Overview of the manufacturing sector

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This article examines recent trends in New Zealand's manufacturing sector. It finds that sales to the domestic market have been reasonably robust in recent years, reflecting the strong local economy. However, the share of imports in local sales has been rising, partly due to structural factors and partly due to the rising exchange rate. Manufactured export activity has fluctuated in recent years, with key influences including the exchange rate, commodity prices, and cycles in trading partner economies. After some weakness in 2002 and 2003, export sales strengthened in 2004, helped by the global economic cycle. The article finds that profitability (the earnings to sales ratio) has fallen for many industries over this period, which is likely to reflect a rising exchange rate and ongoing competitive pressures.

1 Introduction

New Zealand's manufacturing sector accounts for just over 15 per cent of Gross Domestic Product, with total sales of around $69 billion in 2004 (see table 1). Around one third of the sector's output is exported directly, with an estimated 10 to 20 per cent exported indirectly as inputs into other sectors' production. This still leaves a significant portion of output that is used to meet demand in New Zealand. Consequently, both external and domestic demand conditions are important in shaping overall prospects for the manufacturing sector.

The aim of this article is to provide an overview of recent performance in the manufacturing sector and a brief look at trends in the various sub-industries. The main source of information is the Quarterly Manufacturing Survey (QMS), which provides details on sales, volumes, costs of production and inventories. Unfortunately the QMS only provides aggregate statistics and does not decompose sales into their 'domestic' and 'export' components. In this article, export statistics have been used to estimate the share of domestic sales residually. However, the QMS sub-industry classification differs from that used to report export and imports. Although we have attempted to reconcile the two classification systems, there are limitations with this approach. Consequently, the statistics reported in this article should be treated as indicative only.

Table 1
Manufacturing sector sales
(Year to September 2004)

	Sales ($ M)	% of Total
Meat and Dairy	17,050	24.9
Other Food	7,030	10.3
Metal Products	7,008	10.2
Machinery and Equipment	6,506	9.5
Wood Products	4,584	6.7
Rubber, Plastics and Other Chemicals	4,443	6.5
Printing, Publishing and Recorded Media	3,596	5.2
Petroleum and Industrial Chemicals	3,063	4.5
Beverages, Malt and Tobacco	3,036	4.4
Textiles and Apparel	2,815	4.1
Paper and Paper Products	2,756	4.0
Transport Equipment	2,329	3.4
Non-Metallic Mineral Products	2,303	3.4
Furniture/Other	2,044	3.0
Total	68,564	100.0

Box 1

The manufacturing sector at a glance

Manufacturing sector's contribution to GDP	15%
Manufacturing sales (year to September 2004)	$68.5 Bn
of which	
Export sales[1]	$24.5 Bn
Domestic sales	$44.0 Bn
Average domestic sales growth over last five years	5.8%
Average export sales growth over last five years	4.6%
Number of employees (February 2004)[2]	258, 570
Number of manufacturing enterprises[2]	21, 853

	1998	2004
Manufacturing share of real GDP	16.5%	15.2%
Manufacturing share of total employment[3]	17.7%	15.7%

Exports by destination (% of total manufacturing exports)

	1996	2001	2002	2003	2004
Australia	20.1	18.2	19.2	20.4	20.1
US	10.1	16.2	16.9	16.6	16.6
Japan	16.6	13.4	11.5	10.7	10.9
UK	6.5	4.8	4.9	4.9	5.0
China	2.9	3.8	4.7	5.2	5.6
South Korea	5.1	4.0	4.5	3.5	3.9
Hong Kong	3.5	2.5	2.0	1.9	1.8
Taiwan	3.1	2.4	2.3	2.4	2.5
Malaysia	2.7	2.3	2.1	1.9	1.9

Fastest growing export markets (by average annual growth since September 1997)

China	14.8
US	10.6
Australia	4.5

1 Includes exports of processed meat and dairy
2 Source: Enterprises, Geographic Units and Employee Count, Statistics New Zealand's Business Demography Statistics
3 Source: Household Labour Force Survey – Hours Worked

Two other caveats should be made. First, individual firm experiences are likely to differ significantly relative to that of the 'industry'. Second, the backward nature of these statistics means they provide limited insight into the likely fortunes of the sector going forward.

