

# Medium–Long Term Employment Outlook

Looking ahead to 2021



**MINISTRY OF BUSINESS,  
INNOVATION & EMPLOYMENT**  
HĪKINA WHAKATUTUKI

## **Ministry of Business, Innovation and Employment (MBIE)**

### **Hikina Whakatutuki Lifting to make successful**

MBIE develops and delivers policy, services, advice and regulation to support economic growth and the prosperity and wellbeing of New Zealanders.

MBIE combines the former Ministries of Economic Development, Science + Innovation, and the Departments of Labour, and Building and Housing.

### **More information**

Information, examples and answers to your questions about the topics covered here can be found on our website <http://www.mbie.govt.nz> or by calling us free on 0800 20 90 20.

### **Disclaimer**

This document is a guide only. It should not be used as a substitute for legislation or legal advice. The Ministry of Business, Innovation and Employment is not responsible for the results of any actions taken on the basis of information in this document, or for any errors or omissions.

ISSN 2253-413X  
November 2013

© Crown copyright 2012

The material contained in this report is subject to Crown copyright protection unless otherwise indicated. The Crown copyright protected material may be reproduced free of charge in any format or media without requiring specific permission. This is subject to the material being reproduced accurately and not being used in a derogatory manner or in a misleading context. Where the material is being published or issued to others, the source and copyright status should be acknowledged. The permission to reproduce Crown copyright protected material does not extend to any material in this report that is identified as being the copyright of a third party. Authorisation to reproduce such material should be obtained from the copyright holders.

# MEDIUM-LONG TERM EMPLOYMENT OUTLOOK: LOOKING AHEAD TO 2021

## Purpose

The employment outlook for the 2011-21 March year period is outlined in this paper, broken down by industry and occupation.<sup>1</sup> It will be used to inform the Ministry of Business, Innovation and Employment's (the Ministry) medium-long term policy advice relating to immigration policy settings, and priority setting for tertiary education and industry training. It has a particular focus on labour supply constraints arising from an ageing population, and highlights the importance of future productivity gains to maintain economic growth.

The Ministry'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 2021.<sup>2</sup>

## Key points

- The employment outlook over the medium-longer term is for steady and moderate employment growth on average, declining slightly further out.
- Total employment is expected to increase by 180,300 over the 2011-16 period, and by about 174,500 over the subsequent five years to 2021.
- This represents employment growth of about 1.6% per year (or 36,000 on average) and about 1.4% per year (or about 34,900 on average), respectively.
- This employment outlook is conditional on average annual GDP growth of 2.7% and 3.0% over the 2011-16 and 2016-21 periods, respectively.
- The unemployment rate over the projection period is expected to trend down to 4.8% by 2016 and 4.0% by 2021. Increasing labour supply constraints arising from an ageing population underpin this outlook.
- The resulting higher labour supply costs and increased capital investment are expected to contribute to annual productivity growth rising by more than one-third from 2016 to 2021 compared with the previous 5 years.

---

<sup>1</sup> 2011 is the base year for these forecasts as it is based on an economy-wide or Computable General Equilibrium (CGE) model with GDP data by industries in the ANZSIC96 classification. The model will be moved to ANZSIC06 industry classification and for a more recent base year when the full complement of GDP and other data is available for this update. Regional forecasts for this extended outlook period are unavailable due to the lack of historical regional GDP data by industries for sufficient years.

<sup>2</sup> The forecast was completed in September 2013 using a CGE model and is consistent with the latest macro-economic and macro-labour market "consensus" view, extending the 2013 Treasury Budget Forecast views on GDP provided to the 2015-16 March year.

