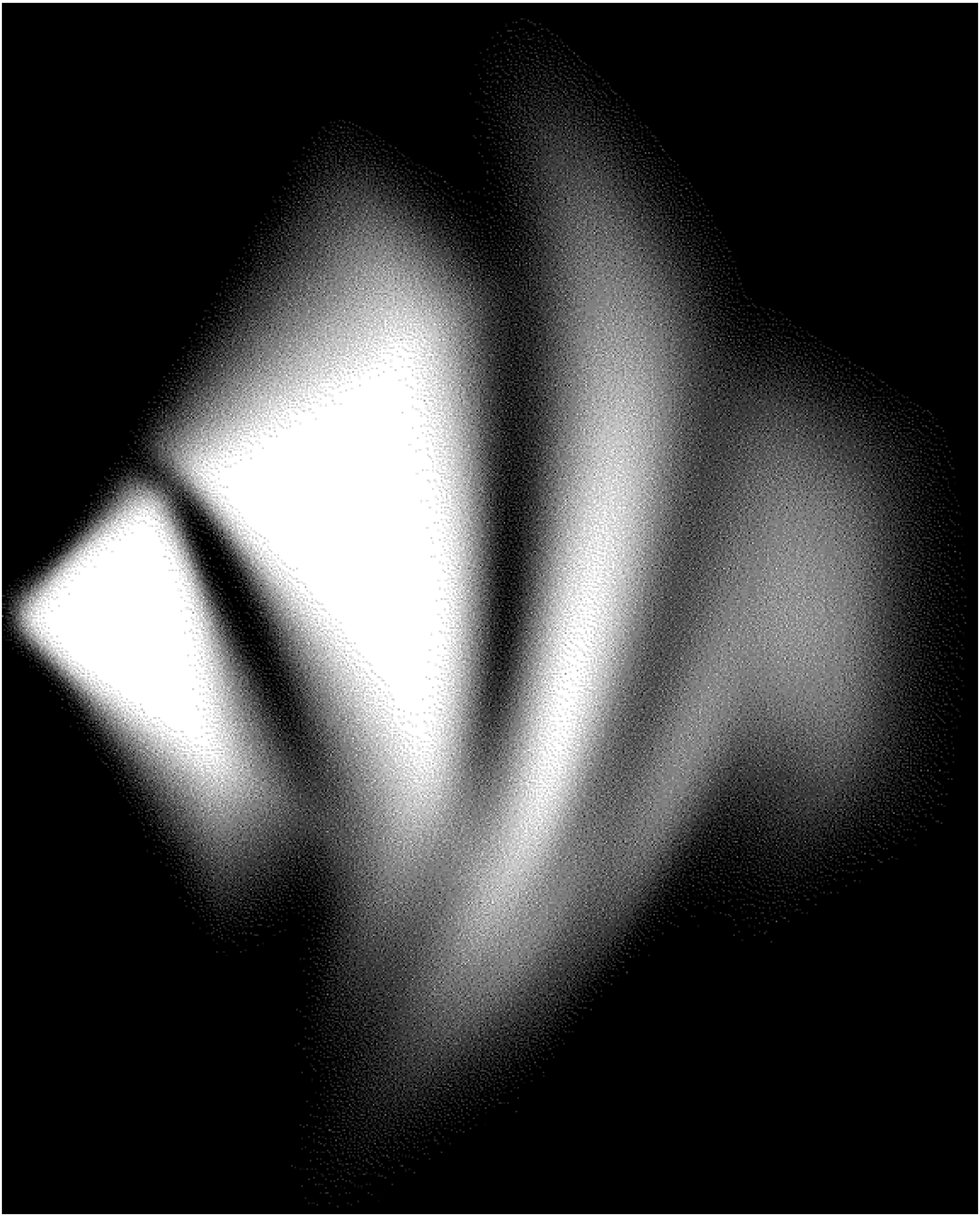
Trade & Assistance Review 1999-2000

PRODUCTIVITY COMMISSION



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Inquiries:

Media and Publications
Productivity Commission
Locked Bag 2
Collins Street East Post Office
Melbourne Vic 8003

Tel: (03) 9653 2244
Fax: (03) 9653 2303
Email: maps@pc.gov.au

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The Productivity Commission

The Productivity Commission, an independent Commonwealth agency, is the Government's principal review and advisory body on microeconomic policy and regulation. It conducts public inquiries and research into a broad range of economic and social issues affecting the welfare of Australians.

The Commission's independence is underpinned by an Act of Parliament. Its processes and outputs are open to public scrutiny and are driven by concern for the wellbeing of the community as a whole.

Information on the Productivity Commission, its publications and its current work program can be found on the World Wide Web at www.pc.gov.au or by contacting Media and Publications on (03) 9653 2244.

Foreword

The Productivity Commission is required to report annually on industry assistance and its effects on the economy. This review of trade and assistance issues and developments over the past year contains the Commission's latest estimates of assistance to the manufacturing, agriculture and mining sectors. It also presents the latest is a new series of estimates of barriers to trade in selected services for Australia and its trading partners.

Trade & Assistance Review 1999-2000 forms part of the Commission's annual report series. Its companion volumes are the Commission's *Annual Report 1999-2000*, and *Regulation and its Review 1999-2000*.

Gary Banks
Chairman

12 December 2000

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Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ACIS	Automotive Competitiveness and Investment Scheme
ACS	Australian Customs Service
ANAO	Australian National Audit Office
ANZSIC	Australia and New Zealand Standard Industrial Classification
APEC	Asia Pacific Economic Cooperation
ASIC	Australian Standard Industrial Classification
ATC	Australian Tourist Commission
ATO	Australian Taxation Office
AWB	Australian Wheat Board
COMET	Commercialising Emerging Technology
CRC	Cooperative Research Centres
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCF	Deciduous Canning Fruits
DEP	Dairy Exit Program
DFAT	Department of Foreign Affairs and Trade
DIAP	Dairy Industry Adjustment Package
DISR	Department of Industry, Science and Resources
DMSS	Domestic Market Support Scheme
DRAP	Dairy Regional Assistance Program
DSAP	Dairy Structural Adjustment Program
EFIC	Export Finance and Insurance Corporation
EMDG	Export Market Development Grants
ERA	effective rate of assistance

GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GSE	gross subsidy equivalent
GSP	gross sectoral product
GTL	gas-to-liquid
GVA	gross value added
IAC	Industries Assistance Commission
IC	Industry Commission
ICS	Import Credit Scheme
IIF	Innovation Investment Fund
IR&D	Industry Research and Development
ISIC	International standard industrial classification
LIDP	Lamb Industry Development Program
NCC	National Competition Council
NCP	National Competition Policy
NRA	nominal rate of assistance
NSE	net subsidy equivalent
OECD	Organisation for Economic Co-operation and Development
OSIC	Office of the Strategic Investment Coordinator
PC	Productivity Commission
PIIP	Pharmaceutical Industry Investment Program
PMV	passenger motor vehicles
QSC	Queensland Sugar Corporation
RIS	Regulation Impact Statement
R&D	research and development
SIIP	Strategic Investment Incentive Program
SIP	Strategic Investment Program
TCF	textiles, clothing and footwear
TEM	tax equivalent on materials
TEXCO	Tariff Export Concession
UVM	unassisted value of materials
UVO	unassisted value of output

US	United States (of America)
WEA	Wheat Export Authority
WTO	World Trade Organization

Key points

- Assistance to the *manufacturing sector* has declined significantly over the last decade, largely due to a program of phased reductions in tariffs on manufactured goods.
  - The effective rate of tariff assistance for manufacturing (which takes into account the effects of tariff assistance on industries' inputs as well as on their outputs) is estimated to have fallen from 14 per cent in 1991-92 to 5 per cent in 1999-2000.
  - Budgetary assistance to the sector, while less significant, has remained at around 2 per cent of sectoral gross value added since 1991-92.
- These aggregate figures hide significant variations in assistance to the different industries within the manufacturing sector.
  - At the high end, the passenger motor vehicles and the textiles, clothing, footwear and leather industries have effective rates of tariff assistance of around 15 per cent and 25 per cent, and attract budgetary assistance equivalent to 7.1 per cent and 4.7 per cent of their gross value added, respectively.
  - By contrast, most other manufacturing industries receive effective tariff assistance of less than 5 per cent and budgetary assistance of less than 2 per cent of their gross value added.
- Effective assistance to the *agriculture sector* has also declined over the last decade, in part due to the unwinding of various statutory marketing arrangements.
  - The average effective rate of assistance for the agriculture sector — which is not directly comparable with the effective rate for the manufacturing sector — is estimated to have fallen from around 12 per cent in 1991-92 to around 8 per cent in 1998-99.
  - Budgetary assistance for primary producers has declined from the equivalent of 6.5 per cent of their gross value added is 1991-92 to 4 per cent in 1999-2000.

- Again, these aggregate figures hide significant variations in assistance to the different industries within the agriculture sector.
  - At the high end, the dairy industry has received assistance well above the average, with an effective rate of 54 per cent in 1998-99. The dairy industry was deregulated in July 2000, but will continue to receive substantial assistance in the form of a $1.8 billion adjustment package funded by a levy on milk consumers.
  - When dairy is excluded, the sectoral effective rate for all other agricultural activities falls to 3 per cent.
- The total of tariff and budgetary assistance to the *mining sector* is small. Government policies on native title, the environment and royalties have a more substantial impact.
- The *services sector* receives limited budgetary assistance and, because of the nature of services trade, is not subject to tariff protection. Rather, trade in services tends to be restricted by regulations, some of which apply only to foreigners wanting to invest or work in Australian services industries, while others apply to both foreign and domestic businesses.
- Compared with other economies, Australia has:
  - liberal trading regimes for engineering, architecture, distribution (which includes the wholesale and retail industries), banking and telecommunications; and
  - moderately restrictive trading regimes in legal, accountancy and maritime services.
- Total *budgetary assistance* was $3.7 billion in 1999-2000. More detailed estimates prepared by the Commission for the first time indicate that:
  - the primary production, motor vehicles & parts, petroleum, coal, chemicals & associated products (which includes pharmaceuticals), and mining industry groupings are the largest recipients of budgetary assistance; and
  - a similar pattern emerges when budgetary assistance is measured as a proportion of industry size, except that mining is replaced by textiles, clothing, footwear & leather.

- 19 Australian *anti-dumping* cases were initiated in 1999-2000, much the same as in the previous year. 54 anti-dumping and countervailing measures were in force in 1999-2000, much the same as in the last few years but down from 103 in 1993-94. Nevertheless, relative to its share of world trade, Australia continues to be one of the most frequent users of anti-dumping and countervailing measures.

1 Introduction

Assistance is defined in the *Productivity Commission Act 1998* in very broad terms as:

> … any government act that, directly or indirectly, assists a person to carry on a business or activity, or confers a pecuniary benefit on, or results in a pecuniary benefit accruing to, a person in respect of carrying on a business or activity.

Assistance to industry takes many forms. It includes tariffs, quotas, anti-dumping duties and regulatory restrictions on imported goods and services, as well as tax concessions and subsidies for domestic producers. Local producers may also benefit from services provided by government agencies which are not priced at their full cost.

Assistance generally provides benefits to the firms and industries that receive it, but comes at a cost to other sections of the community or economy. For example, direct business subsidies increase returns to recipient firms and industries, but come at a cost to the public purse. To meet this cost, governments must increase taxes and charges, cut back on other spending, or borrow extra funds. This adversely affects other parts of the economy. On the other hand, in some cases, certain forms of industry support — most notably R&D support — can deliver net community benefits.

The Commission has a statutory obligation to report annually on industry assistance, and its approach contains several elements:

- estimates of effective assistance to agriculture, manufacturing and mining;
- budgetary assistance estimates;
- estimates of trade restrictions in the services sector;
- data on anti-dumping and countervailing activities; and
- information on other changes in assistance arrangements for specific industries.

The Commission's estimates apply predominantly to Commonwealth assistance schemes, although certain State-based arrangements which have national impacts are also included in its estimates of effective rates of assistance to agriculture.

The estimates and related information help to reveal which groups in the community gain and which groups lose from industry assistance. They can also highlight the community costs of inappropriate industry support, and thus provide information to help governments to adopt welfare-enhancing policies. There are some methodological and coverage differences between the different sets of estimates, as well as some areas of overlap. Nevertheless, the Commission's broad approach to the measurement of government assistance is intended to aid transparency and facilitate analysis.

Last year's Trade & Assistance Review drew comment in different quarters about its coverage and measurement of assistance to industry. One criticism was that the Review included government support for activities such as research and development (R&D), adjustment, and the exploration of market opportunities, that governments *should* support (Amery 1999). Another view was that the Commission takes a 'conservative approach' to measuring some forms of industry assistance (Van Dyke 2000).

The Commission's approach takes as its starting point the definition of assistance in the *Productivity Commission Act 1998* — that is, government programs that support people carrying on a business or activity. As pointed out in last year's Review, however, the Commission does not seek to include all government support to industry in its assistance estimates. Rather, the estimates cover those measures which *selectively* benefit particular firms, industries or activities and which can be quantified given practical constraints in measurement and data availability. Detailed information on the Commission's approach to measuring industry assistance can be found in appendix A of last year's Review.

The estimates provide a broad indication of the resource allocation effects of selective government industry policies. Assessing whether the benefits of any particular industry support program exceed its costs involves case-by-case consideration — a task beyond the scope of the Trade & Assistance Review.

For this year's Review, the Commission has enhanced its assistance estimates in four ways.

- It has converted its existing estimates of manufacturing assistance (for all years from 1968-69 to the present) from an ASIC-based to an ANZSIC-based industry classification system.
- It has calculated new projections of manufacturing assistance to 2005-06.
- In reporting the incidence of budgetary assistance, it has augmented its normal four sector split of the Australian economy with an ANZSIC-based 27 industry classification.

- It has also provided a breakdown of the economic activities — R&D, exports, investment etc — to which different budgetary assistance schemes are targeted.

These changes provide more detail on the distribution of assistance and improve the comparability of the estimates.

2 Manufacturing, agriculture and mining

Historically, industries in the manufacturing and agricultural sectors have received high levels of assistance. Manufacturing assistance has been provided mainly through tariffs on imported goods, while agricultural industries have been assisted through domestic marketing arrangements. Industries in both sectors have also enjoyed budgetary assistance. Assistance to both sectors has declined over the past decade, although some of the industries remain highly assisted.

Tariffs and budgetary assistance do not have a major effect on the mining sector. Other government measures, including native title, environmental regulation and royalties, are far more significant for the sector.

In this chapter, the Commission:

- summarises output and trade data for manufacturing, agriculture and mining;
- outlines the Commission's assistance measurement methodology;
- provides estimates of assistance to the three sectors, analyses trends in assistance to manufacturing and agriculture, and discusses existing and foreshadowed assistance arrangements applying to them; and
- updates data on anti-dumping and countervailing activity in these sectors.

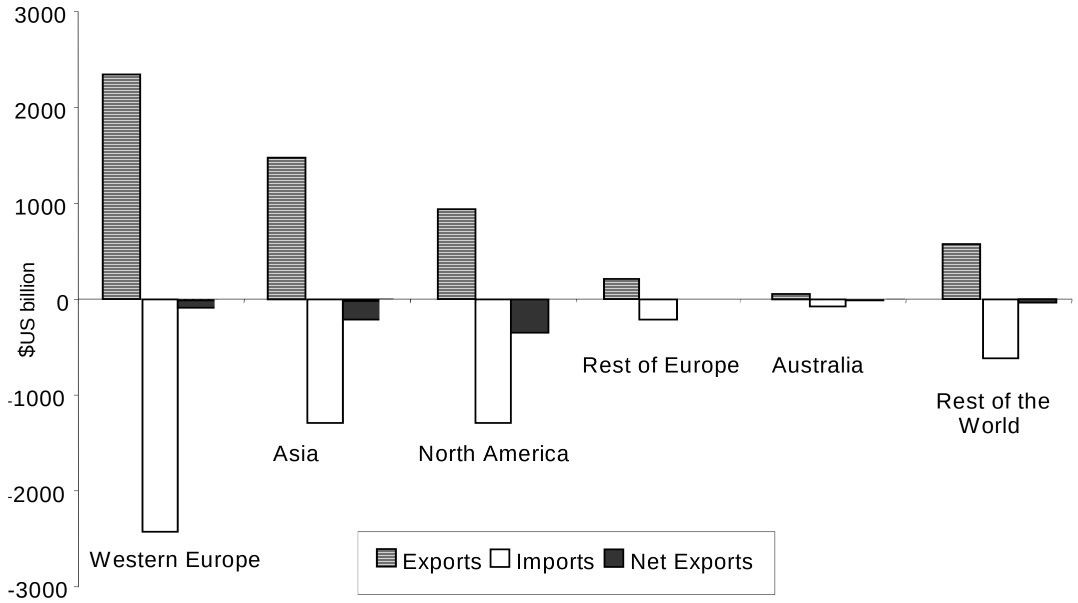
2.1 Trade and production: a snapshot

World agricultural exports totalled US$544 billion or 8 per cent of total global exports in 1999, while world manufacturing exports totalled US$4186 billion or 63 per cent of global exports. In that year, world mining exports increased by 12 per cent in value terms in 1999 to US$556 billion, or approximately 8 per cent of world exports (WTO 2000a).

Asia, North America and Western Europe accounted for over 83 per cent of merchandise exports — which includes manufacturing, agriculture and mining[1]. Northern America and Western Europe are the largest net importers of merchandise (figure 2.1). Australia accounts for less than 1 per cent of merchandise trade (WTO 2000a).

Figure 2.1 **World exports and imports of merchandise for selected regions, 1999**[ab]

US$ billion



a North America includes Canada and the United States. Western Europe includes Croatia, European Union Member States, Iceland, Malta, Norway, Slovenia, Switzerland, Turkey and the former Yugoslavia. The Rest of Europe includes Central and Eastern Europe, the Baltic States and the Commonwealth of Independent States. The Rest of the World includes Africa, Latin America and the Middle East. Asia excludes Australia. **b** Data for some economies are not available.

Data source: WTO (2000a).

Manufacturing accounts for around 13 per cent of Australia's gross domestic product and employment (table 2.1), and around one fifth of Australia's exports (ABARE 1999). Some of the largest manufacturing sectors are machinery and equipment (which includes the passenger motor vehicle industry), the food sector, metal products, and petroleum, coal and chemical products.

1 The Commission has sometimes used WTO merchandise trade figures in this section due to the lack of reliable disaggregated data on manufacturing, agriculture and mining for the selected regions. Under WTO classifications, 'agriculture' includes food and raw materials.

The agriculture, forestry and fishing sector accounts for less than 4 per cent of Australia's gross domestic product, 5 per cent of employment (see table 2.1), and around one fifth of Australia's exports (ABARE 1999).

Mining accounts for around 5 per cent of Australia's total gross domestic product, 1 per cent of total employment (see table 2.1), and around 35 per cent of Australia's exports (ABARE 1999). Coal, gold, iron ore, alumina, aluminium, copper and nickel are the largest mining industries.

Table 2.1 **Manufacturing, agriculture and mining sectors' shares of total gross product and employment, 1999-2000[a]**

Sector	*Gross product[b]*		*Employment[c]*	
	Value	*Share of total*	*Persons employed*	*Share of total*
	$m	%	'000	%
Agriculture, forestry and fishing				
Agriculture	17669	93.0	383	87.4
Forestry and fishing	1 335	7.0	24	5.6
Total (incl. services)	19 005	100	438	100
Total agriculture as a percentage of total gross product and total employment		**3.3**		**4.9**
Manufacturing				
Food, beverages and tobacco	14 823	19.6	179	16.1
Textiles, clothing and footwear	2 831	3.7	86	7.7
Wood and paper products	5 597	7.4	69	6.2
Printing, publishing and recorded media	7 478	9.9	115	10.3
Petroleum, coal and chemicals	10 209	13.5	111	10.0
Non-metallic mineral products	2 849	3.8	50	4.5
Metal products	13 095	17.3	182	16.3
Machinery and equipment	16 264	21.5	234	21.0
Other manufacturing	2 413	3.2	89	8.0
Total	75 560	100	1113	100
Total manufacturing as a percentage of total gross product and total employment		**13.1**		**12.5**
Mining				
Mining	25 341	96.8	62.2	79.5
Services to mining	843	3.2	16.1	20.6
Total	26 183	100	78.2	100
Total mining as a percentage of total gross product and total employment		**4.6**		**0.9**

a Figures may not add to totals due to rounding. **b** Gross product data are the industry gross value added at basic prices using 1998-99 chain volume measures. Total output is the total gross value added. **c** Employment is the average number of persons employed during 1998-99.

Sources: ABS (2000a) and ABS (2000b).

2.2 Scope of the Commission's assistance estimates

The Commission has adopted several measures to help quantify and compare the diverse assistance arrangements which affect businesses in the manufacturing, agriculture and mining sectors. These are defined in box 2.1. In brief, the key measures are:

- the *nominal rates of assistance*, which is a measure of assistance to an industry's or activity's outputs, or on its inputs;
- the *effective rate of assistance* and the *net subsidy equivalent*, which are measures of the net assistance to the land, labour and capital resources used in a particular industry or activity; and
- the *standard deviation in nominal rates* and the *standard deviation in effective rates*, which are indicators of the dispersion of output assistance and net assistance, respectively, among the industries within a sector.

These measures help to explain how the overall assistance structure affects the allocation of resources between different industries or activities within the economy, as well as how different types of assistance affect the incentives to produce and, to a lesser extent, to consume, certain commodities.

Notwithstanding the usefulness of these measures, caution is required when using the Commission's assistance estimates to draw inferences about the allocation of resources between different industries or activities. The key qualifications are that:

- the measurement methodology uses a 'static' framework, so the estimates do not take account of the 'dynamic' responses of producers and consumers to the incentives created by the provision of assistance;
- nominal rates of assistance, unlike effective rates, do not take into account the *net* impacts of assistance on various inputs and outputs;
- the net subsidy equivalent simply measures the transfers of income to producers from consumers, taxpayers and intermediate suppliers — it does not indicate the 'economic welfare' costs to the community of assistance;
- differences in calculation of the agricultural, manufacturing and mining estimates, particularly effective rates, mean that caution is required when making intersectoral comparisons; and
- the Commission's estimates do not take into account all forms of assistance.

These issues, and the Commission's assistance measures and methodology, are explained in more detail in appendix A of *Trade & Assistance Review 1998-99* (PC 1999).

Box 2.1 Definitions of assistance measures

The **nominal rate of assistance on outputs** is the percentage change in gross returns per unit of output relative to the (hypothetical) situation of no assistance. The nominal rate measures the extent to which consumers pay higher prices and taxpayers pay subsidies to support local output.

The **standard deviation in the nominal rate of assistance on outputs** measures the dispersion of the nominal rates of output assistance for the different industries in a sector around the sectoral average nominal rate. It is an indicator of the potential for distortions in production and consumption patterns within the sector resulting from the output assistance provided to the sector.

The **gross subsidy equivalent** is an estimate of the change in producers' gross returns from assistance. It is the notional amount of money, or subsidy, necessary to provide an activity with a level of assistance equivalent to the nominal rate of assistance on its output.

The **consumer tax equivalent** is the transfer from final consumers due to the price-raising effects of assistance. It is the sum of the gross subsidy equivalent of assistance, which measures the higher prices paid for domestically produced goods, and the effect of border assistance on the price of imports purchased by final consumers.

The **nominal rate of assistance on materials** (intermediate inputs) is the percentage change in the prices paid for materials used in the production process, due to government intervention.

The **tax equivalent on materials** is an estimate of the net change to user industries' input costs due to government assistance altering the prices paid for intermediate inputs. It is the notional amount of money user industries pay for intermediate inputs to provide the producers of those inputs with a level of assistance equivalent to the nominal rate of assistance on materials.

The **effective rate of assistance** is the percentage change in returns per unit of output to an activity's value-adding factors due to the assistance structure. The effective rate measures net assistance, by taking into account the costs and benefits of government intervention on inputs, direct assistance to value-adding factors and output assistance.

The **standard deviation in the effective rate** measures the dispersion of the effective rates of assistance for the different industries in a sector around the sectoral average effective rate. It is an indicator of the potential for distortions in resource allocation within the sector resulting from the overall assistance structure.

The **net subsidy equivalent** is an estimate of the change in returns to an activity's value added due to assistance. It is the notional amount of money, or subsidy, necessary to provide a level of assistance equivalent to the effective rate of assistance. It is equal to the gross subsidy equivalent plus any assistance to inputs or value-adding factors, less the tax equivalent on materials used in the production process.

2.3 Assistance to manufacturing

The manufacturing sector receives assistance from a wide range of government programs. Tariff assistance — which includes the impact of tariffs on import prices, as well as the effects of duty exemptions and concessions — is the most significant form of assistance received by the sector, accounting for around three quarters (or $4.8 billion) of *measured* effective assistance for manufacturing in 1998-99. Budgetary assistance accounts for the remaining quarter, or $1.5 billion, of *measured* effective assistance received by the manufacturing sector. Budgetary assistance includes budgetary outlays, such as production bounties, certain export incentives and input subsidies, as well as 'tax expenditures' such as income tax concessions.

Recent Trade & Assistance Reviews have contained estimates and projections of manufacturing tariff assistance made in 1996-97, under the ASIC industry classification structure.

In this year's Review, the Commission has drawn on work undertaken for its recent *Review of Australia's General Tariff Arrangements* (PC 2000b) to:

- convert its estimates of tariff assistance to manufacturing activities to the current ANZSIC classification structure[2];
- report ANZSIC-based estimates of tariff assistance for selected years starting with 1968-69 — the year the Commission began reporting effective rates of assistance to the manufacturing sector;
- analyse the impact of changing industry production shares and assistance levels on effective rates of assistance to the manufacturing sector since 1968-69; and
- provide new projections of tariff assistance to 2005-06.

Nominal and effective rates of assistance to manufacturing, derived from tariffs, are presented in tables 2.3, 2.4 and 2.5, and the key estimates and related developments in tariff assistance are discussed below. The methodology used to rebase the Commission's assistance estimates from the ASIC to ANZSIC classification system and to calculate new assistance estimates is discussed in appendix A. Budgetary assistance to manufacturing is reported in chapter 4. Combined budgetary and tariff assistance to manufacturing industries is reported in table 2.2.

[2] The Australian and New Zealand Standard Industrial Classification (ANZSIC) replaced the Australian Standard Industrial Classification (ASIC) system in 1993 (see appendix A).

Trends in tariff assistance to the manufacturing sector

Tariffs, by raising the price of imports, provide assistance to local producers of items subject to tariffs and impose a tax on the inputs of those producers using imported items and locally made import substitutes. To measure tariff assistance to the manufacturing sector, the Commission has traditionally used the nominal rate of assistance, on inputs and outputs, together with the effective rate of assistance.

Movements in tariff assistance since 1968-69

From 1968-69 to 1998-99, the effective rate of assistance for the manufacturing sector fell significantly, from 34.9 per cent to 5.2 per cent. While effective rates fell steadily over the period for the manufacturing sector as a whole, this was not so for the TCF and PMV industries. For these industries, effective rates of assistance increased between 1968-69 and 1983-84, and decreased between 1983-84 and 1998-99 (figure 2.2).

Because measured effective rates of assistance for a sector are weighted averages of the industries comprising the sector, these changes in effective rates of assistance for the manufacturing sector can be divided into two components:

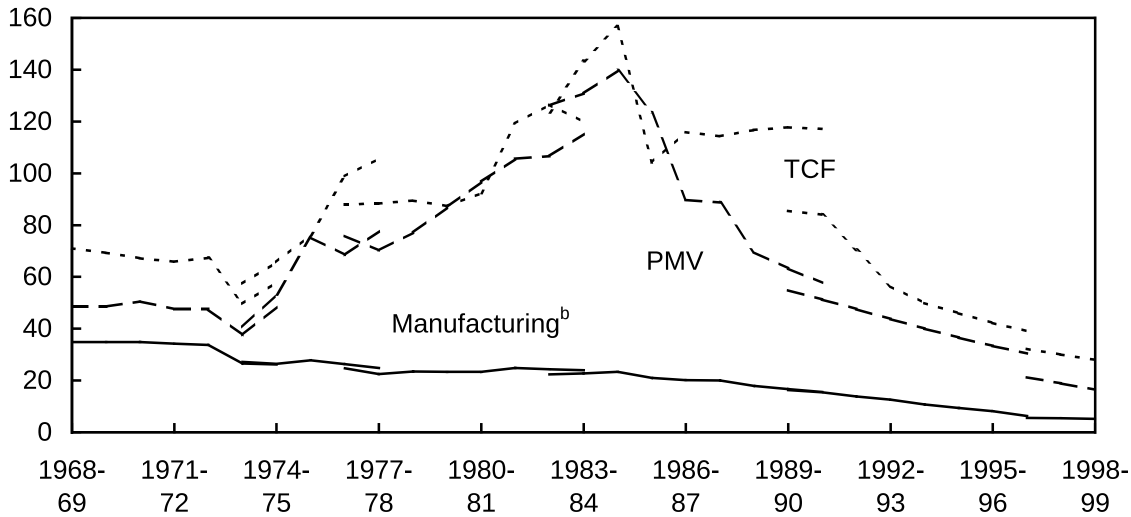
- an ‘assistance’ component, caused by changes in assistance levels; and
- an ‘industry composition’ component, brought about by changing shares of production of those industries comprising a sector (see box 2.2)

Between 1968-69 and 1983-84, the effective rate of assistance for the manufacturing sector as a whole fell by around 12 percentage points, from 34.9 per cent to 22.7 per cent.

Of this decrease, around 10 percentage points, or 85 per cent, is explained by the industry composition effect. This is mainly because the shares of manufacturing production held by the highly assisted TCF and PMV industries fell significantly over the period, while the shares of manufacturing production for the more lowly assisted industries increased.

Figure 2.2 **Average effective rates of assistance to manufacturing[a], TCF and PMV, 1968-69 to 1998-99**

per cent

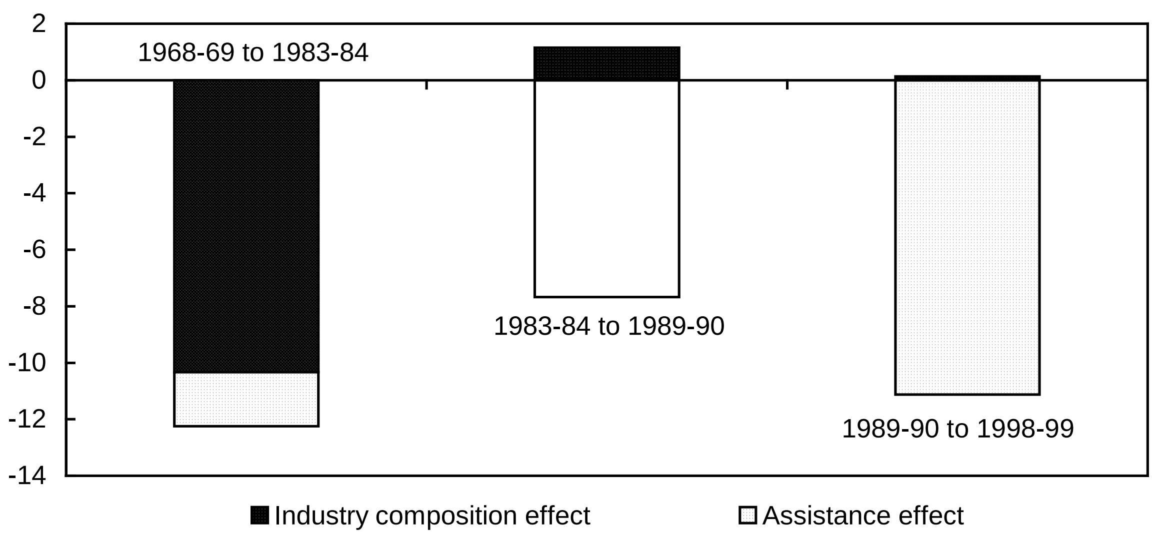


[a] Breaks in the series reflect the effects of periodic revisions to industry inputs and outputs. These changes occur gradually over time, due to factors such as changing technology and relative prices of inputs and outputs. [b] Includes TCF and PMV.

Data source: PC estimates.

Figure 2.3 **Contribution of 'assistance' and 'industry composition' effects to changes in effective rates of assistance in manufacturing, 1968-69 to 1998-99**

percentage points



Data source: PC estimates.

Box 2.2 Assistance and compositional changes in effective rates: definitions and examples

Any change in effective rates for the manufacturing sector can be divided into an assistance effect and an industry composition effect.