2 Broad trends

Figure 1 shows the path of domestic and export sales growth since 1997, while figure 2 shows the price-volume split of total sales.[4,5] Falling export prices brought about by the rising exchange rate saw sales growth stagnate during 1997, although the volume of sales continued to grow modestly. Following the onset of the Asian crisis in late 1997, sales registered an outright fall, driven by falling domestic and export sales growth. Over this period, manufacturers faced weaker demand locally, as the economy cooled down, as well as weaker international markets (particularly in South East Asia). Export prices for manufactured goods appear to have been driven lower over this period, notwithstanding a falling exchange rate, in part, due to intense efforts by Asian exporters to re-grow their own export markets.

Figure 1

Growth in manufacturing sector sales

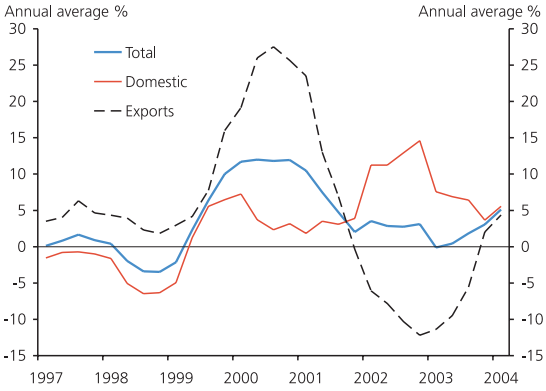
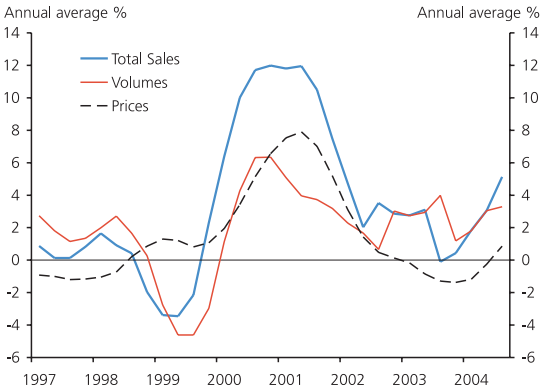


Figure 2

Growth in manufacturing volumes and prices



By 1999, both domestic and export sales were recovering. Export conditions had become more favourable due to the combination of strong commodity prices (benefiting meat and dairy manufacturing), a lower exchange rate, and recovering demand from Asia. The domestic economy was also recovering strongly over this period, with a sharp lift in both consumption and business investment spending benefiting a range of manufacturers.

In 2001, as commodity prices began to fall and the exchange rate started to appreciate, the pace of the manufacturing sector's recovery began to ease, with more moderate export and domestic sales growth. Since 2002, domestic sales growth has been robust – reflecting a strong local economy. However, export revenues were driven lower during 2002 and 2003 by an appreciating exchange rate and, for some manufacturers, weaker international prices. During 2004, export sales appear to have gained some momentum again, reflecting a recovery in some export commodity prices (especially for meat and dairy) and an improvement in trading partner economies. These factors would have been offset, to some extent, by a further rise in the exchange rate.

Trends in manufacturing sales by industry are summarised in table 2 (overleaf) while table 3 (overleaf), shows growth in sales volumes (ie sales adjusted for price movements).

[4] The relatively short horizon examined in this article is due to the period for which data is available in its current format.

[5] Aggregate sales and export trends should be interpreted with caution as the sales and export data do not account for hedging. The values of exports are recorded at the spot exchange rate, not at the price actually received by the producer due to hedging. When the exchange rate is falling, export values may be inflated (to the extent exporters are hedged at higher exchange rates); conversely when the exchange rate is rising export values may be understated.

