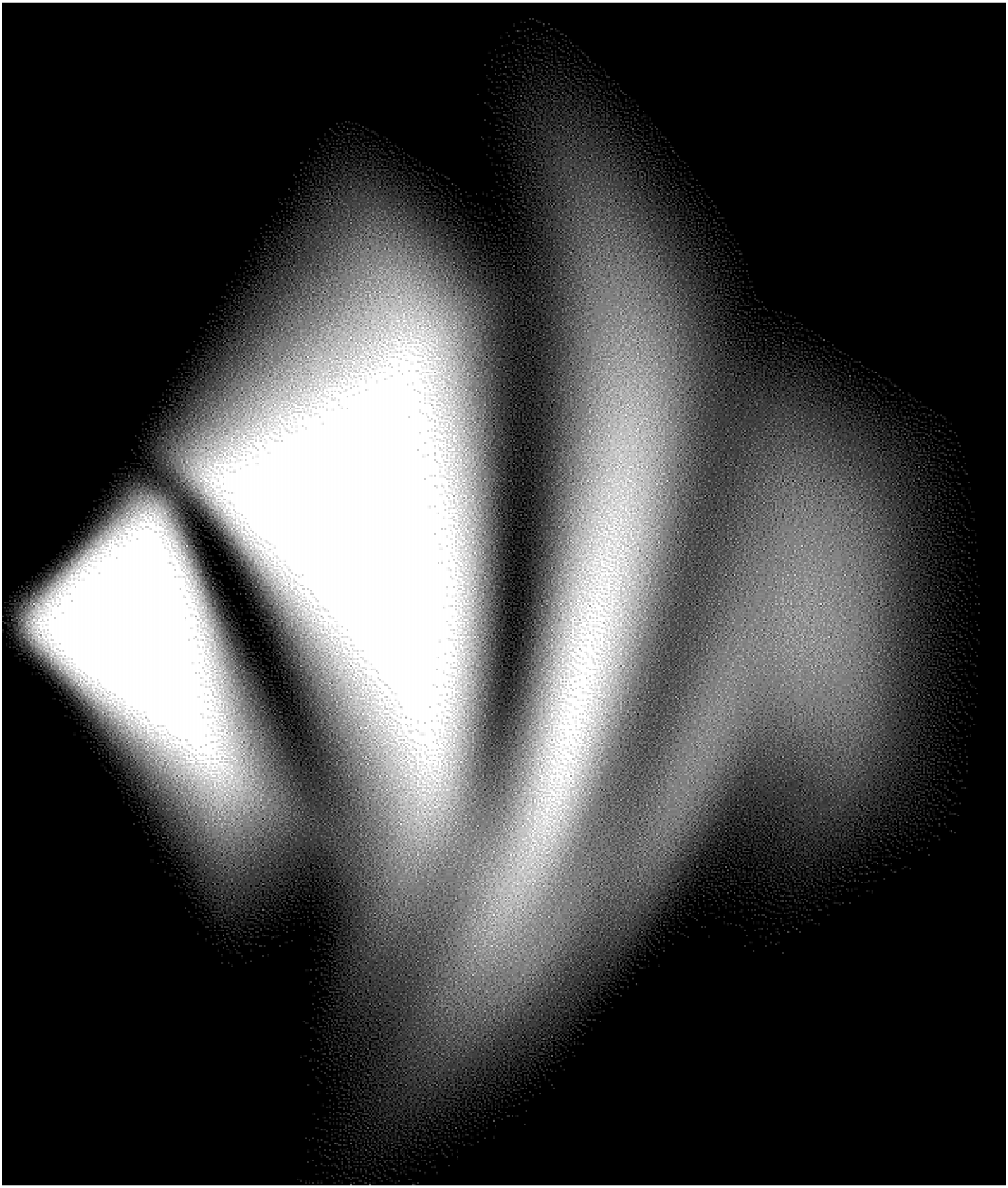
Trade & Assistance Review 1998-99

PRODUCTIVITY COMMISSION



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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 agricultural, manufacturing and budgetary assistance.

It also presents new estimates of barriers to trade in selected services for Australia and its trading partners. These new estimates are the first output of a collaborative project with the University of Adelaide and the Australian National University, supported by the Australian Research Council. The estimates should prove useful for trade negotiators as they gear up for the World Trade Organisation's proposed 'Millennium Round' of multilateral trade negotiations.

Trade & Assistance Review 1998-99 forms part of the Commission's annual report series. Its companion volumes are the Commission's *Annual Report 1998-99*, and *Regulation and its Review 1998-99*, both of which are to be released shortly.

Gary Banks
Chairman

4 November 1999

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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
ADA	Anti-Dumping Authority
AMAMS	agricultural and manufacturing assistance measurement system
ANZSIC	Australia and New Zealand Standard Industrial Classification
APEC	Asia Pacific Economic Cooperation
ASA	Air Services Arrangements
ASIC	Australian Standard Industrial Classification
ATC	Australian Tourist Commission
ATO	Australian Taxation Office
AWB	Australian Wheat Board
ANU	Australian National University
BIE	Bureau of Industry Economics
CRC	Cooperative Research Centres
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DISR	Department of Industry, Science and Resources
EFIC	Export Finance and Insurance Corporation
EMDG	Export Market Development Grants
ERA	effective rate of assistance
EU	European Union
FOB	free on board
GATS	General Agreement on Trade in Services
GSE	gross subsidy equivalent
IAC	Industries Assistance Commission
IAP	Individual Action Plan

IBS	International Business Services
IC	Industry Commission
IRA	import risk analysis
MPF	Major Projects Facilitation
NCP	National Competition Policy
NRA	nominal rate of assistance
NSE	net subsidy equivalent
NSW	New South Wales
OECD	Organisation for Economic Co-operation and Development
OSIC	Office of the Strategic Investment Coordinator
PC	Productivity Commission
PDF	Pooled Development Fund
PMV	passenger motor vehicles
R&D	research and development
SIIP	Strategic Investment Incentive Program
SMEs	small and medium-sized enterprises
SPS	sanitary and phytosanitary
TCF	textiles, clothing and footwear
TMRO	Trade Measures Review Officer
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNCTAD	United Nations Conference on Trade and Development
US	United States
WTO	World Trade Organization

Key messages

- Australia has a clear interest in promoting further action to liberalise world markets in forums such as the proposed 'Millennium Round' of World Trade Organisation negotiations.

- Australia can bolster its case by demonstrating its own openness to trade, and by exposing the costs of countries' protectionist policies not only to their trading partners but also to their own communities.

- New estimates of the level and impact of (non-prudential) barriers to trade in some services in various countries reveal that restrictions can increase the price of services by more than 50 per cent in the country that imposes the restrictions.
  - Australia has liberal regimes in banking and telecommunications, and a moderately restrictive regime in the maritime sector.
  - South American and Asian economies have the most restrictive trade regimes in the three service sectors studied.

- Effective assistance is low and either stable or falling in most Australian agricultural and manufacturing industries, and the quantum of Commonwealth budgetary assistance to industry is also stable.
  - Exceptions include the dairy, tobacco, passenger motor vehicles, and textiles, clothing and footwear industries which remain highly assisted.
  - Other exceptions include information technology, biotechnology, books and venture capital for which additional assistance has recently been provided and/or foreshadowed.

- While the Commonwealth's new Strategic Investment Incentive Program offers some potential benefits, more transparent assessment procedures would help mitigate the risks which inevitably arise under such programs.

Summary

The proposed 'Millennium Round' negotiations of the World Trade Organization (WTO) are expected to bring about further action to liberalise world markets.

Australia has a clear interest in promoting such action. Commission estimates suggest that the liberalisation of trade in services alone could boost Australia's income by almost $2 billion annually. As well, access to export markets remains vital for the viability of many Australian farmers, and the ability to source competitively priced goods from abroad can improve the cost structure of industry and directly benefit consumers.

Australia can bolster the case for further trade liberalisation by demonstrating its own openness to trade, and by exposing the costs of countries' protectionist policies borne not only by their trading partners but also by their own communities.

Scrutiny of government measures which assist Australian industries is also important from a purely domestic perspective. Such scrutiny reveals which groups in the community lose, as well as which groups win, from industry assistance. It can also highlight the net costs of inappropriate assistance, and thus encourage policies which are in the long term interests of the community as a whole.

In this year's *Trade and Assistance Review*, the Commission:

- presents new estimates of the level of trade restrictions in different countries' service sectors, and the effects of those restrictions on the price of services;
- updates estimates of, and developments in, budgetary assistance and other agricultural and manufacturing assistance; and
- highlights some trade and assistance policy issues.

Services

WTO negotiations about restrictions on trade in services are expected to recommence in 2000. Services account for around 80 per cent of domestic economic activity and an increasing share of trade.

Estimates of trade restrictions

In a joint project with the University of Adelaide and the ANU, the Commission has estimated the level and impact of (non-prudential) barriers to services trade in the banking, telecommunications and maritime sectors of an array of countries.

Australia has liberal regulatory regimes in banking and telecommunications and a moderately restrictive regime in maritime services.

The countries found to have the most restrictive regimes are located mostly in Asia and South America. Brazil, Colombia, South Korea, Mexico, the Philippines, Thailand, Turkey and Uruguay have among the most restrictive trade regimes in two of the three sectors studied, while India, Indonesia, and Malaysia have among the most restrictive trade regimes for all three service sectors.

These countries' restrictions on services trade are estimated to have inflated prices in banking services by more than 45 per cent for Brazil, India, Indonesia, Malaysia and the Philippines, and by more than 55 per cent in telecommunications services for Indonesia, Thailand and the Philippines. These trade restrictions can therefore harm not just potential competitors but also other sectors of the economies with the restrictions.

Negotiating approaches

Data of this kind will be useful for negotiators during the Millennium Round as they seek to encourage greater liberalisation of services markets, and to determine the focus of their negotiating efforts. For example, negotiations might concentrate on opening the more restricted foreign markets, generally in Asian and South American economies.

Further, while negotiators will need to focus on whether restrictions applying solely to foreign suppliers are necessary, they should also aim to improve market access for all entrants, including domestic suppliers. This can lessen the impact of liberalisation on the domestic services sector, help facilitate the removal of restrictions against foreigners and bring greater benefits to the economy.

Relaxation of Australian restrictions

Australia made three main commitments in relation to services trade at the APEC forum in September 1999. These were to relax foreign investment restrictions, and to liberalise air and postal services. The Commission has also recently reviewed Australia's restrictions on trade in maritime services.

Agriculture and manufacturing

WTO negotiations on agriculture are also expected to recommence in 2000, but there is less certainty about whether manufacturing trade restrictions will be subject to negotiation. The agricultural negotiations will be particularly important for Australia because the viability of the rural sector hinges largely on access to export markets. Both the agriculture and manufacturing sectors account for around 20 per cent of Australia’s exports, although agriculture accounts for a much smaller share of employment and production.

Estimates of effective assistance

Assistance to both sectors has declined during the 1990s and is projected to continue to do so, largely due to the program of phased reductions in manufacturing tariffs and the unwinding of various agricultural marketing arrangements.

For agriculture, the average ‘effective’ rate of assistance (which takes into account the effects of tariffs and other assistance on industries’ inputs as well as on their outputs) is estimated to have been around 8 per cent in 1997-98. The market milk sector receives assistance many times higher than this, at more than 200 per cent. The current assistance arrangements for dairy producers are set to change next year when it is expected that farm gate prices will be deregulated and a $1.8 billion industry assistance package funded by a levy on milk consumers introduced. The tobacco growing industry also receives relatively high assistance, with an estimated effective rate of 60 per cent in 1997-98, although the industry’s assistance arrangements are being unwound. Most agricultural activities, however, have an effective rate of below 5 per cent.

For manufacturing, the effective rate of assistance in 1997-98 is estimated to have been between 5 and 6 per cent. The Government recently announced its intention to abolish ‘nuisance’ tariffs — with rates of 5 per cent or less — on 400 imported manufacturing items, and an inquiry into the remaining tariffs at these levels. The inquiry excludes tariffs applying to the passenger motor vehicles (PMV) and the textiles, clothing and footwear industries. Assistance arrangements to apply to these industries from 2000 to 2005 have already been announced. These industries continue to receive effective assistance several times higher than other manufacturing activities, at more than 20 per cent for PMV and textiles, and more than 40 per cent for clothing and footwear in 1997-98. The new arrangements will modify the way assistance is delivered to these industries, but will not significantly reduce the levels of effective assistance before 2005.

Anti-dumping measures

Australia was the world's second largest initiator of anti-dumping actions against imports in 1997, and currently has about 50 anti-dumping measures in force.

A new anti-dumping system commenced in July 1998. While the changes have reduced the time taken to consider applications for anti-dumping measures, some questions have arisen about the thoroughness of the initial investigation process and the effectiveness of the new appeals process in ensuring that only genuine anti-dumping actions are taken. The new scheme is scheduled to be reviewed next year.

Application of WTO trading rules

Several matters arose (or were progressed) during the year relating to compliance with WTO trading rules:

- a successful Canadian complaint to the WTO led to the review and relaxation of Australian import restrictions on certain uncooked salmon, but new import restrictions on certain related fish products;
- a US complaint to the WTO on assistance to Howe Leather led to a withdrawal of assistance deemed to be 'export assistance', although the replacement assistance offered by the Commonwealth has also been challenged;
- the Government took action in line with the Commission's findings that, while there were grounds under the WTO 'safeguards' agreement to impose a temporary tariff on imported pigmeat, it should instead provide an assistance package to facilitate industry restructuring; and
- Australia has recently lodged a complaint with the WTO in response to the United States decision to impose a 'safeguards' tariff-quota on lamb imported from Australia.

Trade-related aspects of intellectual property

Further negotiations on the WTO agreement on Trade-Related Aspects of Intellectual Property Rights (called TRIPS) are scheduled for the proposed Millennium Round. Australia's best approach to intellectual property rights protection will generally be to provide regulation which complies with the minimum standards required under TRIPS, but no more. In relation to the use of geographical names for products, action to extend the protections in the TRIPS from wine and spirits to other products could hinder Australia's competitiveness in export markets against regions which have already acquired a strong reputation for quality.

In the biotechnology area, however, Australia's standards already exceed those in the TRIPS, and it would be economically advantageous for Australia to support higher and broader international standards in this area.

Budgetary assistance

While to date most industry assistance has been provided through measures such as tariffs on imports and statutory marketing arrangements, industry assistance in the form of tax concessions and government spending on industry programs is becoming increasingly important.

Estimates of budgetary assistance

In 1998-99, the Commonwealth provided nearly $3.4 billion of budgetary assistance to industry. The level of budgetary assistance has been reasonably constant for the last two years, and is projected to remain so in 1999-2000. This follows an 11 per cent fall from more than $3.7 billion in 1996-97.

The manufacturing sector received almost half of all budgetary assistance in 1998-99. As a proportion of gross sectoral output, however, primary production received most budgetary assistance, followed by manufacturing, mining and energy, and services.

While the quantum of Commonwealth budgetary assistance has remained stable, several changes to the design of budgetary assistance schemes have been made or foreshadowed in recent years.

Further, against the general trend to lower assistance, the Government has announced and/or provided additional budgetary assistance recently for the information technology, biotechnology and book industries, as well as new incentives for venture capital.

Strategic investment incentives

During the year, the Government offered two firm-specific assistance packages under its Strategic Investment Incentive Program — a $40 million package for a new pulp and paper mill in New South Wales and a package in excess of $100 million for expansion of a Queensland aluminium smelter.

While selective assistance can in theory provide net benefits to Australia in specific circumstances, it also entails several risks. At the extreme, if an investment project is sufficiently viable in its own right such that it would proceed without government assistance, then providing a selective assistance package involves only costs, not benefits. This is of particular concern where the business involved is foreign owned. Another risk is that assisted projects could 'crowd out' other investments, drawing resources away from potentially more productive uses elsewhere in the economy.

It is therefore critical that decisions about the funding of projects under the Strategic Investment Incentive Program be informed by rigorous analysis of the potential benefits and costs. The Commission also considers it important that there be clarity as to how the program's selection criteria, which presently are expressed in broad and general terms, are applied in practice. Similarly, the benefit-cost analyses undertaken as part of the assessment process should be made publicly available. Ultimately, transparency is the best means of ensuring that decisions are in the wider community's interests.

1 Setting the scene

Given its likely size and scope, the proposed Millennium Round of World Trade Organization (WTO) negotiations seems set to dominate the world trade policy scene. The importance of these negotiations is highlighted by the apparent rise in protectionist pressures in a number of countries, including the United States and the European Union.

WTO negotiations on agriculture and services are expected to resume in 2000. Both sectors are vital to Australia — agriculture because it continues to provide a major part of Australia's exports, and services because of its dominance in domestic economic activity and its growing importance in trade.

The WTO agenda also includes unresolved issues in trade-related aspects of intellectual property rights. The issues are narrow in scope, covering the use of geographic labelling and the protection of biotechnology. Again though, both are of interest to Australia.

The trade ministers of WTO member countries will meet in Seattle in late November 1999 to give final agreement to launch the Millennium Round and to discuss what other issues it should cover. Most developed countries are keen to negotiate further on protection of manufacturing products. Many developing economies, some still struggling to implement their Uruguay Round commitments, are less so.

In order to negotiate effectively, countries need good information about their own trade barriers as well as information about those of their trading partners.

To meet the information requirements of past WTO Rounds, international organisations and individual countries have built reasonably comprehensive information sets covering barriers to trade in agricultural and manufacturing products. For example, for many years the OECD has calculated 'consumer tax and producer subsidy equivalent' measures to summarise import protection and domestic market support regimes affecting the agricultural sectors of OECD member economies. UNCTAD has a comprehensive database on non-tariff barriers affecting merchandise trade. The WTO itself collected information on tariff protection of merchandise trade as part of the Uruguay Round. And for many years, the Productivity Commission and its predecessors have published comprehensive information on the tariff and non-tariff protection afforded to Australia's agricultural and manufacturing sectors.

In services, the situation is different. The Uruguay Round was only the first multilateral round to have services on its agenda. Much of the Uruguay Round involved negotiating the architecture of a services agreement — the General Agreement on Trade in Services, or GATS — rather than negotiating on protection levels. Member countries did provide substantial information about existing barriers to trade in services, but the usefulness of that information was limited in two important respects:

- it was primarily qualitative, providing little indication of the relative importance of diverse measures affecting trade in services; and
- because of the 'positive list' nature of the GATS schedules, it was seriously incomplete for many countries (Australia's schedules being no exception — see McGuire 1998).

This year's *Trade and Assistance Review* presents the first of a new series of estimates of barriers to services trade designed to address these shortcomings (chapter 2). The estimates are:

- quantitative, giving an indication of the relative importance of different barriers, including a measure of their impact on service prices; and
- more complete than the information in GATS schedules, because they draw on a much broader range of sources.

Estimates are provided for a range of countries, not just Australia. This is partly a consequence of the cross-country methodology used to estimate the price impact of barriers to services trade. Importantly though, it also helps to fill a major information gap for Australia as it prepares for the Millennium Round.

The estimates are the product of a three-year collaborative project between the Productivity Commission, the University of Adelaide and the Australian National University. The methodologies by which they have been derived are fully documented elsewhere. The results are summarised here in a simple, accessible and comparable form. The results available this year cover banking services, telecommunications and maritime transport. It is intended that results will be available for additional sectors next year.

In addition, this year's *Trade and Assistance Review* presents the Commission's usual estimates of effective rates of assistance to Australia's manufacturing and agricultural sectors (chapter 3), and information on Australia's budgetary assistance (chapter 4). These estimates and information help to reveal which groups in the community win and which groups lose from industry assistance. They can also highlight the net costs to the community of inappropriate assistance, and thus provide information and incentives for governments to adopt welfare-enhancing policies. There are some methodological and coverage differences between the two sets of estimates, as well as some areas of overlap. This two-pronged approach, while not conducive to consistency, allows a broader range of government assistance to be measured and thus aids transparency. The methodological and coverage issues are canvassed in Appendix A.

The Commission also outlines some recent and forthcoming issues in agricultural, manufacturing and services trade and assistance. Some issues are WTO-related, including possible negotiating strategies for services and intellectual property rights during the Millennium Round, Australia's quarantine risk assessment processes, the recent safeguard action for pigmeat, and the US action on imports of Australian lamb. Others have a mainly domestic focus, including recent reviews of liner shipping and air services, the performance of Australia's revamped anti-dumping system, and foreshadowed changes in assistance arrangements for the dairy industry. Each is dealt with in the relevant parts of chapters 2 and 3.

Finally, the Commission examines the recent granting of firm-specific budgetary assistance under the Government's Strategic Investment Incentive Program. The program was announced in the Government's *Investing for Growth* statement in December 1997, and was a response to the recommendations of the Mortimer and Goldsworthy inquiries which advocated the use of large-scale incentives to attract major investment projects. The Government recently foreshadowed an extension to the program to help compensate for the removal of the accelerated depreciation allowance, as part of the Government's response to the (Ralph) Review of Business Taxation. Aspects of the program's design and early operation are discussed in chapter 4.

2 Services

The service sectors account for almost 80 per cent of Australia's gross domestic product and around 20 per cent of the nation's exports.

The proposed WTO Millennium Round negotiations should provide an opportunity for Australia to further liberalise its service sectors, while simultaneously negotiating with its trading partners to liberalise theirs. Many of Australia's service sectors are already open to trade, and its negotiating position can be strengthened where it can inform its trading partners of the economic costs of their restrictions on trade in services.

In this chapter, after outlining data on services output and trade, the Commission:

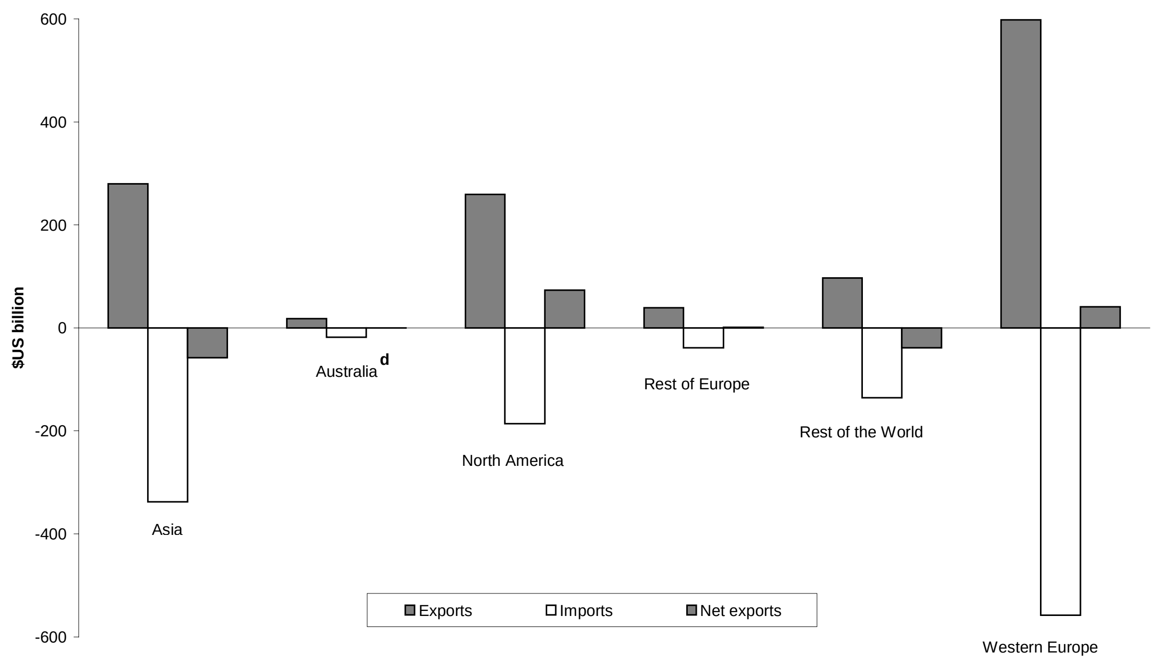
- summarises its new methodology for determining the extent and price impacts of a country's restrictions on services trade;
- presents data on the degree of restrictiveness in a range of countries, and the impacts of those countries' restrictions on prices in their own economies; and
- discusses a number of policy issues relating to the liberalisation of services trade.

2.1 Trade and production: a snapshot

World exports of services in 1997 were $US1312 billion, or about 20 per cent of total world exports (WTO 1998c). As would be expected, the flow of exports and imports of services is the greatest for Asia, North America and Western Europe (figure 2.1). North American and Western European economies are the largest net exporters of services. Asia and the 'rest of the world' are the largest net importers of services. Australia accounts for around 1.4 per cent of services trade (WTO 1998c).

Figure 2.1 **1997 world exports and imports of services for selected regions**[abc]

$US billion



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 (1998c).

Services account for about 20 per cent of Australia's total exports and total imports.[1] Over the past five years, services exports have grown at an average annual rate of 6 per cent, while services imports have grown at 4 per cent annually. The ABS reported a services trade deficit for Australia in 1998-99 of $800m (ABS 1999b).

In line with global trends, the services sector's share of domestic economic activity has grown considerably over recent decades. Today it accounts for some 77 per cent

[1] The ABS revised its trade in services data in 1998. The data are now expressed as a 'chain volume' measure rather than in 1989-90 constant prices. Royalty and copyright fees are now classified as service transactions (ABS 1999a, 1999c and1999d).

of gross domestic product and 80 per cent of employment (ABS 1998a and 1998b). Some of the largest service sectors are property and business, transport and storage, and finance and insurance (refer to table 2.1).

Table 2.1 **Service sectors share of gross product and employment, 1997-98**[a]

Services sector	*Gross product*[b]		*Employment*[c]	
	$m	*Percentage share*	*'000 persons employed*	*Percentage share*
Property and business	59 662	16.6	895	13.1
Transport and storage	33 464	9.3	394	5.8
Finance and insurance	32 398	9.0	312	4.6
Health and community	31 714	8.8	800	11.7
Retail trade	30 792	8.6	1 245	18.2
Wholesale trade	30 727	8.6	499	7.3
Construction	30 003	8.4	597	8.8
Education	23 788	6.6	584	8.5
Government administration and defence	23 185	6.5	340	5.0
Communication	15 665	4.4	149	2.2
Electricity, gas and water supply	14 292	4.0	65	0.9
Personal and other	12 122	3.4	340	5.0
Accommodation, cafes and restaurants	11 321	3.2	404	5.9
Cultural and recreation	9 904	2.8	203	3.0
Total services	**359 037**	**100.0**	**6 825**	**100.0**
Total services as a percentage of total gross product and total employment		**77.2**		**80.6**

a Figures may not add to totals due to rounding. **b** Gross product data is the industry gross value added at basic prices using the 1997-98 chain volume measures. Ownership of dwellings is excluded. Total output is the total gross value added. **c** Employment is the average number of persons employed during 1997-98.

Source: ABS (1998a and 1998b).

2.2 Measuring the effects of restrictions on trade in services

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.

Recent work involving the Commission, the University of Adelaide and the Australian National University, and partly funded by the Australian Research Council, has estimated the effect of restrictions on trade in selected services, not just for Australia but also for a range of our trading partners. A methodology has been developed which:

- classifies the different types of restrictions on trade in services;
- measures 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.[2]

The reason for distinguishing restrictions on establishment from restrictions on ongoing operations is so that the former can be modelled as restrictions on the movement of capital, while the latter can be modelled as restrictions on world trade in services. 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 1999).

[2] This classification is similar to the modes of supply used in the General Agreement on Trade in Services (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 the new entrants. Such restrictions may be more burdensome than necessary to achieve a competitive and efficient services sectors. For example, an economy may have a legislated government monopoly over the provision of workers' compensation insurance; or
- violate *national treatment* – that is, restrictions which treat foreigners less favourably than domestic service providers. Restrictions on national treatment often aim to restrict trade. For example, a foreign bank may be prohibited from entering a domestic financial service sector.

This classification leads to four categories in a two-by-two matrix. Table 2.2 provides an example.

Table 2.2 **An example of classifying banking trade restrictions**

	Establishment	*Ongoing operations*
Restrictions on market access	The number of banking licences is restricted.	Banks are restricted in the manner in which they can raise funds.
Restrictions on national treatment	The number of foreign bank licences is restricted.	Foreign banks are restricted in the manner in which they can raise funds.

Restrictiveness indexes for selected service sectors

A restrictiveness index uses available information on regulation to quantify the extent to which comparable economies have more or less restrictive trading regimes for services. An index summarises the nature and extent of restrictions on trade in services, although not their impacts on price.

