



**nfaw.org**

**Women's Economic Opportunities Review**

**NSW Treasury**

**Prepared by: Professor Helen Hodgson**

4 March 2022

### **Authorisation**

This submission has been authorised by the NFAW Board

Professor Helen Hodgson  
Chair, Social Policy Committee,  
National Foundation for Australian Women

Marie Coleman AO PSM  
Advisor, Social Policy Committee

Inquiries about this submission should be directed to Helen Hodgson at [h.hodgson@tpg.com.au](mailto:h.hodgson@tpg.com.au)

## Women's Economic Opportunities Review

This submission is being made by The National Foundation for Australian Women (NFAW).

NFAW is dedicated to promoting and protecting the interests of Australian women, including intellectual, cultural, political, social, economic, legal, industrial and domestic spheres, and ensuring that the aims and ideals of the women's movement and its collective wisdom are handed on to new generations of women. NFAW is a feminist organisation, independent of party politics and working in partnership with other women's organisations.

### Recommendations:

The National Foundation for Australian Women strongly supports the following measures.

- 1) Improving women's economic security through access to more affordable child care (including raising the Child Care Subsidy from 85% to 95% for low income families) and NSW Government commitment to support vulnerable families in accessing child care places.
- 2) Providing ongoing funding from the Australian Government and NSW Government support for the National Partnership on Universal Access to Early Childhood Education for children in the year before full-time school and extension of this funding to two years of preschool for vulnerable children, irrespective of ECEC setting.
- 3) The introduction of subsidised 'wrap-around' care options families using stand-alone community or government preschools, similar to outside school hours care for school age children
- 4) Funding the Centre for Policy Development's [Starting Better Guarantee for young children and families.](#)
- 5) Addressing low pay, recruitment and retention issues in the ECEC sector, including supporting:
  - a) a 2021 Equal Remuneration Order by the Fair Work Commission to help address low pay for early childhood teachers in the ECEC sector;
  - b) expanding the ECEC workforce, in particular, to enable provision of universal access to two years of early childhood education before full-time school and child care provision through the expansion of JobTrainer, VET or higher education fee waivers, scholarships or incentives for women (and men) to undertake Certificate III training, diplomas or early childhood degrees; and
  - c) supporting the ECEC workforce through short, medium and long-term workforce development strategies under a funded National ECEC Workforce Strategy agreed to by Australian, State and Territory governments, including professional development support for educators and services.
- 6) A gender pay audit should be undertaken of all NSW agencies and departments.
- 7) The NSW Government should be a model employer when developing a code in relation to flexible working that extends beyond the current COVID period. This code should ensure that the

needs of workers are balanced with business operational requirements to ensure that parents are better able to balance paid work with unpaid care.

- 8) The NSW Government should improve diversity on Government Boards and Committees by proactively searching out nominations and supporting the appointment of women and other underrepresented groups to those bodies.
- 9) The NFAW recommends that the NSW Government urgently increases the funding for social housing for women in low income households and older women.
- 10) The NFAW recommends that the NSW Government adopt gender budgeting processes in the development of policies; expenditure and revenue programs to ensure that the effect on women is taken into account.

**We would welcome the opportunity to participate in stakeholder consultation on these issues.**

## Discussion

The National Foundation for Australian Women is a national organisation. Most of our policy work is based around issues that affect women nationally, as we have limited capacity to work in specific states. However we note that the terms of reference for this review overlap with issues that arise from Federal policy. Therefore we offer our expertise in this space to the Expert Reference Panel for consideration in how they may be used in developing a NSW position.

Economic insecurity for women is a product of the gender pay gap, which leads to lower superannuation balances and lower rates of home ownership for women. The gender pay gap is a product of occupational gender segregation and career interruptions as well as bias in hiring and career progression. Conditions for workers in the caring occupations must be improved, and women returning to work must be supported through parental leave, access to affordable ECEC and flexible work conditions that allow autonomy. Modelling commissioned by NFAW in 2020 shows the overall economic benefits that flow from investing in the care sector by supporting care workers and unpaid carers (Appendix A).

- a. Support women to enter, re-enter and stay in the workforce, including options to improve the affordability and accessibility of childcare.**

We believe that women's participation and economic productivity can be boosted by:

- making ECEC more accessible and affordable
- more investment in the ECEC workforce
- more investment in PPL to support families and boost fertility rates.

In spite of major Australian Government's Child Care Package reforms introduced in 2018 to make child care more accessible and affordable, families continue to report that the cost of ECEC is high and that it impacts disposable income. The Productivity Commission's 2021 Report on Government Services revealed a sharp 21.7% rise in the number of parents and carers in Australia who did not work because of associated child care costs in 2020, compared with the previous 12 months. This equates to more than 90,000 Australian parents.

The COVID-19 pandemic has [demonstrated](#) the importance of a viable ECEC sector to support working families children. It has a predominantly female, low-paid workforce – many are in part-time, casual jobs and do not have economic security. Over a third of respondents working in ECEC

reported to a [2021 HESTA survey](#) that their household income was less than \$60,000 and almost one in five reported their household earned less than \$40,000. Almost one in five ECEC educators HESTA surveyed in 2019 and 2020 said they were considering leaving the sector within two years. Among the biggest issues were dissatisfaction with wages, feeling unappreciated by the community for their role as early educators and a lack of opportunities for promotion and growth.

Strategies for recruitment and retention are urgently needed to meet growing demand and maintain high quality services. The Australian Government's [occupation projections](#) to November 2025 predict the ECEC sector will require around 26,000 additional Certificate III and IV trained educators, as well as more than 8,000 additional early childhood teachers to deliver preschool programs.

The National Foundation for Australian Women strongly supports:

- 1) Improving women's economic security through access to more affordable child care (including raising the Child Care Subsidy from 85% to 95% for low income families) and NSW Government commitment to support vulnerable families in accessing child care places.
- 2) Providing ongoing funding from the Australian Government and NSW Government support for the National Partnership on Universal Access to Early Childhood Education for children in the year before full-time school and extension of this funding to two years of preschool for vulnerable children, irrespective of ECEC setting.
- 3) The introduction of subsidised 'wrap-around' care options families using stand-alone community or government preschools, similar to outside school hours care for school age children.
- 4) Funding the Centre for Policy Development's [Starting Better Guarantee for young children and families](#).
- 5) Addressing low pay, recruitment and retention issues in the ECEC sector, including supporting:
  - a) a 2021 Equal Remuneration Order by the Fair Work Commission to help address low pay for early childhood teachers in the ECEC sector;
  - b) expanding the ECEC workforce, in particular, to enable provision of universal access to two years of early childhood education before full-time school and child care provision through the expansion of JobTrainer, VET or higher education fee waivers, scholarships or incentives for women (and men) to undertake Certificate III training, diplomas or early childhood degrees; and
  - c) supporting the ECEC workforce through short, medium and long-term workforce development strategies under a funded National ECEC Workforce Strategy agreed to by Australian, State and Territory governments, including professional development support for educators and services.

- b. Create the opportunities and conditions for women to succeed in the workforce, including equity in the workplace such as reducing the gender pay gap and improving women's leadership opportunities.**

Gender pay inequity is one of the most deeply entrenched gender inequities we face. It is both a symptom and driver of inequality. Recent research from the [Global Institute for Women's](#)

[Leadership at the ANU](#) showed Australia “...received the joint-lowest ranking on the gender pay gap reporting scorecard” across the six countries studied in the report.

