

DIGITALES ARCHIV

ZBW – Leibniz-Informationszentrum Wirtschaft
ZBW – Leibniz Information Centre for Economics

Periodical Part

Trade and assistance review ; 2013/14

Provided in Cooperation with:
Australian Government

Reference: Trade and assistance review ; 2013/14 (2015).

This Version is available at:
<http://hdl.handle.net/11159/1705>

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.
<https://zbw.eu/econis-archiv/termsfuse>

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.



Australian Government
Productivity Commission

Trade & Assistance Review 2013-14

Productivity Commission
Annual Report Series



© Commonwealth of Australia 2015

ISBN 978-1-74037-548-1 (PDF)

ISBN 978-1-74037-549-8 (Print)



Except for the Commonwealth Coat of Arms and content supplied by third parties, this copyright work is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/3.0/au>. In essence, you are free to copy, communicate and adapt the work, as long as you attribute the work to the Productivity Commission (but not in any way that suggests the Commission endorses you or your use) and abide by the other licence terms.

Use of the Commonwealth Coat of Arms

For terms of use of the Coat of Arms visit the 'It's an Honour' website: <http://www.itsanhonour.gov.au>

Third party copyright

Wherever a third party holds copyright in this material, the copyright remains with that party. Their permission may be required to use the material, please contact them directly.

Attribution

This work should be attributed as follows, *Source: Productivity Commission, Trade & Assistance Review 2013-14*.

If you have adapted, modified or transformed this work in anyway, please use the following, *Source: based on Productivity Commission data, Trade & Assistance Review 2013-14*.

An appropriate reference for this publication is:

Productivity Commission 2015, *Trade & Assistance Review 2013-14*, Annual Report Series, Productivity Commission, Canberra, June.

Publications enquiries

Media and Publications, phone: (03) 9653 2244 or email: maps@pc.gov.au

The Productivity Commission

The Productivity Commission is the Australian Government's independent research and advisory body on a range of economic, social and environmental issues affecting the welfare of Australians. Its role, expressed most simply, is to help governments make better policies, in the long term interest of the Australian community.

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.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au).

Foreword

This is the Productivity Commission's 18th annual Trade and Assistance Review.

The Commission is required under its Act to report annually on industry assistance and its effects on the economy. *Trade & Assistance Review 2013-14* contains the Commission's latest quantitative estimates of Australian Government assistance to industry. It also draws attention to trade and assistance policy that could be impeding economic growth, and identifies recent developments in industry assistance and international trade policy.

This year's Review also includes three policy relevant chapters. Collectively they draw policy implications from the emerging patterns of global trade, assess firm-level assistance and the associated governance, and identify and assess concerns with preferential trade agreements.

The Review is informed by the evolution and recent measurement of global value chains. New measures of value added trade flows unravel the DNA of trade and in doing so provide valuable insights and better informed foundations for trade and assistance policy. The key policy take-outs reinforce several established policy imperatives, including:

- multilateral trade reform is the most effective way to improve national and global welfare
- non-discriminatory policies that seek to lower imported input costs and other business costs have the best chance of fostering firm and economic growth
- policies that seek to support (at times ill-informed) priority sectors unavoidably risk disadvantaging more competitive activities.

Finally, the Review examines the quality of the limited analysis currently being made available for both industry assistance, for example co-investment and preferential trade agreements. Based on benchmarks well established in other circumstances, both suffer from inadequate assessment prior to committing Australian resources and policy.

In preparing this report, the Commission has received helpful advice and feedback from a number of officials in Australian Government agencies and Professor Peter Drysdale. The Commission is very grateful for their assistance.

Peter Harris
Chairman
June 2015

Contents

Foreword	iii
Abbreviations	xi
Overview	1
Key points	2
Estimates of tariff and budgetary assistance to industry	4
Recent developments in industry assistance — some swings and roundabouts	6
What do emerging patterns of trade and global value chains mean for trade and industry policy?	8
Good governance matters for industry and especially firm-specific assistance	11
Recent developments in trade policy	13
Concerns remain about preferential trade agreements	14
1 About this Review	17
2 Policy insights from emerging patterns of global trade	21
2.1 Value-added trade patterns	23
2.2 International trade competitiveness	29
2.3 Assistance to exporting and Australia's export competitiveness	33
2.4 Concluding comments	43
3 Firm assistance – when government becomes an 'investor'	45
3.1 An appropriate governance framework	47
3.2 Current assistance governance practices vary considerably	49
3.3 Governance processes that would help narrow the performance gaps	58
4 Issues and concerns with preferential trade agreements	61
4.1 Rules of origin	63
4.2 Service sector coverage	70

4.3	Intellectual property provisions	75
4.4	Dispute settlement	77
4.5	Assessing the potential impacts of trade agreements	82
5	Assistance estimates	89
5.1	Estimates in aggregate	92
5.2	Tariff assistance	94
5.3	Australian Government budgetary assistance	102
5.4	Combined assistance and effective rates of assistance	111
5.5	Effective rates of assistance since 1970	117
6	Recent developments in industry assistance	121
6.1	Research, development and innovation	123
6.2	Primary production	125
6.3	Manufacturing	131
6.4	Industry Innovation and Competitiveness Agenda	134
6.5	Regional assistance programs	136
6.6	Broadcasting and communications	138
6.7	Other industry assistance developments	141
6.8	Policy framework reviews	144
7	Recent developments in trade policy	147
7.1	Multilateral, plurilateral and regional developments	148
7.2	Bilateral and regional agreements	156
7.3	Dispute settlement	162
7.4	Anti-dumping activity	164
Appendices		
A	Detailed estimates of Australian Government assistance to industry	167
B	Emerging patterns of production and trade	221
C	Recent co-investment grant proposals	241
D	Services commitments in the ASEAN-Australia-New Zealand trade agreement	247
E	Anti-dumping and countervailing activity	261

References 265

Boxes

2.1	Sources of trade competitiveness	30
2.2	Some recent empirical studies on trade competitiveness	31
2.3	Participation in global value chains found to have increased productivity of Canadian manufacturing firms	33
2.4	Some cautionary considerations about EMDG and EFIC	36
2.5	Competitiveness Agenda proposals which give priority to five industries	38
2.6	Approaches to identifying Australian industry export growth prospects	40
3.1	Inappropriate use of multiplier analysis	56
3.2	Investment governance for APRA supervised entities	59
4.1	Approaches for determining origin of non-originating materials used in merchandise trade in Australia's preferential trading agreements	64
4.2	Rules of origin for Bed linen, table linen, toilet linen and kitchen linen	66
4.3	Services and investment origin (denial of benefits) rules in selected Australian trade agreements	69
4.4	Article 17.4.7 AUSFTA: circumvention of technological protection measures	76
4.5	Possible evaluation framework for trade agreements	83
4.6	OBPR assessment of the JAEPA RIS	85
5.1	Coverage of the Commission's assistance estimates	91
5.2	Tariff assistance to the Petroleum, coal, chemical and rubber products industry in 2013-14	95
5.3	Treatment of tariff preferences in assistance estimates	98
5.4	Summary measures of combined assistance	111
5.5	Assistance measures that provide above average levels of support	117
6.1	Overseas-based online content services: legality and local competitors	140
6.2	Implicit guarantee of banks	146
7.1	APEC Business Travel Card	153
7.2	Key features of the China-Australia trade agreement — Australian export market access perspective	159

Figures

1	The incidence of assistance varies widely across industries	5
2	Budgetary assistance to industry increased in 2013-14	6
3	Global value chain activity has increased since 1990	9
4	Australian exports in gross and value added terms	10
5	Recent calls for firm-specific co-investment grants	11
6	The ‘investment’ continuum: government support to commercial financing	12
7	An appropriate assistance governance framework	13
8	Gaps exist in the assessment of the net benefits of trade agreements — the case of the Japan-Australia Economic Partnership Agreement	16
2.1	World exports in gross and value-added terms sector shares	25
2.2	Australian exports in gross and value-added terms sector shares	25
2.3	Australian value-added exports by country	27
2.4	Global export flows have increased ahead of value added in exporting	28
2.5	Value added in exporting varies between sector and over time	29
3.1	The ‘investment’ continuum: government support to commercial financing	47
3.2	An appropriate assistance governance framework	48
3.3	Recent calls for firm-specific co-investment grants	52
4.1	Methods used to determine origin of merchandise trade in Australia’s preferential trade agreements	67
4.2	Known ISDS cases	78
4.3	Gaps abound – the Government’s assessment of the net benefits of the Japan Australia Economic Partnership Agreement	87
5.1	Aggregate estimates of measurable assistance	93
5.2	Net combined assistance by industry sector	94
5.3	Net tariff assistance by industry sector	99
5.4	Forms of budgetary assistance	102
5.5	Budgetary assistance to industry	103
5.6	Budgetary assistance by category	106
5.7	Budgetary assistance and value-added shares by industry sector	109
5.8	Effective rates of assistance to manufacturing and agriculture	118
7.1	Australia’s recent trade policy developments	149
7.2	Australia’s bilateral trade agreements in force	157

B.1	The increasing contributions to global production of China, South Korea and ASEAN	222
B.2	Value added by broad sector as a proportion of global production	223
B.3	Merchandise trade has grown much faster than output	224
B.4	The emergence of Asia in merchandise exports	225
B.5	The share of merchandise trade by sector	226
B.6	The changing composition of services trade	227
B.7	Sector shares in total world value-added and gross exports	229
B.8	Gross exports per unit of value-added has increased	230
B.9	Changes in global exports per unit value added in exporting by sector	232
B.10	Gross exports per unit of value added in exporting, top 20 exporting countries	233
B.11	Value added decomposition of gross exports	235
B.12	Australian exports in gross and value-added terms	237
B.13	Australian value-added exports by country of destination	238
B.14	Factor income shares across 14 manufacturing industries	239
E.1	Australian anti-dumping and countervailing activity	264

Tables

2.1	Value-added decomposition of gross exports, 2008	26
2.2	Recent Australian Government export assistance	34
2.3	Some future growth sectors identified by economic consulting firms	39
3.1	Recent co-investment funding support	54
3.2	Information provided on governance features of co-investment proposals by the Department of Industry and Science	55
4.1	Count of listed rules of origin by trade agreement	65
4.2	Foreign direct investment in Australia	70
4.3	Services commitments in the ASEAN-Australia-New Zealand trade agreement	73
4.4	Comparison of GATS and AANZFTA services commitments	74
4.5	Australia's major foreign investment relationshipsa	81
5.1	Tariff assistance	96
5.2	Net tariff assistance by industry sector	99
5.3	Tariff assistance by industry grouping	101
5.4	Budgetary assistance by industry grouping	110
5.5	Combined assistance by industry grouping	113
5.6	Effective rate of combined assistance by industry grouping	115

6.1	Comparison of the three farm concessional loans schemes	127
6.2	Industry assistance related measures in the Industry Innovation and Competitiveness Agenda	135
7.1	Analysis of G20 country members' trade actions on the Brisbane Action Plan	151
A.1	Net tariff assistance by industry grouping	168
A.2	Budgetary assistance by industry grouping	169
A.3	Net combined assistance by industry grouping	170
A.4	Output tariff assistance by industry grouping	171
A.5	Input tariff penalty by industry grouping	172
A.6	Budgetary outlays by industry grouping	173
A.7	Budgetary tax concessions by industry grouping	174
A.8	Nominal rate of combined assistance on outputs by industry grouping	175
A.9	Nominal rate of combined assistance on materials by industry grouping	176
A.10	Australian Government budgetary assistance to primary industry	177
A.11	Australian Government budgetary assistance to mining	188
A.12	Australian Government budgetary assistance to manufacturing	190
A.13	Australian Government budgetary assistance to services	204
A.14	Australian Government budgetary assistance, unallocated other	219
B.1	Public datasets on value added in trade flows	228
B.2	Alternate estimates of value added to gross exports	231
B.3	Components of gross exports	234
B.4	Simplified value-added decomposition of gross exports	236
B.5	Changes in factor shares from 1995 to 2008 in manufacturing global value chains, by economy	240
D.1	Services commitments in the ASEAN-Australia-New Zealand preferential trade agreement	248
E.1	Australian anti-dumping and countervailing activity — initiation of investigations	262
E.2	Australian anti-dumping and countervailing activity — new measures imposed and measures expired	263

Abbreviations

ABS	Australian Bureau of Statistics
ANAO	Australian National Audit Office
ANZSIC	Australian and New Zealand Standard Industrial Classification
APRA	Australian Prudential Regulation Authority
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTC	Change in Tariff Classification
DFAT	Department of Foreign Affairs and Trade
EFIC	Export Finance and Insurance Corporation
EMDG	Export Market Development Grants
ERA	Effective rate of assistance
GATS	General Agreement on Trade in Services
GVC	Global Value Chain
ISDS	Investor-State Dispute Settlement
MFN	Most Favoured Nation
OECD	Organisation for Economic Co-operation and Development
PC	Productivity Commission
RCEP	Regional Comprehensive Economic Partnership
R&D	Research and Development
RVC	Regional Value Content
SME	Small and medium-sized enterprise
TES	Tax Expenditure Statement
TPP	Trans-Pacific Partnership
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

OVERVIEW

Key points

- Government assistance to firms, projects and industry is provided through an array of measures including tariffs, grants, concessional loans, tax concessions, regulatory restrictions on competition, and government purchasing preferences.
 - While tariff and budgetary assistance remains substantial and is readily quantified, other less transparent and difficult to quantify measures can confer substantial assistance.
 - The reaction of some firms to emerging competition, technologies and business models (for example digital disruption) has been to call for restrictions on competition.
- Australian Government tariff and budgetary gross assistance to industry amounted to over \$17 billion in 2013-14.
 - After allowing for the cost to business of tariffs on imported inputs (\$7.3 billion, largely incurred by service industries), net assistance across all sectors was \$9.7 billion.
 - Tariffs alone costs every Australian around \$150 each year.
- Net assistance matters. This is most perversely manifest in the net negative assistance to services — \$4.3 billion of assistance is outweighed by a \$4.9 billion tariff penalty on inputs.
- Budgetary industry assistance in 2013-14 was about 17 per cent (or \$1.3 billion) higher than in 2012-13. The largest increase was from the Small Business Simplified Depreciation Rules.
- Notably in the year to May 2015, the Government announced additional industry assistance involving about \$1.5 billion as well as reductions of around \$1 billion. Significant increases were afforded though the *Industry Innovation and Competitiveness Agenda*.
- Where Government becomes a 'co-investor' through firm-specific grants, and despite some recent government resistance to such calls, resource misallocation is likely. Moreover, governance and due diligence fall short of contemporary, comparable best practice. The term 'co-investor' is a commercial misnomer.
 - Better government assessment processes are needed.
- The evolution and recent measurement of global value chains and value-added trade flows provides valuable insights for trade and assistance policy. The key policy take-outs reinforce several established policy imperatives, including:
 - multilateral trade reform is the most effective way to improve national and global welfare
 - non-discriminatory policies that seek to lower imported input costs and other business costs have the best chance of fostering firm and economic growth
 - policies that seek to support designated priority sectors unavoidably risk disadvantaging more competitive activities.
- Slow progress in multilateral trade reform has accelerated preferential agreement making.
- Preferential trade agreements add to the complexity and cost of international trade through substantially different sets of rules of origin, varying coverage of services and potentially costly intellectual property protections and investor-state dispute settlement provisions.
 - The emerging and growing potential for trade preferences to impose net costs on the community presents a compelling case for the final text of an agreement to be rigorously analysed before signing. Analysis undertaken for the Japan-Australia agreement reveals a wide and concerning gap compared to the Commission's view of rigorous assessment.

Overview

Government assistance to firms, projects and industry is provided through an array of measures including tariffs, grants, concessional loans, tax concessions, regulatory restrictions on competition, and government purchasing preferences.

While tariff and budgetary assistance remains substantial and is readily quantified, other less transparent, and difficult to quantify forms of assistance can confer substantial assistance.

Although assistance generally benefits the receiving industry and businesses, it penalises other industries, taxpayers and consumers. Transparency about assistance arrangements is therefore paramount.

This *Review* reports the Commission's latest estimates of tariff and budgetary assistance to industry, up to 30 June 2014. It also reports on:

- recent development in industry support
- emerging and now measurable patterns of trade and global value chains, and implications for trade and industry policy (including existing and proposed export assistance)
- the efficacy of governance of industry and firm-specific assistance
- recent developments in trade policy and material concerns about aspects of Australia's trade agreements.

The Commission reporting covers only distinguishable and readily measured assistance to industry on an annual basis in relation to tariff and budgetary assistance to industry. As noted, these measures selectively benefit particular firms, industries or activities and can be quantified within practical constraints in measurement and data availability. Arrangements that may have assistance implications but are not part of the estimates include non-tariff barriers and government policies affecting the level and distribution of activity, including quarantine measures, regulatory restrictions on competition, general taxation and differential tax rates and government purchasing preferences and programs. Moreover, some forms of industry assistance are not fully provisioned for in the budget forward estimates (such as disaster relief to businesses and drought assistance). Assistance to industry provided by state governments (for example, regional development industry assistance including on a cost-shared basis with the Australian Government) is not included in the estimates.

Taken collectively, this means the assistance estimates provided in this *Review* are unavoidably underestimates of the overall government assistance ultimately afforded firms, projects and industries.

Assessing whether the benefits of any particular support program exceed the costs requires detailed consideration as an imperative, indeed it is the cornerstone of good governance for industry assistance, but outside the scope of this *Review*.

Estimates of tariff and budgetary assistance to industry

Australian Government tariff and budgetary assistance to industry was over \$17 billion in gross terms in 2013-14 — comprising \$7.9 billion in gross tariff assistance, \$4.1 billion of budgetary outlays and \$5 billion in tax concessions.

After allowing for the cost to business of tariffs on imported inputs (\$7.3 billion), estimated net assistance across all sectors was \$9.7 billion in 2013-14 — an increase of around \$1.2 billion in nominal terms (or 14 per cent) from 2012-13 levels

The sectoral incidence of output tariff assistance, budgetary support and the input penalty of tariffs differs markedly (figure 1). Most notably, the manufacturing sector receives the highest level of net assistance — mainly because of tariff assistance on its outputs, conferred by the 5 per cent tariff on around half of tariff line items. In contrast, the services sector incurs around two thirds of the tariff penalty on inputs and negative net assistance overall — the \$4.3 billion of budgetary support is outweighed by the \$4.9 billion cost impost of tariffs on the sector's imported inputs.

While tariffs today are much lower than they were historically and tariff quotas no longer apply (affording rates of assistance as high as 125 per cent in 1985 have fallen to a maximum of 5 per cent today), tariffs still 'tax' every Australian by around \$150 each year. And by adding \$7.3 billion to business costs, they are taxing Australia's exporters and other businesses.

The estimated value of budgetary assistance amounted to \$9.1 billion (outlays plus tax concessions) in 2013-14, up from around \$7.8 billion the previous year (figure 2). The largest increases were from the Small Business Simplified Depreciation Rules (\$1.5 billion), the Australian Renewable Energy Agency (\$200 million) and the Carbon Capture and Storage Flagships Program (\$88 million).

Figure 1 **The incidence of assistance varies widely across industries, 2013-14**
\$ billion (nominal)

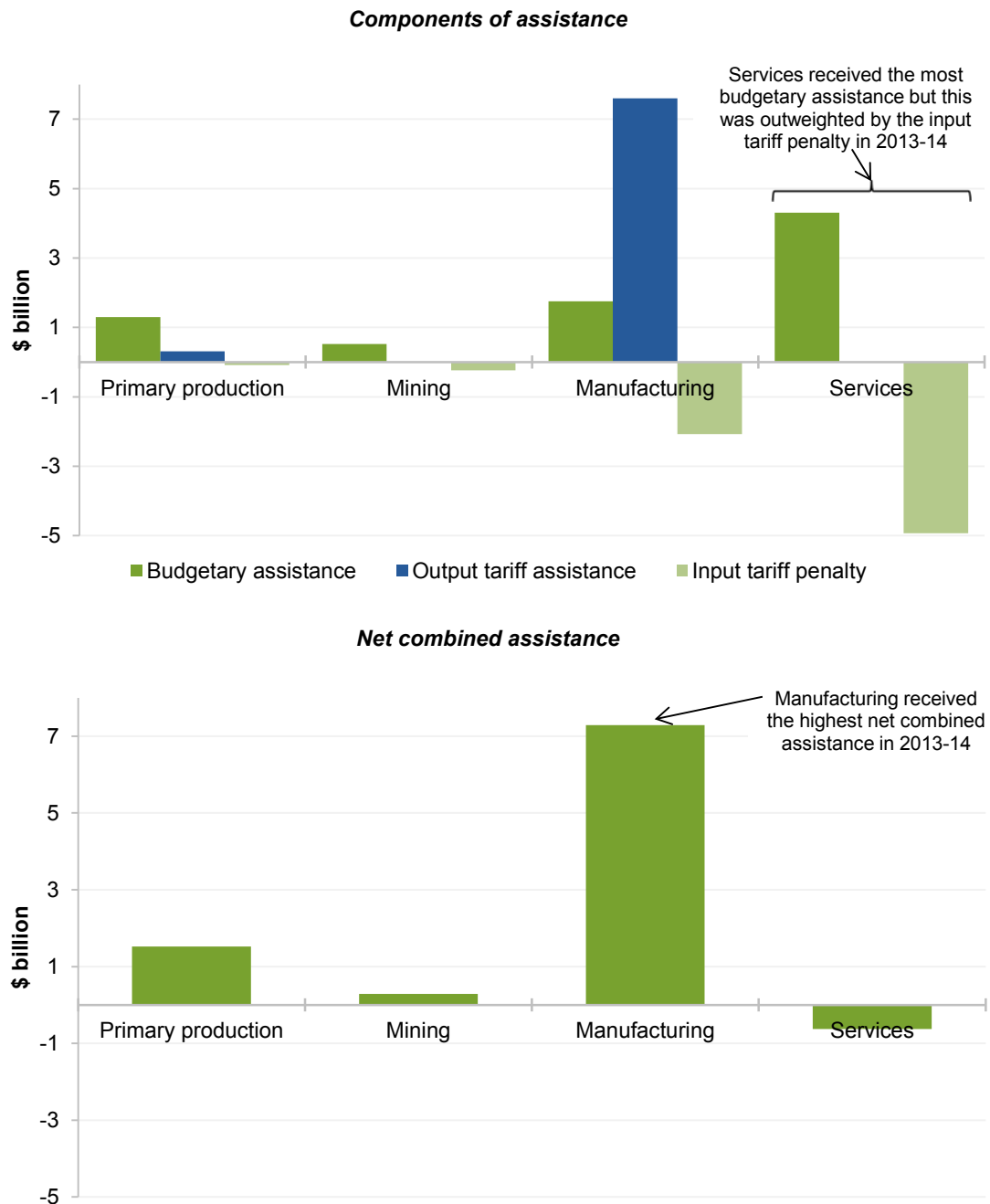
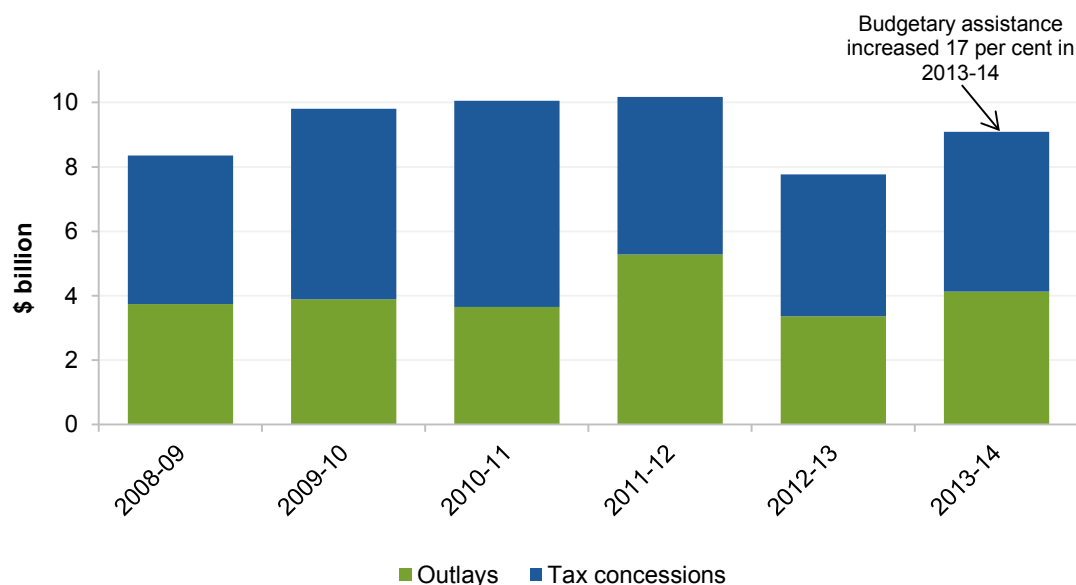


Figure 2 Budgetary assistance to industry increased in 2013-14
\$ billion (nominal)



The effective rate of assistance — net assistance per unit of value added — was around 4 per cent for the manufacturing sector, nearly 3 per cent for the primary production sector and less than 1 per cent for mining. At the industry group level, the highest measured effective rates of assistance continued to be for the *Motor vehicles and parts* and the *Textiles, leather, clothing and footwear* industry groups. With the reduction in tariffs from an most favoured nation (MFN) rate of 10 to 5 per cent on selected textile and clothing items on 1 January 2015, net assistance to textile, clothing and footwear activities will decline further.

With MFN tariffs remaining in place under current settings, a tariff penalty on imported vehicles, textiles, clothing and footwear together with other manufactures will remain.

Recent developments in industry assistance — some swings and roundabouts

Since May 2014 (the reporting date for the 2012-13 *Review*), the Australian Government has announced a suite of budgetary and regulatory measures relating to industry assistance, across a range of activities. The major and readily distinguishable announcements (identified for reporting in this *Review*) include new expenditures involving around \$1.5 billion, over the budget forward estimates, as well as reductions of around \$1.3 billion. Ascertaining the net additional assistance implied by the announced allocations is not straightforward. It requires accounting for funds brought forward or transferred from previous programs. Furthermore, some announcements were subject to

attaining legislative backing while other measures announced are demand driven and the level of support may eventually be higher or lower than the announced estimate.

A major announcement relates to measures detailed in the *Industry Innovation and Competitiveness Agenda*. The Agenda is intended to strengthen Australia's productivity and competitiveness including Australia's export (and import competing) competitiveness. In addition to a range of measures intended to improve the general business environment, such as lowering the company tax, the Agenda includes: an Entrepreneurs Infrastructure Program (\$484 million over four years); an Industry Skills Fund (\$476 million over four years), an injection into the Export Finance and Insurance Corporation (a one-off \$200 million) which reverses a withdrawal by the previous Government, reduced taxation of Employee Share Schemes (\$200 million over four years); an Industry Growth Centres program (\$188.5 million over four years), a Growth Fund to help build jobs in regions affected by closure of car manufacturing plants (\$155 million over four years); a Manufacturing Transition Programme (\$50 million over four years) and increased funding for Export Market Development Grants (\$50 million over four years). While substantial, around half of the announced industry-program total expenditure of \$1.7 billion was offset by reductions from the cessation of other industry programs.

Continuing drought conditions in some locations culminated in changes to, and increases in, availability of farm assistance and farm household support. A new \$100 million Drought Recovery Concessional Loans Scheme was announced (funded from within existing allocations). The Drought Recovery Concessional Loans Scheme parallels the existing Drought Concessional Loans scheme and the existing Farm Finance Concessional Loans scheme, with all three schemes having different eligibility, purpose and loan parameters. In addition, the new Farm Household Allowance arrangements raised the assets threshold test by over \$1 million to \$2.55 million, increasing the scope of claims. Other major agriculture support developments include the Rural R&D Profit Policy Initiative — a \$100 million extension to the existing rural research and development corporations — and the new National Landcare Programme (which replaces the previous, more expensive, Landcare Programme).

Other major assistance developments, outside of the Competitiveness Agenda and the agriculture sector, include an expansion of the Tasmanian Freight Equalisation Scheme (\$203 million) and a minerals Exploration Development Incentive for small companies (\$100 million).

Government-initiated reductions in support comprise the now passed legislation denying large companies access to the R&D Tax Incentive, which is expected to save \$1.1 billion over the forward estimates.

A number of reviews were completed during the year including the broad ranging Competition Policy Review (Harper review) and the Financial System Inquiry (Murray inquiry). Among other matters, the Harper review recommended removal of restrictions on competition, for liner and coastal shipping, and that there be reviews of other regulations to ensure that unnecessary restriction on competition be removed. It identified three areas as

priorities for immediate attention — planning zoning rules, the regulation of taxis and mandatory product standards (in particular greater acceptance on international product standards). Other areas of restrictions on competition identified for action, include professional occupational licensing, broadcast media rules, liquor and gambling regulation, private health insurance regulation, agricultural marketing rules and air services restrictions. It also identified three areas for consideration of immediate reform — restrictions on retail trading hours, parallel import restrictions on books and second-hand cars and pharmacy ownership and location. The Harper review also recommended reforms intended to reduce geographic price discrimination (such as traditionally for books and emerging with geoblocking for online video content service providers like Netflix and Hulu).

The Murray inquiry concluded that the potential overregulation of financial innovators would risk repressing an important source of competition. It made recommendations intended to encourage competition to seek to remove impediments to the take up of new technologies and the developments of the financial system. It also recommended stronger capital requirements (to improve resilience to market fluctuations) which will also act to reduce the implicit Government guarantee of authorised deposit taking institutions and introduce an element of competitor neutrality across financial institutions.

Effective use of these reports by government can offset some of the unhealthy trends in industry assistance and preferential trade regulation.

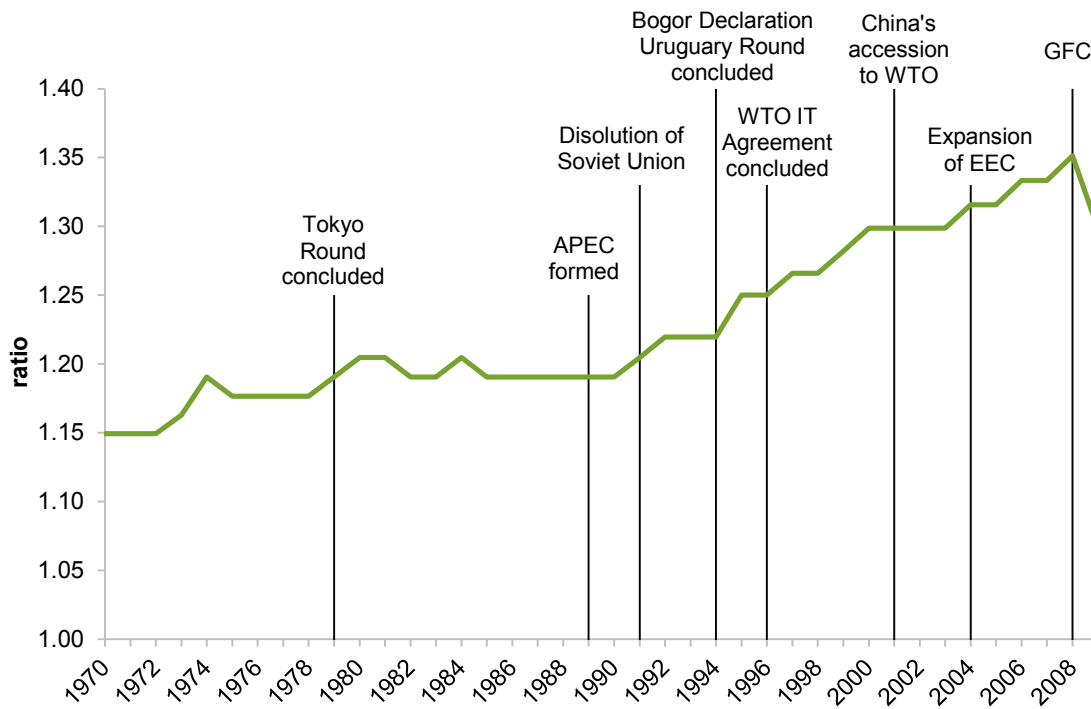
What do emerging patterns of trade and global value chains mean for trade and industry policy?

World trade and production are increasingly structured around ‘global value chains’ (GVCs). A value chain identifies the full range of activities that firms undertake to bring a product or a service from its conception to its end use. Continued technological progress and trade-cost reductions, reduced barriers to trade and investment, and economic liberalisation have accelerated the geographical fragmentation of production processes across the globe — particularly since the early 1990s (figure 3).

One consequence of the fragmentation of production across regions and industries is that gross merchandise and services export statistics blur the industry and country of origin of the value added (and income) generated in the production process. Most observed (gross) trade is in manufactures — estimated to account for 67 per cent of global trade — and is well above direct trade in services, which accounts for around 20 per cent. Importantly, however, because value added from services is embodied in merchandise exports (notably through transport, business and financial services), service industries are more important in trade than trade-flow data suggests. From a value adding perspective, services are of equal importance to manufacturing, each accounting for about 40 per cent of exports at a global level. For Australia, manufactures historically comprise around 40 per cent of observed exports (although this is changing with the terms of trade boom and its aftermath), but

accounting for only around 14 per cent on a value added basis (figure 4) — well below the global average.

