age for Australia's overall labour force is 39 years; see Labour Market Information Portal, https://lmip.gov.au/default.aspx?LMIP/GainInsights/IndustryInformation.

with a Diploma or Advanced Diploma had increased by about 4 percentage points in the same period, to 34 per cent.

Average ECEC experience for paid contact staff was 6.6 years in 2016. Staff with more qualifications were also likely to have more years of experience – confirming the mutually reinforcing relationship between training, job stability, and quality of care. Workers with ECEC qualifications had an average of 7.4 years of experience, compared to just 2.1 years of experience for those without qualifications. Average tenure for paid contact staff at their current early learning centre was 3.3 years.

The industry faces significant challenges in recruiting, retaining, and training more staff, as the scale of ECEC service provision continues to expand. These challenges were documented in a United Workers Union workforce survey, covering over 3,800 ECEC educators performed in March 2021.[14]

Over one-third of ECEC workers (37 per cent) do not intend to continue working in the industry in the long term. Worryingly, ECEC educators who are upskilling are more likely to leave the industry than those that aren't. Of those currently working toward an Early Childhood Teaching degree, 40 per cent said they intended to leave the sector. That proportion increases to 51 per cent for those working on a master's degree. In contrast, just 29 per cent of workers not currently pursuing a higher qualification expected to leave the industry – likely because they feel their lack of portable qualifications does not equip them well to seek alternative positions (rather than because of greater satisfaction with working conditions). The top reasons for ECEC workers wanting to leave the industry included excessive workload, insufficient time to provide quality care, and the low rates of pay typical in the industry.

Further evidence regarding the unacceptable working conditions in much of the ECEC sector was provided by a subsequent report from the United Workers Union (2021b), which highlighted the damaging impacts of private ownership in much of Australia's ECEC sector on the quality of jobs in privately-operated centres – and consequently on the quality of care for children and families using those centres. After all, evidence from other research on child care, aged care, and other human and caring services has long demonstrated that the quality of care depends strongly on the quality of work – since care workers need time, training, and support to deliver the best-quality service possible.[15]

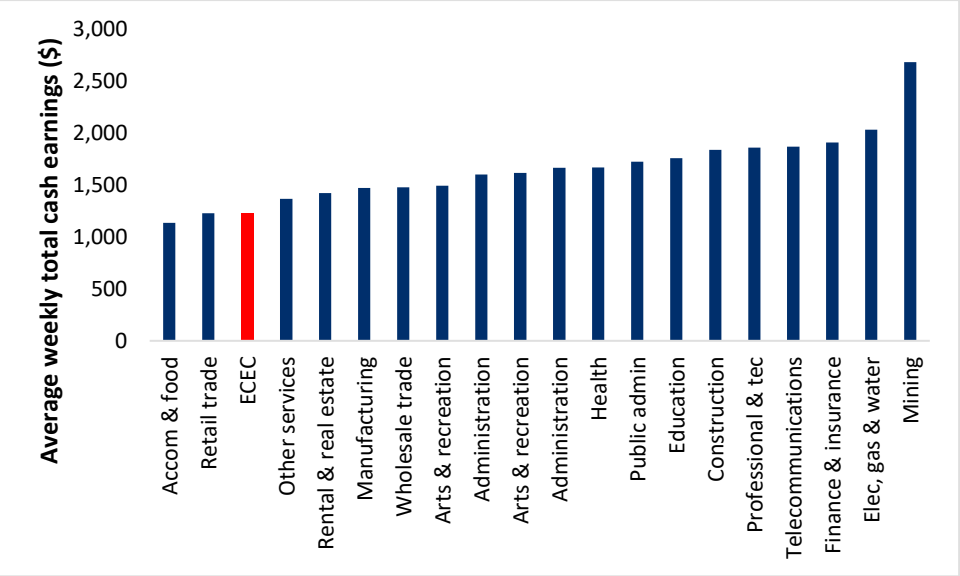
[14] See United Workers Union (2021a) for detailed findings and methodology.

[15] Other research documenting the connection between working conditions and quality of caring service delivery includes Baines and Armstrong (2015), Martin (2007), and Baines et al. (2020).

Another survey performed in 2021 by the superannuation fund HESTA (which covers many ECEC workers) reported similar findings regarding the challenges faced by the ECEC workforce. It found that ECEC workers felt underpaid and lacked opportunities for promotion.[16] Negative sentiments towards the sector within the ECEC workforce were common: 43 per cent of workers reported they would not recommend a career in ECEC. For those planning to leave the sector, the main reasons given were low pay and few opportunities for promotions.

According to Australia Bureau of Statistics data, this perception of underpayment accords with reality. Figure 8 below illustrates average weekly earnings for full time workers in the 18 main industry groups tracked by the ABS at the 2-digit level. Figure 8 also depicts average earnings in the specific sub-sector which includes ECEC workers: namely, social assistance services (a part of the broader health and social services sector).