There are a number of reasons for the Gender Pay Gap, including occupational segregation, career breaks and workforce participation and gender bias.

The OECD and ILO have suggested that, in G20 nations, “[t]he gender gap in earnings and in the incidence of low pay are partly explained by gender segregation by occupation, with women more crowded into lower paying occupations than men” ([OECD and ILO 2019](#), p. 11). The Workplace Gender Equality Agency notes that Australia’s workforce remains highly sex segregated, and that “[a]verage remuneration in female-dominated organisations is lower than in male-dominated organisations.” Female dominated occupations have grown generally at a greater rate than male dominated industries, with Health Care and Social Assistance growing at almost three times the pace of employment growth across all sectors (Cassells, 2018a).

Women also take on a higher proportion of unpaid caring and domestic work, and this is reflected in their participation in the paid labour market. Part time work is often associated with higher levels of unpaid caring work and is highly gendered. For parents whose youngest dependent child was under six, three in five employed mothers worked part time compared to less than one in ten employed fathers ([ABS 2020](#)).

The proportion of men working full time decreased from 95% to 81% between 1978 and 2018. “In this same period, the share of women working full-time fell from around two-thirds to half” ([Cassells et al 2018](#), p viii). While part time work has increased more rapidly among men over the last five years, it is clearly coming from a much lower base ([Carney and Stanford 2018](#), p 7).

Paid Parental Leave arrangements are an important means to maintain workforce attachment, facilitating a return to work after the period of leave. The Commonwealth PPL scheme is inadequate in many respects. Specifically, it needs to be reformed to provide:

- a more generous PPL scheme of up to 26 weeks of PPL to be shared by both partners and
- PPL paid at an average wage, split between the Australian Government and employers

One of the outcomes of the COVID pandemic is likely to be an increased level of flexibility in working patterns, which should facilitate women balancing work and care obligations. **It is critical not to allow the word ‘flexibility’ to confuse employer-defined flexibility with flexibility for workers with family responsibilities. They are very different things.** Women actually need to know when they will be working. They are the family carers. They need to know the minimum they will earn to ensure that the effective marginal tax rate they pay makes financial sense. Flexible hours only benefit women where they have certainty and/or autonomy over their working hours.

However, even accounting for these known factors there remains a gender pay gap that is attributable to discrimination, bias and other factors. [WGEA data](#) show that only around half of all reporting organisations had even conducted a gender pay equity audit over the previous two years, and fewer than half of them took action to rectify any gaps they discovered. The only way to address unconscious and inherent bias in a workplace is to uncover it and to adopt active measures to address the bias.

The NFAW recommends that

- 6) A gender pay audit should be undertaken of all NSW agencies and departments.
- 7) The NSW Government should be a model employer when developing a code in relation to flexible working that extends beyond the current COVID period. This code should ensure that the needs of workers are balanced with business operational requirements to ensure that parents are better able to balance paid work with unpaid care.
- 8) The NSW Government should improve diversity on Government Boards and Committees by proactively searching out nominations and supporting the appointment of women and other underrepresented groups to those bodies.

**c. Improve women's economic security throughout their lifetime.**

The biggest factor in women's economic security is the gender pay gap.

At different stages in a woman's life the issues that she is facing will vary: the issues around parenting are likely to emerge relatively early in a woman's working life, but the economic consequences of reduced workforce participation will persist through to retirement.

The compulsory superannuation guarantee is tied to earnings, accordingly women who earn less over their lifetime will also accumulate less superannuation. Women are more likely than men to take a career break or reduce their working hours to give birth to and care children, and this happens relatively early in their working life. Not only do women lose the value of contributions over this period, but they lose the compound returns on that investment over the period to retirement.

The [Retirement Income Review \(Table 3B-2\)](#) has modelled the effect that caring and part-time work has on superannuation balances. It estimates that the gender superannuation gap for a woman who has worked full time with no career break faces a gender superannuation gap at retirement of 17.4%: this is solely an outcome of lower lifetime pay. This increases with the birth of children and part time work until a woman with two children who has worked part time until the children are both at school faces a superannuation gap at retirement of 44.7%.

The modelling included a scenario where a woman works part time for 12 years from age 55 to 67, to care for a parent. Because that leave was later in life, the effect was similar to that of a woman who worked part time for five years in her 30's, confirming that the effect of career breaks are more significant earlier in working life.

Other issues that affect women disproportionately are marriage breakdown and, for single women in particular, housing. Data show that women are three times as likely to experience poverty after separation and divorce ([BCEC, 2021 Table 8](#)).

We welcome the recent allocation of \$484 m to housing for women escaping family violence. This needs to be extended to increase the supply of social housing for other women and families who are in poverty and unable to find appropriate and affordable accommodation, including those in low paid employment and older women.

- 9) The NFAW recommends that the NSW Government urgently increases the funding for social housing for women in low income households and older women.

## Monitoring and reporting progress

Although this is not within the terms of reference of this committee, it is essential that Gender Responsive Budgeting is adopted in order to ensure that the gender effects of all policies are taken into account when developing and implementing policy.

Fundamentally, in order to understand and apply the policy dimensions of gender responsive budgeting, policymakers need appropriate data that disaggregates policy outcomes by gender.

Gender responsive budgeting requires three stages of analysis to be effective ([Elson, 2002](#)). The first level of analysis is to examine gender based programmes to ensure that they are meeting their required goals. These programmes may be initiatives around violence, health, employment etc. However gender responsive budgeting that focuses on these headline programs runs the risk of failing to identify systemic issues that impact on women differently to men.

The outcomes of these specific measures should be reported in accordance with the Outcomes Framework. There is a tendency for Governments to headline successful programs, but it is important that negative outcomes are also presented so that the community can participate in informed decision making in respect of these initiatives.

The second level of analysis is an examination of expenditure within Government departments to ensure that principles of equal opportunity are implemented within government. Programs to increase the representation of women on government boards and agencies would fall within this category. The most effective way to ensure progress on these indicators is to undertake an audit of employment conditions to identify gender gaps; for example conducting internal gender pay gap audits and reviewing employment contracts and agreements to remove anomalies around work flexibility and parental leave. The outcomes of these audits should be reported as part of the Departmental Annual Reports.

The most challenging level of gender responsive budgeting is assessing mainstream budget initiatives to determine whether the outcome has a gendered outcome, whether intentional or not. This applies to both the revenue and the expenditure side of the budget: for example the effect of consumption taxes will be felt more by women; whereas changes in income taxes are more likely to affect men ([Sadiq and Hodgson, 2017](#)). More prosaically, the design of parking and lighting in proximity to public transport has a gendered dimension that affects women's safety and health.

It is at this level that a more nuanced understanding of the consequences of policy design will pay benefits in improving the status of women.

