Confidential

Environmental scan

Report to Competenz (final version)

March 2009

Preface

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NZIER was established in 1958.

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Executive Summary

Introduction

This report (written in March 2009) provides an environmental scan to feed into Competenz's business plans. Given the rapidly changing economic and political environment, this report places greater emphasis on these aspects of the business environment than have our previous desk-based studies for Competenz.

Environment

NZIER estimates the New Zealand economy to have contracted 1.5% over the past year (to the end of March 2009), which would be the lowest annual growth rate since the climb out of the 1991 recession. We forecast the economy to resume growing slowly over the next 12 months. But it will be a long, slow recovery.

This growth will not be evenly spread. While some parts of manufacturing will grow more slowly than the economy as a whole, we anticipate that machinery and equipment manufacturing will grow at a faster rate than average over the period 2008/09 to 2012/13.

We forecast New Zealand's unemployment rate to pass 6% by this time next year and to remain around this level for a further two years. In our view, firms will seek flexible ways to manage lower labour needs without losing workers who were only recently so difficult to find. We expect some hoarding of labour, such as through reducing hours worked. If the economic outlook worsens further, however, hoarding labour may become less practical.

The Government has its attention focused on the economy. In particular, policies to stimulate employment are a priority, as evidenced by the recent Job Summit.

Implications for Competenz

Rising unemployment is likely to see a relative shift away from industry training towards full-time provider-based training. Competenz may face relatively muted demand for its programmes over the next few years, due to a deteriorating employment outlook and tighter training budgets in parts of manufacturing.

There are, however, opportunities for Competenz. Training programmes which raise skills and productivity and offer value for money should fare relatively well. Manufacturers who continue to engage in industry training should be better positioned than others once the economy starts taking off again.

There is considerable uncertainty in relation to the economic outlook. Overall, this implies that Competenz may want to build a range of assumptions/scenarios/ contingency plans into its business plans.

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1. Introduction

1.1 Drivers – changing political and economic landscape

This report follows earlier desk-based studies which NZIER has undertaken for Competenz – one conducted in 2006 (NZIER 2006) and one in June 2008 (NZIER 2008). These earlier studies aimed at supporting Competenz in its skills leadership role. They examined key features and trends of Competenz-relevant industries, and issues for skills and training in those industries.

Since the most recent of these earlier studies was conducted, the political and (especially) economic landscape in New Zealand has changed considerably. Competenz wishes to better understand the implications of this changing environment.

1.2 Objectives and approach

This report provides an environmental scan for Competenz, primarily to inform Competenz's own strategic and operational plans, but also to provide context for forthcoming industry-wide strategic training plans which it intends to develop.

We undertook a PEST analysis (an analysis of the political, economic, social and technological environment in which Competenz operates). We also examined key issues for skills and training in the manufacturing sector.[1] However, given the rapidly changing political and economic environment, this report places greater emphasis on these two aspects than did our earlier reports to Competenz.

We conducted the research in March 2009. The main sources we used are NZIER's comprehensive macroeconomic forecasting publication *Quarterly Predictions (QP)* and our *Quarterly Survey of Business Opinion (QSBO)*. *QSBO* is widely used by the Reserve Bank, Department of Labour (DoL) and others as a leading indicator of economic activity, capacity utilisation, skill shortages and the general business situation in New Zealand. Our analysis of *QP* and *QSBO* was supplemented with a brief literature review and internet search of relevant New Zealand and international sources. This covered recent (released since June 2008) publications. In other words, the aim was to complement, rather than replicate, NZIER's earlier studies for Competenz.

This report considers the political, economic, social, technological and skills and training environment over the next three to five years. Where practical, we draw out the implications of that environment both for the manufacturing sector and for Competenz, based on our understanding of Competenz's role and activities.

[1] Note that Competenz covers parts of the manufacturing sector, and has some coverage outside the manufacturing sector.

2. Political environment

In November 2008 a National-led Government was formed based on confidence and supply agreements held with the ACT Party, the Maori Party and the United-Future Party. This followed three consecutive terms in office by Labour.

Here we outline the overall priorities for the new Government, and in particular the policy direction for education including tertiary education.

2.1 Overall priorities for the new Government

Strengthening the economy was the central theme in the Prime Minister John Key's "*speech from the throne*" on 9 December 2008.[2] Key priorities for the Government outlined in the speech include an ongoing programme of personal tax reductions and an infrastructure programme (new roading and public transport projects, the improvement of school property and accelerated roll-out of an ultra-fast broadband network). Halting the growth in government bureaucracy and reviewing the Emissions Trading Scheme (ETS) are further priorities.

Policies to stimulate employment are a pressing issue for the Government in the light of the current recession, as evidenced by the recent Job Summit.[3] A nine day working fortnight was one of the most prominent suggestions to emerge from the Summit, although the original intention of linking the tenth day to training has been subsequently dropped.[4]

Implications: The change of Government heralds a significant shift in direction in the political landscape. However, it is early days, so there is limited policy detail at present.

There may be significant opportunities for the training sector, especially training which offers a means of lifting productivity. Anything Competenz can offer that raises basic skill levels will put New Zealand manufacturers in good stead once the economy starts taking off again.

