

2.11 Dependency ratio

The dependency ratio is expressed as a percentage derived as follows:

$$\frac{\text{Percentage of population aged under 15 years} + \text{percentage of population aged 65 years and over}}{\text{Percentage of population aged 15-64 years}}$$

It is used as a substitute for the ratio between those who are not economically active (and therefore dependent) and those who are economically active.

The youth and aged dependency ratios can be calculated separately if required:

$$\text{Youth dependency ratio} = \frac{\text{Percentage of population aged under 15 years}}{\text{Percentage of population aged 15-64 years}}$$

$$\text{Aged dependency ratio} = \frac{\text{Percentage of population aged 65 years and over}}{\text{Percentage of population aged 15-64 years}}$$

Data sources

The majority of data for this measure come from the ABS estimated resident populations for the Indigenous and total Australian populations from the 2006 Census of Population and Housing. Data from the Census are adjusted for a number of factors, including undercounting and Indigenous status not stated, to produce population estimates by Indigenous status, age and geographic regions.

The time series data presented for this measure come from the ABS Indigenous-specific 'low series' population estimates and projections based on the 2001 Census of Population and Housing. The Census year estimate of the Indigenous population is used as the basis for revising Indigenous population figures for previous years. This adjustment removes the effects of unexplained growth between censuses from Indigenous time series, and presents growth in terms of demographic factors alone (following the development of the 2001 Indigenous population estimates, the size and structure of the Indigenous population for 1991 to 2000 were recalculated based on the 2001 estimates). Indigenous population estimates and projections are not yet available based on the 2006 Census.

Because Indigenous population estimates by remoteness region are available only for the Census years 2001 and 2006, data by remoteness are presented for these years only.

Data analyses

Age distribution of population

- In the total Australian population, 20% of people are aged under 15 years, 66% are aged 15-64 years and 13% are aged 65 years and over.

- The Indigenous population has a younger age structure than the non-Indigenous population, which is shown in the population pyramid in Figure 2.11.1. In 2006, 38% of Indigenous people were aged under 15 years compared with 19% of non-Indigenous people. People aged 65 years and over made up 3% of the Indigenous population and 13% of the non-Indigenous population. These figures reflect higher rates of fertility and deaths occurring at younger ages among the Indigenous population.
- The age structures of the Indigenous and non-Indigenous populations are similar across most states and territories (Table 2.11.1). The main variations from the national average are that, compared with other states and territories, the Australian Capital Territory has a lower proportion of Indigenous people aged 65 years and over (2%) and the Northern Territory has a lower proportion of non-Indigenous people aged 65 years and over (4%).