- |   |
|---|
| 10) The NFAW recommends that the NSW Government adopt gender budgeting processes in the development of policies; expenditure and revenue programs to ensure that the effect on women is taken into account. |
|---|

**We would welcome the opportunity to participate in stakeholder consultation on these issues.**

# Appendix A: Simulations of increased government expenditure in the care sectors

Janine Dixon  
October 15, 2020

## **Key statistics and findings**

1. More than 900 thousand Australians who have unpaid caring responsibilities for young children, the elderly, or people with disabilities would like to work more hours in paid employment. If this could be facilitated by greater provision of government-funded care services, labour supply would increase by over 2 per cent.
2. More than 70 per cent of this additional labour input would be supplied by women, alleviating some of the disadvantage experienced by women in the labour market.
3. Supporting carers with additional government-funded service delivery and higher wage growth in the child care, aged care and disabled care sectors underpins additional economic growth such that GDP in 2030 would be 1.64 per cent higher than it otherwise would have been. This is equivalent to an average of \$1266 per person per year in 2018-19 prices, or more than \$30 billion per year in aggregate.
4. Additional employment and higher wages in the care sector also directly supports women's employment and incomes, as these sectors account for a high proportion of women's employment.
5. This economic growth dividend underpins increased revenue from taxes on income and consumption, offsetting much of the cost to government of increased service delivery (including higher wages) in the care sector. In 2030, we estimate the cost of the additional service delivery to be \$19 billion, yet the additional impact on the government deficit is less than \$3 billion.

# 1 Introduction and background

This note describes two simulations of the Australian economy over the next decade in which government expenditure in the care sectors is increased significantly.

## 2 Methodology and model inputs

### 2.1 Methodology

The simulations are run using VUEF-G, a variant of the Victoria University Employment Forecasting (VUEF) model, a Computable General Equilibrium model of the Australian economy with a detailed representation of the labour market and gender. The model is described in the Appendix.

A key feature of VUEF-G is the modelling of time use by cohort. Cohorts are defined by highest level and field of educational attainment and gender (e.g. “Certificate III-IV, Society and Culture, Female”). Time use for each cohort is divided into paid employment, leisure, and unpaid employment (such as caring for children or elderly relatives or maintaining a household). Cohorts allocate time according to preferences (as revealed in existing time use data derived from the Census), and change their allocation through time according to changes in wages and the cost (or availability) of care services that can replace unpaid employment. By this mechanism, an increase in wages provides an incentive to forgo some leisure time and supply more labour. Similarly, an increase in the user cost of care services creates an incentive for people to forgo paid employment and provide care services themselves, for example, a parent may forgo an additional day per week of paid employment if child care costs increase.

For cohorts with significant time allocated to unpaid employment, the scope to increase employment by greater provision of government-funded care services is large. Across all levels of educational attainment, women allocate more time than men to unpaid employment, and both men and women with lower levels of educational attainment allocate more time to unpaid employment. The time-use theory in VUEF-G uses this information to estimate the labour supply response to provision of additional care services for every cohort. The aggregate impacts for men and women are calibrated to the shocks described in Section 2.2.2.

Model results are generally expressed as percentage deviations from a business-as-usual base case. The base case does not take into account the Covid-19 pandemic.

### 2.2 Model inputs

#### 2.2.1 Expenditure

The key economic shocks are increases in expenditure on the care sectors.

In VUEF, the care sectors are Child Care, Residential Aged Care, Residential Disabled Care and Other Social Assistance (Disabled). Shocks to the quantity of output for each sector are introduced over four years (2021-22 to 2024-25) as set out in Table 1. Over the same time interval, wage increases are applied to two occupations, Child Carers and Personal Carers and Assistants, as set out in Table 1.

To facilitate the rapid increase in output in the care sector, shocks are applied to investment from 2020-21, one year in advance of the shocks to output. This ensures that sufficient capital stocks are in place to support the expansion.

Table 1: Expenditure shocks applied by industry and occupation (%)

	Total increase (over 4 years)	Annual increase
<u>Service delivery by industry</u>		
Child Care	35.0	7.79
Residential Aged Care	8.3	2.02

Residential Disabled Care	8.3	2.02
Other Social Assistance (Disabled)	8.3	2.02
<u>Wage increase by occupation</u>		
Child Carers	21.6	5.0
Personal Carers and Assistants	21.6	5.0

The expansion in output and increase in wage costs are absorbed by an increase in government expenditure. Higher wage costs increase the price of care, which has a negative impact on household (private) consumption of care services. Therefore the expansion in government expenditure covers not only the net expansion of the care sectors, but also replaces some private expenditure.

### 2.2.2 Labour supply

The increase in the care economy is assumed to be government-funded and large enough to remove all impediments to labour market participation experienced by carers in the informal sector. This drives a significant increase in labour supply. The calculation of the shock to labour supply involves determining the number of people for which caring responsibilities act as a barrier to labour force participation, determining a suitable increase in average hours worked if formal care was made available, and converting this into a percentage increase in labour supply.

Shocks to labour supply are calculated using data from the ABS (ABS Cat. No. 6239.0, 2020), in which 923,000 people with caring responsibilities reported that they wanted to work more hours (Table 2). Approximately two-thirds of these are women, and approximately half cared for children under the age of 5.

Informal primary carers for aged and disabled people provide an average of 35.2 hours of care per week (152 hours per month), while non-primary carers provide an average of 10 hours per week (43 hours per month) (Deloitte, 2020). We assume that the increase in supply of formal care relieves primary and non-primary carers of some of their responsibilities and enables them to enter the labour force or increase their hours of formal work. We assume that primary carers increase formal employment by an average of 100 hours per month, and informal carers by 10 hours per month. Around one-third of aged and disabled carers are classified as primary carers (Deloitte, 2020). We assume that people who care for children could increase their employment by 40 hours per month if sufficient child care was available.

Based on these assumptions, an additional 37 million hours of labour would be supplied per month, of which 27 million would be supplied by women. This is equivalent to an increase in overall labour supply of 2.06 per cent. Labour supply increases for both men and women: Men's labour supply increases by 0.93 per cent and women's by 3.74 per cent.

The increases in labour supply are treated as shocks to the VUEF-G model, and introduced over four years (2021-22 to 2024-25) alongside the increases in expenditure on the care sectors.

Table 2: Labour supply impacts

	Male	Female	Persons
<u>People who want to work more hours ('000 persons)</u>			
Cared for someone with a long-term illness or disability	106	152	258
Cared for an elderly person	78	142	219
Youngest child aged under 5	108	337	446
Total	292	631	923
<u>Additional hours supplied per person per month if sufficient care available (assumed)</u>			
Aged/disabled primary carer	100	100	100

Aged/disabled non-primary carer	10	10	10
Child carer	40	40	40
Percentage of aged/disabled carers who are primary carers	21	41	32
<u>Economy-wide aggregates</u>			
Total additional hours supplied per month (million)	10	27	37
Average monthly hours worked, 2018-19 (million)	1044	726	1770
Percentage increase	0.93	3.74	2.06

### 2.2.3 Other macro settings

The shocks as described are run in two macroeconomic environments. In both cases, standard CGE macroeconomic settings apply: household consumption is a fixed proportion of household income, government consumption expenditure (other than on the caring sectors) is fixed to the baseline, and real wages adjust slowly to return the unemployment rate to the baseline.

In **Scenario 1**, the increase in government expenditure on the caring sectors is deficit-financed, with no explicit policy measures taken to recover the deficit.

In **Scenario 2**, the increase in government expenditure on the caring sectors is offset by a reduction in government-funded investment in infrastructure.

