

Appendix B: Sensitivity analysis of long-run economic and fiscal projections

Table B1: Assumptions underlying sensitivity analysis

	Base case	Lower	Higher
Participation			
Total labour force participation rates (population aged 15 and over)	60.6% by 2049-50	57.0% by 2049-50(a)	63.7% by 2049-50(b)
Older workers participation rates (aged 50-69)	61.9% by 2049-50		66.9% by 2049-50(c)
Unemployment rate (per cent)	5.0	4.0	6.0
Productivity			
Labour productivity growth (per cent)	1.6	1.2(d)	2.0
Population			
Net migration (no. of people per year)	180,000	150,000	210,000
Fertility (total fertility rate)	1.9	Constant at 1.7	Constant at 2.1
Life expectancy at birth (years)			
Males in 2050	87.7	86.4(e)	91.0(f)
Females in 2050	90.5	90.2(e)	92.8(f)

(a) Male and female age specific participation rates held constant at 2006–07 levels from 2013–14.

(b) All male and female age specific participation rates are adjusted to achieve an increase of 5 per cent in total participation rates for population aged 15 and over.

(c) Growth in age specific participation rates is increased by 10 per cent for workers in the age cohorts of 50–54, 55–59, 60–64 and 65–69, giving a total participation rate (15+) of 62.0 per cent in 2049-50.

(d) Represents the average productivity rate in the 1980s.

(e) Uses IGR 2007 life expectancy projections.

(f) All the improvement factors are scaled by 1.625 for men and 1.5 for women.

Source: Treasury projections.

Table B2: Impact of alternative scenarios

	Participation		Lower unemployment rate	Productivity	Population		
	Higher labour force participation	Older All ages		Higher labour productivity	Higher migration	Higher fertility rate	Higher life expectancy
Annual growth rate(a)							
Labour force	0.06	0.12	0.00	0.00	0.13	0.08	0.01
Real GDP	0.06	0.12	0.03	0.36	0.13	0.08	0.01
Real GDP per person	0.06	0.12	0.03	0.36	0.02	-0.03	-0.04
Levels(b)							
Labour force	2.25	5.01	0.00	0.00	5.18	3.34	0.59
Real GDP	2.36	4.94	1.01	15.12	5.23	3.17	0.55
Real GDP per person	2.36	4.94	1.01	15.12	0.86	-1.14	-1.47
Dependency ratios(c)							
Aged to working-age ratio	0.00	0.00	0.00	0.00	-1.47	-1.27	2.84
Child to working-age ratio	0.00	0.00	0.00	0.00	0.06	2.61	-0.06
Change in spending(c) (per cent of GDP)							
Health	-0.15	-0.30	-0.06	(d)	-0.16	-0.10	0.30
Aged care	-0.04	-0.09	-0.02	-0.01	-0.08	-0.05	0.29
Age and service pensions	-0.16	-0.25	-0.03	-0.01	-0.16	-0.12	0.40
Other payments to individuals	-0.06	-0.13	-0.09	-0.18	-0.01	0.07	0.00
Education	-0.05	-0.09	-0.02	0.00	0.00	0.12	0.00
	Participation		Higher unemployment rate	Productivity	Population		
	Lower labour force participation	All ages		Lower labour productivity	Lower migration	Lower fertility rate	Lower life expectancy
Annual growth rate(a)							
Labour force		-0.16	0.00	0.00	-0.13	-0.09	0.00
Real GDP		-0.11	-0.03	-0.39	-0.14	-0.08	0.00
Real GDP per person		-0.11	-0.03	-0.38	-0.02	0.03	0.01
Levels(b)							
Labour force		-5.98	0.00	0.00	-5.18	-3.33	-0.14
Real GDP		-4.27	-1.01	-13.98	-5.23	-3.16	-0.12
Real GDP per person		-4.27	-1.01	-13.98	-0.93	1.14	0.47
Dependency ratios(c)							
Aged to working-age ratio		0.00	0.00	0.00	1.63	1.36	-0.91
Child to working-age ratio		0.00	0.00	0.00	-0.07	-2.64	0.02
Change in spending(c) (per cent of GDP)							
Health		0.29	0.07	(d)	0.18	0.11	-0.10
Aged care		0.08	0.02	0.01	0.09	0.06	-0.06
Age and service pensions		0.33	0.04	0.05	0.18	0.13	-0.12
Other payments to individuals		0.11	0.09	0.22	0.01	-0.07	0.00
Education		0.08	0.02	0.00	0.00	-0.12	0.00

(a) Represents the percentage point difference in the average annual growth rate for the period 2009–10 to 2049–50, compared to the base scenario.

(b) Represents the percentage change in the size of the labour force and the level of GDP and GDP per capita by 2049–50 compared to the base scenario.

(c) Percentage point change in 2049–50 compared to the base scenario.

(d) The potential impact of higher or lower productivity growth on Australian government health spending is difficult to quantify and has not been included here.

Source: Treasury projections.