

Labour & Immigration
Research Centre

Te Pokapū a Mahi me Te Manene Rangahau

Medium–Long Term Employment Outlook

Looking ahead to 2020



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The Department of Labour was integrated into the new Ministry of Business, Innovation and Employment on 1 July 2012. All information included in this report continues to apply after 1 July 2012. All references to "Department of Labour" now refer to the Labour Group, Ministry of Business, Innovation and Employment.

Purpose

The employment outlook for the 2015-20 March year period is outlined in this paper, broken down by industry and occupation.¹ It will be used to inform the Department of Labour's medium-long term policy advice relating to immigration policy settings, and priority setting for tertiary education and industry training. It has particular focus on labour supply constraints arising from an ageing population and highlights the importance of productivity gains.

The Department's medium-long term economy-wide model draws on the latest available macroeconomic outlook to provide more detailed information on changes in the labour market to 2020.²

Key points

- The employment outlook over the medium-longer term is for steadier and moderate employment growth on average, but declining further out.
- Total employment is expected to increase by 172,400 over the 2010-15 period and by about 154,000 over the subsequent five years to 2020.
- This represents employment growth of about 1.6% per year (or 34,500 jobs on average) and about 1.3% per year (or about 31,000 jobs on average), respectively.
- This employment outlook is conditional on average GDP growth of 2.8% and 2.9% over the 2010-15 and 2015-20 periods, respectively.
- Increasing labour supply constraints arising from an ageing population and reduced labour force growth projections underpin this outlook. Labour supply constraints are expected to push up labour costs and lead to increased capital investment by firms. This is expected to result in productivity rising by about one-third from 2015 to 2020.
- Strong employment growth is expected in the primary processing, certain manufacturing industries such as machinery and equipment, metal products and in construction-related activities. Service industries, including the health and education sectors, will also experience modest employment growth. The growth will be strongest for highly-skilled occupations, including managers and professionals.

¹ Regional forecasts for this extended outlook period are unavailable due to the lack of historical regional GDP data for recent years.

² Forecast completed in March 2012 using an economy-wide or Computable General Equilibrium (CGE) model and is consistent with macro-economic and macro-labour market "consensus" view, extending further the Treasury Budget Policy Statement (BPS) views on GDP provided to 2015-16 March year.

- Opportunities for lower-skilled workers are expected to account for more than one-third of employment growth over the 2010-15 period. This will be somewhat lower over the 2015-20 period as employment growth in the construction sector slows. The food processing, retailing, accommodation and construction industries are expected to create most of these opportunities.
- The number of workers retiring is expected to rise from about 50,000 per year during 2010-15 to about 70,000 per year during 2015-20, even with slightly higher participation by older workers.

Economic growth looking further ahead...

Projected economic growth to 2020 could cover the next business cycle in its entirety in addition to the end of the present cycle. The model averages growth rates over a five and 10 year period, and not for individual years, and incorporates both the longer term drivers of economic growth and the additional stimulus brought about by the Canterbury rebuild.

This medium-longer term growth looks beyond the recovery from the recent economic downturn and the balance likely between an export-led growth and that which is driven by domestic household spending. This has implications for labour market outcomes across various industries and the potential for productivity gains. Associated with this growth path is the size of import growth which will be required to meet the investment needs for the Canterbury rebuild as well as capital replacement in manufacturing and in the primary sector.

The latest projections show the economy growing by 2.8% on average between 2010-15 and by 2.9% on average over the 10 year period covering 2010-20 (see Table 1). This indicates economic growth of just over 2.9% on average over the 2015-20 period.

The IMF's latest World Economic Outlook (April 2012)³ still sees considerable risk and uncertainty in the global economy and highlights the importance of the steps needed to improve this weak medium-term growth outlook for the major advanced economies.

...with steady but slowing growth in employment...