A collaborative project by Commission staff and others calculated the restrictiveness indexes for three key services in selected economies — banking, telecommunications and maritime. McGuire and Schuele (1999) and McGuire et al (1999) used an index to summarise (non-prudential) trade restrictions on banking services, and restrictions on maritime services. Warren (1999a) used a similar index methodology for telecommunication services.

While these sectors comprise a minor part of all service industries, they are important in facilitating trade and, as noted earlier, the transport and financial sectors each account for around 9 per cent of gross services output. That said, maritime accounts for only a small proportion of the transport sector in Australia. The communications sector, of which telecommunications forms a part, accounts for just over 4 per cent of services output.

The studies compile information on restrictions in these sectors from a wide range of sources such as the WTO and, in the case of telecommunications, an International Telecommunications Union survey (ITU 1998).

A score is assigned to particular restrictions applied in an economy, under the classifications in table 2.1, and an overall score is calculated for each economy. Scores range from 0 to 1.[3] The greater the number of restrictions and/or the more these restrictions impede trade, the higher the index score for an economy. The assignment of scores is inevitably subjective, but it aims to capture the relative economic significance of various restrictive measures.

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 domestic market. These include those requirements which apply to local service providers as well as those additional requirements which apply only to foreigners.[4]

In arriving at an overall economy score, these studies generally did not seek to determine which restrictions, if any, that contributed to the score might be justified to enhance the efficiency of a service sector and which might not. In general, trade restrictions, by reducing competition in a services market, will reduce the efficiency of that market. However, sometimes regulation which limits competition is necessary to deal with 'market failure' and to meet particular social objectives. Most obviously, prudential regulation of banking services is generally considered necessary to ensure the stability of the financial system. For this reason, the study of banking services excluded all prudential regulation from its restrictiveness index. However, the studies did not incorporate any other judgments about the merits or

[3] Warren calculated a number of openness indexes for telecommunication services. The highest possible scores for these indexes ranged from 1 to 6. The Commission converted these openness indexes to restrictiveness indexes. These converted indexes are grouped into the same classifications as outlined in table 2.2 and normalised so that the scores range from 0 to 1.

[4] The Commission added Warren's national treatment and market access scores for telecommunications to obtain an index of restrictions applying to foreign operators.

otherwise of the restrictions they covered. This is partly because the merits of any other class of restrictions are more doubtful, and partly because of the practical difficulties involved in making case-by-case judgments of the merits of all the restrictions covered by the studies in each of the various economies studied.

The results of these cross-country studies indicate that Australia is liberal in the banking and telecommunications services sectors and moderately restrictive in maritime services (refer to table 2.3). Many of the economies experiencing financial difficulties in recent years, mainly Asian and South American, have medium to high restrictiveness index scores. These economies were also found to be the most discriminatory against foreign suppliers.

Table 2.3 **Summary of foreign restrictiveness index results for economies**[a]

Service sector	*Restrictiveness scores from 0 to 0.25*	*Restrictiveness scores from 0.26 to 0.45*	*Restrictiveness scores greater than 0.45*
Banking	Argentina, Australia, Austria, Belguim, Canada, Colombia, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Portugal, South Africa, Spain, Sweden, Switzerland, the United Kingdom, the United States and Venezuela.	Chile, South Korea, Singapore, Thailand and Turkey.	Brazil, India, Indonesia, Malaysia, the Philippines and Uruguay.
Tele-commun-ications	Australia, Austria, Belguim, Chile, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, Luxembourg, Netherlands, New Zealand, Sweden, Switzerland, the United Kingdom and the United States.	Argentina, Brazil, Canada, Ireland, the Philippines, Singapore and Spain.	Colombia, Greece, India, Indonesia, South Korea, Malaysia, Mexico, Portugal, South Africa, Thailand, Turkey, Uruguay and Venezuela.
Maritime[b]	Luxembourg, Singapore and the United Kingdom.	Argentina, Australia, Austria, Belguim, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Portugal, Spain, Sweden and Switzerland.	Brazil, Chile, Colombia, India, Indonesia, South Korea, Malaysia, Mexico, the Philippines, Thailand Turkey and the United States.

a Refer to tables 2.5, 2.7 and 2.9 for a full list of results. **b** Inland waterways were covered as part of the maritime study.

Banking

In McGuire and Schuele's study of trade restrictions applying in 1997 on banking services in 38 economies, Australia was rated as very liberal (refer to table 2.5 at the end of this chapter). Australia has few restrictions on the entry and ongoing operations of banks. The main restriction is a condition on a foreign bank acquiring any of the four major banks (PC 1998b). The Government will apply the principle that any large-scale transfer of Australian ownership of the financial system to foreigners would be contrary to the national interest (Costello 1997).

Brazil, India, Indonesia, Malaysia, the Philippines and Uruguay are the most restrictive economies for foreign banking services. Some of these economies prohibit or restrict foreign bank entry. Several also limit foreign equity participation in domestic banks to a minority shareholding. These economies also have varying restrictions on banks raising and lending of funds, and on expanding the number of banking outlets.

Telecommunications

In Warren's study of trade restrictions applying in 1998 on telecommunications services in 136 economies, Australia was rated as very liberal (table 2.7). Operators are free to enter and operate in Australia. However, the Government retains a specific foreign investment restriction on Telstra (IC 1997). Under the *Telstra (Dilution of Public Ownership) Act 1996*, aggregate foreign ownership is restricted to 35 per cent of the equity sold. Individual foreign investors are also limited to no more than 5 per cent of that equity (Fahey 1999).

Of the same 38 economies examined in the banking study (discussed above), Colombia, Greece, India, Indonesia, South Korea, Malaysia, Mexico, Portugal, South Africa, Thailand, Turkey, Uruguay and Venezuela are the most restrictive economies for domestic and foreign telecommunications operators. Telecommunications services in most of these economies are supplied by government-owned monopolies. In some instances, where some form of private participation in the communications industry is allowed, governments limit foreign investment to a minority or completely prohibit foreigners from investing in telecommunications operators. The provision of callback services and the use of private leased lines also tend to be prohibited.

Maritime

In the McGuire et al study of trade restrictions applying in 1998 on maritime services in 35 economies, Australia was rated as moderately restrictive (table 2.9). Australia imposes a number of restrictions on the entry and operation of maritime service suppliers. To provide coastal shipping services, a ship must also fly the national flag or have a special voyage permit. To fly the national flag, a ship must be majority Australian owned and registered under the *Shipping Act 1981*. Pilotage and towage are also mandatory in some ports and liner conferences are exempt from competition policy legislation (see section 2.3).

Brazil, Chile, Colombia, India, Indonesia, South Korea, Malaysia, Mexico, the Philippines, Thailand, Turkey and the United States are more restrictive than Australia. These economies are characterised by strict conditions on the right to fly the national flag, strict conditions on cabotage, and restrictions on the carriage of certain cargoes. Most of these governments also permit liner conferences to form and operate, and reserve the right to impose discretionary retaliatory measures against trading partners.

Price effects of restrictions for selected service sectors

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.

Kalirajan et al (1999) estimate the price effect of restrictions for banking, while Warren (1999b) calculates the price effects for telecommunications services. The estimated price effects generally reflect the number and/or strength of the restrictions imposed by economies, which are summarised in the restrictiveness index — that is, the greater the restrictiveness, the greater the price impact. Table 2.4 provides a summary of the estimated price effects.

Table 2.4 **Summary of foreign price effects for economies**[a]

Service sector	*Price effects from zero to 10 per cent*	*Price effects from 11 to 30 per cent*	*Price effects greater than 30 per cent*
Banking	Argentina, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Luxembourg, Netherlands, New Zealand, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.	Colombia, Japan, Mexico, South Africa and Venezuela.	Brazil, Chile, India, Indonesia, South Korea, Malaysia, the Philippines, Singapore Thailand, Turkey, and Uruguay.
Tele-communications	Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, South Korea, Luxembourg, Netherlands, New Zealand, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.	Colombia, Malaysia, Mexico, South Africa, Uruguay and Venezuela.	Indonesia, the Philippines Thailand and Turkey.

a Refer to tables 2.6 and 2.8 for a full list of results.

Banking

Kalirajan et al found that non-prudential trade restrictions on foreign banks raise the price, or ‘net interest margins’, of the different banking services studied by 5 to 60 per cent (table 2.6). That is, the prices of the banking services are estimated to be 5 to 60 per cent higher than they would be in the absence of these trade restrictions.

The estimated price effect of restrictions on Australia’s banking services is around 10 per cent, among the lowest found in the 38 economies studied.

At the higher end of the range, Chile, Singapore, South Korea, Thailand, Turkey and Uruguay have estimated price effects of between 30 and 45 per cent, while Brazil, India, Indonesia, Malaysia and the Philippines have estimated price effects of at least 45 per cent.

The effect of the domestic score alone — which measures those restrictions on ‘market access’ which apply equally to domestic and foreign banks — is estimated to raise the price of banking services by more than 20 per cent in some cases. Chile, Japan, South Korea, Malaysia, the Philippines and Uruguay all have market access price effects of greater than 10 per cent. That said, most economies studied have market access price effects of zero.

Telecommunications

From Warren's (1999b) study it is estimated[5] that, for the majority of the 38 economies, the price effect of all restrictions facing foreign telecommunications providers is less than 20 per cent. The estimated price effect of restrictions on Australia's telecommunications services is negligible.

Colombia, the Philippines, South Africa, Thailand and Turkey have large price effects ranging from an estimated 20 per cent to 75 per cent. Indonesia has the largest price effect of more than 100 per cent.

The estimated effect of the domestic score by itself can be to raise the price by up to 70 per cent (table 2.8).

2.3 Trade policy developments

Other developments are increasing the awareness of restrictions on trade in services and the benefits of reducing many of these restrictions. International trading forums are focusing increasingly on services issues and improving the transparency of restrictions on services. The WTO is expected to commence a new round of trade negotiations in 2000 and APEC member economies commit actions to liberalise trade in services each year. As well, in the past year, the Commission has contributed to the policy debate on reforming Australia's trading regime for air services and liner cargo shipping services.

World Trade Organization

The WTO's Third Ministerial Conference to be held in Seattle in late 1999 will be an important precursor to the proposed Millennium Round. The purpose of this meeting will be to seek agreement among WTO Members to hold the round and to determine the scope, structure and timeframes of the following negotiations. Among

5 Warren (1999b) produced 'quantity impact' and 'tariff equivalent' measures for restrictions on market access and national treatment in telecommunications. The Commission has converted the tariff equivalent measures to price effect measures.

other things, the trade ministers will discuss whether negotiations should proceed:

- on an integrated basis, or with ongoing agenda items being dealt with separately from additional items;
- on a sector-by-sector basis, or as a total package — the former allowing rapid progress on non-contentious issues, while the latter facilitating cross-sectoral trade-offs; and
- via ‘request and offer’, or by some other mechanism.

Such procedural issues will bear significantly on the dynamics of the negotiations.

The WTO has recently released a number of sectoral papers on services. They outline the nature of specific services, the structure of a services market, and commitments made under the GATS. The papers provide background information to stimulate discussion by Members on issues for services sectors. They show that Members have made more commitments in financial and professional services than in other service sectors. Increasing the number and quality of commitments in the next round of negotiations will be a move towards further liberalisation.

With respect to the negotiations themselves, negotiators will need to focus on whether restrictions applying to supply by foreigners are necessary. Discriminatory restrictions usually aim to deliberately restrict trade in services. The fact that they go beyond the restrictions imposed on domestic services providers immediately casts doubt on whether they are necessary to ensure a competitive and efficient service sectors. As the earlier price impact work shows, trade restrictions increase the price of services. This is likely to mean adverse effects for other sectors of an economy.

However, negotiations should also aim to improve market access for all entrants, not just foreigners. Dee et al (1999) argue that liberalising trade for domestic and foreign service providers together should be a better approach than only reducing discriminatory restrictions on foreign service providers. This is because reducing discriminatory restrictions on foreigners alone can have a negative impact on the level of services supplied by domestic firms. It should result in lower prices and higher total sales, but domestic service suppliers will end up with a smaller share of this market. However, if restrictions that affect foreign and domestic service providers equally are reduced, all service providers will have the same opportunities to increase the amount of services they supply in an expanding market.

Recent modelling work by Commission staff provides an indication of the benefits that could flow if Australia is successful in negotiating to improve access to services markets with its trading partners. Dee and Hanslow (1999)[6] projected an increase in world real income of some US$250 billion (or about 1 per cent) as a result of eliminating all post-Uruguay Round trade barriers. More than half would come from liberalising services trade. Australia's real annual income would be higher by about US$1.9 billion from global liberalisation of services trade. These results are the projected gains in annual income, about ten years after the liberalisation has occurred and the associated resource adjustments have taken place. While projections of this nature need to be interpreted with caution, they nevertheless provide a useful indication of the gains available from further liberalisation of services trade.

Australia's strategy for negotiating on services could comprise an approach to negotiate on all service sectors with a more detailed strategy for specific services sectors. The aim for all service sectors could be to liberalise restrictions on 'establishment'. For each service sector, important sector-specific restrictions could be identified, such as nationality requirements for professional services, and the negotiations could focus on liberalising these sector-specific restrictions.

Australia might focus on negotiating to open the more restricted foreign markets — generally, Asian and South American economies. As discussed above, these economies are more restricted than others in banking, telecommunications and maritime services. Opening up these economies, with appropriate attention to prudential requirements, will not only benefit Australia's and other economies' access, but also improve efficiency within the economies where trade restrictions remain substantial.

Asia Pacific Economic Cooperation

At the September 1999 Economic Leaders Meeting in New Zealand, APEC Leaders continued to pursue trade liberalisation and regulatory reform. Most of the APEC initiatives were to further harmonise regulation and enhance financial system stability within the region. APEC Leaders also strongly supported the upcoming WTO 2000 round of negotiations.

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6 The effects of liberalisation were examined using version 4.1 of the Global Trade Analysis Project (GTAP) model and database of world trade. The model was modified for services delivered via 'commercial presence' through the inclusion of bilateral foreign direct investment flows and to allow for income earned abroad. The model was used to examine the importance of multilateral liberalisation of services trade, relative to liberalisation of trade in agricultural and manufactured products (see Dee and Hanslow 1999).

The major initiatives adopted by APEC Leaders were to:

- *liberalise air services* — APEC Leaders agreed to eliminate some restrictions on air-related services and freight services, to allow multiple airline designations and to permit airlines to cooperate through code-sharing;
- *strengthen financial systems* — in the wake of the Asian financial crises, APEC supported enhancing supervision of financial markets, developing domestic bond markets, and applying APEC corporate governance principles to financial institutions; and
- *enhance competition* — the APEC Principles to Enhance Competition and Regulatory Reform were adopted by member economies. These principles aim to enhance the role of competition to improve efficiency and the quality of regulation in APEC member economies.

Australia, as part of its contribution to liberalisation within APEC, submitted its 1999 Individual Action Plan (IAP). An IAP is submitted annually by each member economy to update its commitments on liberalising trade in goods and services. In services, Australia made the following substantive commitments in the APEC forum.

- *Relaxing foreign investment restrictions* — Australia committed to liberalising foreign investment for business acquisitions, property and airlines. Subject to the passage of regulations through Parliament, the foreign investment notification threshold will increase to $50m for business acquisitions and developed, non-residential commercial real estate. The allowable level of foreign investment in Australian international airlines, other than Qantas, will be increased from 25 per cent for individuals and 35 per cent for aggregate foreign interests to 49 per cent for both.
- *Negotiating to liberalise air services* — Australia will negotiate reciprocal 'open skies' arrangements with like-minded countries subject to meeting national interest requirements. Where negotiating for open skies is not an option, Australia will aim to negotiate for the most liberal arrangements. This commitment is consistent with the Commission's recommendations in its international air services report (see below).
- *Liberalising postal services* — Australia also committed, subject to the passage of legislation through Parliament, to remove from 1 July 2000 the Government-owned monopoly on postal services for incoming international mail and some domestic mail of certain weight.

International air services

International air services are governed by a system of bilateral air services arrangements (ASAs) between economies. Trade in air services can only occur where it is explicitly permitted in ASAs, which set out terms and conditions under which airlines can fly. Typically they specify capacity, frequency, routes, cities, ownership provisions, and safety certification and price approval processes. ASAs influence the nature of competition between airlines by controlling market entry and the quantity and variety of the rights allocated to particular airlines.

Australia has 51 ASAs with its bilateral partners. These ASAs facilitate the operation of international services between Australia and other countries, but also contain a number of restrictions on ownership, capacity, freedom rights, city designation, cabotage, stopovers, codesharing and tariffs.

The Commission's inquiry into international air services made a number of recommendations to improve the efficiency of Australia's airline industry (PC 1998a). Major findings are summarised below.

- *Benefits of reciprocal 'open skies' agreements* — A bilateral 'open skies' policy which removes restrictions on access to each country's markets would loosen the regulation which constricts airline growth. Airlines would be able to respond quickly to market opportunities and pressures. Consumers would benefit from greater capacity and frequency, expanded networks, innovative travel products and competitive fares. The costs to governments and airlines would also be reduced.
- *Problems with the regime for designating international airlines* — The Commission found the greatest bilateral constraint on international air services to be national designation. This requires national flag carriers to be locally owned and controlled and aims to ensure that safety and technical standards of airlines are regulated effectively. However, domestic ownership is not a prerequisite to ensure this safety.
- *Benefits of including air transport services in the GATS* — International air services could be negotiated as part of a multilateral basis in the WTO round in 2000. A liberal multilateral agreement under the GATS would drive progress towards enhancing international competition by replacing inefficient carriers and removing restrictions on entry. An agreement under the GATS would be easier to administer and comply with than the current bilateral system.

The Government accepted the Commission's recommendations in these areas, along with several other (but not all) of the recommendations in the report. Further detail on the Government's response is provided in the Commission's *Annual Report 1998-99* (PC 1999b).

International liner cargo shipping services

Many countries, including Australia, which have pro-competitive legislation — such as Australia's *Trade Practices Act 1974* — provide special conditional exemptions for liner conferences.

Liner conferences, or groupings of liner shipping operators who coordinate services, account for the majority of liner shipping capacity on major global routes. Conference members are typically permitted to engage in price setting, capacity rationalisation, revenue and cost pooling arrangements, and customer loyalty agreements.

The supply of international shipping services differs from many other sectors. A shipping company usually incurs high fixed costs when providing a shipping service on a route. Shipping service providers may be unwilling to risk incurring these fixed costs where demand is uncertain. Cooperation among shipping companies can achieve economies of scale and scope while allowing them to provide regular scheduled and coordinated services at reasonable prices. Cooperation on a particular route can reduce demand uncertainty and encourage shipping companies to commit larger and more efficient vessels.

However, concerns are sometimes expressed that sheltering liner conferences from competition may give shipping operators market power. This would occur were there is a lack of competition between conferences and non-conference operators such that conference members could charge excessive prices or provide inadequate service.

The Commission has been considering these and other issues as part of its current inquiry into Part X of the *Trade Practices Act 1974.*

Part X describes the conditions under which international liner shipping operators are permitted to form conferences to provide joint shipping services for Australian exporters and importers. The stated aim of Part X is to ensure that Australian exporters have continued access to outward liner cargo shipping services of adequate frequency and reliability at internationally competitive freight rates.

The Commission's position paper on international liner cargo shipping services found that preliminary evidence suggests that Part X, together with effective competition in liner shipping markets, has promoted the provision of efficient liner shipping services to Australian exporters (PC 1999a). The benefits of conferences might be best passed through to Australian shippers by a balanced and comparatively non-interventionist framework which recognises the role of conferences while also promoting market competition and countervailing power.

Table 2.5 **Restrictiveness indexes for banking services**[ab]

score

Economy	*Domestic*			*Foreign*		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	-	-	-	0.03	0.04	0.07
Australia	-	-	-	0.09	0.03	0.12
Austria	-	-	-	0.03	0.04	0.07
Belgium	-	-	-	0.03	0.04	0.07
Brazil	-	0.01	0.01	0.39	0.12	0.51
Canada	-	-	-	0.03	0.04	0.07
Chile	0.19	0.10	0.29	0.27	0.13	0.40
Colombia	0.05	-	0.05	0.08	0.15	0.23
Denmark	-	-	-	0.03	0.04	0.07
Finland	-	-	-	0.03	0.04	0.07
France	-	-	-	0.03	0.04	0.07
Germany	-	-	-	0.03	0.04	0.07
Greece	-	-	-	0.03	0.04	0.07
Hong Kong	-	0.04	0.04	0.03	0.07	0.09
India	0.05	-	0.05	0.31	0.29	0.60
Indonesia	-	0.07	0.07	0.37	0.18	0.55
Ireland	-	-	-	0.03	0.04	0.07
Italy	-	-	-	0.03	0.04	0.07
Japan	-	0.13	0.13	0.03	0.17	0.19
South Korea	-	0.19	0.19	0.21	0.22	0.43
Luxembourg	-	-	-	0.03	0.04	0.07
Malaysia	0.19	0.08	0.27	0.38	0.26	0.65
Mexico	-	-	-	0.13	0.04	0.17
Netherlands	-	-	-	0.03	0.04	0.07
New Zealand	-	-	-	0.03	0.03	0.06
Philippines	0.10	0.05	0.14	0.37	0.16	0.53
Portugal	-	-	-	0.03	0.04	0.07
Singapore	-	0.11	0.11	0.13	0.25	0.37
South Africa	-	-	-	0.03	0.16	0.19
Spain	-	-	-	0.03	0.04	0.07
Sweden	-	-	-	0.03	0.04	0.07
Switzerland	-	-	-	0.03	0.05	0.08
Thailand	-	-	-	0.24	0.15	0.39
Turkey	0.05	-	0.05	0.27	0.10	0.37
United Kingdom	-	-	-	0.03	0.04	0.07
United States	-	-	-	0.03	0.04	0.06
Uruguay	0.14	-	0.14	0.18	0.29	0.46
Venezuela	-	-	-	0.07	0.10	0.17

- Nil. **a** Figures may not add 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: McGuire and Schuele (1999).

Table 2.6 **Price effect measures for banking services**[a]

percentage

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	-	-	-	2.53	2.81	5.34
Australia	-	-	-	7.08	2.22	9.31
Austria	-	-	-	2.52	2.80	5.32
Belgium	-	-	-	2.52	2.80	5.32
Brazil[b]	-	0.87	0.87	35.06	10.50	45.56
Canada	-	-	-	2.53	2.81	5.34
Chile	15.47	7.73	23.20	22.74	11.26	34.00
Colombia	3.54	-	3.54	6.47	11.88	18.35
Denmark	-	-	-	2.52	2.80	5.32
Finland	-	-	-	2.52	2.80	5.32
France	-	-	-	2.52	2.80	5.32
Germany	-	-	-	2.52	2.80	5.32
Greece	-	-	-	2.52	2.80	5.32
Hong Kong	-	2.65	2.65	1.97	4.94	6.91
India[b]	3.54	-	3.54	28.58	26.50	55.08
Indonesia	-	5.35	5.35	32.91	16.42	49.33
Ireland	-	-	-	2.52	2.80	5.32
Italy	-	-	-	2.52	2.80	5.32
Japan	-	10.03	10.03	2.05	13.22	15.26
South Korea	-	14.93	14.93	18.15	18.58	36.73
Luxembourg	-	-	-	2.52	2.80	5.32
Malaysia	15.38	6.73	22.11	35.92	24.69	60.61
Mexico[b]	-	-	-	10.48	2.92	13.40
Netherlands	-	-	-	2.52	2.80	5.32
New Zealand[b]	-	-	-	2.52	2.18	4.69
Philippines	7.32	3.66	10.99	33.28	14.08	47.36
Portugal	-	-	-	2.52	2.80	5.32
Singapore	-	8.15	8.15	10.69	20.76	31.45
South Africa[b]	-	-	-	2.64	12.27	14.90
Spain	-	-	-	2.52	2.80	5.32
Sweden	-	-	-	2.52	2.80	5.32
Switzerland	-	-	-	2.24	3.71	5.95
Thailand	-	-	-	20.56	12.50	33.06
Turkey[b]	3.54	-	3.54	23.12	8.43	31.54
United Kingdom	-	-	-	2.52	2.80	5.32
United States	-	-	-	1.95	2.80	4.75
Uruguay[b]	11.00	-	11.00	15.35	24.99	40.34
Venezuela[b]	-	-	-	5.35	8.09	13.44

- Nil. **a** Figures may not add to total due to rounding. **b** The estimates for these economies are extrapolated from Kalirajan et al (1999).

Source: Kalirajan et al (1999).

Table 2.7 **Restrictiveness indexes for telecommunications services**[ab]

score

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	0.12	0.17	0.29	0.12	0.17	0.29
Australia	0.04	-	0.04	0.04	-	0.04
Austria	0.13	-	0.13	0.13	-	0.13
Belgium	0.03	0.07	0.10	0.13	0.07	0.20
Brazil	0.17	0.03	0.21	0.28	0.03	0.31
Canada	0.04	0.10	0.14	0.14	0.30	0.44
Chile	0.02	0.07	0.09	0.02	0.07	0.09
Colombia	0.10	0.10	0.20	0.16	0.30	0.46
Denmark	0.03	-	0.03	0.03	-	0.03
Finland	-	-	-	-	-	-
France	0.05	-	0.05	0.21	-	0.21
Germany	0.05	-	0.05	0.05	-	0.05
Greece	0.16	0.10	0.26	0.16	0.30	0.46
Hong Kong	0.11	0.10	0.21	0.11	0.10	0.21
India	0.19	0.20	0.39	0.29	0.40	0.69
Indonesia	0.14	0.20	0.34	0.27	0.40	0.67
Ireland	0.19	-	0.19	0.35	-	0.35
Italy	0.14	-	0.14	0.14	-	0.14
Japan	0.04	-	0.04	0.04	-	0.04
South Korea	0.15	0.20	0.35	0.28	0.40	0.68
Luxembourg	0.17	-	0.17	0.17	-	0.17
Malaysia	0.04	0.20	0.24	0.18	0.40	0.58
Mexico	0.03	0.20	0.23	0.13	0.40	0.53
Netherlands	0.03	-	0.03	0.03	-	0.03
New Zealand	0.03	-	0.03	0.03	-	0.03
Philippines	-	0.13	0.13	0.12	0.33	0.45
Portugal	0.11	0.20	0.31	0.11	0.40	0.51
Singapore	0.21	0.13	0.34	0.31	0.13	0.44
South Africa	0.19	0.20	0.39	0.19	0.40	0.59
Spain	0.18	0.03	0.21	0.18	0.23	0.41
Sweden	0.10	-	0.10	0.10	-	0.10
Switzerland	0.20	-	0.20	0.20	-	0.20
Thailand	0.23	0.20	0.43	0.39	0.40	0.79
Turkey	0.27	0.20	0.47	0.40	0.40	0.80
United Kingdom	-	-	-	-	-	-
United States	-	0.03	0.03	-	0.03	0.03
Uruguay	0.22	0.13	0.35	0.22	0.33	0.55
Venezuela	0.16	0.20	0.36	0.16	0.40	0.56

- Nil. **a** Figures may not add 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: Calculated from Warren (1999a).