Figure 3 Global value chain activity has increased since 1990^a
Ratio of gross exports to value added generated in exporting



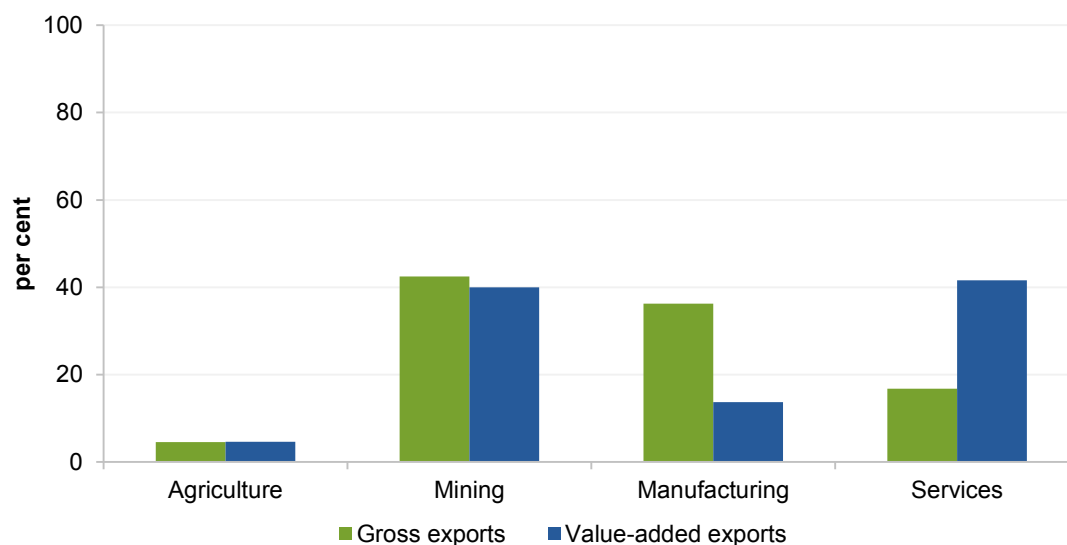
^a Ratio of the global gross value of exports to the value added in exports

The recent availability of global value added in trade data provides valuable insights into trade and assistance policy foundations. The key policy take-outs reinforce several established policy imperatives, including:

- multilateral trade reform is the most effective way to improve national and global welfare and understanding the ultimate net benefits of bilateral or regional preferential agreements needs to be informed by an understanding of these insights;
- policies that seek to lower imported input costs and other business costs have the best chance of fostering firm and economic growth; and
- policies that seek to support (at times ill-informed) priority sectors unavoidably risk disadvantaging more competitive activities.

This broader picture of export value generation also suggests that there should be increased priority given to addressing impediments to the efficiency of services used indirectly in exports of manufactures, agriculture and resources, and of direct service exports.

Figure 4 Australian exports in gross and value added terms, 2008-09
per cent



The evolution of global value chains reinforces the reality that imports are essential for exports and that barriers and cost imposts to imported inputs act as a tax on exports. And while transparent tariff barriers have been significantly reduced, unilaterally and multi-laterally, the increasingly global fragmentation of production of a final good further elevates the priority for eliminating the remaining tariffs and addressing less transparent non-tariff barriers to trade. Australia still retains a 5 per cent tariff on about 50 per cent of goods and the cost impost falls heavily on the services industries.

Policies that are non-discriminatory, that are focused on removing impediments to business activity, and that are also focused on reducing business costs have the best chance of fostering economic growth and higher incomes. Policies that seek to direct resources and effort according to priority sectors unavoidably risk disadvantaging other activities and firms that may be more competitive and have better prospects in global markets.

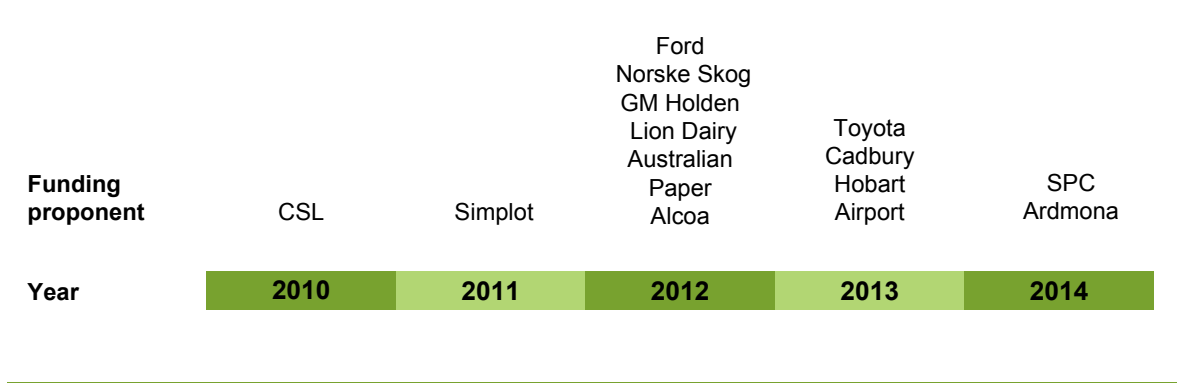
The Australian Government seeks to influence Australia's export volume and pattern through a variety of selective measures, not all of which are well-considered. The sheer diversity of export support programs in place in Australia, the quantum of support (over \$900 million in 2013-14 alone) and the tendency towards targeting assistance to selected activities and firms is likely to be challenged by the ever growing globalisation of production.

There is an emerging imperative to undertake a holistic and independent assessment of the cost-effectiveness of Australia's export assistance and related industry support. Any such review can draw upon the newly available insights provided by the global value-added trade flows information.

Good governance matters for industry and especially firm-specific assistance

Calls for firm-specific assistance have emerged in recent years. Where financial support has been provided and is firm specific, it has at times been termed an ‘investment’ or ‘co-investment’ by government (figure 5). Over the three years to 2013-14, nearly \$160 million in ‘co-investment’ grants to selected firms has been paid by the Australian Government and an (unanswered) call for a further \$256 million has been made. And while only a small portion of total government assistance to industry, such payments can confer high levels of assistance at the individual firm or project level.

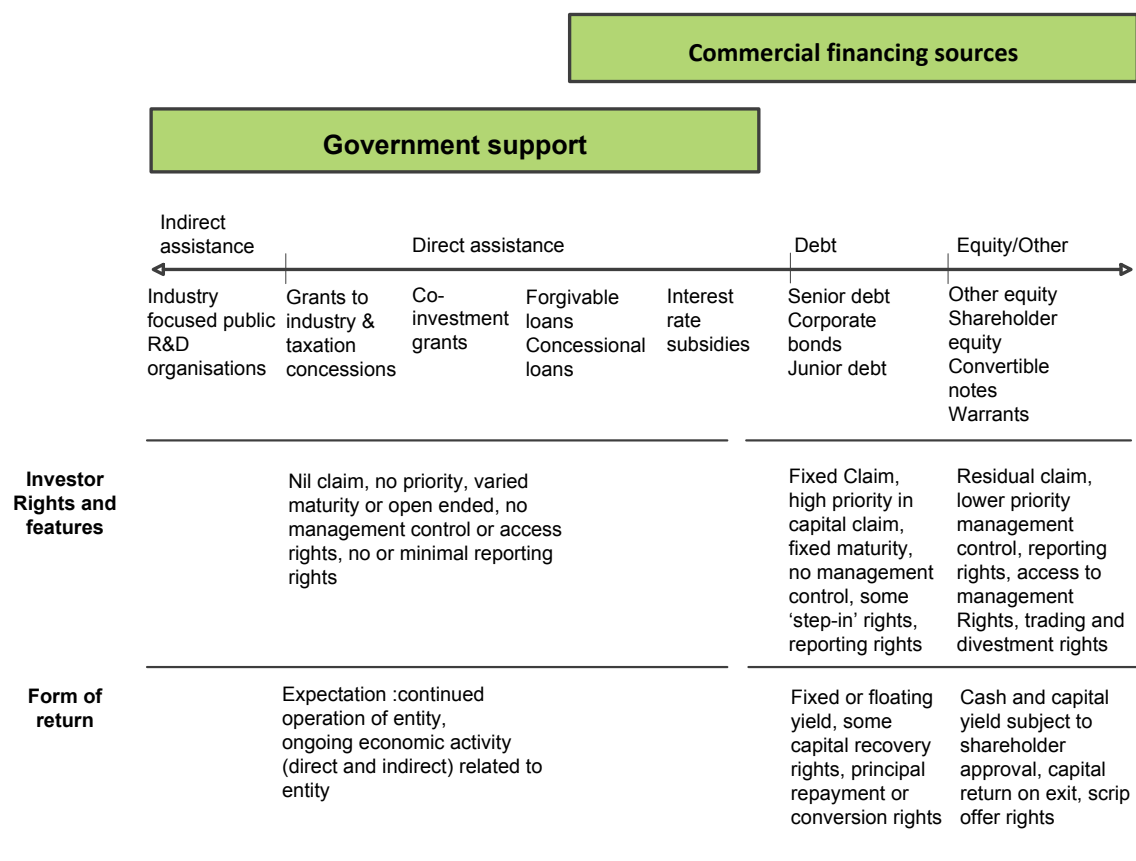
Figure 5 Recent calls for firm-specific co-investment grants



Unlike a commercial investment, such financial support provided by government does not in substance constitute an equity shareholding or a debt instrument, has no associated cash or capital return requirement, bestows no voting or other shareholder rights on the government nor does the government rank as a creditor (secured or unsecured) in the event of business failure (figure 6). Rather, the return objective typically articulated is to maintain or enhance activity and employment of the recipient firm and its suppliers. As such, coining the term ‘co-investment’ for these forms of assistance is arguably a commercial misnomer.

There has been welcome evidence of some recent government resistance in the awarding of such calls for further direct assistance to industries, firms and projects.

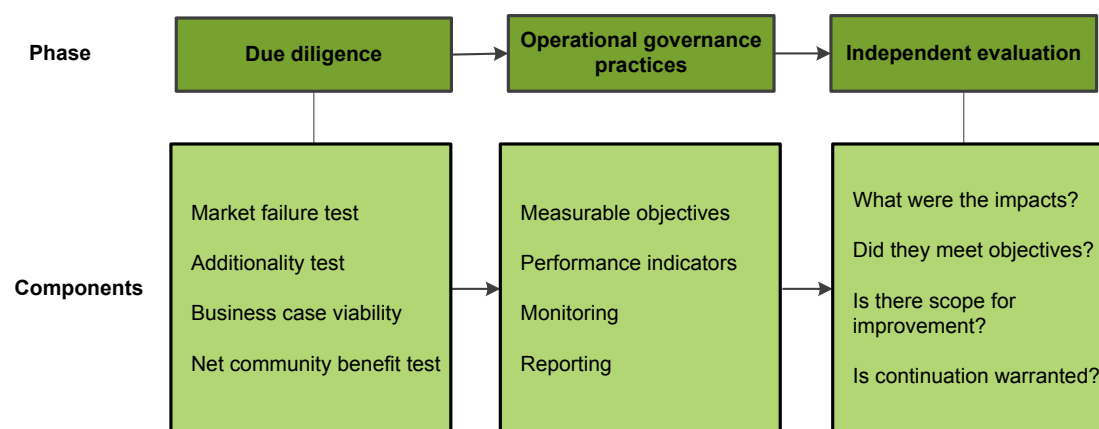
Figure 6 **The ‘investment’ continuum: government support to commercial financing**



The Commission, however, remains concerned about both the resource misallocation from preferred investments by the Commonwealth and States and the efficacy of governance processes used across the spectrum of assistance measures,. Even if governments are unconcerned about resource misallocation, they should at least do so on a well-informed basis.

Figure 7 below outlines the core elements that need to be met to ensure good governance practice across assistance measures. Further a comparison of current governance compared to contemporary and comparable best practice reveals a concerning gap. In particular, pre-assistance due diligence to establish the relative merit for government involvement, along with post-assistance performance monitoring and evaluation processes against government objectives, falls short of a minimum acceptable standard. Moreover, a number of Commission evaluations have consistently found that many government assistance measures are unlikely to confer a net economic benefit to the Australian community.

Figure 7 **An appropriate assistance governance framework**



Recent developments in trade policy

Multilateral, plurilateral, regional and bilateral trade agreement activity

In the year to May 2015, Australia's trade policy environment was influenced by several developments at the multilateral, plurilateral, regional and bilateral level. While some progress was made on aspects of the long running Doha round of trade negotiations under the World Trade Organization (WTO), these negotiations continue to be hampered by the inherent difficulties in reaching consensus among the 161 member countries under the requirement that the package of associated measures must be agreed to collectively — the single undertaking approach. Nevertheless, multilateral trade reform remains the most effective way to improve national and global welfare compared with preferential agreements for which the net impacts are typically opaque and which discriminate against non-parties to those agreements. Well-founded unilateral reform based on most favoured nation and national treatment principles can afford larger and timelier economic gains than achievable through preferential deals.

The lack of progress in multilateral forums has accelerated agreement-making at the bilateral and regional or plurilateral level including by Australia. During the year, Australia's bilateral agreements with Korea and Japan entered into force, negotiations for trade agreement with China concluded and negotiations for bilateral agreements with several countries including India and Indonesia continued. Australia also participated in negotiations for two significant regional agreements — the Trans Pacific Partnership Agreement and Regional Comprehensive Economic Partnership Agreement.

The negotiation and commitment processes for these agreements have raised concerns about a lack of both transparency of the provisions being negotiated and rigorous assessment before the Australian government commits to signing. Post-negotiation assessments can only result in the Government deciding not to proceed with ratification.

Investor State Dispute Settlement activity

The Australian Government continued defence of its tobacco plain packaging laws in a case brought by Philip Morris Asia in the Permanent Court of Arbitration and a number of countries in the WTO dispute settlement body. This case highlights the potential (and un-provisioned) contingent liability of Investor State Dispute Settlement (ISDS) provisions in trade and investment agreements that confer procedural rights to foreign investors not available to domestic residents. The final outcome of the case is not expected to be known for some time. The ongoing costs to Australian taxpayers of funding the preparation and defence of the tobacco plain packaging legislation, and the ultimate ruling, are unknown, unfunded and likely to be substantial.

Anti-dumping activity

During 2013-14, there were 19 new anti-dumping investigations initiated — compared to 13 in 2012-13. Overall, at the end of June 2014, there were 48 dumping measures in force, up from 40 the year before. Given the significant recent changes in the anti-dumping regime and the potential for an increase in the number and size of anti-dumping actions, there is a need for close monitoring of outcomes. It would be timely for a formal and independent review of the anti-dumping arrangements and outcomes to be undertaken. This is important to ensure that the arrangements do not persist beyond the identified period or scope of the complaint; minimise costs on the product users, and consider whether there is evidence of any emerging abuse of the system. Such a review should consider the need for a national interest test as recommended by the 2009 Productivity Commission review.

Concerns remain about preferential trade agreements

The proliferation of preferential trade agreements at the bilateral and regional level (referred to commonly as ‘free trade agreements’) is adding to the complexity and business transaction costs of the international trading system. However, the practical impacts of agreements being entered into by Australia remain unclear and highlight the need for thorough evaluation of the negotiated agreement text prior to their signing. In substance, the devil resides in the detail of these agreements and full and transparent analysis is not afforded to the final texts for many of them.

Amongst other things, preferential agreements are resulting in:

- different product-specific rules of origin for merchandise trade and ownership-based origin rules for services and investment across agreements
- variable coverage of services sector liberalisation across agreements
- more stringent intellectual property rights protection

-
- the adoption of investor state dispute settlement procedures that depart from the national treatment principle, to grant rights of legal recourse for commercial loss to foreign investors not available to national investors.

There is a growing and compelling case for the negotiated text of an agreement to be comprehensively analysed before signing, including:

- the complexity of bilateral and regional trade agreements
- the potential for trade preferences to impose net costs on the community
- the availability of alternative reform strategies
- the risk that domestic reform may be delayed to retain negotiating coin.

However, current assessment processes in Australia fall well short of what is needed to adequately assess the impacts of prospective agreements. This is reflected in the wide and concerning gap identified in comparing the assessment analysis undertaken for the Japan Australia EPA with the Commission's previously-published benchmarks of what constitutes a comprehensive pre-execution assessment. Current assessment processes do not systematically quantify the likely costs and benefits of negotiated texts to an agreement, fail to consider the opportunity costs of pursuing preferential arrangements compared to unilateral reform and ignore the extent to which agreements actually liberalise existing markets (figure 8). For example, the JAEPA and other bilateral agreements can deny foreign-owned or controlled services businesses in Australia access to the liberalising provisions of the agreement via the partner economy. The substantial level of foreign direct investment in services (amounting to nearly \$265 billion by value or 40 per cent of total foreign direct investment in Australia) raises the possibility that such 'denial of benefit' provisions could divert services trade and investment flows, diminishing the potential liberalising benefits of an agreement.

Another issue is the extent of additional liberalisation achieved through an agreement and the degree of disparity across respective agreements. For example, an index-based analysis by the WTO indicates that services provisions negotiated under the ASEAN-Australia-New Zealand agreement added little if anything, to those already afforded by services commitments under the General Agreement on Trade in Services (GATS). On the other hand, application of the same methodology to the analysis of bilateral concessions under the Australia-United States agreement indicated a substantially higher level of bilateral concessions by Australia than afforded under GATS commitments. This is consistent with an observation by the WTO that larger trading powers tend to receive more concessions in preferential trading agreements than other trading partners. An issue where such differences arise is the extent that the varying concessions lead to costly services trade diversion.

Figure 8 Gaps exist in the assessment of the net benefits of trade agreements — the case of the Japan-Australia Economic Partnership Agreement

Comprehensive evaluation	Decision RIS (May 2014) National Interest Analysis (July 2014)	JSCOT Review (October 2014)
Identify intended incremental changes to existing policy settings & regulation	Legislative requirements Tariff preferences & market access commitments listed	Sourced legislative requirements & market access commitments to RIS
Identify scale of activities affected	Outlines trade, investment & local stakeholders affected	Outlines trade, investment & local stakeholders affected
Estimate economy-wide effects and timescale over which impacts would occur	Partial sectoral modelling Phasing arrangements outlined, but not quantified	Discussed barriers to trade & investment Impact of barriers not quantified
Identify potential risks and alternatives for reform	Alternative policy options considered	Discussed some trade policy alternatives
Provide overall assessment and scope for improvement	Aspirational claims of benefits	Partial assessment Consultation-based findings

Notes: Dashed border indicate only partial or non-fulfilment of ideal assessment of agreement impacts. RIS refers to Regulation Impact Statement. JSCOT refers to Joint Standing Committee on Treaties.

Further, while texts include consultative and review procedures they do not contain provisions requiring the ex-post evaluation of the actual impacts of an agreement and scope for improvement. Without such a detailed assessment, it is not possible to form a view as to whether the aspirational goals typically ascribed to the formation of preferential agreements are commensurate with real-world impacts.

They also do not include wider assessments of whether preferential bilateral and regional approaches are more effective means of improving national welfare compared with multilateral or unilateral domestic reform approaches.

1 About this Review

One of the Productivity Commission's functions under its legislation is to review industry assistance arrangements. It also has a statutory obligation to report annually on assistance and its effects on the economy. The Productivity Commission Act 1998 defines government assistance to industry as:

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

Assistance takes many forms. It extends beyond direct government subsidies to particular firms or industries and includes tariffs, quotas, regulatory restrictions on imported goods and services and tax concessions. Assistance can also arise from the provision of services below cost by government agencies, from government procurement policies and preferential treatment under trade agreements.

Although assistance benefits the firms or industries that receive it, it typically imposes costs on other sectors of the economy. For example, direct business subsidies increase returns to recipient firms and industries, but to fund the subsidies governments must increase taxes and charges, cut back on other spending, or borrow additional funds. Funding provided to a single firm also discriminates against its competitors.

Similarly, while tariffs provide some price support to domestic goods producers, they result in higher input costs for other local businesses, reducing their competitiveness. They also effectively tax consumers by imposing higher prices on the goods subject to the tariff, leaving them with less money to spend on other goods and services.

Governments provide assistance for many different reasons. Some types of assistance — such as for R&D and to meet environmental objectives — can overcome market failure and deliver net community benefits. Similarly, some policies which have industry assistance effects may be justified on other grounds, such as the achievement of social or equity objectives. However, the way in which such assistance is provided requires transparent and rigorous assessment to minimise its unintended impacts on resource allocation.

In view of the costs, as well as the potential benefits, that industry assistance can entail, government measures that provide assistance need to be monitored and regularly reviewed. To that end, the annual *Trade & Assistance Review* fulfils a transparency function of identifying existing government assistance and contemporary assistance issues, and allowing closer examination to be made when it is not obvious why such costs are being incurred.

Assistance afforded by tariffs and budgetary measures through government outlays and taxation concessions with industry policy objectives is quantified in the *Trade & Assistance Review*. While these estimates cover a broad range of measures that afford substantive support to industry and that can be readily quantified on a consistent basis annually, the estimates do not capture all Australian Government support for industry, nor State government assistance. They are therefore an under estimate of the total support to industry provided by government.

This edition of *Trade & Assistance Review* begins with a focus on policy insights from the emergence and measurement of global value chains (chapter 2). Previous editions of *Trade & Assistance Review* have taken a detailed look at particular assistance arrangements including carbon emission reduction measures (2007-08), assistance to the finance industry (2008-09), state government assistance to industry (2009-10), adjustment assistance (2010-11), intellectual property (2011-12), and defence procurement (2012-13).

Chapter 2 is followed by a review of ‘co-investment’ support provided by governments to specific firms or projects. That support places government in the role of passive investor (of sorts), but without the usual commercial terms attached to private investment. Where Government becomes a ‘co-investor’ through firm-specific grants, noting recent government resistance to such calls, governance and due diligence fall short of contemporary, comparable best practice. The term ‘co-investor’ is a commercial misnomer. A review of governance processes is needed to improve the modest net benefit prospects of this support (chapter 3).

Chapter 4 looks at aspects of preferential trade agreements. It identifies and examines concerns about the detailed, complex and costly rules of origin embedded in such agreements, the stringency of intellectual property rights provisions, and the risks associated with investor-state dispute settlement provisions. The complexity of Australia’s preferential agreements and the potential for provisions to impose net costs on the community means there is a need for comprehensive and transparent evaluation before signing. It provides a case study assessment of Government and Parliamentary assessment of the JAEPA against the Commission’s view of what such an assessment should comprise.

The Commission's latest estimates of Australian Government assistance to industry, up to 30 June 2014, are presented in chapter 5. This continues a time series of assistance estimates dating back four decades. This long series provides a clear illustration of the patterns of industry preferment through time and the reform of trade barriers. The estimates generally cover those government measures which are readily distinguishable, selectively benefit particular firms, industries or activities, and which can be quantified, given practical constraints in measurement and data availability.

Chapter 6 reports on industry assistance announcements since May 2014 (the cut-off reporting date of the last *2012-13 Review*). This provides some insight into potential changes in assistance beyond those estimates in chapter 5. The announcements cover an array of industry arrangements including in relation to research and development, primary industries, manufacturing, carbon emissions reduction and energy efficiency, regional assistance, and broadcasting and communications.

Chapter 7 reports on recent developments in Australia's trade policy environment including ongoing efforts to conclude the Doha Round of multilateral trade negotiations and negotiation of preferential bilateral and regional trade agreements. The chapter also covers trade complaints affecting Australia lodged through the WTO disputes resolution framework and recent anti-dumping and countervailing duty activity.

2 Policy insights from emerging patterns of global trade

Key points

- Global trade patterns have been changing over recent decades with world trade and production structured more around ‘global value chains’ — increasing interdependence between industries, economies and regions.
- The evolution and recent measurement of global value chains and value-added trade flows reinforces several established policy imperatives, including:
 - non-discriminatory multilateral trade reform is the most effective way to improve national and global welfare
 - policies that seek to lower imported input costs and other business costs have the best chance of fostering firm and economic growth
 - policies that seek to support (at times ill-informed) priority sectors unavoidably risk disadvantaging more competitive activities.
- Much of the focus of industry and trade policy forms the antithesis of the policy insights of global value chain and supporting trade flow data.
- Most observed trade is in manufactures — estimated to account for 67 per cent of global trade — well above services which account for 20 per cent of global trade.
 - However, because value added from services is embodied in merchandise exports, service industries are more important in trade and income generation than trade-flow data suggests.
 - From a value adding perspective, services are of equal importance to manufacturing, each accounting for about 40 per cent of global exports.
- While Australian manufactures historically comprise around 40 per cent of exports, they only account for around 14 per cent on a value added basis — well below the global average.
- The value-added decomposition of Australia’s trade, by taking into account the ultimate destination of Australia’s exports, also changes the relative importance of direct and indirect trading partners elevating the importance of America and Europe relative to Asian countries.
- Currently, Australia expends over \$900 million per annum on export assistance. An additional \$250 million in export assistance has been included in the Government’s *Industry Innovation and Competitiveness Agenda*.
 - The Agenda also includes \$650 million over four years to be focused on five selected industries chosen on the basis of export growth potential (albeit based predominantly on past gross export earnings and not a value-added basis).
- There would be merit in undertaking a comprehensive assessment of the likely cost-effectiveness of export and industry support measures. At a minimum, there remains a need to assess whether the requirement of additionality is met.

Global trade patterns have changed markedly over recent decades. World trade and production are increasingly structured around ‘global value chains’ (GVCs), with trade growth since the 1990s dominated by intra-regional trade in intermediate inputs. A value chain identifies the full range of activities that firms undertake to bring a product or a service from its conception to its end use. Technological progress, trade-cost reductions, trade and investment liberalisation, and regulatory reform have enabled the geographical fragmentation of production processes across the globe.

The emergence of global value chains and changes in the fortunes of different industries and different countries has prompted two questions. First, what are the drivers of trade patterns — or the determinants of trade competitiveness? Second, what should governments do, or not do, to influence trade patterns?

The recent availability of improved global trade data — value-added flows, firm level, finer product disaggregation, developing country coverage, longer time frames, and matching with data on capital, labour and institutional characteristics — has promoted a ‘new wave’ of trade empirics, which deepens the analysis of trade and industry policy. The value-added stream allows a better understanding of global value chains across industries, countries and over time. For instance, in value-adding terms, exports of services are relatively more important, and manufactured exports relatively less important, as a generator of national income, than implied by gross export values. This broader view of export value generation suggests there should be increased priority for addressing impediments to the efficiency of services delivery supporting the exports of manufactures, agriculture and resources, as well as to the direct exports of services.

The study of global value chains reinforces the role of imports and the value added of other economies embodied in them, as essential to exports. It therefore highlights that tariff and non-tariff barriers on imported inputs act as a tax on exports. Australia still has a 5 per cent MFN tariff on about 50 per cent of goods.

While there has been a long history focussing on capital, labour and resource endowments as the main sources of trade competitiveness, the recent literature is illustrating the importance of institutions in determining a country’s comparative advantage as well, such as labour market institutions, financial system attributes, contract enforcement, intellectual property arrangements, foreign investment, and the business climate. At the same time, the literature suggests that differences in transport, distribution and other costs of trade (trade costs for short) — such as arising from proximity of trading partners, the availability of efficient transportation and communications, as well as efficient and effective border control and customs procedures — may outrank within-country resource endowment advantages as determinants of trade patterns.

This new wave of trade analysis comes at a time when the Australian Government has released an *Industry Innovation and Competitiveness Agenda*, which includes measures intended to boost exports, and in some cases direct public support towards particular

‘priority’ industries. The quantitative methodologies used to identify the industries with the most promising growth potential are predominantly based on past gross export earnings. However, newer analyses are suggesting past export success at the industry or firm level is not necessarily the best guide to future success. Policies which seek to direct resources and effort according to priority sectors risk disadvantaging other sectors (firms) that may be more competitive and have better prospects in global markets. Similarly, the establishment of bilateral and regional preferential trading arrangements risks disadvantaging more competitive suppliers not covered by those arrangements. In short, much of the focus of industry and trade policy forms the antithesis of the policy insights of value chain and supporting trade flow data.

2.1 Value-added trade patterns

The production of a single good or service involves direct and indirect transactions with many other industries and many other countries. At any one point in the global supply chain, the cost of a good or service can be divided into two components: the cost of intermediate inputs used in the production of goods and services; and the cost of the primary factors of production — labour, capital and land. The cost (or returns) to labour, capital and land are known as the ‘value-added’ generated in production. As inputs pass through global supply chains they cross borders many times with the value added generated in upstream activities embodied in the interim and final prices of the good or service. The WTO describe the implication:

Attributing the full commercial value to the last country of origin [and final industry] can lead to distorted statistics. Measuring trade in value-added terms seeks to address this distortion. (WTO 2013, p.181)

While the conceptual difference between gross trade and trade in value-added has been long recognised, only recently have the differences been quantified on a comprehensive and consistent basis. This has been made possible by the increased availability of more refined national input-output tables (beyond those of developed countries), particularly emerging countries with significant increased involvement in global supply chains, and international efforts to link the national tables. These global input-output tables allow the ‘value added’ by country and industry-of-origin underlying gross trade flows to be traced to provide a fuller depiction of global production and trade.¹

¹ Comprehensive examinations of global value chains measured in gross production and gross export terms include De Backer and Yamano (2012), Baldwin (2011) and Baldwin and Lopez-Gonzalez (2013).

Comparing trade in ‘gross’ and value-added terms

Sectoral differences

In global terms, gross exports of manufactures accounts for an estimated 67 per cent, and services accounts for 20 per cent, of total exports. However, this overstates the contribution of manufacturing in global exports in two ways. First, a significant proportion of manufactured exports are of intermediate inputs for further processing. Second, manufactured exports include the indirect value added contributed by raw materials and service inputs. When the sectoral origin of all direct and indirect value added is traced through national and global value chains, manufacturing and services each account for about 40 per cent of total value-added exports (figure 2.1).

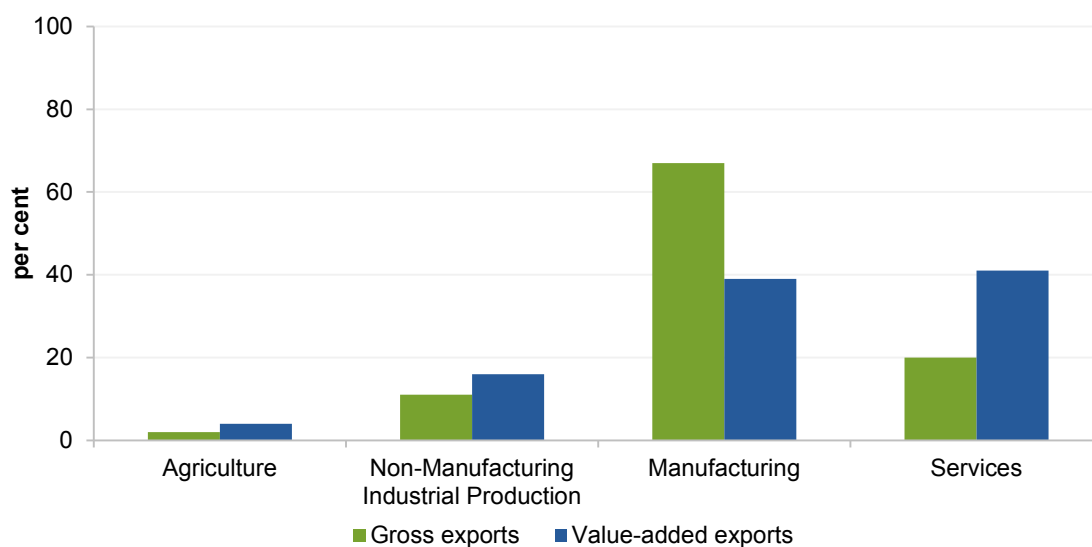
Australian trade shares the global pattern whereby manufacturing is relatively less important, and services relatively more important, when measured in value-added export terms, than in gross exports terms (figure 2.1 compared to 2.2). However, while manufactures comprised around 36 per cent of Australia’s observed exports in 2008 (the year for which comparative information is available),² manufactures only contribute around 14 per cent on a value adding basis — well below the global average for that year. Reflecting Australia’s mineral resource endowments, Australia’s exports of resource-based products is much higher than the global average, and accounted for around 40 per cent of Australia’s exports in both gross and value-added terms in 2008-09. Since the comparison year coincides with the terms of trade boom, the relative importance of mining product exports has increased, amounting to around 47 per cent of gross exports in 2013-14 declining to 43 per cent to the March quarter 2014-15 (value added in export shares are not available for these years) (ABS 2015a, Tables 2 and 32a).³

While the economic importance of services in international trade is heightened by its embodiment in other products, overall services output has tended to increase faster than that of other industries with the demand for services increasing ahead of per capita incomes. The share of services in global production has consequently increased over the last few decades — with World Bank information indicating that the services share of global production has increased from 56 per cent in 1980 to around 70 per cent in 2012. There has been a corresponding decline, at the global level, in the relative shares of agriculture and industry (appendix B).