Employment growth over the five years from 2010-15 is expected to average about 1.6% per annum, which includes periods of limited growth in the 2011 and 2012 March years. Growth is expected to be somewhat lower over the entire 10 year period from 2010-20, averaging at about 1.4% per annum (see Table 1).

³ Source; World Economic Outlook (April 2012): Growth Resuming, Dangers Remain.
<http://www.imf.org/external/pubs/ft/weo/2012/01/pdf/text.pdf>

Table 1: GDP forecast, employment and productivity changes (March years)

Annual average percentage change	2010-15 (%)	2010-20 (%)	2015-20 (%)
GDP growth	2.8%	2.9%	2.9%
Labour Productivity	1.2%	1.4%	1.6%
Employment growth	1.6%	1.4%	1.3%

Source: DoL CGE model runs for 2010-15 and 2010-20 periods; 2015-20 period results derived.

The values have been rounded to one decimal place and do not show some of the small differences.

This employment growth is associated with the expected rise in GDP growth along with a steady and appreciable increase in productivity over the medium-longer term, from 1.2% to 1.6%.

Employment is expected to increase from 2,154,550 in the March 2010 year to 2,327,000 in the March 2015 year, with 172,400 new jobs expected to be created during this five year period. This includes a modest recovery initially in the labour market followed by stronger growth during 2014 March year.

Over the 10 year period to 2020, employment is forecast to increase by 326,500 to 2,481,000, or by 154,000 between 2015 and 2020. This equates to average annual employment growth of 34,500 between 2010-15 and 30,800 between 2015 and 2020.

...associated with stronger productivity gains...

Between 2006 and 2011, Statistics New Zealand estimates that the labour force grew by 1.6%. However, between 2011-16 and 2016-21 the labour force is projected to grow at 1.0% and 0.6%, respectively.⁴ With reduced rates of labour supply growth, economic growth further out can only be sustained from steady labour productivity gains.

Already high participation levels may not be sustainable as more baby boomers enter retirement age, with some deciding to work fewer hours, while others leave the labour force completely. This will constrain New Zealand's ability to raise employment and participation levels on an on-going basis, and thus in the medium-longer term greater reliance will need to be placed on rising productivity for economic growth.⁵ Labour supply constraints are expected to push up labour costs and lead to increased capital investment by firms. This is expected to result in productivity rising by about one-third from 2015 to 2020.

⁴ This assumes a medium scenario for fertility, mortality, migration and labour force participation.

⁵ The Conference Board, a global, independent business membership and research association undertakes medium-long term outlook <http://www.conference-board.org/data/globaloutlook.cfm> using growth accounting; http://www.conference-board.org/pdf_free/GEO2012_Methodology.pdf

...resulting in growth in more stable and resilient industries...

Employment growth in primary processing activities and certain areas of other manufacturing such as machinery and equipment, metal products is expected to continue to be strong. Employment in service industries such as health and education sectors are also expected to remain stable over this period (see table 2). The Canterbury rebuild and other significant projects across New Zealand are forecast to drive construction-related employment by about 3% on average over the 2010-15 March year period, slowing to about 1% during the 2015-20 March year period.

Table 2: Employment growth for industry groups for 5 and 10 years and average annual percentage changes

Industry Groups	2010-15 (5 years)		2010-20 (10 years)		2015-20 (5 years)	
	(000)	(%)	(000)	(%)	(000)	(%)
Primary sector	12.8	1.6%	19.5	1.2%	6.7	0.8%
Primary processing	8.4	1.7%	14.4	1.4%	6.0	1.1%
Other manufacturing	12.1	1.5%	27.8	1.6%	15.6	1.7%
Construction and utilities	26.0	2.7%	36.7	1.8%	10.7	1.0%
Private services sector	78.4	1.6%	145.8	1.5%	67.4	1.3%
Govt. admin & defence	0.07	0.2%	2.3	0.2%	1.5	0.3%
Health and education	19.5	0.9%	51.0	1.2%	31.5	1.4%
Other public services	14.5	1.9%	29.0	1.9%	14.5	1.8%
Total	172.4	1.6%	326.5	1.4%	154.1	1.3%

Source: DoL CGE model runs for 2010-15 and 2010-20 periods; 2015-20 period results derived.