### 2.2.4 Limitations

The modelling provides insights into the macroeconomy and the household sector as a whole, but does not differentiate between individuals or households by income. The key finding that greater availability of government-funded care services will have a positive impact on labour supply, is of a general nature, and we make no recommendations about the distribution of these services. The existing childcare subsidy scheme is particularly complex and creates strong disincentives to work for individuals (usually mothers) in some families. Recommendations on how to simplify this system and remove these disincentives (see for example KPMG, 2020) are not able to be derived from the CGE model.

## 3 Results and Discussion

### 3.1 Scenario 1

The increase in labour supply facilitated by additional supply of caring services is absorbed gradually by the market. By 2026, labour supply is 2.24% above the base case, and employment is 1.85% above base case, with female employment accounting for the majority of the increase (Figure 1). After 2026, labour supply stops increasing and employment gradually catches up (unemployment returns to base case level).

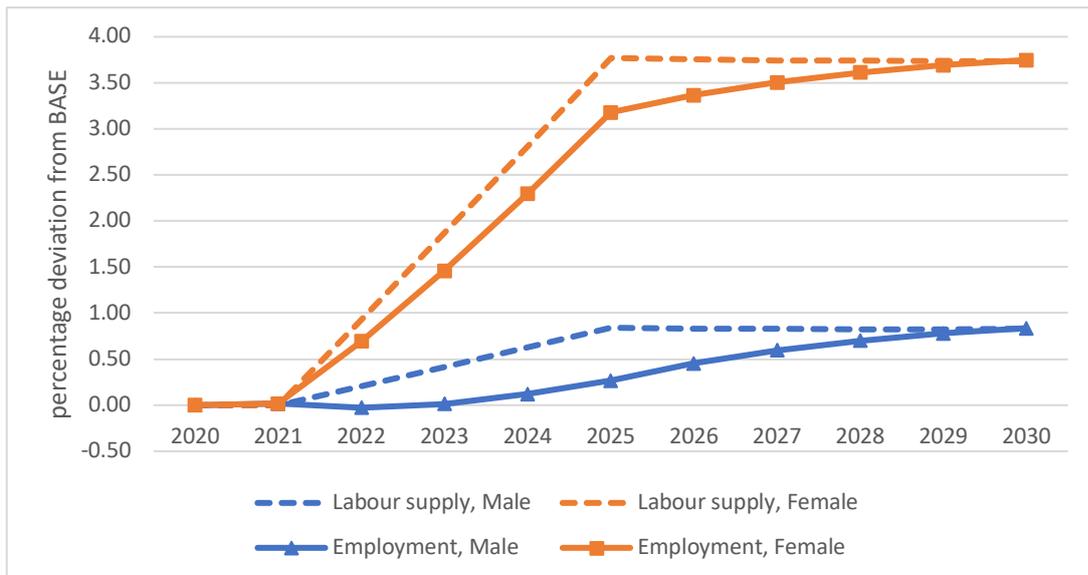


Figure 1: Employment and labour supply impacts, Scenario 1

The increase in labour supply causes slower overall wage growth (notwithstanding specific increases imposed on some occupations) but the net impact on labour income (higher employment and lower wages) is positive. There is a very slight slowing of income growth for males, and a strong increase in income growth for females (Figure 2).

Beneficiaries under the scenario include people who are relieved of some caring responsibilities and can work more hours, thus earning more income, and business owners, who can access a greater pool of labour. On the other hand, people who were already employed will experience slower wage growth than they otherwise would have. Overall stronger income growth underpins higher tax collections on income and consumption.

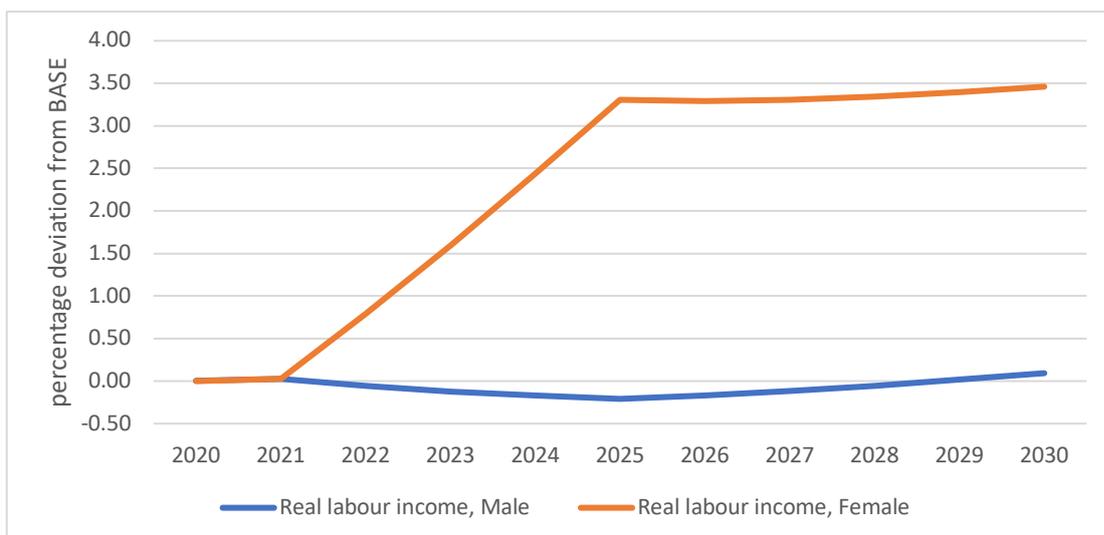


Figure 2: Impact on real labour income, Scenario 1

The increase in employment strengthens GDP growth, which remains at around 1.25 per cent above the base case from 2025 (Figure 3). Public expenditure, which includes the large additional expenditure on the care sector, grows more quickly than GDP, thus increasing its overall share of

GDP. This is offset by slower export growth. Growth in household spending and investment follow a similar trajectory to GDP. Household spending is supported by stronger income growth, while investment is stimulated by the need to create more capital stocks to support the expansion in the caring sector and more widely as a response to the larger labour supply.