2.2 Education

The Government's "intended crusade to improve literacy and numeracy standards throughout New Zealand's school system" is noted by the Prime Minister in his *"speech from the throne"*. He also cites two new policies the Government will introduce.

[2] See http://beehive.govt.nz/speech/speech+throne+0

[3] See http://beehive.govt.nz/feature/summit

[4] See http://beehive.govt.nz/release/government+moves+fast+help+retain+jobs

- *The "Trades in Schools" policy* is aimed at the development of specialised Trades Academies, expanded opportunities for school-based apprenticeships and enhanced trades and technology-based learning opportunities.
- *The "Youth Guarantee" policy* will provide 16 and 17 year olds with an entitlement to free school-level education at a wider range of institutions including polytechnics, wananga and private training establishments.

Implications: There are opportunities and challenges for Competenz arising from these new policies. Essentially they further blur the lines between secondary and tertiary education. Competenz will need to understand how these changes can be capitalised upon to meet the needs of the manufacturing sector.

More generally, in the next few years training providers are likely to see an increase in demand from school leavers. School leavers may struggle to find jobs compared with the recent past and turn to full-time education instead. This implies a shift away from industry training towards full-time study in relative terms.

2.3 Tertiary education

2.3.1 TEC and the tertiary reforms

Streamlining the bureaucracy, ensuring course quality, and responding better to employers' and students' needs, are the priorities for tertiary education noted by the Prime Minister in his "*speech from the throne*". In its 2008 policy statement on tertiary education (National Party 2008), the National Party stated the following in relation to the Tertiary Education Commission (TEC).

> *"The Tertiary Education Commission, which was initially intended to be a lean funding body, has grown into a large and demanding agency that places an excessive compliance burden on education providers and stifles innovation. National will cut back the complex Wellington bureaucracy because it has failed spectacularly to ensure value for taxpayers' investment in tertiary education."*

Proposed job losses have been recently announced at TEC. The proposal, presented on 4 March 2009 by TEC Chief Executive Dr Roy Sharpe to staff for consultation, suggests cutting the number of full-time equivalent employees from 364 to 292.5 - a net loss of 71.5 jobs.[5]

More generally, there appear to be fairly widespread concerns about the ability of the recent tertiary reforms to deliver a responsive training system (see for example NZ *Skills Strategy*).[6] The need for greater transparency and stronger signals to providers, and a call to review TEC, is noted by Business NZ (2008b).

[5] See *TEC restructuring to cut 70 jobs* in the Dominion Post, 5 March 2009, Edition 2 page 3

[6] See Business NZ, New Zealand Council of Trade Unions, Industry Training Federation and the New Zealand Government (2008)

Implications: While the Government has indicated some concerns around the performance of the tertiary education sector and TEC in particular, it is difficult to know how high up the Government's agenda addressing these concerns will be. There may be some uncertainty within the sector in the meantime.

2.3.2 Role of ITOs

The change of government has provided an opportunity for many agencies and organisations, including the industry training sector, to promote their respective roles and contributions. The Industry Training Federation (ITF), in its briefing for the incoming Government (ITF 2008a), makes the following recommendations.

- *More investment closer to the action* – industry training offers good value for money.
- *Simpler, more flexible industry skills system* – the funding regime should reflect ITOs' increasingly wide roles.
- *More say for industry on tertiary spending* – information from ITOs should influence the wider tertiary education system.
- *Clearer roles in the tertiary system* – especially ITOs vis-à-vis polytechnics.
- *More flexible standards and qualifications* – including supporting the review of certificates and diplomas suggested in the NZ *Skills Strategy*.
- *Directly linking skills and productivity investments* – leveraging the training spend by investing more in industry training.
- *Investment in skills leadership* – long term strategic investments in ITO capability.

The Government has confirmed its commitment to industry training at the recent Jobs Summit, with Prime Minister John Key indicating the intention to maintain or increase the levels of industry training during the current recession (ITF 2009).

Implications: The Government's interest in obtaining greater value from public sector spending offers several opportunities for ITOs. Firstly, compared with provider-based full-time study, industry training appears to offer good value for money, as it develops skills directly relevant to the workplace. Secondly, as noted by some commentators (see for example ITF 2008a), there is an opportunity for ITOs to act as the "voice" of industry in ensuring the training system as a whole is more responsive and provides good value. Given that full-time provider-based training could grow significantly in response to rising unemployment, ensuring industry has a say in such training is important.

3. Economic environment

In planning and preparing for the future economic environment, it is important to look beyond the immediate impacts of the global financial crisis to the medium to long-term direction of the New Zealand economy. As noted by Business New Zealand (2008a), now is the time to look past sensational headlines and obtain an accurate picture of what is really going on.

Here we use NZIER's latest forecasts to examine the outlook economywide and specifically for the manufacturing sector, in relation to economic activity, sales, costs, prices and profits, investment and employment.