² With the terms of trade boom in mining products, the share as estimated in Australian foreign trade statistics declined from 36 per cent in 2008-09 to 30 per cent in 2013-14, then rose to 33 per cent to the March quarter 2014-15 ABS 2015a, Tables 2 and 32a).

³ It should be noted in interpreting these estimates that exports of basic metal products including refined (non-monetary) gold, aluminium and refined copper, silver, lead and zinc are classified as exports of manufactures.

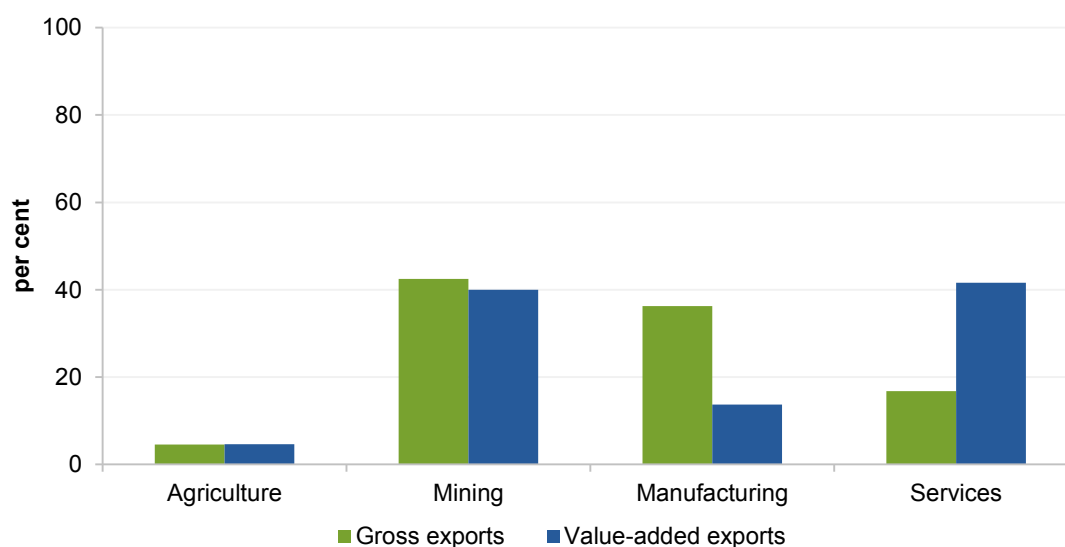
Figure 2.1 World exports in gross and value-added terms sector shares, 2008^a
per cent



^a Agriculture includes forestry, hunting and fishing. Non-manufacturing industrial production includes mining and quarrying, electricity gas and water supply, and construction.

Source: Johnson (2014, p. 125).

Figure 2.2 Australian exports in gross and value-added terms sector shares, 2008-09
per cent



Source: Commission estimates based on ABS (*Input-Output Tables 2008-09*, Cat. no. 5209.0).

Domestic versus foreign value-added content of gross exports

The domestic value-added content of exports (figure 2.2 above), however, does not cover the extent of foreign value added embodied in domestic production (and exports). The embodied input can be distinguished by tracing the foreign value added embodied in imports of intermediate inputs in the new world input-output tables. These tables indicate that in 2008, for example, an estimated 86 per cent of Australia's gross export value is domestic value added (table 2.1, line three), with the remaining 14 per cent being foreign value added embodied in Australia's imports of intermediate inputs.⁴ Because of Australia's role as an exporter of raw materials and distance from global manufacturing hubs, Australia's pattern materially differs from the world average — it having a higher domestic value-added content (86 per cent compared to a global average of 74 per cent) and lower imported value-added content in exports (14 per cent compared to a global average of 26 per cent). The higher imported value-added content of other countries' exports is reflective of engagement in more multi-stage, multi-country manufacturing processes that has developed with the lowering costs of international trade and more open and liberal global trading environment.

Table 2.1 Value-added decomposition of gross exports, 2008
per cent

<i>Components of gross exports</i>	<i>Australia</i>	<i>New Zealand</i>	<i>Global average</i>	<i>USA</i>	<i>China</i>
Exports direct to trading partner, used solely within trading partner	52	38	42	49	25
Exports to trading partner, processed and on-exported to third countries	34	40	32	36	41
Domestic value-added exports	86	79	74	85	66
Re-imported domestic value added	>1	>1	>1	>1	1
Foreign value added in imported intermediate inputs used for export production	14	21	26	15	33

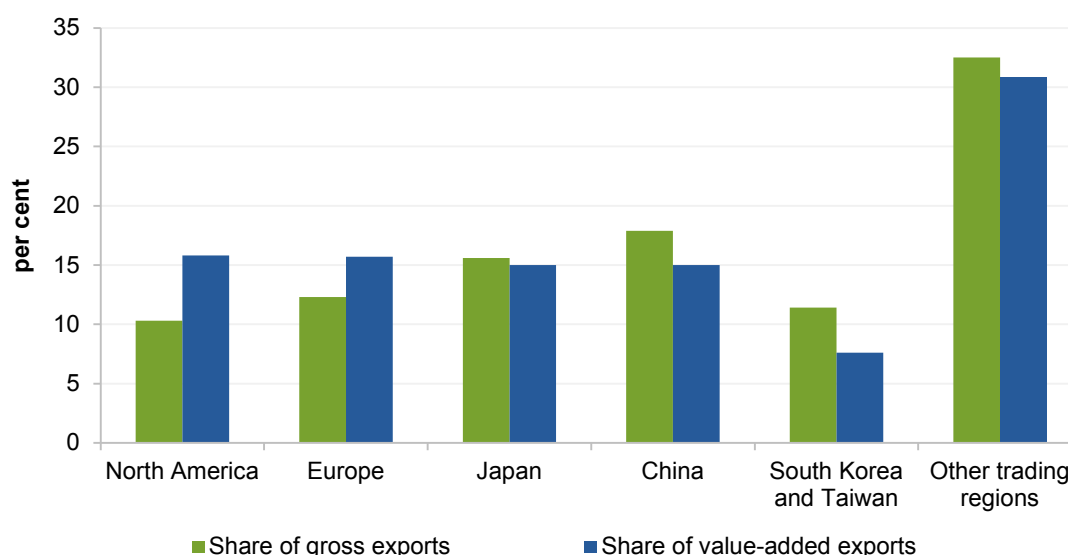
Source: WTO (2013).

Another dimension shown by the world input-output tables, and not discernible from Australia's national input-output table, is the ultimate destination of Australia's value added in exports. For example, in 2008 an estimated 52 per cent of the Australia's gross exports was Australian value added embodied in goods and services for consumption and investment within Australia's trading partners (table 2.1, line one). A further 34 per cent of Australia's gross exports by value was domestic value added embodied in goods and services which Australia's bilateral trading partners further processed and on-exported to 'third' countries (table 2.1, line two).

⁴ A small amount of gross export value is Australian value added 're-imported' as part of imported inputs that had been made using Australian exports.

Through the value-added decomposition of trade, once account is taken of the ultimate country destination of Australia's exports, the relative importance of direct and indirect trading partners changes. Over the period 2002 to 2011, North America and Europe accounted for 23 per cent of Australia's gross exports but about 32 per cent in value-added terms (figure 2.3). This is because a proportion of exports to Asia (such as to China, South Korea and Taiwan), especially of resources, are intermediate inputs used to produce goods that are then re-exported to North America and Europe. This trading structure underlines that Australia's interests are best served through a multilateral trading system based on most favoured nation and national treatment principles.

Figure 2.3 Australian value-added exports by country, 2002 to 2011 average
per cent



Source: Kelly and La Cava (2014).

The global trade intensity of value added has increased

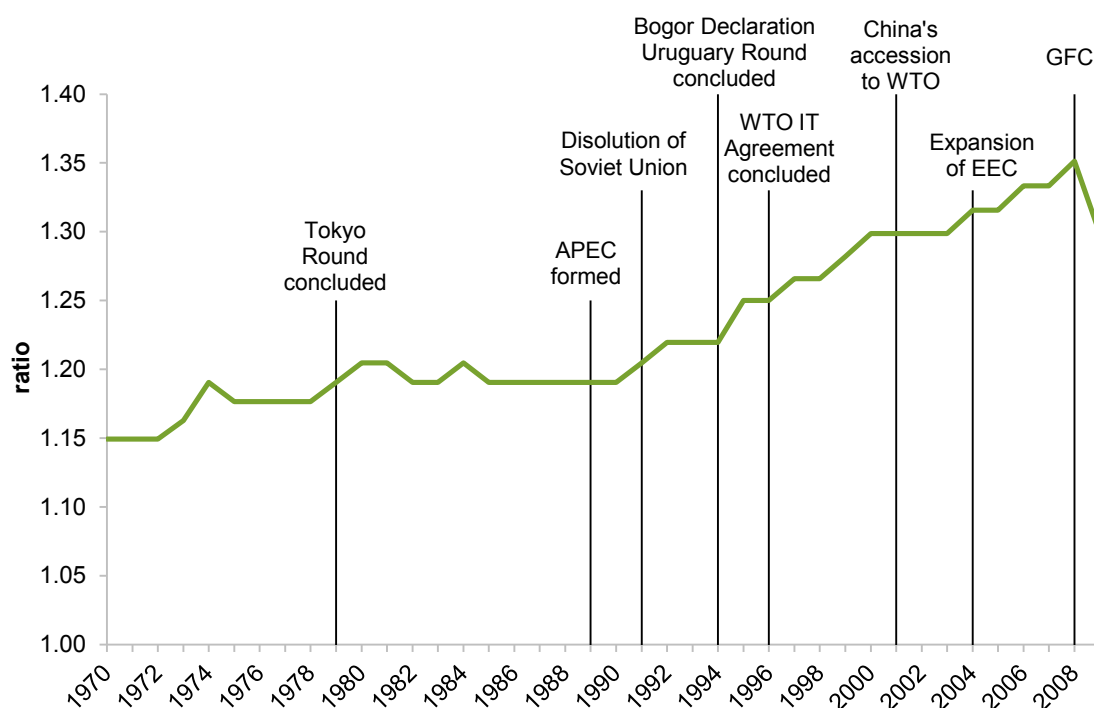
As production processes have increasingly been dispersed across countries to take advantage of lower-cost production opportunities, the gross value of exports to the value added generated in exporting has increased. Over the period 1970 to around 2009, available estimates indicate exports per unit of value added increased from 1.15 to 1.33 — that is, by around 15 per cent (figure 2.4).⁵ Most of this increase occurred after 1990

⁵ 'Gross exports per unit of value added' is the inverse of what is commonly known in the empirical trade literature as the ratio of 'value added exports' (VAX) to gross exports (Johnson and Noguera 2012a). Aggregate value added exports is less than gross exports because of the existence of intermediate stages of production across countries.

coinciding with major trade liberalisations (including those associated with the formation of APEC in 1989 and the Bogor Declaration of 1994 and the accession of China into the WTO in 2001), the dissolution of the Soviet Union in 1991 and the expansion of the European Union to include former Soviet bloc economies, and the emergence and uptake of advanced information and communication technologies. With the contraction of global trade associated with the 2008 global financial crisis, global exports per unit of value added declined.

Figure 2.4 Global export flows have increased ahead of value added in exporting, 1970 to 2009

Ratio of the global gross value of exports to the value added in exports^a



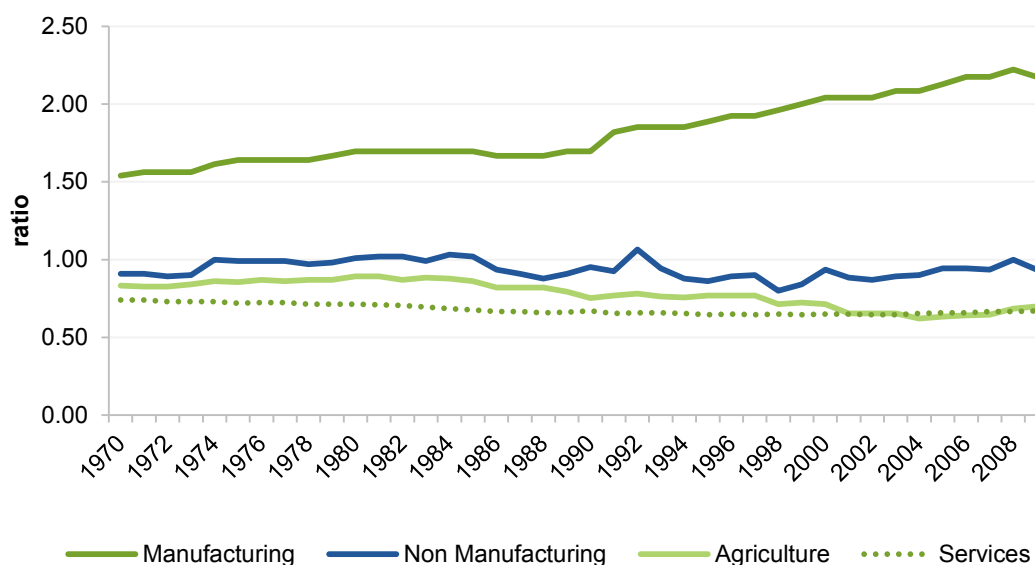
^a The original estimates of Johnson and Noguera were expressed in terms of value added exports to gross exports (the VAX ratio).

Source: Commission estimates based on Johnson and Noguera (2012a).

The increase in the ratio of gross exports to value added, between 1970 and 2009, particularly after 1990, predominantly reflects structural changes within the global manufacturing sector (figure 2.5). In particular, while exports of final manufactures has grown (steadily), the number of stages (or slicing up) of the stock of final manufactures has increased faster. As a result, the value of exports of manufactures relative to the value added exports of manufacturing has risen over 30 per cent — mainly since 1990. In contrast, exports of agricultural products and services per unit of value added in exports has slightly declined — as exports of agricultural products and services have grown slower than the use of those products as inputs into the increasingly fragmented manufacturing sector.

Figure 2.5 Value added in exporting varies between sector and over time, 1970 to 2009

Ratio of gross exports of a sector to sectoral value added in exports^{a,b}



^a The original estimates of Johnson and Noguera were expressed in terms of value added exports by sector to gross exports of the sector (the sectoral VAX ratio). ^b Non-manufacturing includes oil and gas, iron ores and other mining.

Source: Johnson and Noguera (2012a, p. 58).

2.2 International trade competitiveness

The evolution of global supply chains has been paralleled by empirical research that has sought to identify the determinants of trade patterns and to disentangle the relative importance of cross-country industry and firm differences in factor endowments, institutional arrangements and trade costs (box 2.1).

Box 2.1 Sources of trade competitiveness

As emphasised by the OECD (2011a) international trade is (largely) driven by *relative* trade competitiveness (that is, comparative advantage), which can be described in the following way:

... a country [firm] has comparative advantage in producing a good if the opportunity cost of producing that good in terms of other goods is lower in that country [firm] than it is in other countries. (Krugman and Obstfeld 2009, p.29)

While well established, and supported by contemporary empirical studies, there are a number of distinct sources of difference between industries and businesses (across countries) that generate opportunities for mutually beneficial international trade.

- Comparative advantages, posited in the principal theories of trade, based on cross-country differences in technology; cross-country differences in factor endowments; differences between industries and countries in industrial organisation, such as imperfect competition, returns to scale, and product differentiation and productivity differences between firms within industries.
- 'Institutional' comparative advantages, arising from, for instance, differences in the local system of labour market arrangements, the availability of finance and financial institutions, legal systems and the recognition of property rights, intellectual property arrangements and, foreign direct investment policy.
- Direct costs of trade and trade facilitation advantages arising from, for example, the proximity of trading partners, the availability of efficient transportation and communications as well as efficient and effective border control and customs procedures.

Trade and investment can be eroded by barriers to trade such as though customs tariffs, quotas, local content schemes, preferential trading arrangements under bilateral and regional trade agreements, as well as industry subsidies and product marketing arrangements, preferential rules of origin in merchandise and services trade and inappropriately stringent quarantine arrangements.

While this chapter does not seek to review all facets of trade competitiveness as it relates to Australia and its key trading partners, the empirical studies in this stream of investigation (box 2.2) have drawn attention to:

- the rate of change in countries' most internationally competitive industries or activities is quite fast (or faster than what might have been guessed based on static analysis of representative firms or activities) suggesting that 'winners' are 'temporary' and evolve over time
- the role that institutional settings play in determining the overall trade competitiveness of an economy
- the importance of trade costs (such as transport and merchant costs and customs clearance time and charges) and the prospect that these may be the most important factor in determining trade patterns and product specialisation, for the 'average' country, compared with industry-level productivity differences and factor endowments.

Box 2.2 Some recent empirical studies on trade competitiveness

The dynamic nature of comparative advantage

Hanson et al. (2014) explore the long-run evolution of comparative advantage for 135 industries in 90 countries from 1962 to 2007. They find that in the typical country, export success is highly concentrated in a handful of broad industries (defined at a mix of two and three digit level in the Standard International Trade Classification.). They also find there is a high rate of turnover in a country's top export industries, which they estimate to be of the order of 35 per cent to 55 per cent per decade. The dynamic nature of comparative advantage is also empirically studied by Levchenko and Zhang (2011), OECD (2011b) and WTO (2013).

Disentangling multiple sources of comparative advantage

An OECD study (Kowalski 2011) sought to jointly investigate the effect of numerous sources of comparative advantage. The empirical investigation covered bilateral trade of 55 OECD and selected emerging market economies and 44 manufacturing sectors, covering the entirety of merchandise trade in 1995 and 2005. Overall, capital-to-labour ratios were estimated to be as important as distance in explaining trade patterns. Cross-country differences in secondary and tertiary education provide approximately half the explanatory power compared with distance. Country and industry differences in availability of credit and primary energy supply, regulatory quality and labour market rigidity were also confirmed as having a role in explaining the trade patterns. Another OECD study (Johannson and Olaberria 2014) performed a similar disentangling analysis using value-added production data covering manufacturing and services. Again, factor endowment differences do not fully explain production specialisation.

Institutions and comparative advantages

Nicolini (2011) focused specifically on the role of potential sources of institutional comparative advantage in a panel data analysis of variations in exports for 100 countries in 28 sectors across 1976 to 2004. Previous studies along these lines have been for single years (that is, cross sectional) and/or of single institutional variables. While confirming an important role for capital and skilled labour (in capital intensive and skill intensive industries) the analysis also finds a role for institutional quality as a source of comparative advantage. Better quality contract enforcement in the production of complex goods is identified as a source of comparative advantage, and this effect is gaining relevance over time, and is found to be more important in OECD than non-OECD countries. The level of development of financial institutions is also found to be a source of comparative advantage in industries that rely more on external financing.

Are trade costs more relevant than factor endowments as determinants of trade specialisation?

Shikher (2013) advances previous treatments of trade costs in trade models by allowing for trade costs to be different for each industry and each pair of countries. The relative role of trade costs was then concurrently evaluated with factor endowments, technology and taste differences, in explaining the trade patterns among 19 OECD countries in eight broad manufacturing industries. The model was parameterized to 1989 data and then the effect of removing a single determinant from the model was simulated. Amongst other things the study indicated, that trade costs of an 'average' economy were relatively more important than variation in industry productivity and factor endowments. Such considerations appear most pronounced in middle income than richer countries. (Separate results for Australia, which is an outlier in terms of distance and natural resource endowments, are not available).

Complementary to empirical trade studies at the country and industry level has been some investigations of firm-level trade. A robust finding across countries and industries, and over time, is that a small percentage of firms in an industry account for a large share of exports, and that many firms in an industry do not directly export. This prompts the question, whether firms engaging in exporting, and more particularly global value chains, stand-out from other firms in terms of their underlying characteristics.

An issue in this regard is how firms benefit from integration into a global value chain — possibilities include through accessing larger foreign markets allowing exploitation of scale economies, learning about new technologies and products and becoming more innovative.⁶ Participation in a global value chain may also provide access to cheaper intermediate products, a wider variety of products, or a higher quality of foreign inputs, all of which may improve efficiency and reduce costs.

There is empirical evidence from Canadian manufacturing firms which suggests that firms which participate in global value chains are more productive (box 2.3). The effects were more pronounced in high and medium-high technology industries. Productivity growth was also higher for the firms that traded with high-wage countries, which is consistent with the learning-by-exporting hypothesis and the hypothesis that imports provide a channel of technology diffusion. There were also some benefits to Canadian manufacturing firms in terms of cost savings from the use of imported inputs from low-wage countries in low technology industries.⁷

⁶ Recent trade empirics has delved into firm level analysis, covering aspects such as location and sourcing decisions of multinationals (Arkolakis, Ramondo, Rodriguez-Clare and Yeaple 2013); foreign direct investment (Helpman 2013); how the within industry distribution of firm size influences trade patterns and the effects of trade liberalisation (Gretton and Gabbittas 2003, Giovanni and Levchenko 2010, and Yang 2014); and the formation of trade networks and export expansion (Chaney 2011, 2014, Riccaboni and Schiavo 2013, Armenter and Koren 2014).

⁷ Amiti and Konings (2007) estimate a significant increase in productivity of Indonesian manufacturing firms for 1991 to 2001 from a reduction in tariffs on imported intermediate inputs, and that the effect is much higher than reducing output tariffs. Importing firms gain more than firms which do not import. The study was unable to distinguish the channels of productivity growth. Similarly, an OECD paper (Miroudot, Lanz and Rgooussis 2009) estimates a positive effect on productivity from imported intermediate inputs (using data for 10 OECD countries and 29 sectors), but does not identify the channel(s) by which the effect operates.

Box 2.3 Participation in global value chains found to have increased productivity of Canadian manufacturing firms

Baldwin and Yan (2014) examined whether the integration of Canadian manufacturing firms into a global value chain (GVC) improves their productivity. The firm sample covered the majority of Canadian manufacturing firms (around 30 000) over the period 2002 to 2006. Baldwin and Yan define GVC status as those firms engaging in both importing and exporting. Accordingly, about 28 per cent of Canadian manufacturing firms participated in GVCs. About 30 per cent of firms neither export or import and about 20 per cent only import material or only export.

The raw data shows that the GVC firms had higher sales per worker (14 per cent), paid higher wages (6 per cent) and were also more likely to be foreign-controlled. However, such survey data alone is insufficient to conclude whether being in a GVC raises productivity or whether more productive firms participate in GVCs. After statistically controlling for potential selection bias, Baldwin and Yan found that firms that joined GVCs were significantly more productive than those that did not, and firms that exited from GVCs were significantly less productive than those that continued to participate in a GVC. During their first year in a GVC, firms experienced 5 per cent more productivity growth than did non-GVC firms. The gap accumulated to 9 per cent over four years. Alternatively, in the first year after they ceased to be in a GVC, firms experienced 1 per cent lower productivity growth, compared with continuing GVC firms. The relative loss over four years amounted to 8 per cent.

The magnitude and timing of the productivity effects of GVC status was not uniform across industries. Around 50 per cent of firms in high- and medium-to-high-technology industries were integrated into GVCs, compared with the overall average of 28 per cent. And the productivity benefits of GVC participation by firms in the high technology sector were almost double the gain of an average GVC starter. Nonetheless, GVC participation also resulted in higher productivity across many other industries.

Source: Baldwin and Yan (2014).

2.3 Assistance to exporting and Australia's export competitiveness

The previous sections outlined patterns of global trade, the determinants of trade competitiveness and drew attention to some policy implications. Against that background, this section identifies the main export assistance programs of the Australian Government. It highlights a diversity (indeed a plethora) of measures and target activities. A key issue is whether the rationales, effectiveness and efficiency of these export assistance programs are beneficial both in context of global value chains and value-added export patterns, and more generally. The section also previews aspects of the Australian Government's recent *Industry, Innovation and Competitiveness Agenda*, which includes measures intended to boost exports, and in some cases direct public support towards particular 'priority' industries.

Australian Government programs to assist industry exporting and global value chain participation

Successive Australian governments have provided assistance to businesses specifically to engage in global markets through exporting. In 2012-13, Australian Government support through such programs amounted to over \$900 million. The selective export support afforded by these programs comes in various forms and with differing target groups (table 2.2).

Table 2.2 Recent Australian Government export assistance

<i>Type of export assistance</i>	<i>Example programs</i>	<i>Government outlays 2013-14</i>
Industry specific (through outlays, tax concessions and third party promotion and information services)	Australia as a Financial Centre (reduced withholding tax) (\$200.0m); Offshore Banking Units (tax concession) (\$185.0m); Tourism Australia (\$130.4m); Automotive New Markets Initiative (\$6.3m); Global Supply Chains (Defence); Defence Export Unit; Clean Energy Trade and Investment Strategy; Food Innovation Australia Limited.	> \$521.0 million
Generally available across industries (through grants, loans, guarantees, third party promotion and information services)	Austrade (\$176.8m); Export Market Development Grants (\$113.6m); Export Finance and Insurance Corporation; Women in Global Business.	\$290.4 million ^a
Tariff relief on imported inputs used to produce exports	Duty Drawback (\$62.7m); TRADEX (\$43.5m); Enhanced Project By-Law Scheme (exporters and non-exporters).	\$106.2 million ^b
Supplier participation (including through government procurement plans, third party promotion and information)	Australian Industry Participation Plans; Supplier Access to Major Projects; Global Opportunities Program; Buy Australia at Home and Abroad; Export Facilitators (Australia-US Free Trade Agreement).	Not available ^c
TOTAL		>\$917.6 million

^a Excludes EFIC. EFIC does not receive an annual budget appropriation. EFIC borrows to fund its expenditure and earns revenue on its services. In 2013-14, EFIC's net interest income was \$22.6 million. The value of its products provided in 2013-14 was \$577 million. The equity in EFIC at 30 June 2014 was \$225.9 million. EFIC paid a dividend to the Australian Government of \$11.3 million in 2013-14. ^b Excludes Enhanced Project By-Law Scheme, which is confidential. ^c Supplier participation plans generally do not involve assistance paid to businesses by the Australian Government. The Australian Government incurs departmental expenditure in administering such programs. Amounts for 2013-14 are not available. Expenditure in 2007 for some of these programs was \$34.1 million.

Source: Commission estimates.

-
- Some of this support is industry specific, such as several relating to defence, tourism, automotive, finance, food and ‘clean’ energy, and which accounted for about half of total estimated export assistance in 2013-14.⁸ Of the \$521 million of identified industry specific export assistance, the tax concessions available to the finance industry accounted for \$385 million.
 - There are generic programs, available to firms across all industries, such as the long-running support relating to export and trade finance (Export Finance and Insurance Corporation) (EFIC) and market access (Austrade and Export Market Development Grants) (EMDG). The budget appropriations for Austrade and EMDG totalled almost \$300 million in 2013-14. EFIC does not receive an annual budget appropriation (see table 2.1, note ‘a’). In 2013-14, EFIC provided \$577 million worth of export finance assistance in the form of guarantees, bonds and loans, though this does not equate to the ‘assistance’ to EFIC clients in terms of export credit subsidy. Quantifying the assistance to EFIC clients is difficult, though some estimates have been made for some overseas export credit programs (PC 2012a, chapter 6 and appendix B).
 - There are three programs — Duty Drawback, TRADEX and the Enhanced Project By-Law Scheme (EPBLS) — that variously provide tariff relief on imported inputs for eligible exporting activities. Duty Drawback and TRADEX provided over \$100 million tariff relief in 2013-14. The tariff concessions under the EPBLS is available to large (export and non-export) projects having an approved plan to use local suppliers. The projects and the concession are confidential.
 - There are also a number of supplier participation programs which are generally intended to increase the participation of Australia suppliers in major local projects (many of which export, such as resources) and global supply chains. There does not appear to be meaningful public data on program outcomes.

The scale, diversity and mixed targeting of export assistance prompts asking: what additional activity is prompted by this assistance, what is the alternative uses (opportunity cost) of funds directed to such export assistance and which programs deliver best-value for taxpayer money? Some relevant observations include:

- while there have been a number of reviews of some individual export assistance programs, such as of EMDG and EFIC, some residual concerns continue for these programs (box 2.4)
- there has been little, if any, appropriate economic evaluations of the significant assistance to travel and tourism (*Trade & Assistance Review* 2006-07), and defence industry assistance (*Trade & Assistance Review* 2012-13)

⁸ Australia’s export policies have long contained an element of ‘priority’ industries. A 1992 inquiry by the Industry Commission into overseas export enhancement measures identified specific support for various agriculture industries, metal working machines and robots, passenger motor vehicles, photographic colour film production, shipbuilding, textile, clothing and footwear, telecommunications equipment, pharmaceuticals, and tourism (IC 1992).

Box 2.4 **Some cautionary considerations about EMDG and EFIC**

Export Market Development Grants

Following the 2008 Review of the EMDG Scheme, the 2007-08 *Trade & Assistance Review* (PC 2009b) outlined a number of concerns with the design and operation of the scheme, and of some of the analytical assumptions made by the review.

- The rationales advanced for the EMDG are problematic. Governments do not generally subsidise the operating costs of business. Information deficiencies about the general benefits of exporting and specific knowledge about suitable export markets is, or can be, addressed by Austrade (and the Australian Tourism Commission). Learning by doing benefits (to the exporter) are 'internalised' and so firms have a strong incentive to realise these gains. Moreover, learning by doing is ubiquitous for almost any 'new' activity, whether export or domestic. Government's do not generally underwrite learning by doing.
- Assessments of the effectiveness of grants — the additionality impact — are implausibly large. EMDG grants partly subsidise export promotion, which are less than 5 per cent of total export costs. Yet the 2008 review concluded that each dollar of EMDG support (not all of which is successful) generated additional exports of between \$13.50 and \$27.
- The economy-wide efficiency assessment included an optimistic assumption of spillover benefits from EMDG recipients to non-EMDG firms of equal magnitude to the direct benefits to EMDG recipients. The profile of EMDG firms and activity suggests that the extent of 'leaning' and pioneering' spillover benefits may be more limited than commonly claimed. The majority of EMDG firms were experienced exporters and mostly exported identical or virtually the same products as they sell domestically. The majority of EMDG exports were to traditional markets (United States and United Kingdom). The main products exported by EMDG participants — tourism, education, culture, information technology and food and beverages — do not appear to be 'new'. Only 26 per cent of surveyed non-EMDG exporters said they benefited from EMDG exporters.

Export Finance and Insurance Corporation

The Export Finance and Insurance Corporation (EFIC) was established to facilitate and encourage Australian export trade through provision of financial services. A key element of the recommendations from the Productivity Commission review of EFIC (PC 2012a) was to reorientate EFIC's operations to support SMEs and to limit provision of export finance to situations of information-related market failure. These failures were likely to be limited to SMEs with limited export experience or attempting to access emerging export markets.

The Commission observed that the EFIC definition of an SME — annual turnover up to \$150 million — was over double the value used by some other Australian Government agencies and private sector finance providers. The EFIC definition has the effect of affording assistance to large firms whose financing ability is unlikely to be subject to market failures.

The PC recommended that EFIC should be required to define a SME as a business with less than 100 employees or annual turnover of less than \$50 million. The former Government in its formal response indicated it would change the threshold to \$100 million. The \$150 million threshold remains in operation. EFIC is also not precluded from lending to firms larger than the SME threshold. In 2013-14 around 10 per cent of EFIC transactions (by number) on the Commercial Account involved 'large' companies. In 2010-11, 77 per cent (by value) of EFIC transactions were with large firms (PC 2012a, p. 10). It is intended that EFIC will be subject to competitive neutrality charges from 2015-16 (Robb 2014a; Export Finance and Insurance Corporation Act (1991).

-
- the lack of transparency on the recipients of export assistance and outcomes data in key programs, for example, there is no public record of the projects (and industries) receiving tariff concessions under the EPBLS, industry usage of duty drawback, nor the industry profile of firms that receive Austrade services.

Recent assessments of Australia's trade competitiveness

In October 2014 the Australian Government released its *Industry, Innovation and Competitiveness Agenda* (Australian Government 2014b). The Agenda is intended to strengthen Australia's productivity and competitiveness including Australia's export (and import competing) competitiveness:

Australia compares well against a number of international economic benchmarks, but in recent years our competitiveness has weakened. ... Without change, Australia risks being out-competed in the world market, resulting in fewer jobs and lower economic growth. If left unaddressed, our declining competitiveness will represent the start of an unacceptable slide into mediocrity. Improving our competitiveness is essential if we are to sustain and enhance the living standard of all Australians. (Australian Government 2014b, p.iii)

In seeking to improve Australia's competitiveness the Agenda proposes four 'ambitions':

- A lower cost, business friendly environment
- A more skilled labour force
- Better economic infrastructure
- Industry policy that fosters innovation and entrepreneurship.

The first three ambitions involve measures intended to improve the general business environment. The achievement of these objectives could potentially lower trade costs and improve competitiveness of Australian industry.