Table 2

Growth in manufacturing sales by industry

(annual average growth)

	1998	1999	2000	2001	2002	2003	2004
Meat and Dairy	5.3	-7.1	17.6	24.6	5.9	-9.0	6.6
Other Food	4.2	-0.3	5.8	7.8	3.5	1.6	2.8
Beverages, Malt and Tobacco	12.1	9.0	12.2	10.0	1.1	10.1	1.2
Textiles and Apparel	-10.3	2.6	9.7	5.5	1.4	2.0	-7.1
Wood Products	-1.1	8.9	19.5	-6.2	9.2	5.1	8.7
Paper and Paper Products	-5.9	10.9	20.4	-4.0	-3.3	-5.7	1.9
Printing, Publishing and Recorded Media	3.0	-5.3	5.0	7.9	-6.2	-2.0	5.7
Petroleum and Industrial Chemicals	-11.4	-10.0	24.3	31.1	-9.8	4.0	-3.1
Rubber, Plastics and Other Chemicals	2.2	2.4	7.7	2.2	9.7	2.7	6.5
Non-Metallic Mineral Products	3.7	0.7	-0.2	1.7	11.2	12.4	8.4
Metal Products	-2.2	-4.8	10.4	2.9	5.8	5.1	10.2
Transport Equipment	-3.3	-27.4	13.7	6.8	15.7	5.5	0.3
Machinery and Equipment	-1.6	0.7	8.6	14.6	-3.0	2.8	9.8
Furniture/Other	-2.7	7.2	-4.9	-0.2	14.9	1.7	3.4
Total	0.4	-2.1	11.7	10.5	3.5	-0.1	5.1

Table 3

Growth in manufacturing sales volumes by industry

(annual average growth)

	1998	1999	2000	2001	2002	2003	2004
Meat and Dairy	6.1	-8.3	8.4	11.8	7.7	-3.8	3.8
Other Food	2.6	-4.2	1.9	2.8	0.0	1.6	2.8
Beverages, Malt and Tobacco	8.0	6.8	10.3	5.8	-3.5	5.9	-2.4
Textile and Apparel	-7.6	4.1	6.1	-1.3	0.4	1.5	-5.4
Wood Product	-1.8	8.9	14.3	-8.7	9.6	7.0	10.8
Paper and Paper Products	-6.7	12.6	6.9	-6.5	-1.4	-3.2	4.3
Printing, Publishing and Recorded Media	-0.7	-10.3	-1.1	5.3	-6.4	-5.8	4.1
Petroleum and Industrial Chemicals	-9.2	-6.9	13.0	12.7	-7.1	2.5	-0.2
Rubber, Plastics and Other Chemicals	1.4	2.1	4.9	-3.2	8.0	2.6	6.2
Non-Metallic Mineral Products	3.3	1.1	-0.2	-1.4	7.1	11.1	6.0
Metal Products	-2.4	-1.7	8.2	-2.3	4.1	6.0	7.6
Transport Equipment	-4.0	-28.7	10.6	1.5	14.8	5.2	0.9
Machinery and Equipment	-0.2	-1.5	5.5	7.8	-4.9	2.7	8.5
Furniture/Other	-1.9	6.2	-6.4	-4.9	12.6	0.2	3.0
Total	0.3	-3.0	6.3	3.2	3.0	1.2	4.2

3 Domestic trends

Table 4 shows our estimates of domestic sales growth by industry. As shown by the table, aggregate domestic sales of locally produced manufactures continued to expand quite rapidly in 2004, although there was considerable variation in performance across the sub-industries. Those industries related to the construction sector, such as wood products, metal products and non-metallic mineral products (which includes commodities such as cement and other building aggregates) continued to grow quickly with rising production volumes – although the rate of increase moderated. Sales in the rubber, plastic and other chemical products (including pharmaceuticals) industries also achieved high growth rates underpinned by rising volumes. Domestic sales contracted for producers of beverages, textiles, apparel and paper products – this following relatively strong growth in previous years. This slowdown in domestic sales may, in part, reflect greater import competition brought about by the higher exchange rate.

For meat, dairy and non-metallic mineral products, moderate increases in prices helped boost domestic sales revenues in 2004. However, for the remainder of manufactures prices remained subdued, as suggested by figure 3. Despite strong domestic demand, price rises may have been suppressed by falling import prices of similar products due to a rising New Zealand dollar. For some manufacturers, the rising exchange rate may also have helped to contain the cost of imported inputs.