- Over the 2016-21 period, productivity growth is projected to slow employment growth to 174,500, somewhat lower than the 180,300 anticipated over the 2011-16 period.
- The Ministry expects that this level of unemployment rate could be achievable with higher productivity growth. Prior to the onset of the recent economic downturn, unemployment rate was lower but productivity growth was also lower.
- Strong employment growth is expected in the primary sector, primary processing, certain manufacturing industries such as machinery and equipment, metal products and in construction-related activities. Service industries, including the health and cultural and personal services sectors, will also experience modest to strong employment growth. The growth will be strongest for highly-skilled occupations, including managers and professionals.
- Opportunities for lower-skilled workers are expected to account for more than one-third of employment growth over the 2011-16 period. This will be sustained over the 2016-21 period as the construction sector activity related to Canterbury rebuild is expected to continue beyond 2016. The food processing, retailing, accommodation and personal service industries are expected to create most of the remaining opportunities.
- The number of workers retiring is expected to rise from about 50,000 per year during 2011-16 to about 70,000 per year during 2016-21, as a result of the ageing population. This is despite participation rates by the older workers rising further.

### **Economic growth looking further ahead ...**

Projected economic growth to 2021 could cover the next business cycle in its entirety in addition to the end of the present cycle. The average growth rates over five and 10 year periods are projected by this modelling approach and incorporate both the longer term drivers of economic growth and the additional stimulus brought about by the Canterbury rebuild.

This medium-longer term growth beyond the recovery from the recent economic downturn is expected to be a mix of an export-led growth and growth driven by domestic household spending. This has implications for labour market outcomes across various industries and the potential for productivity gains captured by the general equilibrium modelling framework. Associated with this growth path is the size of import growth 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 2.7% on average between 2011-16 and by 2.8% on average over the 10 year period covering 2011-21 (see Table 1). This indicates economic growth of just over 3.0% on average over the 2016-21 period.

The IMF's latest World Economic Outlook (July 2013)<sup>3</sup> update highlights difficult conditions for sustained world economic growth following its April 2013 report. These conditions are set in the context of uncertainty in the global economy and the importance of action by individual countries and regional bodies such as the European Union.

### ...with steady but moderate growth in employment ...

Employment growth over the five years from 2011-16 is expected to average about 1.6% per annum, which includes periods of limited growth already observed in the 2012 and 2013 March years. Growth is expected to be somewhat lower over the entire 10 year period from 2011-21, averaging at about 1.5% per annum (see Table 1).

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

<b>Annual average percentage change</b>	<b>2011-16 (5 years) (%)</b>	<b>2011-21 (10 years) (%)</b>	<b>2016-21 (5 years) (%)</b>
GDP growth	2.7%	2.8%	3.0%
Labour Productivity	1.1%	1.3%	1.6%
Employment growth	1.6%	1.5%	1.4%

Source: MBIE CGE model runs for 2011-16 and 2011-21 periods; 2016-21 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 average annual GDP growth supported by a steady and appreciable increase in average annual productivity growth between the medium (2011-16) and longer (2016-21) term, from 1.1% to 1.6%.

The employment level is expected to increase from 2,183,275 in the March 2011 year to 2,363,500 in the March 2016 year, with 180,300 more employed during this five year period. This includes a modest recovery in the labour market in 2014 March year followed by much stronger growth during the 2015 March year.

Over the 10 year period to 2021, the employment level is forecast to rise by 354,800 to 2,538,000 or by 174,500 between 2016 and 2021. This equates to average annual employment growth of 36,000 and 34,900 between 2011-16 and 2016-2021, respectively.

Modest growth in employment in the short-term may be balanced by excess labour supply arising from recent welfare reform measures. However, as employment growth strengthens and stabilises over the medium-longer term, the unemployment rate is expected to drop to 4.6% by 2016 and to 4.0% by 2021.

<sup>3</sup> Source; World Economic Outlook (July 2013): Growing Pains.

<http://www.imf.org/external/pubs/ft/weo/2013/update/02/>

### ...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 2016-2021 the labour force is projected to grow at 1.1% and 1.0%, respectively.<sup>4</sup> Even with less restrictive rates of labour supply growth than previously considered, economic growth further out can only be sustained from steady labour productivity gains.

Already high overall participation levels may not be sustainable as more baby boomers enter retirement age, with some working fewer hours, while others leave the labour force completely. This will constrain the ability to raise 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.<sup>5</sup> Labour supply constraints are expected to push up labour costs and lead to increased capital investment. This is expected to contribute to annual average productivity growth rising by more than one-third from 2016 to 2021, compared with 2011-16.