The fourth ambition which relates to industry policy, includes three direct export assistance measures — an additional \$200 million capital injection into EFIC; an additional \$50 million over four years for EMDG; and a 'Team Australia' approach through trade missions led by the Prime Minister and senior Cabinet Ministers to priority markets. The \$200 million for EFIC is a return of the \$200 million that had been a budget reduction made by the previous Government. EFIC plan to use the \$200 million capital injection '...to support exporting SMEs, those in the global supply chain and exporters of all sizes conducting business in emerging and frontier markets' (EFIC 2014a, p. 7). EFIC was at or near its maximum country limits for Russia, Mongolia, Sri Lanka and Papua New Guinea. The additional \$50 million (over four years) for EMDG compares with an annual program cost of \$113.6 million in 2013-14. In concert with the \$50 million, eligibility for EMDG has also been enhanced, through a reduction in the minimum expenses threshold (from \$20 000 to \$15 000), and an increase in the maximum number of grants able to be received by an applicant from seven to eight.

Box 2.5 Competitiveness Agenda proposals which give priority to five industries

The Industry Skills Fund and Industry Growth Centres will give immediate priority, but not exclusivity, to five designated growth sectors within the Industry and Science Portfolio — advanced manufacturing, food and agribusiness, medical technologies and pharmaceuticals, mining equipment, technology and services, and, oil, gas and energy sources.

Industry Skills Fund

The 2014-15 Budget provided \$476 million over four years to establish the Industry Skills Fund to support the training needs of small to medium enterprises not readily met by the national training system. The Fund will commence in January 2015 and is expected to deliver 200,000 targeted training places and training support services over four years. It will prioritise assistance to small and medium enterprises (SMEs). Larger companies may apply to access the Fund, but will be expected to make greater contributions towards the cost of training.

Industry Growth Centres Initiative

The Government has budgeted \$188.5 million over four years from 2014-15 to 2017-18 to establish five Industry Growth Centres (Growth Centres), one for each designated key growth sector within the Industry and Science Portfolio.

The Centres are intended to lift competitiveness and productivity by focusing on areas of competitive strength and address the need to encourage innovation, target market failures and enable activities that markets will not adequately provide. The Initiative provides a platform for coordinated national action on issues such as deregulation, skills and science. The Industry Growth Centres model is based on Australian and overseas experience, including the United States' Small Business Administration's Regional Cluster Initiative, the Canadian Business-led Networks of Centres of Excellence and the United Kingdom's Catapult Centres.

Each of the initial five centres will receive funding of up to \$3.5 million per year and will be required to plan to become self-sustaining after four years. Each Growth Centre can apply for competitive grants from a \$63 million Growth Centre Project Fund, to support large-scale projects.

Entrepreneurs' Infrastructure Programme

The 2014-15 Budget provided \$484.2 million for the Entrepreneurs' Infrastructure Programme, which included an allocation of \$92.4 million for the single business advisory service. The Entrepreneurs' Infrastructure Programme is intended to provide support through: advice from professionals with private sector experience; co-funded grants to commercialise new products, processes and services; funding to take advantage of growth opportunities; and connection and collaboration opportunities.

The Programme consists of three elements. The Business Management and Research Connections elements are to provide support to eligible businesses in the five growth sectors, as well as eligible businesses providing enabling technologies and services to those sectors. The Accelerating Commercialisation element focuses on small and medium businesses, entrepreneurs and researchers, with priority given to eligible projects in the five growth sectors,

Sources: Australian Government (2014b); Australian Government (2015b).

The industry policy ambition also includes three measures — Industry Growth Centres, the Industry Skills Fund and the Entrepreneurs’ Infrastructure Programme (box 2.5). These are not exclusively for export support, but will give priority to five industries, chosen on the basis of their export growth potential. Among other things, the Industry Skills Fund is intended to assist participating companies to open ‘... export markets and emerging economies’ (Australian Government 2014, p. 70) whilst the Industry Growth Centres and Entrepreneurs’ Infrastructure Programme are intended to enhance ‘...businesses’ ability to enter global value chains...’ (Australian Government 2014b, p. 73).

The five designated priority areas within the Industry and Science Portfolio — advanced manufacturing, food and agribusiness, mining equipment, technology and services, medical technologies and pharmaceuticals, and oil, gas and energy resources — are nominated in the Agenda. These five priority areas align, in part, with eight industry groupings judged (but not unanimously) by five private sector economic consulting firms as having future growth potential (table 2.3).

The methodologies adopted by the consultants, to analyse industry growth prospects, involve a mix of quantitative calculations and qualitative assessments (box 2.6).

Table 2.3 Some future growth sectors identified by economic consulting firms

<i>Industry sector</i>	<i>Deloitte (2014)</i>	<i>PwC (2013)^a</i>	<i>IBIS World (2013)</i>	<i>Outlook Economics (2014)</i>	<i>McKinsey Australia (2014)^b</i>
<i>Activities with growth potential broadly aligned with Industry Innovation & Competitiveness Agenda priority areas</i>					
Agriculture	✓	✓			✓
Food & beverage processing	✓		✓		✓
Mining services		✓		✓	✓
Pharmaceuticals, biotech & medical		✓			✓
Gas	✓	✓	✓	✓	✓
<i>Activities with growth potential not aligned with IICA priority industries</i>					
International education	✓		✓	✓	✓
Tourism	✓	✓		✓	✓
Professional & financial services	✓ ^c	✓	✓ ^d	✓	
Distribution Services ^e	✓	✓			

^a PwC also identified Digital; Transport; Space & spatial; and Built environment & construction as having strong growth paths. ^b Sectors identified by McKinsey as ‘advantaged performers’ and ‘latent potentials’. ^c In professional & financial services Deloitte identified wealth management as a growth subsector. ^d Within the professional and financial services category IBIS identified legal services as a key growth subsector. ^e Distribution services includes wholesale and retail trade, transport, and postal and warehousing. The Agenda excluded Distribution Services from the ‘final eight’ industries discussed in further detail in the Agenda.

Source: Australian Government (2014b, p. 9).

Box 2.6 **Approaches to identifying Australian industry export growth prospects**

The methodologies adopted by three of the consultants to analyse industry growth prospects are public, and involve a mix of quantitative calculations and judgements.

Deloitte (2014), ‘Positioning for Prosperity: catching the next wave’

Deloitte first projected global industry output growth for 20 industry sectors for 2013 to 2033. Second, it assessed the (underlying) advantage of Australian industries. It then compared how the two rankings intersected. This produced a relative advantage score for each Australian industry.

The underlying advantage of Australian industries was calculated as a weighted average of scores for the following nine indicators, in descending order of weight: natural resource (29 per cent weight); cost competitiveness (19.1); regulatory competitiveness (18.9); exchange rate (11.8); relative productivity (11.1); sector-specific factors (4.3); proximity to Asia (3.4), revealed comparative advantage (1.9); and educational attainment (0.4).

The rankings based on the numerical exercise were adjusted for several industries based on judgements about the industry. For instance, coal, manufacturing and health were marked down, while wealth management, international education, agri-business and professional services were marked up.

IBIS World (2013), ‘Australia’s Top 5 New Exports’

IBIS drew on nine of their industry reports to identify Australia’s five biggest export prospects, beyond mining commodities. IBIS industry reports examine factors such as: demand drivers, cost structures, competition and entry barriers, firm level differences, and government policies.

Increased demand opportunities from Asia and a lower exchange rate were significant factors in delineating between industry prospects.

McKinsey Australia (2014), ‘Compete to Prosper: How Australia can gain a global edge’

McKinsey assessed export competitiveness in two ways.

- The first method of assessment is how Australian industries actually performed in the global market. Accordingly, it calculated two outcome measures. One was the export to import ratio for 14 industry groupings in the snapshot year 2010. The other indicator was world export market share growth for 2005 to 2010.
- The second method of assessment was to calculate a Relative Competitiveness Index (RCI) for 2005 and 2012. The RCI is an index of gross value added (GVA) divided by total input costs, relative to other countries. The RCI could only be calculated for a few industries and for a few countries because of data limitations.

McKinsey supplement this empirical work by judgements on which industries fit Australia’s endowments. It judges that Australia has ‘two great’ endowments: natural endowments built on its unique geography and geology; and a skill endowment derived from people (whether Australian-born or immigrants, educated in Australia or overseas).

Broadly, the assessments take into account past export sales (that is, gross exports), fit with future predicted global growth, fit with Australia's natural resources, and sectoral relative cost and productivity.

An issue regarding this approach of targeting is whether past experience is the best guide to the future, whether policy judgements concerning future areas of commercial success are the best guide and whether an approach based on selectivity affords net economic benefits, that is, community wide gains. Some cautionary concerns about designating five priority sectors follow.

- The quantitative methodologies used to identify the industries with the most promising (export) growth potential are predominantly based on past gross export earnings. As discussed above (section 2.1), value-added export data provides an additional perspective of the relative contribution of how industries contribute to the Australian economy. In value-added terms, for Australia and the world, services are relatively more important, and manufactured exports relatively less important, as a generator of national income, than implied by gross export values. Estimations of Revealed Comparative Advantage (RCA) in gross and value-added terms, indicate that the rankings of industries (and countries) change, often significantly, including from having a revealed comparative advantage in gross terms to a disadvantage in value-added terms (Koopman et al. 2014).⁹
- Recent export performance may not be the best guide to future prospects. Moreover, industries that have recently been internationally successful, and somewhat likely to remain so in the near term, would not seem to warrant being a priority for future public support. Between 1995 and 2007 about 75 per cent of the growth in world manufacturing exports was growth of existing country-product trade flows (often referred to as growth along the intensive margin) (Beltramello et al. 2012). For Australia, the contribution of 'old trade flows' was about 50 per cent.¹⁰ New trade flows (often referred to as growth along the extensive margin) can be divided into three categories: (1) new combination of existing products to existing destination; (2) existing products to new destinations; and (3) new products to new destinations. For the world, growth along the intensive margin dominated, with Australia above the world average. Around 90 per cent of Australia's growth in new manufactured exports between 1995 and 2007 was of an existing exported product to an existing trading

⁹ For illustrative purposes and space constraints the authors only provide results for two industries — *Finished metal products* (ISIC 28) and *Real estate, renting and business activities* (ISIC: division K). Australia's relative competitiveness rises for both industries when calculated in value-added terms (though in both cases it remains in the relative disadvantage category). China and India are the two countries showing the largest drop in revealed competitiveness when switching from a gross basis to value-added basis.

¹⁰ A shift-share decomposition of Australia's growth in old trade flows into sectoral, geographic and residual (pure competitiveness) effects estimated an approximately equal beneficial effect of Australia having a basket of products benefiting from relatively high world demand and 'pure competitiveness'. Exports were assessed to have been negatively affected by being orientated towards a group of trading partners with less dynamic demand relative to the rest of the world.

partner. Most of the remaining 10 per cent of new exports was in the form of new products to existing destinations.

- The five priority sectors are very broad. For instance the ‘food and agribusiness’ grouping would seem to describe 2 industries of the ANZSIC 2 digit classification, 19 industries at the 3 digit classification level, and 58 at the 4 digit level. The empirical trade literature indicates quite different competitiveness and trade patterns for industries that fall within the same broad industry grouping (OECD 2011a), while the consultants identified specific subsectors with the broad industry groupings as having different prospects.¹¹ For instance, within the broad Food and Agribusiness industry grouping, one consultant report specifically identified beer manufacturing, baby food and dairy as top prospects. A concern is whether the programs can realistically identify sub-industry participants (within the broad industry groupings) with realisable growth prospects and/or deliver general purpose skills and information that would not otherwise be available and that are transferable between activities. Moreover, even if activities with above average growth prospects can be identified, there is a question as to what rationale and merit there is for government intervention.
- Following a market analysis in 2013 Austrade identified a broader set of eight high-level global demand and trade areas on which to focus its activities (Austrade 2014, p. 26). These areas subsume the five designated priority areas in the Industry and Science Portfolio and cover: premium processed foods (especially clean, green and ethical); agribusiness (such as dairy and seafood production); resources and energy (focussing on mining equipment, technology and services); health, aged care and biotechnology; advanced manufacturing (focussing on aerospace, defence, marine and automotive components); infrastructure; environment, water and energy efficiency; and advanced services (focussing on financial, ICT, professional business advisory, creative industries and major sporting event delivery).
- Industries comprise highly heterogeneous firms. The empirical literature indicates substantial between-firm differences in competitiveness and trading position within the same industry. And, while a robust stylised fact (across countries, industries and time) is that a few firms account for the majority of exports of an industry, even a small number of successful firms within the same industry can have different sources of underlying comparative advantages. A concern is that the program will not be cost effective given unavoidable difficulty in meaningfully selecting firms that are likely to be successful in commerce by administrative processes.

An enduring concern is that if the assessment about sector, industry or firm prospects are not robust or ultimately realised (in the first instance), further public support may be sought and committed.

¹¹ The OECD found that the majority of exports within 2-digit industry groupings occurred within a relatively few 4-digit product categories. Similarly, the Commission’s productivity analysis reveals quite disparate performance of sub-industries within the 2 digit level of the manufacturing industry (Barnes, Soames, Li and Munoz 2013).

2.4 Concluding comments

World production and trade have increasingly been structured around global value chains. In particular, manufacturing has been ‘sliced’ into more stages across countries. One consequence is that gross export statistics blur the industry and country origin of the value added in production, which increases with the evolution of global value chains. Gross export data attribute the full value to the last industry and country. The recent construction of value-added trade flow data has furthered the understanding of the inter-relatedness and dependency among industries and across countries, and provides a better picture of the resource allocation effects of trade. For instance, in value-added terms exports of services are relatively more important, and manufactured exports relatively less important, as a generator of national income, than implied by gross export values. This increases the priority for addressing impediments to services exports and to overcoming inefficient services used as inputs in domestic production.

Effective participation in GVCs can be facilitated in a number of ways — minimising barriers to cross border trade, allowing domestic labour and capital to flow to best use (in a global sense), and ensuring supporting services are efficiently provided. Past steps to open Australia’s borders and improve productivity in the domestic economy have been associated with increased trade openness and improved economic performance in absolute terms and relative to peers. Future improvements are likely to come from completing the agenda of tariff liberalisation, and policies that enable firms to adjust to changing circumstances. The evolution of GVCs reinforces the reality that imports are essential for exports and that barriers to imported inputs act as a tax on exports. And while transparent tariff barriers have been significantly reduced, unilaterally and multi-laterally, the increasingly global fragmentation of production of a final good further elevates the priority for eliminating remaining tariffs and addressing less transparent non-tariff barriers to trade.

Policies that are non-discriminatory, that are focused on removing impediments to business activity, and that are also focused on reducing business costs have the best chance of fostering economic growth and higher incomes. Policies that seek to direct resources and effort according to priority sectors unavoidably risk disadvantaging other firms or sectors that may be more competitive and have better prospects in global markets.

The diversity of export support programs in place in Australia, the quantum of support (over \$900 million in 2013-14 alone) and the tendency towards targeting assistance to selected activities and firms brings into question whether this strategy is likely to be most effective in the context of the emerging global economic architecture. There would be merit in undertaking a comprehensive assessment of the cost-effectiveness of Australia’s export assistance and related industry support seeking to bolster selected industries, activities or firms.

3 Firm assistance – when government becomes an ‘investor’

Key points

- Governments play an important role influencing the general economic environment in which businesses operate.
- They also provide a range of budgetary assistance to industry, firms and projects through competitive and other grants, taxation concessions and concessional loans.
- At times, this has involved firm-specific ‘co-investment’ assistance with the government assuming the role of a de facto passive investor, albeit with no shareholder rights or capital claims but an expected ‘investor return’ in the form of the firm or project’s viability.
 - As such, using the term ‘co-investment’ for these forms of assistance is arguably a commercial misnomer.
- Rigorous assessment of the case for any support program before commencement is needed.
 - The minimum threshold level of governance should satisfy the condition that the support will deliver net beneficial outcomes or, at the very least, lower the risk of costly diversion of public funds.
- APRA guidance on investment governance for superannuation funds offers a comparator best-practice benchmark for improving governance of firm-specific assistance, especially for co-investment grants by government.
- The nature of existing program governance processes varies considerably and ‘co-investment’ governance to date falls short of contemporary and comparable best practice.
- Improved governance overall could be achieved through rigorous and structured pre-program due diligence.
 - It would assess the net economic benefits from government support, economic viability of the firm or project (with and without support), and establish appropriate monitoring and reporting following the provision of assistance and ongoing independent evaluation of outcomes against objectives.
- There would be merit in reviewing current governance processes with the aim of adopting best-practice, achieving greater consistency and improving the arguably modest prospects for national benefits from government support to activities, firms and projects.

The role of government in facilitating economic growth is widely accepted. This brings key responsibilities in areas that include establishing and maintaining stable and transparent institutional rules and settings, efficient provision of infrastructure and appropriate macroeconomic policies that foster price stability and fiscal sustainability.

Governments are also called upon to do more to support particular activities, firms or projects. Responding to those calls, public financial support has taken a variety of forms ranging from tax concessions, competitive and other discretionary (including ‘co-investment’) grants, interest rate subsidies, loans and equity injections to measures delivering benefits indirectly via industry-focused funding of public sector research organisations.¹²

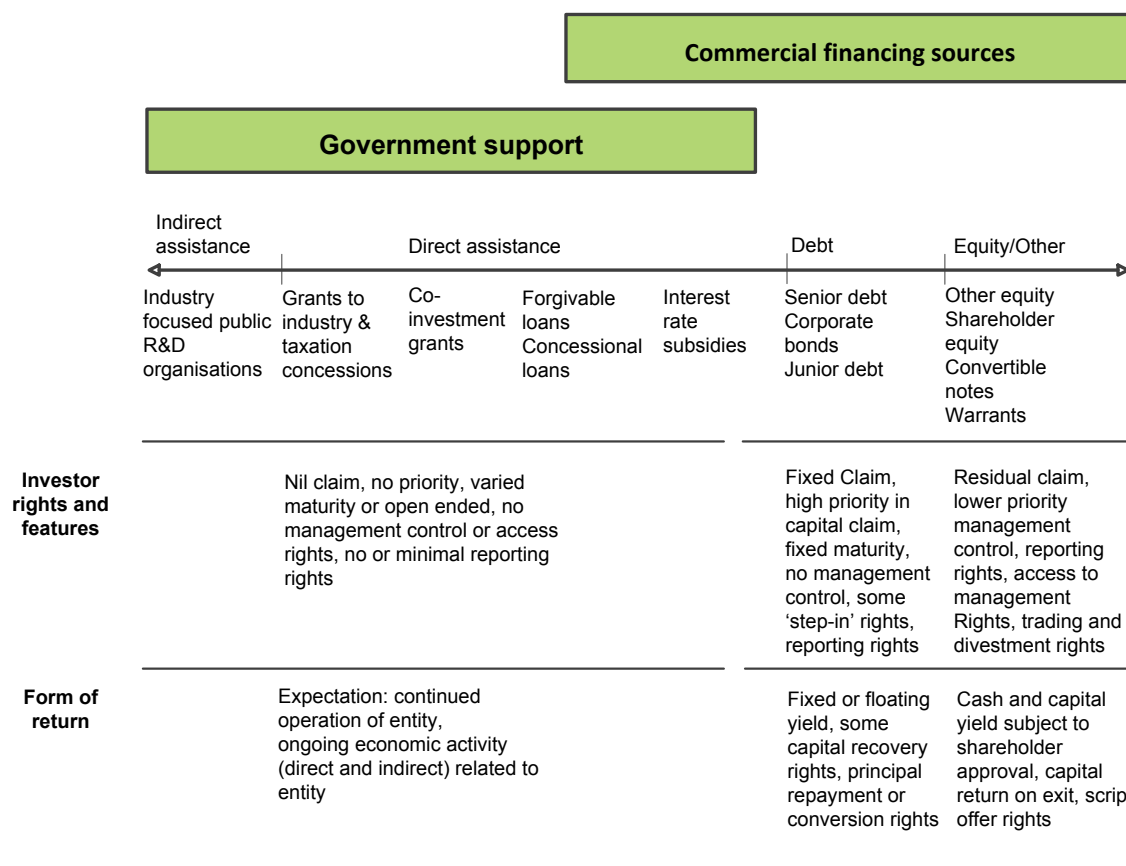
Arguably, these forms of assistance place governments in the role of investor (of sorts), residing somewhere along an investment continuum but without the usual commercial terms attached to private investment (figure 3.1). For example, certain firm-specific assistance such as ‘co-investment’ grants have been announced as a form of passive investment by government.

Unlike commercial investments, such public support does not constitute an equity stake or a debt instrument, has no associated cash or capital return requirement, bestows no voting or other shareholder rights on the government nor does the government rank as a creditor (secured or unsecured) in the event of business failure. Rather, the return objective typically articulated is to maintain or enhance activity and employment of the recipient firm and its suppliers, and therefore requiring some level of operation of the firm. As such, coining the term ‘co-investment’ for these forms of assistance is arguably a commercial misnomer.

There has been welcome evidence of recent government resistance to calls for more public assistance to industry in the form of discretionary or “co-investment” grants. This reflects greater responsibility being shifted back to firms to make the necessary investments, restructuring and productivity improvements needed to ensure their commercial viability. The Commission however remains concerned about the efficacy and consistency of governance processes used across the spectrum of assistance measures. In particular, the robustness of pre-assistance due diligence to establish the relative merit for government involvement, along with post-assistance performance monitoring and evaluation processes to determine whether government objectives are being met, in many cases, fall short of a minimum acceptable standard. Moreover, a number of Commission, economic consultant and academic evaluations have found that many government assistance measures are unlikely to confer a net economic benefit to the Australian community.

¹² Readily distinguishable and quantified assistance to activities, firms and projects through budgetary measures amounted to around \$9.1 billion in 2013-14. Tax concessions with industry policy objectives accounted for 55 per cent (or \$5 billion) of the total. Direct budgetary support measures (such as grants, concessional loans and interest rate subsidies) accounted for another \$2.3 billion while indirect support via research organisations such as the CSIRO amounted to \$1.8 billion. Tariff assistance of around \$7.9 billion in gross terms was also provided in 2013-14 (chapter 5).

Figure 3.1 The 'investment' continuum: government support to commercial financing



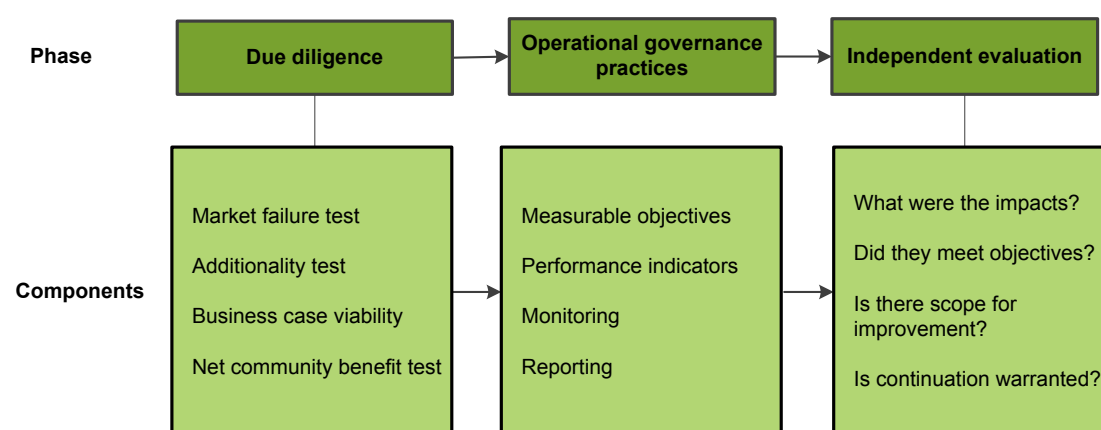
This chapter highlights lessons from some recent evaluations and from the ad hoc nature of proposals for co-investment grants to firms and projects. It also draws upon Australian Prudential Regulation Authority (APRA) guidance on investment governance for superannuation funds as a comparator best-practice benchmark for improving the governance of assistance programs generally, especially those of a discretionary and firm/project specific nature.

3.1 An appropriate governance framework

The stated rationales provided for the many different forms of budgetary assistance are wide ranging. They include addressing market failures, multiplier benefits, attracting investment capital (both domestically and from overseas), alleviating adverse market conditions or policy change, job creation, export expansion, regional economic development and adjustment, the delivery of environmental benefits, or simply assisting with capital and plant upgrades.

From a community-wide economic perspective, the basis for allocating public funding to assist firms should be a threshold market failure test accompanied by evidence that any support will lead to a net improvement in community-wide outcomes including that the business would not have undertaken the investment or activity in the absence of support and that there is a reasonable prospect of business viability post assistance (figure 3.2). Where the decision to provide public support rests on the ongoing viability of the firm or project, the process for assessing such support is analogous to the financial due diligence conducted by private investors (including superannuation funds) before making commercial investment decisions.

Figure 3.2 **An appropriate assistance governance framework**



Careful due diligence preceding the commitment and ensuing commencement of public funding (or a new commitment to existing funding) should provide a minimum threshold level of governance practice and contribute to the achievement of beneficial outcomes or at the very least lower the risk of costly diversion of public funds. Such diversions represent an opportunity cost to the community equivalent to the foregone benefits available from the most effective alternative application of those funds.

Where proper analysis and evidence supports the threshold case for public funding, the next stage of good governance practice (the operational stage) involves effective setting of objectives, performance management and reporting to track program outcomes against objectives. An independent evaluation phase would then examine whether policy objectives are being met, assess whether those objectives are being cost-effectively delivered and whether continuation of the program is warranted. The latter goes beyond an audit.

Importantly, as genuine market failure leads to under-provision of an activity from a community-wide perspective, proposals likely to provide community-wide benefits would not proceed without government support. But as discussed below, while there have been attempts to quarantine public funding to genuinely additional proposals, the effectiveness of those attempts in many previous or ongoing public support initiatives is questionable.

3.2 Current assistance governance practices vary considerably

Some governance processes are better than others

At one end of the governance spectrum, processes employed by agencies such as the CSIRO and, to a lesser extent, CRCs and RRDCs for managing industry-focused research are relatively more thorough and have wider applicability to other public support programs (PC 2007). For example, CSIRO's stated approach to project selection, performance management and assessment is risk-based, incorporates both ex-ante and ex-post appraisal processes, combines bottom-up and top-down input to planning, focuses on projects that would not crowd-out private sector activity (that is, those that would not be undertaken by private firms without public support) and actively manages projects against performance benchmarks which allows funding to be terminated mid-stream if those benchmarks are not met.

The CRC programme utilises a corporate model with Board oversight and detailed annual reporting requirements against which progress in meeting program objectives is measured. Performance reviews are conducted at regular intervals while the Australian Government commissions assessments of broader program impacts.¹³ Although these features are representative of good governance, the Commission's earlier review of the CRC model found that governance arrangements could be improved in a number of ways including through more focused funding objectives; better cost sharing arrangements with potential beneficiaries; and improved performance management and monitoring of compliance and administrative costs (PC 2007).¹⁴

Similarly, both statutory and industry-owned RRDCs are governed by Boards and subject to various planning, consultation and ex-post reporting requirements on research outcomes and performance in return for the Government's 'co-investment' funding. In response to an earlier review (PC 2011a), amendments to increase the transparency and accountability of the RRDC model have been effected to enhance governance arrangements, including a requirement that RRDCs publish outcomes of project selection processes, evaluate the efficiency, effectiveness and impact of RRDC research and commission regular independent performance reviews (see footnote 2).

¹³ CRC performance reviews are conducted by panels of up to five members comprising three CRC Committee nominated members (one of whom Chairs the panel where possible) and two CRC nominated members approved by the administering department. The Commission has previously expressed reservations about whether these reviews and related impact evaluations are conducted at 'arms-length' and accordingly, whether they are sufficiently independent (PC 2007).

¹⁴ The Australian Government announced another review of the CRC programme in September 2014. The final report and recommendations of that review are expected in the first half of 2015 (Macfarlane 2014b).

However, a review recommendation to introduce a public benefit test for public funding of RRDCs was rejected by the Australian Government (Australian Government 2012b). RRDC governance would be further improved with the adoption and rigorous application of a public-interest objective.

Some practices reveal weaker governance processes

What constitutes weaker governance can take many forms including: where pre-assistance due diligence tests have not been robustly undertaken or not satisfied; how operational processes measure up against some of the stronger processes outlined above; performance or other audit qualification by the Australian National Audit Office; lack of transparency in respect of which activities, industries and firms are receiving support and what quantum; absence of periodic evaluation; and persistence with programs for which there is a lack of evidence supporting program effectiveness. Such weaknesses can lead to a potential performance gap between the intentions of a program and what it delivers.

Focusing on performance gaps, a number of cases can be identified where intentions and outcomes are not likely to be well aligned. For example, an independent evaluation of the *R&D START* program found that much of the grant funding simply involved a transfer to firms for projects that would have proceeded without any public support (CIE 2003). This was despite selection criteria which notionally attempted to stop firms seeking funding for proposals they would undertake in any case. Without regard to concerns about the effectiveness of *R&D START*, its key design features were rolled into the program which replaced it in 2004 – *Commercial Ready* – and which committed \$200 million annually in grant funding over seven years (PC 2007).

While *Commercial Ready* was subsequently terminated in 2010, the effectiveness of any future initiative would be compromised by these design flaws.¹⁵ In this context, the *R&D Tax Incentive* (which has operated in various forms since 1985 and delivered over \$2 billion in funding during 2013-14) continues to be provided despite lack of evidence that the funding supports a substantial body of private research and development that would not have proceeded without public funding. In recognition that the Tax Incentive is likely to be less effective in stimulating additional R&D in large firms, the Government has recently limited eligibility for the Tax Incentive to firms with aggregate Australian turnover of less than \$20 billion (chapter 5).

Similarly, financial support historically provided by the Export Finance and Insurance Corporation (EFIC) in the form of loans, guarantees and insurance has been found to accrue in value terms primarily to large corporate clients and resource related projects. This is despite there being no convincing evidence of systemic failures that impede commercial access to finance by large firms (PC 2012a). Moreover, the commercial status

¹⁵ It should be noted that one component of R&D START that did seek to support projects that would not have been otherwise undertaken through repayable loans for certain projects was not carried over to Commercial Ready.

of the large and well established firm recipients suggests that the additionality test is unlikely to be satisfied. In 2013-14, just under 80 per cent of EFIC transactions by value assisted three large corporations comprising an export finance guarantee to a Belgian metals processing company for a lead smelting plant upgrade at Port Pirie South Australia (\$291.25 million); a loan to a Chilean mining venture majority owned by BHP and Rio Tinto (\$111.2 million); and bond transactions (valued at \$45.5 million) for a South African owned engineering group McConnell-Dowell (EFIC 2014a).

While eligibility criteria articulated in the Government's *Statement of Expectations* have been subsequently revised to focus more directly on small and medium-sized enterprises, support to larger more resourceful firms is not precluded (Robb 2014a).¹⁶ Moreover, information on the industry and size of firms in receipt of public funds that may be used to assess the direction of funding is not currently published nor is such transparency required under the revised *Statement of Expectations*. Similarly, in the case of export assistance provided by Austrade (which amounted to \$112 million in 2013-14), while examples of export success are provided, comprehensive information on the activities and industries supported is not.

In another context, the suite of support measures currently available to businesses and primary producers for natural disaster relief (including interest rate subsidies, grants, concessional loans and freight subsidies) have been found to be poorly designed and lacking in justification (PC 2014c). Moreover, research into the effects of financial assistance to disaster-affected businesses suggests that such assistance has relatively little effect on business survival, post-disaster profitability and employment. Overall, the case for ongoing government assistance to businesses and primary producers after a natural disaster appears weak. If governments choose to continue to provide such assistance, up front and modest untied grants are a more efficient, effective and equitable instrument than the current ongoing approach of using loans and subsidies (PC 2014c).

In an earlier review of drought assistance, it was similarly found that interest rate subsidies (although of financial advantage to recipients) were an ineffective means of improving the viability of the agricultural sector (PC 2009a). Subsequent to this review, the then Government discontinued interest rate subsidies to farmers in drought declared regions, opting rather for a suite of policies that included the introduction of a farm household support payment and certain taxation support measures. In 2014, however, the Australian Government announced the re-introduction of interest rate subsidies to farms in drought affected areas (Joyce 2014b).

Regional structural adjustment initiatives (including Innovation and Investment Funds) aimed at diversifying local economies following the closure or downsizing of large local employers have been another feature of the industry policy landscape. These measures have included providing targeted assistance to firms and regions to support structural

¹⁶ Under the *Statement of Expectations*, EFIC will no longer support resource projects and related infrastructure located in Australia (Robb 2014a).

change and assist affected employees (through retraining and job placement services) where large firm closures have occurred.

Total announced funding for the 11 funds established since 2008-09 was almost \$107 million with assistance taking the form of competitive grants for investment in plant or equipment up to 50 per cent of project costs. While each fund has a similar general focus, differences in eligibility criteria (which may reflect regional characteristics or specific policy objectives); attempts to quarantine funding to projects that would not proceed without support; targeting; and emphasis on innovation highlight a lack of uniformity in program design (PC 2012b). One relatively recent evaluation of selected IIFs found that assisted regions did not perform better than regions that lost a major employer but did not receive any government support (Grattan Institute 2011).¹⁷ In each of the cases described above, programs have been sustained over extended periods or have been renewed when there is genuine concern about the community-wide benefits that may accrue to justify the outlay of public funds.