...oriented towards higher skilled occupations ...

Employment growth is projected to be the strongest in highly skilled jobs (see Table 3), steady at 1.9% per annum compared with overall employment growth of 1.6% (2010-15) and 1.3% (2015-20) per annum.

Employment growth through this period is expected to be weakest for semi-skilled jobs (namely clerical and some service and primary sector workers) at or below 1% per annum. The demand for skilled and elementary skilled workers is also projected to weaken over time but remain at about the overall rate of employment growth.

Table 3: Employment growth by skill level for skill groups for 5 and 10 years and average annual percentage changes

Skill-level	2010-15		2010-20		2015-20	
	(000)	(%)	(000)	(%)	(000)	(%)
Highly skilled (HS)	69.1	1.9%	142.5	1.9%	73.4	1.9%
Skilled (S)	41.1	1.7%	73.3	1.5%	32.2	1.2%
Semi-skilled (SS)	32.9	1.0%	60.0	0.9%	27.1	0.8%
Elementary skilled(ES)	29.2	1.8%	50.6	1.5%	21.3	1.2%
Total	172.4	1.6%	326.5	1.4%	154.1	1.3%

Source: DoL CGE model runs for 2010-15 and 2010-20 periods; 2015-20 period results derived.

The stronger demand for skilled (trades workers in particular) and elementary skilled workers (such as building labourers) are nearly as high as for highly skilled workers during the 2010-15 March year period. This is mainly attributed to the Canterbury rebuild and other construction activity across New Zealand.

Table 4: Top 25 occupational groups ranked by growth in employment level during 2015-20 and average annual percentage changes

Occupational Groups		2010-15		2015-20	
		(000)	(%)	(000)	(%)
Specialized Managers	(HS)	39.2	3.2%	35.5	2.5%
Business Professionals	(HS)	14.1	4.0%	10.8	2.6%
Finance/Sales Assoc. Profs.	(S)	15.8	3.2%	10.4	1.8%
Personal Care Workers	(S)	6.2	2.4%	8.8	3.0%
Labourers	(ES)	12.8	3.4%	8.2	1.9%
Writers/Artists/Sports Profs.	(S)	8.0	3.7%	7.7	3.0%
Computing Profs.	(HS)	7.9	4.4%	5.9	2.7%
Primary & ECE Teach profs.	(HS)	6.6	2.2%	5.5	1.6%
Social Work Assoc. Profs.	(S)	6.1	3.3%	5.5	2.5%
H.Keeping & Rest. Workers	(SS)	7.6	1.7%	5.2	1.1%
Library, Mail & rel. Clerks	(SS)	3.1	0.6%	4.9	1.0%
Motor Vehicle Drivers	(ES)	5.9	2.5%	4.5	1.7%
S'persons/ Demonstrators	(SS)	4.8	0.9%	4.5	0.9%
Bldng frame related Trades	(S)	6.9	2.8%	4.5	1.6%
Protective Service Workers	(SS)	4.0	2.0%	4.4	1.9%
Architects & Engineers	(HS)	4.9	2.9%	3.9	2.0%
Recording/Transport Clerks	(SS)	2.4	1.7%	3.1	2.0%
Health Professionals	(HS)	3.6	2.7%	2.9	1.9%
Machinery Mechanics	(S)	3.1	1.9%	2.7	1.6%
Senior Bus Administrators	(HS)	3.2	3.9%	2.6	2.6%
Social Science Professionals	(HS)	3.1	3.7%	2.4	2.4%
Metal/Mineral M. Operators	(ES)	2.6	3.5%	2.4	2.7%
Health Assoc. Professionals	(S)	2.2	2.7%	2.4	2.6%
Packers/Freight Handlers	(ES)	2.3	1.6%	2.1	1.4%
Building & related workers	(ES)	2.2	3.6%	1.9	2.6%
Total (for 96 Occupation Gps)		172.4	1.6%	154.1	1.3%

Source: DoL CGE model runs for 2010-15 and 2010-20 periods; 2015-20 period results derived.