3.1 Economic activity

New Zealand's current recession originated in last season's North Island drought reducing dairy production and export volumes, whilst high food and oil prices and mortgage interest rates over much of 2008 dampened private consumption. These factors have been compounded by the international financial market turmoil of September and October 2008 and ensuing fallout in economies around the world.

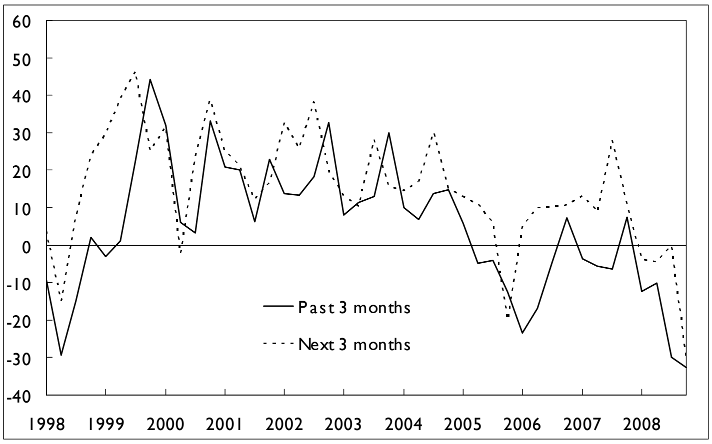
Leading indicators of real GDP growth in NZIER's January 2009 *Quarterly Survey of Business Opinion* point to New Zealand's recession continuing into the last quarter of 2008 and spilling into the first quarter of 2009. Across all sectors surveyed, the net balance of firms reporting a fall in their own trading activity in the December 2008 quarter was the worst result for this indicator since at least 1970. Firms' expectations for their own trading activity in the March 2009 quarter were similarly negative.

Of the firms surveyed, those in the manufacturing sector also reported a poorer outlook for their output, as shown in Figure 1. A net[7] 33% of manufacturing firms reported their output to have fallen in the last three months of 2008 – the highest number since 1991. A net 31% expected their output to fall in the first three months of 2009 – the highest number since 1985. This compares with a net 44% and 43%, respectively, across all sectors, suggesting somewhat more resilience in the manufacturing sector.

[7] The percentage of firms reporting their own output to have fallen minus the percentage of firms reporting their own output to have risen, allowing for the percentage of firms reporting no change or not providing a response.

Figure 1 Manufacturing firms – output

Net per cent of firms reporting/expecting an increase in their output



Source: NZIER

NZIER estimates the economy to have contracted 1.5% over the past year (to the end of March 2009), which would be the lowest annual growth rate since the climb out of the 1991 recession. The main factors reducing our economic activity have been falls in private consumption, investment and net exports.

We forecast the economy to resume growing slowly over the next 12 months. Over the coming year, the combination of lower interest rates than in 2008, lower petrol prices, still relatively high wage inflation, further tax cuts in April 2009 and growing net immigration will contribute to stimulating a modest increase in private consumption. The upturn will be gradual, however, as consumers remain cautious in the face of rising unemployment. Dairy export volumes will start to recover in the March 2010 year. Looking further out, economic growth in our trading partners is expected to strengthen in the March 2011 year, underpinned by lower interest rates and substantial fiscal stimulus packages. This will increase their demand for our exports.

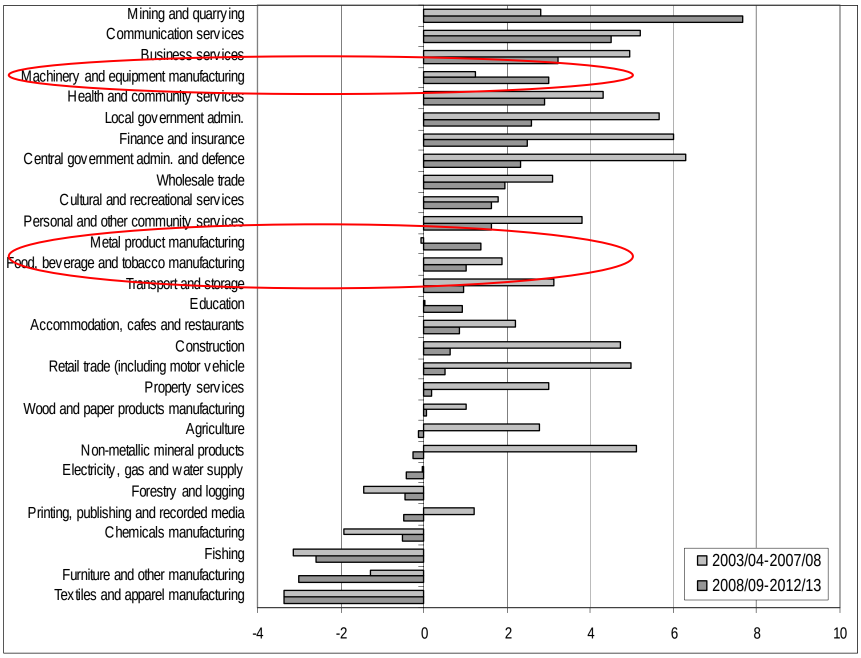
Our forecasts suggest that it be a long, slow recovery, however, taking around four years for the New Zealand economy to return to over 3% annual growth. We forecast weak growth in real GDP of 1.1% over the next year, before accelerating to 2.8% in each of the March 2011 and 2012 years and 3.0% in the March 2013 year.