Particular concerns with ‘co-investment’ support

A more concerning form of governance process has been associated with assistance provided to firms through what governments have termed ‘co-investment’ initiatives with a number of calls for such firm-specific assistance emerging in recent years (figure 3.3).¹⁸ Appendix C provides a brief description of each of the proposals.

Figure 3.3 Recent calls for firm-specific co-investment grants

Funding proponent	CSL	Simplot	Ford Norske Skog GM Holden Lion Dairy Australian Paper Alcoa	Toyota Cadbury Hobart Airport	SPC Ardmona
Year	2010	2011	2012	2013	2014

¹⁷ According to the Department of Industry and Science (pers. comm., 20 May 2015) internal evaluation work shows evidence that well managed and efficient IIFs play a role in fostering confidence in affected regions, facilitating employment and investment (in the short term), bringing forward investment and facilitating access to finance.

¹⁸ Firm-specific assistance has also been used in other contexts. For example, in the late-1990s and early 2000s assistance was provided under the Strategic Investment Incentive Program which was aimed at inducing direct foreign investment into Australia for selected larger scale ventures.

Over the four years to 2013-14, nearly \$160 million in co-investment grants has been paid to selected firms by the Australian Government and there has also been an unanswered call for a further \$256 million (table 3.1). And while only a small portion of total government assistance, such payments can confer high levels of assistance at the individual firm or project level.¹⁹

Co-investment assistance differs from general forms of industry assistance in a number of respects. First, support is directed to a specific operating firm rather than being broadly available to qualifying firms across an industry or activity. Second, the financial contribution from government is typically dependent on a contribution by the shareholders of the assisted firm (although not necessarily equivalent in value). Third, assistance is ad hoc and ‘needs-based’ for the contemporary circumstances of the recipient firm. And as noted earlier, while promoted as a co-investment, the government typically assumes the role of de facto passive investor, with no shareholder rights or capital claims but an expected ‘investor return’ in the form of the firm’s ongoing viability. As such, government contributions have not included any financial consideration to recognise the opportunity cost of funds (such as an equity-shareholding arrangement, royalty or loan repayment mechanism) that would encourage firms to weigh up the benefits of government involvement against alternative funding options.

The case for support appears weak

The stated rationales by government for co-investment funding support have included securing footloose capital, alleviating adverse market conditions, achieving regional development and environmental benefits and capital upgrades. Funded proposals have typically been associated with high profile companies or larger regional employers and couched in terms of the continued or expanded operation of those businesses, in situ. But as detailed in table 3.2, there has been a lack of consistency in the governance processes applied across individual co-investment proposals, both in relation to pre-commitment due diligence and in throughout the life of proposals.

The Commission sought to undertake a gap analysis between the governance of co-investment proposals and grants with a comparable and contemporary governance benchmark such as those provided for APRA supervised entities in making investment decisions (see box 3.2, below). However, information to support such an analysis was not publically available and the Commission was unable to secure it separately. The residual information gap is especially critical for the *financial modelling* and *performance monitoring* aspects of governance. These governance processes should be assessed independently of the proponent and program administrator and include a robust financial analysis of the investment including the identification of risk factors and sensitivity analysis. The outcome of the analysis should be transparent to the public. The provision of a ‘business case’ for government support and ‘operating milestones’ to Government by a

¹⁹ State governments have also contributed significant co-investment funds to selected firms but the amounts have not always been disclosed.

proponent would not meet the benchmark governance standards such as those for APRA supervised entities.

Table 3.1 Recent co-investment funding support

<i>Recipient</i>	<i>Total project cost</i>	<i>Announced Australian Government contribution</i>	<i>Actual Australian Government contribution</i>	<i>Announced State Government contribution</i>	<i>Funding and project status</i>
CSL	\$235 million	\$30 million	\$30 million	Not disclosed	Funding provided. Operation ongoing.
Simplot	\$15.6 million	\$3 million	\$3 million	\$1 million	Funding provided. Operation ongoing
Norske Skog	\$84 million	\$28 million	\$28 million	\$13 million	Funding provided. Operation ongoing
Ford Australia	\$103 million	\$34 million	\$34 million	Not disclosed	Funding provided. Production to cease 2016
GM Holden	\$1 billion+	\$215 million	nil	\$60 million	Funding withdrawn. Production to cease in 2017
Lion Dairy	\$140 million	\$4.25 million	\$4.25 million	\$1.5 million	Funding provided. Operation ongoing
Australian Paper	\$90 million	\$9.5 million	\$9.5 million	Not disclosed	Funding provided. Operation ongoing
Alcoa	Not available	\$40 million	\$40 million	Not disclosed	Funding provided. Production ceased 2014
Toyota Australia	\$123 million	\$28.6 million	\$5.75 million	Not disclosed	Part funding provided. Production to cease 2017
Cadbury Australia	\$66 million	\$16 million	nil	-	Application withdrawn
Hobart Airport	\$40 million	\$38 million	\$3.035 million	-	Part funding provided
SPC Ardmona ^a	\$100 million	nil	nil	\$22 million	Funding refused

^a SPC Ardmona had sought a \$25 million contribution from the Australian Government.

Sources: Appendix C, Department of Industry and Science (pers. comm., 20 May 2015).

Table 3.2 Information provided on governance features of co-investment proposals by the Department of Industry and Science

<i>Governance feature</i>	<i>CSL</i>	<i>Simplot</i>	<i>Ford</i>	<i>GM Holden^a</i>	<i>Australian Paper</i>	<i>Alcoa</i>	<i>Toyota</i>
Funding objectives formalised and made public	✓	✓	X	✓	✓	✓	X
Formal selection/merit criteria developed and applied	X	X	✓	✓	X	X	✓
Financial plan provided by firm ^b	✓	✓	✓	✓	X	✓	✓
Key Performance Indicators established and monitored ^c	✓	✓	✓	✓	✓	✓	✓
Independent evaluation of outcomes	X	X	X	X	✓	X	X
Public reporting of impacts	X	X	X	X	✓	X	X

^a The Commission derived the governance features of the GM Holden proposal from information published by the Australian Government at the time the co-investment was approved. As noted in the text, funding for that proposal was subsequently withdrawn. ^b The Commission has been unable to verify the scope of financial modelling undertaken and whether that modelling was independently audited. ^c The Commission has been unable to verify the detail with which the performance indicators have been developed and applied. Such information would be needed for there to be confidence in the soundness of the government outlay.

Source: Information provided by the Department of Industry and Science (pers. comm., 20 May 2015); Australian Government (2012a).

In articulating the benefits of such support, proponents of co-investment projects have often relied on estimates of multiplier benefits in terms of job creation, securing existing employment levels and the financial contribution of assisted industries to the broader economy (for example, the GM Holden case in table 3.1 and appendix C). But the use of multiplier analysis in this way is both flawed and misleading because it fails to consider alternative uses (the opportunity cost) of the resources employed in assisted activities (box 3.1).

Box 3.1 **Inappropriate use of multiplier analysis**

The Commission recently highlighted the dangers of relying on multiplier analysis to inform policy decisions due to the restrictive assumptions which underpin its use (Gretton 2013).

In particular, the paper noted that while multiplier analysis recognises the inter-linkages between different parts of the economy, it assumes (among other things) that labour and capital had an unlimited supply, that prices do not change in response to changes in supply and demand, that there is a fixed input structure in each industry and that production technology (which determines the mix of inputs that can be used) is fixed. As a consequence of these assumptions, the use of multipliers fails to:

- recognise the mobility of employees to find alternative employment in other industries or regions (facilitated by changes in relative wage levels);
- account for an expansion in economic activity and incomes in other industries as resources are freed from the assisted activity; and
- quantify alternative uses of public funds.

Source: Gretton 2013.

Accordingly, from a governance perspective, multiplier analysis ignores the threshold market failure test and, equally, also fails the net economic benefit test as it does not take account of the full cost of the project against the next best use of resources. The heavy reliance on firm-specific activity and employment objectives rather than full due diligence on proposals including market failure, additionality, business viability and net community benefit tests partly reflects the ad hoc, firm-specific nature of co-investment grants. The information gap between full due diligence and what is actually considered raises the question of whether or not a program is in the community's best interest and whether there is an actual imperative to commit government funds.

Co-investment outcomes have varied

Reflecting the opportunistic nature of individual support proposals, the progression and outcome of such proposals has varied (table 3.1). Some have not advanced past the consideration stage as in the recent SPC Ardmona (a subsidiary of Coca Cola Amatil) and Cadbury Australia (a subsidiary of Mondelez International) cases. With respect to SPC Ardmona, the Australian Government was asked to make a \$25 million grant to restructure its food processing operation in Shepparton, Victoria. While the Victorian Government agreed to provide \$22 million in funding, the Australian Government decided not to support the proposal on the grounds that the parent company had the financial resources to undertake the project independently. In making the announcement, the Prime Minister said:

... in this case the Government would have to borrow money on behalf of the taxpayers to put into the proposal, where we believe Coca Cola, with a very, very healthy balance sheet is able to provide that money from within its own resources. (Abbott and Macfarlane 2014a)

In the case of Cadbury Australia, its application for \$16 million in Australian Government funding to support an upgrade of the Cadbury manufacturing plant in Tasmania was withdrawn. That action was based on the company not satisfying Australian Government funding criteria requiring commitments to increase production and export volumes to target levels (Robb 2015a). Importantly, these funding criteria are not a suitable proxy for the market failure, additionality, business viability and net community benefit tests and accordingly do not in their own right satisfy an economic test for government assistance.

Other proposals have been successful in securing a funding commitment, but because of changed circumstances funding was subsequently withdrawn. In the case of the \$275 million offered to GM Holden by the Australian, Victorian and South Australian Governments, the assessment criteria relating to project viability in the absence of public support appears to have been satisfied through a threshold assurance by the firm that operations in Australia would continue over a predetermined period.²⁰ The promised co-investment funding was withdrawn when GM Holden announced it would cease vehicle production in 2017 (ahead of the proposal planning period ending 2022).

On the other hand, certain proposals were fully funded but outcomes have varied. Ford Australia received \$34 million in co-investment assistance in 2012 and then subsequently announced its intention to cease vehicle manufacturing operations in 2016. Alcoa received co-investment funding of \$40 million from the Australian government (and an undisclosed amount from the Victorian government) and ceased production in 2014. In the cases of a Simplot Australia project for a natural gas co-generation plant (to eliminate coal use) and an Australian Paper project to construct a de-inked pulp plant, funding has been provided and the projects are in operation.

Improving governance of co-investment grants

Public evaluation of co-investment grants is hampered by a lack of transparency across projects. This lack of transparency is reinforced by the firm-specific commercial-in-confidence nature of negotiations for support and contractual arrangements between governments and the businesses involved. Public evaluation is also complicated by the fact that the Government is seeking to underwrite the operations of the firm (following public support) rather than achieve a financial return on the outlay (as would be the case with a conventional commercial investment).

Nevertheless, there is scope to improve the level of scrutiny and transparency of proposal assessments. As noted earlier, if viewed from a commercial investment perspective, the efficacy of government support would rely on conducting a minimum appropriate level of due diligence, operational governance and review. One practical benchmark is arguably the governance standards required by the regulator of superannuation entities (the Australian

²⁰ See Australian Government 2012a, *How the GM Holden Investment Will Benefit Australia : Fact Sheet*, 22 March.

Prudential Regulation Authority (APRA)) to manage investments to meet investor-entities obligations (box 3.2).

Importantly, even complying with prudential standards for commercial investments, for a proposal to justify public funding, it would also need to be established that the support responded to an identifiable market failure and that any community-wide benefits outweighed the costs to the community. Further, that the additionality and business viability tests are also satisfied. Establishing the case that the assistance would underwrite the commercial success of a business activity (or avoid a commercial failure), while required, would not be sufficient in itself. Publication of the due diligence requirements for co-investment proposals would contribute to the transparency of such proposals and the objective assessment of outcomes, and the provision of such support more generally.

3.3 Governance processes that would help narrow the performance gaps

Aspects of current government programs providing direct support to firms highlight the scope to enhance governance arrangements and improve prospects for community-wide benefits. This is especially the case for discretionary support provided to individual firms under the guise of co-investment.

Elements of good governance cover selection processes, performance requirements, evaluation, monitoring and reporting. The cornerstone of assessing the case for support should be a market failure test accompanied by evidence that any support would lead to an improvement in community-wide outcomes. Satisfying this twin threshold also requires due diligence to assess whether both the additionality and viability tests are likely to be met.

Where these requirements are satisfied, merit assessment criteria should be developed and rigorously applied that are consistent with specific funding objectives and take into account alternative funding vehicles available to potential recipients. Ex-post evaluation would help draw out lessons from previous funding outcomes to assist in the design of future support. Evaluations should be conducted at arms-length from the agency responsible for administration of the program and its funding.

Beyond co-investment, given the quantum and opportunity cost of general budgetary support and the breadth of programs used to assist firms, there would also be merit in a stocktake of governance processes across such assistance programs. Such a review would provide the opportunity to consolidate and inject contemporary best-practice across the currently disparate approaches to governance for assistance programs.

Box 3.2 **Investment governance for APRA supervised entities**

APRA guidance and prudential standards establish a requirement for registrable superannuation entity licensees to implement sound investment governance frameworks and to manage investments in a manner consistent with the interests of the beneficiaries. At a portfolio level, the investment governance framework must include investment strategies for each entity and for each investment option.

The investment governance framework promulgated by APRA requires that a licensee, *inter alia*:

- formulate specific and measurable investment objectives for each investment option, including return and risk objectives (for example, to take account of possible differences in risk factors and target exposure to risk);
- develop and implement an effective due diligence process for the selection of investments (for example, to ensure that the due diligence is commensurate with the nature and characteristics of an investment);
- determine appropriate measures to monitor investment performance on an ongoing basis (for example, in relation to investment objectives relating to returns and risk); and
- review the investment objectives and investment strategies on a periodic basis.

At an individual investment level, APRA guidance requires that a licensee undertake the following minimal due diligence requirements for a proposed investment. These would include, but not be limited to, an assessment of:

- (a) the industry in which the investment operates and current market environment;
- (b) the projected performance of the investment;
- (c) the identified risk factors to which the investment is potentially exposed, including, where applicable, derivative risk exposure;
- (d) the valuation methodology of the investment; and
- (e) where the investment involves unlisted equity:
 - (i) the ownership structure, including information regarding Board membership and senior management personnel;
 - (ii) the business plan of the organisation;
 - (iii) financial analysis of any private market for the investment; and
 - (iv) any future commitments required and any lock-up periods, including any restrictions on the ability to exit the investment.

APRA also articulates that the investment risk assessment as part of the requisite investment due diligence must involve:

APRA expects that a prudent RSE licensee, when assessing either an investment or investment manager, would undertake a formal risk assessment that would typically include:

- (a) identification of risk factors;
- (b) assessment and measurement of the identified risk factors, including the potential impact on the sources of investment return;

(Continued next page)

Box 3.2 (continued)

- (c) the risk mitigation strategies in place; and
- (d) how the identified risks would be monitored and reported. (APRA 2013b, p. 20)

Finally, in relation to ongoing monitoring and review of an individual investment, APRA requires the following practices be followed:

SPS 530 requires that the persons assessing the performance of each investment are operationally independent from those carrying out investment activities. This may be achieved through a separation of reporting lines. For example, where an RSE licensee undertakes in-house investment activities, performance assessment would be expected to be conducted by a separate business unit or division, such as the finance unit, rather than by persons involved in implementing and managing the investment activities.

APRA expects that an RSE licensee's monitoring process would use appropriate pre-determined benchmarks and/or performance measurement criteria to evaluate investments and investment managers. (APRA 2013b, p. 17)

Sources: APRA (2013a, 2013b).

4 Issues and concerns with preferential trade agreements

Key points

- Diverse preferential trading arrangements add to the complexity of international trade and investment, are costly and time consuming to negotiate and add to the compliance costs of firms and administrative costs of governments.
 - Complexity stems in part from the diversity of approaches used to determine and list origin requirements (for both goods and services) in Australia's preferential agreements — revealingly referred to as 'denial of benefits' for services and investment.
 - Complexity also arises from the divergent market access and national treatment commitments for services activities across agreements.
 - The complexity and additional costs erode potential benefits of agreements.
- Some agreements entered into by Australia impose more stringent intellectual property protection than previously required. There is potential for future agreements to contain even more stringent levels of protection — imposing additional costs without commensurate benefits.
- The inclusion of investor-state dispute settlement (ISDS) provisions in Australia's preferential trade agreements and bilateral investment treaties has become contentious.
 - The provisions depart from national treatment principles by affording substantive appeal rights to foreigners not available to domestic firms, risk impeding domestic regulatory reform (regulatory chill), include safeguards and carve-outs of uncertain effect, lack transparency and have inadequate parliamentary scrutiny.
 - ISDS provisions also expose the Australian Government to potentially large unfunded contingent liabilities dependent on decisions by international arbitration tribunals.
 - Concerns are heightened by increases in the number of ISDS cases internationally.
- Against these concerns, it is not clear ISDS provisions respond to a demonstrable market failure or have been associated with the fostering of foreign investment flows, particularly between advanced economies with transparent and well-functioning legal systems.
- Preferential bilateral and regional trade agreements are complex and can affect wide sections of the economy.
 - However, current processes do not provide a sufficient understanding of the likely scale or scope of the net impacts of negotiated agreements. Full assessments of alternative reform strategies are also not provided.
- The complexity of bilateral and regional trade agreements and the potential for provisions to impose net costs on the community presents a compelling case for the negotiated text of an agreement to be comprehensively analysed well before signing.

Proponents of preferential bilateral and regional trade agreements argue that such arrangements are a pragmatic way of improving market access opportunities for Australian exporters in the absence of multilateral reform. Active participation is said to be needed to avoid placing Australian exporters at a disadvantage to competitors that are parties to such agreements. In practice, however, the give-and-take nature of preferential agreement negotiations means that certain domestic industries are favoured over others, imposing costs on the domestic economy which are only understood transparently through a comprehensive independent evaluation of each agreement.²¹

Accordingly, preferential trade agreements are not as effective in improving national welfare as unilateral action to reduce or eliminate trade barriers (primarily through greater domestic competition), or multilateral trade and investment liberalisation (PC 2010a). Preferential agreements also add to the complexity of international trade and investment, are costly and time consuming to negotiate and add to the compliance costs of firms (in the evaluation and utilisation of preferences) and administrative costs of governments. In the words of the Australian Chamber of Commerce and Industry (ACCI):

When the hundreds of trade agreements across the globe are negotiated in aggregate by nations a complex barrier of administrative obligations and procedures emerges, which traders must understand and overcome for each specific agreement in order to obtain benefit. These agreement by agreement administrative barriers are an added cost to business, add risk for delay of goods should documentation and other requirements be addressed incorrectly, and ultimately risk reducing the streamlining of international trade. (ACCI 2013, p. iii)

The Commission's report on Bilateral and Regional Trade Agreements (PC 2010a) noted the importance of pursuing domestic reforms (including unilateral tariff reductions) as a preferable means of raising national welfare compared to preferential or discriminatory trade agreements. Nevertheless, Australia has actively pursued such preferential approaches in recent times. The resulting agreements are complex. Considered analysis of individual agreements is beyond the scope of this review. The impacts of those agreements therefore remain unclear and highlight the need for rigorous evaluation of the negotiated text prior to their signing. In this edition of the *Trade & Assistance Review*, the Commission draws attention to several material areas of concern including:

- differing rules of origin for merchandise and services trade and investment
- variable coverage of services across agreements and the likely effectiveness of services sector liberalisation
- likely costs of more stringent intellectual property rights protection
- concerns about the variability, effectiveness and unfunded liability posed by investor-state dispute settlement provisions
- the evaluation of the negotiated text of agreements.

²¹ Efficiency costs are created when resources move from efficient industries that are not direct beneficiaries of the agreement to the beneficiaries of preferential market access arrangements, such as in the area of export-oriented agricultural products. Negotiated preferential arrangements also do not provide protection against the granting of preferential access to other trading partners.

4.1 Rules of origin

Rules of origin are incorporated in preferential trade agreements in order to restrict access to tariff and other preferences to goods and services deemed to originate from parties to the agreement. Without such rules there would be an incentive to import goods or services from a third country into one of the member countries in order to take advantage of the negotiated preferences offered by the agreement (PC 2004a, 2010a). Origin rules pertaining to merchandise trade typically relate to the sourcing or nature of inputs to production, whereas origin rules (termed denial of benefits) pertaining to services relate to location of substantial business activity, ownership and control. Importantly, rules of origin are treated as non-tariff barriers to trade in the UNCTAD (2013) and by the WTO. While it is difficult to gauge the protective effect of these rules in Australia's preferential agreements, origin rules are negotiated around the commercial interests of firms. This implies that the rules play at least some contemporaneous role in protecting domestic industries from import competition and affording a 'margin of preference' to partner suppliers.

Merchandise trade

Australia's preferential trade agreements contain a range of approaches to conferring origin that businesses must consider when sourcing inputs to attain concessional tariff rates for merchandise trade.²² Typically, a good is eligible for preferential tariff treatment if:

- the good is wholly obtained in the territory of one or both of the Parties²³
- the good is produced entirely in the territory of one or both of the Parties, exclusively from originating materials
- the good satisfies all applicable requirements of the Product Specific Rules schedule where the good includes non-originating materials.

Where a good is designated not to be 'wholly obtained' or 'produced entirely locally', the main approaches used for determining origin of merchandise trade are shown in box 4.1. The approaches described are variously applied individually or in combination to determine origin in Australia's preferential agreements. The application of the approaches varies between products within agreements and, for individual products, between agreements.

22 Most rules of origin require direct consignment of goods meaning that for a product to be eligible for origin treatment it must be transported directly from the place of production to its preferential destination. The purpose is to ensure that imported goods, in particular bulk cargo etc. whose identity is difficult to establish, are identical with the goods that left the exporting country and to reduce the risk of eligible goods being mixed with non-eligible goods.

23 Australia's exports of energy, minerals and agricultural commodities generally comply with the wholly obtained rule.

Box 4.1 Approaches for determining origin of non-originating materials used in merchandise trade in Australia's preferential trading agreements

There are three common tests used for determining origin for goods that contain non-originating materials:

- The change in tariff classification (CTC) test — a good is transformed if there is a change in tariff classification, using the Harmonized Commodity Description and Coding System (HS). The CTC method can be applied at the HS 8-digit, HS 6-digit, HS 4-digit or HS 2-digit level of classification.
- The specified process test — a good is transformed if it has undergone specified manufacturing or processing operations which are deemed to confer origin of the country in which they were carried out.
- The regional value content (RVC) test — a good is transformed if a threshold percentage value of locally or regionally produced inputs is reached in the exporting country.

These rules are variously applied individually or in combination with one another. In some agreements, such as the ASEAN and Malaysia agreements, a choice between rules is afforded.

Source: PC (2010a, p. 79).

This adds to the complexity and costs facing businesses when sourcing inputs to attain preferential treatment.²⁴ ACCI recently noted:

Preferential agreements, while potentially providing 'freer' trade between the agreement parties, are specifically designed to be restricted to the parties and so exclude non-parties by way of complex 'rules of origin'. (ACCI 2013, p. iii)

Moreover, the administrative features of particular origin rules can add to business costs in unexpected ways. A specific example is provided by the ASEAN-Australia-New Zealand agreement (AANZFTA) which was recently amended because:

Australian industry came to Government with concerns that a number of administrative requirements in AANZFTA discouraged use because they required some businesses to provide commercially sensitive information. The Protocol addresses these concerns and modernises the presentation of the Agreement's Rules of Origin. This should reduce costs and make doing business under AANZFTA easier. (Robb 2014e)

Recent studies have suggested that the cost associated with origin requirements could be as high as 25 per cent of the value of goods trade within ASEAN (APEC 2009, p. 67).

The product-specific rules can be expressed at the 2-digit chapter, 4-digit heading, 6-digit sub-heading, 8-digit tariff line item or for groupings of tariff line items under the Harmonized System (HS) of international trade. While the rules apply to a similar number

²⁴ Exporters have a choice of whether to access preferential treatment subject to meeting rules of origin or exporting under the MFN regime. Where the latter approach is chosen this avoids the compliance costs associated with origin rules, but it also means the negotiated agreement is of no practical benefit to those firms.

of tariff items overall, the approach to listing those rules varies considerably from a single three-tiered regional value content based rule in the agreement with Singapore to more than 5200 individual rules in the agreement with Korea (table 4.1).^{25,26}

Table 4.1 Count of listed rules of origin by trade agreement

Number of rules listed in agreements

	<i>New Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>USA</i>	<i>Chile</i>	<i>ASEAN</i>	<i>Malaysia</i>	<i>Korea</i>	<i>Japan</i>
Number	2826	1	2900	980	2803	3102	2658	5205	1943

Source: Commission estimates.

The different rule structures across agreements means that a firm trading with multiple countries faces greater complexity and compliance costs through the need to interpret, and comply with, different rules of origin schedules. A specific example of how these differences manifest in actual agreements with respect to a single tariff item (bed, table and other linen) is shown in box 4.2.

In addition to differences in the number of origin rules listed in schedules, there is also a diversity of approaches used for conferring origin. The most common rule is the change in tariff classification (CTC) test but there is considerable variation in how CTC rules are combined with other rules and how they are applied across agreements (figure 4.1).

In the Japan-Australia agreement (the latest agreement to enter into force), just over 40 per cent of the origin rules are based on a CTC only test (left hand panel in figure 4.1). This differs considerably from the use of CTC only rules in Australia's earlier agreements. For example, a CTC only test made up just 11 per cent of the origin rules in the ASEAN and Malaysian agreements and 60 per cent in the Korean agreement. Further, just under 50 per cent of the origin rules as specified in the Japan-Australia agreement involved a rule choice between a CTC rule or a regional value content rule. This compares with 72 per cent in the ASEAN agreement, 86 per cent in the Malaysian agreement and 22 per cent in the Korean agreement.

²⁵ The presentation of product-specific rules is negotiated as part of each agreement with some partners preferring a disaggregated approach while others prefer a summary where the same rule applies under a chapter or heading. While Australia generally seeks the same product-specific rule outcome in its agreements, variations result from different industry sensitivities across agreement partners. (DFAT, pers. comm., 21 May 2015).

²⁶ While the Commission understands the more detailed list of rules in the Korea agreement was intended to simplify the use of the origin-rule schedule for firms, that justification appears not to have been carried over to the more recent Japan-Australia agreement which contains 1943 individual origin rules.

Box 4.2 **Rules of origin for Bed linen, table linen, toilet linen and kitchen linen (HS item 6302)**

In order to qualify for concessional entry, Bed linen, table linen, toilet linen and kitchen linen [HS item 6302] must meet the following criteria:

- *Australia-United States*. Change to heading 6302 from any other chapter, except from heading 5106 through 5113, 5204 through 5212, 5307 through 5308 or 5310 through 5311, Chapter 54, or heading 5508 through 5516, 5801 through 5802 or 6001 through 6006, provided that the good is both cut (or knit to shape) and sewn or otherwise assembled in the US or Australia.
- *Thailand-Australia*. Change to heading 6302 from any other chapter, provided that any non-originating material that is fabric is pre-bleached or unbleached, and that there is a regional value content of not less than 55 per cent.
- *Australia-New Zealand*. Change to heading 6302 from any other chapter, provided that where the starting material is fabric, the fabric is raw and fully finished in the territory of the Parties; or No change in tariff classification is required, provided that there is a regional value content of not less than 45 per cent based on the build down method.
- *Australia-Chile*. Change to heading 6302 from any other chapter provided that where the starting material is fabric, the fabric is raw and fully finished in the territory of the parties.
- *Malaysia-Australia*. Change to heading 6302 from any other chapter, provided that where the starting material is fabric, the fabric was greige fabric that: (a) is dyed or printed; and (b) finished in Australia or Malaysia to render it directly usable.
- *Japan-Australia*. CC [Change to heading from any other chapter] provided that, where non-originating materials of headings 50.07, 51.11 through 51.13, 52.08 through 52.12, 53.09 through 53.11, 54.07, 54.08, 55.12 through 55.16, or chapter 60 are used, each of the non-originating materials is woven, or knitted or crocheted entirely in the Area of one or both Parties.

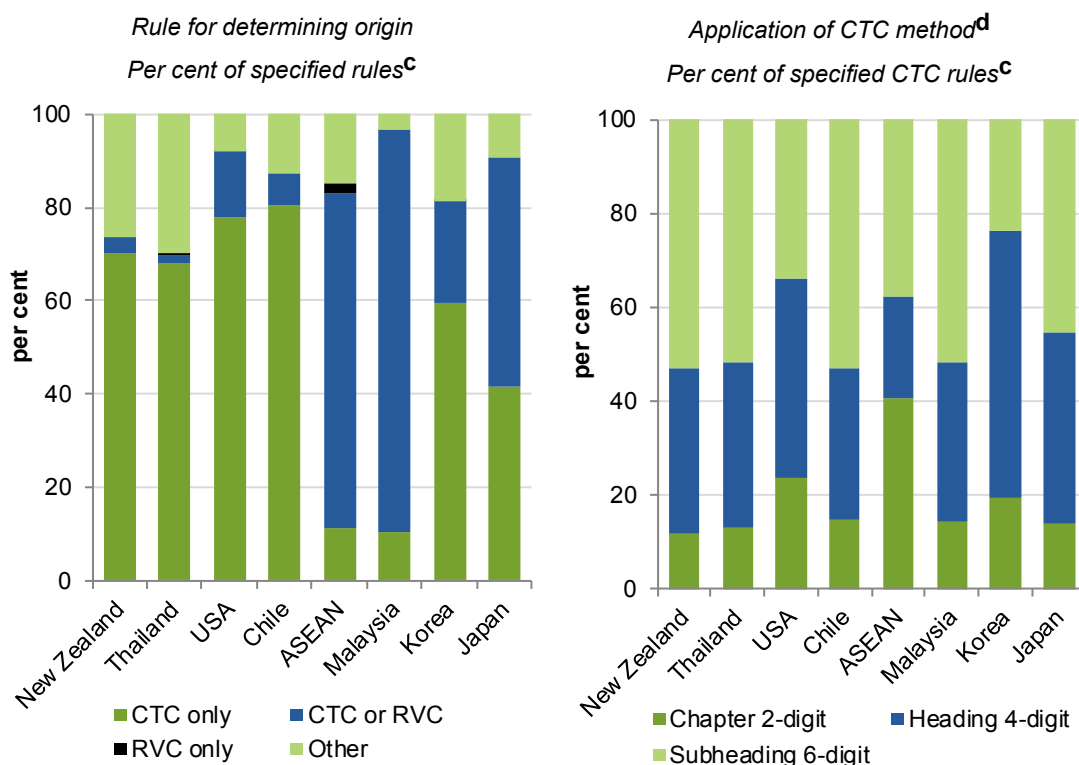
In other agreements, the qualifying criteria are described at the HS 6 digit level. For example, in order to qualify for concessional entry, the 6 digit sub-item *Bed linen, table linen, toilet linen and kitchen linen - Bed linen, knitted or crocheted* [item 6302.10] must meet the following criteria:

- *ASEAN-Australia-New Zealand*. CC [Change to subheading from any other chapter], provided that where the starting material is fabric, the fabric is raw or unbleached fabric and fully finished in the territory of one or more of the Parties.
- *Korea-Australia*. CC [Change to subheading from any other chapter], provided that where the starting material is fabric, the fabric was greige fabric that is dyed or printed and finished in the territory of one or both of the Parties to render it directly usable.

Source: Australian Customs and Border Protection Service (2015b).

At a more detailed level, 45 per cent of the CTC origin rules in the Japan-Australia agreement require change from a detailed HS 6 digit subheading item level to another chapter, heading or subheading (right hand panel in figure 4.1). This compares with 38 per cent in the ASEAN agreement, 52 per cent in the Malaysian agreement and just 24 per cent in the Korea agreement.

Figure 4.1 **Methods used to determine origin of merchandise trade in Australia's preferential trade agreements^{a,b,c,d}**



^a CTC refers to a change in tariff classification test. RVC refers to a regional or qualifying value content rule. 'Other' includes, combined CTC and RVC rules, CTC rules with exceptions and specified process tests requiring particular production methods needed to qualify for preferential entry. The figures are slightly different to those published in the *Trade & Assistance Review 2012-13* due to minor revisions to selected calculations. ^b The agreement with Singapore is not included as it applies a single three-tiered test of origin. ^c Individual rules can be expressed at the 4 digit heading level, 6 digit subheading level or groupings of tariff line items. ^d When the Australia-New Zealand CER agreement entered into force in 1983, an RVC rule with a simple technical test was the main rule applied. The revised rules reported replaced that rule and have been in force since 1 January 2007.

Source: Commission estimates.

Services and investment

While the existence of rules of origin in goods trade is well known, their application (and associated consequences) in services trade and investment has received much less attention. Rather than defining the origin of the service or investment (the focus in goods trade), trade agreements have generally sought to delineate the origin of a service supplier or investor (Fink and Dikomborirak 2007). The effect is to deny designated foreign (non-Party) owned or controlled companies access to the provisions negotiated in trade agreements.