Table 2.8 **Price effect measures for telecommunications services**[a]

percentage

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	1.60	2.22	3.81	1.60	2.22	3.81
Australia	0.31	-	0.31	0.31	-	0.31
Austria	0.85	-	0.85	0.85	-	0.85
Belgium	0.22	0.44	0.65	0.87	0.44	1.31
Brazil	3.19	0.61	3.81	5.07	0.61	5.68
Canada	0.30	0.76	1.07	1.08	2.29	3.37
Chile	0.40	1.28	1.68	0.40	1.28	1.68
Colombia	5.28	5.28	10.55	8.44	15.83	24.27
Denmark	0.20	-	0.20	0.20	-	0.20
Finland	-	-	-	-	-	-
France	0.34	-	0.34	1.43	-	1.43
Germany	0.32	-	0.32	0.32	-	0.32
Greece	1.58	0.98	2.56	1.58	2.94	4.52
Hong Kong	0.65	0.61	1.26	0.65	0.61	1.26
India[b]	ne	ne	ne	ne	ne	ne
Indonesia	29.66	41.04	70.70	56.34	82.08	138.41
Ireland	1.46	-	1.46	2.67	-	2.67
Italy	1.00	-	1.00	1.00	-	1.00
Japan	0.26	-	0.26	0.26	-	0.26
South Korea	1.83	2.47	4.30	3.49	4.95	8.43
Luxembourg	0.65	-	0.65	0.65	-	0.65
Malaysia	1.23	5.50	6.73	5.08	11.00	16.08
Mexico	0.81	5.43	6.24	3.58	10.85	14.43
Netherlands	0.20	-	0.20	0.20	-	0.20
New Zealand	0.27	-	0.27	0.27	-	0.27
Philippines	-	21.43	21.43	19.28	53.57	72.85
Portugal	1.35	2.45	3.80	1.35	4.90	6.25
Singapore	1.28	0.82	2.10	1.90	0.82	2.72
South Africa	6.65	7.12	13.77	6.65	14.24	20.89
Spain	1.71	0.32	2.03	1.71	2.22	3.93
Sweden	0.65	-	0.65	0.65	-	0.65
Switzerland	1.23	-	1.23	1.23	-	1.23
Thailand	15.88	14.01	29.90	27.09	28.03	55.12
Turkey	11.20	8.40	19.59	16.74	16.79	33.53
United Kingdom	-	-	-	-	-	-
United States	-	0.20	0.20	-	0.20	0.20
Uruguay	4.74	2.87	7.61	4.74	7.18	11.92
Venezuela	4.21	5.37	9.57	4.21	10.73	14.94

- Nil. **ne** not estimated **a** Figures may not add to total due to rounding. **b** India has a very large quantity impact measure which produces negative tariff equivalents and negative price effects.

Source: Calculated from Warren (1999b).

Table 2.9 **Restrictiveness indexes for maritime services**[ab]

score

Economy	Domestic			Foreign		
	Establishment	*Ongoing operations*	*Total*	*Establishment*	*Ongoing operations*	*Total*
Argentina	0.01	0.08	0.10	0.05	0.29	0.33
Australia	0.06	0.07	0.13	0.19	0.23	0.42
Austria	0.13	-	0.13	0.15	0.19	0.35
Belgium	0.10	0.05	0.15	0.13	0.21	0.35
Brazil	0.13	0.10	0.23	0.15	0.37	0.52
Canada	0.01	0.08	0.09	0.04	0.28	0.32
Chile	0.03	0.10	0.12	0.20	0.30	0.50
Colombia	0.09	0.09	0.18	0.24	0.23	0.47
Denmark	0.01	0.07	0.08	0.05	0.24	0.28
Finland	0.04	0.07	0.11	0.07	0.24	0.32
France	0.06	0.07	0.13	0.09	0.24	0.33
Germany	0.10	0.09	0.19	0.13	0.26	0.39
Greece	0.04	0.09	0.13	0.07	0.20	0.28
Hong Kong	0.01	0.08	0.09	0.15	0.26	0.40
India	0.14	0.11	0.25	0.26	0.34	0.61
Indonesia	0.10	0.11	0.21	0.24	0.32	0.56
Ireland	0.09	0.07	0.15	0.17	0.18	0.35
Italy	0.13	0.05	0.18	0.16	0.22	0.38
Japan	0.10	0.05	0.15	0.13	0.28	0.41
South Korea	0.10	0.19	0.28	0.23	0.36	0.58
Luxembourg	0.06	0.05	0.10	0.09	0.16	0.25
Malaysia	0.12	0.13	0.25	0.26	0.26	0.52
Mexico	0.12	0.05	0.17	0.26	0.22	0.48
Netherlands	0.10	0.05	0.15	0.13	0.22	0.35
New Zealand	0.01	0.09	0.10	0.09	0.26	0.35
Philippines	0.03	0.14	0.17	0.27	0.37	0.64
Portugal	0.01	0.07	0.08	0.05	0.21	0.26
Singapore	0.01	0.09	0.10	0.04	0.17	0.21
Spain	0.12	0.07	0.19	0.15	0.24	0.39
Sweden	0.10	0.07	0.17	0.18	0.24	0.42
Switzerland	0.10	-	0.10	0.22	0.13	0.35
Thailand	-	0.13	0.13	0.24	0.36	0.60
Turkey	0.03	0.05	0.08	0.26	0.23	0.49
United Kingdom	0.01	0.05	0.06	0.05	0.19	0.24
United States	0.08	0.10	0.17	0.20	0.40	0.60

- Nil. **a** Figures may not add 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: McGuire et al (1999).

3 Agriculture and manufacturing

The agricultural and manufacturing sectors together account for around 20 percent of Australia's gross domestic product and are the source of nearly 40 per cent of the nation's exports.

Assistance to these sectors, which has been reduced during the last decade, declined again in 1997-98. These falls primarily reflect the effects of ongoing reductions in import tariffs on the manufacturing side, and the unwinding of various statutory marketing arrangements in the agricultural sector.

Several other trade and assistance policy matters affecting these sectors, and in particular affecting specific industries within the agricultural sector, have emerged recently. These include a recent WTO decision to disallow Australia's ban on Canadian salmon imports, a decision by the United States to impose a tariff on lamb imports, the provision of a $1.8 billion restructuring package for the dairy industry subject to deregulation in the sector, an assistance package for the pigmeat industry following its application for temporary 'safeguard' import protection, and changes to Australia's anti-dumping assessment system.

Further, agricultural trade barriers are scheduled to be negotiated during the proposed WTO Millennium Round. Access to export markets is crucial for the viability of many Australian farmers, so the sector has a large stake in the success of these negotiations. Aspects of intellectual property rights, which affect both the agricultural and manufacturing sectors, are also on the WTO agenda.

Against this background, in this chapter the Commission:

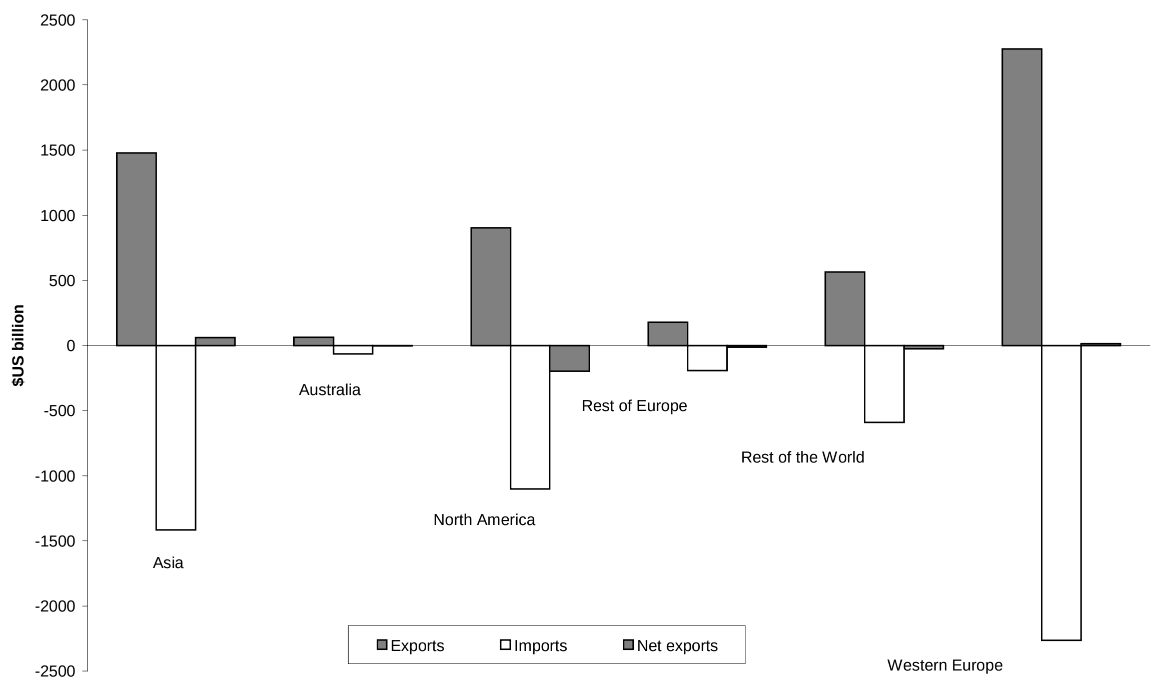
- summarises the output and trade performance of agriculture and manufacturing;
- explains the Commission's assistance measures;
- provides estimates of assistance to the two sectors, and discusses existing and foreshadowed assistance arrangements applying to them;
- examines recent anti-dumping activity and the new assessment system; and
- discusses other trade policy issues which affect one or both of the sectors.

3.1 Trade and production: a snapshot

In 1997, global agricultural exports totalled $US580 billion and global exports of manufactures totalled $US3927 billion, or around 10 per cent and 60 per cent of total world exports, respectively (WTO 1998c). Not surprisingly, the flow of exports and imports of merchandise — which includes mining, as well as agriculture and manufacturing[1] — is largest in Asia, North America and Western Europe (figure 3.1). Asia and Western Europe are the largest net exporters of merchandise, while North America and the 'Rest of the World' are the largest net importers. Australia accounts for 1.2 per cent of merchandise trade (WTO 1998c).

Figure 3.1 **World exports and imports of merchandise for selected region, 1997**[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.

1 The Commission has sometimes used WTO merchandise trade figures in this section due to the lack of reliable disaggregated data on agriculture and manufacturing for the selected regions. The WTO reports that 'mining' exports account for 10 per cent of total world exports, compared with 70 per cent for agriculture and manufacturing combined. Hence, agriculture and manufacturing account for more than 85 per cent of the merchandise category. Under WTO classifications, 'agriculture' includes food and raw materials.

Data source: WTO (1998c).

Agriculture and manufacturing each account for around 20 per cent of Australia's total exports (ABARE 1999). Over the past five years, Australia's agricultural exports have increased on average by 12 per cent annually and manufacturing exports by 5 per cent annually (ABS 1997 and 1999f). Imports in these two sectors have been increasing at around 6 per cent per annum over the same period. In 1998-99, Australia recorded a trade deficit in merchandise of almost $8 billion (ABS 1999b).

Although agriculture and manufacturing generate a similar level of exports, the sectors have a very different trade orientation. For agriculture, Australia exports around 65 to 70 per cent of its domestic production, whereas for manufacturing, exports are far less significant as a proportion of domestic production.[2]

Both sectors have declined in relative importance over recent decades, despite consistent growth in farm output and a more than doubling of manufacturing output over the last three decades. The farm sector's share of gross domestic product has fallen from 14 per cent in the 1950s to around 3 per cent today, and its share of employment has halved from 10 per cent in the 1960s to 5 per cent now (ABARE 1998). Manufacturing's shares of gross domestic product and employment have also declined, from around 20 per cent in the 1980s to approximately 15 per cent today. These declines are attributable to the fact that other sectors, particularly services and mining, have been growing much more rapidly.

Some of the largest manufacturing sectors are machinery and equipment (which includes the passenger motor vehicle industry), the food sector, metal products, printing, publishing and recording, and petroleum, coal and chemical products.

Agricultural output is split roughly equally between livestock and related products, and crops.

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[2] Precise estimates of an industry's exports as a percentage of the industry's domestic production are difficult to make as data are collected on different bases. In ABS statistics, the value of domestic production is gross value added and the value of exports is 'free on board' (FOB). The FOB data include not only the value of a product but also the value added after the product was produced. For example, a farm product valued at FOB is usually the value of production at the farm gate *plus* the value added between the farm gate and the product landing on the dock. Using the FOB figures, the relevant figure for agriculture is around 80 per cent. However, the Australian Bureau of Agricultural and Resource Economics (ABARE) has advised the Commission that, when the post-farm gate component is removed, the figure drops to between 65 and 70 per cent. Equivalent data are not available for manufacturing.

3.2 Scope of the Commission’s assistance estimates

Because of their different trade orientations, the manufacturing and agricultural sectors traditionally have been afforded different forms of assistance. Manufacturing has been assisted mainly through tariffs, quotas and other forms of protection against imports. For agriculture, assistance has taken the form mainly of statutory marketing arrangements, designed to allow producers to combine together to limit competition for domestic sales and thereby allow higher prices to be charged. In some cases, high returns from the domestic market have been used to subsidise agricultural exports. As well, both sectors benefit from various budgetary assistance arrangements, including support for research and development (R&D) and tax concessions on inputs.

The Commission has adopted several measures to help quantify and compare diverse assistance arrangements such as these. The measures are explained in detail in box A.2 of appendix A. In brief, the key measures are:

- the *nominal rate of assistance*, which is a measure of assistance to an industry’s or activity’s outputs;
- 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 can be used to help understand 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 people face to produce and, to a lesser extent, to consume certain commodities.

The effective rate measure is particularly useful as it:

- can include a wide range of industry assistance;
- takes into account both the benefits and penalties of assistance to individual industries and activities; and
- provides a summary indicator of the extent to which the overall assistance structure advantages or disadvantages an industry or activity relative to others.

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 and manufacturing estimates 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 more generally, are discussed in more detail in appendix A.

3.3 Assistance to agriculture

The agricultural sector receives assistance from a wide range of government programs and policies. 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. The assistance associated with these measures is partly offset by tariffs and other taxes on the inputs used in agriculture.

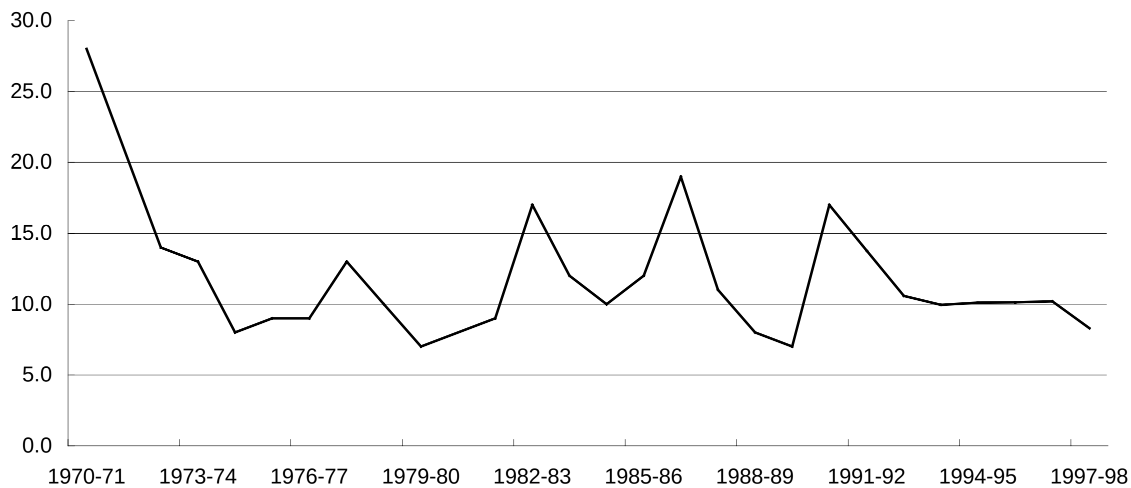
For this year's *Trade and Assistance Review*, the Commission has updated the estimates of assistance to agriculture to 1997-98. It also presents revised estimates for 1996-97, along with previously published estimates for earlier years. Nominal and effective rates of assistance for agriculture are reported in tables 3.1 and 3.2 and in figures 3.2, 3.3 and 3.4. The net subsidy equivalent (NSE) is presented in table 3.3. 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 1970-71 are presented in figure 3.2.

Figure 3.2 **Average effective rates of assistance for agriculture, 1970-71 to 1997-98**

per cent



Data source: Commission estimates.

While assistance afforded by various agricultural arrangements has declined over the past decade, 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 has been relatively stable.

Compared with 1996-97, overall agricultural assistance declined in 1997-98.

- The average nominal rate of assistance to agriculture fell from 3.3 per cent to 2.8 per cent. Nominal rates rose for market milk, wine grapes and dried vine fruit, but fell or remained the same for the rest. The largest falls were in the tobacco and sugar sectors.
- The average effective rate of assistance for agriculture fell from 10.2 per cent to 8.3 per cent in 1997-98. Again, there were rises in effective assistance for market

milk, wine grapes and dried vine fruit. The largest falls were for sugar, tobacco and manufacturing milk.

- The fall in the net subsidy equivalent (NSE) for agriculture was $171 million, with assistance to value adding factors falling by $68 million and assistance to output falling by $103 million. Assistance to inputs was virtually unchanged.

The fall in agricultural assistance mainly reflects the removal of import tariffs and of domestic monopoly pricing for sugar, the phasing down of assistance for tobacco and manufacturing milk, and the removal of government loan guarantees and reductions in research assistance in a number of sectors. These developments are discussed in more detail below.

Overall, the assistance provided to the dairy industry dominates the estimates for the agricultural sector. If the dairy industry was excluded, the 1997-98 effective rate of assistance for agriculture would be 3.2 per cent.

The variation in assistance across agricultural commodities increased slightly in 1997-98. The standard deviation of the effective rate rose from 55.5 percentage points to 62.8 percentage points, although the standard deviation of the nominal rate was virtually unchanged at 10.9 percentage points (table 3.1).

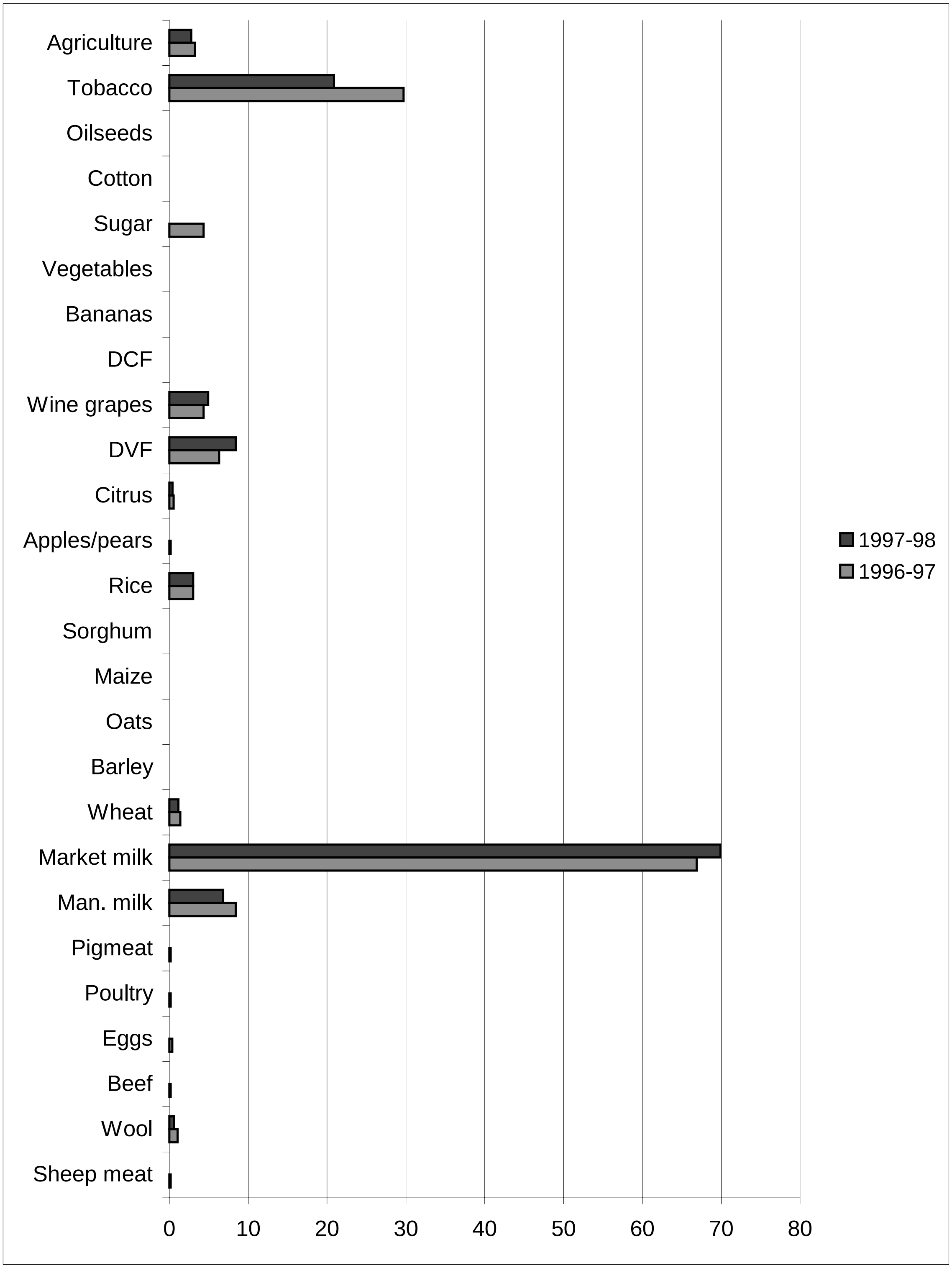
Developments in sectoral and commodity assistance

Agricultural assistance fell in total and across most agricultural sectors in 1997-98. The biggest falls in net subsidy equivalents (NSEs) were in the sugar, beef, wheat, manufacturing milk and wool sectors. Recent policy announcements mean that further falls are likely to have occurred in the 1998-99 financial year.

Despite this, a range of assistance remains in place for several agricultural industries. These measures are discussed below, as are assistance arrangements for those sectors where recent changes have been made or announced.

Figure 3.3 **Nominal rates of assistance to agricultural commodities, 1996-97 and 1997-98**

per cent

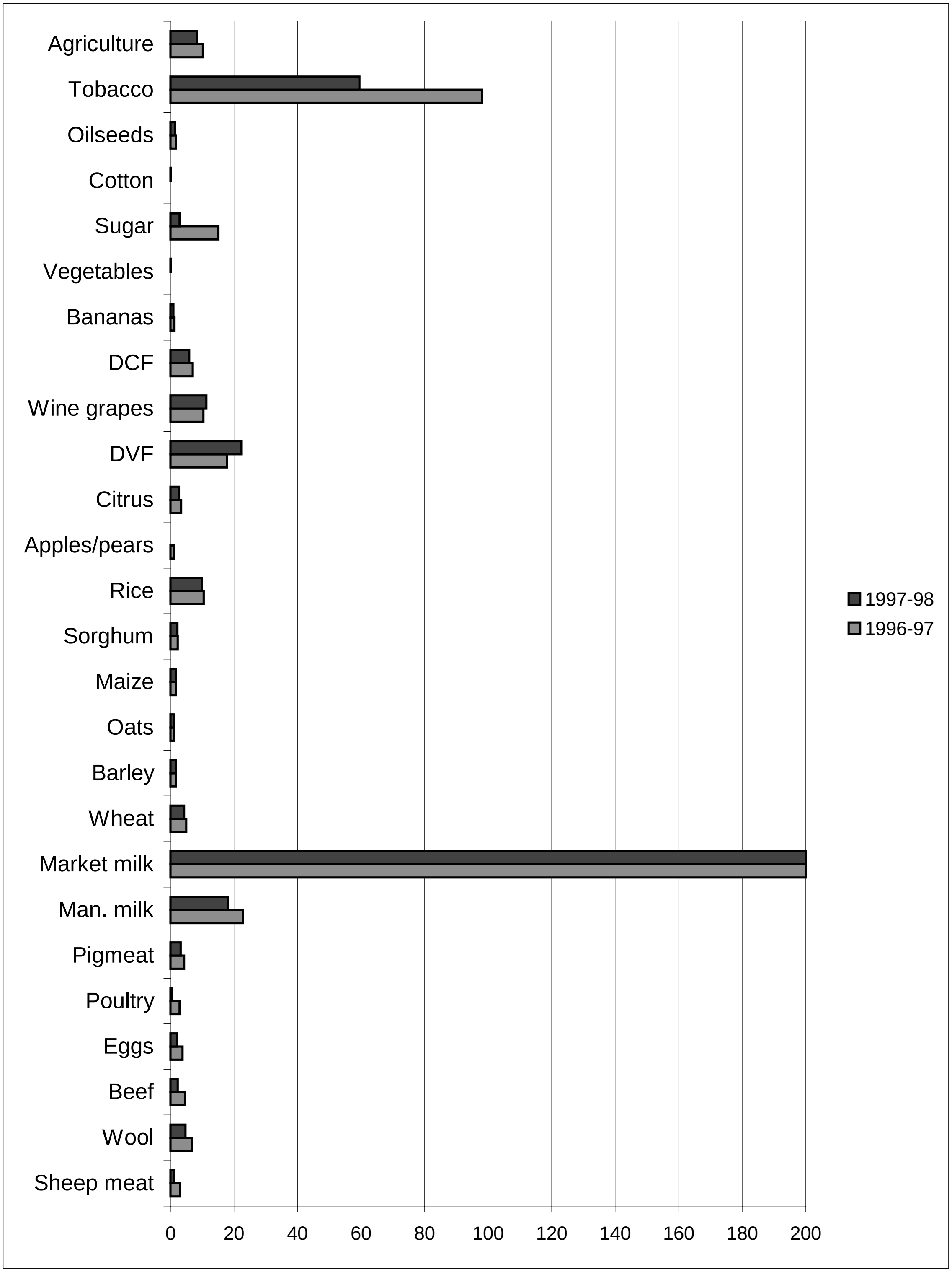


Notes: [a] DCF: Deciduous Canning Fruits. [b] DVF: Dried Vine Fruits. [c] Man. Milk: Manufacturing milk.

Data source: Commission estimates.

Figure 3.4 **Effective rates of assistance to agricultural commodities, 1996-97 and 1997-98**

per cent



Notes: [a] DCF: Deciduous Canning Fruits. [b] DVF: Dried Vine Fruits. [c] Man. milk: Manufacturing milk.

Data source: Commission estimates.

Forms of agricultural assistance

Sixteen kinds of agricultural assistance (twelve applying to the industries themselves and four to their inputs) have been identified for this year's *Trade and Assistance Review*. These can be grouped as:

- *assistance to value adding factors*, the most significant of which are adjustment assistance, research assistance, tax concessions and natural disaster relief;
- *output assistance*, which includes marketing and regulatory arrangements, export incentives, export inspection and government loan guarantees; and
- *input assistance*, which includes tariff assistance, materials assistance and penalties on non-traders.

Statutory marketing and regulatory arrangements were the most significant form of assistance measure in 1997-98. These arrangements accounted for 65 per cent of the total agricultural NSE. Arrangements for market milk accounted for most of this (73 per cent), while the remainder of the NSE was largely for manufacturing milk.

Research assistance accounted for 17 per cent of the NSE, with support for wool, wheat, sugar, dairy, beef and barley research accounting for 65 per cent of this total.

Revenue forgone from tax concessions was also a significant source of assistance, accounting for 9 per cent of the NSE. Concessions for wheat, beef, dairy, wool, sugar and barley accounted for 74 per cent of the total.

Adjustment assistance represented 11 per cent of the NSE, the major beneficiaries being wool, beef, wheat and dairy producers who received 80 per cent of the total.

Market Milk

For market milk in 1997-98:

- the nominal rate of assistance on outputs increased from 66.9 to 69.9 per cent;
- the effective rate of assistance also increased, remaining above 200 per cent; and
- the NSE accounted for 47.9 per cent of the total agricultural NSE.

Assistance is largely due to State marketing arrangements (98 per cent of NSE in 1997-98). Marketing authorities in each State set farm gate prices and production quotas, as well as regulating in other areas.

The high level of assistance provided by these arrangements may be about to fall. In July 1999, the (then) Victorian Government gave in-principle agreement to the deregulation of its market milk industry. The new State Government has indicated that it will put this issue to a vote of the State's dairy farmers. If Victoria deregulates its industry, this is likely to have a flow-on effect to the other States due to the size of the Victorian industry (as was acknowledged in the report by the Queensland Dairy Legislation Review Committee 1998).

In September 1999, the Federal Government announced that, provided certain conditions are met, it will provide dairy farmers — producers of both market and manufacturing milk — with $1.8 billion of adjustment assistance. The offer is conditional upon all States having deregulated their dairy industries by July 2000. The rationale for the assistance is that the payments will allow farmers to improve their efficiency and competitiveness. Assistance would be paid quarterly over eight years and funded through a levy of 11 cents per litre on all retail sales. Up to $45 000 would also be available for each farmer choosing to exit dairying (Truss 1999).

Manufacturing milk

For manufacturing milk in 1997-98:

- the nominal rate fell from 8.4 per cent to 6.8 per cent;
- effective rate fell from 22.7 per cent to 18.1 per cent; and
- the NSE accounted for 17.3 per cent of the total agricultural NSE.

The bulk of assistance for manufacturing milk came from Commonwealth marketing arrangements (the Domestic Market Support Scheme). The scheme assists manufacturing milk with subsidies raised through levies collected from all milk producers (market and manufacturing). The subsidy rates are being phased down, with the scheme due to expire on 30 June 2000 (IC 1997).