The *assistance* (or shift) effect measures the contribution that changes in levels of assistance, to those industries that comprise a sector, make to a change in assistance at the sector level.

– For example, assuming production shares remain unchanged, a decrease in effective rates of assistance for any of the industries that make-up a sector will involve a reduction in effective rates for that sector.

The *industry composition* (or share) effect measures the contribution that changing production shares, of those industries that comprise a sector, make to a change in assistance at the sector level.

– As an example, assume that the effective rates of assistance for those industries that make-up a sector remain unchanged between two periods, and that the share of production of the more lowly assisted industries increases. In this example, the effective rate of assistance for the sector would fall even though the effective rates for each of the industries that make-up the sector have not changed. This occurs because, in the second period, the more lowly assisted industries carry a greater weight in determining the effective rate of assistance for the sector. In this case, the change in assistance between the two periods is totally explained by the composition or share effect.

The remaining 2 percentage point fall in the effective rate is accounted for by net reductions in assistance levels. The fall in effective rates, accounted for by net reductions in assistance levels, was relatively small despite there being a 25 per cent across the board tariff cut in 1973. This is mainly because increases in assistance levels for TCF and PMV industries, after 1973, marginally off-set[3] the reduction in assistance levels for other industries between 1968-69 and 1983-84 (figure 2.3).

In contrast, for the period 1983-84 to 1998-99, changes in assistance levels were the more significant determinant of changes in effective rates of assistance. Between 1983-84 and 1989-90, the ‘assistance effect’ accounted for around 85 per cent of the fall in manufacturing effective rates, and for over 95 per cent of the decline in effective rates between 1989-90 and 1998-99. In other words, since 1983-84, changing production shares have become much less important.

[3] Between 1968-69 and 1983-84, the percentage point contribution of TCF and PMV industries to changes in effective rates, accounted for by changes in assistance levels, was 12 percentage points. The remaining manufacturing industries contributed -14 percentage points, giving a total fall in effective rates, accounted for by reductions in assistance levels, of 2 percentage points.

Movements in tariff assistance in the last decade

From the late 1980s to mid-1990s, the proportion of tariff items with general rates greater than 5 per cent fell significantly (figure 2.4). This fall can be attributed to the effects of a series of tariff policy changes over this period. In 1988, the then Government announced a four-year program of phased reductions in tariffs from 1988 to 1992, and in 1991, a further tariff reduction program, to take effect from 1992 to 1996, was announced. A more detailed discussion of tariff reform in Australia since the early 1970s is presented in the Commission’s draft report into the *Review of Australia’s General Tariff Arrangements* (PC 2000b).

The remaining tariff items with general rates greater than 5 per cent are largely associated with just two industries, TCF and PMV.

The fall in tariff rates over the period is also reflected in declining effective rates of assistance for the manufacturing sector (figure 2.5). Between 1989-90 and 1996-97, the effective rate of assistance to manufacturing decreased from 16.3 per cent to 5.6 per cent. Higher tariff rates on TCF and PMV imports are reflected in higher effective rates of assistance for these sectors, although assistance levels also declined significantly over the period. Between 1989-90 and 1996-97, the effective rates of assistance for the TCF and PMV industries decreased from 85.5 per cent and 54.9 per cent to 32.2 per cent and 21.3 per cent, respectively.

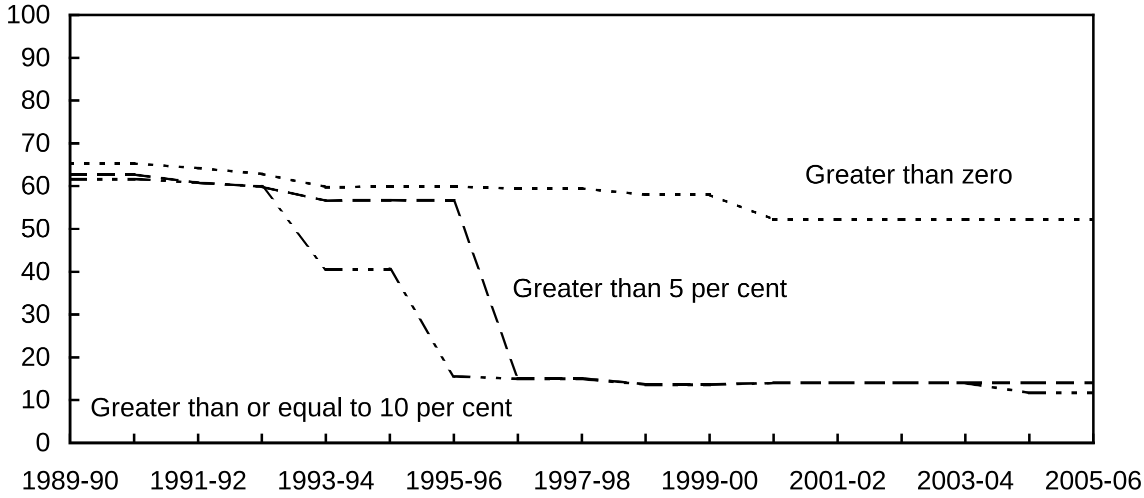
The dispersion of assistance across the manufacturing sector, as measured by the standard deviation of effective rates, has also fallen over this period. The standard deviation in effective rates fell from 20.4 per cent in 1989-90 to 7.8 per cent in 1996-97.

Future movements in tariff assistance

Assistance to manufacturing is expected to fall between 1998-99 and 2005-06. In 1998-99, the nominal and effective rates of assistance to manufacturing were around 3.3 per cent and 5.2 per cent, respectively. In line with *announced*[4] tariff changes, the nominal and effective rates of assistance are expected to stay at about these levels until 2005-06, when they are expected to fall to 2.8 per cent and

[4] The projections of effective rates of assistance to 2005-2006, and of the dispersion in those rates, presented in this section have been calculated taking into account those changes in tariff assistance that have already been announced. The Government is yet to announce its decision regarding options for tariffs of 5 per cent or less (other than for TCF and PMV industries) post-2000, following the Commission’s *Review of Australia’s General Tariff Arrangements* (PC 2000b).

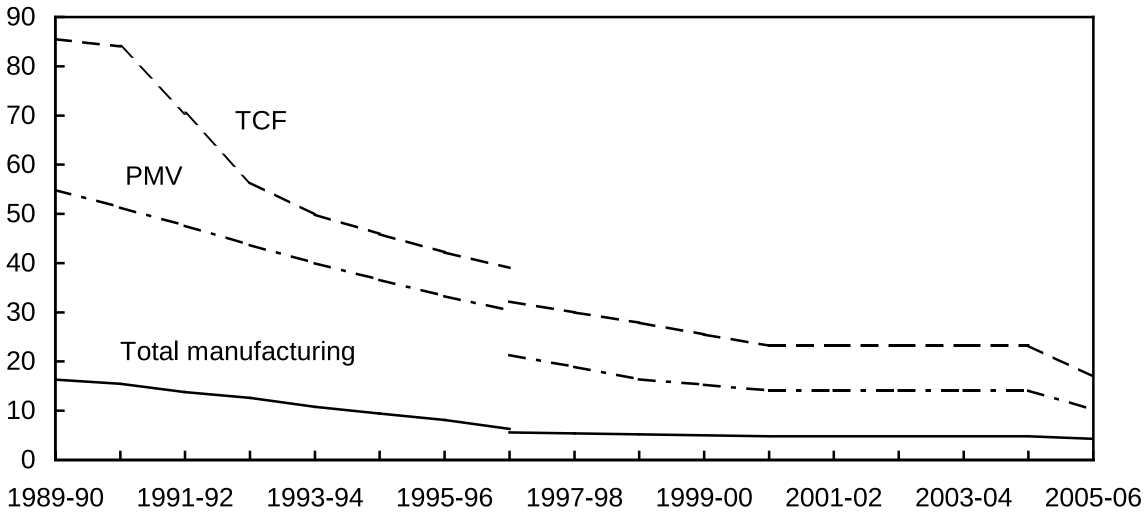
Figure 2.4 Proportion of tariff line items[a] for selected general rates[b], 1989-90 to 2005-06[cd] per cent



a A tariff line item is defined as an 8-digit import item as outlined in the Australian Customs Tariff Schedule. **b** The general rate is defined as the rate of duty applicable to individual tariff line items. **c** Rates for the years 1989-90 to 1995-96 and 1998-99 are averages for the year. From 1996-97 to 2003-04 and 2005-06, excluding 1998-99, the rates are for 1July, while for 2004-05 the rates are for 1 January 2005. The rates at 1 July 2000 are assumed to also apply for the periods 2001-02 to 2003-04. The distribution takes no account of the current review of general tariffs. **d** Tariff rates exclude the excise component of general rates on excisable goods.

Data source: PC estimates based on the Australian Customs Tariff.

Figure 2.5 Average effective rates of assistance to manufacturing[a], TCF and PMV, 1990-91 to 2005-06 per cent



a Breaks in the series reflect the effects of periodic revisions to industry inputs and outputs. These changes occur gradually over time, due to factors such as changing technology and relative input and output prices.

Data source: PC estimates.

4.3 per cent, respectively. These changes primarily reflect the impact of phased tariff reductions to 2000 and further reductions scheduled to occur in 2005 under the TCF and PMV plans (discussed separately below). Other industries to be affected by phasing arrangements are the *Petroleum, coal and chemical products*, *Fabricated metal products* and *Other machinery and equipment* industries.

Declining TCF and PMV tariffs relative to the manufacturing average tariff rate (refer to figure 2.5 above) are expected to result in a decline in the dispersion of assistance across the manufacturing sector in 2005-06. Based on announced changes, the standard deviation of effective rates is projected to fall by 2.3 percentage points - from 6.6 per cent in 1998-99 to 4.3 per cent in 2005-06.

The estimated net subsidy equivalent of tariff assistance to manufacturing was around $4.8 billion in 1998-99. Following announced tariff changes, the net subsidy equivalent of tariff assistance is projected to fall to $3.9 billion in 2005-06 (in 1998-99 prices). The TCF and PMV industries accounted for around 45 per cent of the estimated net subsidy equivalent to the manufacturing sector in 1998-99. This share is projected to fall to around 30 per cent by 2005-06.

Combined tariff and budgetary assistance to manufacturing

As noted earlier, as well as tariff assistance, manufacturing industries also receive assistance in the form of budgetary outlays and tax concessions. Budgetary assistance is reported in detail in chapter 4. Total budgetary assistance to the manufacturing sector accounted for $1.5 billion in 1998-99.

For this year’s Review, as well as reporting budgetary assistance at the sectoral level, the Commission has estimated the incidence of budgetary assistance using an ANZSIC-based industry classification system. The methodology used is set out in appendix B. The system includes 11 industry groupings within the manufacturing sector, and enables the comparison, and aggregation, of tariff and budgetary assistance estimates for industries in that sector.

Table 2.2 sets out this information for 1998-99, the latest year for which estimates of both tariff and budgetary assistance are available. The estimates are provided in net subsidy equivalent form — that is, the dollar value of the assistance received. Hence, they do not relate the assistance received to industry size. In these absolute terms, however, the TCF and PMV industries remain the most highly assisted. Other industry groupings receiving high levels of assistance in absolute terms include petroleum, coal, chemicals & plastics (which includes pharmaceuticals producers), food, beverages & tobacco, and metal products.

Table 2.2 **Tariff and budgetary assistance net subsidy equivalents [a], by manufacturing industry subdivision, 1998-99**

$ million

Industry Grouping	*Tariffs*	*Budgetary*	*Total[b]*
Food, beverages and tobacco	870.1	68.9	938.9
Textiles, clothing, footwear and leather (TCF)	1048.8	181.2	1115.2
Wood and paper products	288.5	11.0	297.7
Printing, publishing and recorded media	83.8	6.2	90.0
Petroleum, coal, chemical and assoc. products	534.2	267.4	799.9
Non-metallic mineral products	130.5	27.1	156.8
Metal products	606.2	150.4	752.1
Motor vehicles and parts (PMV)	887.2	349.7	949.0
Other transport equipment	-18.6	35.7	17.1
Other machinery and equipment	232.8	249.5	452.4
Other manufacturing	128.1	31.7	150.9
Unallocated manufacturing[c]	0.0	159.0	63.9
Total	**4791.6**	**1537.9**	**5783.8**

a The net subsidy equivalent is the dollar value of the net assistance to the land, labour and capital resources used in a particular industry or activity. **b** The total net subsidy equivalent has been adjusted to take account of programs included in both tariff and budgetary assistance. These programs include tariff concessions or tax expenditures such as the PMV export facilitation scheme, the TCF import credits scheme, duty drawback and TEXCO. **c** Unallocated includes general programs where details of claimants and/or beneficiaries is unknown.

Source: PC estimates.

Developments in sectoral or industry-specific assistance

Assistance to the TCF industry

Assistance to the TCF industry is expected to decline between 1998-99 and 2005-06. Tariff phasing arrangements for the TCF industry commenced in 1989, as announced in the then Government's 1987 TCF Industry Plan. Tariff reductions were accelerated in the Government's 1991 *Building a Competitive Australia* statement, so that by 1 July 2000 the maximum TCF tariff had been reduced to 25 per cent. In 1997, the Government confirmed the previously announced schedule for TCF tariff phasing and announced further reductions to take effect on 1 January 2005.

All TCF tariffs (apart from those already at rates of 5 per cent or less) were reduced to rates of 25 per cent, 15 per cent or 10 per cent on 1 July 2000. TCF tariffs are to remain at these levels until 1 January 2005, when tariffs on apparel and certain finished textiles, footwear and fabrics are scheduled to decline immediately to 17.5, 10 and 7.5 per cent, respectively.

A new package of assistance measures for the TCF industry is being applied from 2000 to 2005. These measures, which replace some other arrangements, were outlined in the *Trade & Assistance Review 1997-98* (PC 1998). Recent developments related to these arrangements are reported in section 4.3. While the new arrangements may have implications for the distribution of assistance within TCF and the rates of assistance for individual TCF activities, assistance at the broad industry grouping level is unlikely to change significantly between 2000 and 2005.

The effective rate of assistance for the textiles industry is projected to fall from 27.9 per cent in 1998-99 to 23.2 per cent in 2000-01. The effective rate is then expected to stay at about this level until 2005-06, when it should fall to around 16.9 per cent, still more than three times the manufacturing average.

Assistance to the PMV industry

Tariff phasing arrangements for the PMV industry were announced in the Government's 1991 *Building a Competitive Australia* statement, with tariffs to be phased gradually from 35 per cent in 1992 to 15 per cent on 1 January 2000. The Government announced in 1997 that the tariff will remain at 15 per cent until 1 January 2005, when it is scheduled to fall to 10 per cent.

In January 2001, the current Export Facilitation Scheme for PMV is to be replaced by the Automotive Competitiveness and Investment Scheme (ACIS) which will operate for five years. The ACIS is not expected to have a significant impact on measured assistance to the PMV industry, relative to current assistance arrangements.

As a result of the program of phased tariff reductions, the effective rate of assistance to the PMV industry is estimated to fall from 16.4 per cent in 1998-99 to 14.1 per cent in 2000-01. It is then expected to stay at about this level until 2005-06 when it is projected to fall to 10.2 per cent. At that point, however, effective assistance to PMV is expected to remain equivalent to more than double the manufacturing average.

Table 2.3 Nominal rates of assistance on materials,[a] manufacturing subdivisions, selected benchmark years[b]

per cent

ANZSIC[c] Industry grouping								
Code	*Description*	*1968-69*	*1974-75*	*1977-78*	*1983-84*	*1989-90*	*1996-97*	*2000-01*
21	Food, beverages and tobacco	10.4	2.5	2.7	8.8	5.2	0.8	0.8
22	Textiles, clothing, footwear and leather	17.4	14.2	16.9	11.2	11.9	4.7	3.6
23	Wood and paper products	11.4	7.2	7.6	8.0	5.8	2.5	2.2
24	Printing, publishing and recorded media	4.7	5.2	6.1	7.9	4.6	2.1	2.1
25	Petroleum, coal, chemical and associated products	13.2	7.0	5.6	3.7	3.8	1.2	1.2
26	Non-metallic mineral products	7.5	2.3	3.6	3.0	1.8	0.8	0.8
271-3	Basic metal products	3.7	2.3	4.2	4.4	1.9	1.0	1.0
274-6	Fabricated metal products	20.0	13.6	12.3	10.8	7.7	3.1	3.1
281	Motor vehicles and parts	28.0	19.0	27.0	29.0	15.2	3.1	2.8
282	Other vehicles	15.0	11.0	15.0	13.0	10.0	3.6	3.6
283-6	Other machinery and equipment	26.6	16.8	13.7	12.9	10.3	2.5	2.2
29	Other manufacturing	19.9	12.4	10.6	12.7	8.8	3.2	3.1
21-29	**TOTAL MANUFACTURING**	**14.4**	**8.1**	**8.4**	**8.6**	**6.3**	**1.9**	**1.7**

a Assistance provided by tariffs and certain non-tariff measures. **b** Excluding 1996-97 and 2000-01, benchmark years represent the years in which industry outputs and inputs were revised. Details of industry outputs and inputs are revised periodically to take account of compositional changes that occur over time. Factors that influence compositional changes include changes in technology and relative prices. **c** Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 edition.

Source: PC estimates.

Table 2.4 **Nominal rates of assistance on outputs,[a] manufacturing subdivisions, selected benchmark years[b]**

per cent

ANZSIC[c] Industry grouping								
Code	*Description*	*1968-69*	*1974-75*	*1977-78*	*1983-84*	*1989-90*	*1996-97*	*2000-01*
21	Food, beverages and tobacco	11.7	8.9	5.5	7.9	5.0	2.2	2.2
22	Textiles, clothing, footwear and leather	38.5	31.8	41.9	46.7	37.6	14.7	10.7
23	Wood and paper products	24.4	13.7	13.0	14.1	9.5	3.9	3.7
24	Printing, publishing and recorded media	20.4	14.6	15.8	10.9	5.8	1.3	1.3
25	Petroleum, coal, chemical and associated products	18.6	12.4	10.6	6.5	6.4	2.3	2.3
26	Non-metallic mineral products	11.1	5.9	4.0	3.1	3.0	1.8	1.8
271-3	Basic metal products	13.9	7.7	6.2	5.6	4.0	1.9	1.9
274-6	Fabricated metal products	38.1	25.3	19.9	17.4	13.3	3.8	3.7
281	Motor vehicles and parts	35.0	29.0	38.0	51.0	28.0	9.5	6.8
282	Other vehicles	30.0	15.0	12.0	14.0	10.0	1.0	1.0
283-6	Other machinery and equipment	33.6	20.5	16.2	17.4	14.9	2.6	2.1
29	Other manufacturing	35.3	24.0	21.0	18.6	16.3	3.9	3.8
21-29	**TOTAL MANUFACTURING**	**22.9**	**15.6**	**14.1**	**13.6**	**10.5**	**3.5**	**3.1**

a Assistance provided by tariffs and certain non-tariff measures. **b** Excluding 1996-97 and 2000-01, benchmark years represent the years in which industry outputs and inputs were revised. Details of industry outputs and inputs are revised periodically to take account of compositional changes that occur over time. Factors that influence compositional changes include changes in technology and relative prices. **c** Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 edition.

Source: PC estimates.

Table 2.5 **Effective rates of assistance,[a] manufacturing subdivisions, selected benchmark years[b]**

per cent

ANZSIC[c] Industry grouping Code	Description	1968-69	1974-75	1977-78	1983-84	1989-90	1996-97	2000-01
21	Food, beverages and tobacco	14.0	21.5	10.4	6.0	4.5	4.4	4.6
22	Textiles, clothing, footwear and leather	71.0	65.7	88.4	143.3	85.5	32.2	23.2
23	Wood and paper products	39.5	21.1	19.1	21.8	13.9	5.5	5.6
24	Printing, publishing and recorded media	35.5	21.8	23.3	12.8	6.5	0.9	0.9
25	Petroleum, coal, chemical and associated products	26.6	20.8	20.7	15.7	11.0	3.9	3.9
26	Non-metallic mineral products	13.5	8.7	4.2	3.3	4.1	2.7	2.7
271-3	Basic metal products	28.1	17.2	10.1	8.5	7.5	3.0	3.0
274-6	Fabricated metal products	58.7	38.1	28.4	25.4	20.0	4.6	4.6
281	Motor vehicles and parts	48.6	53.3	70.2	130.8	54.9	21.3	14.1
282	Other vehicles	39.1	16.5	10.8	14.6	10.0	-0.7	-0.6
283-6	Other machinery and equipment	41.9	24.6	18.7	22.4	19.8	2.7	2.1
29	Other manufacturing	54.4	38.1	32.3	25.4	24.7	4.8	4.7
21-29	**TOTAL MANUFACTURING**	**34.9**	**26.4**	**22.5**	**22.7**	**16.3**	**5.6**	**4.8**

a Assistance provided by tariffs and certain non-tariff measures. **b** Excluding 1996-97 and 2000-01, benchmark years represent the years in which industry outputs and inputs were revised. Details of industry outputs and inputs are revised periodically to take account of compositional changes that occur over time. Factors that influence compositional changes include changes in technology and relative prices. **c** Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 edition.

Source: PC estimates.

2.4 Assistance to agriculture

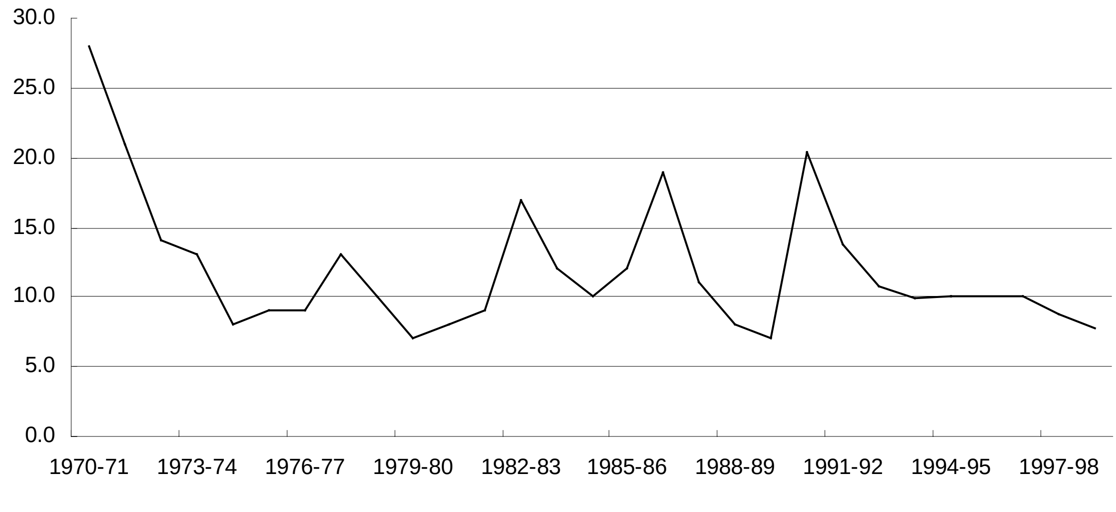
The agriculture sector receives assistance from a wide range of government programs. Statutory marketing and regulatory arrangements form the major component of assistance to agriculture, with budgetary assistance (including R&D, adjustment assistance and tax concessions) and tariffs on outputs being less important. Economic assistance also exists as a by-product of quarantine restrictions for many agricultural products. The assistance associated with the above measures is partly offset by tariffs and other taxes on the inputs used in agriculture.

In this year's Trade and Assistance Review, the Commission has updated the estimates of assistance to agriculture to 1998-99. It also presents revised estimates for 1997-98, along with previously published estimates for earlier years. Nominal and effective rates of assistance for agriculture are reported in tables 2.6 and 2.7, and illustrated in figures 2.6, 2.7 and 2.8. The net subsidy equivalent (NSE) is presented in tables 2.8 and 2.9. The tables appear at the end of this section. The key estimates from these tables, together with related developments, are described and discussed below.

Trends in agricultural assistance

Average effective rates of assistance to agriculture since 1971-72 are presented in figure 2.6.

Figure 2.6 **Average effective rates of assistance for agriculture, 1971-72 to 1998-99**
per cent



Data source: PC estimates.

Assistance afforded by various arrangements for the sector has declined over the past decade, although it has not fallen consistently across commodities. Assistance to agriculture has typically been more variable than assistance to manufacturing, with changes in estimated assistance reflecting more than just changes in assistance policies. They also reflect fluctuations in world commodity prices, the value of output, and the counter-cyclical nature of many agricultural assistance programs. During most of the 1990s, however, assistance to agriculture was relatively stable.

Assistance in 1998-99

Assistance levels

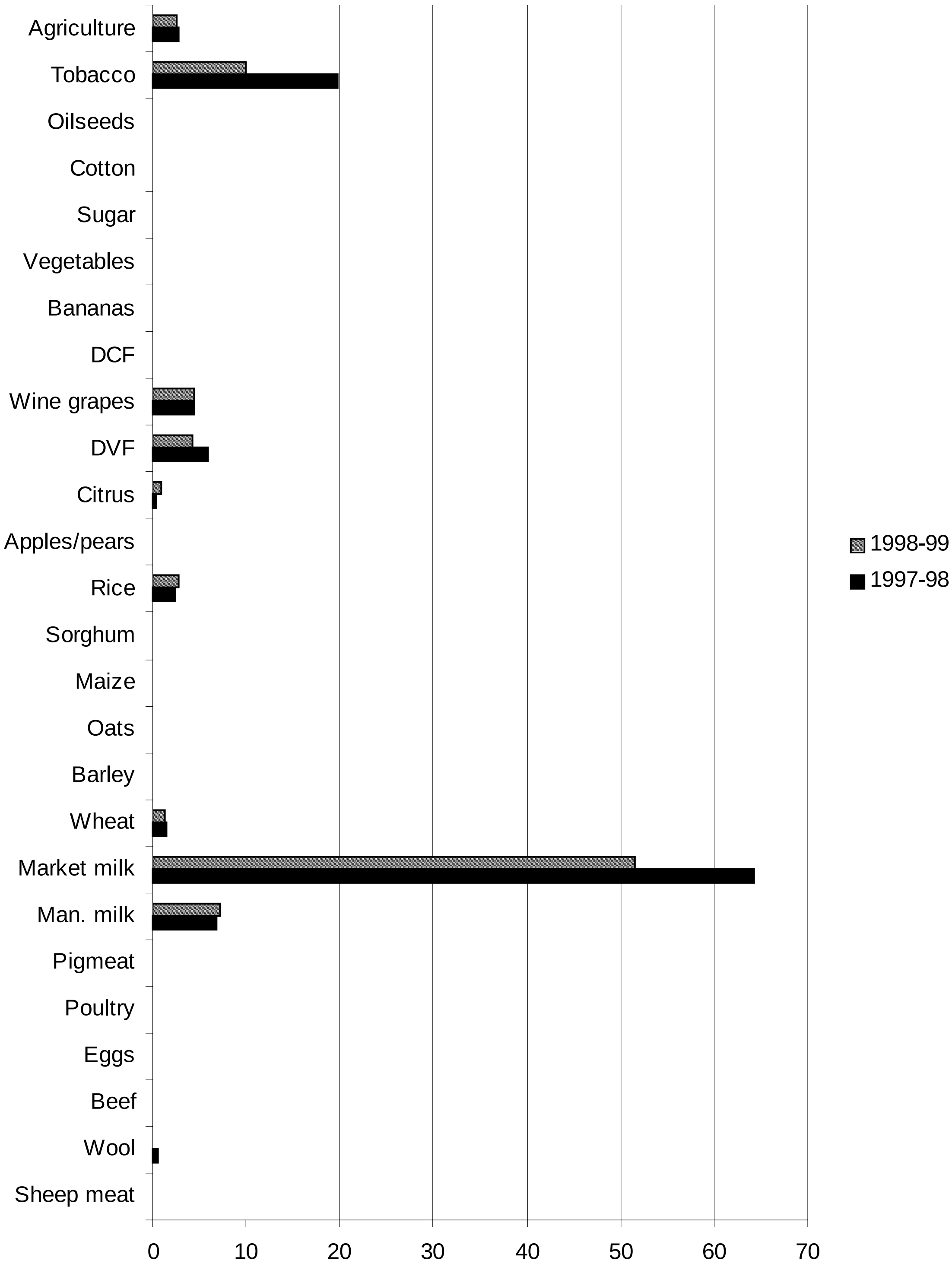
Overall, assistance to agriculture was lower in 1998-99 than in 1997-98

- The average *nominal* rate of assistance to agriculture fell from 2.8 per cent to 2.5 per cent. Only a few agricultural industries had nominal rates of more than one per cent. These were manufacturing milk, market milk, rice, wheat, dried vine fruit, wine grapes and tobacco. Nominal rates rose slightly for manufacturing milk, while rates fell by more than a percentage point in the market milk, tobacco and dried vine fruit industries. (figure 2.7)
- The average *effective* rate of assistance for agriculture fell from 8.6 per cent to 7.7 per cent in 1998-99. All industries had effective rates above one per cent except for poultry, bananas, vegetables, apples and pears and cotton. There were slight rises in effective rates for citrus, manufacturing milk, rice, vegetables and sugar. Effective rates fell by more than a percentage point in the market milk (although its effective rate remained above 200 per cent), tobacco, cotton, dried vine fruit, deciduous canning fruit and wool industries. (figure 2.8)
- The *NSE* for agriculture fell by 10 per cent ($83 million) to $744 million. The fall in NSE reflects falls in output assistance ($54 million) and falls in assistance to value adding factors ($30 million). Input assistance was virtually unchanged (see table 2.9). Among the different agricultural activities, milk production enjoyed the largest NSE of $470 million in 1998-99, down from $514 million in the previous year. Other activities with high NSEs include wheat ($80 million), beef ($41 million), wine grapes ($36 million) and wool ($35 million) — table 2.8.

The variation in assistance across agricultural commodities declined slightly in 1998-99. The standard deviation of the effective rate fell from 50 percentage points to 32 percentage points and the standard deviation of the nominal rate fell from 10.3 percentage points to 8.6 percentage points.

Figure 2.7 **Nominal rates of assistance to agricultural commodities, 1997-98 and 1998-99**

per cent

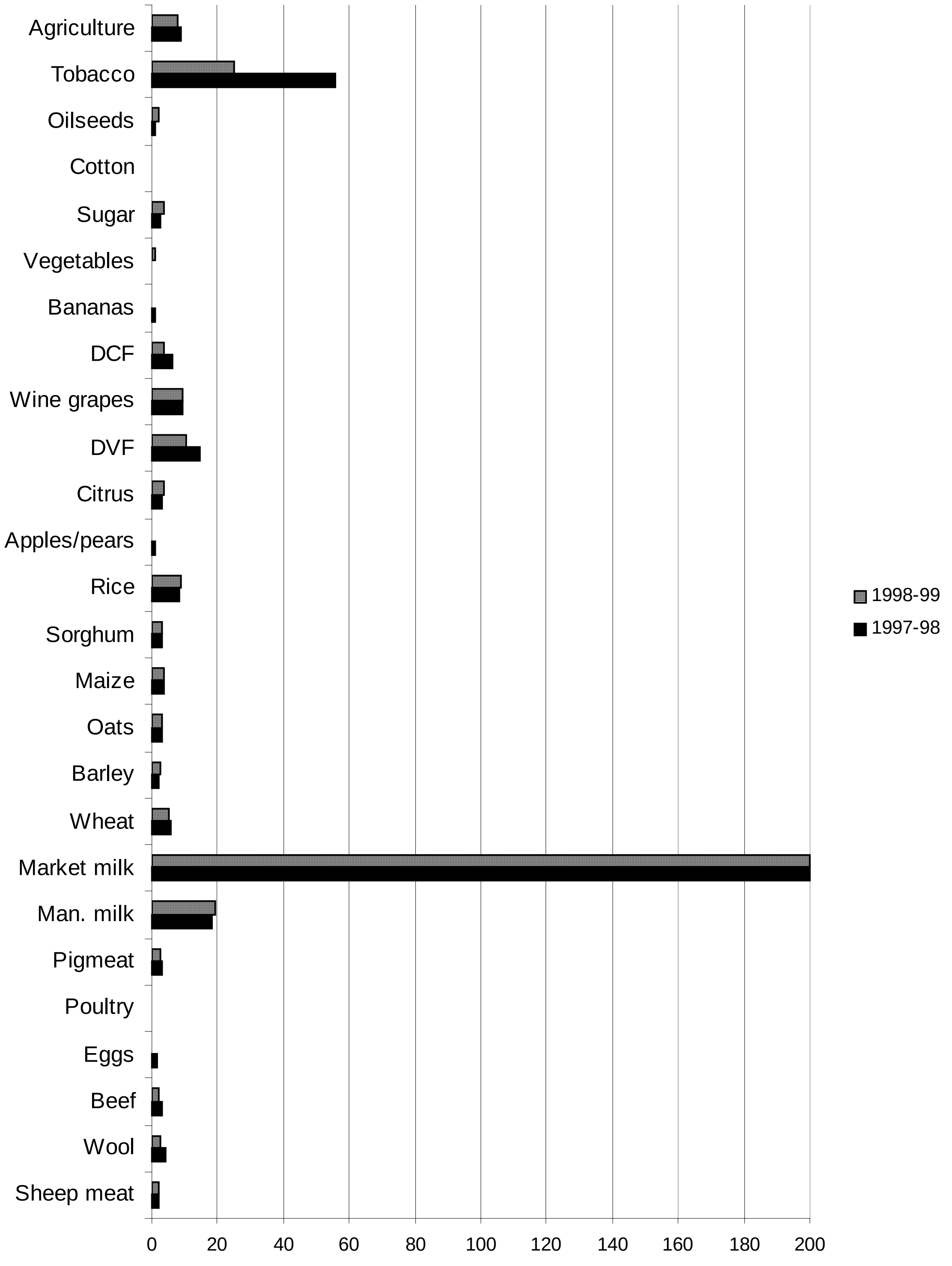


a DCF: Deciduous Canning Fruits. **b** DVF: Dried Vine Fruits. **c** Man. Milk: Manufacturing milk.

