



SKILLSINSIGHT: THE CHANGING DEMAND FOR SKILLS

February 2010

1. Introduction

This *SkillsInsight* report examines changes in the mix of skills in demand across occupations by broad skill level, using Department of Labour (the Department) employment forecasts to 2013.

Across all occupations, data is presented on current and future projections of expansion and replacement demand for workers.

Expansion demand measures the increase in the number of people employed in an occupation due to industry growth, or because of an increase in the importance of that occupation within its industry.

Replacement demand measures the net outflow of workers from an occupation due to retirement, migration or other movements out of an occupation.

The **total demand** for workers is the sum of expansion demand and replacement demand.

This report is one of several reports prepared as a supplement to the [SkillsInsight tool](#). For any questions about the data contained in this report or other analysis available from the Department of Labour, please contact info@dol.govt.nz.

2. Overall subdued employment growth in the medium term

Employment growth averaged 2.6 percent per annum over the period 2003 to 2008, when total employment rose from around 1.89 million to 2.15 million workers (an increase of around 260,000 workers).

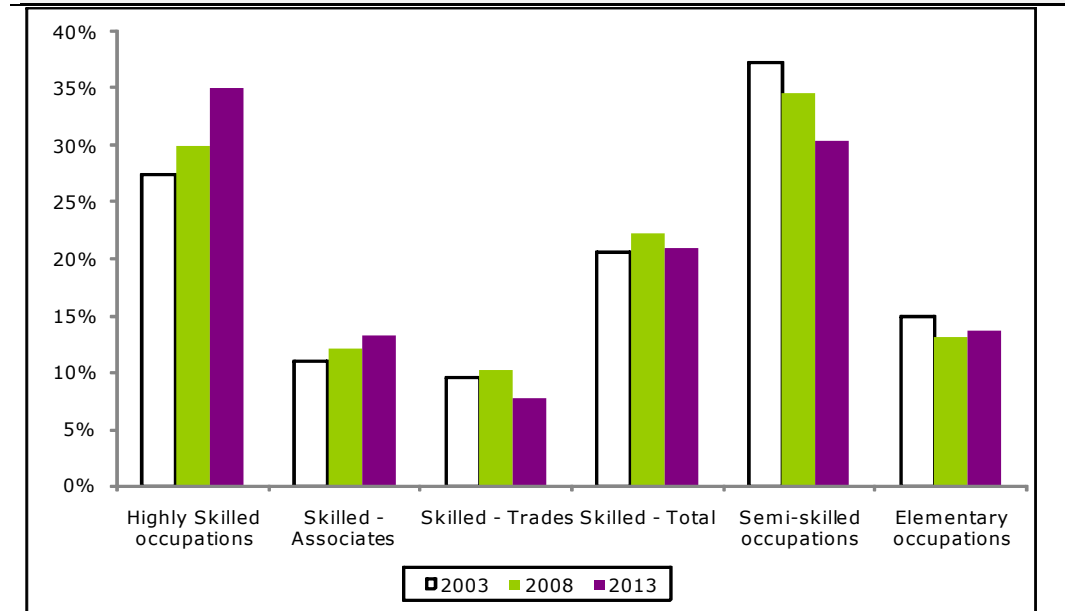
Employment growth from 2008 to 2013 is expected to be much more subdued, at around 0.5 percent per annum, leading to a forecast total employment level of 2.20 million in 2013 or an increase of around 51,000 workers.

Strong growth for highly-skilled workers

Despite the low overall growth in employment numbers, highly-skilled (e.g. legislators and administrators, corporate managers, teaching professionals etc) employment is expected to grow by around 3.6 percent per annum between 2008 and 2013, as shown in Figure 1.



Figure 1: Shares of Occupational Skill Categories – 2003, 2008 and 2013



Source: Department of Labour Employment Estimates and Forecasts

In 2008, highly-skilled workers comprised 30.0 percent of the workforce (or 646,000 workers), up from 27.3 percent (or around 518,000 workers) in 2003. Further increases are predicted over the next five years to 2013, to lift the total share of highly-skilled workers to 35.0 percent (approximately 772,000 workers). This represents an increase of 126,000 highly-skilled workers over the 2008 level.

Slight decrease in skilled workers

The total number of skilled workers (e.g. physical science and engineering associate professionals, building trades workers) employed is expected to decline slightly over the period to 2013 with their total share falling to 21.0 percent in 2013, down from 22.2 percent in 2008. The number of skilled workers employed will also decline from around 479,000 in 2008 to around 462,000 in 2013.

When the share of skilled workers is disaggregated into skilled - associates (e.g. quantity surveyors, avionics technicians, medical laboratory technicians) and skilled - trades (e.g. building trades workers, metal and machinery trades workers), an interesting trend emerges. Although the share of skilled - trades is expected to decline from 10.2 percent in 2008 to 7.7 percent in 2013 (a decrease of approximately 52,000 workers), the share of skilled - associates is expected to continue increasing from 12.0 percent in 2008 to 13.3 percent in 2013 (an increase of around 35,000 workers).