Figure 8. Average Full Time Weekly Earnings by Industry, 2020.



Source: ABS, Employee Earnings and Hours. 'ECEC' includes all social assistance services.

This sub-sector reports among the lowest full-time average weekly earnings of any industry. The only two broad industries (at the 2-digit level) which pay less – accommodation and food services, and retail trade – have much lower required qualifications. Moreover, Figure 8 understates the low weekly earnings in ECEC, given that most ECEC workers are employed part-time. For them, weekly earnings are further held back by inadequate hours of work as well as low hourly wages.

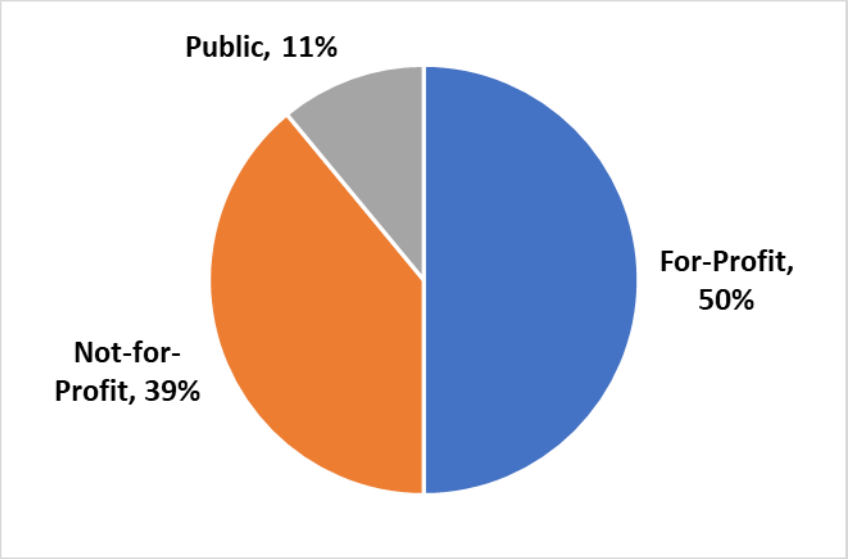
[16] See Health Employees Superannuation Trust Australia (2021) for detailed findings and methodology.

The Commonwealth government has the lead responsibility to address the crisis in job quality and compensation in the ECEC sector. Through its public subsidies for ECEC services (which, unfortunately, are too often channelled through private for-profit providers), it possesses the economic and regulatory power to bring job quality and pay into line with the high qualifications, job demands, and responsibility demonstrated by ECEC workers.

Why Public Provision is Better

In Australia, early childhood education and care services are delivered via several different ownership models. These include private for-profit centres (FP), not-for-profit centres (NFP), and government-run public providers. At present in Australia, about half of ECEC is delivered by FP providers. The NFP sector (in which we include Independent and Catholic school providers) make up 39 per cent of services.[17] Governments, including services in state and territory schools, deliver 11 per cent of services.

Figure 9. ECEC Service Provision by Sector



Source: Australian Children's Education and Care Quality Authority (2021).

The private for-profit sector of the ECEC industry is marked by serious quality problems. The National Quality Framework was introduced in 2012 to improve education and care across the ECEC sector. It introduced a National Quality Standard which sets a benchmark for all ECEC services. The overall quality rating of FP centres was 12 per cent lower than other management types.[18]

FP centres were also underrepresented among overachieving centres. Only 16 per cent of FP centres exceeded the National Quality Standards, whereas 36 per cent of NFP centres and over 40 per cent of government run centres exceed those standards.

Concerningly, the FP sector was also overrepresented in enforcement actions taken against ECEC providers since 2015. Despite making up 50 per cent of all centres, FP

[17] "Services" are defined in this data as individual centres (not chains or networks).

[18] United Workers Union (2020).

centres were the target of almost three quarters of enforcement actions. FP centres in Victoria accounted for almost 90 per cent of enforcement activity in that state. Similarly, in South Australia and the Northern Territory, where FP providers constitute less than one third of the sector, they accounted for more than half of enforcement actions.

Comparing the largest FP and NFP providers was also revealing. 15 per cent of the three largest FP providers' centres did not meet the National Quality Standard. Only two per cent of the three largest NFP centres did not meet the standard.

Subsequent research published by the United Workers Union (2021b) documents the significant diversion of fiscal resources in the FP child care industry: away from direct caring services (including staffing) and toward dividend payouts, other financalised transactions, and million-dollar executive compensation packages. This validates concerns regarding the value-for-money received by Australian families from services which are publicly-subsidised but privately-delivered. And it reaffirms the conclusion that public resources should be directed toward ECEC centres operating on a not-for-profit or public basis.