Data source: PC estimates.

Figure 2.8 **Effective rates of assistance to agricultural commodities, 1997-98 and 1998-99**

per cent



a DCF: Deciduous Canning Fruits. **b** DVF: Dried Vine Fruits. **c** Man. milk: Manufacturing milk.

Data source: PC estimates.

Forms of assistance

Statutory marketing and regulatory arrangements were the most significant form of assistance in 1998-99. These arrangements accounted for 62 per cent of the total agricultural NSE. Arrangements for market milk accounted for most of this (69 per cent), while the remainder of the NSE was largely for manufacturing milk.

Research assistance accounted for 22 per cent of the NSE, with support for wheat, beef, dairy, wool, sugar, dairy, barley, vegetables and sheep meat accounting for 77 per cent of this total.

Revenue forgone from tax concessions was also a significant source of assistance, accounting for 11 per cent of the NSE. Concessions for wheat, beef, dairy, wool, sugar, barley, and wine grapes accounting for 51 per cent of this total.

Adjustment assistance represented 7 per cent of the NSE, the major beneficiaries being beef, wool, wheat, dairy and sheep meat producers who received 84 per cent of the total.

Other forms of assistance include natural disaster relief, specific industry programs, export incentives, tariffs and government loan guarantees.

Selected developments in assistance to agriculture

Assistance to agriculture has fallen over the last decade, in part due to an unwinding of statutory marketing arrangements applying in many agricultural industries. In several cases, these arrangements have been, or are being, reviewed and reformed under the National Competition Policy (NCP) legislation review processes. Recent changes in assistance arrangements for selected agricultural industries are discussed below.

Dairy

The dairy sector includes the market milk and manufacturing milk industries. Market milk is produced for direct human consumption, while manufacturing milk is used to make a variety of processed food products. In 1998-99, market milk output was valued at $953 million, while manufacturing milk output was valued at $1947 million.

Prior to the recent deregulation of the dairy industry, market milk received assistance largely from State marketing arrangements (98 per cent of NSE in 1998-99). Marketing authorities in each State set farm gate prices and production quotas, as well as regulating other aspects of the industry. The bulk of assistance for manufacturing milk came from the Commonwealth’s Domestic Market Support Scheme (DMSS). The scheme assisted manufacturing milk with subsidies financed through levies collected on market milk and manufacturing milk products sold domestically.

The effective rate of assistance for dairy fell from 62 per cent in 1997-98 to 54 per cent in 1998-99. The rate for manufacturing milk rose slightly, from 18 to 19 per cent, but the rate for market milk fell significantly, although remaining above 200 per cent.

The assistance provided to the dairy industry dominates the estimates for the agriculture sector. If the dairy industry were excluded, the 1998-99 effective rate of assistance for agriculture would fall from 7.7 to 3 per cent.

In July 1999, the Victorian Government announced its intention to deregulate all legislative price and supply controls over Victorian milk from 1 July 2000. The announcement followed a NCP review of the Victorian dairy industry which found that reform would deliver a net public benefit.

As the largest Australian milk producing State, the Victorian decision, coupled with the production cost advantage which Victorian producers enjoy, put pressure on other States to deregulate their dairy industries.

After initially phasing down subsidy rates, the Commonwealth removed its DMSS assistance program for manufacturing milk on 1 July 2000. As a part of the deregulation process, the Commonwealth announced in September 1999 that it would provide a Dairy Industry Adjustment Package (DIAP). Under the package, producers in a particular State could receive assistance only if the State’s government deregulated its market milk industry — which all of the States have now done.

The DIAP, totalling $1.78 billion, is funded by a Commonwealth levy of 11 cents per litre on retail sales of all liquid milk. The levy commenced on 8 July 2000 and is expected to operate for eight years.

There are three sub-programs under the DIAP:

- The largest is the Dairy Structural Adjustment Program (DSAP) which provides $1.63 billion. Up to 20 000 farmers may apply for assistance under the DSAP, which will provide payments to eligible farmers over an eight year period, to compensate them for reductions in their incomes, and to allow farmers to manage the transition to production in a deregulated environment (AFFA 2000a). There is potential for large payments — for example, the Department of

Agriculture, Fisheries and Forestry has indicated that payments in excess of $350 000 will be allowed under certain conditions.

- A second part of the package is the $30 million Dairy Exit Program (DEP). Farmers who believe that they would not be viable after deregulation can decide to leave the agriculture industry and accept DEP payments instead of DSAP payments. DEP payments can be up to $45 000 tax free per exiting farmer. The program runs until June 2002 (AFFA 2000a).
- A third element is a $45 million Dairy Regional Assistance Program. The program will operate over three years to subsidise the development of businesses in order to provide employment in dairy communities (AFFA 2000a).

Dairy farmers in New South Wales, Queensland and Western Australia are also able to claim capital losses for taxation purposes on milk quotas they held at the time of deregulation. These losses can be off-set against present or future capital gains, and are not affected by any moneys provided to dairy farmers under the Commonwealth's DSAP or DEP schemes (Truss 2000b).

The activities of the Australian Dairy Corporation are scheduled to be reviewed by January 2001 by the Commonwealth Government under the National Competition Policy processes. The Government has also asked ABARE to conduct an investigation into the impact of deregulation.

Sugar

Prior to the 1997 reform of the Queensland sugar industry, assistance was provided by a tariff and through Queensland's statutory marketing arrangements.

The 1995-96 Sugar Industry Review, conducted as a part of the National Competition Policy processes, recommended partial deregulation of the sugar sector. The Queensland Government implemented the review's recommendations, removing the tariff in July 1997 and reforming the Queensland Sugar Corporation's (QSC) pricing arrangements. The Government also announced a ten-year moratorium on further reviews of the sugar industry.

Domestic pricing issues

The National Competition Council (NCC) expressed reservations about aspects of the review panel's approach to the reform of the industry:

> It is not clear to the [NCC] that all of the review panel's conclusions are sustainable. In particular, questions arise in relation to the review's conclusion that 'the benefits of full domestic deregulation can be achieved by mandating the provision of export parity

priced raw sugar to the domestic market while, at the same time, avoiding the adverse impact of domestic deregulation on the competitiveness of export arrangements'. Further, the [NCC] has questions about the basis of the estimated 'Far East premium', and the expectation that it will persist over time (NCC 1997, pp. 74-75).

In response to the NCC's concerns, the Queensland Government undertook to reconsider marketing arrangements for sugar within ten years should changes in market conditions suggest that the current arrangements were no longer in the community interest. The NCC considered that this criterion would be satisfied if, among other things, there were evidence that the export parity pricing provisions were not producing the same benefits as would full domestic deregulation (NCC 1997, p. 75).

The NCC is concerned that this may now be the case:

> … it is not clear that consumers are receiving the full net benefit which domestic market reform would bring. Further, recent developments in world sugar market conditions have introduced greater competitive pressures, which are forcing down Australian export premia. This raises doubts as to whether the single desk marketing arrangements for sugar continues to be in the public interest. (NCC 1999, p. 56).

Adjustment assistance

To offset reductions in assistance, the Commonwealth Government introduced the Sugar Industry (Research) Assistance Package in July 1998. The program provided $14 million over four years for R&D aimed at increasing sugar content levels in sugar cane.

In September 2000, the Commonwealth Government introduced a separate package — the Sugar Industry (Cane Growers) Assistance Package. The package was a response to adverse climatic and farming conditions in the industry over the preceding season which reduced production and lessened the financial ability of growers to plant and harvest crop for the next season (AFFA 2000b). The package includes:

- interest subsidies on loans of up to $50 000 for planting cane crops for this and the next season;
- interest subsidies on new or existing loans of up to $100 000 associated with the business of producing cane;
- family relief payments from September to assist cane farmers and their families;
- vouchers of up to $1000 per farmer for access to financial counselling services, where these services are not already provided; and

- FarmBis programs to target the cane industry, offering assistance with farm skills and business management training.

The total cost of the package will be approximately $83 million[5] (Truss 2000a).

The Queensland Government (Beattie 2000) has provided additional assistance to the industry. It has allocated $10 million for concessional loans for the replanting and establishment of sugar cane crops. Three-year loans are available up to $10 000 with an initial interest rate of 6 per cent.

Wheat

An NCP review has been established to examine the *Wheat Marketing Act 1989*. Among other things, the Act gives AWB International Limited a 'single desk' monopoly over export sales of wheat. The Committee conducting the review is required to assess whether the current legislation provides a net benefit to the Australian community compared with open competition in wheat marketing. It must also determine preferred options for regulation, if any.

In a submission to the review, the Commission (PC 2000c) argued that the single desk is unlikely to generate net benefits for Australia or, indeed, for wheat producers themselves, because:

- a lack of marketing choice for wheat growers is likely to be impairing efficiency and innovation within the industry; and
- most if not all of any potential benefits of the AWB's single desk could be achieved under competitive selling arrangements combined with, if necessary, targeted mechanisms that could promote industry-wide activities and exploitation of export premiums in identified markets.

The Commission considered that a desirable outcome of the review would be to limit compulsory arrangements to those markets or activities where benefits of compulsion demonstrably outweigh the costs, and to allow competition in all other markets and activities.

In its draft report, the Committee concluded that it 'was not convinced … that the community would suffer a net loss of social benefit in the long term if the current legislation were removed and a fully competitive situation permitted' (WMARC 2000, p. 17). Nonetheless, it recommended continuation of the single desk at least

[5] This figure assumes that 50 per cent of sugar cane farmers will utilise the welfare assistance program, 40 per cent take up the interest rate relief for replanting and 30 per cent take up additional interest rate relief.

until a scheduled review by the Wheat Export Authority (WEA) in 2004. However, the Committee also considered that, for a trial period, the marketing monopoly should be narrowed by:

- further deregulating the export of all wheat in containers and bags;
- deregulating the export of durum wheat in bulk; and
- replacing the permit system currently administered by the WEA with an export control system under which the exporter is licensed annually.

The Committee also invited comments on a proposal to allow competitive selling to all export markets except those where the buyer acted as a monopsonist and/or Australia held some market advantage which a single desk could exploit.

The Committee's final report is due to be forwarded to the Minister for Agriculture by the end of December 2000.

Lamb

In July 1999, the United States imposed a tariff-rate quota on imports of fresh, chilled or frozen lamb, indicating that it was taking the action under the World Trade Organisation (WTO) Agreement on Safeguards.

In response, the Government put in place a mechanism to allocate the US quota to lamb producers — 16 339 tonnes are allocated to producers based upon their US exports in 1997-98 and 1998-99. Another 800 tonnes are reserved for exporters who have recently received accreditation to export to the US and for existing producers who are particularly disadvantaged by the allocation formula due to exceptional circumstances. The Government is also exploring whether Australia's share of the quota can be increased by gaining access to unassigned or unused allocations (AFFA 2000c).

In July 1999, the Government also announced an assistance package to assist lamb producers. The total amount provided for in the package is $18 million. The first component of the package will provide relief of 50 per cent of the levy payment used to fund marketing, R&D, and animal health and residue testing programs. A Lamb Industry Development Program (LIDP) has also been established to assist producers, processors and exporters of lamb. Six million has been provided for the LIDP program over two years. Grants of up to $500 000 can be obtained by individual producers, processors and exporters in order to enhance performance, improve quality, develop infrastructure and encourage productivity and innovation (AFFA 2000d).

Further, in October 1999, the Government lodged a complaint with the WTO, contending that the United States' measure is inconsistent with various articles of the WTO Safeguard Agreement.

The WTO final report, delivered in December 2000, found that the US should lift restrictions on imported Australian and New Zealand lamb (Allard 2000). The US has 60 days to lodge an appeal, following the ratification of this decision in January 2001.

Beef

In February 1999, the United States lodged a complaint with the WTO, alleging that Korea was using regulation to protect its fresh, chilled and frozen beef industry. Australia, Canada and New Zealand later joined the United States in the dispute.

The complaint alleged that Korea was applying several discriminatory measures to beef imports, including a requirement that imported beef be sold separately from Korean beef, discrimination against grass fed beef, minimum wholesale pricing, restrictions on who can buy and sell imported beef, discriminatory labelling and record-keeping requirements, and subsidies to Korea's beef producers in excess of Korea's agreed WTO subsidy limits. (Korea also maintains a quota on imported beef that will be removed by January 2001, although this was not a part of the dispute) (Vaile 2000c).

The WTO panel report of July 2000 upheld the complaint and recommended that Korea largely cease or modify these practices so as to conform to its WTO commitments (WTO 2000d). However Korea appealed these findings.

In December 2000, the WTO's appellate body submitted a subsequent report. Korea's appeal was unsuccessful regarding its dual retailing system (ie confining the sale of beef to specialised stores and limiting the display of imported beef in supermarkets) but successful regarding its domestic support arrangements (WTO 2000e).

The removal restrictions in place in the Korean market would enhance opportunities for Australian beef exports to Korea, which were valued at $150 million in 1998-99 (Vaile 2000c).

Table 2.6 **Nominal and effective rates of assistance by agricultural activity, 1994-95 to 1998-99**

per cent

	Nominal rate of assistance[a]					*Effective rate of assistance[b]*				
Activity/commodity	*94-95*	*95-96*	*96-97*	*97-98*	*98-99*	*94-95*	*95-96*	*96-97*	*97-98*	*98-99*
Horticulture										
Apples and pears	..	..	..	..	..	..	..	1	1	..
Dried vine fruits[c]	5	5	6	6	4	14	11	18	15	11
Wine grapes	9	7	4	4	4	19	15	10	9	9
Citrus	1	1	1	..	1	4	4	3	3	4
Deciduous canning fruits	..	..	..	..	..	1	2	7	6	3
Bananas	..	..	..	..	..	..	1	1	1	1
Tobacco[d]	50	40	30	20	10	>200	160	98	56	25
Vegetables	..	..	..	..	..	..	1	..	..	1
Average	**2**	**2**	**1**	**1**	**1**	**5**	**6**	**4**	**4**	**4**
Extensive cropping										
Wheat	2	1	1	1	1	6	4	5	6	5
Barley	..	..	..	..	..	2	1	2	2	2
Oats	..	..	..	..	..	1	1	1	3	3
Maize	..	..	..	..	..	..	1	2	4	3
Sorghum	..	..	..	..	..	1	1	2	3	3
Oilseeds	..	..	..	..	..	5	4	2	1	2
Average	**1**	**1**	**1**	**1**	**1**	**4**	**3**	**4**	**4**	**4**
Extensive irrigation and high-rainfall crops										
Sugar[e]	4	4	4	..	..	11	15	15	3	3
Cotton	..	..	..	..	..	2	3	..	..	..
Rice[f]	2	2	3	2	3	8	8	10	8	9
Average	**2**	**2**	**2**	**..**	**..**	**7**	**10**	**8**	**2**	**2**
Extensive grazing										
Beef	..	..	..	..	..	4	5	5	3	2
Wool	1	2	1	1	..	6	9	6	4	3
Sheepmeat	..	..	..	..	..	3	3	3	2	2
Average	**..**	**1**	**..**	**..**	**..**	**4**	**6**	**5**	**3**	**2**
Intensive livestock										
Pigs	..	..	..	..	..	5	5	4	3	3
Poultry	..	..	..	..	..	9	11	3	..	..
Eggs[g]	4	2	..	..	..	11	8	4	2	1
Milk production	24	19	22	21	18	77	56	70	62	54
Manufacturing milk	9	8	8	7	7	25	21	23	18	19
Fresh milk[h]	58	53	67	64	52	>200	>200	>200	>200	>200
Average	**13**	**11**	**13**	**11**	**10**	**51**	**42**	**47**	**41**	**36**
Total agriculture										
Average	**3**	**3**	**3**	**3**	**3**	**10**	**10**	**10**	**9**	**8**
Standard deviation[i]	**(10)**	**(9)**	**(11)**	**(10)**	**(9)**	**(41)**	**(33)**	**(55)**	**(50)**	**(32)**

Table 2.6 continued

.. between -0.5 and 0.5 per cent. [a] Average nominal rates on outputs are weighted by the unassisted value of output of each activity. [b] Average effective rates are weighted by the unassisted value added of each activity. [c] The estimates of assistance to sultanas are based on a comparison of the lower of either domestic or constructed import parity returns with the export returns. [d] Based on transfers derived by applying the price differential between Australian green leaf and comparable imported green leaf to the domestic sales of Australian leaf. Following the removal of the local leaf content scheme in January 1995, the methodology used for calculating producer transfers was revised for the 1994-95 and 1996-97 estimates. [e] Producer transfers were estimated in accordance with the industry formula used for dividing raw sugar returns between millers and growers. [f] Estimated by comparing domestic and export prices for medium and long-grain rice. [g] Estimates are derived using a weighted average of retail prices for eggs in the deregulated States to determine a benchmark retail price. This benchmark price is compared with the average retail prices in the regulated States in order to make an estimate of assistance provided to retailers. Finally, this retail-level assistance is estimated on a pro-rata basis from the value of retail prices to provide an estimate of assistance at the farm gate-level. [h] The producer transfer was estimated by multiplying the difference between the fresh milk price and the local manufacturing milk price plus an allowance of 20 per cent of the average Australian manufacturing milk price to represent the cost of assurance of out-of–season supply. [i] The standard deviation measures the extent of variation (or dispersion) in a distribution. The larger the variability among individual activities' nominal and effective rates, the larger the standard deviation.

Source: PC estimates.

Table 2.7 **Average nominal and effective rates of assistance, by 3-digit ANZSIC[a], 1994-95 to 1998-99**

per cent

		Nominal rate of assistance on output[b]					Effective rate of assistance[c]				
	Activity/commodity description	*94-95*	*95-96*	*96-97*	*97-98*	*98-99*	*94-95*	*95-96*	*96-97*	*97-98*	*98-99*
Code											
011	Horticulture and Fruit Growing	2	2	1	1	1	4	5	3	3	4
012	Grain, Sheep and Grain Beef Cattle Farming	1	1	1	1	..	5	5	5	4	3
013	Dairy Cattle Farming	24	19	22	21	18	77	56	70	62	54
014	Poultry Farming	1	..	..	..	..	10	10	3	1	1
015	Other Livestock Farming	..	..	..	..	..	5	5	4	3	3
016	Other Crop Growing	3	3	2	..	..	9	12	9	2	2
01	**Agriculture**	**3**	**3**	**3**	**3**	**3**	**10**	**10**	**10**	**9**	**8**

.. Between 0 and 0.5 per cent. [a] Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC). [b] Average nominal rates on outputs are weighted by the unassisted value of output of each activity. [c] Average effective rates are weighted by the unassisted value added of each activity.

Source: PC estimates.

Table 2.8 Net subsidy equivalents[a] by agricultural activity, 1994-95 to 1998-99

$ million

Activity/commodity	*94-95*	*95-96*	*96-97*	*97-98*	*98-99*
Horticulture					
Apples and pears	-2	..	1	1	..
Dried vine fruits[b]	3	6	4	5	3
Wine grapes	33	38	28	36	36
Citrus	5	6	5	4	5
Deciduous canning fruits	..	..	2	2	1
Bananas	..	1	1	1	1
Tobacco[c]	13	13	11	7	4
Vegetables	2	7	..	1	7
Total	**55**	**71**	**52**	**56**	**57**
Extensive cropping					
Wheat	56	75	97	87	80
Barley	5	5	9	10	11
Oats	1	2	2	3	3
Maize	..	..	1	1	1
Sorghum	1	2	2	2	2
Oilseeds	3	4	3	2	3
Total	**67**	**88**	**113**	**106**	**100**
Extensive irrigation and high-rainfall crops					
Sugar[d]	49	67	66	13	17
Cotton	4	11	..	1	-3
Rice[e]	8	7	12	11	10
Total	**62**	**85**	**78**	**24**	**25**
Extensive grazing					
Beef	79	81	74	54	41
Wool	85	99	77	54	35
Sheepmeat	11	15	14	10	8
Total	**175**	**195**	**165**	**118**	**84**
Intensive livestock					
Pigs	10	9	8	6	5
Poultry	9	12	3	1	1
Eggs[f]	7	6	3	2	2
Milk production	456	490	555	514	470
Manufacturing milk	130	167	170	140	145
Fresh milk[g]	326	323	385	374	326
Total	**482**	**518**	**569**	**522**	**477**
Total agriculture					
Total	**839**	**958**	**977**	**827**	**744**

.. Less than $0.5 million. [a] The net subsidy equivalent is the dollar value of the net assistance to the land, labour and capital resources used in a particular industry or activity. [b] The estimates of assistance to sultanas are based on a comparison of the lower of either domestic or constructed import parity returns with the export returns. [c] Based on transfers derived by apply-

Table 2.8 continued

-ing the price differential between Australian green leaf and comparable imported green leaf to the domestic sales of Australian leaf. Following the removal of the local leaf content scheme in January 1995, the methodology used for calculating producer transfers was revised for the 1994-95 and 1996-97 estimates. **d** Producer transfers were estimated in accordance with the industry formula used for dividing raw sugar returns between millers and growers. **e** Estimated by comparing domestic and export prices for medium and long-grain rice. **f** Estimates are derived using a weighted average of retail prices for eggs in the deregulated States to determine a benchmark retail price. This benchmark price is compared with the average retail prices in the regulated States in order to make an estimate of assistance provided to retailers. Finally, this retail-level assistance is estimated on a pro-rata basis from the value of retail prices to provide an estimate of assistance at the farm gate-level. **g** The producer transfer was estimated by multiplying the difference between the fresh milk price and the local manufacturing milk price plus an allowance of 20 per cent of the average Australian manufacturing milk price to represent the cost of assurance of out-of-season supply. *Source:* PC estimates.

Table 2.9 **Assistance to agriculture by form, 1994-95 to 1998-99** $ million

	1994-95	*1995-96*	*1996-97*	*1997-98*	*1998-99*
Assistance to outputs					
Domestic pricing arrangements[a]	479	504	571	509	464
Tariffs	58	66	55	36	36
Local content schemes	0	0	0	0	0
Export incentives	3	3	3	2	2
Export inspection services[b]	6	0	9	0	1
Marketing support	1	1	1	0	0
Government guarantees	58	85	80	60	50
Total[c]	**605**	**659**	**718**	**607**	**553**
Assistance to value-adding factors					
Adjustment assistance[d]	120	115	105	86	49
Agricultural research	160	155	161	161	161
Income taxation concessions	86	163	97	73	80
Natural disaster relief	1	1	1	0	0
Sugar industry program	4	2	4	3	4
Total	**371**	**436**	**368**	**323**	**294**
Assistance to inputs					
Disease control[e]	3	3	2	2	1
Tariffs on inputs[f]	-77	-80	-61	-56	-54
Tariffs on plant and machinery[f]	-62	-61	-50	-50	-50
Total	**-136**	**-138**	**-109**	**-104**	**-102**
Net Subsidy Equivalent	**839**	**958**	**977**	**827**	**744**

.. Between - 0.5 and 0.5 million. Figures may not add to total due to rounding. **a** For 1994-95, 1995-96, 1996-97 and 1997-98, estimates include transitional assistance to tobacco following the removal of the local content scheme in January 1995. **b** Based on shortfalls from 100 per cent cost recovery. **c** Equal to the Gross Subsidy Equivalent. **d** Figures reflect actual Commonwealth interest subsidies and grants provided to producers. **e** Covers assistance provided by the bovine brucellosis and tuberculosis eradication campaign. **f** The additional costs incurred due to assistance raising the prices of inputs. The current series includes the effect of tariffs on materials used in non-traded inputs. *Source*: PC estimates.

2.5 Assistance to mining

A number of government policies have significant impacts on the mining industry. These include native title legislation which may affect land tenure and land access, environmental regulation, and prescribed royalty levels which vary between firms.

By contrast, tariffs and budgetary assistance do not effect mining substantially.

As reported in chapter 4, budgetary assistance is low for the mining sector — $220 million, which is equivalent to 1.0 per cent of mining gross value added, in 1999-2000. The mining industry is assisted mainly through the development allowance and the R&D tax concession.

As a capital-intensive industry, tariffs on imported capital inputs have a negative effect on mining. The industry receives only small assistance from import tariffs. Chalk, slate, marble, granite, sandstone, mica, steatite and other monumental and building stones are subject to a 5 per cent import tariff.

Table 2.10 **Tariff assistance to the mining industry**

$ million (1994-95)

	1996-97	*1998-99*	*2000-01*[a]	*2005-06*[a]
Gross subsidy equivalent	1.4	1.6	1.5	1.5
Tax equivalent on materials	112.5	119	117.1	111.5
Net subsidy equivalent	-111.1	-117.5	-115.6	-110.0
Effective rate of assistance[b]	-0.6	-0.6	-0.6	-0.5

a 2000-01 and 2005-06 figures are estimates based on tariff schedules. **b** The effective rate of assistance is measured as a percentage change in returns per unit of output to an activity's value-added factors due to the assistance structure.

Source: PC estimates.

The mining industry's net subsidy equivalent (NSE) for 1998-99 was negative, at $118 million. This means that the overall effect of tariffs represented a tax on the industry, rather than a subsidy. Based on the tariff schedules outlining future reductions in tariffs, the Commission estimates that, by 2005-06, the NSE will remain negative at $110 million. This would represent a modest $7.5 million gain to the mining industry. The effective rate of assistance for mining was marginally negative between 1996-97 and 1998-99 and is expected to remain so up until 2005-06 (refer to table 2.10).

2.6 Anti-dumping and countervailing activity

Dumping is said to occur when a foreign supplier exports goods at a price below the 'normal value' of the goods in the supplier's home market. There is no single definition of normal value. The price of the good in the exporter's home market is generally used to determine the normal value, but alternatives such as the good's price in another export market or a constructed price are sometimes used.

Under WTO rules, a country can apply anti-dumping measures on dumped imports if they cause or threaten to cause material injury to a competing domestic industry.

Countries may also apply countervailing duties where imports — benefiting from certain forms of subsidies in the country of origin — cause, or threaten to cause, material injury to a domestic industry.

Like other measures that raise the price of imports, anti-dumping and countervailing measures can assist particular industries but can also impose higher costs on other domestic industries and consumers.

Australia's anti-dumping system

A new anti-dumping and countervailing system — implemented through amendments to the *Customs Act 1901* and the *Customs Tariff (Anti-Dumping) Act 1975* — took effect on 24 July 1998. The new system was described in the *Trade & Assistance Review 1997-98* (PC 1998).

Process

A key feature of the new system is its significantly shorter (155 day) single-stage anti-dumping and countervailing investigation, conducted entirely by the Australian Customs Service (ACS). Previously, the Anti-Dumping Authority was responsible for undertaking a second stage of investigation before the final finding was made.

This change means that Australia's investigation process is now short relative to those used in other countries. The maximum total investigation time for Canada, Mexico, the European Union and the United States, for example, ranges from 255 days to 427 days. The WTO, in its most recent Trade Policy Review of Australia, questioned 'whether the shorter investigation period will enable the ACS to conduct as thorough an analysis and review as previously' (WTO 1998a, p. 57).

While the investigation period has been shortened, there have been some delays in the announcement of the final ruling by the Customs Minister (Pearson 1999). Such delays can pose problems for producers and users of relevant imported products. This is because the ACS can impose interim duties 60 days after the investigation is initiated, and these duties remain in place until the Minister makes a ruling. In a case of copy paper from Indonesia, a ruling had not been made seven months after the end of investigations. Consequently, the foreign supplier instituted legal action against the Customs Minister. The decision by the Federal Court in January 2000 rejected the claim of unreasonable delay. The Minister has a mandate, according to the *Customs Act*, to take additional time to consider other information deemed to be relevant (*PT Pabrik Kertas Tjiwi Kimia Tbk v Minister for Justice and Customs*).

Review

The new anti-dumping system is to be reviewed under the NCP. The deadline for completing the Commonwealth's legislation review and reform program has been extended from December 2000 to June 2002.

Recent anti-dumping and countervailing activity

The number of Australian anti-dumping cases initiated increased to 19 in 1999-2000, from 18 in 1998-99 (figure 2.9 and table 2.11). This is almost half the number of initiations in 1997-98 and less than a quarter of those in 1991-92. No new countervailing actions were initiated in 1999-2000.

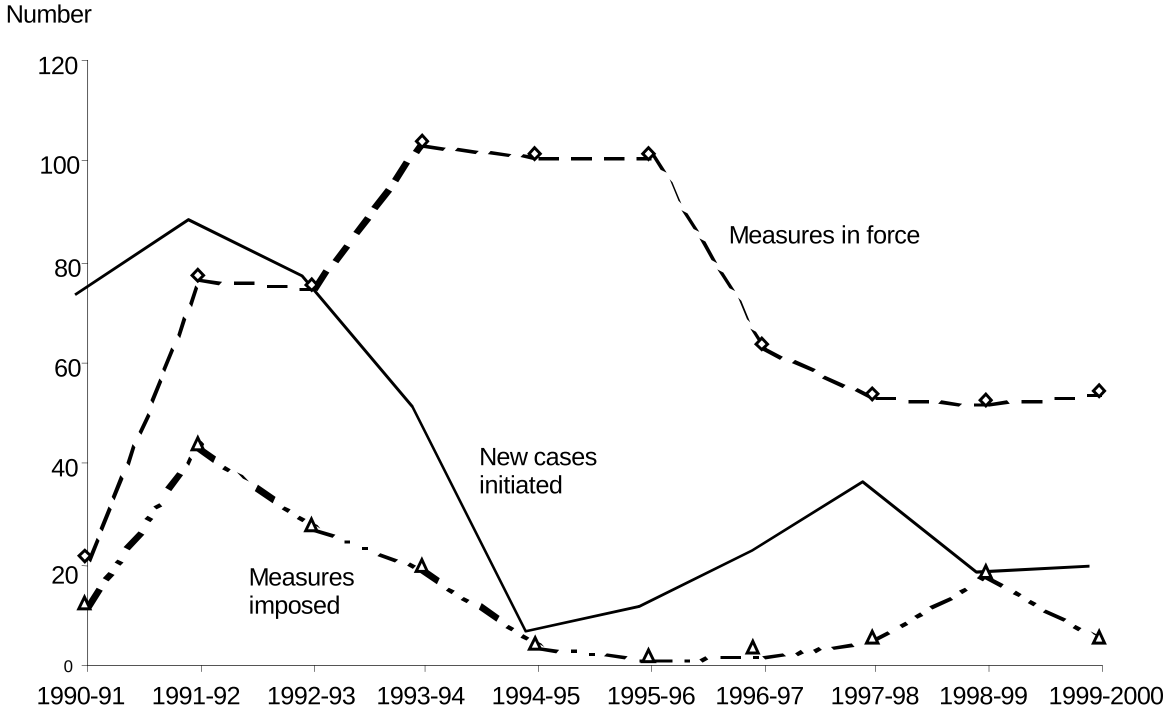
The marginal increase in new anti-dumping cases initiated coincides with a fall in the number of new measures imposed, from 18 in 1998-99 to 5 in 1999-2000.

There was a small increase in the number of measures in force to 54 in 1999-2000, following a six-year fall from 103 in 1993-94 to 52 in 1998-99. The measures in force consisted of 48 anti-dumping measures (nine of which were price undertakings) and five countervailing measures.