Occupational decomposition results to the industry employment projections.

The occupational groups projected to grow the most during the 2015-20 period (see Table 4) suggest that amongst the top 25, eight of them will be Highly Skilled (HS), seven Skilled (S), five Semi-skilled (SS) and five amongst the Elementary Skilled (ES). There is greater representation (15 out of 25) of the higher skilled occupational groups (ie HS and S) in this group with lower skilled occupational groups also represented.

While these top 25 occupational groups are ranked according to growth during the 2015-20 period, growth levels and rates are generally lower than during the 2010-15 period with a few exceptions. One exception is personal care workers occupational group, which is projected to grow more at 3.0% during 2015-20 when additional older people needing such care are expected, compared to 2.4% during the 2010-15 period.

For the building and construction activity, strong growth is forecast for building frame-related trades along with growth in demand for architects and engineers. There is also demand for building and related workers, an Elementary-Skill group.

There is strong demand for business and computing professionals as well as for health and social science professionals in both forecast periods. Amongst the associate professionals, some demand is expected for those in health, finance, sales and social work.

...with lower-skilled workers continue to be in demand...

Opportunities for lower-skilled workers (that is, semi-skilled and elementary workers in total) are expected to account for about 36% (or 62,000 workers) of total employment growth to 2015, declining to 31% (or 48,400 workers) during the subsequent five years to 2020.

The main industries employing lower-skilled workers include food processing, retailing, accommodation and construction. These industries also have particular importance for younger workers (15-24 year olds). In 2011, approximately 19% of younger workers were employed in retail trade, 16% in accommodation and food services, 10% in manufacturing and 7% in agriculture, forestry and fishing.

...and additional employment due to rising retirement rates.

This employment growth excludes job opportunities that will arise as older workers retire. The Department estimates that this 'retirement demand' is likely to be about 52,000 jobs per year over the next five years.⁶ This means that while 34,500 new jobs could be created on average per year during the 2010-15 period, another 52,000 people are likely to be required to replace those retiring

⁶ Source: <http://www.dol.govt.nz/services/LMI/tools/skillsinsight/forecasting-narratives/retirement/>

from the labour force. Over the subsequent five year period, 2016-21, retirement demand rises to over 70,000, when new job growth slows down towards 30,000.

Overall retirement demand is projected to rise from 2.4% in the 2011-16 period to 2.8% during 2016-21. Demand for workers arising from retirement will be spread across all skill levels but will be slightly greater among skilled and elementary skilled workers in both periods (see Table 6).

Table 6: Retirement demand by skill-level, averages 2011-16 and 2016-21

Skill-level	2011-16		2016-21	
	(000)	(%)	(000)	(%)
Highly-skilled	16	2.2%	20	2.4%
Skilled	14	2.7%	17	2.9%
Semi-skilled	14	2.0%	22	2.8%
Elementary skilled	8	2.5%	12	3.2%
Total	52	2.4%	71	2.8%

Source: DoL Cohort component model using 5-yearly Census age cohorts; updated and extended

These retirement demand levels are consistent with the rates of changes in the respective group median age seen in the last four censuses.

Caveats - Methodology

These forecasts are based on a Computable General Equilibrium (CGE) model developed by Business and Economic Research Limited (BERL) for the use of the Department of Labour. The modelling is focused on medium-longer term overall economic growth and growth across industries at the national account level of disaggregation. Employment growth across these industries and occupational groups (also summarised as broad skill groups) for this timeframe are analysed for inclusion in this report, along with retirement levels across the different skill groups.

⇒ More information

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