It is clear, therefore, that focusing public ECEC support on NFP and public government providers will lead to improvements in the quality of education and care. But there are also economic advantages for channelling additional ECEC funding to these same providers.

As discussed previously, despite Australia's generally underfunded ECEC system, the majority of funding for ECEC services comes from public sources. 63 per cent of total ECEC funding comes from the government. The remaining 37 per cent is paid privately, mostly by households. Despite their proportionately larger direct payments toward ECEC services, Australian families receive less services back.

All forms of ECEC are subsidised through public financial support delivered to both parents and to ECEC providers. But private provision of ECEC has different economic impacts than public or NFP provision. This is because private, for-profit ECEC must include a margin for financial return to the owners of the firm delivering the service. This profit diverts resources away from direct service provision; it also distorts incentives for ECEC providers, encouraging them to sacrifice quality and cut corners in order to maximise financial returns for the owners. In contrast, public and NFP providers retain all revenues within the service; these funds are used mostly to increase employment levels. Therefore, each additional dollar of spending on NFP and government-provided ECEC generates more ECEC service provision and employment than is the case with FP providers – since there is no diversion of finances into profit

margins for investors and owners. This supports additional service delivery, employment, and GDP.

The impact of for-profit ECEC delivery on the macroeconomic spin-offs from expanded ECEC funding can be estimated on the basis of ABS Input-Output Tables, supplemented with data from surveys of the ECEC industry undertaken and published by IBIS World.[19] The foregone output represented by the diversion of profit margins in FP ECEC providers can be estimated, as well as the number of additional full-time equivalent positions that would be created by channelling incremental spending through public and NFP providers (which do not 'leak' revenues to profit payouts) rather than for-profit centres. More details on the methodology of these estimates is provided in Appendix A.

Please note that the estimated increments in employment, GDP, and government revenue provided here only consider the economic effects of ECEC provision (including direct jobs in ECEC centres, and resulting indirect jobs in the sector's supply chain and downstream consumer industries). These are *in addition to* the macroeconomic benefits of improved female labour force participation and full-time employment that were discussed above.

CASE A: FUNDING AT THE OECD AVERAGE

As previously indicated, Australia's spending on ECEC is relatively low compared to other industrial countries. Australia ranks 21st out of 30 OECD nations reporting data in terms of overall ECEC spending (both public and private). Australia also relies more heavily on private funding, mainly in the form of user fees paid by parents, than the OECD average. In Australia, 37 per cent of all funding comes from private sources, with the rest coming from the government. This represents the fourth-highest proportion of private funding of any of the OECD countries reporting data.

Given the economic, developmental and educational advantages of high quality ECEC, at a minimum Australia should fund these services at the same average level as other developed nations. To do this, Australia would have to increase funding from 0.53 per cent of GDP to the OECD average of 0.83 per cent of GDP. This would represent additional spending of $4.8 billion per year.

While the OECD average for funding for ECEC is higher than Australia, the amount raised from private sources is lower. If Australia was to spend at the OECD average, then it would need to increase overall spending by $4.8 billion per year. But if Australia

[19] Richardson (2021).

were to also achieve the same public/private split in total funding as the OECD average, then public funding would increase by $6.2 billion, but private funding would decline by $1.4 billion.

This means that overall funding for ECEC would increase, but the fees paid by households would decrease. The split between public and private funding is important, because along with the availability and quality of ECEC, an important determining factor on parents' decision to take up ECEC (normally to participate in paid work) is the cost of those services. Higher public funding can support lower costs for families and hence more participation in ECEC – with consequent benefits for participating children (who receive a head start in education and socialisation), parents (who can better participate in paid work), and the economy (through resulting gains in employment, incomes, GDP, and government revenues).

Using the methodology described in Appendix A, if Australia was to increase total ECEC funding by $4.8 billion, to match the OECD average, this would lead to estimated additional employment of 58,358 FTE positions. This includes direct jobs in ECEC centres, indirect jobs in the various industries which supply ECEC providers with the range of input goods and services, and induced jobs in downstream consumer industries which benefit from the spending power of ECEC workers. Including all these channels of impact, the increase in ECEC funding would lead to an ultimate increase in total GDP of $7.7 billion.[20] This result assumes the current mix of for-profit, not-for-profit and government providers.

In turn, the increase in GDP from this additional funding would also increase government tax receipts. The current ratios of taxes to GDP (for all levels of government) in Australia is 28.7 per cent.[21] This means that the additional $7.7 billion in GDP would increase revenues for governments at all levels by $2.2 billion.

Our analysis shows that multipliers for employment and GDP are higher for the NFP and government providers when compared to the FP providers. This is because NFP and government providers do not require a profit to be paid to the owners of the service. Instead, all revenues are allocated to expanded service, including higher employment.