Industry incidence

The initiations for 1999-2000 all occurred in industries in the paper and paper products, chemical and petroleum products, non-metallic mineral products and metal products manufacturing subdivisions (table 2.12). These subdivisions had multiple country initiations. Three initiations in particular — Portland cement, high strength structural bolts and triethanolamine — accounted for more than half of the initiations. Over the past six years, the paper and paper products and the chemical and petroleum industries have accounted for 67 per cent of new cases.

Figure 2.9 **Anti-dumping and countervailing activity[a], 1990-91 to 1999-2000**



a A measure or case is counted as an action applying to one commodity from one economy. If multiple economies are involved, they are counted as separate actions.

Data sources: ACS and PC estimates.

Table 2.11 **New Australian anti-dumping and countervailing initiations, 1999-2000**

Commodity	*Exporting economy*
Ammonium nitrate	The Russian Federation
A4 copy paper	Indonesia
Clear float glass	Indonesia
Coated paper	Austria, Finland
Continuous computer paper	Indonesia
High strength structural bolts	South Korea, Taiwan
Polyvinyl chloride bottle compound	Singapore
Portland cement	China, Indonesia, Thailand, Malaysia
Tinplate	Taiwan, UK
Triethanolamine	India, Japan

a Complaints formally initiated by industry. Initiations are defined as actions applying to one commodity from one economy.

Source: ACS.

Table 2.12 **Anti-dumping and countervailing cases[a], by industry, 1994-95 to 1999-2000**

Industry[b]	*1994 -95*	*1995 –96*	*1996 -97*	*1997 -98*	*1998 -99*	*1999 -2000*	*Six-year period* Total	*Six-year period* Per cent of total
Food and beverages	2	–	–	–	–	–	2	2
Textiles	–	–	–	1	5	–	6	5
Paper, paper products	–	–	–	14	2	5	21	19
Metallic minerals	–	–	–	–	–	–	–	–
Chemical and petroleum products	2	5	11	13	10	5	46	41
Non-metallic mineral products	–	–	2	1	–	5	8	7
Metal products manufacturing	1	2	–	3	1	4	11	10
Transport equipment	–	–	–	–	–	–	–	–
Machinery and equipment	1	3	1	–	–	–	5	4
Miscellaneous manufacturing	–	1	8	4	–	–	13	12
Total	**6**	**11**	**22**	**36**	**18**	**19**	**112**	**100**

– Nil. [a] Complaints formally initiated by industry. Cases are defined as actions applying to one commodity from one economy. Cases where dumping and subsidisation are alleged for the same economy and commodity are counted as two distinct initiations. [b] Based on Australian and New Zealand Standard Industry Classification subdivisions.

Source: ACS.

Under the new anti-dumping scheme, the Government repealed the legislative requirement that companies wishing to have a complaint investigated must have at least 25 per cent local content in the product in question. Certain industries, such as textiles, manufacturing, and machinery and equipment, use a high proportion of imported inputs in the production process. There is little evidence to suggest that the relaxation of local content requirements has led to a significant increase in the number of submissions made by these industries. In fact, no complaints were formally initiated by these industries during 1999-2000, though the full effect of the new regulation may not yet have taken effect.

Country incidence

During 1999-2000, Australian firms initiated anti-dumping complaints against firms from 13 economies (table 2.13). Of the 19 initiated complaints in 1999-2000, 18 were against firms from Asian and European countries.

Relative to import shares, the number of initiations against Australia's trading partners in North America and Western Europe have been much lower than against economies in the Asian region. This trend continued in 1999-2000, with the Asian region accounting for over three-quarters of total initiations, but approximately one-third of Australia's merchandise imports.

There have been no Australian initiations against imports from New Zealand since July 1990 when the two countries agreed to eliminate anti-dumping and countervailing actions in trans-Tasman trade under changes arising from the Closer Economic Relations Agreement. Since then, competition laws under the *Australian Trade Practices Act 1974* and the *New Zealand Commerce Act 1986* have covered anti-competitive conduct in trans-Tasman trade.

International trends

Australia accounted for 13 (or 5 per cent) of the 249 anti-dumping and countervailing cases initiated internationally in 1998 (the latest year for which comparable data are available) (table 2.14). This made Australia the sixth largest initiator of anti-dumping and countervailing actions. This is in contrast to 1997 when Australia was the second largest initiator of new actions. South Africa, the United States, India and the European Union were the largest initiators of anti-dumping and countervailing action in 1998.

The United States, the European Union, Mexico, Canada, Australia and South Africa accounted for over two thirds of the total measures in force in 1998. Australia accounted for 6 per cent of measures in force internationally. Relative to its share of world trade (less than 1 per cent), Australia continues to be one of the most frequent users of anti-dumping and countervailing measures.

Table 2.13 **Australian initiations of anti-dumping and countervailing cases, by trading region and economy[a], 1994-95 to 1999-2000**

Region/economy	*1994 -95*	*1995 -96*	*1996 -97*	*1997 -98*	*1998 -99*	*1999 -2000*	*Six-year period Total*	*Six-year period Per cent[b]*
North America	**–**	**1**	**1**	***2***	***1***	**–**	***5***	***4***
Canada	–	–	–	1	–	–	1	1
United States	–	1	1	1	1	–	4	4
Western Europe	***2***	***3***	***7***	***14***	***3***	***3***	***32***	***29***
Austria	–	–	–	1	–	1	2	2
Belgium/Lux	–	1	–	1	1	–	3	3
Finland	–	–	–	1	1	1	3	3
France	–	–	–	2	–	–	2	2
Germany	–	–	3	3	–	–	6	5
Italy	2	–	–	1	–	–	3	3
Netherlands	–	–	1	2	–	–	3	3
Spain	–	–	1	–	–	–	1	1
Sweden	–	–	2	1	–	–	3	3
Switzerland	–	–	–	1	–	–	1	1
UK	–	2	–	1	1	1	5	4
Asia	***2***	***5***	***9***	***13***	***9***	***15***	***53***	***47***
China	1	1	3	2	–	1	8	7
Hong Kong	–	–	–	1	–	–	1	1
India	–	–	1	1	–	1	3	3
Indonesia	1	–	1	3	2	5	12	11
Japan	–	–	–	1	–	1	2	2
South Korea	–	2	–	2	1	2	8	7
Malaysia	–	1	1	–	2	1	4	4
Singapore	–	–	–	1	1	1	3	3
Thailand	–	1	1	–	2	1	5	4
Taiwan	–	–	2	2	1	2	7	6
Other	***2***	***2***	***5***	***7***	***5***	***1***	***21***	***19***
Saudi Arabia	–	–	–	–	2	–	2	2
South Africa	2	2	–	3	–	–	7	6
Other	–	–	5	4	3	1	12	11
Total	**6**	**11**	**22**	**36**	**18**	**19**	**112**	**100**

– Nil. [a] Cases are defined as actions applying to one commodity from one economy. Cases where dumping and subsidisation are alleged for the same economy and commodity are counted as two distinct initiations. [b] The sum of the percentages for the individual economies may not add to the regional totals due to rounding.

Source: ACS.

Table 2.14 **International anti-dumping and countervailing actions, 1997 and 1998[a]**

Country	*Initiation*		*Provisional measures*		*Definitive duties*		*Price undertakings*		*Measures in force at 31 December*		*Per cent of total measures in force*	
	1997	*1998*	*1997*	*1998*	*1997*	*1998*	*1997*	*1998*	*1997*	*1998*	*1997*	*1998*
US	22	34	21	34	19	17	4	1	354	386	37	35
EU	45	29	33	30	24	23	10	10	140	164	14	15
Mexico	7	12	7	7	7	5	–	1	89	95	9	9
Canada	14	9	7	9	7	10	–	1	96	82	10	7
Australia	43	13	17	16	1	15	–	2	52	63	5	6
Turkey	4	1	–	–	–	–	–	–	35	34	4	3
Argentina	16	8	12	4	10	15	1	–	32	42	3	4
Brazil	11	17	–	2	2	14	–	–	29	34	3	3
South Africa	24	42	17	33	18	12	–	–	43	57	4	5
New Zealand	6	1	–	–	2	2	2	–	28	29	3	3
India	13	33	16	22	6	–	–	–	24	49	2	4
South Korea	15	3	5	4	6	6	7	2	20	28	2	3
12 WTO Members	**220**	**202**	**135**	**161**	**102**	**119**	**24**	**17**	**942**	**1063**	**96**	**96**
All WTO Members	**256**	**249**	**160**	**184**	**119**	**127**	**24**	**19**	**967**	**1111**	**100**	**100**

– Nil. [a] The reporting period covers 1 January to 31 December of each year.

Source: WTO (1998b and 1999).

3 Services

The liberalisation of service sectors remains a topical issue in international fora. Notwithstanding the breakdown of the Third WTO Ministerial Council Meeting in Seattle in December 1999, WTO negotiations on trade in services have recommenced as scheduled. Future negotiations will provide an opportunity for Australia to negotiate with its trading partners to build on the gains that can be achieved through unilateral liberalisation. Australia’s negotiating position can be strengthened where it is aware of barriers in other countries and can draw attention to the effects of these barriers — on trading partners as well as on Australia.

The regulation of services is also important from a domestic perspective. Expenditure on services is significant and service sectors are large users of resources within the economy.

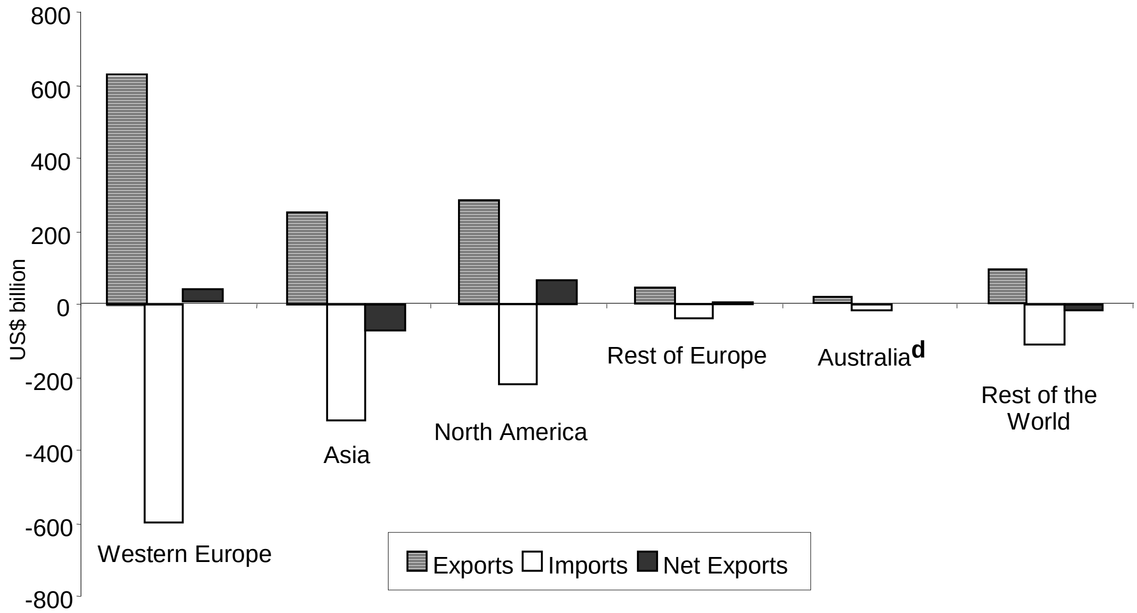
In this chapter, the Commission:

- provides data on services output and trade; and
- presents data on restrictions to trade in selected services for a range of countries, and estimates the impact of those countries’ restrictions on prices in their own economies.

3.1 Trade and production: a snapshot

In 1999, world exports of services increased slightly to US$1350 billion, or approximately 20 per cent of total world exports (WTO 2000a). As would be expected, the flow of exports and imports of services is the greatest for Asia, North America and Western Europe (figure 3.1). These three regions accounted for more than 83 per cent of service exports — the European Union (42 per cent), North America (21 per cent) and Asia (20 per cent). Asia and the ‘Rest of the World’ are the largest net importers of services. Australia accounts for 1.3 per cent of services trade (WTO 2000a).

Figure 3.1 **World exports and imports of services for selected regions[abc], 1999**



[a] The data cover commercial services, defined as all services other than government services. Commercial services are sub-divided into transport, travel and other commercial services. [b] North America includes Canada and the United States. Western Europe includes Croatia, European Union member states, Iceland, Malta, Norway, Slovenia, Switzerland, Turkey and the former Yugoslavia. The Rest of Europe includes Central and Eastern Europe, the Baltic States and the Commonwealth of Independent States. The Rest of the World includes Africa, Latin America and the Middle East. Asia excludes Australia. [c] Data for some economies are not available. [d] The WTO reported a net trade figure for Australia. This is not visible on the graph due to its scale.

Data source: WTO (2000a).

Services are recorded as accounting for more than 23 per cent of Australia's total trade. In line with global trends, the services sector's share of domestic economic activity has grown considerably over recent decades. Today it accounts for around 80 per cent gross product and employment. Property and business, finance and insurance, construction, transport and storage, health and community services, and wholesale and retail trade, are some of the largest service industries in Australia (see table 3.1).

Table 3.1 **Service sectors share of gross product and employment, 1999-2000[a]**

Services sector	*Gross product[b]*		*Employment[c]*	
	$m	*Percentage share*	*‘000 persons employed*	*Percentage share*
Property and business	72 938	16.1	989	13.6
Finance and insurance	41 451	9.1	328	4.5
Transport and storage	34 510	7.6	407	5.6
Construction	34 434	7.6	695	9.6
Wholesale trade	33 942	7.5	495	6.8
Health and community	32 771	7.2	828	11.4
Retail trade	32 737	7.2	1 325	18.3
Education	26 294	6.1	609	8.4
Government administration and defence	22 702	5.2	346	4.8
Communication	19 549	3.9	169	2.3
Personal and other	13 225	3.0	352	4.9
Accommodation, cafes and restaurants	12 692	2.7	433	6.0
Electricity, gas and water supply	11 314	2.5	65	0.9
Cultural and recreation	10 097	2.3	217	3.0
Ownership of dwellings	55 603	12.3	na	na
Total services	**454 259**	**100.0**	**7 258**	**100.0**
Total services as a percentage of total gross product and total employment		**79.0**		**81.7**

[a] Figures may not add to totals due to rounding. [b] Gross product data are the industry gross value added at basic prices using 1998-99 chain volume measures. The total output is the total gross value added. [c] Employment is the average number of persons employed during 1998-99.

Sources: ABS (2000a) and ABS (2000b).

3.2 Estimates of restrictions on trade in selected services

Recent work involving Commission staff, the University of Adelaide and the Australian National University has estimated the effect of restrictions on trade in selected services, not just for Australia, but also for a range of our trading partners. Last year, studies on restrictions to trade in banking (McGuire and Schuele 2000; Kalirajan et al. 2000), maritime (McGuire, Shuele and Smith 2000) and telecommunications (Warren 2000a, 2000b) were completed. This year, Commission staff have estimated trade restrictions in professions (Nguyen-Hong 2000) and distribution services (Kalirajan 2000), which account for around 20 per cent of total services output.

Methodology

Measuring restrictions on trade in services is more difficult than measuring restrictions on trade in goods. International trade in goods involves an exchange of a product between a producer and a user or consumer, and restrictions on such trade usually take the form of a tariff. The effect of trade restrictions on the price of goods can be measured relatively easily by the amount of the tariff. In contrast, trade in services involves a less tangible exchange between the producer and the user or consumer, and restrictions on trade in services are often difficult to identify and quantify.

To gauge the impact of restrictions on trade in services, a methodology has been developed which:

- classifies the different types of restrictions on trade in services;
- assesses the nature and extent of these restrictions; and
- estimates the effect of the restrictions on the profit margin or price of services.

Classifying restrictions on trade in services

The methodology classifies restrictions on services in two ways, both of which align closely with the classification of restrictions under the General Agreement on Trade in Services (GATS).

The first way of classifying a restriction is by whether it applies to:

- a business's *establishment* — the ability of service providers to establish a physical outlet in a territory and supply services through those outlets; or
- a business's *ongoing operations* — the operations of a service provider after it has entered the market.[1]

Restrictions on establishment are distinguished from restrictions on ongoing operations so that the former can be modelled as restrictions on the movement of capital, while the latter can be modelled as restrictions on the output of suppliers. About $600 billion of services exports are supplied through foreign direct investment, mainly for establishment of businesses in overseas countries, and $1 trillion are supplied across borders, mainly for ongoing operations (Dee and Hanslow 2000).

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[1] This classification is similar to the modes of supply used in the GATS. Restrictions on establishment are a subset of services supplied through 'commercial presence'. Restrictions on ongoing operations are similar to services delivered through 'cross-border supply', 'consumption abroad' and the 'temporary movement of people'.

The second way restrictions are classified is according to whether they:

- limit *market access* — that is, restrictions on entry which treat domestic and foreign service providers equally, but restrict activity. This type of restriction may provide competitive benefits to incumbent firms over new entrants; or
- violate *national treatment*[2] — that is, restrictions which treat foreigners less favourably than domestic service providers. Restrictions on national treatment often aim to restrict trade.

This classification leads to four categories which can be presented in a two-by-two matrix. Table 3.2 provides an example.

Table 3.2 **An example of classifying restrictions on professional services**

	Establishment	*Ongoing operations*
Restrictions on market access	Non-professionals may not be allowed to own and invest in professional firms.	Professionals may not be allowed to set fees freely or to advertise, and hence compete on price.
Restrictions on national treatment	Foreign professionals may not be allowed to partner with local professionals.	Foreign professional firms may be restricted in hiring local professionals or using international business names.

Restrictiveness indexes

A restrictiveness index quantifies the extent to which comparable economies have more or less restrictive trading regimes for services.

A score is assigned to particular restrictions applied in an economy and an overall score is calculated for each economy. Scores range from 0 to 1. The greater the number of restrictions and/or the more these restrictions impede trade, the higher the index score for an economy. The scores aim to capture the relative economic significance of various restrictive measures, although the assignment is inevitably subjective.

An overall economy score is calculated for all restrictions on market access (a domestic score) and for restrictions on market access plus restrictions on national treatment (a foreign score). A domestic score measures the restrictions on local service providers entering and operating in a services market. A foreign score measures all the restrictions governing foreigners’ entry and operation in the

[2] The definition of national treatment here and in the GATS differs from that under GATT 1994 where it refers to the treatment of goods *after* they have crossed the frontier.

domestic market. These include requirements that apply to local service providers as well as those additional requirements that apply only to foreigners.[3]

While trade restrictions can reduce competition or inflate costs in a services market, sometimes such regulation may be imposed to deal with 'market failure' and to meet particular social objectives. However, in arriving at an overall economy score, the studies generally do not seek to determine which restrictions, if any, that contribute to the score might be justified to enhance the efficiency of a service sector and which might not.

Price–cost measures

A price impact measure is an estimate of the effect of trade restrictions on the price of services. It is normally estimated by taking a direct measure of price or profit and statistically regressing that on a number of determinants, including an index measure of trade restrictions. The determinants of price can be decomposed to reveal the effect of trade restrictions on the price of services.

Results for selected services industries

Professions

Nguyen-Hong (2000) studied trade restrictions on professional services in 1999, looking specifically at accountancy, architectural, engineering and legal services in 34 economies (29 economies for legal services).

The foreign index results indicate that legal and accountancy services are the most restricted professions, particularly in European, Asia-Pacific and American economies. Many countries impose nationality and residency requirements in accountancy and legal services. These services are often also subject to a combination of measures restricting multi-disciplinary practices, and ownership and investment. In contrast, engineering and architectural services are the least restricted professional services in many economies, where several have not imposed foreign license and qualification requirements.

The domestic index results indicate a similar pattern — domestic regulations are more extensive in legal and accountancy services than architectural and engineering

3 For a more detailed description of the methodology used to calculate the restrictiveness indexes see McGuire and Schuele (2000), McGuire, Shuele and Smith (2000), Kalirajan (2000) and Nguyen-Hong (2000).

services. Apart from minimum qualification requirements, the most common regulations restrict the ability of professionals to advertise and set fees freely.

The most restricted economies for the four professions are Indonesia, Malaysia, Austria, Mexico and Turkey. The most open markets are Finland and the Netherlands (refer to tables 3.3 and 3.5). Results for Australia indicate that:

- the engineering market is very liberal;
- the market for architects is slightly more restricted — Australia has title restrictions but practice is relatively free, although a residency requirement for local training is applied with discretion in some cases;
- the market for accountancy services is more highly restricted — restrictions on residency, multi-disciplinary practices and non-professional investment apply; and
- the legal services market is also more highly restrictive — various States and Territories restrict non-lawyer ownership, multi-disciplinary practises, the form of establishment and advertising, as well as providing exclusive rights to lawyers in certain areas (such as taxation law).

Analysis by the Commission shows that foreign barriers to establishment and ongoing operations are significant determinants of the price–cost margins of engineering firms. The result suggests that restrictions on foreign supply of engineering services tend to allow firms in the domestic market to raise their prices above costs by between 1 per cent and 15 per cent in the 20 countries studied (refer to table 3.7). Foreign barriers to establishment play a significant role in raising prices in a large number of economies, while foreign barriers to ongoing operations tend to have smaller impacts.

Distribution

In Kalirajan's (2000) study of trade restrictions on distribution services in 38 economies for 1998, Australia was rated as very liberal (refer to tables 3.4 and 3.5). Australia imposes relatively minor administrative restrictions on foreign investment and has some non-discriminatory restrictions, such as regulations enforcing property rights.

Singapore, Chile and Hong Kong have relatively few restrictions in the distribution sector, while Belgium, India, Indonesia, France, Korea, Malaysia, the Philippines, Switzerland and Thailand are relatively restrictive. These economies have high scores relative to the other economies, mainly because they restrict the acquisition of commercial land and limit foreign direct investment.

Table 3.3 **Summary of foreign restrictiveness index results for professional services**[a]

	Restrictiveness scores from 0 to 0.25	*Restrictiveness scores from 0.26 to 0.45*	*Restrictiveness scores greater than 0.45*
Legal services	Finland, Netherlands.	Australia, Belgium, Denmark, Greece, Hong Kong, India, Korea, Portugal, Singapore, Spain, Sweden, Thailand, United Kingdom.	Austria, Canada, France, Germany, Indonesia, Italy, Japan, Malaysia, Mexico, New Zealand, Philippines, Switzerland, Turkey, United States.
Accountancy services	Finland, Netherlands, United Kingdom.	Argentina, Australia, Belgium, Brazil, Canada, Chile, Denmark, France, Germany, Greece, Hong Kong, India, Italy, Japan, Luxembourg, Mexico, New Zealand, Portugal, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United States.	Austria, Indonesia, Korea, Malaysia, Philippines, Thailand.
Architectural services	Argentina, Australia, Brazil, Chile, Denmark, Finland, France, Germany, Hong Kong, India, Japan, Korea, Luxembourg, Netherlands, Singapore, South Africa, Sweden, Switzerland, Thailand, United Kingdom, United States.	Austria, Canada, Belgium, Greece, Indonesia, Italy, Malaysia, Mexico, New Zealand, Philippines, Portugal, Spain, Turkey.	
Engineering services	Argentina, Australia, Belgium, Brazil, Canada, Chile, Denmark, Finland, France, Greece, Hong Kong, India, Indonesia, Italy, Japan, Korea, Luxembourg, Malaysia, Netherlands, New Zealand, Philippines, Singapore, South Africa, Spain, Sweden, Switzerland, Thailand, United Kingdom, United States.	Austria, Germany, Mexico, Portugal, Turkey.	

a Refer to tables 3.6, 3.8, 3.9 and 3.10 for a full list of results.

Source: Nguyen-Hong (2000).

The results of the trade restrictiveness index were used to provide tentative estimates of the effects of trade restrictions on the price-cost[4] margins of food distributors. The study found that restrictions appear to add to costs. Belgium, France, Malaysia and Switzerland are the economies in which restrictions on foreign firms have the largest impacts on the price-cost margins of distributors. These economies have stringent restrictions on establishment.

Table 3.4 **Summary of foreign restrictiveness index scores for distribution services**[a]

Restrictiveness scores less than 0.15	*Restrictiveness scores from 0.15 to 0.30*	*Restrictiveness scores greater than 0.30*
Argentina, Australia, Chile, Hong Kong, Mexico, New Zealand, Singapore, South Africa, Turkey, Uruguay.	Austria, Brazil, Canada, Colombia, Denmark, Finland, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom, USA, Venezuela.	Belgium, France, India, Indonesia, Malaysia, Philippines, Korea, Switzerland, Thailand.

a Refer to table 3.11 for full list of results.

Source: Kalirajan (2000).

Banking

As reported in last year's Trade & Assistance Review, McGuire and Schuele's (2000) study of non-prudential trade restrictions on banking services in 1997 for 38 economies rated Australia as very liberal. Brazil, India, Indonesia, Malaysia, the Philippines and Uruguay are the most restrictive economies for foreign banking services.

Kalirajan et al. (2000) found that non-prudential trade restrictions on foreign banks raise the price, or 'net interest margins', of the different banking services studied by between 5 per cent and 60 per cent. The estimated price effect of restrictions on Australia's banking services is around 10 per cent, amongst the lowest found in the 38 economies studied. At the higher end of the scale, Brazil, India, Indonesia, Malaysia and the Philippines have estimated price effects of at least 45 per cent (refer to table 3.5).

4 Price-cost margins capture only the net effect of 'rent-creating' and 'cost-creating' restrictions. By themselves, they are unable to capture the total effect of both types of restrictions. For a detailed discussion of the limitations of price-cost margins, see Kalirajan (2000).

Telecommunications

Warren’s (2000a) study of trade restrictions applying in 1998 on telecommunications services in 136 economies, rated Australia as very liberal. Columbia, Greece, India, Indonesia, South Korea, Malaysia, Mexico, Portugal, South Africa, Thailand, Turkey, Uruguay and Venezuela are the most restrictive economies for domestic and foreign communications operators.

Warren’s (2000b) study estimated that while restrictions can push up prices significantly (by more than 100 per cent in the case of Indonesia), the price effect of all restrictions facing foreign telecommunications providers is less than 20 per cent for the majority of the 38 economies. The estimated price effect of restrictions on Australia’s telecommunications services is negligible (see table 3.5).

Maritime

In the McGuire, Shuele and Smith (2000) study of trade restrictions applying in 1998 on maritime services in 35 economies, Australia was rated as moderately restrictive. Brazil, Chile, Colombia, India, Indonesia, South Korea, Malaysia, Mexico, the Philippines, Thailand, Turkey and the United States were found to be more restrictive than Australia (table 3.5).

Table 3.5 Restrictiveness indexes and their price effects for selected services

	Domestic[a]		*Foreign*[a]		*Price effect*[b]	
	Maximum (country)	*Australia (rank*[c]*)*	*Maximum (country)*	*Australia (rank)*	*Maximum (country)*	*Australia (rank)*
Legal	0.33 (Austria, Japan)	0.27 (24/29)	0.58 (France, Turkey)	0.42 (10/29)	ne	ne
Accountancy	0.31 (India)	0.16 (12/34)	0.63 (Philippines)	0.41 (18/34)	ne	ne
Architectural	0.25 (Canada)	0.03 (12/34)	0.44 (Austria)	0.15 (12/34)	ne	ne
Engineering	0.2 (Austria, Germany)	0.04 (15/34)	0.39 (Austria)	0.08 (6/34)	14.5 (Austria)	2.8 (6/20)
Distribution	0.26 (Korea)	0.03 (5/38)	0.40 (Malaysia)	0.10 (7/38)	ne	ne
Banking	0.27 (Malaysia)	- (1/38)	0.65 (Malaysia)	0.12 (22/38)	60.6 (Malaysia)	9.3 (21/38)
Telecommunications	0.47 (Turkey)	0.04 (7/38)	0.80 (Turkey)	0.04 (7/38)	138.4 (Indonesia)	0.3 (8/37)
Maritime	0.28 (Korea)	0.13 (14/35)	0.64 (Philippines)	0.42 (21/35)	ne	ne

a The restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy. **b** The price effect of restrictions is measured as a percentage. **c** Rank refers to the position of Australia relative to other countries in the study, where 1 is the least restrictive economy. For example, 24/29 means Australia is the 24th least restrictive economy of the 29 economies included in the study — that is, there are five economies more restrictive than Australia. **ne** Not estimated. - Nil.

Sources: Kalirajan (2000); Nguyen-Hong (2000); Kalirajan et al (2000); McGuire and Schuele (2000); McGuire, Schule and Smith (2000); Warren (2000a); Warren (2000b).

Table 3.6 **Restrictiveness indexes for engineering services**[ab]

Score

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	0.01	-	0.01	0.14	0.01	0.15
Australia	0.04	-	0.04	0.05	0.02	0.08
Austria	0.12	0.09	0.20	0.28	0.12	0.39
Belgium	0.01	-	0.01	0.01	0.01	0.02
Brazil	0.04	-	0.04	0.22	0.02	0.23
Canada	0.05	0.06	0.11	0.08	0.08	0.16
Chile	-	-	-	0.23	0.01	0.24
Denmark	0.01	-	0.01	0.01	0.03	0.04
Finland	0.01	-	0.01	0.04	0.02	0.06
France	0.01	0.01	0.03	0.01	0.02	0.03
Germany	0.05	0.15	0.20	0.11	0.17	0.28
Greece	-	0.05	0.05	0.14	0.06	0.20
Hong Kong	0.04	0.04	0.08	0.08	0.05	0.13
India	-	-	-	0.09	0.01	0.10
Indonesia	0.05	-	0.05	0.23	0.01	0.24
Italy	0.08	0.08	0.16	0.09	0.08	0.17
Japan	0.04	0.10	0.14	0.07	0.11	0.18
Korea	-	-	-	0.11	0.01	0.12
Luxembourg	0.08	-	0.08	0.09	0.02	0.11
Malaysia	0.08	0.01	0.08	0.24	0.02	0.26
Mexico	0.04	-	0.04	0.32	0.01	0.33
Netherlands	0.09	-	0.09	0.09	0.01	0.10
New Zealand	-	-	-	0.18	0.01	0.19
Philippines	-	-	-	0.14	0.01	0.15
Portugal	0.08	0.10	0.18	0.22	0.11	0.33
Singapore	0.01	-	0.01	0.11	0.01	0.11
South Africa	0.01	-	0.01	0.09	0.01	0.10
Spain	0.07	0.10	0.17	0.12	0.12	0.24
Sweden	0.01	-	0.01	0.14	0.03	0.17
Switzerland	0.03	0.03	0.05	0.11	0.04	0.15
Thailand	0.04	-	0.04	0.10	0.01	0.11
Turkey	0.08	0.10	0.18	0.26	0.11	0.37
United Kingdom	0.03	-	0.03	0.06	0.01	0.07
USA	0.06	0.05	0.12	0.12	0.07	0.19

- Nil. [a] Figures may not add up to total due to rounding. [b] The restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy.

Source: Nguyen-Hong (2000).

Table 3.7 Price and cost impacts of restrictions for engineering services

Per cent

	Price impact			Cost impact
	Foreign barriers to establishment	*Foreign barriers to ongoing operations*	*All foreign barriers*[a]	*Domestic barriers to establishment*
Austria	11.1	3.5	14.5	6.8
Mexico	13.9	0.2	14.2	1.9
Malaysia	11.3	0.7	12.0	5.3
Indonesia	9.9	0.3	10.2	3.2
Germany	4.7	5.5	10.2	2.9
Spain	5.1	3.7	8.7	3.9
USA	5.1	2.2	7.4	3.8
Sweden	5.9	0.9	6.8	0.7
Japan	3.1	3.4	6.6	2.2
Canada	3.1	2.2	5.3	2.7
Singapore	4.9	0.2	5.0	0.8
Hong Kong	3.6	1.5	5.1	2.3
South Africa	3.5	0.2	3.7	0.7
Netherlands	3.5	0.2	3.7	5.2
Australia	2.1	0.7	2.8	2.1
United Kingdom	2.3	0.2	2.5	1.4
Finland	1.8	0.5	2.3	0.7
Denmark	0.3	0.8	1.1	0.7
France	0.3	0.6	0.9	0.7
Belgium	0.3	0.2	0.5	0.7

a The price impact for all foreign barriers is the sum of the price impacts for foreign barriers to establishment and ongoing operations, respectively.

Source: Nguyen-Hong (2000).