Figure 3

Growth in domestic prices of locally produced manufactures

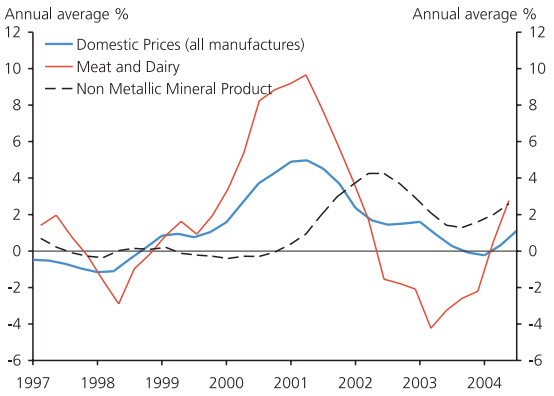


Table 4

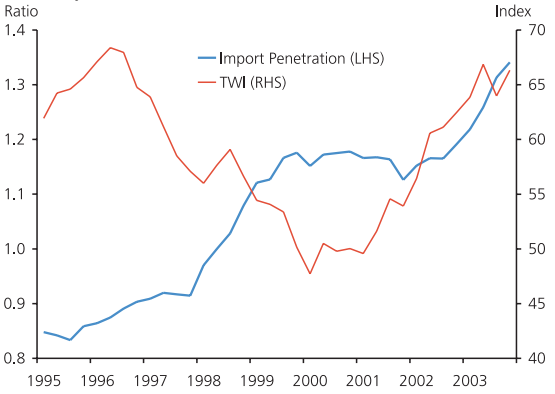
Estimates of growth in domestic manufacturing sales (annual average growth)

	1998	1999	2000	2001	2002	2003	2004
Meat and Dairy	6.4	-17.0	24.0	5.4	27.6	-5.3	3.1
Other Food	2.2	-4.6	4.5	0.3	3.1	12.1	2.2
Beverages, Malt and Tobacco	12.0	7.6	9.0	7.4	0.7	11.6	-1.8
Textiles and Apparel	-22.9	21.9	8.1	6.6	8.0	0.4	-7.3
Wood Products	13.1	0.6	9.4	-19.6	6.8	29.1	23.9
Paper and Paper Products	-15.5	11.2	12.3	-8.3	3.8	14.0	-4.2
Printing, Publishing and Recorded Media	3.0	-5.4	4.9	7.7	-6.2	-2.1	5.6
Petroleum and Industrial Chemicals	-6.6	-13.8	2.8	26.7	25.0	30.2	-0.3
Rubber, Plastics and Other Chemicals	-8.1	-0.2	-2.3	-33.4	57.9	23.1	16.7
Non-Metallic Mineral Products	2.6	-0.2	0.0	1.6	12.2	13.3	8.6
Metal Products	-6.6	-6.0	7.8	-0.4	12.6	12.1	10.4
Transport Equipment	-2.7	-33.2	7.7	4.8	18.0	0.4	6.7
Machinery and Equipment	-8.0	1.8	1.0	16.4	-3.5	3.8	9.1
Furniture/Other	-3.1	6.4	-6.7	-4.3	18.6	2.4	5.1
Total	-1.6	-5.0	7.3	1.8	11.2	7.6	5.6

4 Imports of manufactures

Domestic consumption of manufactured goods is supplied from both local production and imports. Stronger domestic sales have been accompanied by rising production volumes for many manufacturers. However, the rate at which production is increasing has been relatively subdued, which may partly reflect increasing competition from imports of similar products. As shown in figure 4, import penetration of manufactured goods into the New Zealand market has accelerated in the past few years, along with the appreciation of New Zealand's exchange rate. It is difficult to be sure whether the strong import volume growth has been for goods that are in direct competition with local output; whether it represents greater reliance on imported components in the production process; or whether it has been in areas for which New Zealand has limited domestic productive capacity. But there is a strong likelihood that local producers have faced greater competition due to the fall in import prices, and some manufacturers have reported scaling back production of certain products locally.