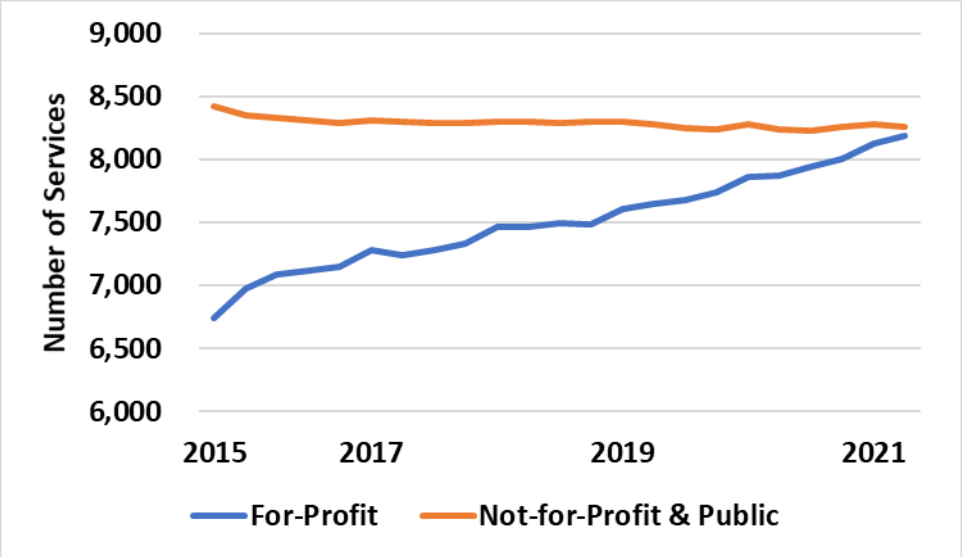
[20] The increase in GDP exceeds the increase in ECEC funding thanks to multiplied impacts experienced in the supply chain which feeds into the ECEC sector, and downstream spending effects resulting from additional employment and personal incomes.

[21] Author's calculations from ABS Government Financial Statistics and National Accounts, for 2018-19 financial year (last full financial year before the COVID-19 pandemic).

If all the new funding was directed only to government and NFP providers, then the employment and GDP gains resulting from the expansion in ECEC funding would be higher than if allocated according to the current 50-50 split between FP and NFP and government providers. If all the new funding was directed to NFP and government services, it would create an additional 66,802 FTE positions. This is 8,444 (or almost 15 per cent) more than if the additional funding was allocated according to the current split of FP, NFP and government providers. In addition to improved employment effects, of course, that would also underpin stronger pedagogical outcomes for children – thanks to more plentiful and better qualified staff, and the elimination of the profit motive which leads current FP providers to cut corners and drive down quality.

The macroeconomic and fiscal gains from a focus on public and NFP delivery would also be substantial (See Table 2). If all incremental funding were allocated solely to public and NFP providers, GDP would increase by $8.2 billion.[22] This is $480 million more than if the additional funding went to the current split of providers. In turn, this additional GDP would generate additional tax revenues – further offsetting the costs of expanded ECEC spending.

Figure 10. ECEC Service Providers by Sector, 2015-2021



Source: Author's compilation from Australian Children's Education and Care Quality Authority (various issues).

However, an additional factor must be taken into account in our simulations: the current mix of services is not reflective of the future evolution of the sector under

[22] The ultimate gain in GDP from a public and non-profit focused ECEC spending strategy arise from larger employment effects and consequently larger downstream spending multipliers.

status quo policy settings. Over the last several years, the number of NFP and government providers has declined slightly; meanwhile, all the growth in ECEC provision has come from the growing FP sector. This worrisome trend is indicated in Figure 10.

If *all* additional funding was to be received solely by the FP sector, as this recent historical pattern suggests (in the absence of a deliberate effort to channel public subsidies toward NFP and public provision), this would have an additional dampening impact on the employment, GDP, and tax revenue effects of expanded ECEC provision. If all of the additional $4.8 billion in funding went to the FP sector, employment would increase by only 50,870 FTEs. This is 15,933 positions fewer than if all the incremental funding were directed to NFP and public providers.

At the macroeconomic level, if all incremental funding went to the FP sector, the final impact on GDP would be an increase of $7.2 billion. This is about $1 billion less than if the funding was directed solely to NFP and government services. The additional tax revenues flowing from that expansion in GDP would also be inferior: almost $300 million less than if all the funding were focused on NFP and government services. In this way, the Commonwealth government's facilitation of creeping private delivery in ECEC services is actually undermining its own revenue base.

Table 2
Macroeconomic Benefits of OECD Average ECEC Spending

Providers	Additional GDP ($m)	Additional Employment (FTE)	Additional Govt Revenues ($m)
Current Split (50-50)	7,678	58,358	2,204
All Not-for-profit and Government	8,158	66,802	2,341
All For-profit	7,199	50,870	2,066

Sources and methodology described in Appendix A. Simulated macroeconomic effects of spending additional $4.8 billion per year to reach average OECD ECEC funding levels. Excludes benefits of increased female labour force participation.