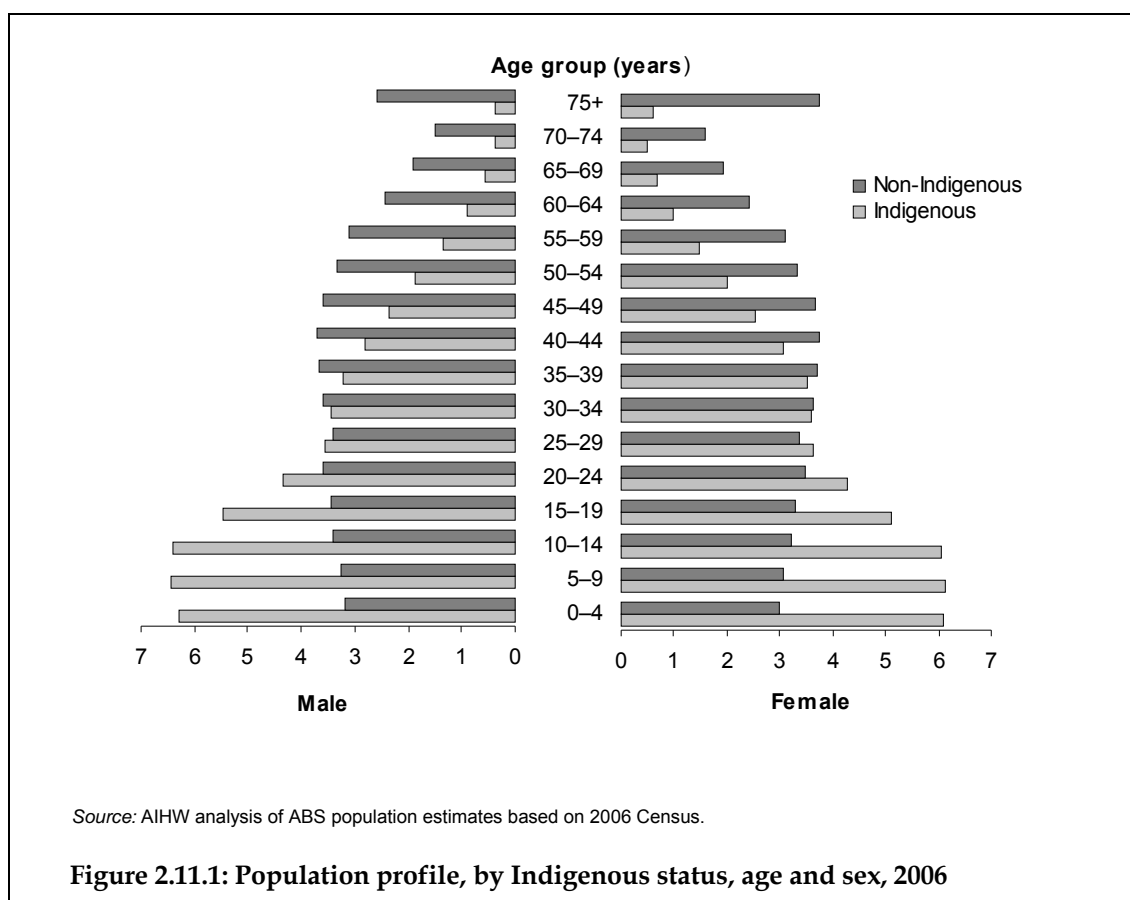


Table 2.11.1: Age distribution of population, by age group, state/territory and Indigenous status, 2006

	NSW		Vic		Qld		WA		SA		Tas		ACT		NT		Australia ^(a)	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
	Per cent																	
0–4	12.5	6.3	11.8	6.1	13.1	6.3	11.9	6.1	11.7	5.6	11.5	6.0	11.4	6.1	11.9	6.8	12.4	6.2
5–9	12.7	6.3	12.5	6.2	13.0	6.5	12.6	6.4	12.3	6.0	11.9	6.3	12.1	6.1	11.7	6.4	12.6	6.3
10–14	13.0	6.5	12.3	6.5	12.8	6.9	12.0	6.8	12.1	6.4	12.9	6.8	12.3	6.4	11.1	6.5	12.5	6.6
15–19	10.7	6.6	10.5	6.8	10.5	6.8	10.5	7.0	11.0	6.6	11.9	6.7	10.9	7.3	10.2	6.1	10.6	6.7
20–24	8.2	6.9	8.5	7.2	8.5	7.2	8.7	7.2	8.9	6.9	8.7	6.3	9.9	8.9	9.5	7.4	8.6	7.1
25–29	6.5	6.9	6.9	7.0	7.2	6.7	7.7	6.7	7.0	6.2	6.3	5.6	7.6	8.2	8.4	8.5	7.2	6.8
30–34	6.6	7.3	6.8	7.4	7.1	7.2	7.3	7.1	7.1	6.5	5.9	6.2	7.6	7.9	8.0	8.8	7.1	7.2
35–39	6.5	7.3	6.7	7.6	6.7	7.4	6.9	7.6	6.7	7.1	6.6	6.8	7.6	7.6	7.3	8.8	6.8	7.4
40–44	5.9	7.4	5.9	7.4	5.7	7.5	5.9	7.7	6.1	7.4	5.9	7.3	6.2	7.4	5.9	8.6	5.9	7.5
45–49	5.0	7.2	4.9	7.2	4.6	7.3	5.0	7.5	5.0	7.4	5.4	7.6	4.8	7.3	4.9	8.3	4.9	7.3
50–54	4.0	6.6	4.1	6.5	3.6	6.7	3.9	6.9	4.0	6.9	4.1	7.1	4.3	6.8	3.8	7.6	3.9	6.7
55–59	3.0	6.1	3.1	6.0	2.7	6.3	2.7	6.4	2.7	6.6	3.3	6.9	2.3	6.2	2.5	6.5	2.8	6.2
60–64	2.1	4.9	2.1	4.7	1.7	5.0	1.8	4.7	1.9	5.1	2.1	5.5	1.4	4.3	1.9	4.1	1.9	4.8
65–69	1.4	3.9	1.5	3.8	1.1	3.8	1.2	3.7	1.3	4.1	1.4	4.4	0.7	3.0	1.2	2.5	1.3	3.8
70–74	1.0	3.2	0.9	3.1	0.7	2.9	0.8	2.9	0.9	3.5	0.9	3.5	0.4	2.3	0.8	1.3	0.8	3.1
75+	1.0	6.6	1.5	6.5	0.9	5.7	1.0	5.5	1.2	7.7	1.1	7.1	0.4	4.3	0.9	1.7	1.0	6.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 2006 Census.