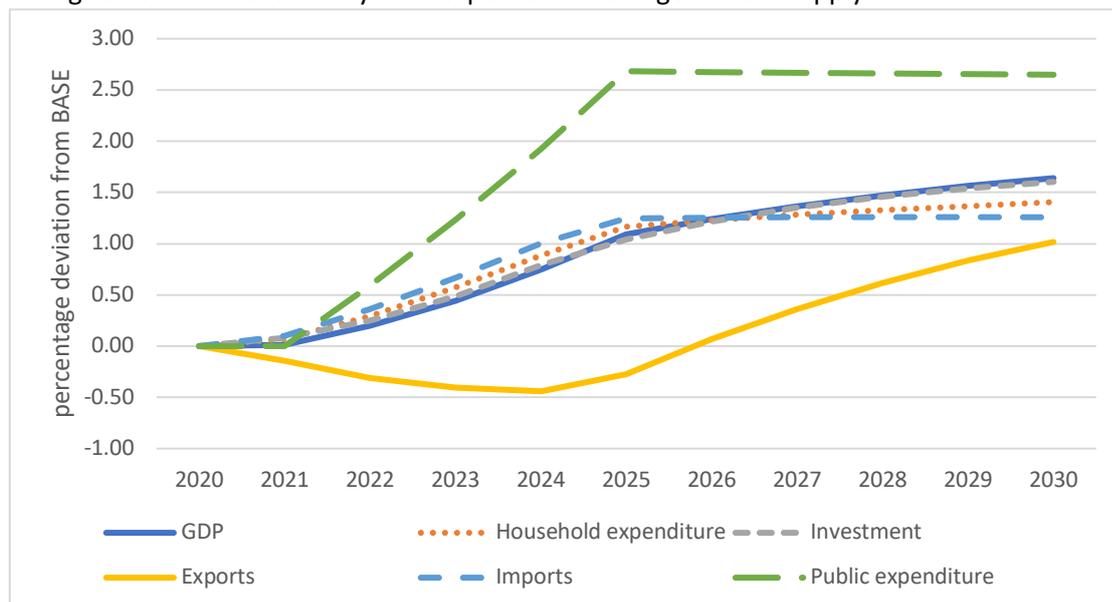


Figure 3: GDP and macroeconomic expenditure impacts, Scenario 1

All industries expand relative to the base case by 2030, but at differing rates (Figure 4). The expansion in Health care and social assistance is well above average, as this sector includes child care and aged and disabled care. Expansion in most other sectors is in the range of 1.5 to 1.75 per cent by 2030, with some exceptions. With strong domestic expenditure, the domestic currency strengthens, which makes trade-exposed industries (those that export or compete with imports, i.e. agriculture, mining, manufacturing, tourism and education) less competitive. Mining expands very little, being trade-exposed and capital-intensive (poorly positioned to take advantage of additional labour supply). Public Administration and Defence expands very little, as policy settings in respect of government expenditure on these activities are assumed not to deviate from the base case.

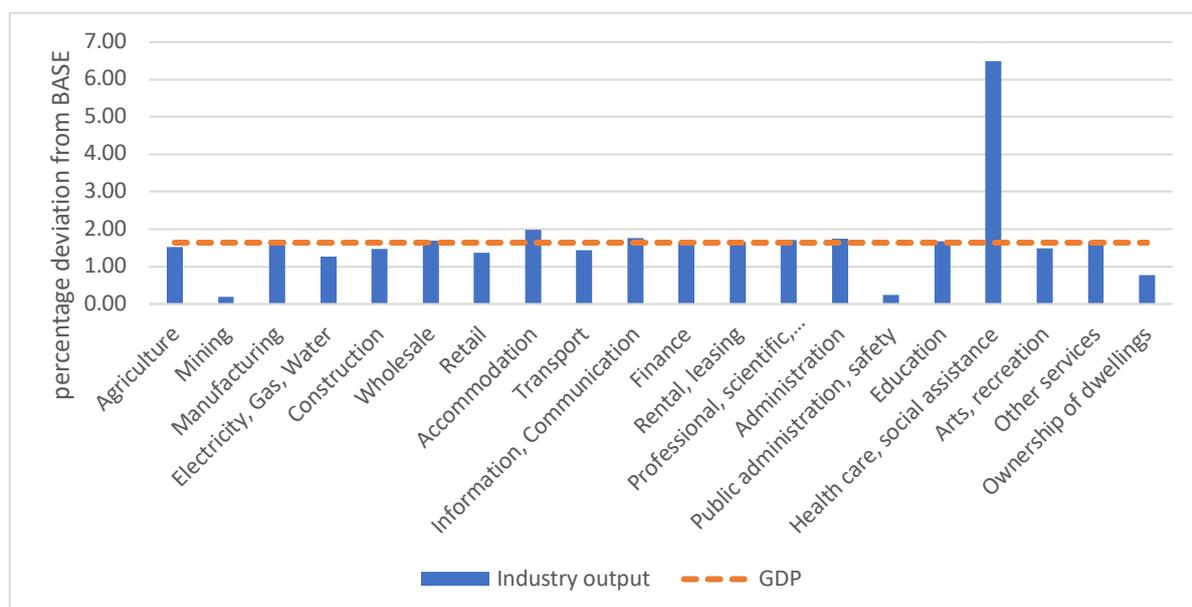


Figure 4: Impact on industry output, 2030, Scenario 1

The additional spending on care services leads to higher budget deficits over the ten-year forecast period (Figure 5). Over 2022-25, the years in which the spending is brought in, the negative impact on budget deficits increases each year, to just below \$7 billion in 2025. After 2025, economic growth and the associated tax revenues begin to offset an increasing proportion of the additional care expenditure. By 2030, the deficit is less than \$3 billion larger than it otherwise would have been, while the cost of the additional service delivery is almost \$19 billion.

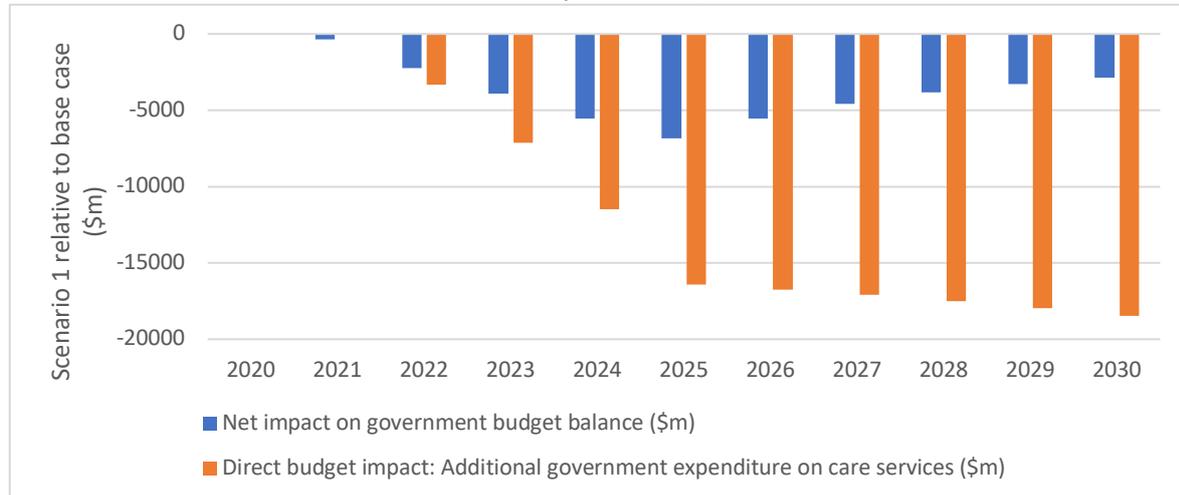


Figure 5: Impact on government budget balance relative to base case (\$m), Scenario 1

### 3.2 Scenario 2

In Scenario 2, the budgetary cost of the additional expenditure on care is offset by a reduction in government expenditure on infrastructure investment. The overall results are very similar to Scenario 1.

Despite the reduction in government-funded infrastructure investment, the impact on aggregate investment is still positive in Scenario 2, albeit smaller than in Scenario 1 (Figure 6). This detracts only slightly from GDP growth.