Tobacco

For tobacco in 1997-98:

- the nominal rate fell from 29.7 per cent to 20.9 per cent;
- the effective rate fell from 98.1 per cent to 59.4 per cent; and
- the NSE accounted for 1 per cent of the total agricultural NSE.

Statutory marketing arrangements for tobacco are being phased out as a part of a restructuring program, which commenced in January 1995. The transitional arrangements have been discussed previously (IC 1996g). Effective rates of assistance are expected to fall to around 2 per cent in 1999-2000 with the completion of the restructuring program.

Rice

For rice in 1997-98:

- the nominal rate remained at 3 per cent;
- the effective rate fell from 10.4 per cent to 9.9 per cent; and
- the NSE was 1.4 per cent of the agricultural NSE.

The majority of Australia's rice is grown in NSW, and receives assistance through statutory marketing arrangements.

Assistance for rice is set to decline, with the NSW Government reversing its original decision and giving in-principle agreement to a Commonwealth proposal for the deregulation of the domestic rice market. This decision is in line with the recommendations of an independent National Competition Policy (NCP) review of the rice industry conducted in 1995.

Wool

For wool in 1997-98:

- the nominal rate fell from 1.1 per cent to 0.6 per cent;
- the effective rate fell from 6.7 per cent to 4.7 per cent; and
- the wool NSE was 6.8 per cent of the agricultural NSE.

The wool industry receives assistance mainly from research and development funding, the rural adjustment scheme and the government guarantee on borrowings by Wool International. The decrease in the effective rate is largely due to reductions in government guarantees and research assistance.

The October 1998 freeze of the wool stockpile increased wool prices and could be considered as an assistance measure. However, the effects of the freeze have not been included in the Commission's assistance estimates. In any case, the stockpile has now been privatised, being purchased by Woolstock Australia Ltd in July 1999.

Wheat

For wheat in 1997-98:

- the nominal rate fell from 1.4 per cent to 1.2 per cent;
- the effective rate fell from 4.9 per cent to 4.3 per cent; and
- the NSE was 10.4 per cent of the agricultural NSE.

These falls were almost entirely due to reductions in the government guarantee on borrowings by the Australian Wheat Board (AWB). This guarantee on AWB borrowings now accounts for around a third of all assistance received by the wheat industry. The interest subsidy afforded by the guarantee is equal to the interest savings resulting from the difference between the assessed market interest rate, and government-guaranteed interest rates. The guarantee expired at the end of 1998-99. However, some of the guarantee subsidy will be received in 1999-2000, because sales from the 1998-99 wheat pool, which attracts the guarantee, will continue into 1999-2000.

Pigmeat

For pigmeat in 1997-98:

- the nominal rate remained at less than 0.5 per cent;
- the effective rate fell from 4.3 per cent to 3.2 per cent; and
- the NSE was 0.8 per cent of agricultural NSE.

The pigmeat industry receives assistance primarily from R&D funding, adjustment assistance and tax concessions. R&D funding accounted for around half of the industry's assistance in 1997-98.

In 1998, increased imports of pork prompted the domestic pork industry to seek the imposition of temporary 'safeguard' duties on pork imports.

Following an inquiry by the Commission (see section 3.6), in January 1999 the government decided not to impose a temporary tariff, opting instead to introduce a Pork Industry Assistance Package. The package provides a potential $24 million to the industry, as follows:

- over the period 1998-2000, $9 million will be provided to the National Pork Industry Development Program focussing on improving international competitiveness and export development and $1 million will be provided to the FarmBis Pork Producer Assistance Program to improve producer management skills;
- in 1999-2000, $6 million will be provided to the Pork Producer Exit Program to assist the most severely affected producers exit pork production; and
- $8 million for the Pork Processing Grants Program, for which applications for funding closed in December 1998, to encourage improved efficiencies in the processing sector.

Sugar

For sugar in 1997-98:

- the nominal rate fell from 4.3 per cent to zero;
- the effective rate fell from 15.1 per cent to 2.8 per cent; and
- the NSE was 1.7 per cent of the agricultural NSE.

Output assistance to Queensland's sugar industry was provided by a tariff and by Queensland's statutory marketing arrangements. The tariff has been removed and the Queensland Sugar Corporation is now required to price domestic sales at the export parity price. As a result, nominal assistance has fallen to essentially zero.

In addition, the NSE has fallen by $51.5 million. To offset this reduction in support, the Commonwealth Government introduced an adjustment package in July 1998. The Sugar Industry Assistance Package provides funding of $14 million over four years for R&D aimed at increasing the sugar content levels of sugar cane.

Sheepmeat

For sheepmeat in 1997-98:

- the nominal rate fell from 0.2 per cent to essentially zero;
- the effective rate fell from 3 per cent to 1 per cent; and
- the NSE was 0.6 per cent of the agricultural NSE.

Following a US decision to impose a tariff-rate quota on lamb imports from Australia, in July 1999 the Government announced a $20 million package to assist lamb producers. 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 will also be established to assist producers, processors and exporters of lamb. The Government has also lodged an appeal with the WTO against the US action (see section 3.6).

Table 3.1 **Nominal and effective rates of assistance by agricultural activity, 1993-94 to 1997-98**

per cent

	Nominal rate of assistance[a]					*Effective rate of assistance*[b]				
Activity/commodity description	*93-94*	*94-95*	*95-96*	*96-97*	*97-98*	*93-94*	*94-95*	*95-96*	*96-97*	*97-98*
Horticulture										
Apples and Pears	..	..	..	..	..	..	..	..	1	..
Dried vine fruits[c]	12	5	5	6	8	29	14	11	18	22
Wine grapes	10	9	7	4	5	24	19	15	10	11
Citrus	2	1	1	1	..	4	4	4	3	3
Deciduous canning fruits	..	..	..	..	..	1	1	2	7	6
Bananas	..	..	..	..	..	..	..	1	1	1
Tobacco[d]	60	50	40	30	21	>200	>200	160	98	59
Vegetables	..	..	..	..	..	..	..	1	..	..
Average	**3**	**2**	**2**	**1**	**1**	**6**	**5**	**6**	**4**	**4**
Extensive cropping										
Wheat	2	2	1	1	1	5	6	4	5	4
Barley	..	..	..	..	..	1	2	1	2	2
Oats	..	..	..	..	..	1	1	1	1	1
Maize	..	..	..	..	..	..	..	1	2	2
Sorghum	..	..	..	..	..	1	1	1	2	2
Oilseeds	..	..	..	..	..	3	5	4	2	1
Average	**1**	**1**	**1**	**1**	**1**	**4**	**4**	**3**	**4**	**3**
Extensive irrigation and high-rainfall crops										
Sugar[e]	4	4	4	4	..	12	11	15	15	3
Cotton	..	..	..	..	..	1	2	3	..	..
Rice[f]	1	2	2	3	3	4	8	8	10	10
Average	**2**	**2**	**2**	**2**	**..**	**7**	**7**	**10**	**8**	**3**
Extensive grazing										
Beef	..	..	..	..	..	3	4	5	5	2
Wool	4	1	2	1	1	14	6	9	7	5
Sheepmeat	..	..	..	..	..	4	3	3	3	1
Average	**1**	**..**	**1**	**1**	**..**	**6**	**4**	**6**	**5**	**3**
Intensive livestock										
Pigs	..	..	..	..	..	4	5	5	4	3
Poultry	..	..	..	..	..	7	9	11	3	1
Eggs[g]	3	4	2	..	..	9	11	8	4	2
Milk production	19	24	19	22	21	56	77	56	70	65
Manufacturing milk	8	9	8	8	7	20	25	21	23	18
Fresh milk[h]	49	58	53	67	70	>200	>200	>200	>200	>200
Average	**10**	**13**	**11**	**13**	**12**	**38**	**51**	**42**	**48**	**44**
Total agriculture										
Average	**3**	**3**	**3**	**3**	**3**	**10**	**10**	**10**	**10**	**8**
Standard deviation[i]	**(9)**	**(10)**	**(9)**	**(11)**	**(11)**	**(30)**	**(41)**	**(33)**	**(56)**	**(63)**

Table 3.1 (continued)

Notes. .. between -0.5 and 0.5 per cent. [a] Average nominal rates on outputs are weighted by 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: Commission estimates.

Table 3.2 **Average nominal and effective rates of assistance, by 3-digit ANZSIC,[a] 1993-94 to 1997-98**

per cent

		Nominal rate of assistance on output[b]					Effective rate of assistance[c]				
	Activity/commodity description	*93-94*	*94-95*	*95-96*	*96-97*	*97-98*	*93-94*	*94-95*	*95-96*	*96-97*	*97-98*
Code											
011	Horticulture and Fruit Growing	2	2	2	1	1	4	4	5	3	3
012	Grain, Sheep and Grain Beef Cattle Farming	1	1	1	1	1	5	5	5	5	3
013	Dairy Cattle Farming	19	24	19	22	21	56	77	56	70	65
014	Poultry Farming	..	1	..	..	..	8	10	10	3	1
015	Other Livestock Farming	..	..	..	..	..	4	5	5	4	3
016	Other Crop Growing	3	3	3	2	..	11	9	12	9	2
01	**Agriculture**	**3**	**3**	**3**	**3**	**3**	**10**	**10**	**10**	**10**	**8**

Notes: .. 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 unassisted value of output of each activity. [c] Average effective rates are weighted by the unassisted value added of each activity.

Source: Commission estimates

Table 3.3 **Assistance to agriculture by form, 1993-94 to 1997-98**

$ million

	1993-94	*1994-95*	*1995-96*	*1996-97*	*1997-98*
Assistance to outputs					
Domestic pricing arrangements[a]	392	479	504	571	523
Tariffs	58	58	66	55	29
Local content schemes	18	0	0	0	0
Export incentives	2	3	3	3	2
Export inspection services[b]	16	6	0	9	0
Marketing support	22	1	1	1	0
Government guarantees	106	58	85	80	60
Total[c]	**614**	**605**	**659**	**718**	**615**
Assistance to value-adding factors					
Adjustment assistance[d]	105	120	115	105	86
Agricultural research	156	160	155	161	137
Income taxation concessions	70	86	163	97	73
Natural disaster relief	2	1	1	1	0
Sugar industry program	3	4	2	4	3
Total	**336**	**371**	**436**	**368**	**300**
Assistance to inputs					
Disease control[e]	3	3	3	2	2
Tariffs on inputs[f]	-87	-77	-80	-61	-60
Tariffs on plant and machinery[f]	-64	-62	-61	-50	-50
Total	**-148**	**-136**	**-138**	**-109**	**-108**
Net Subsidy Equivalent	**802**	**839**	**957**	**977**	**806**

Notes: .. 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 (see section A.1 in Appendix A). **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: Commission estimates.

3.4 Manufacturing assistance

The manufacturing sector receives assistance from a wide range of government programs and policies. Tariffs remain an important form of assistance, but manufacturing activities also receive assistance in the form of production bounties, certain export incentives, input subsidies, by-law (or commercial tariff concession orders) and excise.

The general program of phased tariff reductions, which ran from March 1991 to July 1996, reduced most tariff rates to 5 per cent or less. Those protecting the Passenger Motor Vehicles (PMV) and Textiles, Clothing and Footwear (TCF) industries, however, remained higher.

Despite the large reductions in tariff rates under this program, tariff assistance still accounts for around 90 per cent of **measured** effective assistance to the sector. While the Commission's manufacturing assistance estimates are not comprehensive in their coverage of budgetary assistance, even with the inclusion of some of the additional measures identified in chapter 4, tariffs would remain the dominant form of support for the sector.

Estimates of assistance to the manufacturing sector have not been updated for 1997-98 and 1998-99. Only PMV and TCF tariff rates have changed significantly since 1996-97. These changes had already been foreshadowed, and changes in budgetary assistance would have had a relatively minor impact on measured assistance.

The effects of implementing the remaining scheduled tariff reductions for PMV and TCF are reflected in the Commission's projections of assistance for 2000-01. These projections have not been revised. They continue to represent reasonable estimates of future rates of assistance, particularly at higher levels of aggregation, because:

- tariffs are the dominant influence on measured assistance; and
- the schedule for further PMV and TCF tariff reductions has not changed; and
- no further general tariff reductions have been announced.

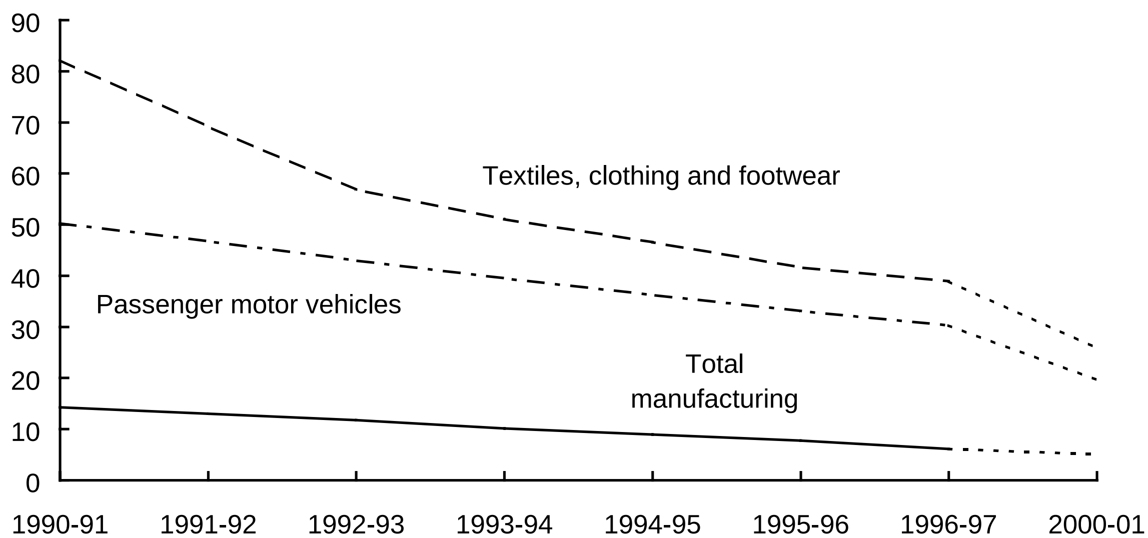
That said, the Commission intends to revise its assistance methodology and estimates in relation to manufacturing (and agriculture) as part of its general tariff review (see below).

For this year's *Trade and Assistance Review*, the Commission has reported manufacturing assistance estimates at the 2-digit ASIC subdivision level, in tables 3.4 to 3.6 (at the end of this section). Previously published estimates of nominal and effective rates of assistance are provided for the years 1993-94 to 1996-97, as well as projections for 2000-01. More detailed estimates down to the 4-digit ASIC industry level were presented in the Commission's information paper, *Assistance to Agricultural and Manufacturing Industries* (IC 1995a). The key estimates from tables 3.4 to 3.6, together with related developments, are described and discussed below.

Trends in manufacturing assistance

The nominal rate of assistance to manufacturing was around 4 per cent in 1996-97 and is projected to fall to 3 per cent by 2000-01, while the effective rate of assistance is projected to fall from 6 per cent to 5 per cent over the same period. PMV and TCF industries continue to receive assistance several times higher than other manufacturing activities (figure 3.5).

Figure 3.5 **Average effective rates of assistance to manufacturing, PMV and TCF, 1990-91 to 2000-01**
per cent



Data source: Commission estimates.

The fall in PMV and TCF tariffs relative to the generally applicable manufacturing tariff of 5 per cent is expected to result in a decline in the dispersion of assistance across the manufacturing sector in the period to 2000-01. The standard deviation of effective rates is projected to fall from 10 percentage points in 1996-97 to 7 percentage points in 2000-01.

The estimated net subsidy equivalent of assistance to manufacturing was around $4 billion in 1996-97 and is projected to fall to $3.5 billion in 2000-01. The PMV and TCF industries accounted for around half of the estimated net subsidy equivalent to the manufacturing sector in 1996-97. This share is projected to fall to around 40 per cent by 2000-01.

Developments in sectoral or industry-specific assistance

In relation to assistance for manufacturing, since the start of 1998-99:

- reductions in PMV and TCF tariffs have occurred as scheduled;
- a number of programs announced in the government's *Investing for Growth* statement have commenced operating;
- the Government has announced the abolition of 400 'nuisance' tariffs and an inquiry into remaining tariffs except those for the PMV and TCF industries;
- the Government has announced changes to tariffs on aluminium can sheet and tin plate, certain parts of machine tools, and imported meters; and
- the Commission has commenced a review into all remaining tariffs, other than those applying to the TCF and PMV industries.

Assistance to the PMV industry

As a result of continuing phased tariff reductions, the effective rate of assistance to the PMV industry is expected to fall to 19 per cent by 2000-01, from 28 per cent in 1996-97 (table 3.6).

The PMV tariff declined by a further 2.5 percentage points to 17.5 per cent on 1 January 1999 and is to fall to 15 per cent in 2000. The tariff is to remain at 15 per cent until January 2005, when it is scheduled to fall immediately to 10 per cent. Assuming no other changes in assistance, the effect of the pause in tariff reductions will be to maintain effective assistance to PMV at levels nearly 4 times the manufacturing average.

Commencing in January 2001, the current Export Facilitation Scheme 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. Legislation to give effect to these changes was approved by the Parliament in October 1999.

Assistance to the TCF industries

Assistance to the TCF industries is expected to decline between 1996-97 and 2000-01, reflecting further phased tariff reductions. The effective rate of assistance for the textiles industry is projected to fall to 17 per cent in 2000-01, from 25 per cent in 1996-97. And the effective rate for the clothing and footwear industries is projected to decline to 34 per cent by 2000-01, from 52 per cent in 1996-97 (table 3.6).

Most TCF tariffs declined on 1 July 1999[3], and are to fall further. All TCF tariffs (apart from those already at rates of 5 per cent or less) will be reduced to tariff rates of 25, 15, or 10 per cent on 1 July 2000. TCF tariffs are to remain at these levels until 2005, when tariffs on apparel and certain finished textiles, footwear and fabrics are scheduled to decline immediately to 17.5 per cent, 10 per cent and 7.5 per cent, respectively.

A new package of assistance measures will apply to the TCF industry, to operate from 2000 to 2005. These measures, which replace some existing arrangements, were outlined in last year's *Trade and Assistance Review*. While they may have implications for the distribution of assistance within TCF and rates of assistance for individual industries, assistance at the broad industry subdivision level is unlikely to change significantly between 2000 and 2005.

The 'Investing for Growth' initiatives

In December 1997, the Commonwealth Government announced a series of initiatives, covering R&D support, investment incentives, export assistance and specific incentives for the information technology industry, in its *Investing for Growth* statement. These initiatives were detailed in last year's *Trade and Assistance Review*.

A number of these initiatives have now commenced. Under the R&D Start program — the major component of *Investing for Growth* — grants to the value of over $190 million were approved in 1998-99 (DISR 1999). As well, the Government has offered two investment incentive packages under its Strategic Investment Incentives program, one of which has been accepted (see section 4.3).

[3] On 1 July 1999, the tariffs on apparel and certain finished textiles fell from 31 to 28 per cent; the tariffs on cotton sheeting and woven fabrics fell from 19 to 17 per cent; the tariffs on sleeping bags, table linen and tea towels fell from 12 to 11 per cent; the tariffs on footwear fell from 21 to 18 per cent; and the tariffs on carpets fell from 19 to 17 per cent. The tariffs on footwear parts and textile yarns remained unchanged at 10 and 5 per cent, respectively.

While the *Investing for Growth* initiatives are not expected to have a significant impact on manufacturing assistance in 1998-99, the program is likely to increase budgetary assistance significantly by 2001-02. It may therefore have implications for future effective rates of assistance to the manufacturing sector.

'Nuisance' tariffs

The Government recently announced the removal of 400 'nuisance tariffs' in late November 1999 pending public consultation by the end of October. These tariffs range from 3 per cent to 5 per cent and are levied on goods not typically made in Australia. They provide few or no protective benefits for Australian industry and disadvantage Australian industry, where such imports are used as inputs into the production process, relative to imported goods which enter Australia duty-free. The Government estimates the removal of these tariffs will reduce business input and consumer costs by around $18 million a year.

As these tariffs apply to goods which are not typically made in Australia and which are used as inputs in the production process of other goods, their removal is likely to place upward pressure on effective rates of assistance to users of them by reducing the (tariff) penalty on business inputs. However, the impact of these tariff reductions on assistance to the manufacturing sector at the 2-digit ASIC subdivision level is not expected to be significant.

Other tariff changes

The Government recently announced the removal of tariffs on aluminium cansheet — used to make the body, ends and tabs of beverage cans — and steel tinplate, following recommendations from the Industry Commission's 1996 inquiry report into *Packaging and Labelling* (IC 1996a).

The Government has also recently implemented the Commission's remaining recommendations from its 1997 inquiry report on *Machine Tools and Robotics Industries* (IC 1996b). These changes include:

- a reduction in tariffs on parts of machine tools, classified to certain subheadings in chapter 84 of the Customs Tariff Act, from 5 per cent to zero; and
- the cancellation of policy by-law items 48, 49 and 55 in schedule 4 of the Customs Tariff Act.

The Government has reimposed a 5 per cent tariff on imported utility meters. The tariff was removed in line with recommendations in the Commission's report into *Medical and Scientific Equipment* (IC 1996f) in 1998. However, following representations from the relevant industry association, the Government decided to restore the tariff, effective from September 1999 (AEEMA 1999).

Like the removal of 400 ‘nuisance’ tariffs outlined above, the impact of these tariff changes on assistance to the manufacturing sector (at the 2-digit level) is not expected to be significant.

General tariff review

In October 1999, the Government requested the Commission to conduct an inquiry reviewing Australia’s general tariff arrangements. The inquiry is to examine the scope for a post-2000 reduction in remaining tariffs other than PMV and TCF, including consideration of the appropriateness of the Tariff Concession Scheme and Project By-Law arrangements.

This review follows decisions by the Government to remove tariffs in the information technology and telecommunications sectors and on medical and scientific equipment. The decision on medical and scientific equipment was in response to a Commission recommendation in the Report on *Medical and Scientific Industries* (IC 1996f). The review also follows consultation between the Minister for Industry, Science and Resources and manufacturing industry representatives on the abolition of ‘nuisance’ tariffs on around 400 manufacturing items (see above).

Table 3.4 **Nominal rates of assistance on materials,[a] manufacturing subdivisions,[b] 1993-94 to 1996-97 and 2000-01**

per cent

Industry[c]						
Code	*Description*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*2000-01*
21	**Food, beverages and tobacco**	**5**	**4**	**4**	**3**	**3**[d]
234	Textile fibres, yarns and woven fabrics	3	3	3	2	2
235	Other textile products	8	7	6	5	4
23	**Textiles**	**4**	**4**	**4**	**3**	**2**
244	Knitting mills	9	8	7	5	5
245	Clothing	19	18	16	14	9
246	Footwear	9	8	7	5	5
24	**Clothing and footwear**	**15**	**13**	**12**	**10**	**7**
25	**Wood, wood products and furniture**	**6**	**5**	**4**	**3**	**3**
26	**Paper, paper products and publishing**	**4**	**3**	**3**	**2**	**2**
27	**Chemical, petroleum and coal products**	**1**	**1**	**1**	**..**	**..**
28	**Non-metallic mineral products**	**1**	**1**	**1**	**1**	**1**
29	**Basic metal products**	**1**	**1**	**1**	**1**	**1**
31	**Fabricated metal products**	**6**	**5**	**5**	**4**	**4**
323	Motor vehicles and parts	11	10	9	8	6
32	**Transport equipment**	**10**	**9**	**8**	**7**	**6**
33	**Other machinery and equipment**	**7**	**6**	**5**	**3**	**3**
34	**Misc. manufacturing**	**7**	**6**	**4**	**3**	**3**
21-34	**TOTAL MANUFACTURING**	**4**	**3**	**3**	**2**	**2**

.. Between 0 per cent and 0.5 per cent. **a** Assistance provided by tariffs and certain non-tariff measures. The nominal rate of assistance on materials is an average of the nominal rates on materials used by that industry, weighted by the unassisted value of each material used. **b** The nominal rate of assistance on materials is provided at the 3-digit ASIC level for the more highly assisted Textiles, Clothing and Footwear and Passenger Motor Vehicle industries. **c** Industry subdivision and group from the Australian Standard Industrial Classification (ASIC) 1983 Edition. The ASIC was replaced by the Australia and New Zealand Standard Industrial Classification (ANZSIC) in 1993. However, manufacturing assistance estimates based on ANZSIC have not been derived. **d** Estimates reflect the Commission's projections of assistance to agricultural commodities.

Source: Commission estimates.

Table 3.5 **Nominal rates of assistance on outputs,[a] manufacturing subdivisions,[b] 1993-94 to 1996-97 and 2000-01**

per cent

Industry[c]						
Code	*Description*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*2000-01*
21	**Food, beverages and tobacco**	**5**	**4**	**3**	**3**	**3**[d]
234	Textile fibres, yarns and woven fabrics	9	8	7	7	5
235	Other textile products	19	18	16	14	10
23	**Textiles**	**12**	**11**	**10**	**9**	**6**
244	Knitting mills	37	34	31	29	20
245	Clothing	39	36	33	30	21
246	Footwear	31	28	25	23	13
24	**Clothing and footwear**	**37**	**34**	**31**	**29**	**19**
25	**Wood, wood products and furniture**	**7**	**6**	**5**	**4**	**4**
26	**Paper, paper products and publishing**	**5**	**4**	**3**	**2**	**2**
27	**Chemical, petroleum and coal products**	**2**	**1**	**1**	**1**	**1**
28	**Non-metallic mineral products**	**2**	**2**	**2**	**1**	**1**
29	**Basic metal products**	**3**	**3**	**3**	**2**	**2**
31	**Fabricated metal products**	**9**	**7**	**6**	**4**	**4**
323	Motor vehicles and parts	20	19	17	15	10
32	**Transport equipment**	**17**	**15**	**14**	**12**	**9**
33	**Other machinery and equipment**	**9**	**8**	**6**	**4**	**4**
34	**Misc. manufacturing**	**10**	**9**	**7**	**5**	**5**
21-34	**TOTAL MANUFACTURING**	**6**	**5**	**5**	**4**	**3**

.. Between 0 per cent and 0.5 per cent. [a] Assistance provided by tariffs and certain non-tariff measures. The nominal rate of assistance on outputs is an average of the nominal rates on outputs used by that industry, weighted by the unassisted value of output used. [b] The nominal rate of assistance on outputs is provided at the 3-digit ASIC level for the more highly assisted Textiles, Clothing and Footwear and Passenger Motor Vehicle industries. [c] Industry subdivision and group from the Australian Standard Industrial Classification (ASIC) 1983 Edition. The ASIC was replaced by the Australia and New Zealand Standard Industrial Classification (ANZSIC) in 1993. However, manufacturing assistance estimates based on ANZSIC have not been derived. [d] Estimates for 2000-01 reflect the Commission's projections of assistance to agricultural commodities.

Source: Commission estimates.

Table 3.6 **Effective rates of assistance,[a] manufacturing subdivisions,[b] 1993-94 to 1996-97 and 2000-01**

per cent

Industry[c]						
Code	*Description*	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*2000-01*
21	**Food, beverages and tobacco**	**3**	**3**	**3**	**2**	**2**[d]
234	Textile fibres, yarns and woven fabrics	37	33	24	23	15
235	Other textile products	37	34	31	28	19
23	**Textiles**	**37**	**33**	**27**	**25**	**17**
244	Knitting mills	92	86	80	76	49
245	Clothing	59	54	50	47	33
246	Footwear	60	54	50	46	24
24	**Clothing and footwear**	**65**	**60**	**56**	**52**	**34**
25	**Wood, wood products and furniture**	**9**	**7**	**6**	**4**	**4**
26	**Paper, paper products and publishing**	**6**	**5**	**4**	**2**	**2**
27	**Chemical, petroleum and coal products**	**6**	**5**	**4**	**3**	**3**
28	**Non-metallic mineral products**	**3**	**3**	**2**	**2**	**2**
29	**Basic metal products**	**6**	**5**	**5**	**4**	**4**
31	**Fabricated metal products**	**12**	**10**	**8**	**4**	**4**
323	Motor vehicles and parts	38	35	31	28	19
32	**Transport equipment**	**26**	**24**	**21**	**19**	**13**
33	**Other machinery and equipment**	**11**	**9**	**8**	**5**	**5**
34	**Misc. manufacturing**	**14**	**12**	**10**	**7**	**7**
21-34	**TOTAL MANUFACTURING**	**10**	**9**	**8**	**6**	**5**

.. Between 0 per cent and 0.5 per cent. **a** Assistance to an activity, net of the effects of tariffs and certain other forms of government intervention which alter the prices of material inputs used by the industry. For certain TCF industries the estimates include some assistance to value adding factors. **b** The effective rate of assistance is provided at the 3-digit ASIC level for the more highly assisted Textiles Clothing and Footwear and Passenger Motor Vehicles. **c** Industry subdivision and group from the Australian Standard Industrial Classification (ASIC) 1983 Edition. The ASIC was replaced by the Australia and New Zealand Standard Industrial Classification (ANZSIC) in 1993. However, manufacturing assistance estimates based on ANZSIC have not been derived. **d** Estimates for 2000-01 reflect Commission projections of assistance to agricultural commodities.