CASE B: FUNDING AT THE NORDIC AVERAGE

The five Nordic countries of Denmark, Finland, Iceland, Norway and Sweden spend considerably more on ECEC than most countries. They have the strongest and most universal programs as a result of that fiscal commitment, typically enrolling around 90

per cent of 2-4 year-olds in organised education programs.[23] As a result, these countries also benefit from superior female labour force participation rates (especially during prime parenting years), with resulting increases in employment, GDP, and government revenues. Where Australia spends 0.59 per cent of GDP on ECEC (from all sources), the Nordic countries spend an average (unweighted) of 1.66 per cent of GDP: almost three times more. Even though the Nordic countries spend considerably more in total, private spending (primarily by households with children) is actually slightly lower than in Australia (amounting to 0.21 per cent of GDP, compared to 0.22 in Australia).

If Australia were to allocate the same resources to ECEC as the Nordic countries, it would need to spend $21 billion more than it does now. If this dramatic expansion of ECEC services maintained the same split between private and public funding as prevails at present, then the government would need to spend $21.2 billion more, and households would spend $219 million less.

This ambitious step forward in ECEC provision would not only lead to much better child development and female labour force participation rates. It would also generate much larger increments in employment, GDP, and government revenues. Using the methodology described in Appendix A, if Australia were to increase its funding of ECEC by that scale, it would lead to additional employment of 255,166 FTE positions – including direct jobs in ECEC provision, indirect jobs in the supply chain, and induced jobs in downstream consumer industries.[24]

National GDP would increase by an impressive $33.6 billion (or about 1.5 per cent; see Table 3). And if the ratio of taxes to GDP in Australia were held constant at present levels, then that additional output would generate $9.6 billion in additional taxation. These impacts assume the existing proportions of FP, NFP and government providers are maintained in the expanded system.

However, if the additional $21 billion in ECEC funding was channelled solely to NFP and public providers, then the gains in employment, GDP and taxation would be even larger – since funds are no longer diverted into profit margins for the investors who own FP providers. Employment would then increase by 292,088 FTE positions (36,922, or 15 per cent more than if funds were allocated according to the current 50-50 split between FP and other providers). GDP would increase by $35.7 billion ($2.1 billion

[23] In contrast, Australia's ECEC system enrolled barely 40 per cent of 2-4 year-old children in organized ECEC, third lowest in the OECD (Alexander et al., 2017, Chart 3).

[24] Of course, the major increases in employment, GDP, and government revenues described here would be experienced over the several years required to roll out such an ambitious expansion of ECEC services.

more than under the 50-50 split). And government taxation revenues would increase $10.2 billion ($600 million more than in the 50-50 scenario).

Remember, however, that recent growth in the ECEC sector has been dominated by for-profit providers. Under status quo policy settings, the additional funding would likely flow solely to the FP sector, and this would have very different macroeconomic effects. An additional $21 billion in funding received exclusively by the FP sector would create 222,423 direct and indirect FTE positions. This is 69,665 fewer new jobs than if the funding had gone to the NFP and public providers. Channelling new funds to higher-quality NFP and public providers thus generates more macroeconomic bang for the buck: the employment gains from a strictly non-profit expansion of ECEC services would be almost one-third larger than under a FP-only scenario.

Moreover, if all additional funding went to FP providers GDP would increase by $4.2 billion less than if the funding had gone to the NFP and public providers. And the flow-back revenues received by government would be $1.2 billion smaller than if the funding had gone only to NFP and public providers.

Table 3
Macroeconomic Benefits of Nordic-Level ECEC Spending

Providers	Additional GDP ($m)	Additional Employment (FTE)	Additional Govt Revenues ($m)
Current Split (50-50)	33,573	255,166	9,636
All Not-for-profit and Government	35,672	292,088	10,238
All For-profit	31,475	222,423	9,033

Sources and methodology described in Appendix A. Simulated macroeconomic effects of spending additional $21 billion per year to reach average Nordic country ECEC funding levels. Excludes benefits of increased female labour force participation.

Combined Macroeconomic Benefits

Previous sections of this report described the economic potential that could be unlocked by the provision of universal ECEC services, which would facilitate increased participation in paid work by Australian women, and hence greater employment, output, incomes, and government revenues. A universal ECEC program which supported a harmonisation of female labour force participation with the levels achieved in Nordic countries would support an increase in national GDP of $64 billion, and an automatic increase in government revenues of $18 billion (shared across all levels of government). A second equivalent economic and fiscal boost would result from the enhanced capacity of women to work full-time hours (rather than being constrained by the unavailability of child care and unequal division of unpaid labour to working only part-time). Achieving rates of full-time employment (as a share of total employment) equivalent to the Nordic countries would support another $68 billion in incremental output and over $19 billion in additional government revenues.