Dependency ratios

The dependency ratio is the percentage of the population aged under 15 years and aged 65 years and over divided by the percentage of the population aged 15–64 years. The dependency ratio for the Indigenous population is influenced mainly by the proportion of children, whereas the dependency ratio for the non-Indigenous population is much more strongly influenced by the proportion of older people. Therefore, it is necessary to look at the youth dependency ratio (percentage of the population aged under 15 years divided by the percentage of the population aged 15–64 years) and the aged dependency ratio (percentage of the population aged 65 years and over divided by the percentage of the population aged 15–64 years) separately for the Indigenous and non-Indigenous populations.

- In 1996, the dependency ratio for Indigenous Australians was 0.75 compared with 0.50 for non-Indigenous Australians. In 2001 the ratios were 0.72 and 0.49 respectively, and in 2006 they were 0.68 and 0.48 respectively (Table 2.11.2).
- In 2006, the youth dependency ratio was higher for Indigenous Australians than for non-Indigenous Australians (0.63 compared with 0.28), whereas the aged dependency ratio was lower for Indigenous Australians than for non-Indigenous Australians (0.05 compared with 0.20).
- In 2006, the youth dependency ratio for Indigenous people ranged from 0.56 in the Northern Territory to 0.67 in Queensland, and the aged dependency ratio for Indigenous people was 0.02 in the Australian Capital Territory and between 0.05 and 0.07 in all other states and territories (Table 2.11.2).
- In 2001 and 2006, the youth dependency ratio for Indigenous people was lowest in Remote and Very Remote areas (0.63 and 0.60) and highest in Inner and Outer Regional areas (0.75 and 0.70). In contrast, the aged dependency ratio was lowest in Major Cities (0.04) and highest in Remote and Very Remote areas (0.06) (Table 2.11.3).
- For non-Indigenous Australians, the youth dependency ratio in 2001 and 2006 was similar across all remoteness categories (0.3). The aged dependency ratio for non-Indigenous Australians was lowest in Remote and Very Remote areas (between 0.1 and 0.15), and highest in Major Cities and Inner and Outer Regional areas (around 0.2).

Table 2.11.2: Total, youth and aged dependency ratios, by state/territory and Indigenous status, 1996, 2001 and 2006

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia ^(a)
1996									
Indigenous									
Dependency ratio	0.77	0.75	0.77	0.75	0.75	0.82	0.71	0.68	0.75
Youth dependency ratio	0.72	0.69	0.71	0.70	0.69	0.77	0.70	0.63	0.70
Aged dependency ratio	0.05	0.06	0.05	0.06	0.05	0.05	0.01	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.50	0.49	0.48	0.52	0.53	0.41	0.36	0.50
Youth dependency ratio	0.31	0.31	0.32	0.32	0.3	0.33	0.31	0.31	0.31
Aged dependency ratio	0.19	0.19	0.17	0.16	0.22	0.20	0.10	0.05	0.18
2001									
Indigenous									
Dependency ratio	0.75	0.72	0.74	0.72	0.75	0.73	0.64	0.63	0.72
Youth dependency ratio	0.69	0.66	0.69	0.67	0.69	0.68	0.63	0.58	0.67
Aged dependency ratio	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.05	0.05
Non-Indigenous									
Dependency ratio	0.50	0.49	0.48	0.47	0.52	0.53	0.41	0.35	0.49
Youth dependency ratio	0.30	0.30	0.31	0.30	0.3	0.31	0.28	0.30	0.30
Aged dependency ratio	0.20	0.19	0.18	0.17	0.22	0.22	0.12	0.06	0.19
2006									
Indigenous									
Dependency ratio	0.71	0.68	0.71	0.65	0.66	0.66	0.59	0.60	0.68
Youth dependency ratio	0.65	0.61	0.67	0.60	0.60	0.60	0.57	0.56	0.63
Aged dependency ratio	0.06	0.07	0.05	0.05	0.06	0.06	0.02	0.05	0.05
Non-Indigenous									
Dependency ratio	0.49	0.48	0.47	0.46	0.50	0.52	0.39	0.34	0.48
Youth dependency ratio	0.28	0.28	0.29	0.28	0.27	0.29	0.26	0.26	0.28
Aged dependency ratio	0.20	0.20	0.18	0.18	0.23	0.23	0.13	0.07	0.20