Source: Commission estimates.

3.5 Anti-dumping and countervailing activity

Dumping occurs 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 good's price 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 instead.

The General Agreement on Tariffs and Trade allows Members to apply anti-dumping measures on dumped imports if they cause, or threaten to cause, material injury to a domestic industry. Anti-dumping measures can take two forms:

- the foreign exporter may agree to make a formal undertaking to export future goods to the importing market at a normal price; or
- a dumping duty may be imposed on the relevant imports to bring the export price up to but not higher than the normal value of goods in the exporting country.

As well as allowing anti-dumping actions, the WTO Agreement on Subsidies and Countervailing Measures (1995) allows Members to 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 which raise the price of imports, anti-dumping and countervailing measures can assist particular domestic industries but can also impose higher costs on other domestic industries and consumers.

Australia's new 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. Key features of the new system are:

- a significantly shorter overall investigation period conducted solely by the Australian Customs Service (ACS);
- the abolition of the Anti-Dumping Authority (ADA); and
- a new appeal and review mechanism conducted by a statutory officer known as the Trade Measures Review Officer (TMRO).

Table 3.7 outlines and compares the key features of the previous and new anti-dumping and countervailing systems.

Investigations under the new system are undertaken entirely by the ACS. Previously, the ADA was responsible for undertaking a second stage of investigation before making a final finding on the level and extent to which measures would be imposed.

ADA findings were often different from ACS findings. Over the nine years to 1997-98, ADA investigations resulted in a final finding different from the ACS finding in more than 40 per cent of cases — the ADA overturned 30 per cent and amended 10 per cent of positive preliminary findings made by the ACS.

The WTO (1998a), in its most recent Trade Policy Review of Australia, questioned whether the shorter investigation, now the shortest in the world, conducted entirely by the ACS would allow as effective an investigation as under the previous system.

Another concern is the adequacy and effectiveness of the new appeal process. Previously, the ADA was responsible for conducting appeals and, in the process, had the capacity to call for and obtain information which was independent of the ACS's investigations. This contrasts with the new system of appeals, which consists of a review of existing information, with no further investigation. The office of the TMRO conducts the appeal, drawing on the resources of the Department of Industry, Science and Resources. The implementation of the new system, which differs in important respects from its predecessor, raises questions such as:

- the appropriateness of the TMRO being restricted to reviewing the interpretation of information collected by the ACS; and
- whether TMRO has sufficient time and resources to conduct appeals effectively.

These questions, and other matters, will need to be examined as part of the Government's scheduled review of anti-dumping and countervailing regulation under the Competition Principles Agreement. The review has been postponed to allow for full implementation of the new arrangements through 2000.

Table 3.7 Comparison of previous[a] and new[b] anti-dumping and countervailing systems

Feature	*Previous*	*New*
Total time frame	215 day two stage system conducted by the ACS and ADA.	155 day (175 including screening) single stage system conducted by the ACS.
Screening	20 days for ACS to examine application and to initiate investigation or reject application.	20 day screening period is now outside the formal investigation period.
	25 per cent local content requirement for a dumping complaint to warrant an investigation.	Complainants must demonstrate that they are a local industry producing like goods, undertake a substantial process of manufacture, and have the support of a majority of local producers of the good.
Preliminary investigation	85 days for ACS to deliver a preliminary finding at which stage interim duties may be applied.	Interim duties may be applied after 60 days of the investigation period.
Final Finding	In the case of a positive preliminary finding, 110 days for the ADA to gather additional information, conduct an investigation and deliver a final finding.	In the case of a positive finding after preliminary investigation, the ACS to continue investigation and deliver a final finding within 155 days. Statement of essential facts by day 110 with submissions in response due by day 130.
Review and Appeals	Rejection of initial application subject to appeal, 60 days for the ADA to conduct a review.	Rejection of initial application automatically subject to 60 day review by the TMRO.
	Negative preliminary finding subject to appeal, 90 days for the ADA to undertake a review of ACS's investigation.	Negative finding after preliminary investigation automatically subject to 60 day review by the TMRO.
	Final duty assessment subject to appeal, 90 days for the ADA to undertake a review.	Positive or negative final finding subject to appeal, 90 days for the TMRO to conduct a review of the ACS's investigation with: • notice of appeal given within 30 days of the final decision; • submissions due by day 60; and • decision delivered by the TMRO by day 90.

[a] System after the interim reductions to time frames implemented on 1 February 1997. [b] Effective from 24 July 1998.

Source: Truss (1998), Moore and Truss (1998) and Willett (1996).

Recent anti-dumping and countervailing activity

The anti-dumping and countervailing data for 1998-99 are a combination of data under the current and previous anti-dumping and countervailing arrangements, with the ADA completing its final case in December 1998.

The number of Australian anti-dumping cases reported as initiated halved from 36 in 1997-98 to 18 in 1998-99 (figure 3.6 and table 3.8). No countervailing cases were initiated in 1998-99.

Although the number of measures reported as initiated fell to a relatively low level in 1998-99, the number of measures imposed increased from 5 in 1997-98 to 18 in 1998-99. This increase is partly attributable to a backlog of investigations from 1997-98 and a faster completion of investigations under the new streamlined arrangements in 1998-99.

In addition, the conversion rate of cases initiated to measures imposed increased in 1998-99 with more than a third of initiated cases resulting in duties being imposed. This compares to conversion rates of 20 per cent in 1997-98 and less than 10 per cent in 1996-97.

The forthcoming legislative review of anti-dumping and countervailing regulation under the Competition Principles Agreement will need to consider these developments and examine whether the new system is effective and appropriate.

Notwithstanding the increase in measures imposed, there was little change in the number of measures in force as at 30 June 1999. This was due to the expiry of several measures for which no applications for extensions were made.[4]

Industry incidence

The initiations for 1998-99 are dominated by industries in the chemical and petroleum products, and textiles, subdivisions (table 3.9). Both of these subdivisions had multiple country initiations in 1998-99. Two initiations in the chemical and petroleum products subdivision — low density polyethylene and polyvinyl chloride resin — accounted for a majority of initiations. In the textiles subdivision, a single initiation — carpet backing — accounted for all five initiations (refer to table 3.8).

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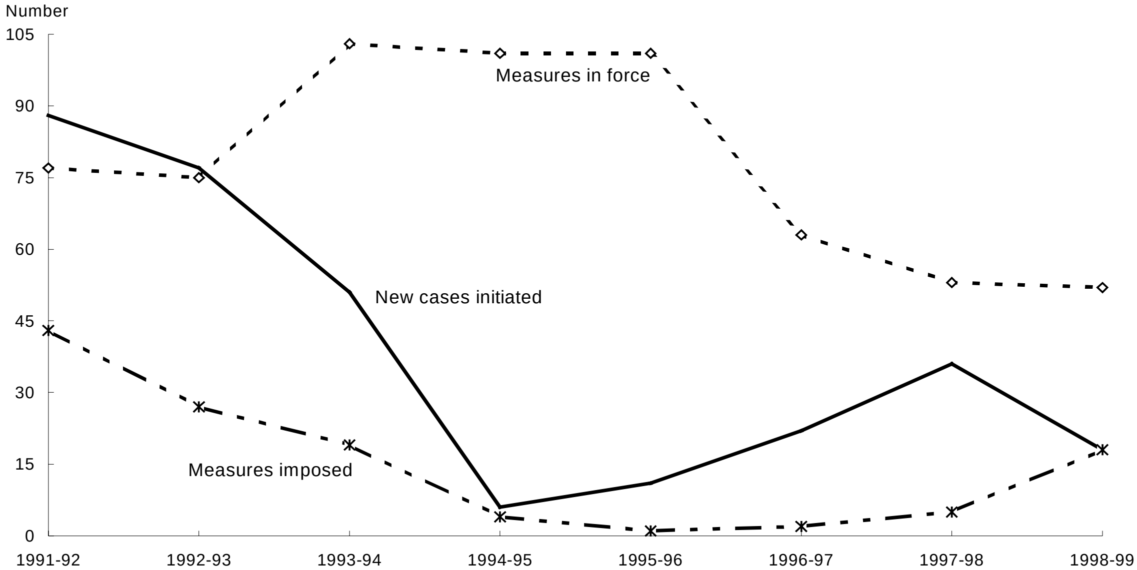
[4] Anti-dumping action in Australia is subject to a five year settlement or sunset period, with reviews to be undertaken prior to the expiry date, if the action is to continue.

Figure 3.6 **Anti-dumping and countervailing activity,[a] 1991-92 to 1998-99**



[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.

Source: ACS and Commission estimates.

Table 3.8 **New Australian anti-dumping and countervailing initiations[a] in 1998-99**

Commodity	*Economy*
A4 copy paper	Brazil
Carpet backing	Belgium, Colombia, Saudi Arabia, United Kingdom, United States of America
Expandable polystyrene	Taiwan, Thailand
Galvanised steel pipe	Thailand
Low density polyethylene	Indonesia, South Korea, Malaysia, Saudi Arabia
Polyvinyl chloride resin	Hungary, Indonesia, South Korea, Singapore
Uncoated white cut ream copy paper	Finland

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

Source: Information provided by ACS.

Table 3.9 Anti-dumping and countervailing cases,[a] by industry, 1993-94 to 1998-99

Industry[b]	*1993 -94*	*1994 -95*	*1995 -96*	*1996 -97*	*1997 -98*	*1998 -99*	*Six-year period Total*	*Six-year period Per cent of total*
Food and beverages	–	2	–	–	–	–	2	1
Textiles	10	–	–	–	1	5	16	11
Paper, paper products	–	–	–	–	14	2	16	11
Metallic minerals	–	–	–	–	–	–	–	–
Chemical and petroleum products	16	2	5	11	13	10	57	40
Non-metallic mineral products	4	–	–	2	1	–	7	5
Metal products manufacturing	4	1	2	–	3	1	11	8
Transport equipment	–	–	–	–	–	–	–	–
Machinery and equipment	4	1	3	1	–	–	9	6
Miscellaneous manufacturing	13	–	1	8	4	–	26	18
Total	**51**	**6**	**11**	**22**	**36**	**18**	**144**	**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: Information provided by ACS.

Country incidence

In 1998-99, Australian firms initiated anti-dumping cases against firms from 14 economies (table 3.10).

The trading regions which have had the highest incidence of initiations against them over the six years to 1998-99 are Asia and Western Europe, together accounting for almost three quarters of total initiations.

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 1998-99 with the Asian region accounting for half of total initiations but about a third of Australia's merchandise imports (ABS 1999e).

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, anti-competitive conduct in trans-Tasman trade has been covered by competition laws under the Australian *Trade Practices Act 1974* and the New Zealand *Commerce Act 1986*.

International trends

Australia accounted for 43 of the 256 (or 17 per cent) of the anti-dumping and countervailing cases initiated internationally in 1997 (the latest year for which comparable data are available) (table 3.11). This made Australia the second largest initiator of anti-dumping and countervailing actions. This is in contrast to 1996 when Australia was the seventh largest initiator of new actions. The increase is partly explained by an initiation made against 14 economies with respect to imports of coated wood-free paper in late 1997 (refer to PC 1998b).

Australia accounted for a much smaller proportion of provisional and other measures imposed internationally in 1997, and had 5 per cent of total measures in force at the end of 1997, down from 6 per cent at the end of 1996. A recent study found that, over the ten years to 1997, Australia was the third most intensive user of anti-dumping measures, on a trade weighted basis, after New Zealand and Argentina (Miranda, Torres and Ruiz 1998).

The United States, the European Union, South Africa, Mexico, Canada and Australia accounted for three quarters of total measures in force in 1997.

The base metals, machinery and electrical equipment, and chemicals and petroleum industries accounted for more than three quarters of all anti-dumping cases initiated internationally in 1997. Measures against base metals continue to be prominent in the United States, while the European Union has a high proportion of measures in the chemicals and textiles industries.

Table 3.10 **Australian initiations of anti-dumping and countervailing cases, by trading region and economy,[a] 1993-94 to 1998-99**

							Six-year period	
Region/economy	*1993-94*	*1994-95*	*1995-96*	*1996-97*	*1997-98*	*1998-99*	*Total*	*Per cent[b]*
North America	***2***	***–***	***1***	***1***	***2***	***1***	***7***	***5***
Canada	–	–	–	–	1	–	1	1
United States	2	–	1	1	1	1	6	4
Western Europe	***11***	***2***	***3***	***7***	***14***	***3***	***40***	***28***
Austria	1	–	–	–	1	–	2	1
Belgium/Lux	–	–	1	–	1	1	3	2
Finland	–	–	–	–	1	1	2	1
France	1	–	–	–	2	–	3	2
Germany	1	–	–	3	3	–	7	5
Italy	2	2	–	–	1	–	5	3
Netherlands	3	–	–	1	2	–	6	4
Spain	1	–	–	1	–	–	2	1
Sweden	–	–	–	2	1	–	3	2
Switzerland	–	–	–	–	1	–	1	1
UK	2	–	2	–	1	1	6	4
Asia	***27***	***2***	***5***	***9***	***13***	***9***	***65***	***45***
China	2	1	1	3	2	–	9	6
Hong Kong	2	–	–	–	1	–	3	2
India	–	–	–	1	1	–	2	1
Indonesia	1	1	–	1	3	2	8	6
Japan	2	-	–	–	1	–	3	2
South Korea	5	–	2	–	2	2	11	8
Malaysia	3	–	1	1	–	1	6	4
Singapore	6	–	–	–	1	1	8	6
Thailand	1	–	1	1	–	2	5	3
Taiwan	5	–	–	2	2	1	10	7
Other	***11***	***2***	***2***	***5***	***7***	***5***	***32***	***22***
Saudi Arabia	–	–	–	–	–	2	2	1
South Africa	6	2	2	–	3	–	13	9
Other	5	–	–	5	4	3	17	12
Total	**51**	**6**	**11**	**22**	**36**	**18**	**144**	**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: Information provided by ACS.

Table 3.11 **International anti-dumping and countervailing actions, 1996 and 1997[a]**

Country	*Initiation*		*Provisional measures*		*Definitive duties*		*Price undertakings*		*Measures in force at 31 December*		*Per cent of total measures in force*	
	1996	*1997*	*1996*	*1997*	*1996*	*1997*	*1996*	*1997*	*1996*	*1997*	*1996*	*1997*
US	23	22	15	21	14	19	1	4	378	354	37	37
EU	24	45	11	33	26	24	6	10	155	140	15	14
Mexico	3	7	3	7	5	7	–	–	106	89	10	9
Canada	5	14	9	7	–	7	–	–	101	96	10	10
Australia	18	43	5	17	–	1	1	–	60	52	6	5
Turkey	–	4	–	–	–	–	–	–	37	35	4	4
Argentina	24	16	4	12	19	10	2	1	31	32	3	3
Brazil	17	11	1	–	6	2	–	–	31	29	3	3
South Africa	30	24	9	17	8	18	–	–	31	43	3	4
New Zealand	8	6	3	–	4	2	–	2	29	28	3	3
India	20	13	5	16	–	6	–	–	15	24	1	2
South Korea	13	15	9	5	5	6	1	7	14	20	1	2
12 WTO Members	**185**	**220**	**74**	**135**	**87**	**102**	**11**	**24**	**988**	**942**	**96**	**96**
All WTO Members	**224**	**256**	**92**	**160**	**93**	**119**	**11**	**24**	**1028**	**967**	**100**	**100**

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

Source: WTO 1997 and 1998b.

3.6 WTO trading rules and disputes

Several matters have arisen recently which demonstrate the role of WTO trading rules and dispute settlement processes, namely:

- a US complaint regarding assistance to Howe Leather;
- a Canadian complaint regarding Australian import restrictions on certain uncooked salmon;
- Australian consideration of the case for safeguard action against imported Canadian salmon; and
- a US decision to take safeguards action against lamb imported from Australia.

Export assistance for Howe Leather

Australia is a signatory to the WTO Agreement on Subsidies and Countervailing Measures (1995) which prohibits export subsidies for products other than agricultural commodities. The Agreement defines subsidies and establishes remedies for measures in breach of the agreement. The prohibition of export subsidies applies to those subsidies considered to be contingent 'in law or in fact' upon export performance. When an export subsidy is challenged and is found to be a prohibited subsidy, the country must cease the practice or the requesting country can impose countervailing measures.

The vulnerability of Australia's export assistance schemes was highlighted in recent challenges by the United States concerning the assistance afforded to Howe Leather. Following a petition by US leather manufacturers in 1996, the Australian and US Government reached an agreement in 1997, which led to Howe Leather being excised from the PMV Export Facilitation Scheme and 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. The grant was conditional on sales and capital expenditure targets.

Following a request by the United States, a WTO Panel was established in June 1998 to examine whether the grant and loan to Howe Leather, while not expressly specified to target exports, were 'contingent in fact' on export performance.

In its examination of the case, the WTO Panel concluded on 16 June 1999 that the loan was not an export subsidy as there were no requirements tied to export or sales performance.

However, it concluded that the grant payments were subsidies ‘contingent in fact’ on export performance:

> Given the export-dependent nature of Howe’s business, and the size of the Australian market, these sales performance targets are, in our view, effectively, export performance targets (WTO 1999a, p. 110).

The Panel report recommended that Australia withdraw the grant subsidy within 90 days.

In September 1999, the Government accepted the WTO finding. Howe Leather is to repay $8 million of the $30 million provided in 1997 and the grant contract has been terminated, although the repayment relates only to the component of the grant which applies to sales performance targets from 14 September 1999 to 30 June 2000. The Government has also agreed to provide an additional loan of around $14 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 (on non-commercial terms) by the Australian Government are inconsistent with WTO recommendations and rulings. The United States requested the original Panel to rule on the new assistance regime within ninety days. Australia and the United States have reached an agreement on how to proceed with this matter. Among other things, both countries agreed that they will unconditionally accept the Panel’s report and there will be no appeal arising from that report (WTO 1999b).

Quarantine restrictions on uncooked salmon

Under the Sanitary and Phytosanitary (SPS) Agreement (1994), Australia, as a WTO Member, may apply quarantine measures which it deems necessary to keep the risk of disease from imported products at an acceptably low level. These measures may be challenged through the WTO’s dispute settlement procedures.

In 1997, Canada lodged a complaint with the WTO concerning Australia’s quarantine ban on uncooked salmon imports. Canada argued that while Australia had maintained a quarantine ban on imports of uncooked salmon products since 1975, there was virtually unrestricted access for a wide range of other fish products which posed levels of disease risk similar to salmon and related species in Australia. A WTO panel subsequently ruled that Australia’s ban on uncooked salmon imports was inconsistent with the SPS Agreement and that the ban nullified or impaired benefits accruing to Canada under the Agreement.

In response to the WTO's findings, the Australian Quarantine Inspection Service conducted and recently released an import risk analysis (IRA) (box 3.1) which determined that imports of some uncooked salmon would be permitted, subject to certain conditions to minimise the risk of disease. New restrictions will be imposed on current imports of marine fish products and on imports of live ornamental fish.

Box 3.1 **Australia's system of import risk analysis**

Import risk analysis (IRA) is a framework which quarantine regulators in several countries, including Australia, apply when making decisions affecting imports of animals, plants and their products. In Australia, the IRA process is conducted and coordinated by the Australian Quarantine Inspection Service and consists of three components — risk assessment (a scientific or technical component), risk management (an economic or policy component) and risk communication (a consultative component).

In Australia, IRAs are being conducted under new transparency and consistency guidelines announced in 1996. These guidelines have the stated aim of ensuring that such analyses are completed in a transparent and consistent manner. The new arrangements are in line with recommendations made by the Nairn Report into Australia quarantine and the Report of the National Task Force on imported fish and fish products. Both reports were released in late 1996. Recent IRAs have covered:

- apples from New Zealand;
- chicken meat (uncooked);
- durian from Thailand;
- maize from the United States;
- ornamental finfish; and
- salmon meat product.

Australian safeguard action on pigmeat

In 1998, growing imports of pork — largely of frozen pork from Canada, allowed into Australia following the removal of quarantine restrictions on frozen pork for processing in July 1990 — prompted the domestic pork industry to seek the imposition of temporary 'safeguard' duties on pork imports.

The Government subsequently requested the Commission to undertake an inquiry into whether safeguard action, in accordance with the WTO Agreement on Safeguards, was warranted against imports of certain frozen pigmeat.

Article XIX of the General Agreement on Tariffs and Trade (1994) allows for safeguard action against imports of particular products which are deemed to be causing, or threatening to cause, serious injury to an industry. Safeguard action is intended to provide temporary assistance for industries to adjust to increased competition from imports.

The Commission found that safeguard action on pigmeat imports could be justified under the WTO provisions, but questioned whether a short-term import tariff would be appropriate as ‘remedying injury and facilitating adjustment’ in the pork industry. The Commission found that a combination of measures that directly promote industry restructuring and export orientation, while providing assistance to those producers wishing to leave the industry, would be more appropriate.

In January 1999, the government decided not to impose a temporary tariff, opting instead to introduce a Pork Industry Assistance Package. Details of the package are set out in section 3.3.

United States safeguard action against imported Australian 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 WTO Agreement on Safeguards.

In response, the Government announced a $20 million package to assist lamb producers in July. Details of the package are set out in section 3.3.

In October, the Government lodged an appeal with the WTO, contending that the measure is inconsistent with various articles of the WTO ‘safeguard’ agreement.

3.7 Trade-related aspects of intellectual property

Intellectual property rights provide legal protection to intellectual property against imitations or copying, through patents, copyrights, trade marks, industrial designs and, to a certain extent, trade secrets. All intellectual property involves some investment in intellectual effort. These intangible investments can be easily copied or imitated by competitors. In many cases, without intellectual property right protection, it would be impossible to prevent ‘free-riding’ by persons who did not contribute to the original intellectual property investment, making it hard to recover the cost of such investment.

The WTO's international agreement on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) was introduced in 1995, and is on the agenda for further consideration during the proposed Millennium Round. The TRIPS specifies minimum standards of intellectual property protection which must be achieved by all Members. Australia's legislation was already largely compliant with TRIPS when it was introduced.

Australia's best approach to intellectual property rights protection will generally be to provide regulation that complies with minimum protection standards required by the TRIPS (Revesz 1999). Compliance with the minimum standards of TRIPS is advisable in order to avoid political and trade retaliation and disciplinary action under the WTO. However, providing protection beyond the minimum standards will hamper competition in the domestic market and provide additional income to foreign intellectual property rights holders at the expense of Australian consumers.[5]

The outstanding issues for Australia of the TRIPS are protection of biotechnology and geographic labelling.

- In the biotechnology area, Australia provides stronger protection for biological innovations than other countries in the world, with the possible exception of the United States and Japan. It may be economically advantageous for Australia to support an international agreement which would strengthen the worldwide intellectual property right protection of biological innovations. The TRIPS requires intellectual property right protection only for new micro-organisms and new plant varieties.
- Geographical indications prevent false or deceptive labeling on the geographical source of goods. The European Union has extended the strong protection of geographical indications now applied in TRIPS to wine and spirits to other products, such as processed foods, agricultural products and handicrafts. This action hinders Australia's competitiveness in export markets against regions which have already acquired a strong reputation for quality. These issues will be considered in Australia's review of intellectual property rights (see below).

Parallel importing is also a prominent intellectual property rights issue for Australia. Apart from sound recordings and books which have not been put on the Australian market within a prescribed period, parallel importing applies to other copyright material, including publications, films, videos and software. Parallel importing is formally allowed for patent and design protected goods, but Australian legislation

[5] An exception to this general principle can occur in areas where intellectual property rights protection is mainly aimed to prevent imitation and copying by domestic (rather than overseas) competitors. For these areas, the rule not to exceed the minimum standards of the TRIPs may not represent the best approach (see Revesz 1999).

provides exclusive rights over importation to the intellectual property right holders, who can prevent parallel importation if they so wish. TRIPS neither sanctions nor prohibits parallel importing.

Australia's intellectual property rights legislation is being reviewed as part of the ongoing reviews of legislation under National Competition Policy. The Intellectual Property and Competition Review Committee will inquire into the effects of intellectual property legislation to determine whether the intellectual property system is meeting the needs of Australian business and consumers while maximising the benefits of domestic and global competition (Entsch 1999). An important component of the review will be to assess the nature of intellectual property restrictions and their likely effects on competition. The review will cover the *Patents Act 1990*, the *Trade Marks Act 1995*, the *Designs Act 1995*, the *Copyright Act 1968* and the *Circuit Layouts Act 1989*. The Committee is expected to report to the Government by 30 June 2000.

4 Budgetary assistance

Budgetary assistance to industry comprises government spending and tax concessions that are of benefit to industries or firms.

While some assistance to industry has always been provided through the budget, this form of assistance is becoming increasingly important. In the past, the major forms of assistance in Australia have been border protection measures, such as tariffs and quotas, and statutory marketing arrangements. Although 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.

Budgetary assistance is subject to frequent changes from year to year as the individual schemes and funding levels vary, 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 important policy developments during the year; and
- examines aspects of the Strategic Investment Incentive Program which commenced in December 1997.

4.1 Scope of the Commission's estimates

Budgetary assistance consists of two broad categories:

- *Outlays,* which include the funding of activities and services of benefit to industry, as well as grants, bounties, interest rate subsidies, subsidised loans, loan guarantees and equity injections which afford direct financial assistance to businesses.
- *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.

Recipients can be individual firms including undertaking or utilising particular activities such as R&D, as well as particular industries or sectors.

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. 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 company tax rates.

Assistance estimates in this chapter are derived from a number of information sources, including the Commonwealth Budget Papers. One effect of the change to an accrual accounting format in this year's Budget has been a loss of details about many assistance schemes. For example, the Budget Papers and Portfolio Budget Statements did not provide figures for the appropriations for various programs under the Industry, Science and Resources portfolio. Such data could only be obtained directly from the department.

Budgetary assistance is estimated for the industry sectors which receive the benefits — namely, primary production, manufacturing, mining and selected services. In apportioning budgetary assistance between sectors, the Commission needs to make few judgments as it is generally able to draw on primary data sources.

The Commission's approach for measuring budgetary assistance is explained in more detail in Appendix A.

4.2 Commonwealth budgetary assistance

For this year's *Trade and Assistance Review*, the Commission has generally provided data on budgetary assistance for the four years up to 1999-2000. The outlay figures for 1998-99 are estimates, and those for 1999-2000 are projections. The tax expenditure figures for both of these years are projections. This reflects the non-availability of data associated with the May release of the budget. The estimates incorporate the Government's revisions of outlays and tax revenue forgone for previous years.

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 related developments, are described and discussed below.

Summary features

Aggregate estimates

Estimates and projections of budgetary assistance and its main components for the period 1996-97 to 1999-2000 are shown in table 4.1.

There was an 11 per cent reduction in total budgetary assistance in 1997-98. This was due to a 19 per cent decline in the tax expenditure category, caused mainly by a reduction in the R&D tax concession and the winding down of the development allowance since 1996. The outlay category did not change significantly.

For the following years, total budgetary assistance, tax expenditures and outlays are estimated to be relatively stable.

Table 4.1 **Commonwealth budgetary assistance to industry**
1996-97 to 1999-2000

	1996-97	*1997-98*	*1998-99*	*1999-2000*
Budgetary outlays	1 775	1 741	1 822	1 777
Tax expenditures	1 974	1 602	1 565	1 555
Total budgetary assistance	3 749	3 344	3 388	3 332

Source: Commonwealth Budget Papers, Treasury (1999), ACS (1999) and Commission estimates.