This growth will not be spread evenly across all industries. Looking at specific industries of most relevance to Competenz, Figure 2 shows that machinery and equipment manufacturing is forecast to grow at a rate nearly twice that across the economy as a whole, whilst food, beverage and tobacco manufacturing is forecast to grow more slowly. Indeed, of all the (29) industries we separately analyse, machinery and equipment manufacturing is forecast to be the fourth fastest growing to 2013 (exceeded only by mining and quarrying, communications services and business services).

Both metal product manufacturing and machinery and equipment manufacturing are forecast to grow significantly faster than they did in the past five years. This is driven by increasing investment in plant, machinery and equipment in New Zealand and our trading partners from 2010 to 2013, as economic growth accelerates and facilitated by (with lagged effect) lower interest rates than in 2006 to 2008.

Figure 2 Real GDP growth by industry

Annual average percent change, March years



Source: NZIER

Implications: There is considerable uncertainty over the economic outlook, with more downside than upside risks. The success of the fiscal stimulus packages being introduced in many countries is not guaranteed and other threats to the global economy are emerging. Protectionism is on the rise as some governments bow to pressure from special interest groups.

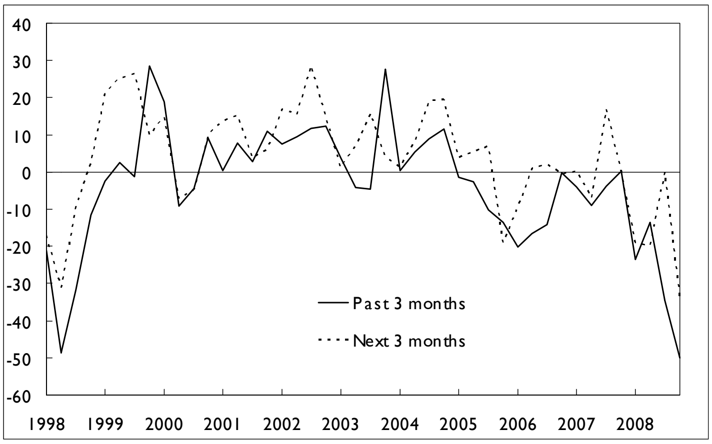
Arguably, uncertainty is especially high in manufacturing compared with many other sectors in New Zealand, as manufacturing is highly dependent on world trade. Overall, this implies that Competenz may want to build a range of assumptions/scenarios/contingency plans into its business plans.

3.2 Sales

In the January 2009 *Quarterly Survey of Business Opinion*, manufacturing firms also reported poorer sales, in both domestic and export markets. The net balance of firms reporting a fall in domestic sales in the past three months was the highest recorded since the survey began in 1961, although was almost as high in 1998, as shown in Figure 3. Export sales were not as badly affected, but still down. In both domestic and export markets, firms' expectations for early 2009 were a little less negative.

Figure 3 Manufacturing firms – sales in New Zealand

Net per cent of firms reporting/expecting an increase in their sales



Source: NZIER

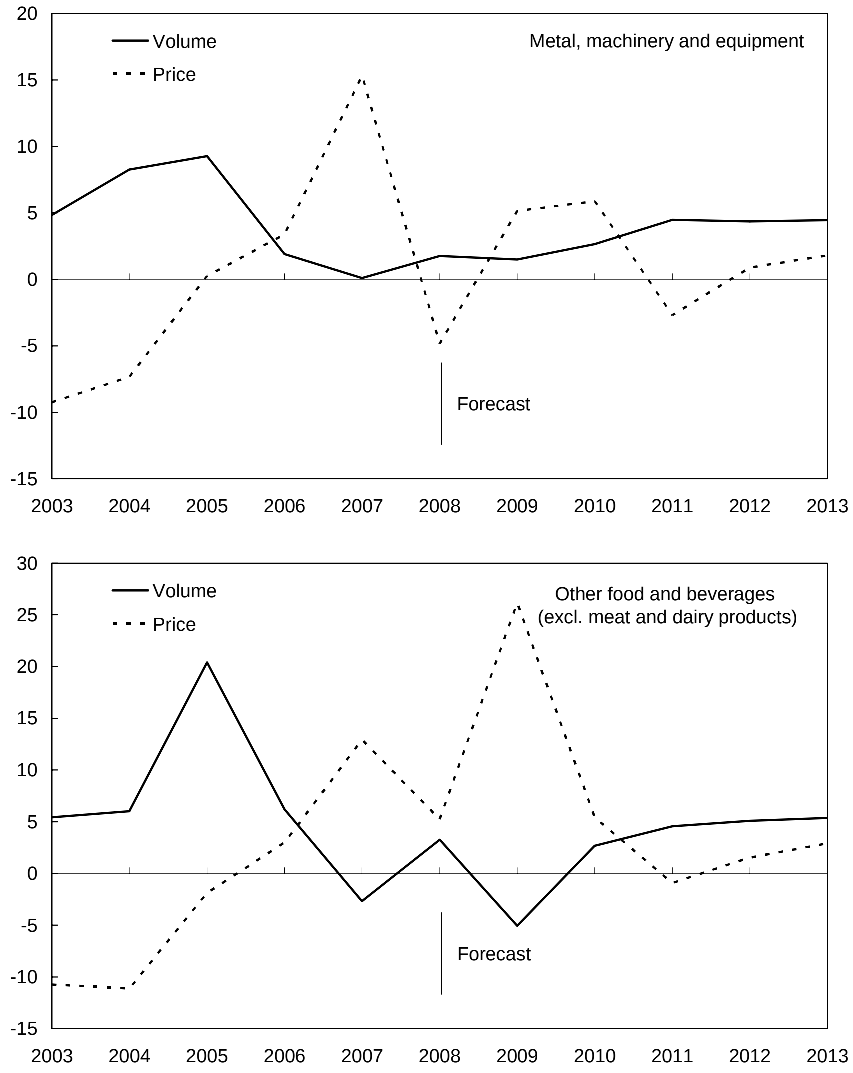
This experience of manufacturing firms is consistent with our forecasts for total consumer spending in New Zealand. We estimate the volume of private consumption to have fallen 0.5% over the past year, due to the dampening effect of high food and oil prices and mortgage interest rates for much of 2008 and the continuing deterioration in the labour market. This is, however, a smaller reduction than that which occurred in the 1991 recession, thanks in part to the Reserve Bank's rapid cutting of interest rates to encourage consumption and to counteract some of the negative influences of a more adverse international environment.