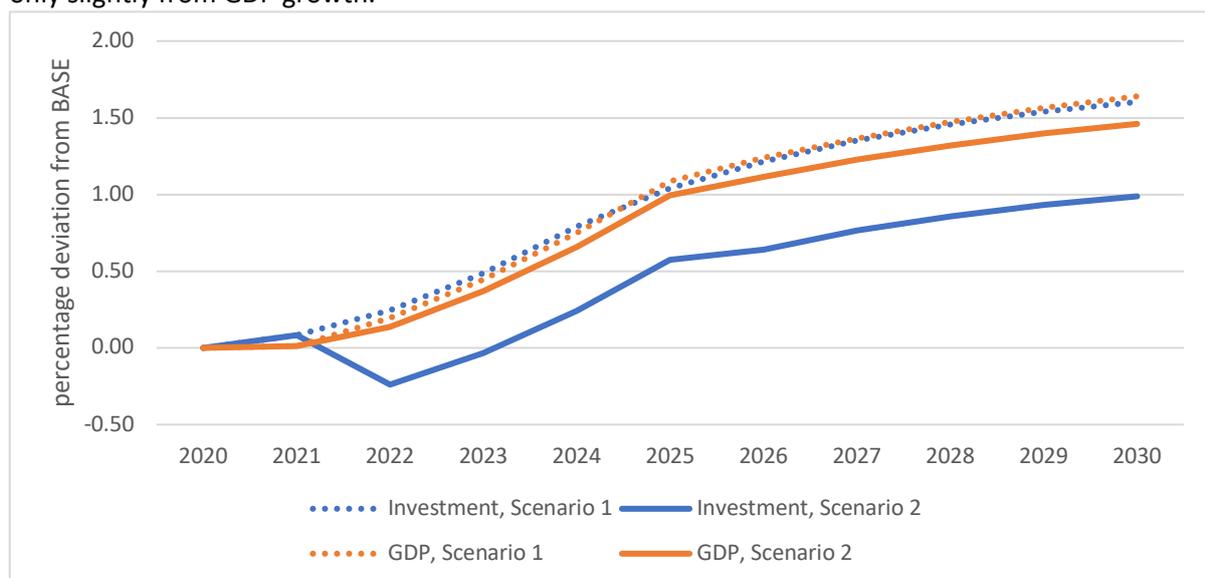


Figure 6: Comparison of GDP and Investment impacts, Scenario 1 and Scenario 2

Industry impacts are similar except there is a notable difference in output in the Construction sector (Figure 7).

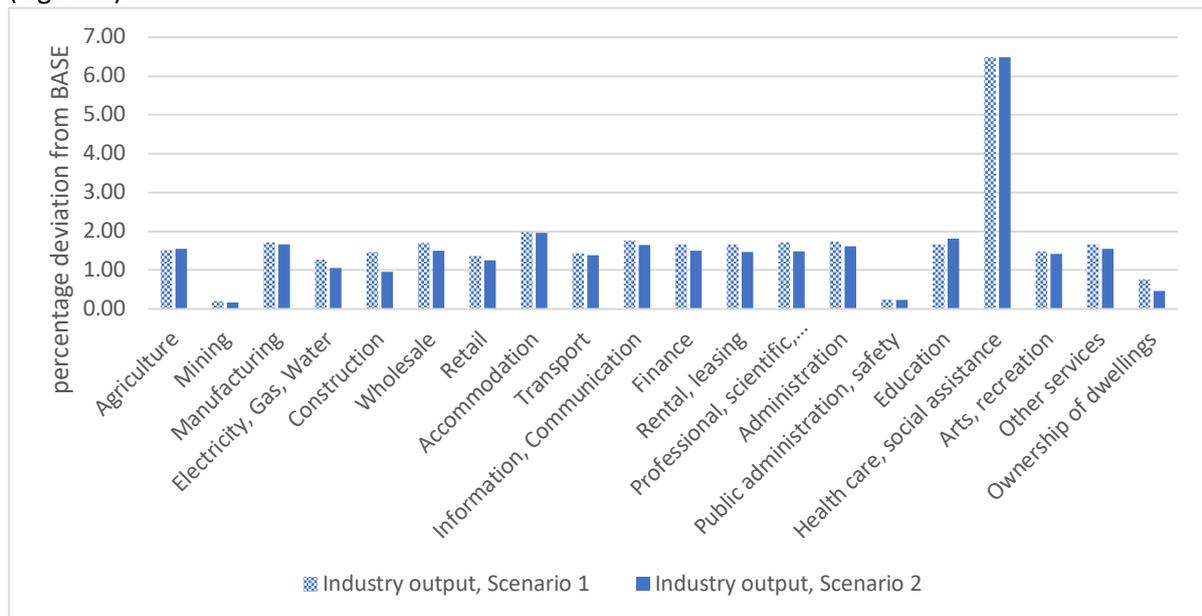


Figure 7: Impact on industry output, 2030, Scenarios 1 and 2

Unlike Scenario 1, in which the government deficit is greater than the base case throughout the simulation period, in Scenario 2, the average deficit is approximately the same as the base case average (Figure 8).

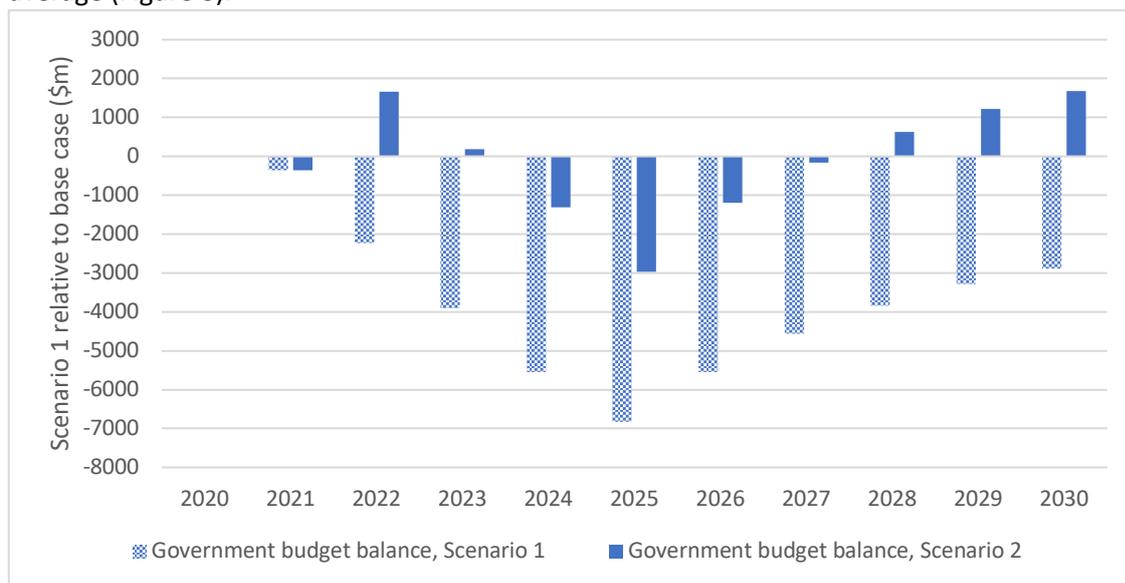


Figure 8: Impact on government budget balance relative to base case (\$m), Scenarios 1 and 2

## 4 Conclusions

An increase in expenditure on care services delivers clear economic benefits and helps to alleviate female economic disadvantage. Spending on care services delivers a double dividend, of job creation in the care sector, and positive labour supply impacts for over 900 thousand Australians who perform unpaid work caring for the elderly, disabled and children. More than 70 per cent of the labour supply impact benefits women.

