

Appendix A: Parameters and further information

This appendix provides information on the parameters used in producing this Budget Paper.

Budget Paper No. 1, *Budget Strategy and Outlook 2023–24, Statement 2: Economic Outlook* provides information on the forecasting approach used in the 2023–24 Budget.

Population

Population data are used to distribute funding between the state and territory governments (states) and in the calculation of annual growth factors. The population projections are produced by the Treasury Centre for Population (the Centre).

Estimates of state populations

State population projections are constructed using the latest demographic data and incorporate assumptions regarding fertility, mortality, net overseas migration and net interstate migration.

The Centre estimates population and components of change on a financial year basis. Projected population for the mid-point of the financial year (31 December, Table A.1) is the simple average of the population at the beginning and end of the financial year (Table A.2).

Table A.1: Population by state, at 31 December

million	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total(a)	Australia
2022	8.228	6.700	5.384	2.818	1.835	0.575	0.462	0.252	26.253	26.258
2023	8.362	6.854	5.486	2.872	1.860	0.581	0.471	0.256	26.743	26.748
2024	8.476	6.993	5.574	2.918	1.880	0.589	0.480	0.260	27.170	27.175
2025	8.580	7.122	5.657	2.963	1.899	0.596	0.490	0.264	27.571	27.576
2026	8.683	7.250	5.740	3.008	1.917	0.603	0.500	0.268	27.969	27.974

a) 'Total' is the sum of the states and territories shown, and excludes Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.

Table A.2: Population by state, at 30 June

million	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total(a)	Australia
2021-22	8.156	6.620	5.327	2.788	1.822	0.572	0.457	0.251	25.991	25.996
2022-23	8.300	6.780	5.441	2.847	1.849	0.578	0.466	0.254	26.516	26.520
2023-24	8.423	6.929	5.532	2.896	1.871	0.585	0.476	0.258	26.970	26.975
2024-25	8.528	7.057	5.616	2.941	1.890	0.592	0.485	0.262	27.371	27.376
2025-26	8.631	7.186	5.699	2.985	1.908	0.599	0.495	0.266	27.770	27.775
2026-27	8.734	7.314	5.782	3.030	1.927	0.607	0.505	0.270	28.168	28.172

a) 'Total' is the sum of the states and territories shown, and excludes Jervis Bay Territory, Christmas Island, the Cocos (Keeling) Islands and Norfolk Island.

Fertility

Assumptions about the fertility rate are based on analysis undertaken and commissioned by the Centre (Table A.3). The total fertility rate is assumed to be 1.66 babies per woman in 2022–23 before falling to 1.64 by 2026–27. Projected state fertility rates are assumed to move in line with the national fertility rate.

Table A.3: Total fertility rate, for years ending 30 June

	2021-22(a)	2022-23	2023-24	2024-25	2025-26	2026-27
Total fertility rate, Australia	1.69	1.66	1.66	1.65	1.65	1.64

a) Outcome for 2021–22, from ABS National, state and territory population, September 2022.

Mortality

Assumptions about life expectancy at birth are based on the Australian Government Actuary mortality improvement factors and the 2019–2021 Australian Bureau of Statistics life tables (Table A.4). Life expectancies are informed by future mortality rates, which have been adjusted in 2021–22 and 2022–23 to account for the impact of COVID-19. Life expectancies are then assumed to improve at the same average annual rate that has been observed over the past 3 decades. Projected state mortality rates are assumed to move in line with the national mortality rates.

Table A.4: Projected life expectancy at birth, for years ending 30 June

	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Male life expectancy at birth, Australia	81.1	81.3	82.0	82.2	82.4	82.5
Female life expectancy at birth, Australia	85.1	85.2	85.9	86.0	86.1	86.3

Net overseas migration

Forecasts for net overseas migration are produced by the Centre (Table A.5). The forecasts incorporate information provided by the Department of Home Affairs, including data on international arrivals and departures, offshore visa grants, and the number of temporary visa holders present in Australia. Box 2.2 in Budget Paper No. 1, *Budget Strategy and Outlook 2023–24, Statement 2: Economic Outlook* provides further detail on the net overseas migration forecasts.

Table A.5: Net overseas migration, for years ending 30 June

	2021-22(a)	2022-23	2023-24	2024-25	2025-26	2026-27
Net overseas migration, Australia	184,000	400,000	315,000	260,000	260,000	260,000

a) Outcome for 2021–22, from ABS National, state and territory population, September 2022.

Interstate migration

Assumptions about future net interstate migration are produced by the Centre (Table A.6). Assumptions are modelled using historical interstate movements data supplied by the Australian Bureau of Statistics. They are also informed by recent population revisions to account for data from the 2021 Census and analysis of economic factors associated with interstate migration.

Table A.6: Net interstate migration by state, for years ending 30 June

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
2021-22(a)	-43,500	-17,200	55,400	10,800	1,000	-200	-3,300	-3,000
2022-23	-30,100	-2,000	28,900	4,100	-800	900	0	-1,200
2023-24	-23,300	3,200	21,000	1,000	-3,200	1,200	900	-800
2024-25	-23,500	2,800	21,400	1,000	-3,100	1,300	900	-800
2025-26	-23,600	2,400	21,700	1,000	-3,000	1,400	900	-800
2026-27	-23,600	2,000	21,900	900	-2,900	1,500	800	-800

a) Outcome for 2021–22, from ABS National, state and territory population, September 2022. There was an increase in recorded interstate moves in 2021, with the COVID-19 vaccination program affecting Medicare address data used to calculate interstate moves.

Wage cost indices

Table A.7 shows estimated growth in the wage cost indices used in this Budget Paper, rounded to the nearest quarter of a per cent.

Table A.7: Wage cost indices

Per cent	2022–23	2023–24	2024–25	2025–26	2026–27
Wage cost index – 1	1 3/4	3 1/2	3 1/4	2 1/2	2
Wage cost index – 3	2	4 1/2	3 1/2	2 1/2	2
Wage cost index – 6	2 1/2	5 1/2	3 1/2	2 3/4	2 1/4

Data sources

The information in Appendix B and Appendix C of this Budget Paper is consistent with the ABS Government Finance Statistics reporting framework for the public sector.

Australian Government data are sourced from the Australian Government Consolidated Financial Statements, Australian Government Final Budget Outcomes, and ABS Government Finance Statistics. See Budget Paper No. 1, *Budget Strategy and Outlook 2023–24 Statement 10: Australian Government Budget Financial Statements*, and *Statement 11: Historical Australian Government Data*, for more information.

Further information

Several publications of the ABS and academics also provide information that is relevant to analysing federal financial relations data, including:

- *National, state and territory population*
- *Overseas Arrivals and Departures, Australia*
- *Migration, Australia*
- *Births, Australia*
- *Life tables*
- *Deaths, Australia*
- *Taxation Revenue, Australia*
- *Government Finance Statistics, Australia*
- *Australian System of Government Finance Statistics – Concepts, Sources and Methods*
- Information Paper: *Developments in Government Finance Statistics*
- Information Paper: *Accruals Based Government Finance Statistics*
- McDonald, P (2020), *A Projection of Australia's Future Fertility Rates*, Centre for Population Research Paper, Australian Government, Canberra.

Commonwealth Grants Commission publications provide information about the distribution of GST revenue. In relation to the 2023–24 financial year, the most relevant publication is the report *GST Revenue Sharing Relativities – 2023 Update*.