We forecast real private consumption to resume growing slowly by 0.7% over the next year, but the upturn will be gradual as consumers remain cautious in the face of rising unemployment.

We expect the global economic slowdown to have reduced the volume of New Zealand's goods and services exports by 2.8% over the year to March 2009. This is similar to the reduction in export demand seen in the recession of the early 1990s. We forecast export volumes to grow 1.7% over the coming year, rising to 3.3% over the year to March 2011 as the economic growth of our trading partners strengthens, but this remains below the 4.0% average annual growth of the past 10 years.

Figure 4 shows forecast volume and price changes for two export categories of particular interest to Competenz. For both, growth in export volumes is forecast to accelerate modestly beyond March 2009 as demand for our exports gradually recovers, but the current global economic slowdown will keep price growth relatively subdued for the remainder of the forecast period.

Figure 4 Selected New Zealand exports
Average annual percent change, March years



Source: NZIER

3.3 Costs, prices and profits

A beneficial effect of the general weakening in demand has been a widespread easing in cost pressures from the historically high inflation seen in 2008. Of firms operating in the manufacturing sector, the net balance expecting their average costs to rise almost halved between the October 2008 and January 2009 *Quarterly Survey of Business Opinion*.

In some sectors, this easing in cost pressures, together with weakening demand for their goods and services, has caused some firms to expect to have to cut their selling prices. Across all sectors, firms expecting to reduce their selling prices in the first three months of 2009 outnumbered those expecting to increase their selling prices (by a net balance of 3% of firms) for the first time since 1998. In the manufacturing sector, however, selling prices seem to be holding up better. Of manufacturing firms, a net balance of 14% raised their selling prices in the last quarter of 2008 and a net 13% expected to do so in the first quarter of 2009.

This is also reflected in a less negative outlook for profitability. A net 51% of manufacturing firms reported a fall in their profitability in the December 2008 quarter, but a significantly smaller net 32% expected their profitability to fall in the January 2009 quarter. This was, however, the 20^{th} quarterly survey in a row in which a net balance of manufacturers reported a decline in profitability. Demand remains by far the most dominant factor limiting output and firms reported a significant jump in surplus capacity in the latest survey.

We forecast annual price inflation for producers' inputs and outputs to ease rapidly over the rest of 2009 and to remain relatively low thereafter, although commodity prices are expected to strengthen from 2010 as the global economy picks up. Interest rates are forecast to start rising again from early 2010 as domestic and global demand strengthen and inflation returns as a concern. The New Zealand dollar has weakened against most major currencies as the financial crisis has deepened. Once confidence starts returning to financial markets from mid to late 2009, Japanese and other foreign investors will again look to benefit from higher interest rates in New Zealand. This will cause a fairly rapid rise in the value of the New Zealand dollar.

The slowdown in domestic and global demand will cause firms' operating surpluses to be lower in the year ending March 2009 than last year, but we forecast these to increase again over the coming year.

3.4 Investment and employment

Like other sectors, the manufacturing sector has responded to weaker demand and surplus capacity by cutting back on planned investment and employment.

In NZIER's January 2009 *Quarterly Survey of Business Opinion*, the net balance of manufacturing firms intending to reduce investment in buildings over the next 12 months was the highest since 1998 and the net balance intending to reduce investment in plant and machinery was the highest since 1975. Investment intentions were less negative in the manufacturing sector, however, than in the other sectors covered by the survey.