(a) Includes other territories.

Source: AIHW analysis of ABS population estimates based on 1996, 2001 and 2006 Census.

Table 2.11.3: Total, youth and aged dependency ratios, by remoteness and Indigenous status, 2001 and 2006

	Major Cities	Inner Regional	Outer Regional	Remote	Very Remote
2001					
Indigenous					
Dependency ratio	0.70	0.79	0.75	0.69	0.66
Youth dependency ratio	0.65	0.75	0.70	0.63	0.60
Aged dependency ratio	0.04	0.05	0.05	0.06	0.06
Non-Indigenous					
Dependency ratio	0.47	0.56	0.53	0.47	0.39
Youth dependency ratio	0.28	0.33	0.33	0.34	0.29
Aged dependency ratio	0.18	0.22	0.20	0.14	0.10
2006					
Indigenous					
Dependency ratio	0.66	0.74	0.72	0.64	0.62
Youth dependency ratio	0.61	0.69	0.66	0.58	0.56
Aged dependency ratio	0.05	0.05	0.06	0.06	0.06
Non-Indigenous					
Dependency ratio	0.45	0.55	0.52	0.46	0.37
Youth dependency ratio	0.27	0.31	0.31	0.31	0.26
Aged dependency ratio	0.18	0.23	0.21	0.15	0.11

Source: AIHW analysis of ABS population estimates based on the 2001 and 2006 Census.

Time series analyses

Table 2.11.4 and Figure 2.11.2 present the youth and aged dependency ratios for Indigenous and non-Indigenous Australians over the period 1996–2006.

- Over the period 1996–2006, there was a significant decline in the youth dependency ratio for both Indigenous and non-Indigenous Australians. The fitted trend implies an average yearly decline in the ratio of around 0.01 for Indigenous Australians (equivalent to a 15% decline over the period) and 0.003 for non-Indigenous Australians (equivalent to a 10% decline over the period).
- Over the same period, there was a significant decline in the aged dependency ratio for Indigenous Australians, with an average yearly decline in the ratio of around 0.001, and a significant increase in the aged dependency ratio for non-Indigenous Australians, with an average yearly increase in the ratio of around 0.001. This was equivalent to a 14% decline over the period for Indigenous Australians and a 7% decline over the period for non-Indigenous Australians.

Table 2.11.4: Youth dependency ratio and aged dependency ratio, by Indigenous status, 1996–2006