Continued decline in semi-skilled workers

The share of semi-skilled workers (e.g. office clerks, customer service clerks, salespersons) is expected to continue declining over the next few years, as shown in Figure 1. In 2008, semi-skilled workers comprised 34.6 percent of the total employed, down from 37.2 percent in 2003. By 2013 it is expected that semi-skilled workers will make up 30.4 percent of the total employed. This reflects a decline from 745,000 semi-skilled workers in 2008 to an estimated 669,000 semi-skilled workers in 2013.

Slight increase in elementary occupations

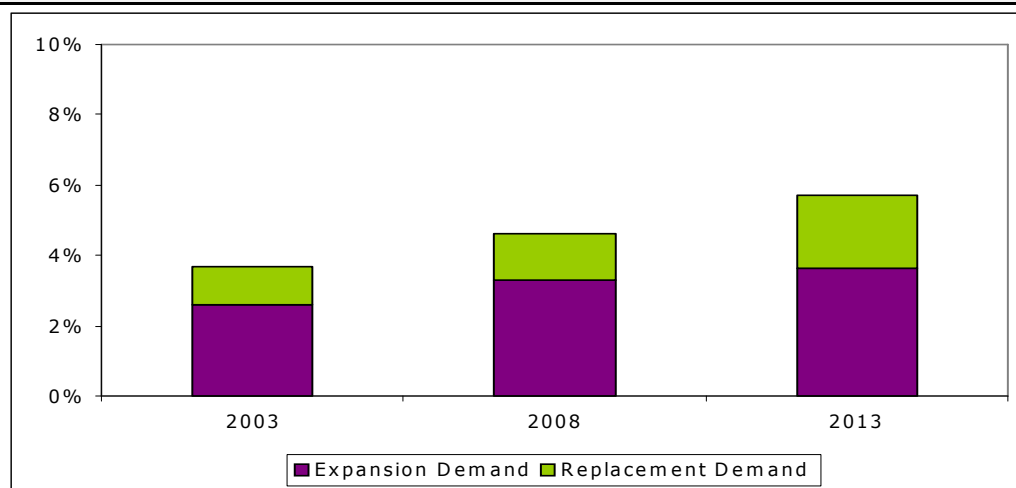
A modest increase in the number and share of elementary level workers (e.g. industrial plant operators, drivers and mobile machinery operators) is predicted over the next few years. Employment of elementary level workers is expected to rise to around 302,000 in 2013, an increase of 18,000 workers from the 283,000 workers employed in elementary occupations in 2008. This will bring the total share of elementary level workers to 13.7 percent (or approximately 302,000 workers) of the workforce in 2013, compared with 13.2 percent (283,000 workers) in 2008. By comparison, in 2003, approximately 282,000 elementary workers were employed. However, this represented 14.9 percent of the workforce.

3. Total demand: expansion demand and replacement demand for workers by skill levels

Highly-skilled occupations: increasing expansion and replacement demand

Total demand growth for people employed in highly-skilled occupations was 3.7 percent in 2003, 4.6 percent in 2008, and is expected to rise to 5.7 percent in 2013. The latter figure can be disaggregated into 3.6 percent expansion demand, and replacement demand of 2.1 percent.

Figure 2: Expansion and replacement demand for highly-skilled occupations - 2003, 2008 and 2013



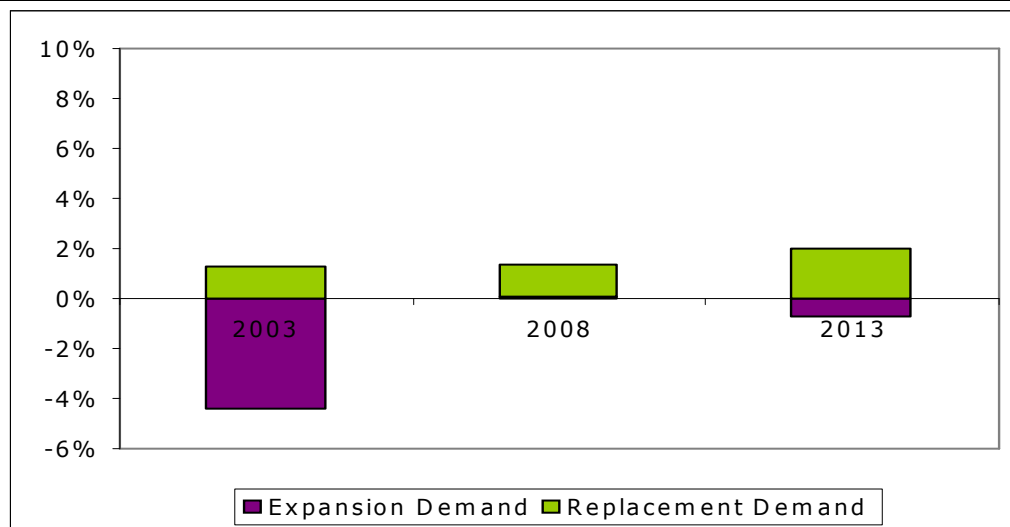
Source: Department of Labour Employment Estimates and Forecasts