We expect the volume of non-residential investment economywide to have fallen 0.8% over the past year and to drop a further 2.1% over the next year, but to resume positive growth thereafter as the economy accelerates and stimulated by a lower cost of borrowing than in 2008.

After the tight labour market of the last few years, manufacturing firms have reported it becoming easier to find skilled and unskilled labour over the past few months. Indeed, increasing numbers are scaling back the number of staff employed. In the latest *Quarterly Survey of Business Opinion*, a net 29% reported reducing staff numbers in the December 2008 quarter. A net 39% expected to reduce staff numbers in the first quarter of 2009. This employment outlook was more negative than firms in the service sector but less negative than firms in the wholesale and retail sector and similar to firms in the building sector.

We forecast New Zealand's unemployment rate to pass 6% by this time next year and to remain around this level for a further two years. New Zealand entered the current recession with a strong labour market, reflected in the lowest unemployment rate (3.4%) since the series began in 1986. By the close of 2008, unemployment had risen to 4.6% and indicators from NZIER's *Quarterly Survey of Business Opinion*, as discussed above, suggest a further increase since. In our view, however, firms are looking for more flexible ways to manage lower labour needs without losing workers who were only recently so difficult to find. Over the coming year, we expect some hoarding of labour, such as through reducing hours worked, to limit the number of jobs firms have to cut. Firms will seek to avoid the significant search costs incurred in attracting quality staff back once economic activity starts to pick up again later this year.

Rising unemployment will, however, raise concerns about job security and make consumers cautious about increasing their spending. Consumer confidence remains a risk to the rate of recovery in the economy and could cause a more severe deterioration in the labour market than we currently anticipate. If the economic outlook worsens further, hoarding labour may become less practical. Firms may have to shed labour as they did in the 1991 recession, when unemployment reached 10.9%. The current recession is not yet forecast to be as deep and long, and the likelihood of unemployment moving into double figures is still very low.

Implications: Competenz may face muted demand for training over the next few years compared with the recent past due to several factors. Firstly, the employment outlook in some manufacturing industries may deteriorate in response to lower demand for manufacturing goods. Even where demand for goods is relatively strong (see section 3.1), growth in *output* may not be matched by growth in *employment* due to the use of labour saving technologies (discussed in our earlier report for Competenz - NZIER 2006). Having said that, there may still be a need to replace workers who leave the sector due to retirements, career changes, etc. Secondly, training budgets will be squeezed as manufacturing firms seek to contain costs. Weaker demand for industry training is evidenced in Business New Zealand's recent survey for the Job Summit (Business New Zealand 2009). Manufacturing firms were over-represented among respondents who had surplus staff (although interestingly not among those who intend to lay off any current apprentices). Across all sectors, 83% of respondents anticipate a drop in the number of apprentices in their industry in the next 12 to 24 months.

There are, however, some possible opportunities for Competenz. If Competenz can demonstrate that its programmes lift productivity, it should have a strong selling proposition in the current environment.

3.5 Summary

The following indicators may assist Competenz in formulating its business plan assumptions.

Table 1 Economic indicators

March years

	2004	2005	2006	2007	2008	2009f	2010f	2011f	2012f	2013f
GDP, real, aapc	4.0	3.9	2.9	2.8	2.3	-1.5	1.1	2.8	2.8	3.0
CPI inflation, apc	1.5	2.8	3.3	2.5	3.4	3.3	2.7	2.3	2.6	2.7
Producers output price index, apc	0.9	3.1	3.9	3.1	6.1	8.2	1.4	2.2	2.4	2.3
Unemployment, %, sa	4.1	3.8	3.9	3.7	3.7	5.1	6.1	6.0	5.9	5.7
Migration, net inflow	27,978	10,013	9,739	12,081	4,678	3,800	5,500	8,000	10,000	12,800
Exchange rate, TWI, annual average	63.6	67.1	70.1	65.6	71.6	61.6	52.2	57.3	61.3	65.4

Notes: (1) aapc = annual average percent change, apc = annual percent change, sa = seasonally adjusted

Source: NZIER

4. Social environment

There have been no official releases on population projections since our previous reports to Competenz.[8] Over the next five years we anticipate a continuation of existing demographic trends (both in the New Zealand population and in the labour force), namely:

- continued growth in the population
- the ageing of the population
- increasing ethnic diversity, with strongest growth in the Asian and Pacific populations.

We do, however, expect net inflows of permanent and long-term migrants to New Zealand to increase over the next four years, after declining over the past two years. This reflects partly the relative attractiveness of New Zealand to potential migrants from countries more adversely affected by the global financial crisis and economic slowdown, but also fewer New Zealanders leaving the country. NZIER forecasts net inflows to increase by between 1,700 and 2,800 people per year (including migrants not actively participating in the labour market).

Addressing the social consequences of higher unemployment levels will be a key social issue over the next few years. High unemployment rates tend to be concentrated in certain demographic groups, such as the non-European ethnic groups and the younger age groups.

Implications: Migrants to New Zealand may need some additional training for, or at the very least familiarisation with, the New Zealand work environment, including relevant standards and qualifications.