Then, the preceding input-output simulations have confirmed an additional channel of macroeconomic and fiscal benefits from the provision of universal ECEC services. On top of the possibilities opened up for hundreds of thousands of Australian women to engage more fully in paid work, the expansion of ECEC services would also create potentially hundreds of thousands of new jobs in the child care industry itself and related indirect activities. (Some of those new ECEC jobs, of course, could be filled by new female entrants to the labour force.[25]) If Australia were to match Nordic levels of ECEC expenditure, and then channel those funds through public and not-for-profit centres (rather than private centres which squander significant resources on payments to investors and executives), that would support another expansion in national GDP of $35.6 billion. Existing taxes would channel over $10 billion of that new income into government revenue streams.

Table 4 summarises the combined macroeconomic and fiscal benefits of a Nordic-style public and non-profit universal ECEC system. All told, the combined impact of

[25] If the economy were starting from a position of full employment, then the jobs created in ECEC provision (and indirectly in the ECEC supply chain and downstream consumer sectors) would need to be filled, on a net basis, from the increase in female labour supply, and hence these two sources of job creation could not be summed; however, given the substantial underutilised labour supply in Australia it is reasonable to consider both sources of employment and economic expansion additively.

increased female paid work, direct jobs in ECEC provision, and indirect jobs supported by ECEC activities could boost Australia's annual GDP by $168 billion (about 8%) and lift government revenues by a combined $48 billion per year.[26] The new revenues automatically flowing to government from this program would exceed by a large margin the cost of providing the service. As noted above, to match the Nordic countries' expenditure on ECEC services (as a proportion of GDP), Australia would have to spend an additional $21 billion per year (and also redistribute the incidence of that expenditure from households toward government).[27] That amount, while substantial, is less than half the flow of new revenues to government arising from additional employment and GDP opportunities unlocked by the provision of universal ECEC services.

Table 4
Combined Macroeconomic & Fiscal Benefits of Nordic-Style Universal ECEC

	Impact on GDP ($bil)	Impact on Government Revenue[1] ($bil)
Increased female labour force participation	$64.0	$18.4
Increased incidence of female full-time work	$68.2	$19.6
Direct and indirect jobs in ECEC provision[2]	$35.6	$10.2
TOTAL	**$167.8**	**$48.2**

Source: Author's estimates as described in text.
1. Received by all levels of government.
2. Incremental funds directed fully to public and not-for-profit providers.

In this regard, universal high-quality ECEC is a public service that literally pays for itself.[28] The only barriers holding back government from providing a service that would not only enrich the lives of parents and children, but actually strengthen governments' own fiscal bottom lines, is adherence to old-fashioned ideas that young children should be raised at home, and an ideological commitment to enriching the often-global

[26] Again, these large benefits would be experienced over the several years required to scale up a Nordic-style ECEC program.

[27] Other direct estimates of the cost of providing universal ECEC services in Australia suggest a required incremental investment of similar magnitude; see, for example, Evershed (2020).

[28] This finding of the neutral or positive net fiscal impact of accessible public ECEC provision is also reported in other work, such as Fortin et al. (2012), Fairholm and Anderson (2017), or Stanford (2020).

corporations that are currently profiting so mightily from Australia's increasingly privatised ECEC system.

Even these impressive estimates of the macroeconomic and fiscal benefits of a universal ECEC system may understate the ultimate long-run benefits. We have not here attempted to model any of the broader economic, social, and fiscal benefits arising from a better-educated and socialised generation of children. Extensive empirical literature[29] attests to the superior educational, employment, and health life outcomes enjoyed by people who received the benefit of high-quality early child education. The very long-run and diffuse nature of these effects (including higher employment rates, higher earnings, better health, more stable familial status, and reduced criminality) makes them challenging to quantify – but they are real nonetheless. In this regard, the estimates presented in this paper of the effects of universal ECEC should be considered conservative.

[29] See the sources cited in footnote 2 for surveys of this extant research.

Conclusion and Recommendations

By international standards, Australia badly underfunds its ECEC system. Australia would need to spend several billions more each year to meet the OECD average of ECEC support – and over $20 billion more per year to match the average for the Nordic countries.