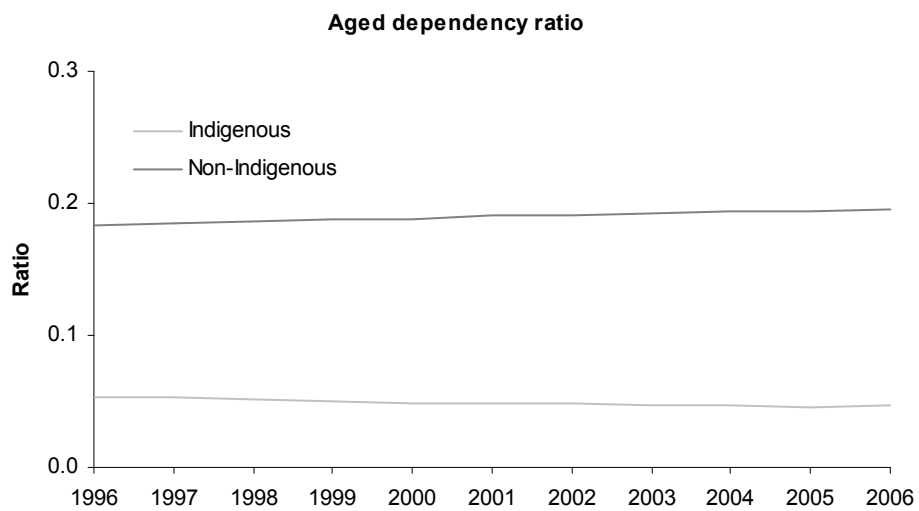
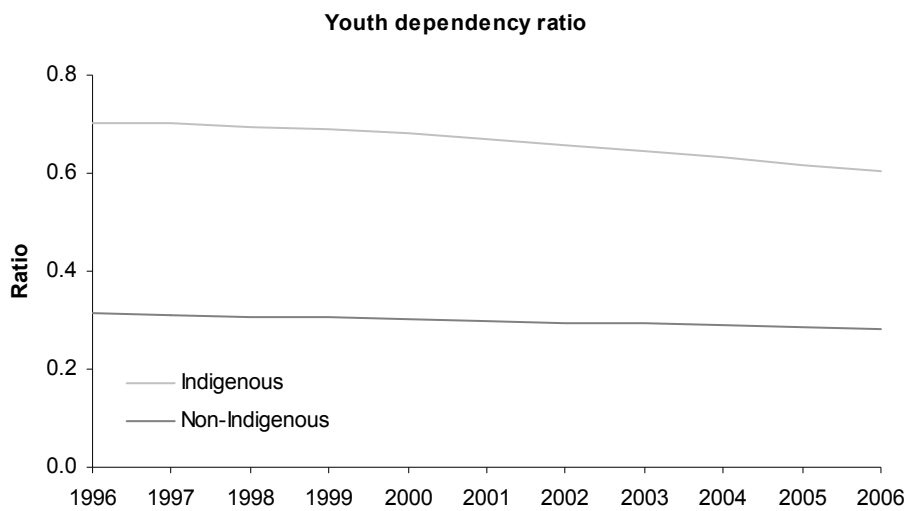
Ratio	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Annual change ^(a)	Per cent change ^(b)
Indigenous													
Youth dependency	0.70	0.70	0.70	0.69	0.68	0.67	0.66	0.64	0.63	0.62	0.60	–0.01*	–14.6
Aged dependency	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	–0.001*	–13.6
Non-Indigenous													
Youth dependency	0.31	0.31	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.28	–0.003*	–9.8
Aged dependency	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.001*	6.7

* Represents results with statistically significant increases or declines at the $p < 0.05$ level over the period 1996–2006.

(a) Average annual change in ratios determined using linear regression analysis.

(b) Per cent change between 1996 and 2006 based on the average annual change.

Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census.



Source: AIHW analysis of ABS population estimates and projections based on the 2001 Census.

Figure 2.11.2: Youth dependency rate and aged dependency rate, by Indigenous status, 1996–2006

Data quality issues

Census of Population and Housing

The Census uses the National health data dictionary standard Indigenous status question and it is asked for each household member. Measures drawn from Census data are subject to broad data concerns relating to the unexplainable growth in the Aboriginal and Torres Strait Islander population since the 1991 Census, and limitations of self-identification. Other Census data issues relate to the accuracy of the Census count itself, for example whether people are counted more than once, or are undercounted (ABS 1996).

ABS population estimates

The ABS refers to Indigenous population estimates and projections as 'experimental' because of concerns about the quality of the data on which they are based, particularly the quality of the Indigenous status identification in the Census and in birth and death records (ABS 2004).

The ABS's policy of backcasting data from successive censuses retrospectively takes into account changes in the level of Indigenous identification, as occurred between the 1991 and 1996 censuses and, to a smaller extent, between the 1996 and 2001 censuses. Changes in the level of Indigenous identification between the 2001 and 2006 censuses will be taken into account in the revision of Indigenous population estimates and projections based on the 2006 Census.

References

ABS (Australian Bureau of Statistics) 1996. Occasional paper. Population issues: Indigenous Australians. ABS cat. no. 4708.0. Canberra: ABS.

ABS 2004. Experimental estimates and projections: Aboriginal and Torres Strait Islander Australians, 1991 to 2009. ABS cat. no. 3238.0. Canberra: ABS.