As noted in our previous reports to Competenz, there may be opportunities in relation to training due to redeployment, arising from structural changes in the economy. There is likely to be strong support from the Government and others for training to help people at risk of redundancy or who have been made redundant to adapt to other employment opportunities.

[8] For Statistics New Zealand's population projections see http://www.stats.govt.nz/datasets/population/population-projections.htm

5. Technological environment

Some of the technological and other implications of the global financial crisis on the manufacturing sector are discussed in recent articles in *The Economist*,[9] which we consider here.

Up until recently there has been a tendency for companies to be as lean as possible, outsourcing all but their core competencies and expanding their global "just-in-time" supplier systems. But the recent difficulty in obtaining credit has meant that companies are starting to hoard cash. This creates a "paradox of thrift"; every firm does what is prudent for itself, but by cutting its own spending it slows down the economy still further. It also means that lean supply chains are looking less attractive than previously – "just in time" is giving way to "just in case".

Concerns about the possible collapse of global supply chains, along with rising unemployment worldwide, increase the risk of protectionism. So far this has taken the form of bail-outs in selected industries, such as the US car industry. There has been less evidence of trade protectionism, although recently India has raised some steel tariffs and the EU has reintroduced export subsidies for some dairy products.

Implications: The possible move away from "just-in-time" has implications for Competenz's current Competitive Manufacturing trial. It will be interesting to see if New Zealand manufacturing firms perceive a shift away from lean supply chains. Arguably, lean manufacturing practices such as reducing stock levels offer a means of containing costs – important in the current economic environment.

Increasing protectionism is a worry for New Zealand's manufacturing sector with its strong export focus. At the moment it is unclear how large a threat this poses in reality.

[9] See the editions of February 21st 2009, *The collapse of manufacturing*, p13, and November 22nd 2008, *All you need is cash*, p15.

6. Skills and training environment

Here we examine recent themes in relation to skills and training in general in New Zealand, and specifically in relation to the manufacturing sector.

6.1 Across all sectors

Some of the themes below have been touched on in our earlier reports for Competenz, some are new, and some reflect a change in emphasis.

- *The role of ITOs in enhancing productivity.* The potential for industry training and ITOs to enhance productivity in the industries they serve is referred to repeatedly in recent publications by the Industry Training Federation (ITF 2008a and b). The ITF notes that lifting productivity often requires training to be accompanied by other changes to business practices. Increasingly, ITOs are working with whole organisations to assist them develop their capability.
- *Skills utilisation and employer demand.* ITOs have shifted focus from simply skills development to addressing the wider challenges of skills utilisation. They can improve the quality of demand for training and act as "skills brokers" (ITF 2008b; Business NZ and ITF 2008). More generally, improving the use and retention of skills, and increasing employer and worker awareness of their skill needs, are two key goals of the *NZ Skills Strategy.*
- *Responsiveness of the training system*. The need to increase the responsiveness of the tertiary education and training system has been discussed in section 2.
- *Engagement with schools*. The increasing expectations of ITOs on a number of schools-related initiatives is noted by the ITF (2008b).
- *Literacy and numeracy skills*. Recent themes are to increase the quality and relevance of learning opportunities and raise awareness among employers and workers of the benefits of literacy and numeracy skills (*NZ Skills Strategy).* ITOs are increasingly focusing on "building in" (rather than "tacking on") such skills in their programmes (ITF 2008a).
- *Management skills.* Management and leadership skills impact substantially on organisational performance. Concerns around the availability of management skills in New Zealand have been noted by a number of sources (ITF 2008b; *NZ Skills Strategy;* Business NZ 2008b).

Implications: Many of the above themes will not be new to Competenz. However, an interesting point is how they inter-relate. For example, managers play a key role in ensuring that the skills of their staff are utilised, and that work is organised in a way which enhances productivity and firm performance. Overall, this reinforces that training and skills development should be considered in a wide context; Competenz's Competitive Manufacturing trial is one example of this.

6.2 Manufacturing

6.2.1 Skills and Training Survey

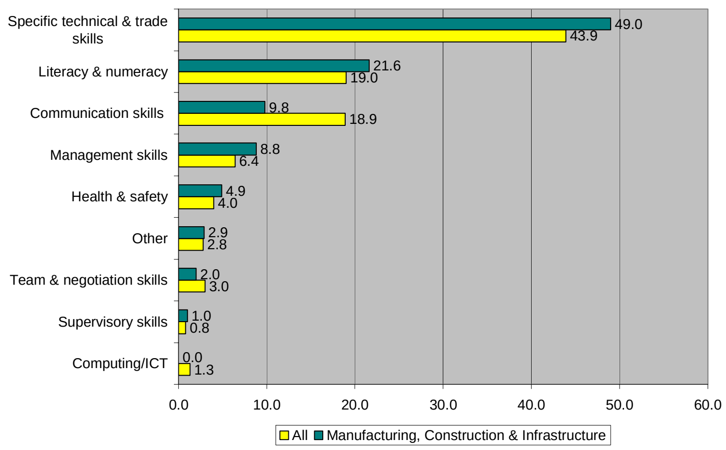
In July 2008, Business NZ and the ITF jointly published the findings from the latest *Skills and Training Survey* (Business NZ & ITF 2008). Here we draw out the key points in relation to the manufacturing sector compared with the *all sectors* findings. Note that highly aggregated industry classifications were used in the survey, so in general the findings relate to the combined manufacturing, construction and infrastructure sector (rather than manufacturing specifically).

a) Most important skills

Figure 5 shows the "most important skill" for manufacturing, construction and infrastructure sector respondents compared with respondents across all sectors. Specialist technical and trade skills were seen as most important, especially in the manufacturing, construction and infrastructure sector.