Most of Australia's bilateral agreements have adopted a near identical services and investment origin rule requiring *substantial business operations* in the Territory of a Party

(the United States example in box 4.3 is typical of the wording in many agreements) although the meaning of ‘substantial’ is not defined.²⁷ As such, a non-party services supplier or investor engaging in substantial business operations in a member State may also benefit from an Agreement. The broad application of services and investment origin requirements (which allows branches of foreign owned companies as well as formally established enterprises to access agreement commitments) is intended to encourage foreign investment in Australia including through the establishment of regional headquarters as a base to invest in partner countries (DFAT, pers. comm., 21 May 2015).

The Japan-Australia agreement (in force since 2015) goes further by stipulating that an enterprise may be denied the benefits of the Agreement if it is more than 50 per cent owned by a non-party or has a majority of its directors appointed by a non-Party which has no substantial business activities in the area of the other Party. Similarly, the Thailand-Australia agreement (in force since 2005) stipulates that a service supplier or investor must not be owned or controlled by persons of a non-Party.

On the other hand, the Australia-New Zealand agreement (in force since 1983) requires that a service or investment must not be *indirectly* provided by a person of neither member State. This variability across agreements adds to the complexity facing Australian-located service suppliers and investors seeking to utilise negotiated access commitments.

Given the direct or vague references to foreign ownership or control in these agreements, the level of foreign ownership in Australian services providers is relevant to whether the origin rules actively deny the services commitments in an agreement to foreign-owned firms and whether this impacts foreign firm decisions to actually use Australia as a base for investment in partner economies. From this perspective, the level of foreign direct investment in Australian service industries is about \$265 billion (nearly 40 per cent of total foreign direct investment) with financial and insurance, wholesale and retail trade, real estate and information and communication services attracting the largest shares of inward foreign direct investment in services (table 4.2).

²⁷ The term *substantial business operations* is based on the language contained in the WTO General Agreement on Trade in Services and is designed, inter alia, to prevent ‘shell companies’ being established to access preferential market access treatment. Denial of benefits clauses also provide governments with the power to impose sanctions on other countries in line with international obligations such as in the area of human rights violations. (DFAT, pers. comm., 21 May 2015)

Box 4.3 **Services and investment origin (denial of benefits) rules in selected Australian trade agreements**

New Zealand

Services (Article 14)

A Member State may deny the benefits of this Protocol to persons of the other Member State providing a service if the Member State establishes that the service is indirectly provided by a person, not being a person of either Member State.

Investment (Article 18)

A Party may deny the benefits of this Protocol to an investor of the other Party that is an enterprise of such other Party and to investments of that investor if the enterprise has no substantive business operations in the territory of the other Party and persons of a non-Party or of the denying Party own or control the enterprise.

Thailand

Services (Article 804)

A Party may deny the benefits of this Chapter to a service supplier of the other Party where the Party establishes that the service supplier is owned or controlled by persons of a non-Party.

Investment (Article 905)

A Party may deny the benefits of this Part to an investor of the other Party that is a juridical person of such Party and to investments of such an investor where the Party establishes that the juridical person is owned or controlled by persons of a non-Party.

United States

Services (Article 10.11)

A Party may deny the benefits of this Chapter to a service supplier of the other Party if the service supplier is an enterprise owned or controlled by persons of a non-Party or of the denying Party that has no substantial business activities in the territory of the other Party.

Investment (Article 11.12)

A Party may deny the benefits of this Chapter to an investor of the other Party that is an enterprise of such other Party and to investments of that investor if the enterprise has no substantial business activities in the territory of the other Party and persons of a non-Party, or of the denying Party, own or control the enterprise.

Japan

Services (Article 9.14)

A Party may deny the benefits of this Chapter to a service supplier of the other Party that is an enterprise of the other Party, where the denying Party establishes that the enterprise is owned or controlled by an investor of a non-Party or of the denying Party and the enterprise has no substantial business activities in the area of the other Party.

Investment (Article 14.17)

A Party may deny the benefits of this Chapter to an investor of the other Party that is an enterprise of the other Party and to its investments, where the denying Party establishes that the enterprise is owned or controlled by an investor of a non-Party or of the denying Party and the enterprise has no substantial business activities in the Area of the other Party.

In both cases, owned means greater than 50 per cent equity interest and controlled means the power to name a majority of directors or otherwise legally direct an enterprises actions.

Source: DFAT (2015c).

Table 4.2 Foreign direct investment in Australia, at December 2014
\$ billion and per cent

<i>Industry</i>	<i>\$ billion</i>	<i>Per cent</i>
Services		
Electricity, Gas and Water	13.3	1.9
Construction	18.9	2.8
Wholesale and Retail Trade	63.0	9.2
Accommodation and Food Services	8.1	1.2
Transport and Storage	13.6	2.0
Information and Communication	24.6	3.6
Financial and Insurance	66.9	9.7
Real Estate Services	47.7	6.9
Other	9.1	1.3
Sub-total	265.8	38.6
Merchandise trade and unallocated		
Agriculture, Forestry and Fishing	1.3	0.2
Mining	264.7	38.4
Manufacturing	88.1	12.8
Unallocated	68.5	10.0
Total	688.4	100.0

Source: ABS (2015b).

As activities across these areas feature prominently in the services commitments found in Australia's preferential trading agreements, the level of foreign ownership highlights the potential for announced liberalisation benefits to overstate the actual benefits.

The discretionary nature and vagueness of the services and investment rules of origin leave a number of questions as to the actual or potential impact of the rules of origin on services trade and investment activity. For example, 'To what extent would the provisions chill (or influence) commercial activity that may otherwise have occurred' and 'Under what circumstance would the partner government invoke the provisions and in such an event, how would terms such as 'ownership and control' and 'substantial business operations' be interpreted.

4.2 Service sector coverage

The size of the services sector in developed economies and its growing importance in developing economies, has seen service sector liberalisation become an increasingly important focus of trade negotiations at the multilateral, plurilateral, regional and bilateral level. The role of services as a facilitator of goods trade and an emerging recognition of its role in intermediate supply reinforces the need to remove restrictions on the efficient supply of, and trade in, services (chapter 2).

Trade agreements, however, typically concentrate on ‘at the border’ barriers to services trade imposed via restrictions on entry or commercial presence of foreign service suppliers. Other barriers to services trade involve ‘behind the border’ restrictions on entry such as through control of recognition of qualifications by professional associations and non-tariff barriers such as language and cultural differences and complex and unfamiliar legal systems. Trade agreements cannot be reasonably expected to address all forms of behind the border protection. Their purported benefits need to be viewed in that light.

Against that background, the China-Australia bilateral trade agreement was presented as a landmark achievement in market access concessions for Australian service providers. Commenting on the services outcomes in ChAFTA, the Australia Minister for Trade and Investment said:

The Australian Government has secured the best ever market access provided to a foreign country by China on services, with enormous scope to build on an export market already worth \$7 billion. (Robb 2014c)

Without the availability of the agreement’s text, detailed assessment remains elusive. As such, the Commission is unable to form a view as to whether the aspirational goals are commensurate with potential real-world impacts. Several questions pertinent to such an assessment include: are there limits to the amount of additional services that can be supplied to expanded market opportunities; are there material trade barriers that exist beyond the scope of agreements; what is the net impact of rules of origin (termed denial of benefits); what is the tenor of phasing arrangements; what carve-outs quarantine certain activities from the liberalising intent of the agreement; to what extent is the agreement necessary to achieve the announced goals (a form of additionality); and what are the opportunity costs of not pursuing unilateral reform in order to retain negotiating coin.

The approach to defining the boundary of Australian agreements on services trade has been to use both negative lists (only specified activities are excluded from the commitments) and positive lists (only specified activities are included in the commitments) to determine the coverage of services in an agreement (PC 2010a). Negative listing is generally viewed as superior because coverage is more transparent, extensive and automatically includes new services industries and innovations. Negative lists have been used in six of Australia’s trade agreements (those with New Zealand, Singapore, the United States, Chile, Korea and Japan). In contrast, the agreements with Thailand, ASEAN (which has ten member States) and Malaysia have adopted a positive list approach. A dual listing approach is being adopted in the agreement with China with provision to move to a negative list approach over time (DFAT pers. comm., 21 May 2015).

The potential impact of any particular agreement will depend on the collective and net ‘sum of parts’ which reflect the net impact of the respective approaches actually taken. And while negotiated reforms may cover barriers in a range of services industries, the benefits obtained depend in large measure on the subsequent uptake of opportunities by business and the extent to which the liberalised barriers are important to facilitating trade. A related issue is whether negotiated agreements work to maintain and further liberalise

existing levels of market openness through ‘standstill’ and ‘ratchet’ provisions, or whether they simply codify existing arrangements — potentially making future reform more difficult or slowing the willingness to reform domestically.²⁸

Another issue involves the divergent market access and national treatment commitments in Australia’s negotiated trade agreements and the complexity this presents for Australian firms. A summary of the nature and extent of services liberalisation commitments for each country that is party to the AANZFTA (which adopts a positive list approach to listing commitments) is presented in table 4.3. These commitments relate to removing restrictions on market access or national treatment in terms of cross-border supply, consumption abroad and commercial presence.

As mentioned, the agreements with the United States, Chile, Korea and Japan use a negative list approach to listing services commitments and do not contain market access or national treatment restrictions. Examples of activities not subject to the liberalising commitments (or carve outs) in these agreements include requirements in AUSFTA that directors of a national bank must be US citizens; prohibition in certain US States on the establishment of a branch or agency by a foreign bank and branches of foreign insurance companies are not permitted to provide surety bonds for US Government contracts.

At the sectoral level, there is considerable disparity in the negotiated services outcomes across countries with the most open being Australia (9 restricted sectors) and New Zealand (5 sectors) which have the lowest number of sectors restricting market access and/or national treatment for foreign firms.²⁹ Where restrictions persist in those two countries, these are mainly in the areas of banking services, insurance, maritime transport and media ownership. Those restrictions typically apply to domestic and foreign firms (that is, national treatment is applied) so they are non-discriminatory. By comparison, other parties to the AANZFTA agreement have a much higher number of restrictions in place (including those countries such as Malaysia, Thailand and Singapore which have separate bilateral agreements with Australia).

²⁸ Standstill provisions are intended to bind existing levels of regulation and prevent backsliding to more protectionist measures while ratchet provisions automatically extend the commitments to include future liberalising measures.

²⁹ Importantly, the failure of agreements to mention commitments in a number of service sectors should not necessarily be interpreted as representative of a market access restriction between the Party’s to the agreement. Similarly, sectors listed as unrestricted may still be subject to qualifications such as carve outs or rules of origin requirements that limit the extent of liberalisation. For example, Korea listed an extensive range of carve-outs in its services undertaking including aspects of construction, transportation, distribution, agriculture and livestock, business services, wholesale and retail distribution, telecommunications, real estate, professional services (legal, accounting etc), engineering and education as non-conforming measures (typically requiring a commercial presence through the establishment of an office in Korea).

Table 4.3 Services commitments in the ASEAN-Australia-New Zealand trade agreement^{a,b}

Number of sectoral line items with restricted or unrestricted market access and national treatment provisions

<i>Member</i>	<i>Restricted sectoral line items</i>	<i>Unrestricted sectoral line items</i>
Australia	8	81
New Zealand	5	93
Singapore	31	39
Thailand	25	41
Vietnam	49	40
Indonesia	59	3
Malaysia	72	6
Laos	10	26
Myanmar	22	9
Cambodia	19	60
Philippines	56	1
Brunei	22	1

^a Commitments are not made to a uniform classification. Hence, aggregation of restricted, unrestricted and unlisted items do not add to a common total across members. ^b The methodology used to construct this table involved an examination of the schedules of specific services commitments provided by individual ASEAN members as part of AANZFTA. Where countries indicated no market access or national treatment limitations on cross-border supply, consumption abroad or commercial presence, the relevant sector or sub-sector was categorised as unrestricted. Where some form of limitation was indicated, the relevant sector or sub-sector was categorised as restricted. Where no specific reference to a sector or sub-sector was made, that sector or sub-sector was not included as either a restricted or unrestricted category. Differences in individual country reporting practices means the combined number of restricted and unrestricted sectors differ across countries.

Source: Commission estimates (see Appendix D).

While this analysis sheds light on the number of restrictions across countries and their broad nature it does not indicate the degree of absolute or relative trade restrictiveness. Nor does it show how AANZFTA commitments compare to multilateral undertakings. Fully assessing the depth and quality of commitments is problematic (WTO 2011b). Nevertheless, partial assessments have been made by assigning scores to market access commitments depending on whether they involve ‘full’, ‘partial’ or ‘no liberalisation’. The resulting index calculated by weighting scores across trade categories, can then be used to compare the level of liberalisation across countries and across time.

Table 4.4 presents index scores for individual country commitments in AANZFTA which entered into force in 2010 and compares these with commitments made to the WTO General Agreement on Trade in Services (GATS) which entered into force in 1995. The table highlights and reinforces the significant disparity in services commitments across countries, the size of the gap between actual commitments and unrestricted services trade (a score of 100) and also the limited progress in further liberalising services trade in AANZFTA compared to the earlier GATS commitments. And while Australia ranks as the

most open country relative to its AANZFTA partners, Australia's services commitments in other preferential agreements are considerably more liberal. For example, in its bilateral agreement with the United States, Australia achieved an index score of 81.5 under the WTO index. This result is consistent with the observation that larger trading powers tend to receive more concessions in preferential trading agreements than other trading partners (WTO 2011b, p.8).

Table 4.4 Comparison of GATS and AANZFTA services commitments^a
Index score out of 100

	<i>Brunei</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Philippines</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Australia</i>	<i>New Zealand</i>
GATS	7.99	17.26	27.47	16.41	37.59	19.39	34.18	57.06	54.42
AANZFTA	10.2	22.3	32.36	21.47	40.31	19.69	34.35	57.06	55.44

^a A score of 100 represents full commitments in all sub-sectors and relevant modes of supply (cross border trade and commercial presence). For each sub-sector and mode of supply, a score of 1 is given for a full commitment, 0.5 for a partial commitment, and 0 for no commitment. Where a partial commitment improves on GATS, a score of 0.75 is awarded. The index implicitly assumes that all commitments with the same score are equivalent. This is a simplification which cannot substitute for a qualitative analysis of the depth and value of commitments undertaken.

Source: WTO (2011a).

In addition, the relaxation of ownership and other restrictions in a number of agreements (especially those with non-English speaking countries) needs to be viewed in the context of cultural or institutional barriers that may limit the effective levels of services liberalisation. Language barriers; complex, unfamiliar legal systems; historical and cultural norms all present material impediments to Australian firms in markets covered by some recent bilateral agreements. In this context, it has been found that Australian services firms tend to enter markets with similar institutions, rules and regulations to those in Australia with Commonwealth countries providing notable examples (Findlay and Rammal 2013). An issue therefore in this context is whether the detailed provisions have any material effect on actual services trade between partner economies. The scale of commercial opportunities offered by offshore markets (particularly those in Asia) would provide a strong incentive for Australian firms to at least consider alternative means of accessing those markets.

Prospects for expanded services trade as a result of specific agreements need to be considered in this overall light. In its report on Bilateral and Regional Trade Agreements, the Commission found that Australian firms had made little use of the services provisions in BRTAs negotiated up to that point (PC 2010a, p. 156). Reasons for not taking advantage of negotiated provisions for market access varied across service industries but in broad terms reflected the fact that the *actual* barriers to services trade existed beyond the sphere of government control and hence were not influenced as much by services provisions in trade agreements (although it was recognised they can serve as one possible catalyst for negotiations between sub-government service regulators) as other factors. For example, in professional services (such as legal, financial and architectural firms), the requirements for

registration and professional practice are regulated by professional associations rather than jurisdictional governments.

Also, the incremental benefits of agreement provisions may not be as great as envisaged because the negotiated commitments have been rendered superfluous because firms had already found cost-effective ways to work around existing barriers behind the border. For example, where foreign ownership (in whole or part) of service providers has been limited or prohibited, Australian firms may forge strategic and other alliances (including networks) with local firms to circumvent such restrictions (PC 2010a, p. xxiv).³⁰

4.3 Intellectual property provisions

The protection of intellectual property (IP) rights has become a mainstream feature of trade agreements at the bilateral, regional and plurilateral level. While the WTO Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement set minimum standards for the scope, length of term, administration and enforcement of IP rights, some preferential agreements (including those to which Australia is a participant) have provided, or are seeking to provide, more stringent protections. For individual countries, the impact of these provisions will directly depend on whether they are net exporters or importers of different forms of IP material. More broadly, the impact of the provisions will depend on how they affect the level and growth in economic activity in partner economies.

While most of Australia's bilateral trade agreements simply reaffirm commitments to the TRIPS Agreement, the agreement with the United States (a net IP exporter) and Chile (which has a similar agreement with the United States) have a wider coverage than either TRIPS or other bilateral agreements and impose more stringent provisions. For example, the term of copyright protection under the Australia-United States agreement was extended to the life of the author plus 70 years and compares with life plus 50 years under TRIPS. As discussed in the Commission's report on Bilateral and Regional Trade Agreements, that extension is likely to have imposed a net cost on Australia (PC 2010a, p. 259).³¹ Concerns have also been expressed about other features of AUSFTA. These include restrictions on circumventing technological protection measures (TPMs) which the Senate Committee examining the effects of the agreement viewed as anti-competitive (box 4.4).³²

However, copyright holders who are in the position to use TPMs can potentially create their own additional de facto monopoly rights by restricting access on their own terms. This could

³⁰ While there may be cost-effective ways to bypass existing barriers, any liberalising provisions of trade agreements may still offer even lower-cost ways of accessing markets.

³¹ Dee (2005) found that an extension of copyright to between 80 and 100 years after death under the AUSFTA would result in a net cost to Australia of \$88 million per annum or up to \$700 million in net present value terms.

³² TPMs include measures such as geo-blocking of internet sites to prevent non-residents from accessing content available in specific markets. Australian consumers access to the United States based Netflix service provides an example.

lead to significant anti-competitive results, with increased costs and/or decreased choice for consumers. State sanctions against circumvention of TPMs substantially increase this risk. This is especially the case where the definition of TPM, for the purposes of the protection of the law, includes any measure which controls access to material, as AUSFTA requires, rather than merely preventing or inhibiting infringement, which is the current Australian position. (SCFTAAUSA 2004, pp. 32-33).

Box 4.4 Article 17.4.7 AUSFTA: circumvention of technological protection measures

In order to provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that authors, performers, and producers of phonograms use in connection with the exercise of their rights and that restrict unauthorised acts in respect of their works, performances, and phonograms, each Party shall provide that any person who:

- (i) knowingly, or having reasonable grounds to know, circumvents without authority any effective technological measure that controls access to a protected work, performance, or phonogram, or other subject matter, or
- (ii) manufactures, imports, distributes, offers to the public, provides, or otherwise traffics in devices, products, or components, or offers to the public, or provides services that:
 - (A) are promoted, advertised, or marketed for the purpose of circumvention of any effective technological measure
 - (B) have only a limited commercially significant purpose or use other than to circumvent any effective technological measure, or
 - (C) are primarily designed, produced, or performed for the purpose of enabling or facilitating the circumvention of any effective technological measure

shall be liable and subject to the remedies specified in Article 17.11.13. Each Party shall provide for criminal procedures and penalties to be applied where any person is found to have engaged wilfully and for the purposes of commercial advantage or financial gain in any of the above activities. Each Party may provide that such criminal procedures and penalties do not apply to a non-profit library, archive, educational institution, or public non-commercial broadcasting entity.

Source: AUSFTA (2005).

The relevance of trade related IP issues for Australia has gained even greater prominence because of the potential reach of the proposed TPP in this area. Potentially, the IP chapter in the TPP could be extensive and go beyond the provisions contained in the TRIPS Agreement and AUSFTA. For example, based on US media access to the current draft text, it appears likely that the TPP will include obligations on pharmaceutical price-determination arrangements in Australia and other TPP members, of an uncertain character and intent. The history of IP arrangements being addressed in preferential trade deals is not good. Indeed, to the extent that the return to IP holders awarded by more stringent IP laws outweighed the benefits to the broader economy, the provision would also impose a net cost on both partners, lowering trading and growth potential across the bloc.

For such reasons, the Commission has previously recommended that:

... Australia's participation in international negotiations in relation to IP laws should focus on plurilateral or multilateral settings, and that its support for any measures to alter the extent and enforcement of IP rights should be informed by a robust economic analysis of size and distribution of the resultant benefits and costs. (PC 2010a, p. 264)

More recently, the Australian Government's Competition Policy Review (Harper 2015) recommended that an overarching review of intellectual property be conducted by an independent body. Amongst other things, it recommended that the review cover the incorporation of intellectual property provisions in international trade agreements.

4.4 Dispute settlement

Some trade agreements and investment treaties entered into by the Australian Government contain investor-state dispute settlement (ISDS) provisions for settling disputes between an investor of one party to the agreement and the government of the other party. Under the provisions, dispute settlement options can include third-party arbitration. For example, the ISDS provisions in the Bilateral Investment Treaty between Australia and Hong Kong were used by Philip Morris Asia to initiate third party arbitration in relation to Australia's tobacco plain packaging laws (chapter 7).

Trends in international ISDS cases

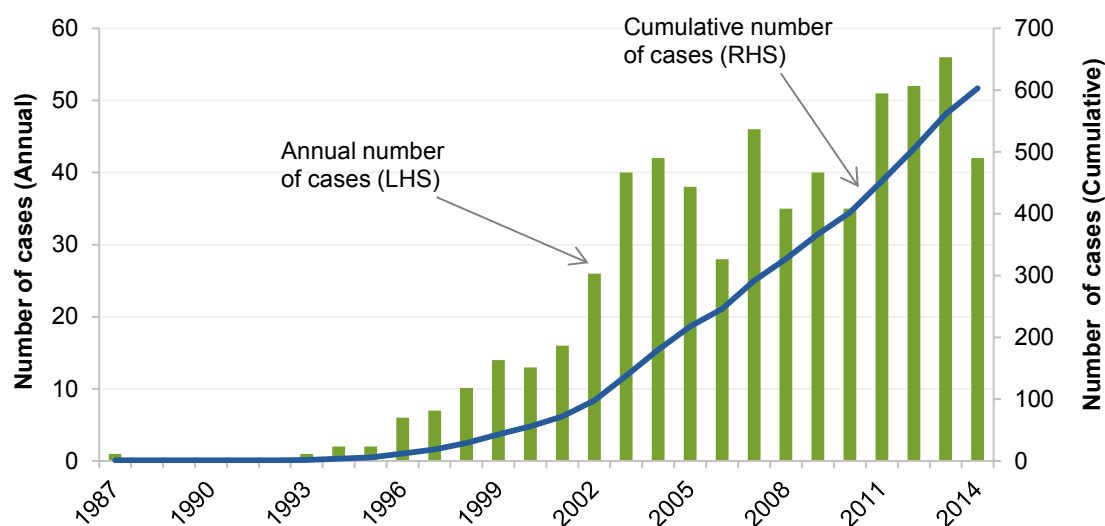
There has been a growing number of ISDS cases in recent years with 42 new claims in 2014 (figure 4.2). While claims have historically been dominated by initiations against developing and transitional States, recent years have witnessed an unusually high number of cases against developed economies (around 40 per cent of the total for 2014). A broad range of government measures have been challenged in recent years including changes related to investment incentive schemes, cancellation or alleged breaches of contracts, revocation or denial of licenses and alleged direct or de facto expropriation (in part, the issue at the heart of Philip Morris Asia's claim against the Australian Government).

In terms of case outcomes, for those ISDS claims decided by arbitration or settled prior to arbitration (which together account for about half the cases shown in figure 4.2), around 37 per cent were ruled in favour of the State, 25 per cent were ruled in favour of the investor and 28 per cent were settled prior to arbitration. While information on the amount of compensation sought by applicant investors is scarce, the amounts claimed ranged from US\$8 million to US\$2.5 billion for cases where this information was reported (UNCTAD 2015a). However, a combined award of US\$50 billion to investors in three closely related cases in 2014 was the highest known award on record.³³

³³ The aggregate amount of compensation obtained by the three claimants constituting the majority shareholders of former Yukos Oil Company in the ISDS proceedings against the Russian Federation. See

Figure 4.2 **Known ISDS cases, 1987 to 2014**

Number of cases



Sources: UNCTAD 2015a, 2015b.

As noted, the Australian Government is currently defending an ISDS case brought by Philip Morris Asia over Australia's introduction of tobacco plain packaging laws in 2011 (chapter 7). While the amount of compensation sought by Philip Morris in its claim against the Australian Government has not been publicly disclosed, the company has stated it will be seeking substantial remedies and that financial losses that have resulted from the plain packaging laws. While the potential risk to future budget outcomes from this case was disclosed (for the first time) in the Australian Government's 2014-15 Budget Papers, the size of the risk has not been quantified nor provisioned in any substantive way. In reporting on this issue, the Australian Government said:

In 2014-15, the Government will continue to fund the defence of legal challenges to the tobacco plain packaging legislation in international forums. Further information about these cases has not been disclosed on the grounds that it may prejudice the outcomes of these cases or may relate to commercial information. (Australian Government 2014c)

The inclusion of ISDS provisions is contentious

The inclusion of investor-state dispute settlement provisions in Australia's preferential trade agreements and investment treaties has become a contentious issue. In response to

Hulley Enterprises Limited (Cyprus) v. The Russian Federation, UNCITRAL, PCA Case No. AA 226, Award, 18 July 2014; Yukos Universal Limited (Isle of Man) v. The Russian Federation, UNCITRAL, PCA Case No. AA 227, Award, 18 July 2014; Veteran Petroleum Limited (Cyprus) v. The Russian Federation, UNCITRAL, PCA Case No. AA 228, Award, 18 July 2014.

concerns about these provisions, the Senate Foreign Affairs, Defence and Trade Legislation Committee (SFADTLC) conducted an inquiry into a bill proposing the Commonwealth be prevented from entering into agreements that include ISDS provisions. The Committee released its final report in August 2014.

The Committee noted that the majority of submissions supported the intention of the bill for reasons which included:

- growth in the number of ISDS cases brought internationally
- extension of substantive appeal rights available to foreigners not available to domestic firms
- risk of regulatory chill
- effectiveness of safeguards and carve-outs
- lack of transparency and inadequate parliamentary scrutiny of ISDS (and other) provisions.

Those not supporting the bill primarily argued it would prevent the negotiation of future international agreements including plurilateral agreements such as the TPP, would disadvantage Australian companies investing in countries with high sovereign risk and that existing safeguards were sufficient to protect the public interest. The Committee concluded that ISDS issues should be assessed on a case-by-case basis and therefore did not support the bill. In reaching its conclusion, the Committee said:

The committee is of the view that a blanket ban on ISDS would impose a significant constraint on the ability of Australian governments to negotiate trade agreements that benefit Australian business. It is for this reason that the committee considers the current case-by-case approach to ISDS is in Australia's long-term national interest and a sound policy for weighing the risks and benefits of ISDS provisions in trade agreements. (SFADTLC 2014, p. 17)

Another argument advanced in favour of ISDS provisions is that they can be used as a negotiating mechanism to trade-off against other elements of an agreement that are viewed as more important. However, such an approach would appear to be a very high risk strategy of achieving market access objectives especially given the potential size of compensation claims involved and the unfunded nature of those claims (discussed above).

Commenting separately on the ISDS issue, the Chief Justice of the High Court recently cautioned against any potential undermining of the authority of domestic courts by ISDS arbitration. He argued that as trade agreements and bilateral investment treaties were long-lived, and resort to ISDS had increased significantly over time, it was not sufficient to argue that because Australia had only been subject to one ISDS claim (that bought by Philip Morris Asia under the Hong Kong IPPA) that the risks posed by ISDS were overstated. The Chief Justice suggested the primacy of domestic courts be maintained:

An approach designed to protect the finality and authority of domestic judicial decisions could consider a limitation on ISDS mechanisms applicable to Australia which would preclude any challenge to the decision of an Australian domestic court as constituting a breach of the

relevant BIT or FTA clauses. Such an approach could also consider precluding the canvassing in an arbitral claim of the correctness of a decision of an Australian domestic court and in particular, decisions on questions of law binding on lower courts. (French 2014, p. 11)

Australia is not the only country to be considering the appropriateness of ISDS provisions with France and Germany both opposed to the inclusion of such provisions in the European Union-United States trade agreement known as the Trans-Atlantic Trade and Investment Partnership which is currently being negotiated. Germany has also indicated it will not ratify the recently signed European Union-Canada agreement (known as the Comprehensive Economic and Trade Agreement) which contains ISDS clauses reportedly on the grounds that:

It must not be that international investors have rights and influence before arbitration tribunals, which national enterprises don't have in their own country. (ICTSD 2014)

The possible inclusion of an ISDS mechanism in the TPP could similarly allow investors to bring claims for private arbitration directly against governments and potentially undermine the role of domestic courts and freedom of governments to regulate in the public interest. The greater the stringency of specific provisions, the greater the risk of ISDS actions against government as firms have more at stake in relation to government decisions that directly or indirectly affect their commercial interests. Similarly, where interpretation of the negotiated text may be subject to dispute, understandings or expectations between TPP members over how these provisions will be interpreted may not necessarily be taken into account by an international tribunal hearing a claim brought by a private company.³⁴

Given the persistent and unresolved debate surrounding this issue, a relevant question to be considered is what impact existing ISDS provisions (or their absence) have had on investment flows and whether those impacts deem ISDS provisions necessary. Australia has included ISDS clauses in six of its bilateral trade agreements — Singapore (2003), Thailand (2005), Chile (2009), ASEAN and New Zealand (2010), Korea (2014) and China (not yet in force). Australia currently also has ISDS provisions in its 21 Investment Protection and Promotion Agreements (IPPAs) signed over the last three decades with Argentina, China, Czech Republic, Egypt, Hong Kong, Hungary, India, Indonesia, Laos, Lithuania, Mexico, Pakistan, Papua New Guinea, Peru, Philippines, Poland, Romania, Sri Lanka, Turkey, Uruguay and Vietnam.

An examination of foreign investment trends with Australia's main foreign investment partners suggests that ISDS provisions are unlikely to have been relevant considerations in the investment decisions of Australian firms investing abroad or foreign firms investing in Australia. Inward and outward foreign investment stocks are dominated by a small number of developed countries with the United States and United Kingdom accounting for 49.6 per

³⁴ Some agreements specifically allow the Parties to consult on the meaning of a treaty and any written record of what negotiating parties understood provisions to mean can be taken into account as official documents (DFAT pers. comm., 21 May 2015). Given the confidential nature of TPP negotiations, it is not clear whether it is intended that the agreement will provide scope for Parties to consult on the meaning of individual provisions.

cent and 44.6 per cent of total inward and outward stocks respectively in 2013 (table 4.5). Only two of the top ten source and destination countries (Hong Kong and Singapore) had signed a preferential trade agreement or IPPA containing investor-state dispute provisions with Australia. These two countries accounted for just 4.6 per cent of Australia's inward foreign investment stock and 2.2 per cent of Australia's stock of investment abroad in 2013 (largely unchanged from the shares in 2003). These features suggest ISDS protections are not necessary or sufficient to foster investment flows between developed countries with transparent and well-functioning legal systems.

Table 4.5 Australia's major foreign investment relationships^a
Stocks of inward and outward foreign investment

Country	Inward stock (%)		Country	Outward stock (%)	
	2003	2013		2003	2013
United States	27.5	26.7	United States	38.1	28.9
United Kingdom	24.9	22.9	United Kingdom	15.7	15.7
Japan	4.4	5.3	New Zealand	6.7	5.0
Singapore*	2.1	2.5	Germany	1.7	3.5
Hong Kong*	2.7	2.1	Canada	1.0	3.3
Switzerland	2.0	1.9	Japan	3.6	3.1
Netherlands	2.1	1.5	Switzerland	1.1	2.3
China*	0.3	1.3	Singapore*	2.2	2.2
New Zealand	1.2	1.2	France	1.9	2.1
Canada	1.1	1.1	Netherlands	2.6	2.1
Other ISDS*	0.2	0.5	Other ISDS*	3.4	6.4
Other countries	30.8	33.0	Other countries	22.1	25.5
Total	100.0	100.0	Total	100.0	100.0

^a Refers to total foreign investment. * Signifies agreement in force prior to 2003 which contains ISDS provisions.

Source: DFAT (2014b).

The majority of Australia's IPPAs have been largely negotiated with less developed countries with perceived higher levels of sovereign risk and questions over the reliability of their legal systems. Despite these agreements, the share of Australian investment abroad accounted for by IPPA countries represented just 6.4 per cent of Australia's outward foreign investment stock in 2013 (excluding Hong Kong which has a highly developed, English-based legal system). While this share has increased over the decade, it is not clear whether the presence of ISDS materially influenced the relative growth or whether it was the result of broader factors relating to commercial opportunity.