Major assistance schemes

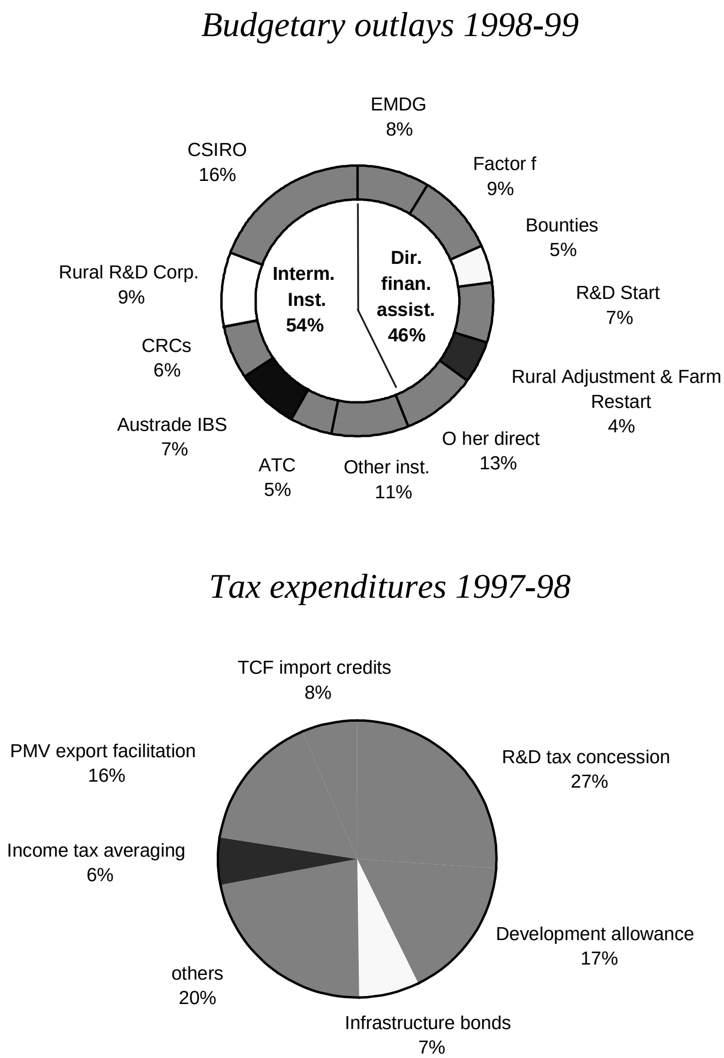
A plethora of budgetary schemes currently assist industry. There were around 100 separate government programs and tax expenditures in 1998-99.

Of the total budgetary outlays, 46 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 4.1, important outlay schemes include Austrade's programs, the Factor f program for pharmaceuticals, R&D Start, 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 4.1). While no new tax concessions were introduced during 1998-99, the Government has recently announced new tax concessions in its response to the (Ralph) Review of Business Taxation. These developments are discussed later in this section.

Figure 4.1 **Major programs and tax expenditures**

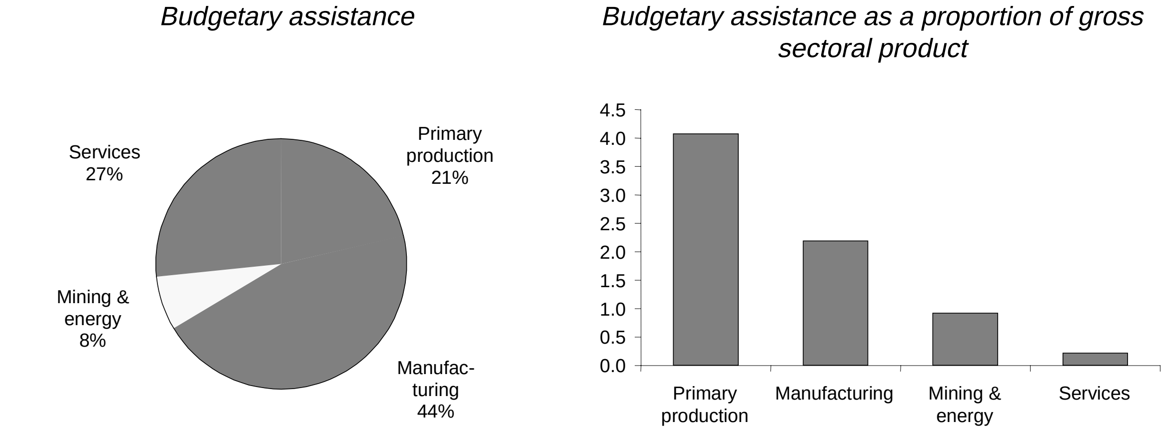


Data source: Commission estimates.

Sectoral distribution of budgetary assistance

Budgetary assistance varies markedly between sectors. The largest proportion of budgetary assistance goes to the manufacturing sector (44 per cent). Services accounted for 27 per cent, and primary production 21 per cent. The mining sector receives the smallest share (figure 4.2).

Figure 4.2 **Budgetary assistance by sector, 1998-99**



Data source: Commission estimates.

As a proportion of gross sectoral product, budgetary assistance was highest for the primary production sector (4 per cent), followed by the manufacturing sector (2 per cent). The proportion was less than 1 per cent for both the mining and services sectors.

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. 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).

Industry-specific assistance

During 1998-99, budgetary assistance was renewed for book printing, shipbuilding, sugar, sheepmeat and pigmeat. Information technology was earmarked for assistance. Budgetary assistance to sugar, sheepmeat and pigmeat is discussed in chapter 3.

Books and book printing

Before 1996, disparate assistance arrangements applied to the book printing industry. Book printing received assistance mainly through the book bounty scheme, while directories and timetables relating to Australia were assisted by a tariff on imports. However, some books received no assistance from tariffs or bounties. Some books, but not all, were penalised by tariff on paper inputs (IC 1996d).

The Government in the 1996 Budget foreshadowed the early termination of the book bounty, but later decided to extend the scheme to its original expiry date of December 1997.

In a report on the Australian book printing industry in 1996 (IC 1996d), the Commission recommended that it not be assisted by bounty, or other forms of assistance, after the end of 1997.

While the book bounty was subsequently allowed to lapse on 31 December 1997, the Government has introduced a new assistance scheme — the *Printing Industry Competitiveness* scheme — to operate from 1 January 1999 to 30 June 2003. The scheme has been allocated $21 million over the next four years. Book printers will be able to claim payment at the rate of 4 per cent of the purchase price of paper inputs. All paper purchases are eligible for payment 'whether the paper was imported or not, and whether duty was paid or not' (Minchin 1999b).

The new scheme is to compensate the book printing industry for the costs of tariffs on production inputs:

> The underlying rationale for the Printing Industry Competitiveness Scheme stems from the fact that book printers face a situation of 'negative assistance' due to an anomaly in the existing tariff system. This is because input costs are inflated by the tariff on paper, while competing imported books are able to enter Australia tariff free (Minchin 1998c).

While this assistance will help to offset tariffs on paper inputs, the Commission observes that many firms and industries are penalised by tariffs but are not compensated for the impact of tariffs on input costs. The mining sector, for example, has long faced negative measured effective assistance due to tariffs on inputs, but is not similarly compensated. It is unclear why the book printing industry has been granted selectively tariff 'compensation'; nor is it clear that such compensation is the best way of addressing the problem created by tariffs on inputs.

The Government has committed further substantial assistance to books and book printing. In negotiations surrounding the passage of the goods and services tax legislation through the Parliament, the Government announced the *Book Industry Assistance Plan* to cost $240 million over the four years from 2000-01 ($60 million annually). The Plan comprises six components (Howard 1999b and 1999c):

- $117 million of subsidy payments to retail sellers of educational textbooks (at a capped rate of 8 per cent of textbook prices);
- $48 million to enhance the Printing Industry Competitiveness scheme, including provision for an Innovation, Infrastructure and Development Fund and a Skills Development Program;

- $38 million for an Educational Lending Right scheme which will make payments to creators and publishers of books held in educational libraries;
- $28 million in grants to primary schools to increase their holdings of Australian books;
- $8 million for book marketing to promote reading and literacy; and
- over $1 million for the ABS to collect data on book publishing and retail sales.

Shipbuilding

The Australian shipbuilding industry is assisted through a range of broad-based and specific measures. These include the shipbuilding bounty, the 125 per cent R&D tax concession, activities of the Export Finance and Insurance Corporation (EFIC), and the concessional entry of imported parts and materials used in the construction, modification and repair of bountiable vessels. The Maritime Cooperative Research Centre also conducts R&D relevant to shipbuilding (DISR 1999).

The Government in the 1996 Budget foreshadowed the termination of the shipbuilding bounty ahead of its expiry date of December 1997, but later decided to extend the bounty to 30 June 1999.

In January 1998, the Shipbuilding Industry Review Panel was established to review assistance arrangements for the shipbuilding industry. The Panel recommended that shipbuilding support continue, but be reduced in line with progress in removing international shipbuilding subsidies. It also recommended specific assistance for shipbuilding innovation.

The Government accepted the Panel's recommendations and the *Bounty (Ships) Amendment Act 1999* has been passed by Parliament. The Government has committed $28 million to the extension of the shipbuilding bounty from 1 July 1999 to 31 December 2000. The bounty payment is available to 'registered' shipbuilders at the rate of 3 per cent of eligible costs. Continuation of the bounty assistance is linked to progress in achieving international shipbuilding reform:

> The Government has also introduced phase out arrangements for the [shipbuilding] bounty which parallel those enjoyed by European shipbuilders (Minchin 1999c).

In addition to bounty assistance, the legislation also provides for a new Shipbuilding Innovation Scheme (SIS). Under the scheme, 'registered' shipbuilders will receive special assistance for R&D and innovation, instead of being able to use the competitive R&D Start program or the more broadly based R&D tax concession. The SIS will operate for five years and provide benefits at the rate of 50 per cent of ‘innovation’ expenditure. The payment will be subject to a limit of 2 per cent of eligible production costs.

Funding for the SIS was transferred from the R&D Start program. In contrast to the R&D Start definition of R&D expenditure, the SIS will allow a broader class of ‘innovative’ expenditures by shipbuilding firms, such as adaptive engineering, to be eligible for assistance (Senate Economics Legislation Committee 1999b).

Information technology

In recent years, the information technology (IT) industry has been a focus in industry policy debates. The (Mortimer) Review of Business Programs (1997) and the Goldsworthy Report (1997) recommended measures specifically to cater for the development of the IT sector.

The Commonwealth Government’s 1997 *Investing for Growth* statement provided $28 million for the establishment of software engineering centres, and for testing and conformance infrastructure.

In June 1999, the Government committed further assistance to the IT industry through the new $158 million Building IT Strengths (BITS) program. According to the Government, BITS is to be funded from the partial sale of Telstra, and comprises three components (Alston 1999b).

- $78 million will be used to establish ‘incubators’ in States and Territories to provide development assistance to small and medium-sized enterprises. Assisted activities include mentoring, management assistance, links to research organisations and venture capital sector, and proof of concept grants and seed capital.
- $40 million in funding will be used to fund the capital costs of establishing advanced network test beds involving technologies such as optical networks, digital transmission and international broad band links. The associated use of state of the art infrastructure technology is intended to make Australia an attractive location for ‘greenfield’ investments.
- $40 million of funding will also be directed to the IT industry in Tasmania as a development of the ‘Intelligent Island’. Assistance will be available for business incubators, IT research and training, multimedia and e-commerce centres of excellence and training, commercialisation of IT R&D and investments in bandwidth infrastructure.

Space

The Commission reported last year on measures designed to facilitate the development of the commercial space industry in Australia (PC 1998b). These include a sales tax exemption for space vehicles and satellites launched from Australia.

Legislation to implement the exemption has now been passed by Parliament. The exemption is intended to:

- facilitate the establishment of a viable commercial space industry; and
- establish access to the expanding world demand for satellite launch facilities (Costello 1998).

The Government has argued that the revenue cost of the exemption is not quantifiable at present, although it notes that the revenue loss — on the basis of sales tax which otherwise would be payable on importing a launch vehicle — would be about $60 million (Costello 1998).

Biotechnology

While $10 million was provided in the 1999-2000 Budget for the development of a biotechnology strategy, including the establishment of a Ministerial Council, no special assistance programs have been established for biotechnology (DISR 1999).

Nevertheless, the Government has estimated in its *1999 Industry Outcomes and Outlook Statement* (DISR 1999) that the sector receives some $250 million a year from various research institutions. R&D on biotechnology is being conducted by the CSIRO, the Australian Research Council, the National Health and Medical Research Council (NHMRC), and rural R&D Corporations. Commercial biotechnology also benefits from a range of other programs, including R&D Start, the Innovation Investment Fund, Pooled Development Funds, Technology Diffusion programs and the Pharmaceutical Industry Investment program. Of the 67 Cooperative Research Centres, 14 undertake research involving biotechnology (DISR 1999).

Substantial additional assistance to biotechnology is to be provided over the next six years. In the *1999 Industry Outcomes and Outlook Statement*, the Government said:

> A further initiative announced in the 1999-2000 Budget is increased funding for biotechnology research. Over the next six years, annual funding for health and medical research through the NHMRC will more than double base research funding from $165 million in 1998-99 to more than $350 million in 2004-05. The total investment of new money over the six years will be $614 million (DISR 1999).

Tourism

In the 1998-99 Budget, the Government announced additional funding of $50 million to the Australian Tourist Commission (ATC) to market and promote overseas tourism to Australia. This brings total funding for the ATC for the four year period to 2001-02 to $359 million. In June 1998, further initiatives were announced in an action plan, Tourism — A Ticket to the 21st Century, including:

- the Regional Tourism Program — allocated $16 million over four years to attract visitors away from metropolitan areas in support of tourism in rural and regional areas;
- the development of the Online Tourism Industry — at a cost of $2 million; and
- the Domestic Tourism Campaign — the Commonwealth will provide $8 million to the campaign, on a matching basis, with funds provided by State governments and industry (DISR 1999).

Research and development, and venture capital

R&D tax concession

The R&D tax concession is a significant measure aimed at encouraging R&D in Australia. The concession accounted for $430 million in revenue forgone in 1997-98. This was 46 per cent lower than in the previous year, following a reduction in the rate of assistance from 150 per cent to 125 per cent. In 1998, the Government streamlined procedures to make the concession more accessible to business (PC 1998b).

In its *Telecommunications Equipment, Systems and Services* report, the Commission (IC 1998) recommended that the Government consider the merits of replacing the general R&D tax concession with an incremental scheme — aimed at assisting ‘additional’ rather than existing R&D — and providing a non-taxable form of incentives which could apply to firms with tax losses or insufficient franking credits. A more targeted scheme would also provide the scope to increase the rate of assistance to R&D. Many industrialised countries (including the US) have adopted schemes targeting *incremental* or additional R&D, rather than providing a tax concession spread across existing and new R&D expenditure (Hall 1995).

In its response to the report, the Government rejected this recommendation. It noted what it saw as the likely complexity and administrative costs of an incremental scheme, and the need of business for certainty in R&D assistance. The Government stated that its objectives in relation to R&D are to improve the focus of support to industry with a greater emphasis on grants. It pointed to the *Investing for Growth* statement, which allocated an additional $556 million to the R&D Start program.

The Government has recently reaffirmed its support of the R&D tax concession. In its response to the (Ralph) Review of Business Taxation, the Government said:

> The 125 per cent R&D tax concession, vital for Australia's full participation in the growing knowledge-based economy, will also be retained (Minchin 1999d).

Availability of venture capital

In recent years, some significant assistance measures have been introduced to facilitate access to venture capital and the commercialisation of R&D. The Innovation Investment Fund (IIF), which provides venture capital to small technology firms to assist commercialisation of R&D, has now been allocated $230 million funding. As part of the measures introduced to address climate change, the Renewable Energy Equity Fund, which is modelled on the IIF, provides venture capital to small firms for the development of renewable energy. Prior to these changes, the Pooled Development Fund (PDF) program was designed to improve access to equity capital for small and medium-sized enterprises (SMEs).

There are considerable doubts about the nature and extent of availability of venture capital in Australia and the appropriate government intervention required.

In its inquiry on the *Availability of Capital*, the Commission (IC 1991) recorded different views between SMEs and financial intermediaries about the possible lack of equity finance. The Commission examined underlying influences on capital availability and concluded that government intervention to expand institutional funds to SMEs would not improve the efficiency of the capital market or the economy generally.

Evidence on the availability of equity capital was re-examined in the Commission's report on *Research and Development* (IC 1995b). The report confirmed the earlier finding that difficulties in attracting capital are explicable by inherent features of financing risky investments, rather than a systematic bias on the part of the institutional funds.

In its inquiry on *Telecommunications Equipment, Systems and Services*, the Commission (IC 1998) recommended that existing venture capital programs be monitored and evaluated before any additional or alternative program in this area is considered. It also recommended that any modifications to the taxation system to improve the availability of venture capital should be considered in the context of the wider review of the tax system.

In its May 1999 response to the report (Alston 1999a), the Government agreed with the first of these recommendations, although it also said that new venture capital programs require some significant periods (typically five years) to mature, before their effectiveness can be evaluated. In relation to the second recommendation, the Government agreed that modifications to improve availability of venture capital would be considered by the (Ralph) Review of Business Taxation. However, the Government also committed itself to changing rules controlling investments in PDFs to make them more attractive for foreign venture capital.

Several changes to the PDF program were announced in the 1999-2000 Budget, including allowing full ownership of PDFs by Australian superannuation funds and overseas pension funds, and ‘limited partnership’ ownership of such funds.

In August 1999, the Government announced that the PDF program is to be tightened. This was in response to concerns that some PDF companies were considering investments which do not satisfy eligibility criteria of the *Pooled Development Funds Act 1992* (Costello and Minchin 1999).

In September 1999, the Government announced two new incentives for venture capital investment in its response to the (Ralph) Review of Business Taxation:

- First, Australian superannuation funds will receive a capital gains tax exemption for their venture capital investments in PDFs. Those superannuation funds will be entitled to a refundable imputation credit on the franked dividends received from PDFs (unfranked dividends are already exempt). PDFs can make new equity investment in companies with assets above $50 million and are subject to a (concessional) tax rate of 15 per cent.
- Second, non-resident pension funds will be eligible for income tax (including capital gains) exemptions on venture capital investment in Australia. To qualify, foreign pension funds are required to be tax exempt in their home countries (to be limited initially to United States, United Kingdom, Japan, Germany, France and Canada). Eligible investments are those considered to be at risk and held by the investor for at least twelve months, and the investee entity’s assets must not exceed $50 million. Real estate and other passive investments are not eligible. The effectiveness of the exemption is to be reviewed five years after its introduction (Costello 1999a).

Estimates on the costs of these tax exemptions are yet to be provided.

Cooperative Research Centre program

In April 1999, the Government announced funding for 26 Cooperative Research Centres as a result of its 1998 selection round. Annual funding of new and existing CRCs totalled $140 million in 1998-99.

A greater emphasis is now placed on commercialisation in determining the allocation of funding to Cooperative Research Centres, following the (Stocker and Mercer) review last year:

> The review's recommendation that the ability of CRCs to commercialise their research should play a large role in the selection criteria has been implemented in this funding round, with a number of successful applicants demonstrating an entrepreneurial approach to research (Minchin 1999a).

Applicants are required to demonstrate 'a well structured, practicable and feasible strategy for the utilisation and commercialisation of the research outputs' (DIST 1998).

Commonwealth Technology Park — Melbourne Docklands

The Government has decided to make a contribution of $23 million over four years to the development of a science and technology park in the Melbourne Docklands. The park will focus on industrial research. The Government's contribution is to be funded from the $1 billion Federation Fund, which finances projects of major significance to mark the Centenary of Federation and other significant infrastructure projects. The Fund draws on proceeds from the first partial privatisation of Telstra.

Investment Ready Program

The Investment Ready Program (IRP) is a new element of the R&D Start program. The IRP has the objective of improving the commercialisation of Australian technology. The support is directed at making information available to small firms about likely information requirements of potential investors, and at enhancing small firms' abilities to manage commercialisation. The program is funded by a reallocation of $20 million from the R&D Start program.

Regional adjustment assistance

Tasmanian freight schemes

The Tasmanian Freight Equalisation Scheme (TFES) provides financial assistance to shippers to offset the cost ‘disadvantage’ on the Tasmanian manufacturing industry from transporting non-bulk goods across Bass Strait. Following the TFES Review Authority (1998) findings on rates of assistance, the Government decided to increase funding to the scheme by $15 million per year to $56 million per year.

The Tasmanian Wheat Freight Shipping Scheme has also been extended at a cost of over $1 million per year to assist cereal processing, intensive animal feedlot and aquaculture industries in Tasmania.

Victorian gas disruption assistance fund

In October 1998, the Government announced a rescue plan — the Commonwealth Gas Assistance Fund — for communities and businesses affected by the Victorian gas grid disruption. The Small Business Program — a component of the Fund — affords assistance of up to $10 000 to non-manufacturing businesses with 100 or fewer employees. Eligible costs include those incurred from emergency conversion from gas to alternative fuels, emergency additional costs, assessment costs of business viability, and costs relating to damage or failure of equipment. $50 million was provided to the Victorian Government for the delivery of the Small Business Program (Fahey 1998). Assistance also covers businesses in New South Wales and South Australia which are connected to the Victorian gas grid.

Budgetary assistance to exports

Around $1 billion in budgetary assistance is directed to supporting export activity. Table 4.2 shows the programs classified as budgetary assistance to exports.

Export subsidies and WTO trading rules

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

The vulnerability of Australia’s export assistance schemes was highlighted in recent challenges by the United States concerning the assistance afforded to Howe Leather The Australian Government has been forced to withdraw some support for the company and provide other support in a different form. This new support is still under consideration by the WTO (see section 3.6).

Supermarket to Asia strategy

In the 1999-2000 Budget, additional funding of $24 million was allocated to the Supermarket to Asia (STA) Strategy over the next four years. The Strategy aims to improve the competitiveness of food exports. The funding is directed to:

- the STA Council ($5 million);
- the Food and Fibre Chains Program ($9 million);
- the Technical Market Access Program of Australian Quarantine and Inspection Services ($7 million); and
- the New Industries Development Program ($3 million).

The Food and Fibre Chains Program seeks to build supply chains for food and fibre exports through matching funding to projects involving at least two enterprises in the chain. The projects are expected to have commercial benefits to participants and wider demonstration effects.

4.3 Strategic investment incentives

The Strategic Investment Incentive Program (SIIP) was established in December 1997 to provide firm-specific assistance to attract additional direct investment to Australia. The program was announced in the *Investing for Growth* statement as a response to recommendations of the (Mortimer) Review of Business Programs (1997) and the Goldsworthy Report (1997). Both reports advocated the use of large-scale incentives to attract major investment projects.

The Office of the Strategic Investment Coordinator (OSIC) — recently headed by Mr Bob Mansfield — was established to assess and advise the Government on the merits of providing investment incentives for selected projects. The investment incentives are intended to apply in limited and special circumstances, and can take the form of grants, tax relief, the provision of infrastructure services, or a combination of these.

The Strategic Investment Coordinator also provides a Major Projects Facilitation (MPF) service — fast tracking government approvals for investments above $50 million. A new agency, Invest Australia, undertakes investment promotion activities and provides secretariat support to the Strategic Investment Coordinator. Invest Australia also assists businesses to establish regional headquarters under the

Regional Headquarters Program, and provides Feasibility Study Funds to prospective investors.

To date, two projects in the manufacturing sector have been awarded incentives or received an offer for assistance under the SIIP. In December 1998, the Government announced the first investment incentive — a $40 million package for Visy Industries to establish an unbleached mini pulp and paper mill in Tumut, New South Wales (Minchin 1998a). In January 1999, the Government offered an incentive package exceeding $100 million to Comalco to expand an alumina refinery in Gladstone (Howard 1999a).

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).

The Government has 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).

The case for investment incentives

The Commission recently examined issues surrounding the provision of investment incentives in its report on *Telecommunications Equipment, Systems and Services* (IC 1998), which was released in May 1999.

It identified several ways in which the Government could attract investment to Australia.

- At the broadest level are measures to improve the ‘fundamentals’ of the economy. As well as being important factors in influencing the locational choices of multinational enterprises, these measures are also beneficial to domestic firms generally. Examples include improving infrastructure, tax, legal and educational systems, and adopting sound macroeconomic policy.

- Another approach is to address the possible negative and inaccurate perceptions about Australia as an investment location through investment promotion and facilitation. The approach would seek to identify micro-level impediments to investment and provide information to foreign investors about improvements in Australia's fundamentals.
- A third approach is the use of incentives such as subsidies and tax concessions for particular types of investment or particular projects**.**

The SIIP falls into the third category.

The Commission noted that, if new investment can be induced through selective incentives, benefits to the local economy can in theory arise through the capture of 'externalities' from new technology and skill transfer, from agglomeration economies, or from the use of unemployed resources.

That said, it is not clear that investment incentives are a particularly important factor in firms' locational decisions. The empirical evidence and the bulk of literature point to the importance of market factors, such as the size and growth of market, as the main drivers of investment (UNCTAD 1996, IC 1996c, 1996e and BIE 1993, 1995, 1996).

Further, the provision of selective investment incentives entails several economic risks. In particular:

- there is a risk that incentives will be provided to firms which would have chosen to invest here anyway and, hence, that Australia will incur economic costs for no additional benefits; and
- where incentives do lure new projects from elsewhere, these projects may still draw national resources, such as skilled labour, away from more productive uses in other domestic industries and firms.

Unless applications for selective assistance are carefully vetted, a proportion of assistance provided under programs such as the SIIP could entail net costs to the community. Indeed, the Commission considered that it is better to fund specific improvements of Australian endowments (such as roads, skills, and R&D) critical to foreign investments than to provide subsidies directly to shareholders, including foreigners.

Nevertheless, to mitigate the risks inherent in the SIIP, the Commission recommended a number of design principles to help improve the program (box 4.1), and it also proposed selection criteria for judging whether a particular project warranted selective assistance.

Box 4.1 **Commission's recommendations on investment incentives**

In implementing its plan for an investment attraction program, the Commonwealth Government should minimise the economic risks by following a number of principles:

- the program should be designed to maximise the extent to which investments are truly new to Australia, by for example, establishing a transparent cap on the amount of financial resources the Government will provide under the program.
- any proposal should be subject to rigorous cost-benefit assessment including examination of the sources of spillovers.
- as the process for discerning beneficial investment opportunities will emerge only after trial and error, the effects of the program should be monitored regularly so that changes in its design can be made to increase its effectiveness early in its life;
- the Office of the Strategic Investment Coordinator (OSIC) should consult with prospective investors to gain detailed intelligence about inappropriate microeconomic impediments to investment in Australia;
- it is better to fund specific improvements of Australian endowments (eg. roads, skills, R&D) critical to foreign investments than to provide subsidies direct to foreign shareholders.
- the OSIC should use transparent processes and criteria for decision making.

Source: IC 1998.

Aspects of the SIIP's design and early operation

Selection of projects and funding process

Under the SIIP, the Strategic Investment Coordinator assesses applications for investment incentives on a case-by-case basis against broad selection criteria (box 4.2), and advises the Cabinet on the merits of investment proposals.

Applicants are encouraged to apply under current government programs (with coordinating assistance available to applicants under the MPF program) before formally applying for a selective investment incentive:

> In the event that assistance cannot be provided through existing Government programs the company is entitled to submit a proposal for investment incentives to the Strategic Investment Coordinator (Moore 1999).

Box 4.2 **Criteria for provision of investment incentives**

The *Investing for Growth* statement outlined a broad eligibility criteria in determining the provision of incentives in limited and special circumstances:

- The investment would not be likely to occur in Australia without the incentive.
- The investment provides significant net economic benefits through:
  - – substantial increase in employment;
  - – substantial business investment;
  - – significant boost to Australia's R&D capability;
  - – significant benefits to, or investment by other industries, either users or suppliers (cluster investment); and
  - – ensuring that it does not involve substitution of existing production capacity which would provide an unfair advantage over other competing projects.
- The investment complements areas of Australia's competitive advantage.
- The investment is viable in the long term without the subsidy.
- The incentives are open to foreign and domestic investors.
- The quantum of project specific assistance takes into consideration the availability of other assistance from Commonwealth or State or Territory governments.
- Any incentives are consistent with our international obligations, including under the WTO.

Source: Commonwealth of Australia 1997.

After receiving OSIC's recommendations, Cabinet makes a determination on the project, and the level and form of assistance to be provided. While decisions on assisted projects and their funding have been announced, details of the assessments underlying these decisions have not been released publicly.

