

australian commodities

march quarter 07.1

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ABARE project 1163 ❖

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ISSN 1321-7844

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australian food industry

performance and competitiveness

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- » **The Australian food industry is an important component of the Australian economy, accounting for around 20 per cent of manufacturing sector output.**
- » **Growth of the Australian food sector has been strongly export oriented, with exports growing at around 2 per cent a year.**
- » **A key trend in world food markets is increasing globalisation, driven by large multinational food manufacturers and supermarket chains with the ability to source their input requirements from many different countries. Greater globalisation and the increased competition it brings are major issues for the Australian food industry.**
- » **Australia's continued international competitiveness in food products requires ongoing improvements to multifactor productivity and investment in research and development.**

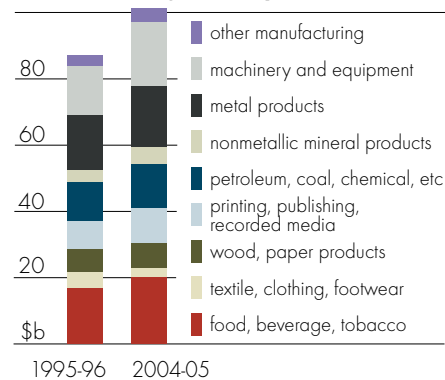
food manufacturing in Australia

Since the late 1970s the value of output from Australia's manufacturing sector as a whole has declined as a proportion of gross domestic product (GDP). Within the sector, food manufacturing accounts for about 20 per cent of output, and remains one of Australia's largest manufacturing industries (figure A). Growth in the value of output from the food industry averaged around 2.0 per cent a year over the past ten years, slightly higher than the 1.9 per cent a year average for the manufacturing sector as a whole.

Geographically, the distribution of food manufacturing in Australia closely resembles the distribution of population, with the bulk of the industry located

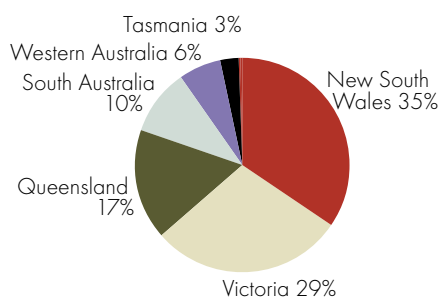
For more information, see Short, C., Chester, C. and Berry, P. 2006, *Australian Food Industry: Performance and Competitiveness*, ABARE Research Report 06.23 Prepared for the Australian Government Department of Agriculture, Fisheries and Forestry, Canberra, December – available on www.abareconomics.com

fig A industry value added, Australian manufacturing industry in 2005-06 dollars



food industry

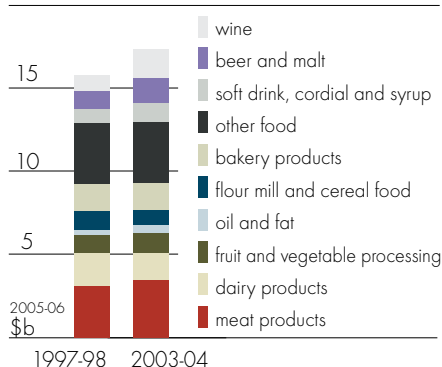
fig B state shares in Australian food, beverage and tobacco manufacturing , 2002-03



along the east coast, predominantly in Victoria and New South Wales (figure B). Between 1998-99 and 2002-03, most of the growth in the industry was concentrated in New South Wales.

Within food manufacturing, the most solid growth over the past five years has been in wine, beer and malt, and soft drinks, cordial and syrup (figure C). Although not the largest food category overall, between 1997-98 and 2003-04 the value of wine production almost doubled, to \$1.7 billion (in 2005-06 dollars). The other beverage categories and meat also had large absolute increases in value added, of about \$300 million (in 2005-06 dollars) each. Meat products were the largest single product category in terms of value added, worth \$3.4 billion (in 2005-06 dollars) in 2003-04.

fig C Australian food, beverage and tobacco industry value added, by subsector



domestic consumption

In Australia, consumer expenditure on food is relatively insensitive to changes in income, with expenditure changing by smaller proportions than the changes in household income. Not surprisingly, total household expenditure on food and nonalcoholic beverages increased by only about 3 per cent in real terms between 1988-89 and 2003-04, equivalent to an average growth rate of 0.2 per cent a year. Consumption expenditure increased most significantly for poultry, seafood and fresh fruit and vegetables, and shifted away from meat, eggs, grains and sugar. The overall trend in expenditures suggests that, since 1948-49, consumers may have been including higher proportions of high value foodstuffs such as seafood in their diets.