Skilled occupations: declining expansion demand, increasing replacement demand

Growth in total demand for people employed in skilled occupations is expected to decrease slightly, from 1.4 percent in 2008, to 1.3 percent in 2013. A fall in expansion demand (from 0.1 percent to -0.7 percent) will be offset by a rise in replacement demand (from 1.3 percent to 2.0 percent).

Figure 3: Expansion and replacement demand for skilled occupations, 2003, 2008 and 2013



Source: Department of Labour Employment Estimates and Forecasts

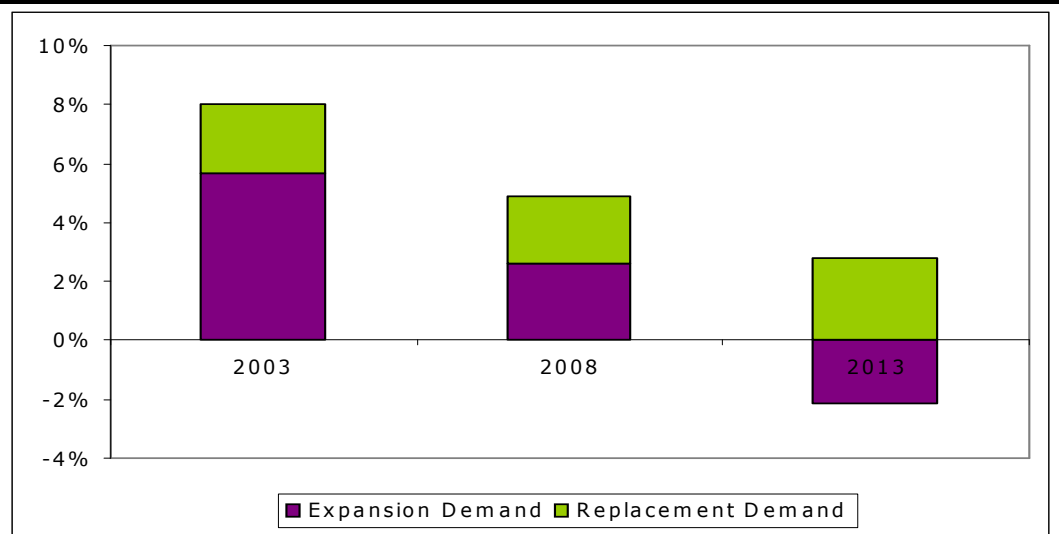
Semi-skilled occupations: large decline in expansion demand, slight increase in replacement demand

Demand for workers employed in semi-skilled occupations is expected to decline markedly, with growth in total demand for these occupations expected to be only 0.7 percent in 2013, compared to 8.0 percent in 2003 and 4.9 percent in 2008. This decline in total demand is due almost exclusively to a sharp fall in expansion demand.

Growth in expansion demand for semi-skilled occupations was 5.7 percent in 2003, fell to 2.6 percent in 2008, and is expected to fall further, to -2.1 percent in 2013. Replacement demand is expected to increase slightly to 2.8 percent in 2013, up from 2.3 percent in 2008.



Figure 4: Expansion and replacement demand for semi-skilled occupations, 2003, 2008 and 2013



Source: Department of Labour Employment Estimates and Forecasts

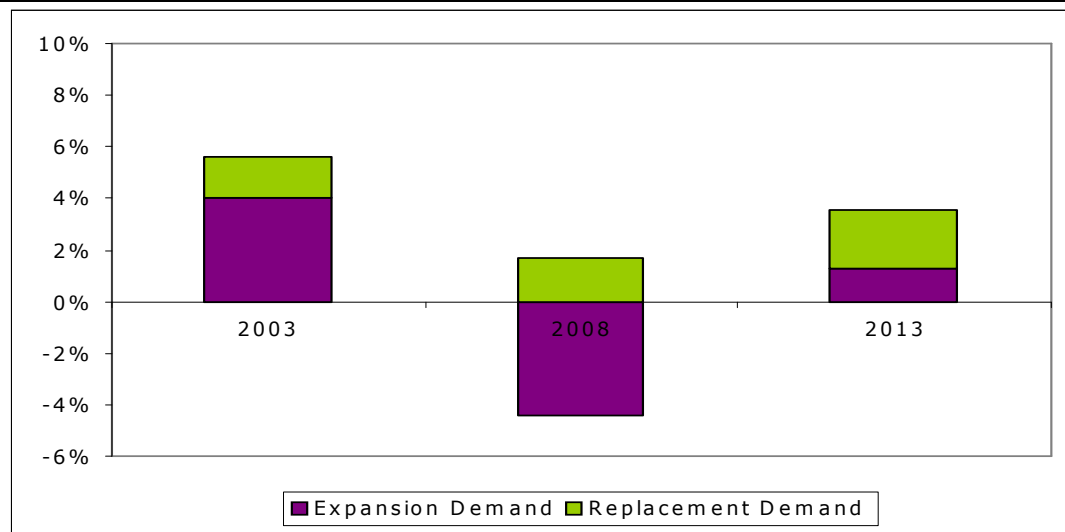
Elementary occupations: large increase in expansion demand, smaller increase in replacement demand