Figure 4
Import penetration of manufactured goods (1991q1 = 1)



The strong exchange rate is likely to have been a key driver of the recent acceleration in import penetration, and some of this increase is likely to reverse when the exchange rate eventually declines. In some cases, strong demand has led to production capacity constraints in some industries, with greater reliance on imported product (this has reportedly been the case for some building materials). However, the rise in import penetration may also reflect a structural change brought about by intense competition from other countries producing manufactured goods, such as China and some other Asian economies. Lower production costs (particularly lower labour costs) have enabled these countries to significantly expand their trade with countries such as New Zealand, and to compete directly with local manufacturers in world markets. The progressive dismantling of New Zealand's import tariffs during the 1980s and 1990s is likely to have further encouraged imports from a range of countries.

5 Export Trends

China and the United States have been New Zealand's fastest growing export destinations over the past decade (see Box 1). Strong growth in export sales to the United States during the late 1990s increased the United States' share of total exports. This has offset a gradual decline in Japan's export share, as growth in export sales remained marginally lower than that of other trading partners. Strong demand from China has seen its share of total exports increase rapidly. Over 2001 to 2003 growth in export sales to China has been significantly stronger than growth in exports to the rest of Asia.

Over 2002 and 2003, export sales suffered due to deteriorating trading conditions as world commodity prices declined sharply, exacerbated by weak demand in many trading partners, such as the US, Japan and the EU. Export sales growth recovered in 2004, as export prices stabilised and external demand conditions improved. Table 5 shows

Figure 5
Manufactures export prices and world commodity prices

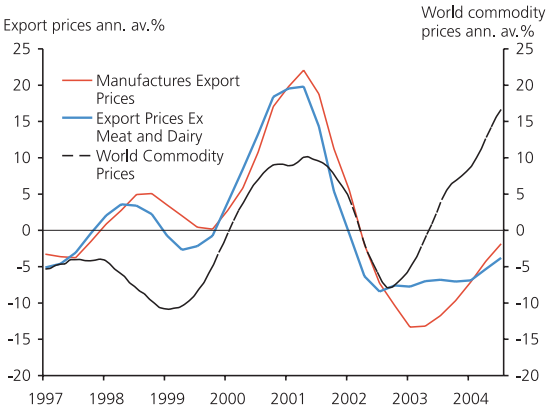


Table 5

Growth in manufactured exports

(annual average growth)

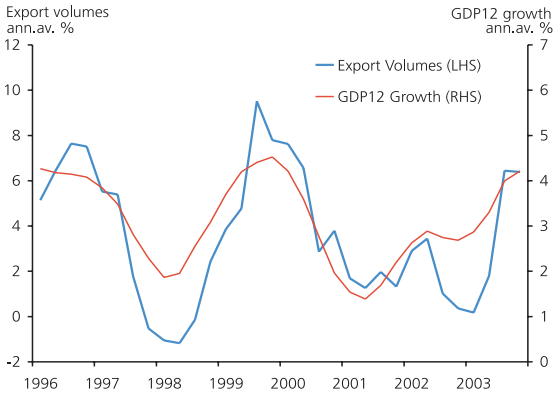
	1998	1999	2000	2001	2002	2003	2004
Meat and Dairy	4.5	0.7	13.6	38.0	-5.7	-11.6	9.4
Other Food	8.1	8.0	8.0	20.0	4.2	-12.3	3.9
Beverage Malt and Tobacco	13.0	22.8	40.0	28.0	3.7	1.6	19.1
Textile and Apparel	2.4	-12.1	11.4	4.3	-5.5	3.9	-6.8
Wood Product	-14.0	18.8	29.6	5.2	10.7	-10.0	-4.9
Paper and Paper Product	15.4	10.5	33.6	2.0	-12.0	-34.4	17.2
Printing, Publishing and Recorded Media	3.3	3.2	14.7	22.1	-4.8	7.0	13.1
Petroleum and Industrial Chemical	-18.4	-3.7	56.3	35.4	-41.7	-47.6	-17.0
Rubber, Plastics and Other Chemical	16.7	5.3	18.2	32.9	-11.2	-13.0	-4.5
Non-Metallic Mineral Product	31.6	17.6	-4.4	3.1	-5.2	-6.7	3.9
Metal Product	13.2	-1.2	17.2	11.3	-9.3	-14.3	9.4
Transport Equipment	-9.4	37.8	46.7	14.9	7.3	25.9	-20.1
Machinery and Equipment	13.2	-1.2	23.4	11.9	-2.1	1.3	11.0
Furniture/Other	0.3	13.6	9.0	27.1	-3.7	-2.5	-7.2
Total	4.3	3.0	19.1	23.5	-6.1	-11.4	4.4