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

Employment growth in the primary sector, primary processing activities and certain areas of manufacturing such as machinery and equipment and metal products will be strong. Employment growth in the health and education sectors is also expected to remain stable over this period (see Table 2). The Canterbury rebuild and significant projects across New Zealand will drive construction-related employment growth by 2.3% on average over the 2011-16 March year period.

**Table 2: Employment growth for industry groups for 5 & 10 years**

Industry Groups	2011-16 (5 years)		2011-21 (10 years)		2016-21 (5 years)	
	(000)	(%)*	(000)	(%)*	(000)	(%)*
Primary sector	16.3	1.9%	28.1	1.6%	11.8	1.3%
Pr. processing	7.2	1.5%	14.3	1.4%	7.1	1.3%
Other manufacturing	13.3	1.6%	32.4	1.9%	19.0	2.1%
Construction and utilities	22.4	2.3%	32.2	1.6%	9.8	0.9%
Private services sector	86.8	1.8%	174.5	1.7%	87.7	1.7%
Govt. admin & defence	0.8	0.2%	4.5	0.5%	3.6	0.7%
Health and education	19.8	0.9%	39.2	0.9%	19.3	0.9%
Other public services	13.6	1.8%	29.7	1.8%	16.1	1.9%
<b>Total</b>	<b>180.3</b>	<b>1.6%</b>	<b>354.8</b>	<b>1.5%</b>	<b>174.5</b>	<b>1.4%</b>

\* average annual changes

Source: MBIE CGE model runs for 2011-16 and 2011-21 periods; 2016-21 period results derived.

<sup>4</sup> This assumption is informed by recent MBIE work on disaggregated short-term labour supply forecasts and preliminary medium-long term labour supply projections at the aggregate level.

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

### ...oriented towards higher skilled occupations ...

Employment growth is projected to be the strongest in highly skilled jobs (see Table 3), growing steadily at about 0.6% to 0.3% higher per annum compared to overall employment growth of 1.6% (2011-16) and 1.4% (2016-21) per annum.

**Table 3: Employment growth for skill groups for 5 & 10 years and annual changes**

Skill-level	2011-16		2011-21		2016-21	
	(5 Years) (000)	(%)*	(10 Years) (000)	(%)*	(5 Years) (000)	(%)*
Highly skilled	81.6	2.2%	149.9	1.9%	68.3	1.7%
Skilled	39.0	1.6%	75.6	1.5%	36.5	1.4%
Semi-skilled	31.7	0.9%	76.6	1.1%	44.9	1.2%
Elementary skilled	27.8	1.7%	52.7	1.5%	24.8	1.4%
<b>Total</b>	<b>180.3</b>	<b>1.6%</b>	<b>354.8</b>	<b>1.5%</b>	<b>174.5</b>	<b>1.4%</b>

\* average annual changes

Source: MBIE CGE model runs for 2011-16 and 2011-21 periods; 2016-21 period results derived.

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 just above 1% per annum. The demand for skilled and elementary skilled workers is also projected to weaken gradually over time but expected to remain at about the overall rate of employment growth.

The stronger demand for skilled workers (trades workers in particular) and elementary skilled workers (such as building labourers) will contribute about 40% of employment growth during the 2011-16 March year period. This is attributed to the Canterbury rebuild and other construction activity across New Zealand.

Amongst the top 25 occupational groups ranked by growth during the 2016-21 period (see Table 4), twelve will be Highly Skilled, 9 Semi-skilled and 4 Elementary Skilled. There is about equal representation of the higher skilled occupational groups (12 out of 25) and medium to lower skilled occupational groups (13 out of 25) in this top 25 occupational groups.

For these top 25 occupational groups, growth levels and rates in 2016-21 are generally lower than during the 2011-16 period. The personal carers and assistants occupational group is projected to grow steadily during the 2016-21 period with additional older people needing such care further out.