Table 3.8 **Restrictiveness indexes for architectural services**[ab]

Score

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	0.03	-	0.03	0.15	0.01	0.16
Australia	0.03	-	0.03	0.14	0.01	0.15
Austria	0.12	0.10	0.22	0.31	0.13	0.44
Belgium	0.04	0.09	0.13	0.20	0.10	0.29
Brazil	0.07	-	0.07	0.14	0.02	0.16
Canada	0.18	0.07	0.25	0.26	0.07	0.33
Chile	0.05	-	0.05	0.14	-	0.14
Denmark	0.01	-	0.01	0.02	-	0.02
Finland	0.01	-	0.01	0.02	-	0.02
France	0.10	0.01	0.12	0.11	0.03	0.14
Germany	0.03	0.13	0.15	0.02	0.13	0.15
Greece	-	0.05	0.05	0.22	0.07	0.29
Hong Kong	0.05	0.04	0.09	0.18	0.04	0.22
India	0.02	-	0.02	0.07	0.01	0.08
Indonesia	0.04	-	0.04	0.30	-	0.30
Italy	0.08	0.05	0.13	0.24	0.06	0.30
Japan	-	0.08	0.08	0.09	0.09	0.19
Korea	-	-	-	0.15	0.03	0.19
Luxembourg	-	-	-	0.02	0.06	0.08
Malaysia	0.04	-	0.04	0.33	-	0.33
Mexico	0.04	-	0.04	0.30	0.01	0.31
Netherlands	-	-	-	0.02	0.01	0.03
New Zealand	0.03	-	0.03	0.30	0.05	0.34
Philippines	-	0.05	0.05	0.27	0.06	0.33
Portugal	0.08	0.05	0.13	0.30	0.08	0.39
Singapore	-	-	-	0.02	0.06	0.08
South Africa	-	-	-	0.04	0.07	0.11
Spain	0.08	0.10	0.18	0.24	0.11	0.35
Sweden	-	-	-	0.15	0.02	0.17
Switzerland	0.03	0.02	0.04	0.16	0.02	0.18
Thailand	-	-	-	0.05	-	0.12
Turkey	0.07	0.10	0.17	0.33	0.06	0.39
United Kingdom	-	-	-	0.02	0.05	0.07
USA	0.09	0.04	0.13	0.16	-	0.23

- Nil. **a** Figures may not add up to total due to rounding. **b** The restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy.

Source: Nguyen-Hong (2000).

Table 3.9 **Restrictiveness indexes for accountancy services**[ab]

Score

Economy	*Domestic*			*Foreign*		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	0.01	0.10	0.11	0.19	0.11	0.29
Australia	0.11	0.05	0.16	0.34	0.07	0.41
Austria	0.12	0.15	0.27	0.39	0.18	0.57
Belgium	0.09	0.10	0.19	0.12	0.10	0.22
Brazil	0.05	0.15	0.20	0.24	0.15	0.39
Canada	0.17	0.05	0.22	0.36	0.06	0.42
Chile	0.05	0.05	0.10	0.28	0.07	0.35
Denmark	0.13	0.08	0.20	0.31	0.10	0.41
Finland	0.07	0.03	0.10	0.10	0.04	0.14
France	0.12	0.13	0.24	0.17	0.14	0.31
Germany	0.12	0.10	0.22	0.27	0.12	0.39
Greece	0.10	0.08	0.18	0.24	0.08	0.32
Hong Kong	0.07	0.13	0.20	0.18	0.14	0.32
India	0.13	0.18	0.31	0.26	0.18	0.44
Indonesia	-	-	-	0.55	0.01	0.55
Italy	0.12	0.01	0.13	0.41	0.02	0.43
Japan	0.13	0.15	0.28	0.26	0.17	0.43
Korea	0.08	0.16	0.24	0.31	0.17	0.48
Luxembourg	0.07	0.05	0.12	0.25	0.06	0.31
Malaysia	0.04	0.05	0.09	0.46	0.06	0.51
Mexico	0.05	0.09	0.14	0.26	0.10	0.36
Netherlands	0.12	0.08	0.19	0.13	0.09	0.22
New Zealand	0.18	0.03	0.21	0.35	0.04	0.39
Philippines	0.12	0.18	0.29	0.44	0.19	0.63
Portugal	0.13	0.13	0.26	0.28	0.13	0.41
Singapore	0.08	0.10	0.18	0.28	0.13	0.41
South Africa	0.05	0.05	0.10	0.39	0.06	0.44
Spain	0.10	0.10	0.20	0.20	0.11	0.31
Sweden	0.13	0.05	0.18	0.36	0.08	0.44
Switzerland	-	0.08	0.08	0.16	0.10	0.27
Thailand	0.08	0.11	0.19	0.35	0.14	0.49
Turkey	0.04	0.05	0.09	0.29	0.13	0.41
United Kingdom	0.08	0.10	0.18	0.09	0.11	0.19
USA	0.13	0.08	0.20	0.23	0.10	0.33

- Nil. [a] Figures may not add up to total due to rounding. [b] The restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy.

Source: Nguyen-Hong (2000).

Table 3.10 **Restrictiveness indexes for legal services**[ab]
Score

Economy	*Domestic*			*Foreign*		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	ne	ne	Ne	ne	ne	ne
Australia	0.09	0.18	0.27	0.23	0.19	0.42
Austria	0.18	0.15	0.33	0.38	0.19	0.57
Belgium	0.05	0.16	0.21	0.14	0.17	0.31
Brazil	ne	ne	Ne	ne	ne	ne
Canada	0.18	0.13	0.31	0.38	0.14	0.52
Chile	ne	ne	Ne	ne	ne	ne
Denmark	0.09	0.06	0.15	0.29	0.14	0.43
Finland	0.03	-	0.03	0.12	0.03	0.14
France	0.14	0.08	0.22	0.48	0.11	0.58
Germany	0.18	0.11	0.29	0.37	0.12	0.49
Greece	0.05	0.05	0.10	0.31	0.06	0.37
Hong Kong	0.03	0.05	0.08	0.20	0.07	0.27
India	0.04	0.05	0.09	0.34	0.06	0.40
Indonesia	0.12	0.05	0.17	0.50	0.07	0.57
Italy	0.05	0.13	0.18	0.38	0.15	0.54
Japan	0.13	0.20	0.33	0.30	0.22	0.52
Korea	0.05	0.06	0.11	0.37	0.07	0.44
Luxembourg	ne	ne	Ne	ne	ne	ne
Malaysia	0.04	0.09	0.13	0.45	0.09	0.54
Mexico	0.14	0.08	0.22	0.40	0.09	0.49
Netherlands	0.05	0.05	0.10	0.20	0.06	0.25
New Zealand	0.04	0.09	0.13	0.38	0.10	0.47
Philippines	0.07	0.04	0.10	0.49	0.05	0.54
Portugal	0.06	0.15	0.21	0.25	0.16	0.41
Singapore	0.03	0.05	0.08	0.34	0.07	0.42
South Africa	ne	ne	Ne	ne	ne	ne
Spain	0.16	0.15	0.31	0.27	0.18	0.45
Sweden	0.12	0.03	0.12	0.24	0.03	0.27
Switzerland	0.12	0.13	0.24	0.36	0.15	0.50
Thailand	0.05	0.05	0.10	0.37	0.06	0.43
Turkey	0.12	0.14	0.26	0.41	0.17	0.58
United Kingdom	0.05	0.13	0.18	0.18	0.14	0.31
USA	0.12	0.13	0.24	0.35	0.13	0.48

[-] Nil. **ne** not estimated because information is not available. [a] Figures may not add up to total due to rounding. [b] The restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy.

Source: Nguyen-Hong (2000).

Table 3.11 **Restrictiveness indexes for distribution services**[ab]

Score

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	-	0.05	0.05	0.02	0.07	0.09
Australia	-	0.03	0.03	0.03	0.07	0.10
Austria	-	0.05	0.05	0.12	0.07	0.19
Belgium	0.10	0.08	0.18	0.22	0.10	0.32
Brazil	-	0.01	0.01	0.17	0.06	0.23
Canada	0.02	0.03	0.05	0.14	0.05	0.19
Chile	0.03	0.03	0.06	0.06	0.07	0.13
Colombia	0.03	0.09	0.12	0.05	0.14	0.19
Denmark	0.02	0.08	0.09	0.14	0.13	0.27
Finland	-	0.05	0.05	0.14	0.11	0.24
France	0.10	0.08	0.18	0.22	0.10	0.33
Germany	0.02	0.08	0.10	0.14	0.10	0.24
Greece	-	0.05	0.05	0.20	0.07	0.27
Hong Kong	-	0.03	0.03	-	0.05	0.05
India	-	0.15	0.15	0.12	0.21	0.32
Indonesia	-	0.09	0.09	0.17	0.14	0.32
Ireland	-	0.05	0.05	0.12	0.07	0.19
Italy	0.09	0.05	0.14	0.22	0.07	0.29
Japan	0.10	0.10	0.20	0.10	0.16	0.25
Korea	0.21	0.05	0.26	0.26	0.07	0.33
Luxembourg	-	0.05	0.05	0.10	0.07	0.17
Malaysia	0.05	0.04	0.09	0.31	0.09	0.40
Mexico	-	-	-	0.09	0.02	0.11
Netherlands	-	0.09	0.09	0.12	0.11	0.24
New Zealand	-	-	-	0.04	0.02	0.06
Philippines	0.03	0.03	0.06	0.29	0.08	0.37
Portugal	-	0.05	0.05	0.14	0.07	0.21
Singapore	-	0.03	0.03	-	0.07	0.07
South Africa	-	0.03	0.03	0.02	0.05	0.07
Spain	0.03	0.05	0.08	0.15	0.07	0.22
Sweden	0.02	0.05	0.07	0.14	0.07	0.21
Switzerland	0.12	0.04	0.16	0.23	0.09	0.33
Thailand	0.03	0.03	0.06	0.26	0.13	0.39
Turkey	-	0.06	0.06	0.03	0.10	0.13
United Kingdom	-	0.05	0.05	0.12	0.07	0.19
United States	-	-	-	0.10	0.06	0.16
Uruguay	0.02	0.01	0.02	0.04	0.03	0.06
Venezuela	0.03	0.08	0.11	0.13	0.13	0.26

- Nil. **a** Figures may not added to total due to rounding. **b** The restrictiveness index scores range from 0 to 1. The higher the score, the greater the restrictions for an economy.

Source: Kalirajan (2000).

4 Budgetary assistance

Budgetary assistance to industry comprises government spending and tax concessions that selectively benefit industries or firms. In the past, the major forms of assistance in Australia have been border protection measures, such as tariffs and quotas, and statutory marketing arrangements. While many of these measures are being unwound, the Government continues to provide a wide range of budgetary assistance measures and, in some cases, is providing budgetary assistance in place of other forms of assistance.

A feature of budgetary assistance is the frequent changes of individual schemes from year to year as funding levels vary and new schemes are created, and as budgetary outlays are subject to annual review by Parliament.

In this chapter, the Commission:

- outlines the scope of the Commission's budgetary assistance estimates;
- presents the main trends in budgetary assistance; and
- discusses recent policy developments affecting budgetary assistance.

4.1 Scope of the Commission's estimates

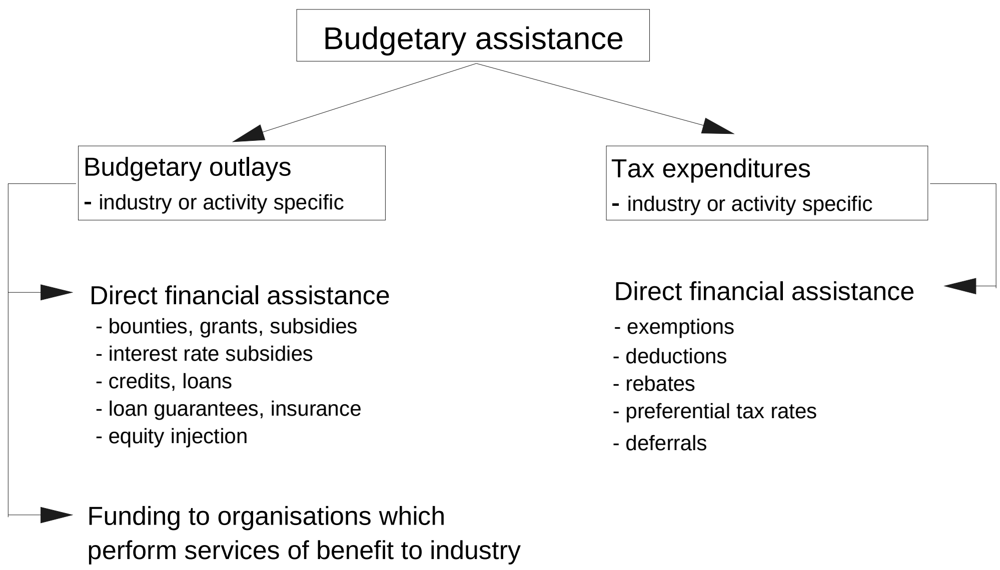
Budgetary assistance comprises:

- outlays, which include funding to organisations which perform activities and services of benefit to industry (such as CSIRO research), as well as grants, bounties, interest rate subsidies, subsidised loans, loan guarantees and equity injections which afford direct financial assistance to businesses; and
- tax expenditures, which are provisions of the tax system that reduce the tax burden of businesses. Tax 'expenditures' include tax exemptions, deductions, rebates, preferential tax rates and tax deferrals which involve the Commonwealth forgoing revenue it would otherwise collect (see figure 4.1).

Recipients can be individual firms, including those undertaking or utilising particular activities such as R&D, as well as particular industries or sectors. As well as reporting budgetary assistance by form, this year's *Trade & Assistance Review* also reports on:

- the activities — R&D, export, industry-specific support etc — to which budgetary assistance is directed; and
- the incidence of assistance across different sectors and industry groupings within the economy.

Figure 4.1 **Forms of budgetary assistance**



The Commission's estimates of budgetary assistance cover those budgetary measures that can be quantified given practical constraints in measurement and data availability. They cover the budgetary assistance provided by the Commonwealth Government, but not that provided by State, Territory and local governments.[1] The estimates exclude outlays on defence, health, education and the labour market. They also exclude measures which are generally available to all firms, such as changes in road funding.

Assistance estimates in this chapter are derived from a number of information sources, including Commonwealth Budget Papers and Treasury's Tax Expenditure Statement. This year, the Commission has provided data on budgetary assistance for the four years up to 2000-01. The outlay figures for 1999-2000 are estimates, and those for 2000-01 are projections (based on budget appropriations). Due to the late release of this year's Tax Expenditure Statement, the tax expenditure figures for 1997-98 are estimates, and the figures for 1998-99 to 2000-01 are projections. The estimates also incorporate the Government's revisions of outlays for previous years.

1 In a previous inquiry (IC 1996), the Commission estimated that budgetary assistance afforded by State and Territory governments totalled $5.7 billion in 1994-95. This consisted of $2.5 billion in budgetary outlays and $3.2 billion in payroll tax exemptions.

In addition to measures identified in the previous Trade & Assistance Review, this year's budgetary assistance estimates incorporate:

- capital gains tax exemptions for small businesses, which were introduced in 1997. These exemptions reduce tax liabilities on the sale of small businesses and are estimated to cost $75 million annually in revenue forgone[2]. Operation of the exemptions is examined in Lattimore (1998); and
- the Regional Assistance Program, which was introduced in 1997 at an annual cost of $40 million to fund business projects with the aim of generating employment in metropolitan, regional and rural areas. A component of the program — the National Initiatives and Emergencies component — provides assistance on a case-by-case basis, including assistance provided as part of the Strategic Investment Incentive program.

The Commission's approach to measuring budgetary assistance was explained in more detail in appendix A of last year's Trade & Assistance Review.

4.2 Commonwealth budgetary assistance

The Commission's estimates of budgetary assistance are set out in tables 4.1 to 4.7 which, apart from table 4.1 (below), appear at the end of the chapter. The key estimates, together with the allocation of assistance across industries, are described and discussed below.

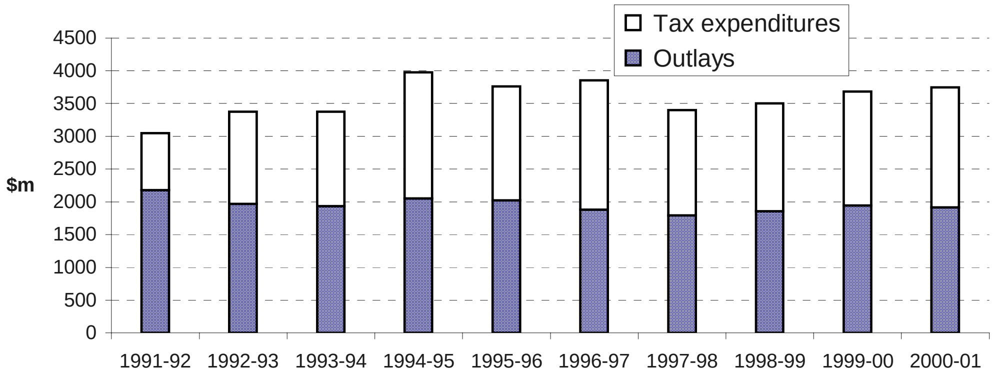
Aggregate estimates

Estimates and projections of budgetary assistance and its main components for the ten years to 2000-01 are shown in figure 4.2.

Despite some fluctuations, budgetary assistance in recent years has remained broadly at the level of the early 1990s. There was some increase in budgetary assistance in the early 1990s to a peak of $4 billion in 1994-95. It then declined slightly in the following three years and, after rising again in 1998-99, is estimated to be relatively stable thereafter. The broad stability in budgetary assistance contrasts with the general trend to lower assistance through border protection measures and marketing arrangements (see chapter 2).

2 In previous years, estimates of actual revenue forgone due to the exemptions were not available from the Commonwealth Treasury and thus could not be incorporated into budgetary assistance estimates. The $75 million revenue forgone is small relative to the payroll tax exemptions to small businesses provided by State and Territory governments.

Figure 4.2 **Commonwealth budgetary assistance to industry, 1991-92 to 2000-01**



Data sources: Commonwealth Budget Papers, Treasury (2000); ACS (2000); PC estimates.

Total budgetary assistance was around $3.7 billion in 1999-2000. This comprised $2 billion in program outlays and $1.7 billion in tax expenditures.

The main determinant of year-to-year changes in budgetary assistance is the impact of major tax expenditures. A feature of tax concessions is that they can be open-ended, involving no cap on revenue forgone, and thereby lead to a rise in revenue forgone in response to growth in applications for assistance. The relatively high levels of budgetary assistance between 1994-95 and 1996-97 reflect the changes in revenue forgone from the R&D tax concession, and the general investment and development allowances.

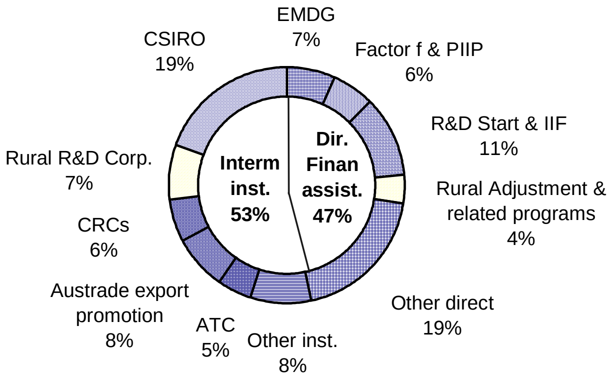
In contrast to the fluctuations in tax expenditures, the outlay category has been more stable. This was particularly so between 1992-93 and 1995-96, as is expected to be the case between 1996-97 and 2000-01. In recent years, several changes to the design of outlay schemes and the introduction of new measures have been made or foreshadowed. However, to date, total outlays have remained steady.

Major assistance schemes

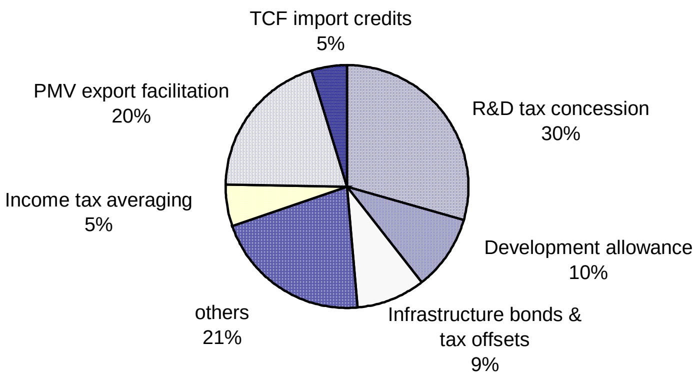
Total budgetary assistance was provided through around 100 separate government programs and tax expenditures in 1999-2000. However, the bulk of total budgetary assistance (76 per cent) was accounted for by 20 programs and tax expenditures, as shown in figure 4.3.

Figure 4.3 **Major programs and tax expenditures, 1999-2000**

Budgetary outlays



Tax expenditures



Data source: PC estimates.

Of total budgetary outlays, 47 per cent was provided as direct financial assistance. The remaining share is accounted for by the funding of institutions which perform activities and provide services of benefit to producers, such as the Australian Tourist Commission (ATC).

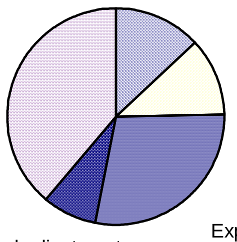
As shown in figure 4.3, important outlay schemes include Austrade's programs, the Factor f program and Pharmaceutical Industry Investment program (PIIP), R&D Start and the Innovation Investment Fund (IIF), and research by CSIRO, rural R&D corporations and cooperative research centres (CRCs).

The major tax expenditures are the R&D tax concession, the development allowance and the PMV Export Facilitation Scheme (figure 4.3).

Activities targeted

Budgetary assistance is often designed to encourage particular activities undertaken by firms across various industries and/or sectors. To provide an indication of distribution of assistance amongst activities, the Commission further classifies budgetary assistance into R&D, export, investment, and sectoral and adjustment measures (figure 4.4).

Figure 4.4 **Budgetary assistance, by activities, 1999-2000**
per cent



Note: The assistance categories include general as well as specific schemes targeting an activity within an industry. For example, the *export assistance* category includes broad-based export measures (such as the Export Market Development Grants scheme) as well as industry-specific measures (such as the TCF Import Credits Scheme) which also facilitate export. The *sectoral and adjustment assistance* category covers programs specifically benefiting producers in a sector or facilitating adjustment. The other industry-specific assistance category covers measures (such as bounties) not already included in the above categories.

Data source: Commission estimates.

Caution is required in interpreting these estimates because, firstly, particular programs may be designed to encourage more than one type of activity. In such cases, the Commission has allocated the program's total funding to the activity deemed to be the main target of the assistance. A further qualification is that the extent to which an activity that appears to be targeted by a program actually benefits from the assistance is not always clear. This is because there is often a lack of information on the operation of certain schemes and their economic effects.

As shown in figure 4.4, the largest shares of budgetary assistance involve R&D support (39 per cent), followed by export assistance (28 per cent) and investment measures (13 per cent). Sectoral and adjustment assistance and other industry-specific measures accounted for 8 and 12 per cent, respectively.

While there is considerable change over time in the particular budgetary assistance measures, the above forms of support have long been a feature of the assistance provided to Australian industries. Section 4.3 discusses recent developments affecting budgetary assistance in those areas.

Sectoral and industry distribution of budgetary assistance

As well as reporting assistance by program, the Commission also estimates the incidence of budgetary assistance by benefiting industries. To date it has reported the incidence of assistance using a four sector classification of the Australian economy. This year, the Commission has augmented this approach by also allocating assistance using a more detailed 27 industry classification. Under this system, the primary production and mining sectors remain as single categories. However, the manufacturing and services sectors are subdivided into 11 and 14 ‘industry groupings’, respectively.

The methodology for allocating budgetary assistance among the 27 industry groupings is discussed in appendix B. While the Commission has used detailed information to allocate assistance among the industry groupings, the need for judgment means that there remains some scope for imprecision. The Commission would welcome comments on its general methodology and on specific allocations.

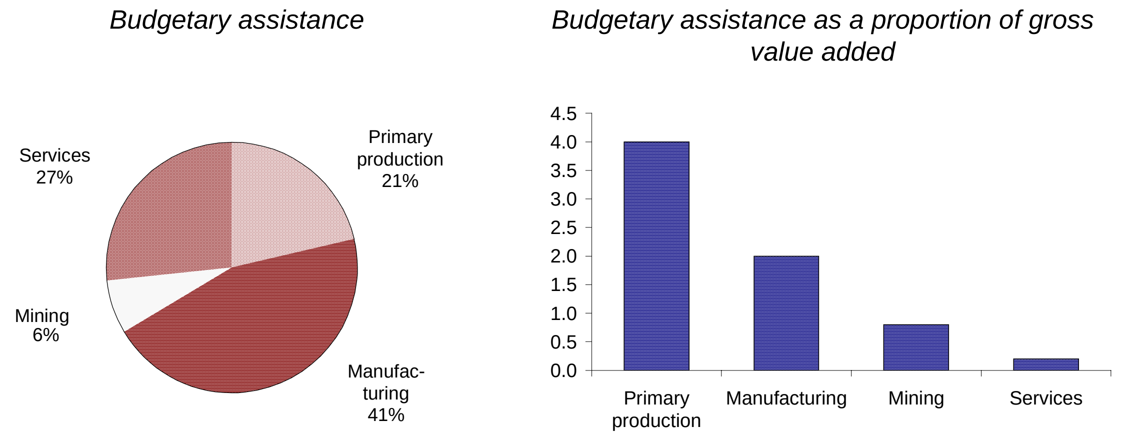
The new allocation method provides significantly more information on the incidence of assistance than the four sector split. That said, although the reporting of budgetary assistance by broad sectors and industries facilitates data collection and measurement, it may conceal significant variations in assistance between firms and industries, and within industry groupings. Indeed, a survey of 6000 firms revealed that around 90 per cent of them used no government programs in 1993-94 and 1994-95 (IC/DIST 1997).

Sectors

Budgetary assistance varies markedly between sectors. The largest proportion of budgetary assistance goes to the manufacturing sector (41 per cent). Services account for 27 per cent, and primary production 21 per cent. The mining sector receives the smallest share (figure 4.5).

As a proportion of gross value added — that is, relative to industry size — budgetary assistance was highest for the primary production sector (4 per cent), followed by the manufacturing sector (2 per cent). The proportion was 0.8 per cent for the mining sector and 0.2 per cent for the services sector.

Figure 4.5 **Budgetary assistance by sector, 1999-2000**



Data source: Commission estimates.

Industry groupings

Table 4.1 below details the incidence of budgetary assistance by industry grouping.

There is significant variation in budgetary assistance at this level. The four industry groupings that accounted for the largest shares of total budgetary assistance in 1999-2000 were:

- *primary production* — assisted mainly through R&D support (CSIRO research and rural R&D corporations), adjustment assistance and income tax averaging provisions;
- *motor vehicles & parts* — assisted almost entirely through the PMV Export Facilitation Scheme;
- *petroleum, coal, chemical & associated products* — most assistance to this sector is targeted to the pharmaceutical industry through the Factor f scheme and its successor, the Pharmaceutical Industry Investment Program; and
- *mining* — assisted mainly through the development allowance and the R&D tax concession.

These four industry groupings each separately accounted for at least 5 per cent of total budgetary assistance in 1999-2000. In contrast, around half of the remaining groupings each received 1 per cent or less of total budgetary assistance.

Table 4.1 **Budgetary assistance by industry grouping, 1999-2000**

ANZSIC Industry	*$m*	*% of total*	*% of gross value added*
Primary production	**762**	**21**	**4.0**
Mining	**220**	**6**	**0.8**
Manufacturing	**1 509**	**41**	**2.0**
Food, beverages & tobacco	70	2	0.5
Textiles, clothing, footwear & leather	134	4	4.7
Wood & paper products	31	1	0.6
Printing, publishing & media	13	0	0.2
Petroleum, coal, chemical & associated products	292	8	2.9
Non-metallic mineral products	27	1	0.9
Metal product manufacturing	148	4	1.1
Motor vehicles & parts	404	11	7.1
Other transport equipment	37	1	1.6
Other machinery & equipment	143	4	1.7
Other manufacturing	35	1	1.5
Unallocated manufacturing[a]	174	5	na
Services	**994**	**27**	**0.2**
Electricity, gas & water supply	77	2	0.7
Construction	75	2	0.2
Wholesale trade	32	1	0.1
Retail trade	40	1	0.1
Accommodation, cafes & restaurants	33	1	0.3
Transport & storage	134	4	0.4
Communication services	103	3	0.5
Finance & insurance	127	3	0.3
Property & business services	110	3	0.2
Government administration & defence	6	0	0.0
Education	30	1	0.1
Health & community services	29	1	0.1
Cultural & recreational services	118	3	1.2
Personal & other services	5	0	0.0
Unallocated services[a]	77	2	na
Unallocated other[a]	202	5	na
TOTAL[b]	**3 686**	**100**	**0.6**

a Unallocated includes general programs where details of claimants and/or beneficiaries is unknown. **b** Totals may not add due to rounding.

Sources: ABS (2000a) and Commission estimates.

A similar pattern emerges when budgetary assistance is measured as a percentage of industry gross value added (GVA). Of the above four industry groupings, three remain as the most assisted, whilst mining is replaced by the *textile, clothing,* *footwear & leather* industry grouping. Among these four most assisted industry groupings, budgetary assistance ranges from 2.9 per cent of GVA (*petroleum, coal, chemical & associated products*) to 7.1 per cent (*motor vehicles & parts*). A further 5 industry groupings receive budgetary assistance greater than 1 per cent of GVA. This compares with an average for the remaining 18 groupings of 0.3 per cent.

Within the manufacturing sector, the incidence of budgetary assistance also varies significantly, ranging from 0.2 per cent of GVA in the case of *printing, publishing & recorded media* to 7.1 per cent for *motor vehicles & parts*. Two manufacturing groupings which receive high budgetary assistance — *motor vehicles & parts* and *textiles, clothing, footwear & leather* — also rank highly in terms of tariff assistance (see chapter 3). The combined effect of this narrow incidence of budgetary and tariff assistance magnifies the unevenness in the distribution of assistance across the economy.

In the case of the services sector, almost all industry groupings are clustered tightly around the 0.2 per cent sector average, except for *cultural & recreational services*, which recorded 1.2 per cent budgetary assistance to GVA. Around three-quarters of budgetary assistance to this industry grouping is a result of funding for the Australian film industry.

4.3 Recent developments

Research and development

This year, the future directions of R&D policy in Australia have been a subject of much debate. One catalyst has been the reports of the National Innovation Summit (Miles 2000) and the Chief Scientist (Batterham 2000). These reports have generally advocated increased funding to:

- foster an ‘innovation culture’, via funding on education, awareness and entrepreneurship relating to science and technology;
- support public sector and business R&D, including doubling of funding for the Australian Research Council (Batterham 2000) and raising the 125 per cent R&D tax concession (Miles 2000); and
- assist the commercialisation of R&D.

The main focus in this debate is the low level of Australia’s R&D expenditures, particularly business R&D, by OECD standard. It has been argued that Australia’s R&D expenditure should match overseas levels to maintain the competitiveness of

Australian industries. According to this argument, government action is needed to reverse the falls in business R&D expenditures in recent years.

The Commission examined Australia's R&D policy comprehensively in a public inquiry (IC 1995). The Commission found a clear economic rationale for some government support of R&D. It also found much to commend in the existing arrangements at that time, and recommended several proposals to improve the design of R&D policy. In particular, the Commission endorsed the (then) 150 per cent tax concession, but considered that changes were needed to improve the design of the scheme (in particular, the targeting of the subsidy). Ways for doing this were further examined in its *Telecommunications Equipment, Systems and Services* report (IC 1998).

However, the Commission also found that the gap between Australian business R&D and that overseas was not attributable to a lack of government assistance. When all forms of assistance were accounted for, business R&D appeared to be more highly supported in Australia than in most other countries. In any case, while international comparisons can reveal the amount of resources used for R&D here relative to abroad, such comparisons do not, of themselves, indicate whether Australia's R&D expenditure is appropriate given its particular industry structure and market conditions.

The Government has indicated that it is considering new R&D funding. It has argued that Australia's R&D support is around the OECD average and that several support measures have been implemented recently, including the restoration of funding for the CSIRO and the doubling of funding of the National Health and Medical Research Council. It has also noted that the earlier exploitation of syndication arrangements under the R&D tax concession underpinned the earlier rise in 'measured' business R&D and that the closure of R&D syndication has in turn contributed to the recent falls in 'measured' business R&D. Nevertheless, the Government will respond to the recommendations of the National Innovation Summit and the Chief Scientist reports in an *Innovation Plan*:

> It will address the innovation spectrum, from skill gaps, through to innovation incentives, fostering collaboration, developing a culture to underpin innovation, and setting in place appropriate technology diffusion and commercialisation programs (Minchin 2000e).