Australia is also becoming increasingly reliant on private for-profit companies to deliver ECEC services. All recent growth in the sector has been captured by the for-profit sector, which now constitutes fully half of all service provision. Not-for-profit and public provision has declined in both absolute and relative terms. However, strong evidence indicates that private for-profit delivery is associated with serious quality problems, arising from lower staffing levels, inadequate attention to training and quality, lower compensation and higher turnover among staff, and a built-in incentive to cut costs in order to expand profit margins for private owners of those facilities. Just one indicator of this structural underperformance is the fact that for-profit centres had an overall National Quality Standard rating 12 per cent lower than other management types. A significant share of the public subsidies flowing to for-profit ECEC providers is siphoned away from direct care (including staffing) in favour of dividend payouts, other financial activities, and lucrative executive compensation for corporate executives, with negative consequences for quality of care.[30]

Additional funding for expanded ECEC would generate significant economic benefits in the form of additional employment, tax revenue and increased participation rates. These economic benefits are large because of the long term benefits arising from increased female labour supply (experienced through both higher participation rates, and greater opportunity for full-time employment). Substantial economic benefits also result from the high labour intensity of ECEC production, and the strong input-output linkages (to both the ECEC sector's supply chain, and downstream consumer goods and services industries) which characterise this industry.

All these macroeconomic and fiscal benefits would be maximised if the additional funding was directed only to public and not-for-profit providers. By dedicating all new funding to public and not-for-profit centres, the employment impact of universal ECEC provision would be expanded by almost 67,000 additional jobs (one-third more than if new funds were allocated solely to for-profit providers, as has been the recent practice). Even more important, of course, is that the quality of education and care for

[30] As documented in United Workers Union (2021b).

participating children will also be greatly enhanced – in large part thanks to the better, more stable jobs for ECEC workers that are possible in not-for-profit and public ECEC centres.

This review of both the level and composition of Australia's fiscal support for ECEC services, and the macroeconomic impacts of that spending, suggests several clear policy recommendations.

First, it is obvious that Australia's level of fiscal support for ECEC – among the lowest in the industrial world – needs to be quickly and substantially increased. Australia's recovery from COVID-19 will be considerably enhanced if Australia increases its public support for ECEC services: first to at least match the average of other industrial countries (implying additional spending of around $5 billion per year), and then in the longer term to emulate the world-leading performance of the Nordic countries.

Secondly, the composition of ECEC funding should be adjusted in order to obtain a fairer and more efficient mix of public and private funding sources. Ultimately, ECEC services should be essentially free for parents – in the same way that public schooling is meant to be free.[31] As the total envelope of ECEC funding is expanded, therefore, parent fees should be radically reduced, and the share of total funding sourced from government increased.

A third obvious recommendation is that the focus of future ECEC expansion must be placed on public and not-for-profit providers. They provide more jobs, more economic benefits, and demonstrated quality advantages compared to private for-profit ECEC providers. ECEC is not a 'child minding' service: it is meant to constitute a critical stage in children's education and social development. And Australia's children should not be seen as a 'profit centre'. This early care and education must be delivered with attention firmly focused on providing the best care possible. That means not diverting resources to profit margins, and not creating financial incentives for providers to cut corners and sacrifice quality and safety.

Some specific parameters of a universal, affordable, and publicly-delivered ECEC system were mapped out in the plan for national post-COVID reconstruction recently advanced by the Australian Council of Trade Unions (2020). That program described how Australia could transition from its current inadequate patchwork of ECEC arrangements, toward a more equitable and consistent system:

[31] Of course, public education in Australia is not genuinely free, due to the concerning rise in user fees and supplementary expenses of various kinds, not to mention the substantial scope of private schools, that together pose a significant threat to the principles of public education.

- Reintroduce the free childcare crisis arrangements that were in place earlier in the pandemic, for a 12-month period. Increase the minimum funding rate to providers from 50% of fee income to 60%-65%.

- Design and implement a new free universal public ECEC system within that 12-month period. The new system should include permanent ongoing funding for preschool education for all 3- and 4-year-old children.

- Construct new high-quality publicly-funded not-for-profit ECEC facilities. An initial capital endowment allocated over three years would create thousands of jobs in construction, and make a significant contribution to alleviating capacity constraints in ECEC as women return to paid work after the pandemic.

- Extend the current 25% wage subsidy for ECEC workers to support the ongoing employment of staff, with the level of support increased to 30-35% of fee revenue.

- Address gendered pay discrimination in ECEC, with increased funding targeted at delivering wages at a level consistent with the attainment of pay equity relative to the market value of equivalently skilled workers in mostly male industries.

A universal ECEC system should be viewed as a fundamental goal for the future Australian economy. Achieving the superior quality and economic benefits of the Nordic systems cannot be done instantly, of course. But our ECEC policies should be reoriented and expanded, with a universal, publicly-delivered, high-quality, and affordable system akin to the Nordic benchmark as its end goal. That will require more substantial investments in ECEC funding, and its reallocation toward the not-for-profit and public facilities which deliver the best quality, and the largest economic benefits.

Appendix A: The Macroeconomic Benefits of ECEC Funding[32]

Using the ABS Input-Output tables and IBISWorld data sources, a set of indirect and induced impact multipliers were developed for the Australian child-care sector, including separate multipliers for non-profit[33] and for-profit providers.