As reported in a previous edition of *Trade & Assistance Review*, there have only been three cases where Australian firms have used ISDS provisions in bilateral investment treaties (each involving less developed countries). The only successful case involved the Australian company (White Industries) which brought proceedings against the Indian

Government in relation to a contractual agreement between White Industries and a state-owned enterprise. The two other cases involved Australia-incorporated companies (Planet Mining and Tethyan Copper Company) initiating ISDS claims against the Governments of Indonesia and Pakistan, respectively (PC 2013).

In its report on Bilateral and Regional Trade Agreements (PC 2010a, p. 271), the Commission concluded there was an absence of an identifiable underlying economic problem on market failure grounds that necessitates the inclusion of ISDS provisions. The apparent lack of evidence regarding the effects of such provisions on Australian foreign investment leads the Commission to emphasise its previous recommendation that:

The Australian Government should not include matters in bilateral and regional trade agreements that would serve to increase barriers to trade, raise costs or alter established social policies without a comprehensive review of the implications and available options for change. On specific matters, the Australian Government should:

- c) seek to avoid the inclusion of investor-state dispute settlement provisions in BRTAs that grant foreign investors in Australia substantive or procedural rights greater than those enjoyed by Australian investors. (PC 2010a, p. xxxviii)

4.5 Assessing the potential impacts of trade agreements

The complexity of bilateral and regional trade agreements and the potential for provisions to impose net costs on the community presents a compelling case for the negotiated text of an agreement to be comprehensively analysed before signing. A comprehensive and robust evaluation framework based on the Commission's framework for evaluating national economic reforms and its findings in the 2010 report on bilateral and regional trade agreements that addresses the relevant issues is set out in box 4.5.

However, current processes fail to adequately assess the impacts of prospective agreements. They do not systematically quantify the costs and benefits of agreement provisions, fail to consider the opportunity costs of pursuing preferential arrangements compared to unilateral reform, ignore the extent to which agreements actually liberalise existing markets and are silent on the need for post-agreement evaluations of actual impacts.³⁵

³⁵ The Commission acknowledges the practical difficulties involved in quantifying the impacts of agreements due to the variable quality and completeness of international services trade and investment statistics and the inherent difficulty in quantifying services and investment trade barriers compared to tariff measures. Nevertheless, given the potential for preferential agreements to impose net costs on Australia, these difficulties should not be used as a justification to avoid greater scrutiny, including through the quantification of potential impacts.

Box 4.5 Possible evaluation framework for trade agreements

A comprehensive and robust analysis of an agreement would:

- provide information on the potential national economic impacts of the full agreement, including estimates of the economy-wide and distributional effects of change
- assess, where practicable, the impact of the agreement on assisting Australia achieving its productivity and trade potential and the opportunities for improvement, recognising the differences in customs tariffs and other barriers to trade across countries, as well as the different nature of merchandise trade, services trade, direct and portfolio investments, intellectual property and the movement of natural persons, carve outs and phasing, and the time paths over which benefits are likely to accrue and costs incurred
- assess the scope for agreements to evolve over time to assist Australia to meet its productivity and trade potential, including through review provisions and built-in agenda
- assess the scope and appropriateness of the agreement to act as a model or template for other agreements.

At a more detailed level, the analysis would (for each chapter of the agreement):

- identify the current institutional settings and changes from those settings, including phasing arrangements
- list the eligibility requirements (including rules of origin for goods, services and investment) for the receipt of preferences under the agreement
- report on who or what could be potentially directly affected by the agreement, and levels and trends in bilateral trade and investment
- identify the nature of potential direct benefits and costs of full implementation of the text of an agreement and impediments, if any, to the take up of preferences
- quantify, where practicable, the potential benefits and costs and the timescale over which they are likely to occur
- identify and quantify where practicable transition costs compared to 'business as usual', that are likely to be incurred achieving preferences under the agreement
- assess any potentially adverse impacts of an agreement, including regulatory chill
- assess the opportunity cost of an agreement, including holding back domestic reform to maintain negotiating coin.

Sources: Based on PC (2010a, 2010b).

In assessing current processes, the Commission has chosen to benchmark the evaluation framework shown in box 4.5 against the assessment actually undertaken for the Japan-Australia agreement.

Current requirements for the assessment of prospective trade agreements involve the preparation of Regulation Impact Statements (RISs) for compliance assessment by the Office of Best Practice Regulation (OPBR), a National Interest Analysis (prepared by the Department of Foreign Affairs and Trade) and a review by the Joint Standing Committee on Treaties (JSCOT) to consider whether ratification of the agreement is in the national interest.

The Australian Government's best practice regulation requirements stipulate the preparation of a Regulation Impact Statement identifying and quantifying the compliance costs to business and the community from a regulatory change.³⁶ Under OBPR guidelines proponents are required to answer the following questions.

- (a) What is the problem you are trying to solve?
- (b) Why is government action needed?
- (c) What policy options are you considering?
- (d) What is the likely net benefit of each option?
- (e) Who will you consult and how will you consult with them?
- (f) What is the best option from those that you have considered?
- (g) How will you implement and evaluate your chosen option? (Australian Government 2014a, p. 1)

With respect to trade agreements, a two stage formal RIS process is invoked — with the first RIS required prior to the decision to enter into negotiations of an agreement and the second prior to the signing. For the Australia-Japan Economic Partnership Agreement — the most recent agreement in force — the OBPR advises that a RIS was not prepared for the decision to enter into negotiations and, accordingly, DFAT had not complied with RIS requirements for this stage of the process (OBPR 2014). The second stage RIS was prepared by DFAT with the OBPR ruling that although the RIS was viewed as compliant with Australian Government requirements at the final decision point, 'having regard to the significance and widespread nature of the likely impacts of the proposal on the Australian economy, the OBPR does not consider that the RIS is best practice' (OBPR 2014). The OBPR went on to provide a number of specific examples of the shortcomings in the prepared RIS (box 4.6).

The National Interest Analysis, also prepared by DFAT, simply listed a set of claims regarding the benefits of market access and other commitments in the agreement which were supported by little in the way of quantitative or qualitative evidence. Further, the analysis ignored the non-tariff barriers included in the agreement such as carve-outs and rules of origin, the opportunity cost of delaying domestic reform to maintain negotiating coin to achieve an agreement, nor did it provide a view on the counterfactual — that is, what was likely in the absence of an agreement.

³⁶ These requirements first came into effect in November 2006.

Box 4.6 OBPR assessment of the JAEPA RIS

The OBPR noted that the RIS prepared by DFAT did not provide the reader with sufficient understanding of the likely scale and scope of the impacts of the JAEPA on affected parts of the Australian economy. OBPR provided the following examples to support its assessment:

- the RIS relies heavily on ‘before and after’ comparisons of tariff levels and quotas, with insufficient analysis of the expected impacts of these changes on the Australian economy;
- with the exception of the beef industry, the RIS does not attempt to quantify the likely impacts of JAEPA on trade volumes or prices for key Australian export industries, or on trade volumes in aggregate;
- the RIS contains only a brief reference to the likely impacts of tariff removal on those Australian industries that currently compete with Japanese imports, without quantifying or analysing the likely impacts of these;
- the RIS contains claims about the benefits of the JAEPA for Australian exporters, importers and consumers which are not supported by the level of evidence and quantification presented; and
- the RIS includes relatively brief and high-level analysis of the impacts of trade liberalisation for those Australian industries that compete with Japanese imports.

Source: OBPR (2014).

Nevertheless, on the basis of broad-level support of most submitting industry representatives and other interested parties JSCOT recommended the treaty be ratified. While it may be expected that potential direct beneficiaries of an agreement would voice support and that general support may be given favouring measures that move toward a more liberal trading regime, such support stands in contrast to earlier indications that businesses generally have made limited use of the opportunities available from Australia’s exiting bilateral and regional trade agreements (PC 2010a, p. xiv). Accordingly, such broad support is not a sufficient measure of what is in the national interest.

In reaching its conclusion, JSCOT stated that the agreement would give Australian exporters significantly improved market access in goods and services and provide Australian industries with a ‘first mover’ advantage over other countries seeking to sign preferential agreements with Japan. It said:

The Committee is satisfied that JAEPA has the potential to provide Australian business and industry with a range of profitable opportunities. The Committee believes JAEPA will provide a net benefit to the economy and is in the National interest and recommends that the Treaty should be ratified and binding treaty action be taken. (JSCOT 2014)

Although there could be debate as to the most appropriate methodology for quantifying and assessing the scale and scope of the impacts of a bilateral or regional trade agreement, one point of reference is the Commission’s economy-wide methodology for assessing the impacts and benefits of national economic reforms (PC 2010b). By reference to this methodology, there are a number of gaps at all stages of the assessment process used for the JAEPA (figure 4.3). For example, there are reporting gaps in relation to the scale of

activities directly affected, the expected import price changes, the restrictive impact of origin rules, take-up of preferences and productivity effects, and the projected economy-wide effects of these changes. Unilateral reform, the mainstay of Australia's economic reform efforts is not identified and discussed as an alternative reform stream.

To close the evaluation gaps a more comprehensive and robust evaluation methodology carried out independently and with transparency is needed. A comprehensive evaluation of existing or prospective trade agreements would include a consideration of the likely incremental effects of an agreement over what would have occurred in its absence. It would also cover the likely direct effects on trade and investment after taking account of the incremental changes referred to above, actual take-up of preferences which will be influenced by rules of origin and other non-tariff barriers, carve-outs (sectors or activities where the agreement's commitments are quarantined) and negotiation and administration costs. Economy-wide impacts would be canvassed taking account of the direct effects and resource constraints in sectors gaining market access and the economy more broadly (such as labour market constraints). The prospect of inducing regulatory chill through new treaty obligations would also feature prominently as would the contingent liabilities created by the agreement. A key example of the latter is the operation of an investor-state dispute mechanism. Finally, the opportunity costs of the agreement in terms of delaying detailed unilateral liberalisation for the sake of maintaining negotiating coin would need to be evaluated.

Figure 4.3 Gaps abound – the Government’s assessment of the net benefits of the Japan Australia Economic Partnership Agreement

Comprehensive evaluation	Some potential evaluation indicators	Decision RIS & National Interest Analysis	JSCOT Review
Identify intended incremental changes to existing policy settings & regulation	Requirements for new or revised legislation affecting bilateral trade & investment & movement of people	Legislative requirements listed Tariff, services & investment commitments listed	Sourced legislative requirements & market access commitments to RIS
Identify scale of activities affected	Trade & investment & local activity subject to provisions People affected	Outlines trade, investment & local stakeholders affected	Outlines trade, investment & local stakeholders affected
Estimate likely direct effects	Import price changes Take-up of preferences Productivity effects Movement of people	Not addressed	Discussed non-tariff barriers & regulatory complexity in Japanese market
Identify/estimate timescale, & compliance & administrative costs	Phasing arrangements Trade negotiation costs RoO & market access tests and costs	Outlined phasing arrangements & RoO compliance costs	Not addressed
Project likely economy-wide impacts	Quantitative modelling of trade, investment productivity & population effects	Partial modelling - Beef industry impacts	Trade & investment barriers discussed Impact of barriers not quantified
Assess potential risks	Regulatory chill (arising from treaty obligations) Contingent liabilities (such as from ISDS)	Not addressed	Not addressed
Detail opportunity costs of delayed reform	Quantify loss of benefits from foregoing unilateral tariff reductions & services reform	Not addressed	Not addressed
Identify alternatives for reform	Assess and compare gains from pursuing unilateral and multilateral alternatives	Alternative policy options considered	Discussed some trade policy alternatives
Provide overall assessment and scope for improvement	Measure of net benefit from agreement	Aspirational claims of benefits	Partial assessment - Consultation-based findings

5 Assistance estimates

Key points

- Government assistance to industry is provided through an array of measures including tariffs, budgetary outlays, tax concessions, and restrictions on competition.
- This benefits the industry receiving it, but comes at the cost to other industries, taxpayers or consumers. A critical issue is whether the benefits accruing to industry outweigh the costs.
- Over 50 per cent of merchandise trade continues to be subject to a 5 per cent tariff on imported goods.
 - Estimated assistance to industry from tariffs was \$7.9 billion in 2013-14 in gross terms, accruing overwhelmingly to manufacturing.
- While tariffs and quotas today are much lower than they were historically (from as high as 125 per cent in 1985 to a maximum of 5 per cent today) they still ‘tax’ every Australian by around \$150 each year and are a ‘tax’ on exports.
- Identifiable and quantified budget and tax-related support to industry amounted to \$9.1 billion, to provide total gross assistance to industry of \$17 billion in 2013-14.
 - In absolute terms, budgetary assistance was highest for the Property, professional and administrative services industry (\$979 million).
- After deducting the \$7.3 billion cost penalty of tariffs on imported inputs, net assistance to industry was \$9.7 billion in 2013-14.
 - Although the services sector receives the most budgetary assistance (around \$4.3 billion in identifiable and quantified support), such assistance is outweighed by the estimated cost penalty on tariffs (\$4.9 billion).
 - Around two thirds of the input penalty on tariffs is incurred by services industries.
 - The net tariff penalty on the services and mining sectors has been increasing over the five years to 2013-14.
- Budgetary assistance in 2013-14 was about 17 per cent (or \$1.3 billion) higher than in 2012-13. The largest increase was the Small Business Simplified Depreciation Rules scheme (\$1.5 billion) with the largest reduction relating to the Small Business and General Business Tax Break (\$220 million).
- In addition to measured tariff and budgetary assistance to industry, industry is also influenced by non-tariff barriers and government policies affecting the level and distribution of activity including quarantine measures, regulatory restrictions on competition, general taxation and differential tax rates, and government purchasing preferences and programs.

Industry is assisted through a wide array of government programs, regulatory instruments and policies. Each year, the Commission updates and publishes estimates of the assistance afforded by readily distinguishable and quantifiable:

-
- import tariffs, which mainly assist the manufacturing sector while raising costs to consumers and to industries that use manufactured and other tariff-assisted inputs
 - Australian Government budgetary measures — divided into government outlays and tax concessions — which apply to the primary production, mining, manufacturing and services sectors
 - certain agricultural pricing and regulatory measures.

While the estimates cover a broad range of measures that afford substantive support to industry and that can be readily quantified on a consistent basis annually, the estimates do not capture all Australian Government support for industry, nor State government assistance. The assistance provided through government regulation is also not included in the estimates (box 5.1). The reported estimates in this chapter therefore do not cover the full extent of assistance to industry with the gap between reported values and actual assistance potentially large. For example, a detailed study State and Territory assistance to industry for the 2009-10 Review indicated support amounting to around \$4 billion in identifiable assistance was provided to industry in 2008-09 (PC 2011b).

The estimates also do not separate influences on industry, activity and firm competitiveness arising from changes in macroeconomic conditions, such as terms of trade changes and currency movements.

The following sections present the most recent — 2013-14 — assistance estimates and report on broad changes in the structure of measured industry assistance over the last four decades. As well as providing estimates for the above three categories, the Commission aggregates them to yield an estimate of the ‘combined’ assistance for four broad industry sectors of the Australian economy — ‘primary production’, ‘mining’, ‘manufacturing’ and ‘services’ — along with effective rates of assistance for the primary, mining and manufacturing sectors.³⁷ For each category of assistance, the Commission provides more detailed estimates of assistance by 34 industry groupings. Where industry detail is not available, estimates are assigned to one of four ‘unallocated’ categories (primary production, manufacturing, services or other).

The Commission also disaggregates its estimates of budgetary assistance into categories (such as R&D, export assistance and support to small business) to facilitate more detailed assessments of changes in the composition and nature of assistance.

³⁷ Effective rates of assistance are not estimated for the services sector. This reflects the adoption of the ‘Corden’ method in estimating effective assistance, where services are treated as not directly traded but as contributing to value-added inputs of the downstream merchandise traded-goods sectors.

Box 5.1 Coverage of the Commission's assistance estimates

The Commission's assistance estimates cover only those measures that selectively benefit particular firms, industries or activities, and that can be quantified given practical constraints in measurement and data availability. Arrangements that may have assistance implications but are not part of the estimates include:

- quarantine restrictions such as prescribed under the *Quarantine Act 1908*
- the allocation and pricing of water resources such as those arrangements in the irrigation areas in the Murray-Darling basin
- the effects of government purchasing preferences and local content arrangements, such as defence procurement purchasing decisions
- regulatory restrictions on competition such as those relating to pharmacies, air services, importation of books and media and broadcasting, and those impeding the take up of new technologies, such as through geo-blocking
- anti-dumping and countervailing measures such as prescribed under the *Customs Act 1901*
- general taxes and certain differential tax rates, including in relation to excises, the GST, payroll tax, superannuation and carbon emissions
- State and Territory government support to industry, other than designated agricultural marketing arrangements and rural support programs such as grants and loans programs, state tax concessions, support for research and development, promotional and industry development objectives, and information, advice and service activities
- government programs affecting a range of services industries, mainly relating to the provision of health, education, and community services — such as the private health insurance rebate, subsidies for the provision of private education and the assistance implications of government funding for community services
- government programs affecting national security and public safety, including police and defence programs
- government programs and taxation concessions affecting professional sport and the arts, such as support for the redevelopment of sporting venues and art exhibitions
- government programs affecting the labour market such as those administered under the Australian social security system and the Australian *Fair Work Act 2009*
- resource access arrangements including to mining, forestry and fisheries, such as the Commonwealth *Fisheries Management Act 1991*, state-based resource management legislation (for example, state 'mining' acts).

More recent developments in industry assistance are reported in chapter 6. These include major and readily distinguishable announcements (identified for reporting in this *Review*) involving additional new expenditure of around \$1.5 billion, over the budget forward estimates, as well as reductions of around \$1.3 billion. However, ascertaining the net additional assistance implied by the announced allocations is not straightforward and caution needs to be exercised in drawing inferences about the future of assistance levels (see chapter 6).

5.1 Estimates in aggregate

Readily distinguishable and quantified tariff and budgetary assistance to industry was over \$17 billion in gross terms in 2013-14 — comprising \$7.9 billion in gross tariff assistance, \$4.1 billion of budgetary outlays and \$5 billion in tax concessions (figure 5.1, top panel).

Estimated assistance in gross terms increased by around \$1.4 billion from 2012-13 in nominal terms (around 9 per cent). In real terms, the increase was 7 per cent.

After allowing for the negative effects of tariff assistance on industry inputs (the input tariff penalty), total estimated net combined assistance amounted to around \$9.7 billion in 2013-14, an increase of around \$1.2 billion in nominal terms (14 per cent) from 2012-13 levels (figure 5.1, bottom panel).

Net tariff assistance declined by around \$0.1 billion, while budgetary assistance increased by around 17 per cent or \$1.3 billion. Between the two years, the impost of tariffs on inputs increased by around 2 per cent or \$156 million.

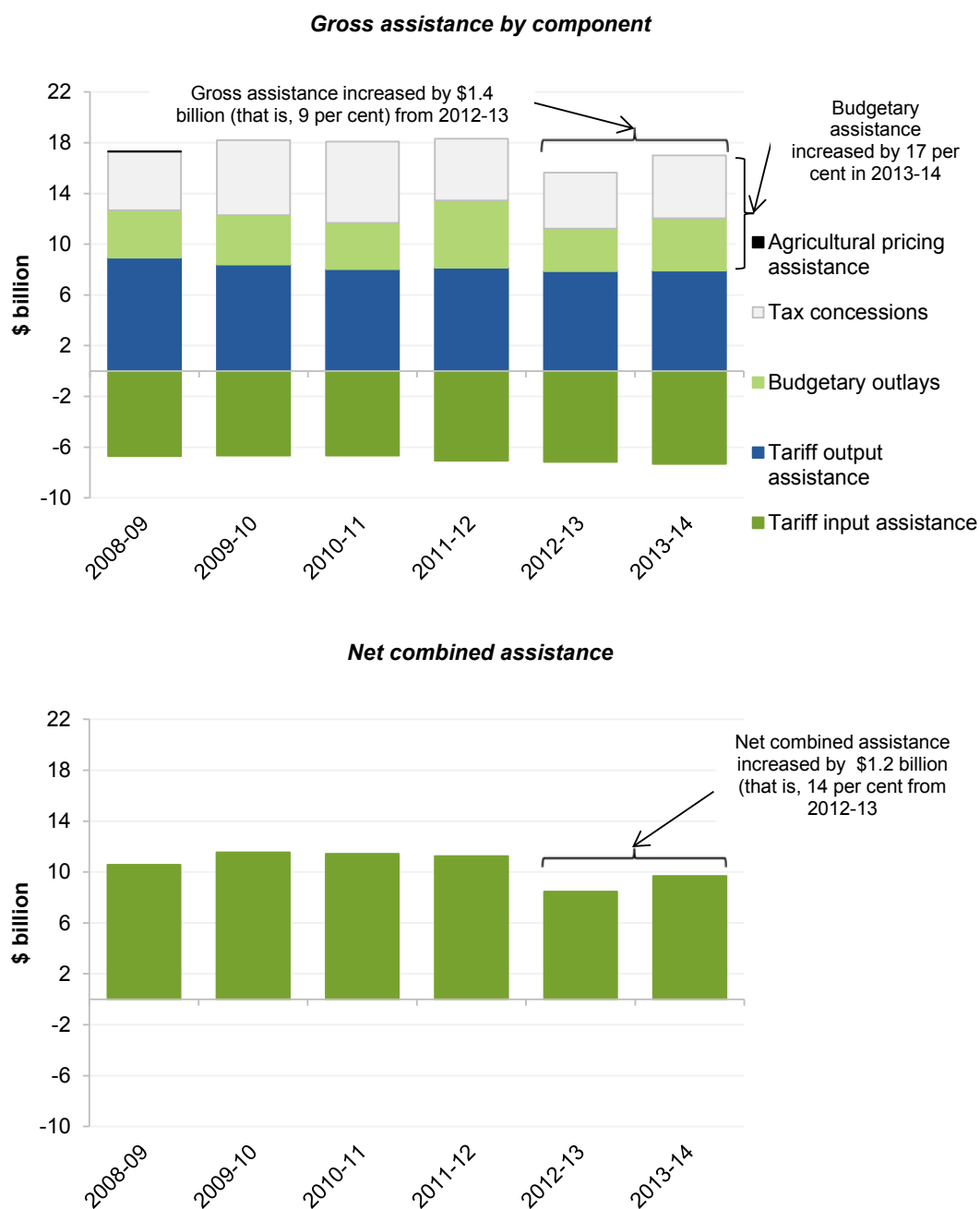
The year-to-year changes in combined assistance over the six year period 2008-09 to 2013-14 represent the net effect of changes in tariff assistance, budgetary outlays and tax concessions. The main influences on changes in tariff assistance are reductions in tariff rates and the scale of activities protected by tariffs, or bearing the cost of tariffs. Tariff output assistance has tended to decline while the tariff penalty on inputs has tended to increase in line with the growth of services, mining and other activities (see section 5.2). While the net effect of these changes is to reduce overall net tariff assistance, this estimate masks the distributional effects of assistance disparities between industries.

Value of combined assistance by industry grouping

The sectoral incidence of tariff assistance, budgetary support and the input penalty of tariffs is markedly different (figure 5.2, top panel). The manufacturing sector receives the highest level of net combined industry assistance because of the tariff assistance on its outputs (figure 5.2, bottom panel). Although the services sector receives the most budgetary assistance (around \$4.3 billion in identifiable support), such assistance is outweighed by the estimated input tariff penalty (\$4.9 billion), highlighting the overlapping and perversely countervailing nature of such assistance arrangements. The primary production sector received the majority of its assistance in the form of budgetary outlays, although some tariff protection continues to be afforded to a range of horticultural and forestry products.

Figure 5.1 **Aggregate estimates of measurable assistance, 2008-09 to 2013-14^a**

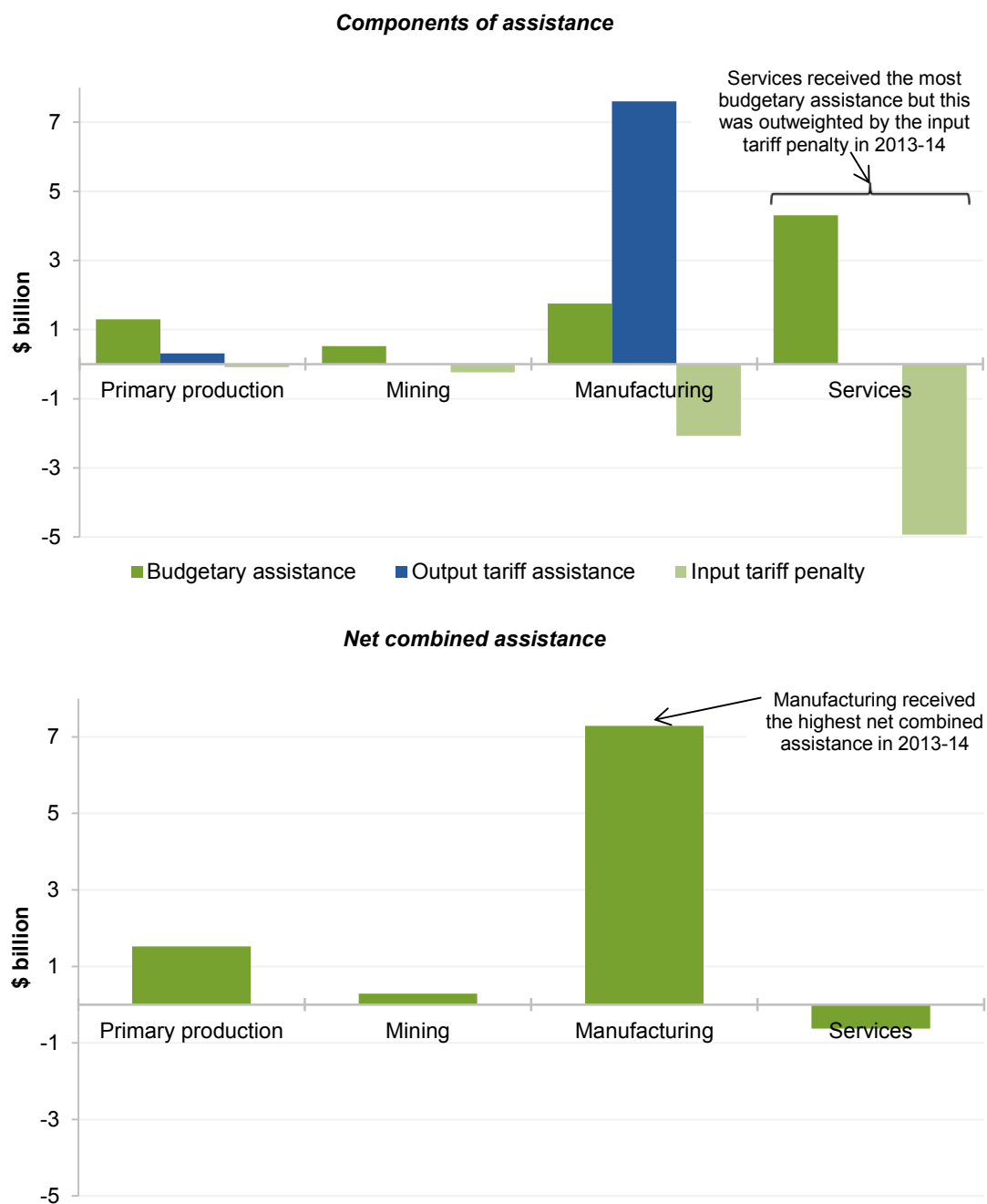
\$ billion (nominal)



^a Agricultural pricing assistance is discussed in the Methodological Annex to *Trade & Assistance Review 2011-12* (PC 2014b).

Source: Commission estimates.

Figure 5.2 Net combined assistance by industry sector, 2013-14
\$ billion (nominal)



Source: Commission estimates.

5.2 Tariff assistance

Tariffs have direct effects on the returns received by Australian producers, where over 50 per cent of merchandise trade continues to be subject to a 5 per cent general tariff on imported goods. The Commission's estimates of tariff assistance are divided into three main categories — 'output' assistance, 'input' assistance and 'net' assistance.

- Tariffs on imported goods increase the price at which those goods are sold on the Australian market and, thus, allow scope for domestic producers of competing products to increase their prices. These effects are captured by the Commission's estimates of *output assistance*.
- On the other hand, tariffs also increase the price of local and imported goods that are used as inputs and thus penalise local user industries. This 'penalty' is reduced if tariff concessions are available to Australian producers. The penalties are reflected in the Commission's estimates of *input assistance*.
- *Net tariff assistance* represents the 'effective' assistance provided through tariffs to industry, and is calculated as output tariff assistance less the input assistance, where input assistance is the cost penalty on business inputs imposed by tariffs (box 5.2).

Box 5.2 Tariff assistance to the *Petroleum, coal, chemical and rubber products* industry in 2013-14

The tariff assistance estimates are divided into three main categories, output tariff assistance, input tariff assistance (input tariff penalty) and net tariff assistance. As a practical example, the estimates for these categories are provided below for the *Petroleum, coal, chemical and rubber products* industry, together with the industries estimated value of output (\$65 billion) and value of inputs (\$49 billion) in 2013-14. (The value of outputs and inputs for the *Petroleum, coal, chemical and rubber products* industry is based on 2008-09 ABS input-output data and adjusted to current values using ABS Industry Gross Value Added at current prices).

Industry size	Value of output \$65 billion	Value of inputs \$49 billion		
Categories of tariff assistance	Output tariff assistance	Input tariff penalty	=	Net tariff assistance
Petroleum, coal, chemical and rubber products	\$0.9 billion	\$0.3 billion	=	\$0.6 billion

Source: Commission estimates.

Output assistance

The Commission estimates that the gross value of tariff assistance to domestic production was around \$7.9 billion in 2013-14, around the same level as in the previous year (table 5.1). The estimated declines in the years 2009-10 and 2010-11 mainly reflect reductions in tariffs assisting *Motor vehicles and parts*, and certain *Textiles, clothing and footwear products* in January 2010, to 5 and 10 per cent, respectively. With the reduction in certain *Textile, clothing and footwear* items to 5 per cent on 1 January 2015, assistance to outputs will decline further. The estimated decline in 2012-13 reflected lower output levels in tariff assisted activities (mainly *Metal and fabricated metal products*, and *Petroleum, coal, chemical and rubber products*). The level of tariff assistance to these activities will depend on the general rate of duty and activity levels in protected activities.

Table 5.1 Tariff assistance, 2008-09 to 2013-14^a
\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Output assistance	8936.3	8396.0	8035.5	8152.8	7871.8	7920.0
Input penalty	-6717.0	-6665.5	-6657.0	-7076.8	-7165.7	-7321.5
Net tariff assistance	2219.3	1730.5	1378.5	1076.0	706.1	598.5

^a Nominal tariff assistance estimates are derived by re-indexing a reference series based on 2008-09 ABS input-output data, using ABS Industry Gross Value Added and supporting data at current prices, for all industries except Mining. For Mining, in order to abstract from the effects of terms of trade changes, the estimates are re-indexed using the ABS Industry Gross Value Added, chain volume measures. This information is subject to periodic revision by the ABS.

Source: Commission estimates.

A component of the output assistance to industry is the value of the transfer from final consumers to local producers. Combining this transfer with the tariff revenue collected from consumers provides a measure of the Consumer Tax Equivalent of the tariff. The transfers associated with the Consumer Tax Equivalent of the tariff accrue mainly to domestic producers of assisted goods and the Australian Government through tariffs levied on imports.³⁸ The Consumer Tax Equivalent is estimated at around \$3.6 billion in 2013-14, that is, around \$155 per person. Of this total, around \$1.4 billion is estimated to have accrued to the Government as tariff revenue. Around half of this total is related to *Food, beverage and tobacco* and *Textiles, clothing leather and footwear products*.³⁹

³⁸ To the extent that eligible suppliers in bilateral and regional preferential trade agreements partner economies price up to the Australian tariff, the value of the margin of preference on imports from the partner would be appropriated by foreign suppliers (see box 5.3). To the extent that the margin of preference is passed through to domestic consumers, the estimated Consumer Tax Equivalent would be lower than estimated.

³⁹ The Consumer Tax Equivalent estimates include only the transfer from consumers and exclude any transfers from intermediate users. It is also important to note that the CTE estimates only provide an indication of the income transfers resulting from the assistance structure. They do not indicate the

Input penalty

The estimated cost penalty on inputs to user industries (including primary, manufacturing and services industries) arising from tariffs was around \$7.3 billion in 2013-14 (table 5.1). This compares with a penalty of around \$6.7 billion in 2008-09. The estimated penalty has increased in nominal terms with the general growth in the economy and rising price levels. This increase was moderated in both 2009-10 and 2010-11 by reductions in tariffs on passenger motor vehicles and parts, and textiles, clothing and footwear products in January 2010.

Net tariff assistance

After deducting the tariff input penalty from the output assistance, net tariff assistance (for the Australian economy) was estimated to be around \$0.6 billion in 2013-14, down from around \$2.2 billion in 2008-09 (table 5.1). This reflects both high relative growth in the services sector (which incurs significant tariff penalties on inputs), especially relative to the manufacturing sector (a significant beneficiary of tariff assistance), together with some reductions in tariffs applied to manufactured products.