Figure 5 Most important skill

Percent of respondents



Source: Business NZ & ITF 2008

b) Literacy and numeracy

Literacy and numeracy skills are ranked relatively highly in importance in the manufacturing, construction and infrastructure sector compared with all sectors (see Figure 5).

The manufacturing, construction and infrastructure sector is also the sector with the highest perceived prevalence of literacy and numeracy issues, with more than half of respondents (54%) reporting that they believed their employees had such issues (compared with 35% across all sectors).

A further important finding in relation to literacy and numeracy (across *all* sectors) is the large gap between the (high) proportion of respondents that identified literacy and numeracy as an important skill and the (low) percentage of those that are providing literacy and numeracy training to their staff. The authors offer four possible explanations for this: employers can employ enough staff with adequate literacy and numeracy skills; the literacy and numeracy issues are not serious enough in the minds of employers to justify training expenditure; employers can not locate suitable training providers; employers do not consider it is their responsibility to train for literacy and numeracy.

In conclusion, the authors suggest that: "..the new tripartite workplace literacy workplace campaign would do well to begin by focusing on the manufacturing and food and beverage sectors".

Implications: The recognised importance of literacy and numeracy issues in the manufacturing sector should mean that Competenz's initiatives in this space will be well received by employers and others.

c) Industry training

Among all the sectors covered in the survey, manufacturing, construction and infrastructure sector respondents were more likely to:

- be aware of industry training
- be engaged in industry training or modern apprenticeships
- agree with the statement "industry training and modern apprenticeships make an effective contribution to meeting the skill development and/or employment needs of my enterprise".

Implications: High awareness, support and engagement in industry training should help Competenz in the face of uncertain training demand discussed earlier.

6.2.2 Recent overseas studies

The Sector Skills Council for Science, Engineering and Manufacturing Technologies (Semta) in the UK has published a recent *Skills Balance Sheet* report for engineering (Semta 2008). Some of the findings from the report support those in the New Zealand *Skills and Training Survey*, and include the following.

- Despite a net decline in projected employment levels (2005-2014), significant numbers of staff will be needed to replace those leaving their jobs due to retirement, etc.
- The main skills cited by employers as lacking in staff were technical and engineering skills (CNC machine operation, CAD, welding skills and assembly line/production robotics).
- The authors' recommendations included upskilling those with no qualifications, improving management and leadership skills, tackling gender imbalances and issues relating to an ageing workforce.

Implications: Many of these issues appear to be relevant in New Zealand, and have been touched on in our earlier studies for Competenz.

Appendix A Bibliography

Business NZ (2009), *Business NZ survey for Jobs Summit*. Business NZ: Wellington, NZ.

Business NZ (2008a), *Planning Forecast December 2008*. Business NZ: Wellington, NZ.

Business NZ (2008b), *Workforce skills and tertiary education*. Briefing to the incoming Government. Business NZ: Wellington, NZ.

Business NZ and the ITF (2008), *Skills and Training Survey*. Business NZ & ITF: Wellington, NZ.

Business NZ, New Zealand Council of Trade Unions, Industry Training Federation and the New Zealand Government (2008), *New Zealand Skills Strategy Action Plan 2008*. Wellington, NZ.

Industry Training Federation (2009), *Industry training support for PM's Job Summit priorities*. Media release 3 March 2009. ITF: Wellington, NZ.

Industry Training Federation (2008a), *Investing in Skills and Productivity – The contribution of Industry Training Organisations*. Briefing for the incoming New Zealand government 2008. ITF: Wellington, NZ.

Industry Training Federation (2008b), *High Performance in ITOs: incorporating the ITO practices and models survey*. ITF: Wellington, NZ.

Industry Training Federation (2008c), *ITOs and the Senior Secondary School: A Policy Framework*. ITF: Wellington, NZ.

National Party (2008), *Tertiary Education: Policy 2008*. National Party: Wellington, NZ.

NZIER, (2009), *Quarterly Predictions March 2009*. NZIER: Wellington, NZ.

NZIER, (2009), *Quarterly Survey of Business Opinion*, January 2009. NZIER: Wellington, NZ.

NZIER (2008), *Support for the development of strategic training plans - Update of 2006 study for Competenz*. Report to Competenz. NZIER: Wellington, NZ.

NZIER (2006), *Research to support Competenz's strategic leadership role - Literature review and analysis of Census data*. Report to Competenz. NZIER: Wellington, NZ.

Sector Skills Council for Science, Engineering and Manufacturing Technologies (2008), *Engineering Skills Balance Sheet*. Semta: UK.