our estimates of export sales growth by industry since 1998. Once again, the variation in performance across the various sub-industries is striking. Meat and dairy sales (which account for 40 per cent of all manufactured export sales) recovered in 2004 due to a sharp lift in world prices for these commodities. Machinery and equipment sales accelerated due to strong growth in volumes – this may be partly due to strong sales in durable goods related to the building cycle in Australia. Export sales contracted for textiles, wood products, rubber, plastic, chemicals and petroleum.

Although export revenues have increased for some manufacturing industries, the rising New Zealand dollar has continued to put downward pressure on export prices over the past couple of years. However, as suggested by figure 5, rising world commodity prices will have contained the fall in prices for some manufacturers (especially meat and dairy product producers) although this will not be the case for many others. Since 2002 world commodity prices have been improving for all our major exports, such as meat, dairy and aluminium. Forestry prices turned down during 2004 and may exacerbate falling export revenues for wood products.

Figure 6

Manufacturing export volumes and external demand



A recovery in external demand[6] was a factor driving export volumes higher for many manufacturers in 2004 (figure 6). Volume growth in machinery continued to accelerate despite weak export prices. Volumes also performed well for metal products, paper products and printing, publishing and recorded media. Volumes of dairy and meat exports continued to grow at a steady pace. Exports of beverages grew substantially – supported by higher production of wine due to bumper grape harvests. Export volumes fell for wood products, compounding the effect of weak prices.

[6] Measured by GDP12 – this proxy for external demand is a trade weighted measure of gross domestic production growth from major trading partners. For more information on the estimation of GDP12 see Smith (2004).

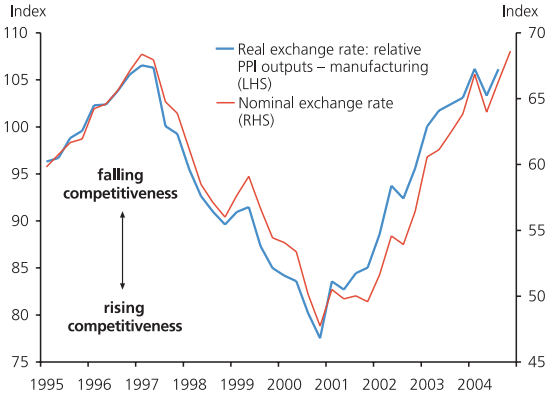
6 Profits, costs and competitiveness

Although trends in sales and volumes provide a barometer of manufacturing performance, looking at measures of profitability and competitiveness provide additional perspective on the overall performance of manufacturing, and likely developments in the future.

A key underlying driver of manufacturing sector profitability is the competitiveness of manufacturers within their key markets. There are a number of dimensions to competitiveness, many of which are difficult to measure. Comparisons of production costs between New Zealand manufacturers, and overseas manufacturers against which they compete, can provide one gauge of their ability to compete in overseas markets (or locally against imported products). However, such measures can be hindered by data limitations. Other dimensions to competitiveness include relative product quality, branding and regulatory factors, all of which can be difficult to measure and compare across countries.

Figure 7 provides a simple measure of relative price competitiveness between New Zealand and its key trading partners. This measure compares relative manufacturing output prices between New Zealand and its five major trading partners in world currency terms.[7] A rise in New Zealand's output prices abroad relative to those of its trading partners implies a loss in competitiveness. With only small differences between relative inflation rates in manufacturing across countries during recent years, changes in relative competitiveness have been driven primarily by movements in the nominal exchange rate.[8] A falling exchange rate during the 1999 to 2001 period boosted New Zealand manufacturers' price competitiveness and, as noted earlier, coincided with an increase in export activity. More recently, falling relative competitiveness brought about by a rising exchange rate has made trading conditions more challenging both domestically and externally. Note that the simple measure in figure 7 may understate the decline in competitiveness as it excludes countries such as China which have become an increasingly important trading partner (and competitor in export markets). Another limitation of the measure is that it is based on a comparison of output prices rather than core production costs, which may be a better indicator of long-term competitiveness.