The Innovation Plan is intended to be released in early 2001.

IR&D Board guidelines

The Industry Research and Development (IR&D) Board administers the R&D Start program, the Innovation Investment Fund and the COMET program (discussed below). The Board determines eligibility for assistance according to guidelines under auspices of ministerial directions and the *Industry Research and Development Act 1986*.

At the request of the IR&D Board, in April 2000 the Government revised the ministerial directions to allow the Board to adopt a new framework for assessing assistance (Minchin 2000d). The change is intended to:

- allow companies which commercialise R&D overseas (as opposed to in Australia) to be still eligible for IR&D Board assistance; and
- ensure that the levels of assistance are not affected by the goods and services tax.

Under the revised guidelines, the IR&D Board will have additional flexibility to determine the 'national benefits' arising from commercialisation of R&D projects. Prior to the change, only 'national benefits' arising from commercialisation or manufacture of products in Australia could be considered.

To be eligible, recipient firms are required to include an on-going commitment to retain Australia as a home base for R&D activities in the commercialisation plan. If (at some stage after the assistance is granted) the firm ceases to comply with the conditions, it is required to repay the grant with interest at the 10 year long-term bond rate.

The new rules will apply to the R&D Start program and the Innovation Investment Fund, and the R&D tax concession to the extent permissible by the *IR&D Act 1986*. Where the Board considers that commercialisation does not satisfy the national benefit criteria, it may issue a certificate to the Commissioner of Taxation to disallow any deductions claimed under the R&D tax concession.

Venture capital

Under the existing Innovation Investment Fund (IIF) program, the Government establishes venture capital funds to invest in small companies that are seeking to commercialise their technologies. The IIF funds receive equity injection from the Government and venture capital companies on a 2:1 basis. The fund managers make all investment and fund management decisions subject to certain conditions specified in a licence agreement.

The IIF has been allocated funding of $130 million in round 1 (commencing in December 1998 and running to 2000-01) and $90 million in round 2 (commencing in 2000-01). For round 2, the selection guidelines were changed to encourage competitive bids on the capital ratio (from 1:2 to 1:1 private contribution) and management fees.

In March 2000, the Government announced a ‘revolving fund’ for the IIF program (Minchin 2000b). Under this arrangement, if and when fund managers realise a return from their investment, the funding initially injected into the venture capital funds, plus interest, would be redistributed to the IIF program, instead of being returned to the Consolidated Revenue Fund (Senate Economics Legislation Committee 2000).

The IIF affords assistance to venture capital companies as well as commercialising firms. In relation to the profit from the investment, the Government receives a share of 10 per cent, as opposed to its 66 per cent (2:1 ratio) share of the initial capital injection (IR&D Board 2000).

The first application of the revolving fund involves a re-allocation of $31.6 million out of a return of $51.4 million from the Government involvement in an IIF fund, AMWIN. As a result of a $2.2 million investment in an Internet-based company, LookSmart, AMWIN received $250 million from the sale of its shares when LookSmart was floated on the US NASDAQ. Of this $250 million, the Government retrieved its equity in AMWIN ($27.5 million), plus interest ($4.1 million) and a profit ($19.8 million) — the equity plus interest ($31.6 million) was then returned to the IIF. The Commonwealth share of profit ($19.8 million) was 10 per cent of the distributed surplus profit. The private partners and fund managers retained 90 per cent of the surplus profit (estimated to be $178 million), from their $14 million capital contribution to the fund. LookSmart has now relocated its principal operations to the United States.

Emerging technologies

Last year, the Commission reported (PC 1999) the Government’s announcement that it would create an Investment Ready Program to improve the commercialisation of Australian technology by small firms. Its funding of $20 million was intended to be reallocated from the R&D Start program. However, the program did not proceed.

Instead, in November 1999, the Government launched the Commercialising Emerging Technologies (COMET) program. Assistance is determined by the IR&D Board and covers individuals, ‘early-stage’ growth firms and spin-off companies from research institutions, in two components:

- the Tailored Assistance for Commercialisation — which provides up to a maximum of $100 000, or 80 per cent, of the costs of certain activities, such as developing business plans or undertaking market research; and
- the Management Skills Development plan — which provides up to $5000 to recipients to fund the costs of educational courses on management skills.

The program has been allocated $30 million over three years to 2002. The funds for the program have been diverted from the R&D Start program. The majority of assisted projects is in the communications and manufacturing sectors (IR&D Board 2000).

Biotechnology

Although no special assistance programs have been established for biotechnology, the Government has estimated that the biotechnology industry receives some $250 million a year from various research institutions and a range of programs (DISR 1999).

In the 1999-2000 Budget, $10 million was provided for the development of a biotechnology strategy, including the establishment of a Ministerial Council. The Government also foreshadowed increased funding for health and biotechnology research through the National Health and Medical Research Council, from $165 million in 1998-99 to more than $350 million in 2004-05.

In July 2000, the Government committed an additional $30 million to the National Biotechnology Strategy to support the development and commercialisation of biotechnology. Of this funding, $20 million will be used to establish a Biotechnology Innovation Fund with matching contributions from industry and State governments.

Export assistance

Export finance and insurance

The Export Finance and Insurance Corporation (EFIC) is a Commonwealth statutory authority which provides credit and finance services to exporters. EFIC's credit insurance facilities provide short-term cover for exporters for non-payment by overseas buyers. The export finance facilities include loans and loan guarantees for buyers of Australian exports. These services are provided through:

- the Commercial Account, in which the Government guarantees all EFIC short-term and medium/long-term businesses. However, EFIC has been self-funded and built up its own reserves, and has not called on this guarantee; and
- the National Interest Account, in which the Government directs EFIC to undertake transactions which the Government considers to be in the 'national interest'. In these cases, the Government directly bears the costs if the export payments are in default. Examples of support provided under this account occurred in response to the Asian financial crisis, when EFIC provided a guarantee to Australian exporters to South Korea and Indonesia (see PC 1998).

In recent years, EFIC's public ownership has raised competitive neutrality issues. Competitive neutrality requires that a government business does not enjoy a competitive advantage by the nature of its public ownership over its private competitors. Competitive neutrality issues have the potential to arise in relation to EFIC since its short-term business could also be provided by the private sector.

In March 2000, the *Export Finance and Insurance Corporation Amendment Act 2000* was passed to apply competitive neutrality disciplines to EFIC. For short-term insurance contracts, EFIC is to provide a debt neutrality charge, guarantee fees and tax equivalent payments to the Government, subject to directions by the Minister for Trade. The debt neutrality charge will apply to its borrowing, while the guarantee fees are to be paid on the Commonwealth guarantee provided to EFIC. The tax equivalent payments remove the tax-exempt status of EFIC and, according to Martyn and Emmery (1999), this provision is likely to have a significant impact on its fees. In addition, the Act also subjects EFIC's short-term business to the existing insurance laws from which it was previously exempt.

This approach to competitive neutrality was implemented so as to avoid jeopardising EFIC's role of providing export assistance. The Regulation Impact Statement (RIS) accompanying the Bill rejected the option of incorporating EFIC under Corporations Law, as this could limit its ability to provide assistance to exports that have risk levels higher than the commercial level. The RIS also proposed that certain EFIC activities — for example, assistance to small and medium-sized exporters — be classed as community service obligations and receive 'notional funding' so that EFIC could operate at lower rate of return targets, and that this option be implemented through administrative action (Fisher 1999).

In June 2000, the Government announced that it will conduct a review of market developments in export finance and insurance services to consider the implications for government involvement, including EFIC's viability under the new competitive neutrality regime. The review will also consider options of the operation and funding under the National Interest Account, taking into account the impact on rural and regional Australia of any proposed change. The review is to be completed by the end of 2000. (Vaile 2000b)

Export marketing

The Export Market Development Grants (EMDG) scheme is an assistance program for small and medium-sized exporters in Australia. The scheme provides taxable grants for up to 50 per cent of marketing and promotion expenses that firms incur in export markets. In recent years, funding for the EMDG scheme has been capped at $150 million per year. In the 1997 *Investing for Growth* statement, the Government decided to extend the scheme for an additional two years to 2001-02.

The scheme is administered by Austrade, which also undertakes export promotion activities such as providing information and advice, and administers other export programs. In 1999-2000, total funding for Austrade's export promotion activities, the EMDG scheme and related export programs was $300 million.

In 1999, the Austrade Board was asked by the Government to review the effectiveness of the EMDG scheme, and whether it should be extended beyond June 2000 and, if so, in what form.

In a submission to the review, the Commission discussed a number of issues to assist the Board to assess the performance of the EMDG scheme (PC 2000a). It considered that the review would need to assess whether export assistance yields net benefits to the economy as a whole, rather than just for exporters. This requires account to be taken of relevant costs — such as those associated with raising revenue to finance the scheme and compliance and administration costs. It also requires assessing whether the scheme induces additional eligible market expenditure, rather than crowding out existing expenditure, and the relationship between such expenditure and additional exports. The Commission also suggested that, of the many reasons advanced to justify government assistance to exports, those relating to certain information deficiencies and 'spillovers' appear to be most relevant. However, given that virtually all activities (including firms' domestic marketing activity) face similar problems, justifying government assistance requires that the nature of the spillovers be identified and be assessed to be significant for exporting firms.

In June 2000, the Austrade Board concluded that the EMDG scheme was effectively meeting its objectives of encouraging the creation and expansion of foreign markets for Australian goods and services (Austrade 2000). Among other things, the review recommended that:

- the EMDG scheme be continued for a minimum period of five years until the end of 2005-06, with a review after four years;
- the Government raise the funding cap to take account of the demand for grants. The review noted that if applications increase then, under the existing funding cap, the value of grants for a significant proportion of applicants will be reduced;
- the scheme's eligibility be broadened to include professional conference organisers, expenses incurred in bringing overseas buyers to Australia and domestic travel and accommodation costs associated with overseas visits; and the definition of consultancy costs and trade fairs also be broadened; and
- the flexibility of the scheme be enhanced by removing the rules for product eligibility from the EMDG legislation and, instead, appropriate ministerial guidelines be established.

In tabling the review's report in Parliament in August 2000, the Government accepted the key recommendation of the review to retain the EMDG scheme for another five years (with a review after four years). The Government is yet to consider other modifications to the program. The Minister for Trade said:

> … while the [EMDG] scheme would be continued, the report would be considered in detail in the lead up to the 2001/2002 Federal Budget. This will give business time to fully consider the report and enable the Government to take any views into account before it takes a final position on the detailed recommendations and findings. (Vaile 2000d)

Export concessions

In the 1997 *Investing for Growth* statement, the Government announced that the Tradex scheme would replace the Tariff Export Concession (TEXCO) scheme and, partially, the Duty Drawback scheme. Tradex became operational in June 2000.

Tradex provides exporters with an up-front exemption from customs duties and goods and services tax (except excise) on imported goods that are processed or warehoused prior to export. The scheme:

- removes the TEXCO requirement that imported goods undergo 'industrial processing' for export as a condition for eligibility;
- requires that imported goods be exported within 12 months;
- adopts a self-assessment system for claims to improve access to the scheme and reduce compliance costs for users; and

- removes the need for duty drawback by providing an up-front exemption. However, duty drawback will still be available in relation to imported goods where it is not known at the time of import whether they will be exported or not.

Tradex costs $100 million per annum, in terms of revenue forgone, and is used by firms across several sectors.

Agriculture

Adjustment assistance

Adjustment assistance has long been a key element of assistance to Australian agricultural industries. In the past, this type of support was provided mainly through the Rural Adjustment Scheme (RAS).

In 1997, the Government introduced the *Agriculture — Advancing Australia* (AAA) package with funding of $500 million over four years, following the mid-term review of the RAS which found that the existing scheme was not effective in promoting rural development (IC 1997b). In replacing the RAS and other rural programs, the package introduced the Farmbis program, the Farm Family Restart Scheme, the Farm Management Deposits Scheme and assistance for retiring farmers (see PC 1998).

In the 2000-01 Budget, the Government announced that the AAA package is to be extended for an additional four years at a funding cost of $309 million. According to the Government:

> The package's components have been refocused to facilitate change, improve farm skills and expand market opportunities, while retaining essential elements of social welfare. (Costello and Fahey 2000, p. 6-17)

The package includes the following programs:

- *Skilling Farmers for the Future* — $168 million will be used to support business and natural resource management training through an amalgamation of Farmbis and Property and Management Planning programs;
- *Farm Help* — $112 million will be used for welfare support and counselling of farmers in financial difficulty through an extension of the Farm Family Restart Scheme to 2003;
- *Farm Innovation* — a new pilot program will be allocated $18 million to encourage farmers to adopt better farming techniques, diversification strategies and innovation;

- *Farm Growth through Export Growth* — $7 million will be used for the negotiation of bilateral cooperation agreements with countries that serve as key markets for Australian agricultural exports; and
- *A Rural Industries Communication Campaign* — $6 million will be used to ensure that farmers are aware of the assistance available.

In addition, the new package provides for continuation of assistance to retiring farmers (to June 2001) and of the Farm Management Deposits Scheme.

Industry-specific assistance

Pharmaceuticals

The Pharmaceutical Industry Investment Program (PIIP), which replaced the Factor f scheme, commenced in July 1999. Like the Factor f scheme, the PIIP has the stated aim of compensating the pharmaceutical industry for the low drug prices under the Pharmaceutical Benefits Scheme (PBS).

Under the PIIP, the payments provide actual and/or notional price increases for pharmaceutical products nominated by eligible companies in return for their commitments in relation to:

- ‘production value added’ and/or R&D targets (which incorporate both existing and additional activity); and
- ‘broad activities’, such as investment in new plant and equipment, workplace reform, or location of regional headquarters in Australia.

PIIP’s funding is capped at $292 million over five years (to June 2004) and involves a reduction of $20 million per year when compared with the Factor f scheme.

Under a competitive-based assessment process conducted in 1998, 10 companies (out of 22 applicants) were selected for assistance, with payments ranging from $6 million to $60 million (over five years) per company. The Australian National Audit Office provided advice to the assessment panel and subsequently undertook an audit of the selection process (ANAO 1999). Among other things, the ANAO considered that PIIP’s assessment process ‘was free of bias and conflict of interest, as well as following closely the published guidelines’.

In 1998, the Government extended the 20-year patent term for an additional 5 years for both existing and new pharmaceutical patents. New ‘springboading’ provisions also allow regulatory approval for generic products still under patent. In addition, under new data exclusivity arrangements, registration data submitted to the

Therapeutic Goods Administration are afforded a five-year period of protection from use by other companies (DISR 1999).

Textiles, clothing, footwear and leather

In December 1999, legislation was passed in parliament to give effect to the TCF Strategic Investment Program (SIP). At a cost of $700 million over five years, the SIP commenced in July 2000 and forms part of an assistance package, including a tariff pause, for the TCF industries. Details of these assistance arrangements were provided in PC (1998).

The Government has noted that the SIP is *not* intended to replace the TCF Import Credit Scheme (ICS), which was scheduled to cease in July 2000. According to the Regulation Impact Statement (RIS) accompanying the Bill (Minchin 1999a), the Government decided that the assistance under the SIP is to be provided:

- as cash payments rather than duty credits provided under the ICS — since the latter has a 'tainted status' in the WTO, favours importing firms and attracts transparency concerns;
- through a program rather than a bounty (or production subsidy) — taking into account problems of bounty assistance highlighted in the Commission's report (IC 1997a);
- as an entitlement rather than on a competitive basis — since the former is likely to be more effective in ensuring the survival and expansion of small TCF firms in the APEC free trade environment of 2010; and
- through legislation rather than budget appropriations — as the industry argued that legislation would provide more certainty in funding.

In May 2000, the Government extended the ICS to September 2000 to assist producers located in Forum Island countries (particularly Fiji). The extension was a response to concerns that removal of the ICS could cause dislocation of TCF activities in those countries. It will also facilitate the finalisation of negotiations of new provisions under the South Pacific Regional Trade and Economic Cooperation Agreement (Downer and Minchin 2000).

In June 2000, the Government introduced the *Customs Tariff Proposal No. 5 (2000)* to allow import credits earned under the ICS to be used up to December 2001. Under existing provisions, import credits could only be used up to June 2000.

In a long-running dispute between Australia and the United States, a WTO Panel ruled in February 2000 that Australia had not withdrawn the prohibited export subsidy provided to Howe Leather (see box 4.1). In June 2000, Australia announced

Box 4.1 **Assistance to Howe Leather**

Australia is a signatory to the WTO Agreement on Subsidies and Countervailing Measures (1995) which prohibits export subsidies, except for agricultural commodities.

In 1996, US leather manufacturers filed a petition that the assistance afforded by the Australian Government to Howe Leather was an export subsidy. Following an agreement between the Australian and US Governments in 1997, Howe Leather was excised from the PMV Export Facilitation Scheme and the TCF Import Credits Scheme. The Australian Government subsequently introduced an assistance package for Howe Leather, comprising a $30 million grant and a $5 million loan.

Following a request by the United States, a WTO Panel was established in June 1998 to determine whether the grant and loan to Howe Leather were export subsidies. In June 1999, the Panel found that the grant (but not the loan) was an export subsidy and recommended that Australia withdraw the grant within 90 days.

In September 1999, the Government announced that, to comply with the WTO finding, the grant contract was to be terminated and that Howe Leather was to repay $8 million of the $30 million provided in 1997. It also agreed to provide an additional loan of around $13.7 million to Howe Leather (Vaile and Minchin 1999).

In October 1999, the United States further submitted to the WTO Dispute Settlement Body that the (partial) withdrawal of the grant and the new loan by the Australian Government were inconsistent with the WTO original finding. The United States requested the original Panel to rule on the new assistance regime within ninety days.

In January 2000, the WTO Panel found that Australia had failed to withdraw the subsidy, and therefore had not taken measures to comply with the previous ruling. It considered that provision of the new loan of $13.7 million was *specifically conditioned* on, and therefore nullified, Howe Leather's repayment of $8 million, such that no repayment had effectively taken place.

Sources: PC (1999); WTO (2000a).

several policy measures in a settlement with the United States to resolve the dispute, involving:

- payment of $7.2 million to the Government by Howe Leather (instead of the full $30 million grant recommended by the WTO);
- removal of automotive leather from eligibility for certain TCF and PMV assistance — namely, the SIP and the Automotive Competitiveness and Investment Scheme;
- prohibition of other direct or indirect subsidies that benefit the manufacture, sale or distribution of automotive leather for a period of 12 years; and
- removal of customs duty on 30 items[3] from the (nominal) 5 per cent rate to zero from July 2000 (WTO 2000b; Vaile 2000a).

Selective investment incentives

The Commonwealth's Strategic Investment Incentive Program (SIIP) is designed to attract direct investment to Australia by providing assistance to selected projects. Under the SIIP, the Office of the Strategic Investment Coordinator (OSIC), currently headed by Mr Fergus Ryan, assesses applications for investment incentives on a case-by-case basis against 'indicative' selection criteria and advises the Cabinet on the merits of investment proposals. The Cabinet then makes a determination on the project, and the level and form of assistance to be provided. However, details of the assessments of selected projects have not been publicly released. The Commission examined aspects of the early operation of the SIIP and the program's design in the *Trade & Assistance Review 1998-99* (PC 1999).

At the State and Territory level, various types of incentives are also provided to attract investment (see IC 1996).

Projects assisted under the SIIP

To date, three companies in the manufacturing sector have been awarded incentives or received an offer for assistance under the SIIP. These are:

- a $40 million package for Visy Industries to establish a pulp and paper mill in Tumut, New South Wales (Minchin 1998);
- an offer of assistance exceeding $100 million to Comalco to expand an alumina refinery in Gladstone (Howard 1999); and
- a $70 million package for the US based Syntroleum Corporation for access to, and development of, gas-to-liquid (GTL) technology in Australia (Minchin 2000a).[4]

The assistance to Visy Industries was announced in December 1998 and initial payments were made in December 1999. The incentive involves a combination of existing programs' funds and additional funding (see PC 1999).

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[3] These tariff items cover certain chemical, rubber, glassware, cutlery, machinery and appliances, electrical equipment, recorders and television, photographic, and toy and sport products. The actual tariff rates applied to these items would be lower than the nominal tariff rates once tariff concession arrangements, to which these imports are also eligible, are taken into account.

[4] In addition to Commonwealth investment incentives, the SIIP's selected projects also receive assistance from State governments, usually in the form of infrastructure funding. For example, Syntroleum has stated that a $30 million funding package is to be provided by the Western Australian Government for construction of a desalinisation plant, access roads and site improvements where its plant is located (Syntroleum 2000).

Comalco has chosen Gladstone (over Bintulu in Malaysia) as its preferred site to conduct a final feasibility study of the proposed alumina refinery. It is yet to make a final decision to proceed with the project (Minchin 2000c).

The incentive to Syntroleum was announced in February 2000. The package consists of a $30 million licence agreement and a $40 million interest-free loan with 25 years maturity.[5] Under the licence agreement, the Commonwealth will pay a $30 million licence fee for the rights to use Syntroleum's GTL technology. Provision of the loan is subject to Syntroleum fulfilling certain conditions before August 2004. The conditions require the company to participate in a research consortium involving Australian research organisations and universities, and to undertake a feasibility study to develop a GTL fuel plant in Australia within three years (Minchin 2000a). Syntroleum has agreed to complete a feasibility study for its 'Sweetwater' project to be located on the Burrup Peninsula in Western Australia. The GTL plant will obtain its gas supply from the nearby North West Shelf project to produce synthetic specialty chemicals.

Expanded SIIP

In September 1999, the Government decided to increase the scope of investment incentives in its response to the (Ralph) Review of Business Taxation:

> Recognising the potential impact of removing accelerated depreciation on large capital intensive projects with long lives, the Government will be prepared to consider such projects in the context of an expanded strategic investment coordination process, including consideration of the option of targeted investment allowances. (Costello 1999a)

In explaining the program change, the Government nominated the North West Shelf project, among others, as a likely recipient of assistance under the expanded SIIP. It noted that, when the North West Shelf project was developed, the (then) Government agreed to provide it with special treatment to compensate for the fact that the project would be unable to benefit from accelerated depreciation provisions (at least in the short term). Because the Government has decided to consider special treatment for the North West Shelf under the SIIP, it has also decided to do the same for other long term projects (Costello 1999b).

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[5] The value of assistance of an interest-free loan is equivalent to the amount of interest that the firm would otherwise pay if it were to borrow the loan at a market rate of interest. Consider, for example, the present market interest rate for a business loan of 8 per cent; an interest-free loan of $40 million with 25 years maturity would provide a subsidy of $3.2 million per year for 25 years, or a total of $80 million. The exact assistance depends on the annual market rate of interest, the period of the loan and the rate of payback.

In December 1999, the Government introduced new objectives for the expanded SIIP to reaffirm its decisions to afford assistance to major resource-based projects. It noted that the assessment process would still be based on the existing, ‘indicative’ selection criteria. However, the expanded SIIP will have a key objective of compensating for the impact of tax reforms:

> … for very large projects, in addition to net economic and employment benefits, the Government will also take into consideration the impact of the Government’s broader taxation reforms. (Minchin 1999b)

Another objective of the SIIP is to promote regional development:

> … recognising the importance of regional development to Australia, the Government will be mindful of the regional impact of proposals when considering for incentives. (Minchin 1999b)

While the focus of the expanded SIIP has been to assist major resource-based projects, in the *Industry 2000* statement on industry policy priorities, the Government indicated that it is evaluating a range of measures to attract investment in R&D activities and knowledge-based industries:

> Strategic initiatives are also being developed to attract investment into the information technology, telecommunication and biotechnology sectors … As part of this work, Invest Australia is developing an R&D investment strategy that will contribute to the proposed Innovation Action Plan. (Minchin 2000e)

State and Territory incentives

Selective investment incentives are provided by State and Territory governments as well as by the Commonwealth. A recent example of State incentives is the (undisclosed sum of) assistance provided by the South Australian Government to attract two manufacturing companies — Email and BAE Systems — to relocate from Victoria to South Australia.

In its inquiry on State, Territory and Local Government assistance to industry (IC 1996), the Commission examined several options to develop an agreement on assistance among the States. The agreements could involve an agreed transparency and monitoring mechanism, limits on some assistance or a comprehensive arrangement to limit all assistance. The Commission also saw a legitimate role for the Commonwealth to encourage the States to limit their selective industry assistance.

The Commonwealth has recently indicated that it has reached an agreement with State and Territory governments to cooperate on investment attraction activities. As part of this cooperation, it will seek to ensure a consistent set of guidelines for investment attraction across jurisdictions (Minchin 2000e).

Table 4.2 **Budgetary assistance to industry, 1997-98 to 2000-01**
$ million

	1997-98	*1998-99*	*1999-00*	*2000-01*
Total budgetary assistance	3 399	3 501	3 686	3 745
Budgetary outlays	1 795	1 856	1 947	1 912
Tax expenditures	1 604	1 645	1 739	1 833
Assistance categories[a]				
Research and development	1 201	1 317	1 433	1 468
Export	1 030	1 062	1 044	856
Investment	434	444	486	717
Sectoral and adjustment assistance	324	304	294	312
Other industry-specific assistance	409	373	430	392

[a] The assistance categories include general as well as specific schemes targeting an activity within an industry. For example, the *export assistance* category would include broad-based export measures (such as the Export Market Development Grants scheme) as well as industry measures (such as the TCF Import Credits Scheme) which also facilitate export. The *sectoral and adjustment assistance* category covers programs specifically benefiting producers in a sector or facilitating adjustment. The other industry-assistance category covers measures (such as bounties) not already included in the above categories.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

Table 4.3 **Commonwealth budgetary outlays on primary production, 1997-98 to 2000-01**
$ million

	Type[a]	*1997-98*	*1998-99*	*1999-00[b]*	*2000-01[b]*
Industry-specific programs					
Horticulture, crops etc					
Australian Plaque Locust Commission	FI	<1	1	-	-
Citrus industry market diversification subsidy	DFA	<1	1	2	<1
Deduction of capital expenditure on establishing horticultural plantations	TE	1	3	4	5
Deduction of expenditures over four years on acquiring and establishing grape vines	TE	4	4	4	4
Sugar Industries Package	FI	-	3	5	4
Sugar Industry Program	FI	3	1	1	2
Forestry					
Forest Industry Structural Adjustment	DFA	6	24	4	48
Commonwealth-NSW Forest Industry	FI	-	3	<1	3
National Forest Policy Program	FI	7	9	5	1
NSW Southeast Forests Package	FI	4	-	-	-

Table 4.3 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
Livestock, poultry etc					
Australian Animal Health Laboratory	FI	6	6	6	6
Bovine brucellocis & tuberculosis eradication	FI	2	-	-	-
Exotic Disease Prepared Program	FI	<1	5	16	1
Lamb Industry Development Program	DFA	-	-	9	-
Pigmeat Processing Grants Program	DFA	-	2	4	4
Pork Producer Exit Program	DFA	-	-	5	-
Pork Industry Development Group Grant	FI	2	5	4	1
Total		*36*	*67*	*69*	*79*
Research and development[c]					
General R&D measures					
Cooperative Research Centres	FI	29	27	24	23
CSIRO plant and animal research	FI	128	133	141	114
R&D Start & related programs	DFA	2	2	5	5
R&D tax concession	TE	6	7	7	7
Rural R&D Corporations					
Fishing industry research	FI	11	12	16	18
Grains (wheat and other[d])	FI	34	34	33	32
Horticulture	FI	11	15	17	18
Land and Water Resources R&D Corporation	FI	11	11	22	19
Meat & livestock research	FI	23	21	21	21
Other rural research[e]	FI	33	36	32	38
Rural Industries R&D Corporation	FI	11	11	11	16
Wool	FI	7	10	12	13
Total		*305*	*320*	*339*	*323*
Sectoral and adjustment programs					
Adjustment and income support					
Agribusiness programs	FI	<1	<1	<1	-
Farm Household Support Scheme	DFA	<1	<1	-	-
Farm Family Restart Program					
- Re-establishment	DFA	17	14	17	23
- Income support	DFA	5	20	18	16
Farm Business Programs	FI	6	6	12	27
Farm Assistance program	FI	-	-	-	1
Farm Innovation	FI	-	-	-	5
Food and Fibre Supply Chain Program	FI	-	-	7	6
Rural Adjustment Scheme	DFA	82	43	29	17
Skilling farmers for the future	FI	-	-	-	10

Table 4.3 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
Other sectoral measures					
Income Equalisation Deposits Scheme	TE	26	24	9	-
Farms Management Deposits Scheme	TE	-	-	23	45
Income tax averaging provisions	TE	90	95	95	95
National Landcare Program	FI	54	56	37	37
Tax deduction for conveying water & conservation measures	TE	30	30	30	30
Tax rebate for landcare expenditures	TE	-	-	1	1
Tax allowance on drought-prepared assets	TE	14	15	15	ne
Total		*324*	*304*	*294*	*312*
General export measures					
Austrade					
- Export Market Development Grants scheme	DFA	4	4	5	5
- Austrade export promotion	FI	30	32	36	36
- Innovative Agricultural Marketing Program	DFA	3	-	-	-
EFIC National Interest Business[f]	DFA	18	17	17	16
Total		*55*	*53*	*58*	*57*
Unallocated primary production					
Tasmanian Freight Equalisation Scheme	DFA	2	3	4	4
Total outlays		**553**	**568**	**574**	**589**
Total tax expenditures		**171**	**178**	**188**	**187**
Total budgetary assistance		**724**	**746**	**762**	**776**

- Nil. **ne** Not estimated. Figures may not add to total due to rounding. **a** DFA: direct financial assistance; FI: funding to institutions; TE: tax expenditures. **b** 1999-2000 data are Budget estimates and 2000-01 data are Budget appropriations. **c** Estimates are derived in part from the Science and Technology Budget Statement 2000-01. **d** Other includes barley, grain, legumes and oilseeds. **e** Other industries include dairy, chicken meat, pig meat, eggs, cotton, dried vine fruits, grapes and wine, honey, sugar and tobacco. **f** The estimates reported in this section are net National Interest Business outlays. These payments are insurance pay-outs. Because any difference between the National Interest Business scheme's borrowing and lending rates is underwritten by the Commonwealth, the scheme may provide assistance to agricultural exporters. However, net National Interest Business outlays provide only a weak indication of any assistance provided.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

Table 4.4 **Commonwealth budgetary assistance to the manufacturing sector, 1997-98 to 2000-01**

$ million

	Type[a]	*1997-98*	*1998-99*	*1999-00*[b]	*2000-01*[b]
Food, beverages & tobacco					
Industry-specific measures					
Agri-Food Industry Program	FI	1	-	-	-
Brandy excise preferential rate	TE	5	5	5	4
General investment measures					
Development allowance	TE	26	4	4	6
General export measures					
Export Market Development Grants scheme	DFA	7	8	9	9
General R&D measures					
Cooperative Research Centres	FI	8	8	6	5
CSIRO research	FI	17	18	18	20
R&D Start and related programs	DFA	3	2	2	3
R&D tax concession	TE	15	22	18	19
Other measures					
Tasmanian Freight Equalisation scheme	DFA	5	1	8	8
Total		*87*	*68*	*70*	*74*
Textiles, clothing, footwear & leather					
Industry-specific measures					
Assistance to Howe Leather[b]					
- Grant	DFA	13	13	-	-
- Loan	DFA	-	-	14	-
TCF Import Credit Scheme	TE	121	106	83	107
TCF Strategic Investment Program	DFA	-	-	-	10
Other TCF programs[c]		6	8	7	6
General export measures					
Austrade export promotion	FI	1	1	1	1
Export Market Development Grants scheme	DFA	6	6	5	5
Tariff Export Concession (TEXCO)	TE	12	9	9	-
TRADEX	TE	-	-	-	15
General R&D measures					
Cooperative Research Centres	FI	2	3	3	-
CSIRO research	FI	15	15	11	31
R&D Start and related programs	DFA	<1	<1	<1	<1
R&D tax concession	TE	2	20	2	2
Total		*178*	*180*	*134*	*177*