OSIC has advised the Commission that, since the inception of the program, around a dozen project proponents have applied for investment incentives, but only two projects (the Tumut paper mill and Gladstone refinery project) have succeeded in reaching to the stage of being considered in Cabinet. Incentives for these projects were subsequently approved and offered. The other 'unsuccessful' projects received on-going assistance through existing programs (with coordination through MPF services).

Reasons for rejections of applications are not made public under the SIIP arrangements, but comments by the Strategic Investment Coordinator have given some indication as to why investment incentives might not be approved. One reason has been a Government concern not to create a 'hand out' mentality. In addition, assistance may be refused if other companies are operating in the industry without help (James 1999).

For successful SIIP applicants, the overall assistance package is drawn from existing government business programs as well as from new funding. Various programs are examined and coordinated to bring together a set of incentives within the overall constraint of the budget (Senate Economics Legislation Committee 1999a).

The $40 million incentive for the Tumut paper mill was provided through a combination of existing programs' funds and new funding allocations. Of the total incentive package, $25 million came from the Infrastructure Borrowing Tax Offsets Scheme, the Roads of National Importance program, and the Regional Assistance Program (Minchin 1998b). The additional investment incentive of $15 million provided under the SIIP comprises five annual allocations of $3 million commencing on 1999-2000. The Commission has been unable to obtain information about whether the offer of assistance to the Gladstone refinery project consists of new or existing program funding, or both.

Because detailed information on the assessment process is not made public, it is not possible to evaluate the way in which the SIIP selection criteria have been applied in relation to the Tumut paper mill project. The criteria (box 4.2) apply only to the additional funding in the incentive package. Where the incentives are drawn from existing programs, applications for investment incentives are to be assessed against the selection criteria of the relevant existing programs. SIIP projects' eligibility for assistance under these existing programs is reported to be assessed on the same basis as other (normal) applicants (Senate Economics Legislation Committee 1999a, pp. 33-4).

The chief advantages of using a combination of programs and tax measures are said to be that it confers flexibility in the provision of selective assistance, and that this mode of funding is favoured by recipient firms.

Such an approach contrasts, though, with the procedures applying to other government programs. In these, the funding process, and the scope, duration and magnitude of the assistance, are specified clearly and followed systematically. Among other things, such features enhance transparency and accountability.

In its report on *Telecommunications Equipment, Systems and Services*, the Commission (IC 1998) recommended that the OSIC should use transparent processes and criteria for decision making.

In its response to the report, the Government agreed with this transparency principle:

> The criteria for investment incentives were published in *Investing for Growth* in December 1997 and are transparent. Cabinet will make all decisions regarding the provision of investment incentives (Alston 1999a).

The Commission sees scope for enhancing the level of public scrutiny of incentives provided under the SIIP. The criteria are expressed in broad, general terms, and it is not clear how they are applied in practice. Important aspects of the SIIP, such as the social cost-benefit analyses, are confidential.

Level of assistance

There is no explicit cap on the funding allocated for the SIIP. The potential budgetary costs of investment incentives are included among contingent liabilities in the Budget, but specific amounts are not listed. The lack of a funding cap has a possible advantage in that it avoids a tendency to spend all allocated funds.

However, a cap would discipline the level of project-specific assistance offered. It would also increase the effective bargaining power of the government to attract multinationals which offer the greatest external benefits (IC 1998).

Although the Government expressed in-principle agreement to this, it observed:

> There is no dedicated fund for the purpose of providing investment incentives. Any decision to allocate funds to provide an incentive will be taken by Cabinet on a case by case basis in limited and special circumstances, taking into account of the eligibility criteria announced in *Investing for Growth* (Alston 1999a).

Inducement

The ability of the SIIP investment incentives to induce genuinely new investments is a fundamental requirement for the measure to be able to generate net national benefits. As noted earlier, if the investment is to take place anyway because of market factors or other government policies, Australia would risk the displacement of existing economic activities and the transfer of income to shareholders, including foreigners, without any apparent gains.

OSIC has advised that, in determining whether ‘the investment would not be likely to occur in Australia without the incentive’, it takes into account a number of factors including whether Australia is competing to attract the investment, or whether the proponent is considering its investment in an overseas location.

There are a number of difficulties with this. First, it requires a great deal of detailed information on the part of selectors. A large degree of subjectivity will always arise in trying to discriminate between the marginal investor and those who will invest anyway. Second, businesses have incentives to engage in strategic behaviour to secure the maximum incentives available and selectors are rarely fully informed about the true intention of the multinational and market prospects facing the investment. Third, the fact that a company is considering its investment in an overseas location, or that another country has offered a bid, does not unambiguously indicate that the project is an 'additional' investment.

These types of issues are likely to have arisen in the context of OSIC's consideration of assistance for the Tumut paper mill project. Indeed, a study has suggested that Australia's manufacturing costs are lower than those of the countries with which it may have been in competition. From the study, it appears that the investment could have been commercially viable without assistance, and that the project may simply limit other domestic market opportunities (box 4.3).

Further problems arise in determining the amount of assistance necessary to induce the 'additional' investment. In its inquiry into *State, Territory and Local Government Assistance to Industry* (IC 1996e), the Commission found that even when the incentive is able to influence the decisions of the investor, the government will not know if it has paid more than required to bring about the investment. In that inquiry, the NSW Government recognised this (p. 43), saying:

> A complication is that the exact amount of competing bids and the true decision mind-set of the intending investor are seldom known. Accordingly, one of the risks is that to win the bid more assistance than is necessary may be offered.

While such problems are inevitable under any selective investment incentive scheme, the lack of publicly released assessment procedures make it unclear how such information problems are handled under the SIIP.

Cost-benefit assessments

In its report on *Telecommunications Equipment, Systems and Services*, the Commission (IC 1998) recommended that any incentive proposal should be subject to rigorous cost-benefit assessment, including an examination of the sources of spillovers. The Government agreed to this recommendation:

> A rigorous and comprehensive methodology is used to evaluate proposals for incentives. A cost-benefit analysis is an integral part of this evaluation process (Alston 1999a).

Box 4.3 **The Tumut paper mill project**

The Tumut paper mill will produce primarily kraft liner board that is used to make corrugated board and boxes. The unbleached production process uses softwood and recycled waste from local plantation pine resources, and completes the integration of the company's box making process.

Visy Industries indicated New Zealand as another possible location to invest, but was also attracted to Tumut of the Murray Valley region which has a substantial softwood sawlog surplus in the medium and long term. The Tumut mill is a greenfield development:

> The project will be the first fully integrated greenfield pulp and paper mill established in Australia in 17 years … In that time there has only been expansion or upgrading of existing plants and establishment of other plants using recycled paper (Minchin 1998a).

How does Australia fare against countries with which it may have competed? Based on a study prepared for Invest Australia on investment opportunities in Australian forest industries (Margules Pöyry 1999), Australia's manufacturing costs of corrugating materials are about the same as in the USA, but lower than those of New Zealand and other Asia-Pacific countries. The study considered that Australia is cost competitive in the Asia-Pacific region, but that existing production capacity exceeds forecast demand up to 2010 in the Australian market. Australian exports of corrugating materials (about 18 per cent of production) have increased steadily since the late 1980s, and there is growing demand for packaging materials in the region.

The study concluded that the Tumut mill represents a possible commercial opportunity, but that, if built, it will limit other domestic market opportunities for several years to come. The study also considered that, if the project did not proceed, the softwood sawlog surplus would become available to another investor (Margules Pöyry 1999).

Source: Margules Pöyry 1999 and Minchin 1998a.

In applying for investment incentives, companies submit studies and modelling on the benefits and costs of the investment. The cost-benefit assessments are scrutinised by the main government departments, but are subject to Cabinet and commercial confidence considerations.

The press announcement of the incentive package for the Tumut project identified several types of benefits. These include:

- a capital investment of $450 million;
- a creation of 1000 jobs, the majority of which centres around the proposed site. This is to be generated from 250 jobs during the construction phase, and 145 full-time jobs and 578 indirect jobs when the mill is at its peak of activity. The project is also expected to generate a further 260 saw milling jobs;
- introduction of state of the art technologies;

- an environmental benefit from the project's use of recycled paper;
- replacing imports of wood products and increasing exports of paper and packaging products;
- market opportunities for regional suppliers; and
- regional development and a catalyst for infrastructure development.

The proposed Gladstone alumina refinery project is said to involve an investment of $3 billion and the direct creation of 1300 jobs in the first stage (Howard 1999a).

The Commission observes that cost-benefit analysis is complex. All potential projects have benefits; the issue is whether they exceed the costs. These costs are not always readily apparent, and estimates of benefits can sometimes be overstated where 'multiplier' effects are applied without consideration of the alternative uses to which resources can be put.

Indeed, it has been claimed that the investment incentive provided for the Gladstone project, if it proceeds, may involve a net public cost. ACTED Consultants (1999) has estimated that the project would reduce the existing supply of ethane feedstock in Australia by some 25 per cent and thereby reduce the viability of various ventures in Western Australia:

> Therefore while one part of the balance sheet that Invest Australia can use to demonstrate the benefit to QLD of its $100m incentive, on the debit are the reduced viability of alumina expansions in W.A. that would benefit from scale economies, the PPP [Pilbara Petrochemical Project] and related [high value-added] chemical projects. The evidence points to a net public cost from Invest Australia's involvement in the market place (ACTED Consultants 1999, p. 11).

While the Commission is not in a position to comment on the merits of the particular cost-benefit studies undertaken as part of the assessment process, any errors that could bias the outcome of such studies are more likely to be detected where they are open to public scrutiny.

Table 4.2 **Commonwealth export assistance, 1996-97 to 1999-00**

$ million

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
DIRECT EXPORT MEASURES				
Export finance & insurance services				
Development Import Finance Facility	12	-	-	-
EFIC Government Guarantee and NIB	ne	ne	ne	ne
Export marketing and promotional services				
Agri-food industry program	1	1	-	-
Australia in Asia	1	1	-	-
Australian Horticultural Corporation	1	-	-	-
Australian Tourist Commission	79	78	89	90
Automotive Market Access and Development	-	-	8	5
Export Access program	3	3	4	4
Export Market Development Grants scheme	188	145	152	152
Innovative Agricultural Marketing program	-	3	-	-
International Business Services (Austrade)	121	122	131	153
International Trade Enhancement scheme	-	13	-	-
AQIS meat export inspection subsidy	12	-	-	-
Other direct export measures				
Duty drawback[b]	97	79	95	95
PMV Export Facilitation Scheme[b,c]	221	251	265	275
TCF Import Credits Scheme[d]	118	121	106	110
TEXCO (Tariff Export Concessions)[b]	57	80	57	60
TRADEX	-	-	na	na
Sub-total	**909**	**899**	**906**	**947**
OTHER MEASURES AFFECTING EXPORTS[e]				
Assistance to Howe Leather[f]				
• Grant	5	13	13	-
• Loan	25	-	-	14
Bounties[g]				
• Computers	24	22	26	-
• Machine tools and robots	3	2	1	-
• Shipbuilding	19	15	19	12
Factor f – pharmaceuticals[g]	66	76	72	-
Pharmaceutical Industry Development program[g]	-	-	-	28

Table 4.2 (continued)

	1996-97	1997-98	1998-99[a]	1999-00[a]
Private Sector Linkages program	3	3	3	-
Sub-total	**144**	**131**	**133**	**54**
TOTAL EXPORT ASSISTANCE	**1 053**	**1 030**	**1 039**	**1001**

ne Not estimated. **na** Not available. **-** Nil. **a** Estimates of outlays and projections of tax revenue forgone. **b** Figures for 1999-00 are Commission estimates. **c** Estimates of revenue forgone are for calendar years, 1996, 1997 and 1998. **d** ACS financial year estimates, representing the actual value of import credits issued, which equals the duty forgone when credits are used. Data for 1999-00 are Commission estimates. **e** Export assistance is also provided under the Commonwealth support arrangement for manufacturing milk — the Dairy Market Support Payments. The arrangement is discussed in chapter 3. **f** Assistance estimates are likely to be revised. **g** Figures for bounty and pharmaceutical programs relate to the export component of the program.

Source: Commonwealth Budget Papers, ACS (1999) and Commission estimates.

Table 4.3 **Commonwealth tax expenditures, 1996-97 to 1999-00**

$ million

	1996-97	1997-98	1998-99[a]	1999-00[a]
PRIMARY PRODUCTION				
Deduction for conserving or conveying water, and conservation measures	30	30	30	30
Tax rebate for landcare expenditures	-	-	ne	ne
Deduction of expenditures over four years on acquiring and establishing grape vines	3	4	4	4
Deduction of capital expenditure on establishing horticultural plantations	-	1	3	4
Five year, 10 per cent taxation allowance on drought-prepared assets	20	14	15	15
Income Equalisation Deposits Scheme	32	26	24	9
Farms Management Deposits Scheme	-	-	-	23
Income tax averaging for primary producers	120	90	95	95
Total primary production	**205**	**165**	**171**	**180**
MANUFACTURING				
Brandy excise preferential rate	5	5	5	5
Deduction of relocating expenses for multinational firms establishing regional headquarters in Australia	7	2	2	2
Development allowance[b]	65	54	38	35

Table 4.3 (continued)

	1996-97	1997-98	1998-99[a]	1999-00[a]
Duty drawback	97	79	95	95
Exemption of business funds used for university R&D	<1	<1	<1	<1
General investment allowance of additional 10 per cent deduction on plant and equipment[c]	12	-	-	-
PMV Export Facilitation Scheme	221	251	265	275
Pooled Development Funds	<1	<1	<1	3
R&D tax concession[b]	336	181	181	181
TCF Import Credits Scheme	118	121	106	110
TEXCO (Tariff Export Concession)	57	80	57	60
TRADEX	-	-	na	na
Total manufacturing	**918**	**772**	**748**	**766**
MINING				
Development allowance[b]	166	138	97	89
Exemption of income from sale, transfer or assignment of rights to mine gold	40	38	18	5
Total mining	**318**	**227**	**167**	**146**
SERVICES				
Accelerated depreciation of Australian trading ships	12	ne	ne	ne
Concessional (10 per cent) tax rate on eligible income from an offshore banking unit	13	17	27	35
Development Allowance[b]	94	78	55	51
Film industry 100 per cent capital deduction	22	20	20	20
Film Licensed Investment Company 100 per cent deduction for investors	-	-	na	na
Infrastructure Bonds	40	115	105	85
Infrastructure Borrowings tax rebate	-	10	75	75
R&D tax concession[b]	352	198	198	198
Total services	**533**	**438**	**480**	**464**
TOTAL	**1 974**	**1 602**	**1 565**	**1555**

- Nil. **na** not available. **ne** not estimated. **a** Treasury forward projections. **b** Commission estimates based on ATO tax deduction data. **c** Qualifying plant and equipment must be ordered from 9 February 1993 and used before July 1994.

Source: Treasury (1999), ACS (1999) and ATO (1998).

Table 4.4 **Commonwealth budgetary outlays on primary production, 1996-97 to 1999-00**

$ million

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
DIRECT FINANCIAL ASSISTANCE				
Industry-specific programs				
Citrus industry market diversification subsidy	2	<1	1	1
Forest Industry structural adjustment Package	5	6	24	23
Pigmeat processing grants program	-	-	2	5
Pork producer exit program	-	-	-	5
Wine industry loan conversion	2	-	-	-
Sub-total	**9**	**7**	**27**	**34**
Sector-specific programs				
Farm Family Restart Program				
• Re-establishment	-	17	14	17
• Income support	-	5	20	18
Farm Household Support Scheme	1	<1	<1	-
Rural Adjustment Scheme	106	82	43	21
Sub-total	**106**	**104**	**77**	**55**
General programs				
Austrade				
• Export Market Development Grants scheme	5	4	5	5
• Innovative Agricultural Marketing Program	-	3	-	-
EFIC – National Interest Business[b]	21	18	17	12
Tasmanian Freight Equalisation Scheme	3	<1	3	5
Sub-total	**30**	**26**	**24**	**21**
Total direct financial assistance	**145**	**137**	**128**	**111**
FUNDING TO INTERMEDIARY ORGANISATIONS				
Industry-specific programs				
Crops				
Australian Horticultural Corporation	1	-	-	-
Australian Plague Locust Commission	1	<1	1	-
Sugar Industries Package	-	-	3	4
Sugar Industry Program	4	3	1	3
Tri-State fruit fly strategy	<1	<1	-	-
Livestock, poultry etc				
AQIS meat inspection subsidy	12	-	-	-
Australian Animal Health Laboratory	6	6	6	6

Table 4.4 (continued)

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
Exotic disease preparedness programs	1	<1	5	1
Pork Industry Development Group Grant	-	2	5	5
Forestry				
Commonwealth-NSW Forest Industry Package	1	-	3	-
National Forest Policy Program	7	7	9	3
NSW Southeast Forests Package	1	4	-	-
Plantation initiatives				
• National Forest Policy Program	4	4	-	-
• North Queensland Community Rainforests Revegetation Program	1	-	-	-
Sub-total	**42**	**29**	**34**	**23**
Research & development[c]				
Cooperative Research Centres	36	35	32	29
CSIRO plant and animal research	101	113	118	121
Fisheries research and development	15	11	12	10
Fisheries resources research	2	<1	2	3
Grains (wheat and other[d])	29	34	36	35
Horticulture	12	11	14	15
Land and Water Resources R&D Corporation	10	11	11	11
Other rural research[e]	27	33	36	35
Meat research	21	23	21	21
Rural Industries R&D Corporation	6	11	11	11
Wool	10	7	14	11
Sub-total	**268**	**288**	**309**	**302**
Sector-specific programs				
Agribusiness programs	<1	<1	<1	<1
Clean Food Production Program	-	<1	<1	<1
Farm Business & Community Programs	-	6	6	24
National Landcare Program	66	54	56	35
Rural Communities Access Program	9	5	-	-
Supermarket to Asia Strategy including Food and Fibre Supply Chain Program	-	-	-	7
Sub-total	**79**	**68**	**66**	**70**
General programs				
Austrade – export promotion operating expenses	3	3	3	3
Total funding to intermediary organisations	**389**	**385**	**409**	**394**
TOTAL OUTLAYS ON PRIMARY PRODUCTION	**534**	**522**	**537**	**505**

Table 4.4 (continued)

- Nil. Figures may not add to total due to rounding. [a] 1998-99 data are Budget estimates and 1999-00 data are Budget appropriations. [b] 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. [c] Estimates are derived in part from the Science and Technology Budget Statement 1999-00. [d] Other includes barley, grain legumes and oilseeds. [e] Other industries, including dairy, chicken meat, pig meat, eggs, cotton, dried vine fruits, grapes and wine, honey, sugar and tobacco.

Source: Commonwealth Budget and Budget related papers (various years), departmental annual reports (various years) and Commission estimates.

Table 4.5 Commonwealth budgetary outlays on the manufacturing sector, 1996-97 to 1999-00

$ million

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
DIRECT FINANCIAL ASSISTANCE				
Industry-specific programs				
Bounties				
Books	13	7	<1	-
Computers	54	49	58	-
Machine tools and robots	6	4	2	-
Shipbuilding	23	19	24	15
Sub-total	*96*	*79*	*84*	*15*
Other industry-specific programs				
Assistance to Howe Leather[b]				
• Grant	5	13	13	-
• Loan	25	-	-	14
Investment incentive to Tumut paper mill	-	-	-	3
Pharmaceutical industry Factor f program	146	174	159	45
Pharmaceutical Industry Development program	-	-	-	63
Tasmanian wheat freight subsidy	1	1	1	1
TCF programs[c]	3	6	8	7
Sub-total	*181*	*190*	*181*	*147*
Sub-total	**277**	**269**	**265**	**162**
General programs				
Austrade				
• Asia Business Links	-	<1	-	-
• Asia Pacific Fellowship	-	1	-	-

Table 4.5 (continued)

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
• Export Market Development Grants scheme	71	52	55	55
• International Trade Enhancement Scheme	1	13	-	-
Development Import Finance Facility	12	-	-	-
IR&D Board programs				
• R&D Start and related programs	56	91	128	161
• Innovation Investment Fund	-	4	25	35
Technology Support Centres	7	19	-	-
Technology Diffusion Program	-	-	13	27
Tasmanian Freight Equalisation Scheme	35	10	35	47
Sub-total	**182**	**191**	**260**	**331**
Total direct financial assistance	**459**	**460**	**525**	**492**
FUNDING TO INTERMEDIARY ORGANISATIONS				
Agri-Food Industry Program	1	1	-	-
Automotive Market Access and Development	-	-	8	5
National Space Program	3	<1	-	-
Sub-total	**4**	**2**	**8**	**5**
General programs				
Austrade				
• Export Access Program	3	3	4	4
• Export promotion operating expenses	48	49	52	61
Cooperative Research Centres	40	42	42	40
CSIRO manufacturing research	98	81	83	85
Enterprise Development Program	22	28	9	6
Enterprise Networking Program	7	7	4	-
Greenhouse Response Strategy	1	1	-	-
Invest Australia	-	-	15	15
Private Sector Linkages Program	3	3	-	-
Sub-total	**224**	**215**	**208**	**211**
Total funding to intermediary organisations	**228**	**217**	**216**	**216**
TOTAL OUTLAYS ON MANUFACTURING	**687**	**677**	**741**	**708**

- Nil. Figures may not add to total due to rounding. **a** 1998-99 data are Budget estimates and 1999-00 data are Budget appropriations. **b** Assistance estimates are likely to be revised. **c** Programs involve both direct financial assistance and funding for services.

Source: Commonwealth Budget and Budget related papers (various years), departmental annual reports (various years) and Commission estimates.

Table 4.6 Commonwealth budgetary outlays on the mining and energy sector, 1996-97 to 1999-00

$ million

	1996-97	1997-98	1998-99[a]	1999-00[a]
DIRECT FINANCIAL ASSISTANCE				
Industry-specific programs				
National Electricity Market Systems Development Project	3	-	-	-
General programs				
Export Market Development Grants scheme	2	1	2	2
Tasmanian Freight Equalisation Scheme	1	<1	1	2
Total direct financial assistance	**6**	**2**	**3**	**3**
FUNDING TO INTERMEDIARTY INSTITUTIONS				
Austrade – export promotion operating expenses	1	1	1	2
Cooperative Research Centres	23	22	23	22
CSIRO minerals and energy research	73	64	68	69
Energy R&D Corporation	7	21	2	-
National Energy Efficiency Program	4	2	4	-
Office of the Supervising Scientist of the Alligator Rivers Region Research Institute	5	4	4	6
Regional Minerals Program	-	-	-	1
Total funding to intermediary organisations	**113**	**114**	**102**	**98**
TOTAL OUTLAYS ON MINING AND ENERGY	**113**	**114**	**102**	**98**

- Nil. Figures may not add to total due to rounding. **a** 1998-99 data are Budget estimates and 1999-00 estimates are Budget appropriations.

Source: Commonwealth Budget and Budget related papers (various years), departmental annual reports (various years) and Commission estimates.

Table 4.7 **Commonwealth budgetary outlays on selected services industries, 1996-97 to 1999-00**

$ million

	1996-97	*1997-98*	*1998-99*[a]	*1999-00*[a]
DIRECT FINANCIAL ASSISTANCE				
Industry-specific programs				
Australian Film Commission[b]	28	30	16	17
Australian Film Finance Corporation & Film Australia[b]	55	48	48	48
Capital Grants Scheme for purchase of trading ships (contingent on lower crewing levels)	9	4	-	-
Commercial television production fund	8	-	-	-
Development Import Finance Facility	3	-	-	-
Pharmacy Restructuring grants	5	8	11	11
Remote air services subsidy	1	1	1	1
Remote commercial television subsidy	1	1	-	-
General programs				
Export Market Development Grants scheme	109	87	91	91
Tasmanian Freight Equalisation Scheme	<1	2	2	3
Total direct financial assistance	**220**	**180**	**183**	**187**
FUNDING TO INTERMEDIARY INSTITUTIONS				
Austrade – export promotion operating expenses	70	73	78	92
Australian Tourist Commission	79	78	89	90
Cooperative Research Centres	17	18	19	21
CSIRO services industry research	43	69	70	72
Tourismprograms	7	7	3	7
Total funding to intermediary organisations	**216**	**246**	**258**	**275**
TOTAL OUTLAYS ON SERVICES	**436**	**426**	**440**	**462**

- Nil. Figures may not add to total due to rounding. **a** 1998-99 data are Budget estimates and 1999-00 data are Budget appropriations. **b** Program involves both direct financial assistance and provision of ervices.

Source: Commonwealth Budget and Budget related papers (various years), departmental annual reports (various years) and Commission estimates.

A About the Commission's assistance estimates

Assistance is defined in the *Productivity Commission Act 1998* as any government act that, directly or indirectly, assists a person to carry on a business or activity, or confers a pecuniary benefit on the person carrying out a business.

Quantifying industry assistance enables governments to make better informed policy decisions, potentially allowing them to improve the allocation of a community's scare resources and, thus, improve community welfare (see box A.1).

The Commission has a statutory obligation to report on industry assistance, and its approach contains two main elements: the agricultural and manufacturing assistance measurement system (AMAMS) and budgetary assistance estimates. The Commission has measured rates of assistance to the agricultural and manufacturing sectors, on a consistent basis across industries, since the early 1970s. While providing an indication of the extent to which particular activities in these sectors are favoured by assistance relative to others, these estimates do not incorporate all forms of intervention which discriminate between industries and sectors. Since 1980, to provide a better coverage of government programs and policies not included in the agriculture and manufacturing estimates, the Commission has also measured Commonwealth budgetary assistance to industry.

Notwithstanding the usefulness of the Commission's assistance framework, a number of conceptual and practical difficulties inevitably arise in the measurement of assistance, and these mean that caution is needed when interpreting the Commission's published estimates.

In this appendix, the Commission discusses issues involved in:

- its estimation of assistance under the AMAMS;
- its measurement of Commonwealth budgetary assistance; and
- the relationship between these two areas.

Box A.1 Assistance and the allocation of resources – an illustration of red and green 'widgets'

Government assistance to a particular industry (or activity) can make investing in the industry more remunerative than it would otherwise be. In turn, this can attract economic resources away from other industries into the assisted one.

- To illustrate with a *highly simplified* example, imagine that the expected returns on investment are 10 per cent in the 'red widget' industry, but only 8 per cent in the 'green widget' industry – say because consumers prefer red widgets to green ones and are thus willing to pay more for them. In these circumstances, people would be expected to invest in red widgets rather than green widgets for as long as the gap remains. However, if the government provides a subsidy for green widgets such that the total returns (including the subsidy) rise to 12 per cent, people will be expected to invest in green rather than red widgets. As well, some existing red widget producers will probably switch to producing green ones.

In specific instances, such assistance will lead to a more efficient allocation of resources between the various industries and activities within the economy. This will be the case if: normal commercial incentives fail to reflect the real benefits and costs that people and society more broadly get from producing or consuming the goods and services in question; and the assistance provided by the government sways incentives *in the right direction*.

- For example, if red widgets when used emit far more pollution than green widgets, and environmental laws are unable to make users of red widgets pay for, or clean up, their pollution, then government assistance which increases the proportion of green widgets consumed may improve community welfare.

However, in other cases, assistance to a particular business or activity will worsen the allocation of resources.

- If the only difference between red and green widgets is their colour then assistance to the green widget industry willl make society worse off, given consumers' preference for red widgets.

A.1 The agriculture and manufacturing assistance measurement system

Governments provide assistance to the agriculture and manufacturing industries in a plethora of ways. These include tariffs on imports, tariff concessions, production bounties, domestic marketing and regulatory arrangements, anti-dumping measures, research funding, income tax concessions and rebates, adjustment assistance, export incentives, input subsidies, income equalisation schemes, excise arrangements and loan guarantees.

The Commission's AMAMS aims as far as practicable to summarise and quantify these various forms of assistance in a way that allows:

- the estimation of the total amount of assistance afforded to a particular industry;
- comparisons to be made between the assistance afforded to different industries;
- the tracking of changes in the assistance afforded to industries over time; and
- judgments to be made regarding the impact of assistance on the allocation of resources between different industries and activities within the economy.

This is no easy task. It requires an appreciation of economic relationships, substantial information and data, and inevitably some use of simplifying assumptions, theory and judgment.

In practice, the Commission makes use of several different conceptual measures under the AMAMS to help gauge different aspects of the assistance structure and its impacts. Together, these different conceptual measures allow an overall picture to be pieced together.