For building and construction activity, there is strong growth in demand for construction related managers, support workers and labourers along with growth in demand for architects, designers, planners and surveyors. There is also strong demand for managers in the areas of business, retail, advertising, sales, hospitality and office administration.

Professionals in information and organisation, social and welfare, sales, marketing and public relations areas are also in strong demand along with accountants and architects in both forecast periods. Amongst the semi-skilled workers in demand

are those in different clerical positions (covering general and logistics), salespersons, defence workers and real estate agents.

**Table 4: Top 25 occupational groups ranked by 2016-21 Employment Changes**

ANZSCO - 3 Digit Occupational Groups	2011-16		2016-21	
	(000)	(%)*	(000)	(%)*
Business Administration Managers	8.7	3.2%	8.7	2.7%
Insurance Agents and Sales Representatives	6.8	2.5%	7.3	2.4%
Miscellaneous Labourers	7.5	2.1%	7.2	1.8%
Sales Assistants and Salespersons	7.4	1.4%	6.9	1.2%
Personal Carers and Assistants	6.7	2.7%	6.9	2.4%
Construction, Distribn. & Prodn. Managers	7.2	2.8%	6.5	2.2%
Retail Managers	6.3	3.2%	6.3	2.7%
Accountants, Auditors & Company Secretaries	5.9	3.5%	5.8	2.9%
Advertising, Public Relns. and Sales Managers	5.0	3.2%	4.9	2.7%
School Teachers	2.5	0.5%	4.8	0.9%
General Clerks	5.9	1.6%	4.6	1.2%
Accommodation and Hospitality Managers	4.0	3.2%	4.0	2.7%
Information and Organisation Professionals	4.0	2.5%	3.9	2.2%
Bus. and System Analysts, & Programmers	4.2	3.0%	3.8	2.4%
Social and Welfare Professionals	3.8	2.4%	3.6	2.0%
Truck Drivers	3.3	2.0%	3.5	1.9%
Office and Practice Managers	3.5	3.2%	3.5	2.7%
Architects, Designers, Planners/Surveyors	3.0	2.8%	3.3	2.7%
Hospitality Workers	3.9	1.8%	3.1	1.3%
Sales, Marketing and Pub. Relns Professionals	3.0	3.0%	3.0	2.7%
Defence Force Members, Fire Fighters & Police	2.3	1.9%	3.0	2.2%
Logistics Clerks	2.5	2.3%	2.8	2.3%
Real Estate Sales Agents	2.7	2.7%	2.8	2.5%
Construction and Mining Labourers	2.7	2.3%	2.7	2.1%
Storepersons	2.2	2.0%	2.4	2.0%
<b>All Occupational Groups Total</b>	<b>180.3</b>	<b>1.6%</b>	<b>174.5</b>	<b>1.4%</b>

\* average annual changes

Source: MBIE CGE model runs for 2011-16 and 2011-21 periods; 2016-21 period results derived. Occupational decomposition results to the industry employment projections.

### **...while 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 33% (or 60,000 workers) of total employment growth to 2016, and about 39% (or 70,000 workers) during the subsequent five years to 2021.



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 Ministry estimates that this 'retirement demand' is likely to be about 52,000 workers per year over the next five years.<sup>6</sup> This means that while 36,000 new workers could be required on average per year during the 2011-16 period, another 52,000 people are likely to be required to replace those retiring from the labour force. Over the subsequent five year period, 2016-21, retirement demand rises to over 70,000, when new employment growth slows down towards 35,000.

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 5).

**Table 5: 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%
<b>Total</b>	<b>52</b>	<b>2.4%</b>	<b>71</b>	<b>2.8%</b>

Source: MBIE Cohort component model using 5-yearly Census age cohorts; updated & extended

### **Caveats - Methodology**

These forecasts are based on a Computable General Equilibrium (CGE) model developed by Business and Economic Research Limited (BERL) for use by the Ministry of Business Innovation and Employment.

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.

The retirement levels and forecasts across the different skill groups are sourced from a separate analysis. This will be updated when the relevant occupational data by age groups from the 2013 Census is available later in 2013.

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