Table 4.4 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
Wood & paper products					
Industry-specific programs					
Investment incentives to Visy Industries	DFA	-	-	3	3
General export measures					
Export Market Development Grants scheme	DFA	1	1	1	1
Tariff Export Concession (TEXCO)	TE	3	2	2	-
TRADEX	TE	-	-	-	3
General R&D measures					
Cooperative Research Centres	FI	2	1	<1	-
CSIRO research	FI	4	4	5	5
R&D Start and related programs	DFA	<1	<1	<1	<1
R&D tax concession	TE	2	2	2	2
Other programs					
Tasmanian Freight Equalisation scheme	DFA	12	10	18	18
Total		*24*	*21*	*31*	*32*
Printing, publishing & recorded media					
Industry-specific programs					
Book bounty	DFA	7	<1	-	-
Printing Industry Competitiveness scheme	DFA	-	-	6	3
Extended Printing Industry Competitiveness	DFA	-	-	-	14
General investment measures					
Development allowance	TE	1	<1	<1	<1
General export measures					
Export Market Development Grants scheme	DFA	3	3	3	3
General R&D measures					
R&D Start and related programs	DFA	1	2	2	2
R&D tax concession	TE	2	1	2	2
Total		*14*	*6*	*13*	*24*
Petroleum, coal, chemical & associated products					
Industry-specific programs					
Investment incentives to Syntroleum	DFA	-	-	42	8
Factor f program	DFA	174	159	79	-
Pharmaceutical Industry Development program	DFA	-	-	34	55
General investment measures					
Development allowance	TE	2	10	9	13

Table 4.4 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
General export measures					
Austrade export promotion	FI	2	2	3	3
Export Market Development Grant scheme	DFA	5	6	6	6
Tariff Export Concession (TEXCO)	TE	2	2	2	-
TRADEX	TE	-	-	-	3
General R&D measures					
Cooperative Research Centres	FI	11	17	19	18
CSIRO research	FI	38	39	40	41
R&D Start and related programs	DFA	6	8	12	12
Innovation Investment Fund	DFA	-	5	8	8
R&D tax concession	TE	32	19	38	40
Total		*273*	*267*	*292*	*206*
Non-metallic mineral products					
General investment measures					
Development allowance	TE	1	13	12	17
General export measures					
Export Market Development Grants scheme	DFA	2	1	1	1
Tariff Export Concession (TEXCO)	TE	1	1	1	-
TRADEX	TE	-	-	-	1
General R&D measures					
R&D Start and related programs	DFA	2	3	<1	<1
R&D tax concession	TE	11	9	13	13
Total		*17*	*27*	*27*	*33*
Metal product manufacturing					
General investment measures					
Development allowance	TE	18	52	48	67
General export measures					
Export Market Development Grants scheme	DFA	4	4	4	4
Tariff Export Concession (TEXCO)	TE	6	4	5	-
TRADEX	TE				8
General R&D measures					
Cooperative Research Centres	FI	6	8	9	11
CSIRO research	FI	25	27	28	28
R&D Start and related programs	DFA	5	3	6	6
R&D tax concession	TE	41	52	49	52
Total		*106*	*151*	*148*	*176*

Table 4.4 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
Motor vehicles & parts					
Industry-specific measures					
PMV Export Facilitation Scheme	TE	251	288	348	174
Automotive Competitiveness & Investment Scheme	TE	-	-	-	200
Automotive Market Access & Development	FI	-	8	5	7
General investment measures					
Development allowance	TE	3	18	17	23
General export measures					
Austrade export promotion	FI	4	5	5	5
General R&D measures					
R&D Start and related programs	DFA	1	1	<1	<1
R&D tax concession	TE	25	30	29	31
Total		*284*	*350*	*404*	*441*
Other transport equipment					
Industry-specific measures					
Shipbuilding bounty	DFA	19	24	15	12
Shipbuilding Innovation Scheme	DFA	-	-	6	9
General R&D measures					
Cooperative Research Centres	FI	2	2	1	-
R&D Start and related programs	DFA	1	3	4	4
R&D tax concession	TE	10	7	12	13
Total		*32*	*36*	*37*	*38*
Other machinery & equipment					
Industry-specific measures					
Computer bounty	DFA	49	58	-	-
Machine tools and robots bounty	DFA	4	<1	-	-
General investment measures					
Development allowance	TE	1	1	1	1
General export measures					
Export Market Development Grant scheme	DFA	19	18	18	18
Tariff Export Concession (TEXCO)	TE	42	30	31	-
TRADEX	TE	-	-	-	53
General R&D measures					
Cooperative Research Centres	FI	21	21	20	23
Innovation Investment Fund	DFA	1	1	2	1

Table 4.4 (continued)

	Type[a]	*1997-98*	*1998-99*	*1999-00[b]*	*2000-01[b]*
R&D Start and related programs	DFA	23	40	37	38
R&D tax concession	TE	30	42	35	37
Total		*191*	*212*	*143*	*171*
Other manufacturing					
General investment measures					
Development allowance	TE	<1	2	1	2
General export measures					
Export Market Development Grant scheme	DFA	5	4	6	6
Tariff Export Concession (TEXCO)	TE	12	9	9	-
TRADEX	TE	-	-	-	16
General R&D measures					
R&D Start and related programs	DFA	7	11	11	12
R&D tax concession	TE	4	6	5	6
Other programs					
Tasmanian Freight Equalisation scheme	DFA	3	5	2	2
Total		*32*	*37*	*35*	*43*
Unallocated manufacturing					
General export measures					
Duty drawback	TE	79	95	87	50
International Trade Enhancement Scheme	DFA	13	-	-	-
General R&D measures					
Technology Support Centres	DFA	14	-	-	-
CSIRO research	FI	34	33	35	35
Technology Diffusion Program	DFA	-	15	19	21
Other programs					
Enterprise Development Program	FI	28	14	6	1
Greenhouse voluntary gas reduction	FI	1	-	-	-
Tasmanian Freight Equalisation Scheme	DFA	20	21	28	29
Total		*189*	*179*	*174*	*136*
Total outlays		**665**	**673**	**632**	**572**
Total tax expenditures		**762**	**860**	**877**	**981**
Total budgetary assistance		**1 426**	**1 533**	**1 509**	**1 552**

- Nil. Figures may not add to total due to rounding. **a** DFA: direct financial assistance; FI: funding to institutions; TE: tax expenditures. **b** 1999-2000 data are Budget estimates and 2000-01 data are Budget appropriations.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

Table 4.5 **Commonwealth budgetary assistance to service sectors, 1997-98 to 2000-01**

$ million

	Type[a]	*1997-98*	*1998-99*	*1999-00[b]*	*2000-01[b]*
Electricity, gas & water supply					
General investment measures					
Development allowance	TE	14	1	1	2
Infrastructure Bonds	TE	60	55	44	31
Infrastructure Borrowing tax offset scheme	TE	3	25	25	-
General export measures					
Export Market Development Grant scheme	DFA	<1	<1	<1	<1
General R&D measures					
Cooperative Research Centres	FI	3	4	5	5
R&D Start and related programs	DFA	1	1	1	1
R&D tax concession	TE	1	1	1	1
Total		*83*	*88*	*77*	*40*
Construction					
General export measures					
Austrade export promotion	FI	20	22	24	24
Export Market Development Grant scheme	DFA	2	2	2	2
General R&D measures					
CSIRO research	FI	24	25	25	22
R&D Start and related programs	DFA	2	<1	<1	<1
R&D tax concession	TE	19	18	23	24
Total		*67*	*67*	*75*	*73*
Wholesale trade					
General investment measures					
Development allowance		<1	-	-	-
General export measures					
Export Market Development Grant scheme	DFA	15	15	13	14
General R&D measures					
R&D Start and related programs	DFA	-	<1	2	1
R&D tax concession	TE	14	15	17	17
Total		*30*	*31*	*32*	*32*
Retail trade					
Industry-specific programs					
Pharmacy Restructuring grants	DFA	7	11	13	10
General investment measures					
Development allowance	TE	<1	<1	<1	<1

Table 4.5 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
General export measures					
Australian Tourist Commission	FI	18	21	21	21
Export Market Development Grants scheme	DFA	4	4	3	3
General R&D measures					
R&D tax concession	TE	2	3	3	3
Total		*32*	*39*	*40*	*38*
Accommodation, cafes & restaurants					
General investment measures					
Development allowance	TE	1	1	1	1
General export measures					
Export Market Development Grants Scheme	DFA	4	5	5	6
Australian Tourist Commission	FI	24	27	27	28
Total		*29*	*33*	*33*	*35*
Transport & storage					
General investment measures					
Development allowance	TE	33	<1	<1	<1
Infrastructure Bonds	TE	55	50	41	26
Infrastructure Borrowing tax offset scheme	TE	4	31	31	31
General export measures					
Export Market Development Grant scheme	DFA	18	18	17	17
Australian Tourist Commission	FI	30	34	34	35
General R&D measures					
R&D Start and related programs	DFA	-	1	5	5
R&D tax concession	TE	4	14	5	5
Total		*144*	*149*	*134*	*119*
Communication services					
Industry-specific measures					
Software Engineering Centres	FI	-	2	6	6
General investment measures					
Development allowance	TE	-	13	-	-
General export measures					
Export Market Development Grant scheme	DFA	1	1	1	<1
Austrade export promotion	FI	17	18	20	20
Australian Tourist Commission	FI	1	1	1	1

Table 4.5 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
General R&D measures					
Cooperative Research Centres	FI	2	2	2	3
CSIRO research	FI	22	21	21	21
Innovation Investment Fund	DFA	-	12	20	17
R&D Start program	DFA	7	10	12	13
R&D tax concession	TE	16	8	19	20
Total		*66*	*89*	*103*	*102*
Finance & insurance					
General investment measures					
Development allowance	TE	27	4	4	6
Offshore Banking Unit	TE	17	27	35	35
Infrastructure Borrowing tax offset scheme	TE	3	19	19	19
General export measures					
Export Market Development Grant scheme	DFA	<1	<1	<1	<1
General R&D measures					
R&D Start program	DFA	1	<1	<1	<1
Innovation Investment Fund	DFA	-	5	5	2
R&D tax concession	TE	54	30	64	68
Total		*102*	*85*	*127*	*130*
Property & business services					
General investment measures					
Development allowance	TE	1	-	12	17
General export measures					
Export Market Development Grants scheme	DFA	22	23	24	24
General R&D measures					
Cooperative Research Centres	FI	7	4	3	4
R&D Start & related programs	DFA	6	14	22	23
Innovation Investment Fund	DFA	-	1	1	1
R&D tax concession	TE	40	57	48	50
Total		*76*	*98*	*110*	*118*
Government administration & defence					
General investment measures					
Development allowance	TE	-	2	2	3
General export measures					
Austrade export promotion	FI	2	2	3	3

Table 4.5 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
General R&D measures					
R&D Start & related programs	DFA	<1	<1	<1	<1
Total		*2*	*5*	*6*	*6*
Education					
General investment measures					
Development allowance	TE	-	1	1	1
General export measures					
Australian Tourist Commission	FI	<1	1	1	1
Export Market Development Grant scheme	DFA	11	11	9	9
Austrade export promotion	FI	8	8	9	9
General R&D measures					
R&D Start & related programs	DFA	5	5	7	7
R&D tax concession	TE	2	-	3	3
Total		*27*	*26*	*30*	*30*
Health & community services					
General export measures					
Export Market Development Grants scheme	DFA	<1	<1	<1	<1
General R&D measures					
Cooperative Research Centres	FI	12	12	13	13
R&D Start program	DFA	7	10	12	13
R&D tax concession	TE	2	3	3	3
Total		*22*	*26*	*29*	*29*
Cultural & recreational services					
Industry-specific measures					
Australian Film Commission[b]	DFA	30	16	17	17
Australian Film Finance Corporation & Film Australia[b]	DFA	48	48	48	48
Film industry 100 per cent capital deduction	TE	20	20	20	20
General export measures					
Australian Tourist Commission	FI	3	4	4	4
Austrade export promotion	FI	16	17	19	19
Export Market Development Grants scheme	DFA	6	7	7	7
General R&D measures					
Cooperative Research Centres	FI	5	2	2	2
R&D Start & related programs	DFA	-	<1	<1	<1

Table 4.5 (continued)

	Type[a]	1997-98	1998-99	1999-00[b]	2000-01[b]
R&D tax concession	TE	1	1	1	2
Total		*129*	*115*	*118*	*120*
Personal & other services					
General export measures					
Export Market Development Grant scheme	DFA	1	1	2	1
General R&D measures					
R&D Start & related programs	DFA	2	2	2	2
R&D tax concession	TE	<1	<1	<1	1
Total		*3*	*3*	*5*	*4*
Unallocated services					
General export measures					
Austrade export promotion	FI	19	20	23	23
Australian Tourist Commission	FI	1	1	1	1
General R&D measures					
CSIRO research	FI	9	9	9	10
R&D Start & related programs	DFA	-	<1	2	3
Other programs					
Building IT Strengths	DFA	-	-	42	42
Total		*29*	*31*	*77*	*78*
Total outlays		**445**	**484**	**569**	**564**
Total tax expenditures		**395**	**402**	**424**	**390**
Total budgetary assistance		**840**	**886**	**994**	**954**

- Nil. Figures may not add to total due to rounding. **a** DFA: direct financial assistance; FI: funding to institutions; TE: tax expenditures. **b** 1999-2000 data are Budget estimates and 2000-01 data are Budget appropriations.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

Table 4.6 Commonwealth budgetary outlays on the mining sector, 1997-98 to 2000-01

$ million

	Type[a]	*1997-98*	*1998-99*	*1999-00*[b]	*2000-01*[b]
Industry-specific measures					
Exemption of income from sale, transfer or assignment of rights to mine gold	TE	38	18	5	-
Regional Minerals Program	FI	-	-	1	1
General investment measures					
Development allowance	TE	138	67	62	87
General export measures					
Austrade export promotion	FI	7	7	8	8
Export Market Development Grants scheme	DFA	1	2	2	2
General R&D measures					
Cooperative Research Centres	FI	8	10	9	6
CSIRO minerals research	FI	45	47	47	53
R&D Start and related programs	DFA	9	8	23	24
R&D tax concession	TE	52	96	62	66
Total outlays		**69**	**74**	**91**	**93**
Total tax expenditures		**228**	**181**	**129**	**153**
Total budgetary assistance to mining		**298**	**255**	**220**	**246**

- Nil. Figures may not add to total due to rounding. **a** DFA: direct financial assistance; FI: funding to institutions; TE: tax expenditures. **b** 1999-2000 data are Budget estimates and 2000-01 data are Budget appropriations.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

Table 4.7 Commonwealth budgetary assistance, unallocated other[a] 1997-98 to 2000-01

$ million

	Type[b]	*1997-98*	*1998-99*	*1999-00*[c]	*2000-01*[c]
Energy programs					
Energy R&D Corporation	FI	21	2	-	-
National Energy Efficiency Program	FI	2	4	-	-
Renewable Energy Commercialisation	DFA	-	2	4	6
Renewable Energy Equity Fund	DFA	-	-	1	3
General investment measures					
Development allowance	TE	3	1	1	1
Invest Australia	FI	-	15	15	14
Regional Headquarters Program	TE	2	2	2	2
General export measures					
Export Access	FI	3	4	4	3
Tourism programs	FI	7	3	7	-
R&D measures					
Commonwealth Technology Park	FI	-	-	3	8
R&D tax concession	TE	43	20	42	44
Other measures					
Enterprise Networking Program	FI	7	4	-	-
Pooled Development Funds	TE	na	na	na	na
Private Sector Linkages Program	FI	3	-	-	-
Regional Assistance Program	DFA	15	20	42	54
Clean Food Production Program	FI	1	1	1	1
National Space Program	FI	1	-	-	-
Small business capital gains tax exemption	TE	-	-	75	75
Innovation Investment Fund	DFA	4	3	5	4
Total outlays		**64**	**57**	**81**	**95**
Total tax expenditures		**48**	**23**	**121**	**122**
Total budgetary assistance		**111**	**80**	**202**	**217**

- Nil. Figures may not add to total due to rounding. **na** not available. **a** Include programs or amounts of funding where the industry is not stated or recipients are unknown. **b** DFA: direct financial assistance; FI: funding to institutions; TE: tax expenditures. **c** 1999-2000 data are Budget estimates and 2000-01 data are Budget appropriations.

Sources: Commonwealth Budget and Budget related papers (various years); departmental annual reports (various years); Treasury 1999; PC estimates.

A Re-estimating tariff assistance to manufacturing

The Commission has a statutory obligation to report annually on industry assistance and, as one part of meeting this requirement, the Commission provides annual estimates of tariff assistance to the manufacturing sector. Tariff assistance includes the impact of tariffs on import prices, as well as the effects of duty exemptions and concessions. To measure tariff assistance to manufacturing, since 1968-69 the Commission has used an 'effective rates' methodology built around the ASIC industry classification system and using ABS manufacturing census data. The Commission's approach to measuring assistance to manufacturing was explained in detail in appendix A of last year's Trade & Assistance Review (PC 1999).

In this year's Review, the Commission has calculated new estimates (and projections) of nominal and effective rates of tariff assistance for the manufacturing sector for the period 1968-69 to 2005-06. These are summarised in table 2.3 to 2.5 of chapter 2, and are presented in full in tables A.1, A.2 and A.3 at the end of this appendix. The new estimates use the ANZSIC[1] classification structure and ABS input-output data. They combine re-based versions of the previously published estimates of manufacturing assistance with newly created forward estimates of tariff assistance out to 2005-06, drawn from work undertaken for the Commission's recent *Review of Australia's General Tariff Arrangements* (PC 2000b). A number of adjustments have been necessary to present the entire range of assistance estimates as one series from 1968-69 to 2005-06.

The Commission has also used the new series of estimates to analyse the 'assistance' and 'industry composition' effects of changes in assistance since 1968-69 (section 2.3).

This appendix describes the methodology used.

[1] The Australian and New Zealand Standard Industrial Classification (ANZSIC) system replaced the Australian Standard Industrial Classification (ASIC) system in 1993. The ANZSIC system was developed to improve the comparability of industry statistics for Australia and New Zealand. Aligning the ANZSIC with the International Standard Industrial Classification (ISIC) also enhanced international comparability.

Past estimates of tariff assistance

The previously published estimates of manufacturing assistance, using the ASIC classification structure, were last estimated in 1996-97, with forward estimates to 2000-01 also provided. Estimates of the value of outputs and inputs (materials), necessary to calculate effective rates, were obtained from ABS manufacturing census data, while information on tariffs, and in earlier years quotas, was derived from the Australian Customs Tariff Schedule.

Several steps were involved in re-basing these estimates.

The raw ASIC manufacturing census data, together with previously published nominal rates of assistance on materials and outputs, were used to derive the 'unassisted value of output' (UVO), 'gross subsidy equivalent' (GSE), 'unassisted value of materials' (UVM) and 'tax equivalent on materials' (TEM) estimates. These estimates underlay the previously published nominal and effective rates of assistance.

The estimates of UVO, GSE, UVM and TEM were then concorded from ASIC to the ANZSIC-based 1994-95 input-output classification structure.[2] The concorded estimates were then used to calculate a new nominal rate of assistance to materials and outputs for the ANZSIC based industry groups.

Using the nominal rates calculated above, together with input-output value of production data, new UVOs, GSEs, UVMs and TEMs were calculated for selected 'benchmark' years.[3] From this information, effective rates of assistance were also calculated for the input-output classification structure. Like previous ASIC based assistance estimates, input-output data for each benchmark year was carried forward for the intervening years until the next benchmark year.

To maintain broad consistency between the ANZSIC-based estimates of manufacturing assistance and the previously published ASIC-based estimates, the past definition and measure of the 'value added' share in output — a measure essential for estimating effective rates of assistance — has been retained. That definition includes certain overhead expenses in the value added which are not included in the ABS input-output definition of value added.

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[2] All estimates were re-based according to the 1994-95 ABS input-output classification (and data) at the 56 manufacturing industry level. 1994-95 is the latest year for which input-output data are available.

[3] The benchmark years were 1968-69, 1974-75, 1977-78, 1983-84 and 1989-90. Details about industry outputs and inputs are revised periodically to take account of compositional changes that occur over time. Factors that influence compositional changes include changes in technology and relative prices.

The newly estimated UVOs, GSEs, UVMs and TEMs were then aggregated to ANZSIC manufacturing subdivisions, using input-output data on shares of production (rather than manufacturing census share data which was used in the past). These aggregated estimates were then used to calculate new nominal and effective rate estimates at the ANZSIC manufacturing subdivision level.

The newly calculated ANZSIC based estimates differ slightly from those previously published, for two main reasons.

First, there are some differences between the ANZSIC and ASIC classification structures at the manufacturing subdivision level. Concording data between two different classification structures (ASIC to ANZSIC) will inevitably lead to some differences between the estimates. While some ASIC and ANZSIC manufacturing subdivisions are the same, or very similar, for other activities there are greater differences in the way ASIC and ANZSIC classify manufacturing activities, which make comparisons difficult or of limited meaning.

Second, differences arise from the use of input-output share of production data, rather than the manufacturing census production share data used previously, for aggregating assistance estimates to the ANZSIC manufacturing subdivision level. This is because the nominal and effective rates of assistance at the manufacturing subdivision level are weighted averages of the rates for those activities that comprise the subdivision.

New estimates of tariff assistance

As part of the *Review of Australia’s General Tariff Arrangements* (PC 2000b), the Commission re-estimated manufacturing assistance using the ANZSIC based input-output classification structure. In its report, effective rates of assistance were presented for 1996-97, 2000-01 and 2005-06, at the ANZSIC manufacturing subdivision level. Additional estimates for 1998-99 have since been calculated. For the new assistance estimates, input-output data were used to estimate the value of output and inputs, and tariff information was derived from the Australian Customs Tariff Schedule.

The estimates presented in this year’s Trade and Assistance Review for 2000-01 and 2005-06 differ slightly from those presented in the Commission’s *Review of Australia’s General Tariff Arrangements* (draft report). The latest estimates for 1998-99, 2000-01 and 2005-06 have been re-calculated using 1998-99 import weights, instead of 1996-97 import weights as were used for the estimates presented in that draft report.

Assistance and industry composition effects of changes in effective rates of assistance

Using revised estimates of assistance from 1968-69 to 1998-99, this year's Trade & Assistance Review reports the impact of changing shares of unassisted value added, between industries, on effective rates of assistance.

Because measured effective rates of assistance for a sector are weighted averages of the industries comprising the sector, changes in effective rates of assistance can be subdivided into two components:

- an 'assistance' component, caused by changes in assistance levels; and
- an 'industry composition' component, brought about by changing shares of the unassisted value added of those industries comprising a sector.

The assistance component is measured as an industry's share of unassisted value added multiplied by the change in its effective rate of assistance. The assistance component for each industry is then summed to determine the total assistance component for the manufacturing sector.

The industry composition component is equal to an industry's effective rate of assistance multiplied by the change in its share of unassisted value added. The industry composition component is then summed to derive the total composition component for the manufacturing sector.

The sum of the assistance and industry composition components is equal to the total change in effective rates for the manufacturing sector, over a given time period.

The analysis of assistance and industry composition components in this year's Review uses the new ANZSIC-based input-output estimates and share of production data for 56 manufacturing industries. The Commission has estimated the assistance and industry composition component for each industry and then summed these results to the ANZSIC manufacturing subdivision level. This has been done to determine the percentage point contribution of each manufacturing subdivision to the total change in effective rates for the manufacturing sector.

For the period 1968-69 to 1983-84, it was found that of the 12 percentage point fall in effective rates, around 10 percentage points, or about 85 per cent of the decrease, is explained by the industry composition component. The remaining 2 percentage point fall in effective rates is accounted for by reductions in assistance levels.

These results differ from earlier Commission studies, such as that in the Industries Assistance Commission's 1987 publication, *Assistance to agricultural and manufacturing activities* (IAC 1987). That study reported that of the 14 per cent decline in effective rates between 1971-72 and 1983-84, around 7 percentage points, or 50 per cent, is explained by the industry composition component, while the remaining 7 percentage points is accounted for by changes in assistance levels.

The main reason for the difference between the two studies, apart from the small difference in the time period over which each study was conducted, is the level of industry detail used to carry out each study. The earlier work used 12 ASIC subdivisions, while the current analysis uses 56 ANZSIC-based input-output manufacturing industries.

The main impact of estimating assistance and industry composition components at the more aggregated subdivision level is that changes in shares of unassisted value added within subdivisions (an industry composition component for these industries) become assistance components when measured at the subdivision level. This occurs because changes in shares of unassisted value added within subdivisions, while not having an impact on the subdivision’s share of unassisted value added relative to other subdivisions, do change effective rates at the subdivision level. This is because effective rates are weighted averages of those industries comprising the subdivision.

Hence, when estimating the assistance and industry composition effects at the subdivision level, there is no industry composition component as the share of unassisted value added for the subdivision, relative to other subdivisions, remains unchanged. There is, however, an assistance component as the effective rate for the subdivision has changed due to changing shares of unassisted value added within the subdivision.

The current analysis of measuring the assistance and industry composition components of changes in effective rates over time uses a more detailed industry classification and, for this reason, is an improvement on more aggregated studies. The current analysis provides a more accurate picture of what is happening at the industry level by estimating more accurately the industry composition components within subdivisions that were previously recorded as assistance effects at the subdivision level.

Table A.1 **Nominal rates of assistance on materials,[a] manufacturing subdivisions, 1968-69 to 1996-97 and 1998-99, 2000-01, and 2005-06**

per cent

ANZSIC[b] Industry grouping		*1968-69 Series*							*1974-75 Series*				
Code	*Description*	*1968-69*	*1969-70*	*1970-71*	*1971-72*	*1972-73*	*1973-74*	*1974-75*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
21	Food, beverages and tobacco	10.4	8.6	6.9	5.2	4.5	2.6	2.7	2.9	2.5	3.0	3.0	3.2
22	Textiles, clothing, footwear and leather (TCF)	17.4	17.1	16.6	17.4	17.7	13.0	13.8	13.2	14.2	15.2	14.8	14.8
23	Wood and paper products	11.4	11.0	11.2	11.1	10.9	7.7	7.4	7.8	7.2	7.6	6.9	6.9
24	Printing, publishing and recorded media	4.7	5.9	6.5	5.2	5.2	2.8	4.5	3.4	5.2	5.7	5.3	5.3
25	Petroleum, coal, chemical and associated products	13.2	13.0	13.3	13.8	13.6	9.5	6.9	10.0	7.0	6.7	6.1	6.0
26	Non-metallic mineral products	7.5	7.6	6.9	6.8	6.2	3.7	2.5	3.5	2.3	2.3	2.2	2.4
271-3	Basic metal products	3.7	3.7	4.7	4.9	4.9	3.7	3.1	3.2	2.3	1.8	1.8	1.7
274-6	Fabricated metal products	20.0	19.0	18.3	17.5	17.5	12.3	13.5	12.4	13.6	13.3	12.3	11.3
281	Motor vehicles and parts (PMV)	28.0	28.0	27.0	27.0	27.0	20.0	19.0	20.0	19.0	17.0	17.0	16.0
282	Other vehicles	15.0	15.0	14.0	14.0	14.0	11.0	11.0	11.0	11.0	11.0	11.0	10.0
283-6	Other machinery and equipment	26.6	26.0	24.5	24.1	24.3	17.7	16.7	17.9	16.8	16.0	15.8	13.5
29	Other manufacturing	19.9	19.9	19.0	19.3	19.1	13.5	12.2	13.8	12.4	11.9	11.4	11.0
21-29	**Total manufacturing**	**14.4**	**13.7**	**13.0**	**12.6**	**12.4**	**8.7**	**8.3**	**8.8**	**8.1**	**8.0**	**7.7**	**7.3**

Table A.1 **(continued)**

per cent

ANZSIC[b] Industry grouping		*1977-78 Series*								*1983-84 Series*								
Code	*Description*	*1976 -77*	*1977 -78*	*1978 -79*	*1979 -80*	*1980 -81*	*1981 -82*	*1982 -83*	*1983 -84*	*1982 -83*	*1983 -84*	*1984 -85*	*1985 -86*	*1986 -87*	*1987 -88*	*1988 -89*	*1989 -90*	*1990 -91*
21	Food, beverages and tobacco	2.9	2.7	2.2	0.7	0.7	4.3	7.5	8.8	8.0	8.8	9.6	9.8	10.0	8.5	6.5	5.9	5.8
22	Textiles, clothing, footwear and leather (TCF)	12.9	16.9	16.6	17.9	17.1	14.1	12.3	11.4	11.8	11.2	12.7	11.6	11.9	12.1	13.2	12.1	11.1
23	Wood and paper products	7.1	7.6	7.6	7.6	7.6	7.6	5.9	7.9	7.3	8.0	7.8	7.7	7.6	7.5	6.1	5.2	5.2
24	Printing, publishing and recorded media	3.4	6.1	5.8	5.5	5.2	5.1	4.2	7.7	7.4	7.9	7.7	7.7	7.8	7.3	6.5	5.4	5.0
25	Petroleum, coal, chemical and associated products	5.2	5.6	5.7	5.5	5.4	5.4	5.3	4.9	3.5	3.7	3.7	3.7	3.8	3.3	2.7	2.4	2.3
26	Non-metallic mineral products	2.3	3.6	2.8	3.4	3.6	3.0	2.0	3.2	3.4	3.0	2.9	3.0	3.0	3.1	2.2	2.0	1.9
271-3	Basic metal products	1.9	4.2	4.2	4.1	3.6	3.6	2.8	4.6	5.0	4.4	4.0	4.0	4.9	4.1	3.3	3.3	2.9
274-6	Fabricated metal products	12.2	12.3	12.6	12.6	11.3	9.3	9.6	10.8	11.4	10.8	10.1	9.8	9.8	10.3	9.5	9.5	9.0
281	Motor vehicles and parts (PMV)	17.0	27.0	30.0	32.0	34.0	35.0	36.0	29.0	29.0	29.0	24.0	17.0	11.0	10.0	14.0	17.0	16.0
282	Other vehicles	11.0	15.0	15.0	15.0	15.0	13.0	12.0	13.0	13.0	13.0	12.0	11.0	11.0	10.0	9.0	8.0	8.0
283-6	Other machinery and equipment	15.5	13.7	13.6	13.5	12.8	12.2	11.2	13.0	13.4	12.9	10.6	10.6	10.8	10.7	9.9	9.2	8.9
29	Other manufacturing	11.3	10.6	10.7	10.4	9.6	9.3	9.0	12.8	13.1	12.7	12.4	12.0	11.1	10.9	10.8	10.1	9.4
21-29	**Total manufacturing**	**7.1**	**8.4**	**8.5**	**8.3**	**8.1**	**8.8**	**9.2**	**9.7**	**8.5**	**8.6**	**8.3**	**7.8**	**7.7**	**7.1**	**6.4**	**6.1**	**5.8**

Table A.1 **(continued)**

per cent

ANZSIC[b] Industry grouping		1989-90 Series									1994-95 Series			
Code	*Description*	*1989 -90*	*1990 -91*	*1991 -92*	*1992 -93*	*1993 -94*	*1994 -95*	*1995 -96*	*1996 -97*	*2000 -01*	*1996 -97*	*1998 -99*	*2000 -01*	*2005 -06*
21	Food, beverages and tobacco	5.2	6.3	5.6	5.6	4.7	4.2	3.5	3.3	2.6	0.8	0.8	0.8	0.8
22	Textiles, clothing, footwear and leather (TCF)	11.9	11.3	10.0	8.9	7.9	7.2	6.3	5.2	3.8	4.7	4.2	3.6	2.8
23	Wood and paper products	5.8	4.8	4.8	4.6	4.4	3.4	3.2	2.1	2.1	2.5	2.4	2.2	2.0
24	Printing, publishing and recorded media	4.6	4.4	4.3	4.3	3.6	3.0	2.2	1.6	1.6	2.1	2.1	2.1	2.0
25	Petroleum, coal, chemical and associated products	3.8	3.4	3.4	3.4	2.7	2.3	2.2	1.2	1.2	1.2	1.3	1.2	1.2
26	Non-metallic mineral products	1.8	1.6	1.6	1.6	1.4	1.4	1.4	0.5	0.5	0.8	0.8	0.8	0.7
271-3	Basic metal products	1.9	1.9	1.5	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0
274-6	Fabricated metal products	7.7	7.4	7.0	6.1	5.4	5.4	4.4	3.6	3.6	3.1	3.1	3.1	3.0
281	Motor vehicles and parts (PMV)	15.2	14.1	13.3	12.1	11.0	10.1	9.2	8.0	6.0	3.1	2.9	2.8	2.5
282	Other vehicles	10.0	10.0	9.0	8.0	7.0	6.0	5.0	3.0	3.0	3.6	3.7	3.6	3.5
283-6	Other machinery and equipment	10.3	9.4	8.9	7.5	6.5	5.8	4.8	3.6	3.6	2.5	2.5	2.2	2.1
29	Other manufacturing	8.8	8.3	7.9	7.0	6.1	5.5	4.5	3.5	3.5	3.2	3.2	3.1	2.9
21-29	**Total manufacturing**	**6.3**	**6.2**	**5.8**	**5.3**	**4.6**	**4.2**	**3.6**	**2.9**	**2.5**	**1.9**	**1.8**	**1.7**	**1.6**

a Assistance provided by tariffs and, in earlier years, certain non-tariff measures. **b** Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 Edition.