Methodology

The analysis began with the ABS I-O tables for the year 2018-19. Within that I-O system, ECEC services are included as part of the *Residential Care and Social Assistance Services* sector.

We disaggregated that sector into *Childcare* and *Other* segments, on the basis of data contained in the ABS's *Australian National Accounts: Input-Output Tables (Product Details)* and IBISWorld's *Child Care Services in Australia* (Richardson, 2021). The IBISWorld data was used to disaggregate total revenues in the sector into output, value-added, and intermediate usage. The ABS data was used to split the final demand pattern between final users (mainly households and government).

The disaggregation was performed on a self-balancing method such that the *Other* component of *Residential Care and Social Assistance Services* acted as a residual. This ensured that, overall, the Australian I-O table remained in balance and equal in aggregate terms to the original table.

The next step was to disaggregate the childcare sector into its for-profit and non-profit components. In this exercise, we are concerned primarily with whether a profit 'wedge' is introduced into the allocation of a provider's total revenues to various uses. Therefore, we combined public services and those offered by various NFP and community agencies, into a unified non-profit amalgam. Data reported in Figure 9 above (from Australian Children's Education and Care Quality Authority, various issues) indicated a 50/50 split between for-profit childcare providers and the aggregated

[32] This Appendix and associated modeling was prepared by Matt Saunders, whose contribution is gratefully acknowledged.

[33] As discussed below, in this Methodology section we have constructed an amalgamated non-profit sector that includes both public ECEC providers and services offered by not-for-profit and community agencies; these two sub-sectors were described separately in the preceding sections of the report.

combination of public and not-for-profit providers, so this disaggregation was preserved in our analysis.

The IBISWorld report (Richardson, 2021) also included a number of case studies of NFP and FP providers that provided illustrative profit shares for each sector to guide this disaggregation. Intermediate costs shares were assumed to be equal between the for-profit and non-profit segments,[34] with payments to wages the balancing factor (implying the NFP sector is more labour intensive than the FP sector).

The composition of final demand for the NFP and FP sectors was assumed to be the same. Childcare is primarily 'sold' to households and government (government 'buys' the final output of the industry, ECEC services, through the subsidies it pays to parents for it), likely at a similar ratio for each sector.

With this new disaggregated I-O Table estimated, output, employment and GDP multipliers could then be calculated.

Multipliers

Table A1 provides a summary of the output, employment and valued added multipliers. Direct multipliers represent effects experienced within the ECEC sector. Simple multipliers include upstream spending and production experienced in the ECEC sector's supply chain: that is, the various industries which provide supplies, equipment, and services to ECEC sectors. The total multiplier includes downstream spending effects resulting from subsequent consumer spending by the people employed in the ECEC sector and its supply chain.

Table A1
ECEC Multipliers, Per $1 Million of Output

	Output, $m		Employment, FTE		Value Added, $m	
	NFP	**FP**	**NFP**	**FP**	**NFP**	**FP**
Direct	1	1	6.35	4.35	0.62	0.62
Simple	1.59	1.59	8.58	6.58	0.89	0.89
Total	3.09	2.72	13.92	10.60	1.70	1.50

Source: Estimates from analysis of ABS National Accounts: Input-Output Tables, as described in text.

[34] It does not seem reasonable to assume that a FP provider could purchase fewer of the inputs required to operate a regulated ECEC centre, such as buildings, utilities, and supplies.

The simple output multipliers are somewhat lower than those in other sectors of the economy: in part because ECEC production is very labour intensive, and also because some of the ECEC sector's intermediate inputs (especially toys, play equipment, etc.) are imported. The simple output multipliers are equal for NFP and FP segments as a result of the assumption of equal intermediate cost shares used in the disaggregation. However, the simple output multipliers are higher than those recorded in other caring services such as Primary and Secondary Schooling, Tertiary Education, and Health Care.

Because of the stronger employment-generating impacts of non-profit ECEC centres (including both NFP and public provider), the total output multipliers are higher than in FP provision. They are also higher compared to many other service industries (including Primary and Secondary Schooling, Tertiary Education, Health Care, Creative and Performing Arts, Sports and Gambling). This reflects the highly labour-intensive nature of ECEC production. Across the spectrum of industries considered in the Australian I-O system, the total employment multipliers for non-profit ECEC services fall within the top quarter of all industries. A million dollars spent on non-profit ECEC generates more direct employment than most other industries. And ECEC workers, given their low incomes, are more likely to fully and immediately spend their resulting wages, generating still-stronger employment benefits through consumer industries.

It should be noted that the direct and indirect spin-off employment benefits arising from public and non-profit ECEC provision described in these simulations do not include the other key source of economic benefit generated by accessible quality child care services: namely, the greater employment and output possibilities arising from increased women's labour force participation and greater opportunity for full-time work. The magnitude of these benefits was discussed on pages 23-25 above.

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