The economic growth derived from additional employment underpins an increase in budget revenue that offsets much of the cost to government of increased service delivery. An option for achieving a complete offset of the costs of the additional service delivery is to reduce government spending on infrastructure. This option leads to smaller impacts on investment and construction activity, nonetheless the impacts are still positive, as is the overall outcome for GDP and employment.

## 5 References

- ABS. (2020). *Barriers and Incentives to Labour Force Participation, Australia, 2018-2019, Cat. No. 6239.0*. Australian Bureau of Statistics.
- Adams, P., Dixon, J. M., & Horridge, J. M. (2015). The Victoria University Regional Model (VURM): Technical Documentation, Version 1.0 . *Centre of Policy Studies Working Paper G-254*.
- Deloitte Access Economics. (2020). *The value of informal care in 2020*.
- Dixon, J. M., & Nassios, J. (2020). *Evaluating gender impacts in employment: A CGE framework for policy makers*. available from authors.
- Dixon, P. B., & Rimmer, M. T. (2002). *Dynamic General Equilibrium Modelling for Forecasting and Policy: A Practical Guide and Documentation of MONASH*. North Holland Publishing Company.
- Horridge, J. M., Jerie, M., Mustakinov, D., & Schiffmann, F. (2018). GEMPACK manual, GEMPACK Software. *Centre of Policy Studies, Victoria University, Melbourne*, ISBN 978-1-921654-34-3.
- KPMG. (2020). *The child care subsidy: Options for increasing support for caregivers who want to work*. <https://assets.kpmg/content/dam/kpmg/au/pdf/2020/kpmg-child-care-subsidy-report.pdf>.

## 6 Tables

Note – in all tables, “2020” refers to the year ending June 30, 2020 (financial year).

Table 3: Scenario 1 Macro results (percentage deviation from base case unless otherwise stated)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Macro aggregates</b>											
<b>GDP</b>	0.00	0.01	0.20	0.45	0.75	1.09	1.24	1.37	1.47	1.56	1.64
<b>Household expenditure</b>	0.00	0.07	0.29	0.57	0.89	1.17	1.23	1.28	1.33	1.37	1.41
<b>Investment</b>	0.00	0.08	0.25	0.49	0.79	1.04	1.21	1.35	1.46	1.54	1.60
<b>Exports</b>	0.00	-0.14	-0.31	-0.41	-0.44	-0.27	0.07	0.36	0.62	0.83	1.02
<b>Imports</b>	0.00	0.10	0.36	0.67	1.00	1.25	1.26	1.26	1.26	1.26	1.26
<b>Public expenditure</b>	0.00	0.00	0.59	1.23	1.93	2.68	2.67	2.67	2.66	2.66	2.65
<b>Labour supply</b>											
<b>Male</b>	0.00	0.00	0.21	0.42	0.63	0.84	0.83	0.83	0.83	0.83	0.83
<b>Female</b>	0.00	0.00	0.93	1.87	2.81	3.77	3.75	3.75	3.74	3.74	3.74
<b>Persons</b>	0.00	0.00	0.55	1.11	1.68	2.25	2.24	2.23	2.22	2.22	2.22
<b>Employment</b>											
<b>Male</b>	0.00	0.02	-0.03	0.01	0.12	0.27	0.45	0.59	0.70	0.78	0.84
<b>Female</b>	0.00	0.02	0.69	1.46	2.30	3.18	3.36	3.51	3.61	3.69	3.75
<b>Persons</b>	0.00	0.02	0.32	0.71	1.17	1.67	1.85	1.99	2.10	2.18	2.23
<b>Labour income</b>											
<b>Male</b>	0.00	0.03	-0.06	-0.13	-0.17	-0.21	-0.17	-0.12	-0.05	0.02	0.09
<b>Female</b>	0.00	0.02	0.79	1.59	2.44	3.31	3.29	3.31	3.35	3.40	3.46
<b>Persons</b>	0.00	0.03	0.35	0.70	1.08	1.48	1.49	1.53	1.58	1.64	1.71
<b>Government budget balance (\$m)</b>	0	-360	-2228	-3904	-5540	-6827	-5543	-4570	-3836	-3288	-2882

Table 4: Scenario 1: Industry results (percentage deviation from base case)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Industry output</b>											
<b>Agriculture</b>	0.00	-0.05	0.01	0.14	0.33	0.63	0.89	1.10	1.27	1.41	1.52
<b>Mining</b>	0.00	-0.03	-0.08	-0.12	-0.16	-0.16	-0.11	-0.04	0.03	0.12	0.20
<b>Manufacturing</b>	0.00	-0.05	0.00	0.13	0.34	0.66	0.95	1.20	1.41	1.58	1.72
<b>Electricity, Gas, Water</b>	0.00	0.01	0.10	0.24	0.43	0.66	0.82	0.96	1.08	1.18	1.27
<b>Construction</b>	0.00	0.05	0.17	0.36	0.61	0.84	1.02	1.17	1.29	1.39	1.47
<b>Wholesale</b>	0.00	0.02	0.18	0.41	0.71	1.04	1.23	1.39	1.51	1.61	1.70
<b>Retail</b>	0.00	0.06	0.30	0.58	0.91	1.20	1.25	1.29	1.32	1.35	1.37
<b>Accommodation</b>	0.00	-0.02	0.12	0.35	0.65	1.04	1.30	1.52	1.70	1.85	1.98
<b>Transport</b>	0.00	-0.03	0.03	0.17	0.36	0.64	0.86	1.04	1.20	1.33	1.44
<b>Information, Communication</b>	0.00	-0.01	0.14	0.37	0.66	1.01	1.23	1.41	1.55	1.66	1.76
<b>Finance</b>	0.00	0.02	0.18	0.41	0.71	1.03	1.21	1.36	1.48	1.58	1.67
<b>Rental, leasing</b>	0.00	0.00	0.15	0.37	0.65	0.97	1.17	1.33	1.47	1.57	1.66
<b>Professional, scientific, technical services</b>	0.00	0.02	0.16	0.38	0.67	0.98	1.21	1.38	1.52	1.63	1.72
<b>Administration</b>	0.00	-0.01	0.14	0.36	0.65	1.00	1.22	1.39	1.53	1.65	1.74
<b>Public administration, safety</b>	0.00	0.00	0.03	0.07	0.12	0.17	0.20	0.21	0.23	0.24	0.25
<b>Education</b>	0.00	-0.10	-0.13	-0.05	0.11	0.43	0.81	1.11	1.35	1.53	1.67
<b>Health care, social assistance</b>	0.00	0.02	1.43	2.95	4.59	6.35	6.40	6.44	6.46	6.48	6.49
<b>Arts, recreation</b>	0.00	0.02	0.20	0.44	0.73	1.03	1.17	1.28	1.36	1.43	1.49
<b>Other services</b>	0.00	0.03	0.22	0.48	0.80	1.14	1.30	1.43	1.53	1.61	1.67
<b>Ownership of dwellings</b>	0.00	0.00	0.01	0.03	0.09	0.18	0.29	0.41	0.53	0.65	0.77