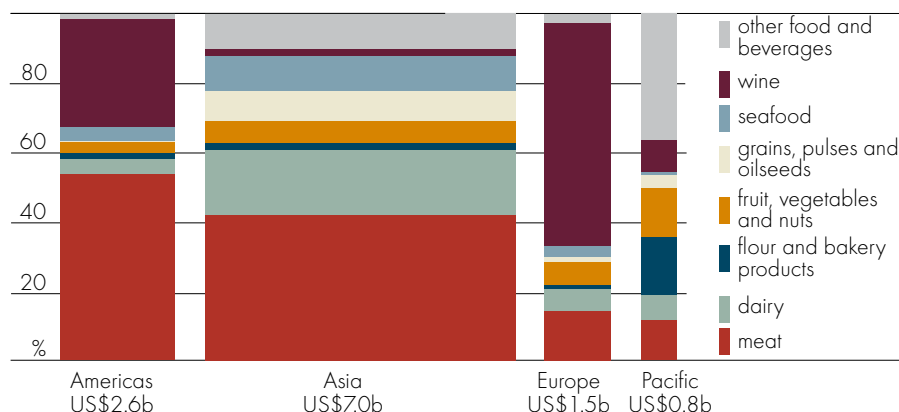
food exports

Between 1995-96 and 2004-05, total food exports (that is, minimally, substantially and elaborately transformed food products) increased by \$4 billion to \$24 billion (in 2005-06 dollars), at an average growth rate of around 2 per cent a year. Meat products have been the main export category, although there have also been large increases in wine and dairy exports.

Despite Queensland being only the third largest producer of manufactured food products in Australia, the state had the largest exports, with shipments valued at more than \$5 billion (in 2005-06 dollars) in the substantially and elaborately transformed categories in 2004-05. The main export commodities from Queensland were meat (\$3 billion) and sugar (\$1 billion).

In 2004, Asia was the biggest market for Australian food exports (US\$7.0 billion—figure D). The composition of exports differed significantly between regions—for example, while the European export market was worth only about US\$1.5 billion in 2004, it was the largest export market for Australian wines.

fig D Australian food exports, by destination region, 2004



employment and productivity in the food industry

High labour and multifactor productivity growth in food manufacturing has contributed to output growth in the sector, enabling employment to remain relatively unchanged over the past twenty years. On a year to year basis, employment levels fluctuate, reflecting fluctuating incomes in the food industry. These fluctuations are associated with primary product supplies being affected by major climatic events, such as droughts, flooding and severe storms, or through impacts on the value of sales caused by exchange rate movements or sudden shifts in consumption patterns.

research and development expenditure

Research and development (R&D) are closely linked with the location of production centres, which is reflected in the distribution of R&D expenditure between states. Most of the \$50 million (in 2005-06 dollars) increase in food, beverage and manufacturing research and development expenditure between 1997-98 and 2003-04 occurred in Victoria, and close to 70 per cent of total R&D expenditure was in New South Wales and Victoria. R&D expenditure tended to be undertaken by firms with 200 or more employees, and mostly (88 per cent) covered labour costs and other current expenditure (not including capital).

market concentration

The global food industry is dominated by large, multinational firms, and the Australian market reflects that trend. In 2003, about 75 per cent of industry revenues in Australia were generated by fifty firms, more than half of which were foreign owned or publicly listed companies. However, the market shares of the largest fifty firms varied widely in individual food categories – from 95 per cent for milk and cream processing to 7 per cent for seafood.

Almost half of the largest fifty firms were foreign owned companies. These firms generated about 45 per cent of domestic revenue in the five years to 2002. There were about nine firms in each of publicly listed companies, cooperatives and privately owned companies, which generated 30 per cent, 14 per cent and 10 per cent respectively of domestic revenue.

food industry

table 1 **global food sales, 2002**
2002 US dollars

	retail stores US\$b	food service US\$b	total US\$b
fresh food	531	382	913
processed products	1 762	1 420	3 182
packaged food	1 148	828	1 976
beverages	614	592	1 206
- alcoholic drinks	316	422	729
- hot drinks	53	12	65
- soft drinks	245	167	412
total food	2 293	1 803	4 096

Source: Regmi and Gehlhar (2005b).

supply chain

In 2001-02, inputs (in value terms) into food manufacturing comprised raw agricultural products (32 per cent), major services (26 per cent), labour (17 per cent), food products (13 per cent) and other industrial inputs (12 per cent). Output from the industry was consumed by households (43 per cent), exported (22 per cent), used as inputs by other industries (33 per cent) or through changes in inventories (2 per cent).

The meat products industry, including beef and dairy cattle, sheep meat, poultry and pigs, was the largest industry examined. In 2001-02, the industry had a total supply value of around \$15 billion (in 2001-02 dollar values). Agricultural goods were the main input (57 per cent), followed by major services and labour. Within

the major services inputs, transport and storage, wholesale trade and business services were the main services provided. Of the buyers of meat products, industries consumed the largest proportion of output (37 per cent), followed by exports (32 per cent) and household consumption (25 per cent).

global food trends

Food sales worldwide in 2002 are estimated to have been worth more than US\$4 trillion (in 2002 dollars), with processed products (packaged foods and beverages) making up more than 70 per cent of this amount (table 1). Packaged foods alone were worth approximately US\$1.9 trillion (in 2002 dollars).

A key trend in food consumption is that the rate of growth of consumption per person, albeit from a low base, is higher for low and middle income countries. As incomes rise, the rate of growth in food consumption per person tends to decline (figure E).