Demand for workers employed in elementary occupations is also expected to rise in the coming years. Growth in total demand for elementary occupations fell from 5.6 percent in 2003 to -2.7 percent in 2008, but is expected to rise to 3.6 percent in 2013. This variation is mainly due to changes in expansion demand which fell sharply from 4.0 percent in 2003 to -4.4 percent in 2008. However, this trend is expected to reverse in the coming years, rising to 1.3 percent in 2013.

Replacement demand is expected to grow to 2.3 percent in 2013, compared with 1.7 percent in 2008, and 1.6 percent in 2003.



Figure 5: Expansion and replacement demand for elementary occupations - 2003, 2008 and 2013



Source: Department of Labour Employment Estimates and Forecasts

4. Summary

Total expansion demand is expected to fall in the medium term. In other words, growth in expansion demand will be lower between 2008 and 2013 than between 2003 and 2008 (see Figure 6). However, this will be offset by an increase in replacement demand. As a result, total demand is likely to remain relatively static.

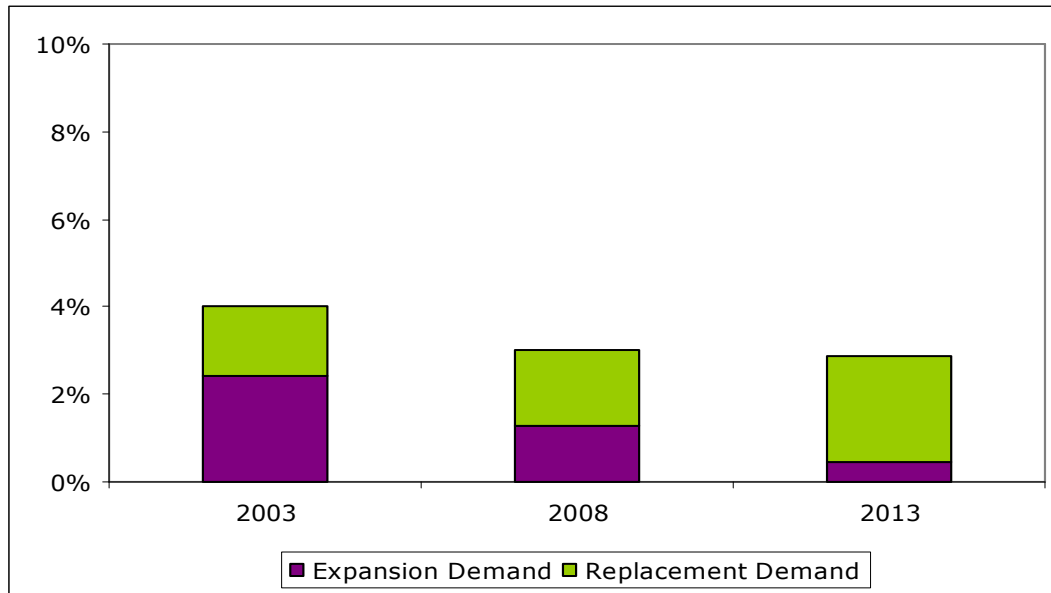
Between 2003 and 2008, growth in total demand fell from 4.0 percent to 3.0 percent, as growth in expansion demand fell from 2.4 percent to 1.3 percent, while replacement demand was fairly static, increasing from 1.6 percent to 1.7 percent.

Between 2008 and 2013, growth in total demand for workers will remain fairly constant (3.0 percent in 2008 and 2.9 percent in 2013), with a further decline in growth in expansion demand from 1.3 percent to 0.5 percent. This will be offset by an increase in replacement demand from 1.7 percent to 2.4 percent.



Across all occupations: growth in total demand will remain relatively static

Figure 6: Expansion and replacement demand for all occupations - 2003, 2008 and 2013



Source: Department of Labour Employment Estimates and Forecasts