Source: PC estimates.

Table A.2 **Nominal rates of assistance on outputs,[a] manufacturing subdivisions, 1968-69 to 1996-97 and 1998-99, 2000-01, and 2005-06**

per cent

ANZSIC[b] Industry grouping		*1968-69 Series*							*1974-75 Series*				
Code	*Description*	*1968-69*	*1969-70*	*1970-71*	*1971-72*	*1972-73*	*1973-74*	*1974-75*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
21	Food, beverages and tobacco	11.7	10.8	9.8	9.0	8.2	7.0	8.1	8.1	8.9	8.7	6.9	5.4
22	Textiles, clothing, footwear and leather (TCF)	38.5	37.6	36.5	36.5	37.2	27.4	31.2	28.3	31.8	36.1	43.6	45.9
23	Wood and paper products	24.4	24.3	23.7	24.6	24.0	17.7	13.6	17.9	13.7	13.7	12.9	12.9
24	Printing, publishing and recorded media	20.4	19.3	20.5	20.5	19.9	15.1	13.1	16.8	14.6	14.6	14.6	14.7
25	Petroleum, coal, chemical and associated products	18.6	18.9	19.0	18.7	18.6	14.4	12.8	14.2	12.4	12.3	11.4	10.6
26	Non-metallic mineral products	11.1	11.7	11.5	10.1	10.5	7.2	6.4	6.7	5.9	5.6	4.0	2.9
271-3	Basic metal products	13.9	13.9	13.9	14.4	13.9	10.6	8.7	9.5	7.7	7.6	6.7	5.9
274-6	Fabricated metal products	38.1	36.8	36.6	35.6	34.3	26.4	25.3	26.3	25.3	24.7	22.3	20.5
281	Motor vehicles and parts (PMV)	35.0	35.0	35.0	34.0	34.0	26.0	29.0	26.0	29.0	34.0	32.0	34.0
282	Other vehicles	30.0	31.0	31.0	29.0	32.0	23.0	15.0	23.0	15.0	17.0	16.0	11.0
283-6	Other machinery and equipment	33.6	33.4	32.8	31.7	31.1	23.0	20.4	23.1	20.5	20.1	18.8	16.4
29	Other manufacturing	35.3	34.6	34.7	32.8	32.4	23.6	24.1	23.3	24.0	23.8	22.2	21.4
21-29	**Total manufacturing**	**22.9**	**22.5**	**22.1**	**21.6**	**21.2**	**16.2**	**15.7**	**16.3**	**15.6**	**16.1**	**15.3**	**14.5**

Table A.2 **(continued)**

per cent

ANZSIC[b] Industry grouping		1977-78 Series								1983-84 Series								
Code	*Description*	*1976 -77*	*1977 -78*	*1978 -79*	*1979 -80*	*1980 -81*	*1981 -82*	*1982 -83*	*1983 -84*	*1982 -83*	*1983 -84*	*1984 -85*	*1985 -86*	*1986 -87*	*1987 -88*	*1988 -89*	*1989 -90*	*1990 -91*
21	Food, beverages and tobacco	6.4	5.5	5.9	4.9	4.1	5.7	8.0	7.4	7.9	7.9	8.4	8.4	8.6	8.0	5.5	5.3	5.3
22	Textiles, clothing, footwear and leather (TCF)	39.2	41.9	42.1	42.2	43.4	50.8	52.2	49.3	41.8	46.7	51.4	36.5	39.8	39.6	41.0	40.5	39.6
23	Wood and paper products	12.8	13.0	12.8	12.6	11.9	11.8	10.4	14.1	13.7	14.1	13.9	13.8	13.7	13.7	12.3	10.2	9.4
24	Printing, publishing and recorded media	9.8	15.8	15.9	15.4	14.7	14.5	14.3	13.1	11.0	10.9	10.6	11.4	10.7	9.2	6.3	5.2	4.3
25	Petroleum, coal, chemical and associated products	10.6	10.6	10.9	10.4	9.6	9.4	9.0	9.2	6.2	6.5	6.4	6.7	6.6	6.3	5.7	5.2	4.7
26	Non-metallic mineral products	4.9	4.0	4.0	4.1	3.9	3.9	3.7	3.5	3.1	3.1	3.1	3.7	3.1	3.1	2.9	2.8	2.5
271-3	Basic metal products	6.9	6.2	6.2	5.7	6.0	6.0	5.4	6.0	6.0	5.6	5.6	5.1	5.6	4.7	4.7	4.1	4.1
274-6	Fabricated metal products	22.4	19.9	20.4	19.6	19.5	19.0	16.8	17.7	19.7	17.4	15.9	15.9	15.9	15.9	14.5	13.5	12.5
281	Motor vehicles and parts (PMV)	32.0	38.0	42.0	46.0	50.0	53.0	54.0	51.0	50.0	51.0	49.0	40.0	28.0	27.0	26.0	27.0	25.0
282	Other vehicles	16.0	12.0	12.0	13.0	13.0	12.0	11.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	13.0	12.0	11.0
283-6	Other machinery and equipment	18.3	16.2	16.2	16.6	16.5	16.5	14.4	17.5	17.3	17.4	17.0	16.8	16.5	16.3	14.6	13.5	12.3
29	Other manufacturing	22.2	21.0	20.4	19.4	18.7	18.6	17.2	18.7	19.1	18.6	18.1	18.5	18.7	18.7	17.3	15.9	14.3
21-29	**Total manufacturing**	**14.2**	**14.1**	**14.5**	**14.3**	**14.3**	**15.2**	**15.3**	**15.5**	**13.4**	**13.6**	**13.7**	**12.5**	**12.1**	**11.7**	**10.5**	**9.9**	**9.3**

Table A.2 **(continued)**

per cent

ANZSIC[b] Industry grouping		*1989-90 Series*									*1994-95 Series*			
Code	*Description*	*1989 -90*	*1990 -91*	*1991 -92*	*1992 -93*	*1993 -94*	*1994 -95*	*1995 -96*	*1996 -97*	*2000 -01*	*1996 -97*	*1998 -99*	*2000 -01*	*2005 -06*
21	Food, beverages and tobacco	5.0	5.8	5.1	5.1	4.6	4.0	3.2	2.8	2.3	2.2	2.2	2.2	2.2
22	Textiles, clothing, footwear and leather (TCF)	37.6	36.7	31.1	25.5	22.6	20.7	18.8	17.0	11.7	14.7	12.8	10.7	8.0
23	Wood and paper products	9.5	8.7	8.5	8.3	6.7	5.9	5.0	3.3	3.3	3.9	3.8	3.7	3.7
24	Printing, publishing and recorded media	5.8	5.1	4.6	4.6	3.5	3.0	2.4	1.6	1.6	1.3	1.3	1.3	1.3
25	Petroleum, coal, chemical and associated products	6.4	6.2	5.9	5.9	4.6	4.1	3.3	2.2	2.2	2.3	2.3	2.3	2.2
26	Non-metallic mineral products	3.0	2.8	2.6	2.4	2.4	2.1	2.0	1.1	1.1	1.8	1.8	1.8	1.7
271-3	Basic metal products	4.0	4.0	3.5	3.2	2.7	2.6	2.5	1.9	1.9	1.9	1.9	1.9	1.9
274-6	Fabricated metal products	13.3	12.3	11.6	10.6	9.0	7.3	6.3	4.0	4.0	3.8	3.8	3.7	3.7
281	Motor vehicles and parts (PMV)	28.0	26.1	24.3	22.3	20.4	18.6	16.9	15.2	10.4	9.5	7.6	6.8	5.2
282	Other vehicles	10.0	9.0	8.0	7.0	6.0	5.0	4.0	3.0	3.0	1.0	1.0	1.0	1.0
283-6	Other machinery and equipment	14.9	13.7	12.0	10.9	9.0	7.5	6.4	4.5	4.5	2.6	2.4	2.1	2.1
29	Other manufacturing	16.3	14.9	12.8	11.4	9.7	7.8	6.8	4.2	4.2	3.9	3.9	3.8	3.8
21-29	**Total manufacturing**	**10.5**	**10.1**	**9.2**	**8.4**	**7.2**	**6.4**	**5.5**	**4.3**	**3.6**	**3.5**	**3.3**	**3.1**	**2.8**

a Assistance provided by tariffs and, in earlier years, certain non-tariff measures. **b** Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 Edition.

Source: PC estimates.

Table A.3 **Effective rate of assistance,[a] manufacturing subdivisions, 1968-69 to 1996-97 and 1998-99, 2000-01, and 2005-06**

per cent

ANZSIC[b] Industry grouping		*1968-69 Series*							*1974-75 Series*				
Code	*Description*	*1968-69*	*1969-70*	*1970-71*	*1971-72*	*1972-73*	*1973-74*	*1974-75*	*1973-74*	*1974-75*	*1975-76*	*1976-77*	*1977-78*
21	Food, beverages and tobacco	14.0	15.0	15.4	16.1	15.1	15.5	18.5	18.4	21.5	19.9	14.6	9.8
22	Textiles, clothing, footwear and leather (TCF)	71.0	69.3	67.2	65.9	67.3	49.7	58.0	57.4	65.7	76.2	98.8	105.7
23	Wood and paper products	39.5	39.7	38.0	40.1	39.0	29.2	20.8	29.5	21.1	20.6	19.8	19.9
24	Printing, publishing and recorded media	35.5	32.2	33.9	35.1	34.0	26.8	21.4	27.0	21.8	21.4	21.7	21.9
25	Petroleum, coal, chemical and associated products	26.6	27.6	27.5	26.0	26.0	21.7	21.4	20.8	20.8	20.7	19.5	17.6
26	Non-metallic mineral products	13.5	14.5	14.6	12.3	13.4	9.5	9.0	9.2	8.7	8.2	5.3	3.3
271-3	Basic metal products	28.1	28.1	26.7	27.7	26.5	20.2	16.5	20.5	17.2	17.8	15.2	13.3
274-6	Fabricated metal products	58.7	57.1	57.3	56.1	53.4	42.4	38.8	41.7	38.1	37.3	33.2	30.7
281	Motor vehicles and parts (PMV)	48.6	48.6	50.5	47.6	47.6	37.6	48.4	40.6	53.3	75.3	68.4	77.7
282	Other vehicles	39.1	40.7	41.3	38.1	42.9	30.3	17.4	27.5	16.5	19.3	17.9	11.4
283-6	Other machinery and equipment	41.9	42.1	42.6	40.8	39.1	29.2	24.8	28.9	24.6	24.5	22.1	19.6
29	Other manufacturing	54.4	52.9	54.1	49.5	48.8	36.1	38.8	35.0	38.1	38.2	35.3	33.9
21-29	**Total manufacturing**	**34.9**	**34.9**	**34.9**	**34.2**	**33.7**	**26.6**	**26.2**	**27.2**	**26.4**	**27.8**	**26.3**	**24.8**

Table A.3 **(continued)**

per cent

ANZSIC[b] Industry grouping		1977-78 Series								1983-84 Series								
Code	*Description*	*1976-77*	*1977-78*	*1978-79*	*1979-80*	*1980-81*	*1981-82*	*1982-83*	*1983-84*	*1982-83*	*1983-84*	*1984-85*	*1985-86*	*1986-87*	*1987-88*	*1988-89*	*1989-90*	*1990-91*
21	Food, beverages and tobacco	12.7	10.4	12.6	12.2	10.2	8.2	9.0	4.8	7.7	6.0	6.1	5.7	5.8	6.9	3.6	4.0	4.2
22	Textiles, clothing, footwear and leather (TCF)	88.0	88.4	89.5	87.4	92.3	119.2	126.5	119.8	123.5	143.3	156.7	104.1	115.9	114.3	116.7	117.7	117.1
23	Wood and paper products	19.3	19.1	18.8	18.1	16.8	16.6	15.5	21.1	21.6	21.8	21.5	21.3	21.3	21.4	20.0	16.5	14.6
24	Printing, publishing and recorded media	14.7	23.3	23.8	23.1	22.0	21.9	22.1	17.2	13.3	12.8	12.4	13.6	12.4	10.4	6.2	5.1	3.8
25	Petroleum, coal, chemical and associated products	21.4	20.7	21.5	20.4	18.3	17.5	16.4	17.9	14.8	15.7	15.2	16.6	15.6	15.8	15.3	14.3	12.3
26	Non-metallic mineral products	6.6	4.2	4.7	4.5	4.1	4.5	4.8	3.8	2.9	3.3	3.4	4.3	3.3	3.2	3.4	3.4	2.9
271-3	Basic metal products	16.8	10.1	10.1	8.9	10.8	10.8	10.7	8.8	8.5	8.5	9.4	7.9	7.2	6.3	8.1	6.2	7.1
274-6	Fabricated metal products	33.9	28.4	29.1	27.5	28.9	30.0	25.0	25.5	29.8	25.4	23.0	23.5	23.4	22.8	20.6	18.4	16.8
281	Motor vehicles and parts (PMV)	75.8	70.2	77.1	86.9	96.8	105.6	106.6	115.3	126.2	130.8	139.7	123.5	89.7	88.7	69.5	63.3	57.7
282	Other vehicles	18.1	10.8	10.8	12.2	12.2	11.6	10.6	14.4	14.6	14.6	15.2	15.8	15.8	16.4	15.4	14.4	12.8
283-6	Other machinery and equipment	21.1	18.7	18.7	19.6	20.2	20.8	17.5	22.0	21.7	22.4	24.1	23.7	22.9	22.6	20.0	18.3	16.2
29	Other manufacturing	34.1	32.3	31.0	29.1	28.6	28.7	26.0	25.0	26.1	25.4	24.6	26.0	27.6	27.8	24.8	22.6	19.9
21-29	**Total manufacturing**	**24.7**	**22.5**	**23.5**	**23.3**	**23.4**	**24.8**	**24.3**	**24.0**	**22.4**	**22.7**	**23.4**	**21.0**	**20.1**	**20.0**	**17.9**	**16.7**	**15.6**

Table A.3 **(continued)**

per cent

ANZSIC[b] Industry grouping		*1989-90 Series*									*1994-95 Series*			
Code	*Description*	*1989 -90*	*1990 -91*	*1991 -92*	*1992 -93*	*1993 -94*	*1994 -95*	*1995 -96*	*1996 -97*	*2000 -01*	*1996 -97*	*1998 -99*	*2000 -01*	*2005 -06*
21	Food, beverages and tobacco	4.5	5.0	4.4	4.4	4.4	3.7	2.6	2.0	1.9	4.4	4.6	4.6	4.6
22	Textiles, clothing, footwear and leather (TCF)	85.5	84.0	70.4	56.4	49.9	45.9	42.2	39.0	26.3	32.2	27.9	23.2	16.9
23	Wood and paper products	13.9	13.2	12.9	12.5	9.4	8.7	7.0	4.6	4.6	5.5	5.5	5.6	5.6
24	Printing, publishing and recorded media	6.5	5.5	4.8	4.8	3.5	3.1	2.5	1.6	1.6	0.9	0.9	0.9	0.9
25	Petroleum, coal, chemical and associated products	11.0	11.0	10.4	10.1	7.9	7.3	5.4	4.0	4.0	3.9	3.9	3.9	3.7
26	Non-metallic mineral products	4.1	3.8	3.6	3.0	3.2	2.7	2.5	1.6	1.6	2.7	2.7	2.7	2.6
271-3	Basic metal products	7.5	7.5	7.0	6.9	5.6	5.3	5.1	3.5	3.5	3.0	3.0	3.0	3.0
274-6	Fabricated metal products	20.0	18.3	17.3	16.2	13.4	9.7	8.7	4.4	4.4	4.6	4.6	4.6	4.5
281	Motor vehicles and parts (PMV)	54.9	51.3	47.6	43.7	40.0	36.6	33.3	30.4	19.7	21.3	16.4	14.1	10.2
282	Other vehicles	10.0	8.4	7.4	6.4	5.4	4.4	3.4	3.0	3.0	-0.7	-0.7	-0.6	-0.6
283-6	Other machinery and equipment	19.8	18.2	15.1	14.4	11.6	9.4	8.1	5.5	5.5	2.7	2.3	2.1	2.0
29	Other manufacturing	24.7	22.2	18.4	16.4	13.8	10.5	9.5	5.0	5.0	4.8	4.6	4.7	4.7
21-29	**Total manufacturing**	**16.3**	**15.5**	**13.8**	**12.6**	**10.8**	**9.4**	**8.1**	**6.3**	**5.2**	**5.6**	**5.2**	**4.8**	**4.3**

[a] Assistance provided by tariffs and, in earlier years, certain non-tariff measures. [b] Industry subdivision and group from the Australian and New Zealand Standard Industrial Classification (ANZSIC) 1993 Edition.

Source: PC estimates.

B Allocating budgetary assistance by industry grouping

The Commission has a statutory obligation to report annually on industry assistance and, as one part of meeting this requirement, the Commission provides annual estimates of budgetary assistance to industry. These estimates cover those budgetary measures that can be quantified, given practical constraints in measurement and data availability. They cover the budgetary assistance provided by the Commonwealth Government, but not that provided by State, Territory and local governments. The estimates exclude outlays on defence, health, education and the labour market. They also exclude measures which are generally available to all firms, such as changes in road funding. The Commission's approach to measuring budgetary assistance was explained in detail in appendix A of the *Trade & Assistance Review 1998-99* (PC 1999).

In the past, the Commission has provided estimates of the incidence of budgetary assistance using a simple, four sector classification of the economy. Budgetary assistance programs were allocated under the headings 'primary production', 'manufacturing', 'mining', and 'services'.

To provide a better basis for determining the incidence of assistance, this year the Commission has augmented this approach by also providing a disaggregated breakdown of the incidence of budgetary assistance, using a 27 industry grouping classification system. Under this system, primary production and mining remain as stand-alone categories, but the manufacturing and service sectors have been disaggregated into various sub-groupings.

Allocating budgetary assistance at the 27 industry grouping level is more difficult than allocating it at the four sector level. The Commission has used detailed information to assist in the allocation process and, in some cases, sought feedback from government agencies responsible for administering the relevant budgetary assistance programs.

This appendix explains the new classification system and outlines the way the Commission has allocated budgetary assistance using the new system. A program-by-program breakdown of allocations — published as a separate document (PC 2000d) — is available from the Commission or its web-site. The Commission would welcome any comments on its general methodology or on the appropriateness of any particular allocations of budgetary assistance to industry groupings that it has made. The results of the allocation for the years 1997-98 to 2000-01 are presented in tables 4.3 to 4.7 of chapter 4 of this report.

Industry classifications

The Commission has based its 27 industry partition of the Australian economy on the ANZSIC system. There are 17 industry *divisions* in the ANZSIC system, which include primary production, mining, manufacturing and 14 service industries. The Commission further divides the manufacturing division into its nine *subdivisions* and, in the case of the *machinery & equipment* subdivision, further divides it into 3 *industry groups*. For convenience, all 27 industries are referred to as *industry groupings* (see table B.1 below). Finally, two additional categories cater for budgetary programs that the Commission is unable to allocate within the manufacturing or service industry groupings, and another category picks up the remaining unallocated programs.

The manufacturing division is subdivided in this way for three reasons. First, manufacturing industries receive the largest amount of budgetary assistance (around 41 per cent), and allocating this amount of assistance to one indivisible group would be contrary to the objective of measuring the resource allocation effects of budgetary assistance in as much detail as practicable. Second, this classification will allow for comparability with the Commission's estimates of tariff assistance to manufacturing (see appendix A). Third, allocating manufacturing assistance at the subdivision and industry grouping level is straightforward because assistance is mainly targeted at this level.

There are three points to note in relation to the industry groupings used here:

- First, notwithstanding the disaggregation of economic activity into 27 industry groupings, some of these groupings still contain disparate activities. For example, the *petroleum, coal, chemical & associated product manufacturing* industry grouping includes industries such as petroleum refining and pharmaceutical products manufacturing, as well as rubber and plastic product manufacturing. Further, in this case, a large proportion of budgetary assistance to this group is a result of schemes that support lower prices for prescription medicines (pharmaceuticals), whereas there is relatively little assistance targeted to other industries within this group.

Table B.1 **ANZSIC codes used for budgetary assistance allocation**

ANZSIC code	*Division, subdivision or industry group*	*ANZSIC code*	*Division, subdivision or industry group*
A	Agriculture, forestry, fishing & hunting	E	Construction
B	Mining	F	Wholesale trade
C21	Food, beverages & tobacco	G	Retail trade
C22	Textile, clothing, footwear & leather	H	Accommodation, cafes & restaurants
C23	Wood & paper products	I	Transport & storage
C24	Printing, publishing & recorded media	J	Communication services
C25	Petroleum, coal, chemical & associated products	K	Finance & insurance
C26	Non-metallic mineral products	L	Property & business services
C27	Metal products	M	Government administration & defence
C281	Motor vehicles & parts	N	Education
C282	Other transport equipment	O	Health & community services
C283 – C286	Other machinery & equipment	P	Cultural & recreational services
C29	Other manufacturing	Q	Personal & other services
D	Electricity, gas & water supply	Non-ANZSIC	Unallocated manufacturing, unallocated services, unallocated other

Source: ABS (1993).

- Second, the size of industry groupings varies considerably. The smallest of the 27 industry groupings is *textiles, clothing, footwear & leather*, which generates around $3.5 billion in gross value added (GVA). The largest grouping, *property & business services*, generates around $60 billion in GVA. The average across the 27 industry groupings was around $20 billion in 1999-2000. Section 4 discusses the incidence of budgetary assistance both in dollar terms and as a percentage of industry GVA.
- Third, the ANZSIC system, upon which the Commission’s industry grouping system is based, is becoming dated in some areas. For example, the development of the information technology industry has occasionally presented difficulties in allocating this type of funding. Various activities in this industry may belong to the *other machinery & equipment manufacturing, communication services* or *property & business services* industry grouping. At times, it is difficult to determine which industry grouping hosts the benefiting firms, particularly when the activities of certain professions or firms cut across industry classifications.

Allocation methodology

The initial benefiting industry concept

The Commission applies an *initial benefiting industry* (IBI) methodology to guide the process of allocation. The IBI method is used to allocate budgetary assistance to the industry grouping hosting the firm that initially benefits from the assistance. In the case where budgetary assistance benefits firms indirectly via an intermediate organisation, such as CSIRO or Austrade, the beneficiaries are identified as the firms that utilise these services, not the organisations that deliver the budgetary assistance.

The IBI approach does not attempt to identify all of the beneficiaries of the various forms of budgetary assistance. It may be that industry groupings not identified as initial beneficiaries benefit subsequently from assistance targeted to another group. For example, budgetary assistance to the Australian film industry is allocated to *cultural & recreational services*. However, the benefits of this assistance could extend beyond this particular industry grouping, say to *construction services* in the case where film production requires these services. Further, an increase in demand for construction services may increase demand in the *wood & paper products* industry grouping.

To identify all of the beneficiaries of budgetary assistance would require working through the production chain to find how industry groupings are likely to be affected by the initial assistance. The Commission uses general equilibrium models to do this in certain instances, such as when conducting inquiries into specific industries.

However, for the purposes of annual reporting, identifying the incidence of assistance by the initial benefiting industry or industries gives a reasonable indication of the effects of budgetary assistance measures on the allocation of economic resources amongst different industries and uses.

Allocating program funding to industry groupings

For 1999-2000, the Commission identified 100 general programs as budgetary assistance. The 20 largest programs by funding accounted for around 80 per cent of the $3.7 billion total budgetary assistance. Table B.2 below lists these programs.

Information to allocate funding for all programs was sought from budget statements, legislation, ministerial statements and various departmental websites. Further, consultations with the organisations responsible for the largest non-targeted appropriations including the CSIRO, Austrade, AusIndustry, the Australian Customs Service and the Australian Tourist Commission resolved a number of issues. The Commission also consulted with the ATO on tax expenditure measures including the R&D tax concession, the development allowance and the infrastructure bonds concession.

Most programs are targeted at a particular industry, so allocating the assistance is straightforward. For example, the TCF import credits scheme funding is allocated to the *textiles, clothing, footwear & leather* industry grouping, and the Australian Film Finance Corporation & Film Australia funding is allocated to the *cultural & recreational services* industry grouping. Of the top 20 programs, 7 are targeted to a *particular* industry grouping. Of the remaining programs, almost all are targeted towards a particular industry, mainly within the *agriculture, forestry, fishing & hunting* industry grouping.

Allocating funding for non-targeted programs, where there is more than one IBI, is not as straightforward as in the targeted case. For example, CSIRO undertakes R&D across several industry groupings. The information that CSIRO and similar organisations provide to the Commission is generally not in the industry grouping format that the Commission uses. In these cases, a concordance is developed between the information provided and the industry grouping classification system. The accuracy of the concordance depends on the level of disaggregation, and clarity, of the information provided. Inevitably, this process requires judgement and introduces the potential for imprecision in the estimates. (The Commission's approach to allocating CSIRO's research funding is provided, as an example, in the annex to this appendix.)

In a small number of cases, the Commission has ascertained that a significant majority of funding initially benefits one industry but has no reliable information to apportion funding between this industry and the other IBIs. In these cases, the Commission has allocated the entire amount of funding to the major IBI. For example, Commonwealth funding for Meat & Livestock Australia (MLA) supports R&D mainly targeted to the *agriculture, forestry, fishing & hunting* industry grouping. However, MLA has indicated that some of its R&D (probably less than 10 per cent) may benefit food processors, which belong to the *food, beverages & tobacco* industry grouping. However, MLA cannot provide actual data on this allocation. In this case, the Commission has allocated all funding for MLA to the *agriculture, forestry, fishing & hunting* industry grouping.

Finally, in some cases, particularly where a new scheme has been introduced, the Commission has had insufficient information to make any allocation. Funding for these schemes has been recorded in an 'unallocated' category. The three unallocated categories accounted for around 12 per cent of total budgetary assistance in 1999-2000.[1]

Table B.2 Budgetary assistance programs, 1999-2000

Program	*Initial benefiting industry*	*$m*
R&D tax concession	Not targeted	510
CSIRO	Not targeted	381
PMV Export Facilitation scheme	Motor vehicles & parts	347
Development allowance	Not targeted	175
R&D Start program	Not targeted	171
Austrade export promotion	Not targeted	150
Austrade – Export Market Development Grants scheme	Not targeted	145
Cooperative Research Centres	Not targeted	115
Income tax averaging for primary producers	Agriculture, forestry, fishing & hunting	95
Australian Tourist Commission	Not targeted	90
Duty Drawback	Not targeted	87
Infrastructure bonds	Not targeted	85
TCF Import Credit Scheme	Textile, clothing, footwear & leather	83
Pharmaceutical factor-f scheme	Petroleum, coal, chemical & associated products	79
Capital gains tax exemptions for small business	Not targeted	75
Infrastructure Borrowings Tax Offset scheme	Transport & storage	75
Tasmanian Freight Equalisation Scheme	Not targeted	60
Tariff Export Concession (TEXCO)	Not targeted	58
Australian Film Finance Corporation & Film Australia	Cultural & recreational services	48
Regional Assistance Program	Agriculture, forestry, fishing & hunting	42
Sub Total (for top 20 programs)		**2 871**
Other Programs		815
Total		**3 686**

Source: PC estimates.

1 The amount of budgetary assistance placed in the ‘unallocated’ categories is 8 per cent for 1998-99 and 7 per cent for 1997-98, as a result of more information being available.

Annex Allocating CSIRO research funding

CSIRO's primary function is to undertake scientific research to assist Australian industry (CSIRO 2000). In many cases, CSIRO collaborates with industry partners and its research funding can be allocated among the industries involved.

CSIRO's own classification of its research effort is based on its total expenditure, which includes appropriation funding and external revenue sources such as industry funding. CSIRO does not attempt to distinguish between the two sources of funding below the aggregate level.

However, for the purposes of allocating budgetary assistance, the Commission needs to identify the budget appropriation portion of CSIRO's total expenditure at a disaggregated level. In previous years, CSIRO has provided the Commission with its *planned* appropriation expenditure. The Commission has continued to use this data to determine budgetary assistance delivered through CSIRO. To aid the allocation of this assistance at the more detailed industry grouping level, the Commission has supplemented this information with CSIRO's total expenditure data, which is broken down to a more detailed level (although not by ANZSIC classification[2]).

The Commission concords the information provided by CSIRO to its own industry grouping classification system (see table B.3). The data provided by CSIRO is in 23 sectors, of which six sectors are allocated to primary production and five sectors are not allocated as they do not fall within the Commission's definition of budgetary assistance.[3] In two cases, the Commission has concorded a CSIRO sector between industry groupings based on additional information (see table B.3).

The Commission has used the concordance to allocate the CSIRO appropriation (table B.4).

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2 CSIRO has also provided a concordance between the way it classifies its research effort across the economy and the ANZSIC classification system and this has allowed the Commission to provide a better indication of where CSIRO directs its research effort by industry grouping.

3 Some CSIRO research may not *initially* benefit industry or, in the case of general research, may not benefit a particular industry grouping or groupings. Such research does not fall within the Commission's definition of assistance and hence is excluded form the estimates. For example, the Commission has excluded the funding allocated by CSIRO to its *Radio Astronomy* sector, which includes research into extragalactic phenomena and multibeam pulsar surveys. In 1999-2000, CSIRO received around $468 million in appropriations, of which the Commission has identified $381 million as budgetary assistance. That said, it should be noted that, with additional information, it may be possible to identify which *parts* of CSIRO research funding in particular sectors fall within the definition of assistance. For example, within the *Climate & Atmosphere* sector, certain research may initially and selectively benefit primary production. However, the Commission has been unable to obtain expenditure data on individual research projects. Therefore, this sector's funding has not been classified as budgetary assistance.

Table B.3 **Concordance between CSIRO sectors and the Commission's industry groupings**

CSIRO sector	*Industry grouping*	*CSIRO sector*	*Industry grouping*
Field Crops	Agriculture, forestry, fishing & hunting	Measurement standards	Not allocated
Food processing	Food, beverages & tobacco	Radio astronomy	Not allocated
Forestry, wood & paper	Agriculture, forestry, fishing & hunting/ Wood & paper products	Services	Unallocated services
Horticulture	Agriculture, forestry, fishing & hunting	Chemicals & plastics	Petroleum, coal, chemical & associated products
Meat, dairy & aquaculture	Agriculture, forestry, fishing & hunting	Integrated manufactured products[a]	Unallocated manufacturing
Wool & textiles	Agriculture, forestry, fishing & hunting/ Textiles, clothing, footwear & leather	Pharmaceuticals & human health	Petroleum, coal, chemical & associated products
Biodiversity	Not allocated	Coal & energy	Mining
Climate & atmosphere	Not allocated	Mineral exploration & mining	Mining
Land & water	Not allocated	Mineral processing & metal production	Metal product manufacturing
Marine	Agriculture, forestry, fishing & hunting	Petroleum	Mining
IT & telecommunications	Communication services	Corporate support	Corporate support is allocated across all sectors
Built environment	Construction		

a A large part of this sector's funding, by project, concords with the *other machinery & equipment* industry grouping. However some projects are targeted towards the *motor vehicles & parts* and *other transport equipment* industry groupings. Further, funding information on particular projects is not available. The Commission has therefore allocated this sector's funding to the *unallocated manufacturing* industry grouping.

Source: CSIRO (2000); PC allocation.

Table B.4 **Allocation of CSIRO budget appropriation, by initial benefiting industry**

Initial benefiting industry	*1997-98*	*1998-99*	*1999-00*	*2000-01*[a]
Agriculture, forestry, fishing & hunting	127.9	133.0	140.7	114.3
Mining	45.3	46.8	47.3	52.7
Food, beverages & tobacco	17.2	17.8	18.4	19.9
Textile, clothing, footwear & leather	14.9	15.5	10.7	30.6
Wood & paper products	4.3	4.5	4.6	4.5
Petroleum, coal, chemical etc	37.7	39.0	40.4	40.8
Metal product manufacturing	25.4	27.3	28.0	28.3
Unallocated manufacturing	34.2	33.4	34.8	35.2
Construction	24.1	25.0	25.3	22.1
Communication services	21.6	21.3	21.3	20.9
Other	8.7	8.6	9.0	9.8
TOTAL	**361.2**	**372.3**	**380.5**	**379.2**

a PC estimates based on 1999-2000 data.

Sources: CSIRO (2000); unpublished CSIRO expenditure data.

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