Table 5: Scenario 2: Macro results (percentage deviation from base case unless otherwise stated)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b><u>Macro aggregates</u></b>											
<b>GDP</b>	0.00	0.01	0.14	0.37	0.66	0.99	1.11	1.23	1.32	1.40	1.46
<b>Household expenditure</b>	0.00	0.07	0.00	0.34	0.69	1.06	1.06	1.12	1.17	1.21	1.25
<b>Investment</b>	0.00	0.08	-0.24	-0.03	0.24	0.57	0.64	0.76	0.86	0.93	0.99
<b>Exports</b>	0.00	-0.14	0.38	0.20	0.09	0.04	0.46	0.70	0.90	1.07	1.22
<b>Imports</b>	0.00	0.10	-0.21	0.18	0.56	0.96	0.87	0.90	0.91	0.93	0.94
<b>Public expenditure</b>	0.00	0.00	0.60	1.24	1.93	2.69	2.67	2.66	2.66	2.65	2.65
<b><u>Labour supply</u></b>											
<b>Male</b>	0.00	0.00	0.20	0.41	0.62	0.83	0.82	0.82	0.81	0.81	0.81
<b>Female</b>	0.00	0.00	0.93	1.86	2.81	3.76	3.74	3.73	3.73	3.72	3.72
<b>Persons</b>	0.00	0.00	0.55	1.11	1.67	2.24	2.22	2.22	2.21	2.21	2.21
<b><u>Employment</u></b>											
<b>Male</b>	0.00	0.02	-0.11	-0.06	0.06	0.23	0.39	0.54	0.64	0.72	0.78
<b>Female</b>	0.00	0.02	0.61	1.39	2.23	3.14	3.30	3.44	3.55	3.63	3.69
<b>Persons</b>	0.00	0.02	0.23	0.64	1.10	1.63	1.79	1.93	2.04	2.12	2.18
<b><u>Labour income</u></b>											
<b>Male</b>	0.00	0.03	-0.21	-0.30	-0.36	-0.39	-0.41	-0.37	-0.33	-0.28	-0.23
<b>Female</b>	0.00	0.02	0.68	1.46	2.28	3.16	3.09	3.08	3.10	3.13	3.17
<b>Persons</b>	0.00	0.03	0.22	0.55	0.91	1.32	1.27	1.29	1.32	1.36	1.41
<b>Government budget balance (\$m)</b>	0	-360	1667	186	-1318	-2963	-1204	-165	622	1218	1670

Table 6: Scenario 2 Industry results (percentage deviation from base case)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Industry output</b>											
<b>Agriculture</b>	0.00	-0.05	0.23	0.32	0.48	0.70	0.98	1.16	1.32	1.44	1.54
<b>Mining</b>	0.00	-0.03	0.05	0.03	-0.01	-0.06	-0.02	0.02	0.07	0.12	0.17
<b>Manufacturing</b>	0.00	-0.05	0.21	0.30	0.46	0.69	1.00	1.22	1.40	1.54	1.66
<b>Electricity, Gas, Water</b>	0.00	0.01	0.05	0.17	0.34	0.56	0.68	0.80	0.90	0.99	1.06
<b>Construction</b>	0.00	0.05	-0.07	0.05	0.24	0.50	0.60	0.72	0.82	0.90	0.97
<b>Wholesale</b>	0.00	0.02	0.02	0.27	0.57	0.91	1.07	1.22	1.34	1.43	1.51
<b>Retail</b>	0.00	0.06	0.00	0.35	0.72	1.10	1.09	1.15	1.19	1.22	1.25
<b>Accommodation</b>	0.00	-0.02	0.21	0.44	0.73	1.08	1.34	1.55	1.71	1.85	1.96
<b>Transport</b>	0.00	-0.03	0.17	0.29	0.45	0.67	0.89	1.06	1.19	1.30	1.39
<b>Information, Communication</b>	0.00	-0.01	0.15	0.37	0.65	0.98	1.18	1.34	1.47	1.57	1.66
<b>Finance</b>	0.00	0.02	0.09	0.33	0.61	0.94	1.09	1.23	1.34	1.43	1.50
<b>Rental, leasing</b>	0.00	0.00	0.11	0.31	0.56	0.86	1.04	1.18	1.30	1.39	1.47
<b>Professional, scientific, technical services</b>	0.00	0.02	0.06	0.25	0.52	0.84	1.02	1.18	1.31	1.40	1.48
<b>Administration</b>	0.00	-0.01	0.16	0.36	0.62	0.94	1.15	1.31	1.43	1.53	1.61
<b>Public administration, safety</b>	0.00	0.00	0.03	0.07	0.11	0.16	0.18	0.20	0.21	0.22	0.23
<b>Education</b>	0.00	-0.10	0.32	0.33	0.43	0.60	1.05	1.32	1.53	1.70	1.82
<b>Health care, social assistance</b>	0.00	0.02	1.37	2.91	4.56	6.33	6.38	6.42	6.45	6.47	6.48
<b>Arts, recreation</b>	0.00	0.02	0.09	0.36	0.67	1.00	1.11	1.22	1.30	1.37	1.43
<b>Other services</b>	0.00	0.03	0.09	0.38	0.71	1.08	1.20	1.33	1.42	1.50	1.56
<b>Ownership of dwellings</b>	0.00	0.00	0.01	-0.01	0.00	0.05	0.13	0.21	0.29	0.38	0.47

## 7 Appendix: VUEF-G

VUEF-G is a variant of the VUEF model which adds a gender dimension to the existing labour market modelling framework (J.Dixon and Nassios, 2020). We formulate labour supply in a labour-leisure framework in which we also introduce home-produced domestic services (“housework”), which covers activities such as cleaning, cooking, and caring for family members, particularly children. We assume that households choose leisure, domestic services and consumption to maximise utility subject to three constraints: (i) a time constraint on total labour, leisure and housework; (ii) a budget constraint equating household wage income to expenditure on consumption (other than domestic services) and purchased domestic services (such as childcare); and, (iii) a production constraint for domestic services, which are a combination of home-produced and purchased domestic services. VUEF-G contains all the features of a standard MONASH – style dynamic CGE model [P. Dixon and Rimmer (2002)], namely:

1. equations describing demand for domestic and imported goods and services by industries, investors, households, government and the rest of the world;
2. equations describing demand for factors of production by industries;
3. market clearing conditions for all goods and services and factors of production;
4. zero pure profit conditions determining basic prices of goods and services;
5. equations linking basic and purchaser prices through taxes and margins;
6. equations linking industry-specific capital supply to investment;
7. equations linking investment by industry to expected rates of return; and
8. equations to ensure that wage adjustment is sticky.

These equations are described in detail in many references including P. Dixon and Rimmer (2002) and Adams et al (2015).

VUEF adds to the standard MONASH framework a detailed specification for labour supply. In VUEF, the working-age population is disaggregated into many skill groups. Each skill group chooses its occupational composition of employment by maximising wage income subject to a transformation frontier.

VUEF therefore adds to the standard CGE framework a method for determining occupational employment and wages. However, participation and unemployment rates by skill group are typically exogenous, or simply indexed to their national equivalents. This treatment fails to acknowledge the likelihood that labour supply is more elastic among part time workers, particularly women. VUEF-G addresses this gap by formalizing the differences in time use between men and women.

VUEF-G comprises a large system of non-linear equations which is solved in the GEMPACK software (Horridge et al, 2018).