Figure 7
Relative competitiveness
(relative producer output prices)



Turning to measures of profitability, information from the QMS allows a range of profitability measures to be calculated. A measure of profit (net earnings before interest and taxation, or EBIT) can be calculated by subtracting labour costs and other expenses from operating income. An estimate of profit margins can then be calculated by dividing net earnings by total sales. This measure is shown in table 6.

As suggested by the table, the combination of higher commodity prices and a lower exchange rate increased profitability for most manufacturing industries over the period from 1999 to 2001. Margins have since fallen back to around 1997 levels for most industries, primarily reflecting the effect of the appreciating exchange rate on earnings. Note that because the analysis in this paper is based on annual average data, these measures will not necessarily reflect very recent developments.

On average, non-labour costs make up 83 per cent of New Zealand manufacturers' operating expenses. The majority

[7] The higher the real exchange rate, the lower is New Zealand's manufacturing competitiveness relative to the following five trading partners: Australia, US, EU, Japan and the UK.

[8] As shown by the difference between the real exchange rate and the nominal exchange rate.

Table 6

Earnings before interest and taxes relative to sales[9]

	1997	1998	1999	2000	2001	2002	2003	2004
Meat and Dairy	6.9	7.7	2.3	6.7	6.1	3.9	6.1	3.2
Other Food	8.0	10.8	16.1	14.1	14.8	15.3	14.1	15.4
Beverages, Malt and Tobacco	24.9	26.0	23.3	24.3	24.5	19.0	19.6	20.2
Textiles and Apparel	4.9	-0.5	6.1	10.3	8.5	12.1	12.5	11.3
Wood Products	11.5	12.1	14.7	16.9	12.4	9.4	6.7	10.2
Paper and Paper Products	13.5	16.9	18.7	24.8	18.4	18.2	13.1	12.7
Printing, Publishing and Recorded Media	16.8	19.0	19.9	17.8	19.0	16.1	17.9	17.4
Petroleum and Industrial Chemicals	19.9	9.3	8.2	18.2	17.7	19.6	19.7	15.2
Rubber, Plastics and Other Chemicals	9.8	6.2	11.4	7.7	8.2	11.3	14.9	16.3
Non-Metallic Mineral Products	21.2	19.5	20.6	19.5	18.0	18.1	20.0	19.1
Metal Products	14.4	13.2	15.3	17.3	14.5	10.7	12.0	13.8
Transport Equipment	7.3	7.1	-13.3	4.8	5.6	11.7	11.0	6.6
Machinery and Equipment	11.4	10.9	9.6	9.2	16.0	12.8	11.7	10.6
Furniture/Other	14.0	13.1	13.6	11.9	10.6	13.6	12.9	12.6
Total	11.5	11.1	11.0	13.1	12.5	11.3	11.9	11.2

of these non-labour costs are for raw materials, which may be sourced domestically or imported. Other significant costs are likely to be energy and transport. Changes in world export prices or the exchange rate will tend to impact both New Zealand dollar export prices and the cost of imported inputs. Typically, the change in export prices will dominate the effect of any change in imported input prices, as the latter are only a fraction of total costs. However, the overall impact on profitability also depends on the currencies in which imports and exports are denominated. For example, discussions with our business contacts suggest that a number of manufacturing exporters servicing the Australian market rely heavily on imported inputs purchased in US dollars. To an extent, profitability for these exporters has been cushioned over the past few years, during which the NZD/USD has risen by more than the NZD/AUD.

[9] These measures are intended to illustrate trends within individual industries and should not be used to infer relative levels of profitability across the different industries.