The composition of food consumed also changes as incomes increase, with changes to the proportion of different foods in consumer diets (figure F). Consumption of fish, dairy and meat products all increase as incomes

fig E **food budget as a share of household expenditure**

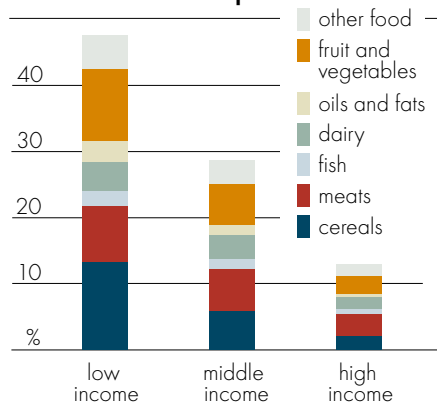
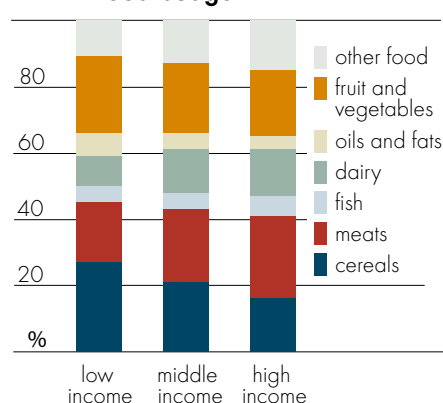


fig F **food groups as a share of food budget**



Expenditure in 2002 by income group (based on per person gross national income in US dollars): low income: ≤US\$760; middle income: US\$761-9360; high income: ≥US\$9361 (World Bank 2000).

rise, while there are declines in the proportions of cereals, oils and fats, and fruits and vegetables.

The responsiveness of household consumption to income changes also varies with level of income, with significant differences in both the magnitude and range of income responsiveness for different food categories. Per person consumption of food in high income countries tends to have relatively low responsiveness to income changes and narrow ranges of responsiveness between different categories, whereas the inverse holds for developing countries.

changing consumer preferences

Reflecting the difference in income growth rates between high and low income countries, the opportunities for the food industry to expand volumes sold within domestic food markets tend to decline as incomes increase. In high income countries, which also tend to have low or declining population growth, firms tend to increase their market share through product differentiation.

The types of foods likely to be developed include products that can be sold on the basis of specific sensory appeal (colour and flavour enhancement), desired nutritional content, relevant health benefits, food safety, origin of production and processing practices or greater convenience.

industry location and trade

The global food processing industry is dominated by a relatively small number of firms. These firms operate food processing facilities across countries and are responsible for most of the investment in such operations. Despite a relatively high concentration in ownership of branded products and production facilities, the existence and location of food processing industries is strongly influenced by the costs of manufacturing and distribution within a region or country.

The various economic forces at work in the market for inputs (raw materials, labour and capital investment) mean there is no reason to expect that countries that have a comparative advantage in producing agricultural goods used as raw inputs to food manufacturing will be advantaged in producing manufactured foods for export to other countries.

The economic characteristics of food manufacturing have a significant role in determining where processing plants are located internationally. Access to investment funds and new technologies are two of the most important inputs to the production of elaborately transformed foods as most manufacturing processes are capital intensive.

The location of manufactured food production is not necessarily dependent on the availability of the natural resource endowments required to produce raw material inputs. This is because raw product inputs such as refined sugars, starches and grains are relatively nonperishable and easily transportable without loss of nutritional value or quality.

Another factor affecting food trade is the cost of the trading activities. Trade related costs include such things as transport charges, cost of coordinating deliveries for managing supply chains with multiple inputs from a variety of regions, and communication and transactions costs (such as cost of meeting legal and regulatory requirements). Together, these factors can result in a decline in trade, the further the final market is from the country where the goods are produced. In this regard, Australia performs well compared with other trading nations given Australia's distance from its major trading partners.

International trade in food products is highly regionalised – with most trade occurring intraregionally. That is, exports and imports of food products occur predominantly within

food industry

Asia, within the European Union and within the North American Free Trade Area rather than across regions.

These trade flow patterns provide an indication that the desire to locate processing facilities close to final markets exerts a strong influence on the location of food processing industries across countries.

Australia's export performance

Comparative advantage is a fundamental economic driver in determining the long run export performance of an industry. By engaging in trade, countries that specialise in producing goods in which they are relatively efficient will maximise their economic benefits.

For Australia, the composition of food exports is such that 95 per cent of the value of exports occurs in the bulk, and minimally or substantially transformed product categories. Only a small percentage of Australia's food exports are represented by elaborately transformed products such as confectionery products.

Analysis of the rate of growth of food exports relative to the growth in world trade on a product line basis indicates that over 75 per cent of the value of total food exports is in products in which the Australian share of export markets is increasing. In addition, 35 per cent of total exports are occurring in products for which the rate of annual growth in trade exceeds that of the growth in world trade for food products in total. That is, 35 per cent of Australian food product exports are being shipped to growing world markets and are increasing their share of world trade at the same time.

Conversely, only a small share – 6 per cent – of exported product lines are in markets for which both trade is declining and Australia is losing market share.