

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 2019–20, Statement 2: Economic Outlook*, provides information on the forecasting approach used in the 2019–20 Budget.

POPULATION

Population data are used to distribute funding between the states and in the calculation of annual growth factors.

Estimates of state populations

Table A.1 sets out the state population series used in this Budget Paper.

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

million	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
2018	8.048	6.531	5.052	2.607	1.743	0.531	0.425	0.247	25.182
2019	8.189	6.690	5.136	2.630	1.756	0.537	0.434	0.248	25.621
2020	8.335	6.853	5.223	2.654	1.770	0.543	0.443	0.250	26.070
2021	8.483	7.017	5.311	2.677	1.784	0.548	0.453	0.251	26.525
2022	8.632	7.183	5.399	2.700	1.798	0.554	0.462	0.253	26.981

The state populations for 2018 to 2022 are Treasury estimates as at 31 December in the relevant year. They are constructed using the latest demographic data available from the Australian Bureau of Statistics (ABS) and assumptions on fertility, mortality, net overseas migration and interstate migration.

Fertility

The total fertility rate is assumed to be 1.781 babies per woman in 2018, and is assumed to rise to 1.900 babies by 2021 and remain stable for the rest of the projection period. These assumptions are consistent with those in the *2015 Intergenerational Report*.

Mortality

The mortality assumptions are based on the medium assumptions used in the ABS *Population Projections, Australia, 2017-2066* (cat. no. 3222.0). Life expectancy is projected to improve over time, but at a declining rate. The difference between life expectancies across the states and territories is assumed to persist.

Net overseas migration

Table A.2 shows the net overseas migration assumptions used in this Budget Paper.

Table A.2: Net overseas migration

	2018	2019	2020	2021	2022
Net overseas migration, Australia	259,600	271,700	271,300	267,600	263,800

State shares of net overseas migration are estimated by using a weighted average of the three most recent observed years – 2015, 2016 and 2017 – with weights of one, two and four respectively.

Interstate migration

Table A.3 shows the net interstate migration assumptions used in this Budget Paper.

Table A.3: Net interstate migration

million	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
2019	-16,000	16,800	18,400	-12,000	-6,500	1,500	700	-2,900	-
2020	-16,000	16,800	18,400	-12,000	-6,500	1,500	700	-2,900	-
2021	-16,000	16,800	18,400	-12,000	-6,500	1,500	700	-2,900	-
2022	-16,000	16,800	18,400	-12,000	-6,500	1,500	700	-2,900	-

Similar to state shares of net overseas migration, these estimates of migration are based on a weighted average of the three most recent observed years – 2015, 2016 and 2017 – with weights of one, two and four respectively. Due to data lags, the 2018 observation includes assumptions for the September and December quarters based on weighted averages of arrivals and departures for the respective September and December quarters in 2015 to 2017.

WAGE COST INDICES

Table A.4 shows estimated growth in the wage cost indices used in this Budget Paper, rounded to the nearest quarter of a per cent.

Table A.4: Wage cost indices

per cent	2018-19	2019-20	2020-21	2021-22	2022-23
Wage cost index - 1	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Wage cost index - 6	1 1/2	1 1/2	2	2	1 3/4

DATA SOURCES

The information in Part 4, 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 Final Budget Outcomes, ABS, and Australian Government Consolidated Financial Statements. See Budget Paper No. 1, *Budget Strategy and Outlook 2019–20, Statement 10: Historical Australian Government Data*, for more information.

State data for 2017-18 onwards are from the most recent publicly available state financial reports (states' 2017-18 final budget outcomes, 2018-19 mid-year financial reports and *NSW 2019 Pre-election Budget Update*). State data for years prior to 2017-18 are sourced from the ABS. Where ABS data is not available, estimates from states' annual financial reports have been used.

FURTHER INFORMATION

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

- *Australian Demographic Statistics* (cat. no. 3101.0);
- *Overseas Arrivals and Departures, Australia* (cat. No 3401.0);
- *Population Projections, 2017–2066* (cat. no. 3222.0);
- *Taxation Revenue, Australia* (cat. no. 5506.0);
- *Government Finance Statistics, Australia* (cat. no. 5512. 0);
- *Australian System of Government Finance Statistics – Concepts, Sources and Methods* (cat. no. 5514.0);
- Information Paper: *Developments in Government Finance Statistics* (cat. no. 5516.0); and
- Information Paper: *Accruals Based Government Finance Statistics* (cat. no. 5517.0)

Commonwealth Grants Commission publications provide information about the distribution of GST revenue. In relation to the 2019-20 financial year, the most relevant publication is the *Report on GST Revenue Sharing Relativities – 2019 Update*.