Further, in compiling its AMAMS estimates, the Commission has adopted the practical approach of seeking to gauge the benefits and penalties associated with mainly major government interventions which affect particular agricultural and manufacturing businesses and industries and for which reliable estimates can be made over time. The aim is to provide a reasonable guide to how the discriminatory nature of assistance provided to manufacturing and agricultural industries alters incentives to use resources in the different industries or activities.

Conceptual measures

The conceptual measures used under the AMAMS are the effective rate of assistance, and nominal rates of assistance on outputs and materials, the standard deviation in the effective rate and in the nominal rate on outputs, the net and gross subsidy equivalents, the tax equivalent on materials and the consumer tax equivalent (box A.2).

The choice of measure depends on which issue is of interest. For example, if the main concern is the extent to which assistance to an industry or activity involves a transfer of income from consumers to producers, due to the price-raising effects of assistance, the consumer tax equivalent is the appropriate measure. Alternatively, if the concern is the effect that the assistance afforded to producers in an industry has on their gross returns, the nominal rate of assistance is appropriate.

Box A.2 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.

Of all the measures, the *effective rate of assistance* is generally of most interest. It summarises the impact of various forms of assistance on the *net* returns to an industry's or activity's 'value-adding factors' — that is, the land, labour and capital resources used to produce an industry's or activity's output.[1] It provides a basis for assessing the extent to which assistance alters the incentives of producers to undertake particular economic activities, or, in other words, the impact that the assistance structure has on 'the allocation of resources' (box A.1). The effective rate is a particularly useful measure as it:

- can include a wide range of border assistance (eg tariffs and quotas) and non-border assistance (eg government programs and regulatory arrangements);
- takes into account both the benefits and penalties of assistance to individual industries or activities; and
- provides an indicator of the extent to which the overall structure of assistance advantages or disadvantages an industry relative to other industries.

The *nominal rate of assistance on output* provides an indication of the impact of assistance on the gross returns to an industry's or activity's output. The nominal rate is a useful indicator of the effects of assistance on incentives to produce certain commodities and, to a lesser extent, to consume those commodities.[2]

However, unlike the effective rate, the nominal rate of output assistance does not take into account the *net* impacts of assistance on various inputs and outputs. The nominal rate simply measures the rate of assistance to particular outputs. For example, where a local producer supplies goods to the domestic market in competition with imported goods, a tariff on those imports provides assistance to the local producer by allowing it to charge higher prices on the domestic market (than it could in the absence of the tariff). The tariff, however, penalises consumers and other producers which use the goods. The benefit which a producer receives on its outputs (nominal assistance) may therefore be offset to some extent by tariff protection on inputs used in production. But this is not reflected in lower estimates of the nominal rate of assistance on outputs.

[1] The net contribution of an activity or industry to the economy is the value that the activity or industry adds to the intermediate inputs, obtained from elsewhere, by the use of land, labour and capital resources in its production process. The 'value added' of an activity or industry can be measured directly from the returns received from the land, labour and capital used by it, or, indirectly, by deducting the value of intermediate inputs from the value of output.

[2] Some forms of assistance, such as tariffs, increase domestic prices and thereby affect the incentives to both produce and consume certain commodities. Other forms of assistance, such as production subsidies, encourage greater domestic production but, in many instances, have no or little impact on domestic prices and therefore consumption.

The Commission also publishes *standard deviations of effective* and *nominal rates* to indicate the degree of dispersion in assistance. The standard deviation measures how far an individual industry's rate is from the average for the sector, which in turn indicates how much variation there is in the distribution. Generally, the wider the variation in assistance, the greater the potential for an inefficient reallocation of resources, and associated costs for the community.

As is the case at present, where sectors such as agriculture and manufacturing have a large and increasing proportion of output which is relatively lightly assisted and a small proportion of output which is highly assisted, sectoral comparisons of assistance can be misleading. This is because they can hide far greater differences in assistance levels among activities within each sector. These differences are likely to be more important sources of loss in community welfare.

The Commission also publishes estimates of the *net* and *gross subsidy equivalents*, the *tax equivalent on materials* and the *consumer tax equivalent* (see box A.2). These measures express effective and nominal rates of assistance, or aspects of them, in dollar terms. They measure income transfers to producers from intermediate users, taxpayers and final consumers, through paying higher prices for goods and/or higher taxes.

While these income transfers highlight gains and losses to particular groups, they do not indicate the economic or welfare costs or benefits to the community of assistance. Such costs or benefits depend on the extent to which assistance changes production and consumption patterns. This depends on the behavioural responses of producers and consumers to the measured price distortions. Measurement of the welfare effects of assistance requires considerable data on elasticities of supply and demand, and ideally should be done within a 'general equilibrium' framework.

For the manufacturing sector in particular, care should be taken when interpreting gross subsidy equivalents or taxes on materials which have been aggregated across industries or activities where one or more of the industries produce inputs used by another industry of the group. This is because the output and material inputs of the group will be less than the sum of outputs and inputs of individual industries. Consequently, the gross subsidy equivalent and the tax on materials of the group will include the subsidy equivalent or sales to other industries or activities in the same group, and the corresponding tax equivalent on those sales.

This is less of a problem for agriculture, as outputs are used less extensively as inputs by other agricultural activities.

The problem also does not arise with the net subsidy equivalent or the consumer tax equivalent. This is because these measure assistance on a net basis at the individual industry level, so the source of the input or destination of the output does not affect them when industries are aggregated.

Coverage

The Commission's measures of assistance to agriculture and manufacturing do not incorporate all forms of assistance to these sectors, for a range of practica`l as well as conceptual reasons. In general, the emphasis in the Commission's assistance estimates has been on measures:

- provided by the Commonwealth Government;
- which benefit or penalise particular agricultural and manufacturing industries;
- which allow a consistent treatment of activities, especially within sectors; and
- for which reliable estimates can be made over time.

That said, the coverage of forms of assistance has improved with each new series of estimates produced by the Commission. For agriculture, the main interventions currently included in the estimates are domestic marketing and regulatory arrangements, research funding, income tax concessions, and adjustment assistance. For manufacturing, the main interventions are tariffs, production bounties, certain export incentives, input subsidies, and commercial tariff concession orders.

General exclusions of government programs and policies from the estimates include: measures which apply generally to activities in all sectors, such as income tax; and measures which apply broadly to all activities within a sector, such as the deductibility for tax purposes of certain expenditures on research and development.

Several other measures are excluded due to data limitations or because they are particularly difficult to quantify. These measures include anti-dumping procedures, government procurement policies, offsets and partnerships for development programs, and assistance that may arise from Commonwealth or State government provision of infrastructure. The latter is excluded because of the difficulty of quantifying the level of assistance involved in activities where there is no readily identifiable alternative benchmark price. Also excluded from the estimates are adjustments made to the prices currently paid for government-provided services, such as electricity, that might result from a more competitive economic environment.

The estimates include certain Commonwealth budgetary outlays and tax expenditures, but do not attempt to cover those of State and local governments.

However, State government interventions which have an impact on the prices of agricultural commodities nationally have been included in the estimates. For example, the fresh milk sector is assisted through State governments setting farm gate prices and rationing production through quotas. Limited inter-state trade in fresh milk enables State government authorities to maintain inflated prices, at the farm gate level, relative to what would occur in a competitive market. Similarly, the rice industry, located primarily in New South Wales, is assisted through statutory marketing arrangements which allow the NSW Rice Growers Co-operative to vest and market all rice grown in the State. With little competition from other jurisdictions in Australia, the NSW Rice Growers Co-operative is able to charge higher prices for rice nationally than would be the case in the absence of regulation.

As well as including some State government programs in the agriculture estimates, the coverage of forms of assistance has traditionally been broader in agriculture than for manufacturing. The agriculture estimates include assistance to value-adding factors, such as adjustment assistance, income tax concessions and research and development incentives. These forms of assistance have tended to be less important for manufacturing industries. However, assistance to value-adding factors for the textiles, clothing and footwear industries in the form of certain capital grants and loans at concessional rates of interest is included. The inclusion of this assistance, however, has a limited impact on the effective rate estimates for these industries.

Methodology and quantification

The measurement of industry assistance under the AMAMS requires:

- detailed data on the sales and cost structure of industries, to calculate an industry’s or activity’s value added;
- identification of the relevant government interventions which alter output returns, intermediate input costs, or returns to value adding factors;
- measurement of each intervention on a common basis so that it can be included in the calculation of rates of assistance.

The Commission obtains its data from several sources, including the Commonwealth Budget Papers, various government departments and agencies, a wide range of annual reports and other publications, and a number of statutory agricultural marketing authorities.

Each year, the Commission uses the latest available data to calculate its AMAMS estimates. Estimates for manufacturing are calculated at various levels of aggregation within the Australian Standard Industrial Classification (ASIC). The estimates for agriculture are by major ANZSIC commodity or commodity group.[3]

A number of practical issues arise when measuring assistance. These relate to:

- the type of model used to calculate assistance;
- the need for generic, simplifying assumptions;
- the selection of a benchmark price against which assistance can be measured;
- the point in the production to consumption chain at which assistance is measured; and
- the measurement of value added on a consistent basis.

The Commission's approach in relation to these matters, and its implications for the interpretation of the Commission's published estimates, are discussed below.

The static model

The Commission's AMAMS is based on a 'static' model. In effect, this means that the model looks at the impact of assistance on returns to different industries *immediately after* the assistance is provided — that is, before:

- producers and consumers alter their production and consumption patterns in response to the changes in incentives caused by assistance; and
- any flow-on changes to broader economic variables, such as exchange rates, interest rates, inflation and so on.

While this gives a good indication of the short-run effects of assistance, in the longer term there may be changes in production, consumption and other economic variables which modify the impact of the assistance provided (see Box A.3). One implication of this is that the increase in returns in the assisted industry will generally finish up being less than those indicated under a static approach. A more general implication is the need for caution when considering the implications of measured assistance for resource allocation among different industries.

However, to capture these longer-term effects would require the use of a more complex model, preferably a 'general equilibrium' model. Such an approach would require additional resources, would lose some of the (relative) simplicity and transparency of the Commission's current approach. That said, when inquiring into the assistance arrangements for particular industries, the Commission typically uses a combination of the two approaches.

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3 The ABS introduced the ANZSIC system in 1993. At this stage, the agricultural estimates have been re-ordered accordingly, but the manufacturing estimates have not.

Box A.3 Production and consumption responses to assistance: an illustration

To understand how assistance can change production and consumption patterns, consider a *highly simplified* situation in which some farmers in an area grow grapes and some grow oranges, and returns in these two industries are about the same – say around a 4 per cent return on investment. All oranges and grapes grown in this economy are consumed in it too, with no imports or exports.

If a subsidy is provided to producers of oranges such that returns from oranges increase, say to 12 per cent, existing orange farmers will receive the full value of this windfall gain in the short-run.

However, over time, some grape farmers are likely to start switching to growing oranges (and existing orange farmers, or other investors, may bring more land into production). This will cause the supply of oranges to increase and, to clear all their stock, producers will need to cut the price. As the price falls, consumers will start buying more oranges, but returns in the orange industry will fall too.

Meanwhile, in the grape industry, supply is declining putting upward pressure on the price. As the price increases, consumers cut back their purchases of grapes, but the returns to grape growing increase.

However, as long at the returns to orange production exceed the returns to grape growing, farmers have a continuing incentive to switch from grapes into oranges. This will go on until the returns in both industries are around the same – say at 9 per cent return on investment.

Another factor though is that, to finance the subsidy for orange producers, the government needs to raise extra revenue (through higher taxes or higher charges for services it provides), cut its spending, or incur a higher budget deficit or lower surplus. Say it raised more revenue through higher electricity charges (although either of the other options would have similar ultimate effects). This would increase orange and grape growers' power bills and further reduce, although only slightly, the returns in those industries. It would also reduce the returns to other industries which rely on electricity to produce their output, particularly energy-intensive industries. And because householders would have to pay slightly higher electricity bills, they would have slightly less left to spend on other goods and services.

With other industries facing slightly higher power bills and slightly lower demand for their products, some 'borderline' businesses in these industries may need to close or, at least, reduce their production.

Overall, the effect of providing assistance in this illustration is to cause more oranges to be produced, mainly at the expense of a cut in the production of grapes, and for production in other industries to fall slightly. Consumers finish up eating more fruit (but a different mix thereof) and consuming less of other products.

While in practice the world is far more complex than this highly simplified illustration, it nevertheless provides an indication of the nature of some of the effects that can flow from the provision of assistance to industry.

Generic assumptions

The Commission's AMAMS incorporates a number of simplifying assumptions relating to the nature or magnitude of various economic variables or relationships. The key assumptions are:

- perfect substitution between domestic and foreign goods of the same description;
- no substitution between nominally different goods;
- infinite elasticities of export demand and import supply;
- the prices of goods, services, and resources represent their opportunity cost to the community in the absence of assistance; and
- production relationships between inputs are unaltered by the assistance structure.

These assumptions are used because obtaining precise data on these variables or relationships for all industries is impractical and/or because the assistance estimates are unlikely to be sensitive to plausible real world divergences from the assumptions.

While violations of these assumptions therefore need not invalidate the Commission's assistance estimates, they do emphasise the approximate nature of the estimates and that, for policy purposes, no great significance should be attached to small differences in estimates.

Benchmark prices

The measurement of assistance requires an assessment of the price at which products would sell on the domestic market if the assistance arrangements were not in place. For an internationally traded good, the appropriate benchmark price is either the import parity price (the landed duty-free price of the imported equivalent) or the export parity price (the free-on-board value of the exported equivalent), depending on whether the good would be imported or exported if the assistance arrangements were removed.

For several agricultural commodities, such as wheat, wool, sugar, rice and dairy products, export parity has been used as the benchmark, since it is reasonable to expect that these industries would continue to export major proportions of their output if unassisted. It is assumed that exports of these agricultural commodities are sold at prices determined by world markets.

However, not all agricultural commodities are assumed to be competing mainly in export markets. Citrus fruits, currants, raisins and tobacco are treated as competing mainly with imports.

Assistance estimates for the manufacturing sector are derived using import parity as the benchmark. While manufacturing exports have increased in recent years, it is still assumed that, in the absence of assistance, a large proportion of manufactured goods would be sold in competition with imports.

Measurement points

The measurement of assistance also involves the choice of an appropriate point in the production, distribution and consumption chain at which to measure assistance.

On the output side, for agriculture, measurement has been made as far as possible at the farm gate level. Similarly for manufacturing, where possible, measurement has been made on an ex-factory basis as this is the point most comparable to the landed duty-free price of imported products.

On the input side, costs are measured on a ‘cost to manufacturer or farmer’ basis.

Many of the interventions which penalise and benefit industries, however, do not operate directly at the factory or farm level, and it is therefore necessary to translate the effect of such interventions into costs and returns.

Calculation of value added

An important component of the Commission’s assistance framework is the calculation of value added.

While the Commission is mindful of the need to define value added consistently between agricultural and manufacturing activities, the use of different data sources has preluded this in a number of areas.

For example, the treatment of traded capital items such as plant and machinery differs between the agricultural and manufacturing estimates. For agriculture, data from ABARE farm surveys are used to include depreciation of tradeable capital items as tradeable inputs to be deducted from value added. Similar data are not available for manufacturing, so the manufacturing estimates include depreciation of tradeable capital as part of an activity’s value added. This difference in the way value added is calculated for manufacturing and agriculture leads to an over-estimation of value added for manufacturing and, in turn, an underestimation of the effective rate of assistance for manufacturing *relative* to agriculture. That said, the effect of this difference in treatment appears to be relatively minor.

Another difference driven by data availability is in the calculation of materials to output ratios. In each series[4] for manufacturing, production patterns and materials to output ratios observed in a base year have been applied to the assistance estimates for all years included in the series. For agriculture, they are calculated using the actual production weights in each year. However, within each series, materials are assumed to constitute a fixed proportion of the value of output in assisted prices. Again, the effect of this difference in treatment is likely to be relatively minor.

More detailed information on the calculation of assistance under the AMAMS is provided in the Commission's report on *Assistance to Agricultural and Manufacturing Industries* (IC 1995a).

A.2 The budgetary assistance estimates

Budgetary measures can provide industry assistance through government spending or in the form of tax revenue that governments forgo when they provide tax concessions to business.

Budgetary assistance takes an array of forms and is provided not only to producers in all sectors of the economy but also to particular firms, or particular industries, or particular activities — such as investment, exporting and R&D — undertaken by firms in different industries.

In compiling its annual estimates of budgetary assistance, the Commission has adopted the practical approach of seeking to gauge only those budgetary measures which selectively benefit firms, industries, sectors, or particular activities. That is, its aim is to quantify those budgetary measures which provide benefits to certain businesses but not to others. The estimates thus provide a guide to how the discriminatory nature of assistance provided through the budget alters incentives to use resources in different industries or activities.

[4] Periodically the Commission re-estimates cost structures for the agricultural and manufacturing sectors used to calculate value added. Changes in cost structures change the estimation of value added and, therefore, effective rates of assistance. This in turn gives rise to a new series of assistance estimates.

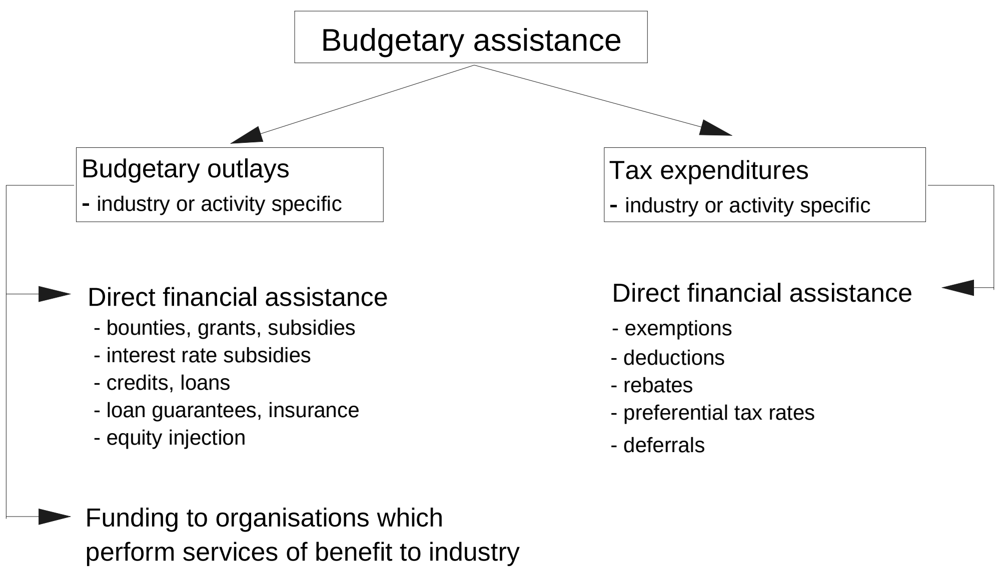
Classifications

In the first instance, budgetary assistance is classified according to:

- the *form* of assistance; and
- the *sector* to which it applies.

In sub-classifying the ‘forms’ of budgetary assistance, total budgetary assistance is categorised into *budgetary outlays* and *tax expenditures*, which are further distinguished by the type of benefits provided (figure A.1).

Figure A.1 **Forms of budgetary assistance**



In relation to ‘budgetary outlays’, a distinction is made between:

- *direct financial assistance* — which broadly comprises bounties, grants and subsidies; interest rate subsidies, loans, credits and guarantees; and government equity participation; and
- *funding of intermediary institutions which perform activities of benefit to industry* — for example, funding of CSIRO and CRC research programs, Austrade’s International Business Services and the Australian Tourist Commission. Provision of services raise producers’ returns in ways similar to direct financial assistance.

‘Tax expenditures’ provide financial benefits to industry through tax exemptions, deductions, rebates, preferential tax rates and tax deferrals. For example, tax exemptions allow income (or other parts of the tax base) to be excluded from the tax base. Tax deductions, such as the R&D tax concession, allow certain expenditures to be eligible for deductions which normally would not be allowed in the tax system. Preferential tax rates involve the application of a lower tax rate for particular industries. The deferral of tax over a number of years also constitutes a form of assistance. Accelerated depreciation provisions are examples of tax deferrals.

To describe the 'sectoral' effects of budgetary assistance, estimates have been compiled for primary production (agriculture, forestry and fisheries), manufacturing, mining and service sectors. Some budgetary assistance measures are industry or sector-specific, while others assist producers in more than one sector. Accordingly, budgetary assistance is classified according to whether the measure is industry-specific, sector-specific or general. Where necessary, budgetary assistance to exports and R&D is also identified separately.

Coverage

The Commission's annual estimates include a wide range of budgetary assistance, but do not seek to incorporate all budgetary measures which provide support for industry, for a range of practical as well as conceptual reasons. In compiling its estimates of budgetary assistance, the Commission's emphasis has been on budgetary outlays and tax expenditures which:

- are provided by the Commonwealth;
- selectively benefit certain firms, industries, sectors, or particular activities; and
- are readily quantifiable.

Included within the coverage is an array of budgetary measures which provide assistance in all four sectors of the economy (see tables 4.2 to 4.7 in chapter 4).

As well as the more obvious forms of budgetary assistance, the estimates include funding for farm landcare activities, income tax averaging and drought assistance, as these measures are specifically available to agricultural activities but equivalents are not available in other sectors.

The support for business R&D covered in the estimates includes the R&D tax concession, targeted R&D grant schemes, funding of rural R&D corporations, and CSIRO and CRC research on primary production, manufacturing, mining and service activities.

The Commission's estimates of budgetary assistance to exports are broader in classification and coverage than the estimates of export assistance outlays reported in the Commonwealth Budget Papers. The outlays classified as export assistance in the budget are confined to the funding of Austrade's programs and the Export Finance and Insurance Corporation (EFIC) export credit facilities. In addition to these expenditures, the Commission has classified as export assistance those industry-specific measures that target particular stages of exporting activity, such as export marketing and promotional activities, or that directly facilitate exports. These include funding to the Australian Tourist Commission, the PMV Export Facilitation Scheme and the TCF Import Credits Scheme. Where the budgetary measures benefit the production of certain goods which are both sold domestically and exported, the share paid on exports is recorded as export assistance.

While the Commission's estimates thus cover a wide range of budgetary measures, they do not include the following.

- Budgetary measures which are generally available to all firms – for example, reductions in company tax rates applying to all firms.
- Outlays on public administration, defence, health, education, the environment and the labour market.
- Expenditures on infrastructure, except where they clearly apply to specific activities.
- The substantial budgetary assistance provided by State, Territory and local governments. These are excluded because of practical constraints in annual monitoring. In a previous inquiry (IC 1996e), 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 the same year, Commonwealth budgetary assistance was \$3.9 billion.
- The revenue forgone from accelerated depreciation provisions. As these provisions allow assets to be written off over a period shorter than the effective economic life of the assets, the assistance impact of accelerated depreciation is equivalent to an interest-free loan, and can thus differ from the estimated revenue forgone. Although accelerated depreciation provisions have been important measures of assistance to manufacturing and mining, quantifying their effect is very difficult. In September 1999, the Government announced the removal of accelerated depreciation provisions (Costello 1999b).

As the coverage of budgetary assistance is confined to those budgetary measures which, among other things, are readily quantifiable, the estimates are likely to understate the overall level of budgetary assistance in Australia to some degree. The extent of this underestimation is likely to vary between sectors, industries and activities.

Quantification

The assistance impact of most budgetary measures can be readily quantified by the budgetary outlays and tax revenue forgone provided to industry in a particular year. In compiling estimates, data are drawn from Commonwealth Budget Papers, annual reports of government departments and agencies, the Treasury's Tax Expenditure Statement and Australian Taxation Office (ATO) taxation statistics.

For those budgetary measures which provide benefits to producers in more than one sector, the Commission has sought detailed information to allow it to apportion the assistance between sectors. For example, ATO taxation statistics are used to apportion the major tax concessions, such the R&D tax concession and development allowance. However, in a few cases where detailed information is not available, the full quantum of assistance is treated as if it were provided to the sector considered to receive the largest share. This has minor implications at the broad sectoral level.

The estimates incorporate only the government contribution to programs' funds. This approach is applied consistently to all programs, including those (such as rural R&D corporations) which are funded jointly by industry and governments.

Some aspects of the Commission's quantification of budgetary assistance may overstate the benefits received under certain programs or tax expenditures, although the extent to which this occurs is likely to be small relative to the overall level of estimated budgetary assistance. For example, although total outlays are reported for non-business organisations that undertake activities of benefit to industry, this will overstate the benefits to the extent that the activities are not delivered efficiently. Also, under Australia's tax imputation system, the value of tax concessions can be reduced to some degree as such concessions reduce company tax liabilities. That said, the Commission understands that the costing of tax expenditures provides some allowance for such factors. Issues in costing tax expenditures are discussed in more detail in the Treasury's Tax Expenditure Statement (Treasury 1999).

A.3 The relationship between the AMAMS estimates and the budgetary assistance estimates

The Commission has adopted a two-pronged approach to assistance measurement because its estimates of assistance under the AMAMS have not incorporated all forms of government intervention that discriminate between industries in the agricultural and manufacturing sectors; nor do they cover industries outside these sectors. The Commission's estimates of budgetary assistance seek to allow a more comprehensive and transparent assessment of government assistance arrangements.

However, the budgetary assistance estimates and the AMAMS estimates have areas of overlap as well as differences in coverage, and there remain some aspects of government assistance to industry that are not covered by either measure.

First, the AMAMS estimates cover only a sub-set of the budgetary assistance measures to the agricultural and manufacturing sectors that are covered in the Commission's budgetary assistance estimates.

As a result of this narrower coverage, in 1997-98 budgetary measures for agricultural included in the AMAMS system amounted to $303 million, while Commonwealth budgetary outlays and tax concessions for agriculture were in the order of $490 million.[5]

There are a number of reasons for the narrower coverage. There is often insufficient detailed and disaggregated information on the incidence of several sectoral and cross-sectoral budgetary measures, such as tax concessions and major outlay schemes, to be included in the effective assistance framework. Some measures are particularly difficult to quantify at a sufficiently detailed level, or the assistance impact is considered too small to warrant additional resources necessary for their inclusion. Practical measurement difficulties often arise as several tax concessions and outlays are subject to frequent changes.

Second, the AMAMS estimates cover assistance provided in non-budgetary form, such as tariffs and statutory marketing arrangements, whereas the budgetary assistance estimates by their nature do not.

Third, the AMAMS estimates and budgetary assistance estimates relate to different sectoral definitions. Budgetary assistance provides estimates for the 'primary production' sector, which includes forestry and fisheries as well as agriculture, while the agriculture estimates are, as their name suggests, restricted to agricultural activities. The broader classification used in the budgetary assistance estimates result from the form in which the data are compiled. That said, agriculture accounts

[5] Budgetary assistance for primary production is estimated at $544 million. The Commission has not attempted to apportion this assistance precisely between the agriculture, forestry and fisheries sectors. However, agriculture accounts for around 90 percent of total primary production, with forestry and fisheries accounting for the remaining 10 per cent (ABS 1998a). Allocating budgetary assistance between the sectors on a pro-rata basis leads to an estimate of around $490 million for agriculture and around $55 million for forestry and fisheries combined. The Commission cautions that the use of a pro-rata allocation of assistance based on sectoral output share provides only rough estimates. They are included here for illustrative purposes only.

for almost 90 percent of total ‘primary production’, so the two categories are not substantially different. Nevertheless, some caution is required if making comparisons between the estimates for these sectors.

Fourth, the budgetary assistance estimates cover the mining and service sectors, sectors for which the Commission does not publish annual estimates of effective rates or related measures. The Commission has in the past published effective rates estimates for mining industries (IAC 1988), but does not ordinarily do so due to the low assistance provided to the sector and the resource requirements entailed. The nature of assistance to service sectors, which often takes the form of legislative restrictions on competition, makes it difficult to calculate effective rates and related estimates. However, as noted in chapter 2, the Commission has commenced estimating restrictiveness indexes and price impact measures for selected service sectors.

In conjunction with its current general tariff review (discussed in section 3.4), the Commission intends to begin reviewing its approach to assistance measurement. The ultimate aim of this exercise is not only to improve the consistency of treatment and coverage of the assistance estimates between the agricultural and manufacturing sectors, but also to more fully incorporate other Commission work such as its budgetary assistance estimates. With the reduction in assistance derived from tariffs in the manufacturing sector and statutory marketing and regulatory arrangements for agriculture, budgetary outlays and tax expenditures are becoming a more important source of industry assistance.

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