7 Labour productivity

Labour productivity is another important metric of manufacturing performance, as it reflects the sector's ability to increase production from its existing labour input. The ability to generate additional output per worker has an important bearing on competitiveness and profitability. From a national perspective, productivity is a key ingredient in lifting per-capita incomes.

Measures of labour productivity can be estimated by dividing real value added in manufacturing from the national accounts by hours worked. Unfortunately there are multiple sources of data, which yield different results. In recent work The Treasury uses the Household Labour Force Survey (HLFS) estimate of hours worked, which is based on respondents recalling how many hours they worked.[10] In contrast, the Quarterly Employment Survey (QES) estimate of total hours paid collects data directly from firms. The QES data might be more accurate as it is sourced directly from administrative records and will not include recollection errors. We have used both measures of hours worked to estimate labour productivity trends in manufacturing over the past 15 years.

[10] See Black, Guy and McLellan (2003)

Table 7
Trend estimates of labour productivity
(compound growth rate)

	QES			*HLFS*		
	GDP growth	Hours paid	Productivity	GDP growth	Hours worked	Productivity
Manufacturing sector						
1990–1997	2.0	0.4	1.5	2.0	1.8	0.2
1997–2004	1.7	-0.5	2.2	1.7	-0.6	2.2
All sectors						
1990–1997	2.7	1.4	1.3	2.7	1.9	0.8
1997–2004	3.0	2.1	0.8	3.0	1.5	1.4

The different measures produce different estimates of productivity and different profiles of productivity growth over the short term. However, when comparing trends over cycles, both yield similar conclusions.[11] Table 7 compares productivity estimates under both measures for the periods 1990–1997 and 1997–2004. These periods correspond approximately to a full growth cycle in manufacturing output. As shown in the table, trend labour productivity in manufacturing appears to have lifted over the 1997–2004 cycle. While the average growth in manufacturing sector GDP has eased slightly over this period, labour hours have actually declined, lifting productivity growth.

The table shows that labour productivity in manufacturing has been higher relative to labour productivity for the whole economy (calculated using either HLFS or QES hours data). Driving this is the difference in labour growth, with substantial growth in employment throughout the rest of the economy. This is also consistent with employment data which shows that manufacturing's share of total employment has declined from 18.0 per cent in 1990 to 15.7 per cent in 2004.[12]

A range of factors may have led to an increase in productivity growth over the latest cycle. Investment has accelerated in recent years as firms have responded to strong demand and tighter labour market conditions, and so the productivity gains may reflect an element of 'capital deepening'. Many manufacturers are likely to have continued to seek further efficiencies due to intense competition from foreign competitors, and in response to the impact of the rising exchange rate on export profitability. It is likely that the pressure to continue improving productivity will be sustained going forward.

8 Conclusion

This overview of the manufacturing sector has briefly discussed recent trends for domestic and export sales, as well as volumes and price developments in each market.

A key finding is that strong domestic sales have been an important feature of manufacturing sector performance over the past few years. Some parts of the sector appear to have performed quite well over this period, in part because of the strength in the domestic environment, which has acted to buffer against weak export sales.

On this score, prospects for the manufacturing sector in 2005 will depend, to a large extent, on developments in the domestic economy as much as the ongoing adjustment to the exchange rate and external conditions. A flattening in the residential construction cycle after last year's rapid growth spurt could potentially result in weaker domestic sales growth for manufacturers than in 2004. Industries such as wood products and non-metallic minerals appear to have been disproportionate drivers of domestic manufacturing sales in 2004, and it may be unrealistic to expect growth to be sustained at the double-digit growth rates seen in 2004.

[11] McLellan (2004) looks at productivity growth over peak to peak periods of the economic cycle. These periods are 1985–1989, 1989–1997 and 1997 to present. Given that the QES data begins in 1989 we have looked at productivity growth over 1990–1997 and 1997–2004.

[12] Estimated using Household Labour Force Survey Hours Worked.

There are some positive signs regarding exports, with both trading partner activity remaining strong and world prices for New Zealand commodities at high levels. But the further rise in the exchange rate in recent months, the gradual expiry of exchange rate hedges, and a probable cooling in the rate of expansion of domestic demand, means that manufacturing prospects are likely to prove challenging in 2005.

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