In the Commission's tariff assistance estimates, preferences granted under Australia's preferential trading agreements are treated on the basis that domestic prices in Australia remain unchanged, that is, imports from agreement partners are priced up to the protective effect of the tariff. The underlying assumption is that there is an incentive for eligible partner exporters to price up to the domestic tariff in order to gain the margin of preference. There is also an incentive for producers to adopt higher cost production methods to meet rules of origin requirements for preferential access to partner markets (box 5.3).

While tariffs on imported goods allow scope for domestic producers of competing products to increase their prices, they also penalise local producers that use these goods as inputs, thus impeding their ability to participate in global value chains (chapter 2). Among other things, the analysis in chapter 2 on emerging trade patterns notes that the remaining 5 per cent import tariff on over 50 per cent of Australia's tariff line items effectively acts as a tax on exports. It also notes that trade liberalisation undertaken according to most favoured nation principles is more effective in enabling the efficient evolution of global value chains than the exchange of tariff and other trade preferences in bilateral and regional preferential deals.

economic welfare cost of assistance, which depends on the behavioural responses of producers and consumers, and which is best measured within a general equilibrium framework (IC 1995).

Box 5.3 **Treatment of tariff preferences in assistance estimates**

The tariff preferences provided under Australia's preferential trading agreements (PTAs) need not result in any change in prices in the domestic market and, thus, in assistance to Australian industry provided by the general (Most Favoured Nation (MFN)) tariff regime. This would be the case if producers in the partner country effectively 'pocketed' the tariff concessions, rather than reduced their prices below the prevailing (tariff-inflated) price of rival imports.

However, to the extent that tariff concessions provided by PTAs reduce the prices of imported products in the Australian market, assistance to the relevant industry's outputs would be lower than that implied by the MFN rate. At the same time though, where the price of imported inputs falls as a result of PTA preferences, the penalties (or negative assistance) on the industry's inputs will also be lower than implied by the MFN rate. Whether this leads to a net overstatement or understatement of assistance to the Australian industry in question would depend on trade patterns with the PTA partner countries, which products are subject to price reductions, and their relative magnitudes.

As the incidence of preferential agreements increases — Australia is now a partner to nine preferential trade agreements (chapter 7) — the impact of agreements on assistance to Australian industry would also depend on the eligibility of partner exporters for the preferential access to the Australian market and the level of competition between trade agreement partners in their segments of the Australian market.

Sources: PC (2004a, 2004b, 2008).

Net tariff assistance by industry sector

The estimated value of net tariff assistance for the manufacturing sector has decreased by around 14 per cent since 2008-09, largely reflecting reductions in tariff assistance to the *Textiles, clothing, footwear and leather*, and *Motor vehicles and parts* industries in January 2010 (table 5.2). The year-to-year changes are also affected by activity levels in tariff-assisted activities. At the same time, the net tariff penalty on the services sector has increased by 19 per cent (to nearly \$5 billion), reflecting growth in the use of tariff assisted manufactures as the sector has expanded (table 5.2 and figure 5.3). Similarly, the net tariff penalty on the mining sector has also increased over the period.

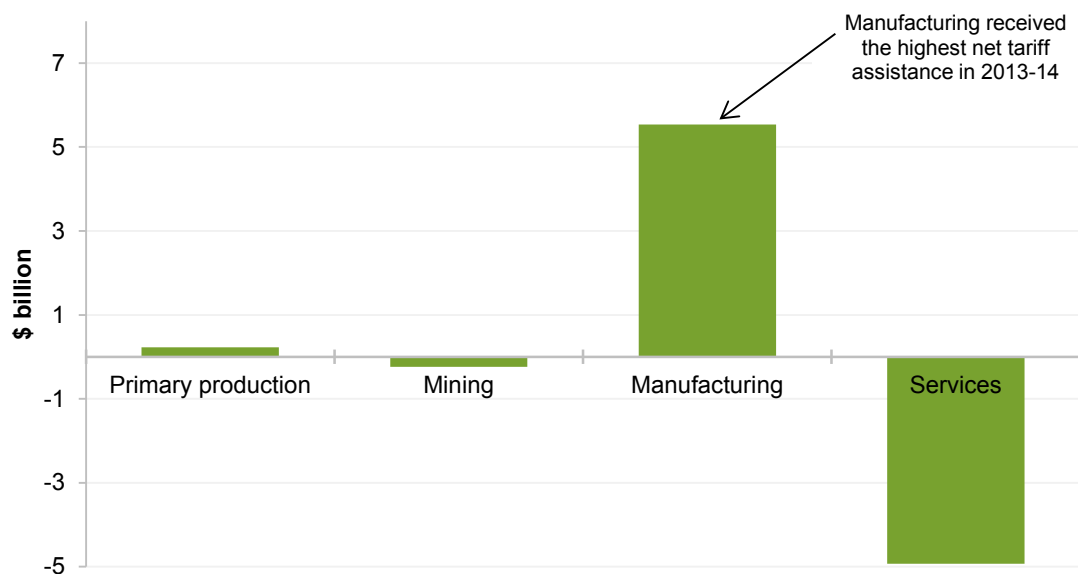
Table 5.2 Net tariff assistance by industry sector, 2008-09 to 2013-14^a
\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Primary production	125.0	142.3	136.3	130.0	171.4	228.1
Mining	-179.5	-186.9	-183.9	-197.5	-214.5	-234.9
Manufacturing	6408.8	5967.8	5699.1	5771.2	5531.3	5533.6
Services	-4135.1	-4192.6	-4273.0	-4627.7	-4782.0	-4928.3
Total	2219.3	1730.5	1378.5	1076.0	706.1	598.5

^a Nominal tariff assistance estimates are derived by re-indexing a reference series based on 2008-09 ABS input-output data, using ABS Industry Gross Value Added and supporting data at current prices for all industries except Mining. For Mining, in order to abstract from the effects of terms of trade changes, the estimates are re-indexed using the ABS Industry Gross Value Added, chain volume measures. This information is subject to periodic revision by the ABS.

Source: Commission estimates.

Figure 5.3 Net tariff assistance by industry sector, 2013-14
\$ billion (nominal)



Source: Commission estimates.

The value of tariff assistance to primary production has trended higher over the period. While there has been year-to-year changes in the value of activity in the sector, the upward trend has occurred as the *Horticulture and fruit growing* and *Forestry and logging* industries (industries that receive positive net tariff assistance) have grown more in absolute terms than other primary production industries (industries that, as a group, incur negative net tariff assistance).

Tariff assistance by industry grouping

Most tariff assistance, by value, on outputs is directed towards the manufacturing sector, and in particular the *Food, beverages and tobacco* (\$1.9 billion), *Metal and fabricated metal products* (\$1.7 billion), *Petroleum, coal, chemical and rubber products* (\$0.9 billion), and *Motor vehicles and parts* (\$0.8 billion) industry groups (table 5.3, left hand column).

Mining and primary production industries receive little tariff assistance on outputs, and tariffs are not levied on services. On the other hand, tariffs impose input-cost penalties on all industries (because of their cost-raising effects on inputs) (table 5.3, middle column). Around two thirds of the input penalty on tariffs is incurred by services industries.

All manufacturing industries are estimated to receive positive net tariff assistance, as the value of tariff assistance on outputs outweighs the cost impost of tariffs on inputs for each industry group (table 5.3, right hand column).

Outside the manufacturing sector, the *Horticulture and fruit growing* and *Forestry and logging* industries are also estimated to have received positive net tariff assistance in 2013-14. This reflects the incidence of the 5 per cent general tariff on certain imports such as grapes and softwood conifers which affords protection to local producers of these import competing products.

The *Mining* industry together with all of the services industries (and most primary production industries) incurred negative net tariff assistance in 2013-14.

Table 5.3 Tariff assistance by industry grouping, 2013-14^{a,b}

\$ million (nominal)

<i>Industry grouping</i>	<i>Output assistance</i>	<i>Input cost penalty</i>	<i>Net tariff assistance</i>
Primary production	314.4	-86.3	228.1
Horticulture and fruit growing	251.1	-13.7	237.4
Sheep, beef cattle and grain farming	0.2	-16.0	-15.8
Other crop growing	2.4	-4.6	-2.2
Dairy cattle farming	—	-2.7	-2.7
Other livestock farming	—	-4.4	-4.4
Aquaculture and fishing	1.0	-14.9	-14.0
Forestry and logging	59.8	-11.8	47.9
Primary production support services	0.0	-18.1	-18.1
Unallocated primary production	—	—	—
Mining	1.1	-236.0	-234.9
Manufacturing	7604.5	-2070.9	5533.6
Food, beverages and tobacco	1873.6	-532.8	1340.8
Textiles, leather, clothing and footwear	328.4	-67.1	261.4
Wood and paper products	631.8	-128.0	503.8
Printing and recorded media	188.1	-30.5	157.6
Petroleum, coal, chemical and rubber products	902.8	-263.7	639.1
Non-metallic mineral products	275.8	-47.3	228.5
Metal and fabricated metal products	1723.1	-409.2	1314.0
Motor vehicles and parts	802.4	-295.5	506.9
Other transport equipment	74.2	-66.2	8.0
Machinery and equipment manufacturing	603.3	-181.8	421.5
Furniture and other manufacturing	201.0	-49.0	152.0
Unallocated manufacturing	—	—	—
Services	—	-4928.3	-4928.3
Electricity, gas, water and waste services	—	-93.8	-93.8
Construction	—	-1804.9	-1804.9
Wholesale trade	—	-262.0	-262.0
Retail trade	—	-191.3	-191.3
Accommodation and food services	—	-543.8	-543.8
Transport, postal and warehousing	—	-216.1	-216.1
Information, media and telecommunications	—	-151.0	-151.0
Financial and insurance services	—	-10.5	-10.5
Property, professional and admin. services	—	-637.2	-637.2
Public administration and safety	—	-228.2	-228.2
Education and training	—	-126.8	-126.8
Health care and social assistance	—	-281.6	-281.6
Arts and recreation services	—	-82.7	-82.7
Other services	—	-298.5	-298.5
Unallocated services	—	—	—
Unallocated other	—	—	—
Total	7920.0	-7321.5	598.5

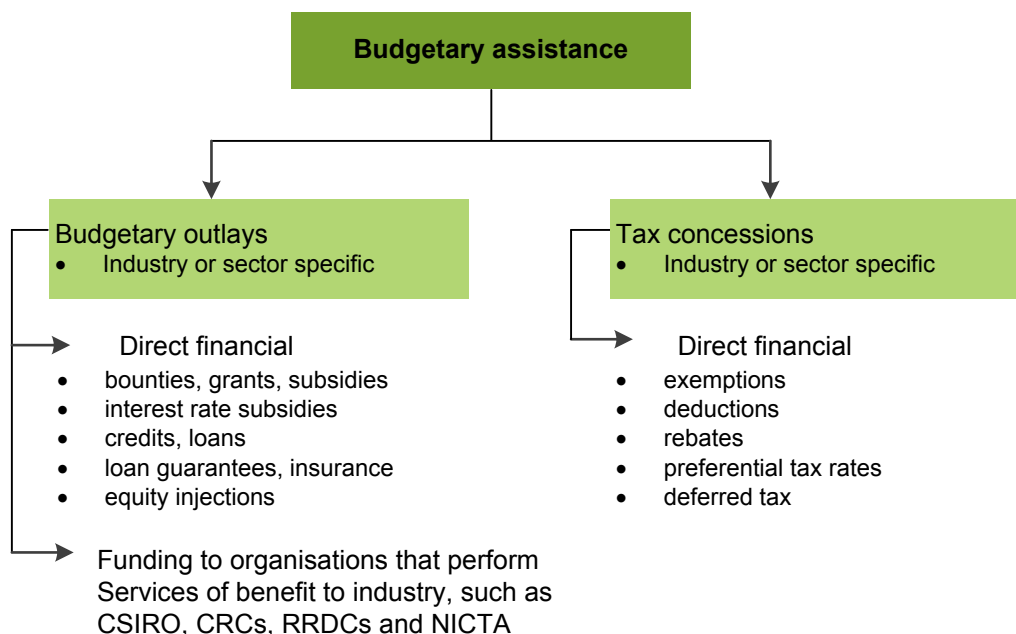
— Nil. ^a See footnote (a) in table 5.1. ^b Totals may not add due to rounding.

Source: Commission estimates.

5.3 Australian Government budgetary assistance

Budgetary assistance includes actual payments (outlays) and industry- and sector-specific tax concessions that have industry policy objectives (figure 5.4). Some measures provide assistance directly to firms, such as the Automotive Transformation Scheme (\$333 million in 2013-14) and taxation concessions on R&D expenditures (\$1.8 billion in 2013-14), while other budgetary support measures deliver benefits indirectly to an industry via intermediate organisations such as the Rural Research and Development Corporations (\$263 million in 2013-14) and the CSIRO (\$492 million in 2013-14).⁴⁰

Figure 5.4 **Forms of budgetary assistance**



The budgetary assistance estimates are derived primarily from actual expenditures shown in departmental and agency annual reports, and the Tax Expenditures Statement (TES) compiled by the Australian Treasury. Industry and sectoral disaggregations are based primarily on supplementary information provided by relevant departments or agencies.

In addition to Australian Government budgetary assistance to industry, State and Territory governments also provide budgetary assistance to industry. As part of the 2008-09 Review, the Commission undertook a detailed study of State and Territory government assistance measures. Among other things, this study found that in 2008-09 State and Territory government expended around \$4.1 billion on programs and services that provided

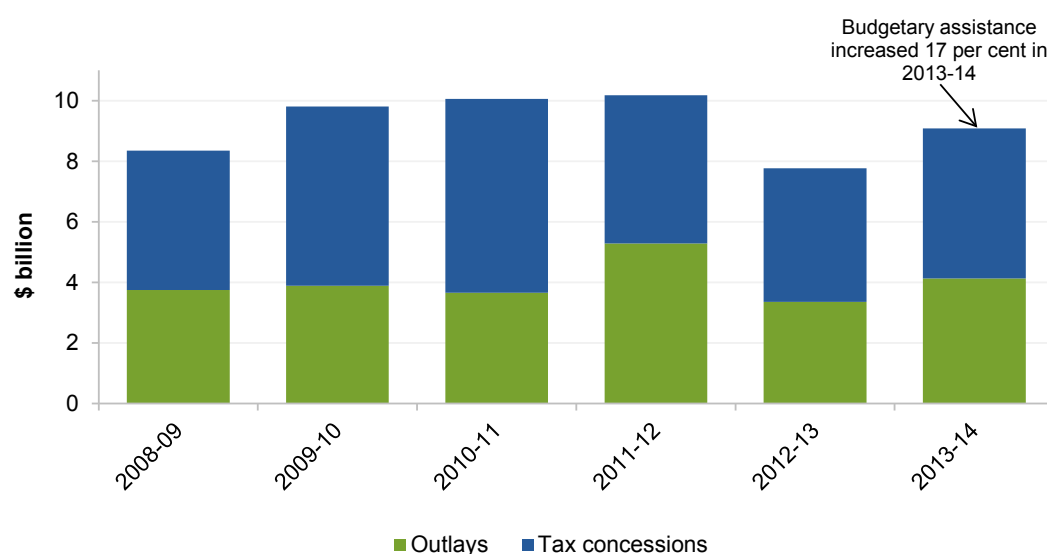
⁴⁰ The Commission's assistance estimates do not include the full government appropriation for CSIRO. Excluded are certain public research such as environmental R&D, some renewable energy R&D and general research towards expanding knowledge in various fields.

assistance to industry. This equated to around \$184 per person. Programs relating to primary industries and resources accounted for around 60 per cent of estimated industry assistance with a significant proportion of this expenditure for Rural R&D support. In addition, there was state government drought support, including interest rate and transport subsidies, of over \$170 million. Around a third of expenditure on industry programs was also paid in grants and subsidies or used in the provision of other direct support to industry such as marketing and promotion (PC 2011a).

Aggregate budgetary assistance

The estimated gross value of budgetary assistance to Australian industry was around \$9.1 billion in 2013-14,⁴¹ 17 per cent higher than 2012-13 in nominal terms (figure 5.5). In real terms, this represents an increase of 15 per cent since 2012-13, although from 2008-09 there has been a net decline in the real, inflation adjusted, level of assistance of 2 per cent.

Figure 5.5 Budgetary assistance to industry, 2008-09 to 2013-14
\$ billion (nominal)



Sources: Australian Government Budget and related papers (various years); departmental annual reports (various years); Australian Government (2015a); Commission estimates.

⁴¹ The Australian Treasury estimated (in the TES) the value of exempting certain emissions activities from the carbon pricing mechanism to be around \$3.8 billion in 2013-14. These principally relate to agriculture and deforestation. These 'concessions' have not been incorporated into the assistance estimates, nor has the 'tax' effect of the carbon pricing mechanism on other activities. Treasury note that the value of exemptions will fall to zero from 1 July 2014, consistent with the revised carbon pricing arrangement applying from that time.

The main reasons for the increase in aggregate budgetary assistance from 2012-13 to 2013-14 are:

- an increase of around \$1.5 billion in assistance afforded by the Small Business Simplified Depreciation Rules scheme to enable small businesses to access concessional depreciation arrangements for business assets⁴²
- around \$200 million in additional assistance provided through the Australian Renewable Energy Agency to fund a broad range of both commercial and R&D projects in Bioenergy, Geothermal power, Hydropower and Solar energy
- an increase of around \$88 million in assistance afforded through the Carbon Capture and Storage Flagships Program to support the construction and demonstration of large-scale integrated carbon capture and storage projects in Australia.

Partially offsetting these increases were decreases in budgetary assistance between 2012-13 to 2013-14, including:

- a decrease of around \$220 million in assistance afforded by the Small Business and General Business Tax Break scheme, as this tax break applies only to eligible assets purchased before 31 December 2009
- a decrease of \$200 million in assistance afforded by the 25 per cent Entrepreneurs' Tax Offset scheme following the cessation of the scheme beyond the 2011-12 income year
- a decrease of around \$155 million afforded through the Rebate for Broadcasting Licence Fees scheme following the ending of the rebate.

The estimated level and composition of budgetary assistance is also affected by program redesign. For example, the estimated assistance afforded by the (new) R&D Tax Incentive scheme increased by around \$440 million from 2012-13 to 2013-14, although this was largely offset by a decrease in assistance of around \$400 million afforded by the scheme that replaced the R&D Tax Concession and Premium R&D Tax Concession schemes.

Unquantified tax concessions

Not all tax concessions affording assistance to industry are quantified in the Treasury's annual TES. In cases where quantification is not practicable, the TES generally provides indicative ranges within which the value of the concession may fall. The 2013 TES identifies 50 business income tax measures which involve 'differential' tax treatment from the 'norm', some which may be considered industry assistance such as tax write-offs for horticulture plants, and tax deductions for horse breeding stock.

⁴² The Small Business Simplified Depreciation Rules scheme is an accelerated asset write-off scheme enabling small business entities with an aggregated annual turnover of less than \$2 million to access concessional depreciation arrangements for business assets.

Activities targeted

Budgetary assistance is often designed to encourage particular activities (such as R&D or exports) or to support particular firms, industries or sectors. To provide an indication of the distribution of assistance among activities and to facilitate more detailed assessments of changes in the composition and nature of assistance, the Commission categorises its estimates of Australian Government budgetary assistance into:

- *R&D* measures, including that undertaken by CSIRO, Cooperative Research Centres and rural R&D corporations, as well as R&D taxation concessions⁴³
- *Export* measures, including through Export Market Development Grants, import duty drawback, TRADEX and Austrade
- *Investment* measures, including development allowances and several former investment attraction packages
- *Industry-specific* measures, including the Automotive Transformation Scheme, the Clothing and Household Textile Building Innovative Capability Program, Film industry offsets scheme and the Offshore Banking Unit Taxation Concession
- *Sector-wide* measures, such as ‘exceptional circumstances’ drought relief payments and the tax concessions under the Farm Management Deposits Scheme, in the case of the primary sector
- *Small business* programs, such as the Small Business and General Business Tax Break, the small business capital gains tax concessions, the 25 per cent Entrepreneurs’ Tax Offset and the Small Business Advisory Services Program
- *Regional* assistance, including the Tasmanian Freight Equalisation Scheme, Bass Strait Passenger Vehicle Equalisation Scheme and various structural adjustment programs with a regional focus
- a residual ‘*Other*’ category, including the Textiles, Leather, Clothing and Footwear Corporate Wear Program, the Pooled Development Funds initiative, and the Enterprise Connect Innovation Centres Initiative.

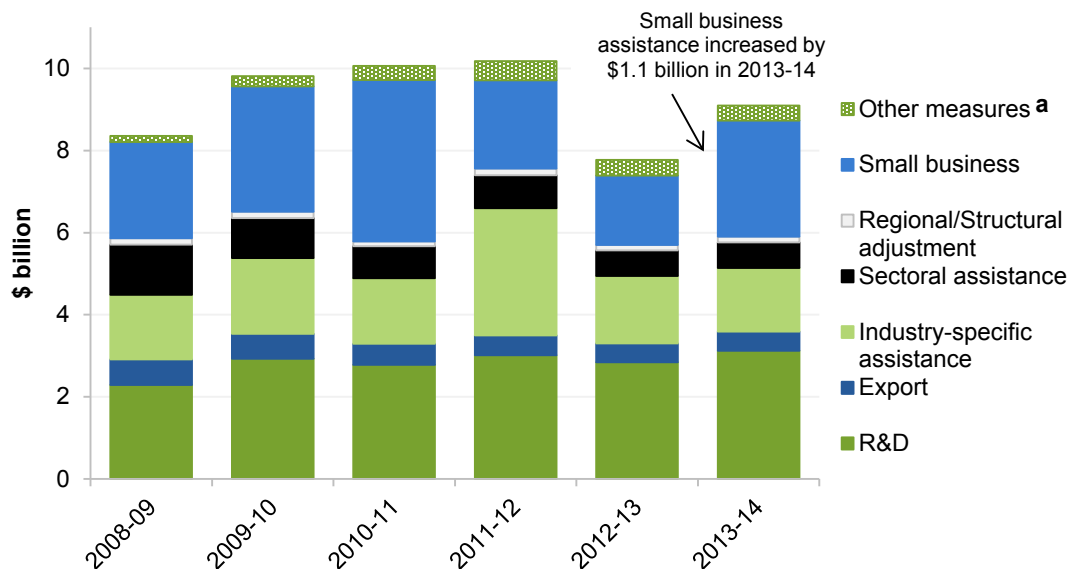
The majority of budgetary assistance in 2013-14 was directed to:

- R&D (34 per cent) — including \$492 million for CSIRO research with most assistance going to the primary production sector (\$154 million), with over half of this allocated to the *Sheep, beef cattle and grain farming* industry) followed by the services sector (\$137 million), and \$112 million for the Cooperative Research Centres program where over half was directed towards services

⁴³ The Commission’s assistance estimates do not include the full government appropriation for CSIRO and Cooperative Research Centres. Excluded are certain public research such as environmental R&D, some renewable energy R&D and general research towards expanding knowledge in various fields. This is discussed in more detail in the Commission’s methodological annex to *Trade & Assistance Review 2011-12*.

- small business (31 per cent) — including \$1.4 billion for the Small Business Simplified Depreciation Rules scheme, where over 80 per cent of the concession is directed towards the services sector with the *Property, professional and administrative services* industry being the single largest recipient (\$379 million)
- specific industries (17 per cent) — including \$333 million for the Automotive Transformation Scheme (allocated to *Motor vehicles and parts*), \$252 million for the Film industry offsets scheme (allocated to *Arts and recreation services*), \$185 million for the Offshore Banking Unit Tax Concession (allocated to *Financial and insurance services*) and \$102 million for the Ethanol production subsidy (allocated to *Petroleum, coal, chemical and rubber products*) (figure 5.6).

Figure 5.6 Budgetary assistance by category, 2008-09 to 2013-14
\$ billion (nominal)



^a Includes investment measures.

Source: Commission estimates.

This compares with a distribution of budgetary assistance comprised of R&D (27 per cent), specific industries (19 per cent) and small business (28 per cent) in 2008-09. As would be expected, the detailed composition has been subject to change over the period 2008-09 to 2013-14. For example, the main taxation concession arrangements supporting R&D was referred to as the R&D Tax Concession and Premium R&D Tax Concession. These schemes ended in 2011 and were replaced by the R&D Tax Incentive. In 2008-09, the flagship program supporting the motor vehicle industry was the Automotive Competitiveness and Investment Scheme (ACIS). This scheme was closed in 2010 when it was replaced by the Automotive Transformation Scheme (ATS). Appendix A provides expenditure details by program for the years 2008-09 to 2013-14.

Over the six year period 2008-09 to 2013-14, changes in the shares of budgetary assistance to different activities are largely accounted for by:

- significant increases in concessions under the Small Business and General Business Tax Break up to 2010-11 followed by sharp decreases in 2011-12 and 2012-13
- an overall reduction in assistance from drought related programs over the period to 2012-13 following an easing in drought conditions, although in February 2014 the Government announced an expanded drought assistance package leading to an increase in drought related assistance in 2013-14⁴⁴
- a significant increase in transitional assistance in relation to the carbon pricing mechanism in 2011-12 and its subsequent winding down in 2012-13
- a gradual increase in funding for R&D activities over the period
- a significant increase in concessions provided under the Small Business Depreciation Rules scheme in 2013-14.

Some caution is required when interpreting these shares. While assistance programs have been allocated to the industry to which the assistance first accrues based on the nature of the support and main activities assessed as receiving that support (the ‘initial benefiting industry’), some have characteristics that relate to more than one category. For example, the R&D category includes rural R&D, which could also be considered sector-specific as it relates to agriculture or agricultural product processing activities.

Carbon emission reduction measures

A number of budgetary measures included in the estimates relate to carbon emissions reduction, designated renewable energy and energy supply and use goals. These measures support a range of activities that span R&D, industry-specific, sector-specific and other measures. The measures amounted to around \$750 million (8 per cent) of estimated budgetary assistance in 2013-14, about \$425 million higher than in 2012-13.

Sectoral and industry distribution

The Commission records the incidence of budgetary assistance by the initial benefiting industry. Estimates are presented for 34 industry groupings, while four ‘unallocated’ categories are used for programs for which it has not been possible to confidently identify the initial benefiting industry or sector from primary information provided.

⁴⁴ Australian Government funding under the Exceptional Circumstances program (both relief payments and interest rate subsidies) declined from a peak of \$779 million in 2008-09 to around \$1.6 million in 2012-13. In February 2014, the Australian Government announced a \$320 million drought assistance package including, among other things, \$280 million towards drought concessional loans and ‘more generous’ criteria for accessing income support through the Farm Household Allowance (see chapter 6).

In 2013-14, as measured by the Commission, most budgetary assistance was afforded through *outlays* for the primary production, mining and manufacturing sectors while for services, the majority of budgetary assistance was provided through *tax concessions*.

In 2013-14, the services sector is estimated to have received around 47 per cent of estimated budgetary assistance — down from around 42 per cent in 2008-09 (figure 5.7). The manufacturing and primary production sectors, which together contribute about 9 per cent of economy-wide value-added, received around one third of total estimated budgetary assistance in 2013-14, while the mining sector received relatively little measured budgetary assistance. While it has been practicable to assign an initial benefiting industry to over 85 per cent of budgetary assistance, the proportion not assigned to a benefiting industry has increased since 2008-09.

The three industry groups receiving the largest levels of budgetary assistance accounted for over a quarter of estimated budgetary assistance to industry in 2013-14 (table 5.4).

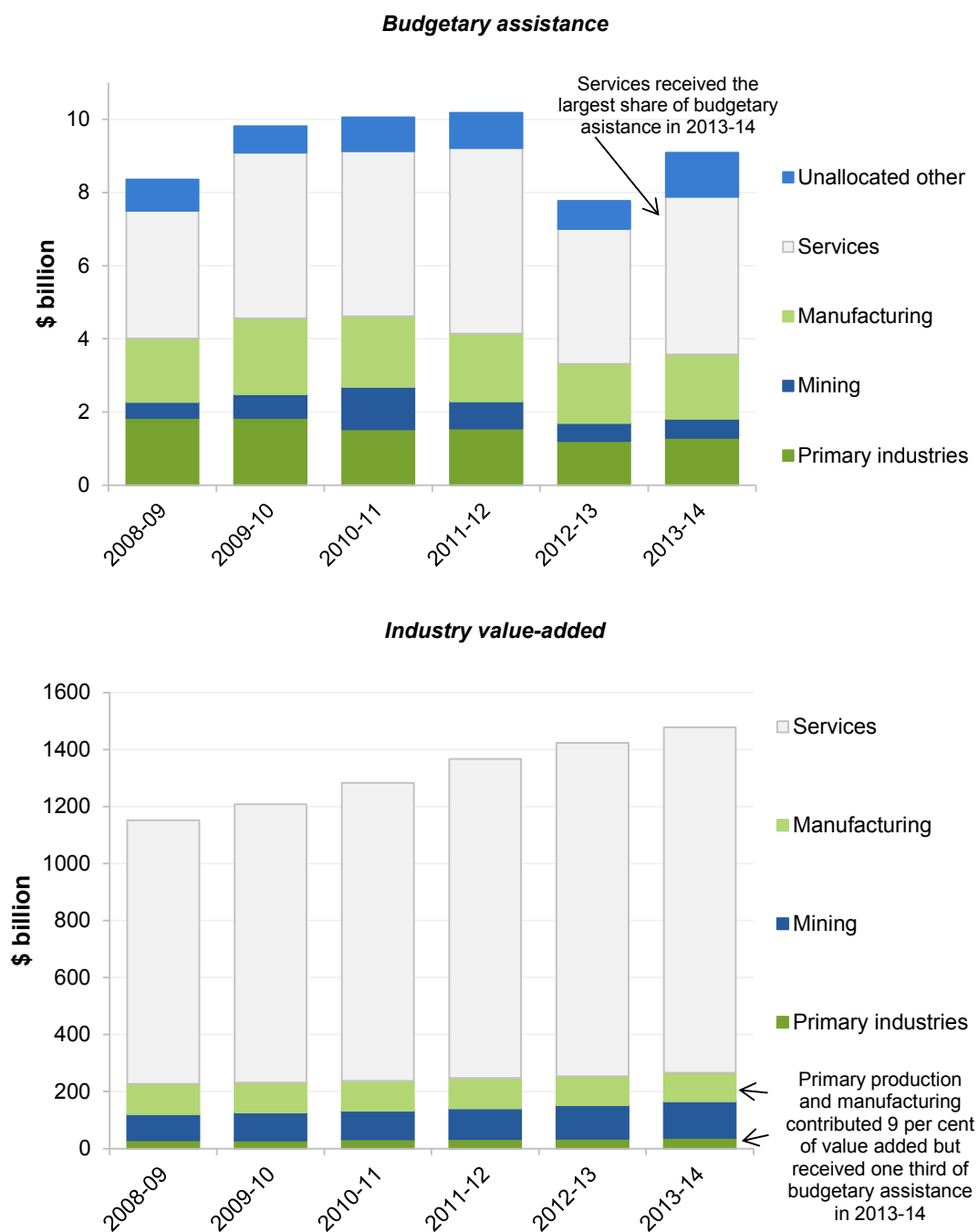
- Budgetary assistance was highest for the *Property, professional and administrative services* industry (\$979 million) consisting mainly of the R&D Tax Incentive scheme and Small Business Simplified Depreciation Rules scheme.
- *Financial and insurance services* was the next highest recipient (\$960 million), including through the R&D Tax Incentive scheme, the Offshore Banking Unit Taxation Concession and the Concessional Rate of Withholding Tax Concession.⁴⁵
- *Sheep, beef cattle and grain farming* accounted for \$609 million, mainly in the form of R&D Tax Incentive scheme and assistance indirectly provided through the CSIRO.

Although *Motor vehicles and parts* received the seventh highest level of support, accounting for \$392 million in budgetary assistance in 2013-14, it has the highest effective rate of assistance of all industry groups because of the relatively high level of assistance relative to the scale of operations (see below). The announced withdrawal of motor vehicle manufacturing in Australia, will result in a consequential reduction in the level of assistance, with any remaining assistance likely to focus on transitional support (such as through the Automotive Diversification Programme for which \$18 million is provisioned over the years 2014-15 to 2017-18 (Department of Industry and Science 2014b)).

Budgetary assistance not assigned to an industry sector is reported in the *Unallocated other* category. That assistance accounted for around 13 per cent of total estimated budgetary assistance in 2013-14. The small business capital gains tax concession programs (\$755 million), for which industry allocation data is currently not available through taxation.

⁴⁵ Taxation concessions on retirement savings associated with Australia's compulsory superannuation arrangements, while providing incidental benefits to the finance sector as the provider of financial services, are not included in the Commission's assistance estimates.

Figure 5.7 Budgetary assistance and value-added shares by industry sector, 2008-09 to 2013-14
\$ billion (nominal)



Source: ABS (2014), Commission estimates.

Table 5.4 Budgetary assistance by industry grouping, 2013-14
\$ million (nominal)

	<i>Outlays</i>	<i>Tax concessions</i>	<i>Total budgetary assistance</i>
Primary production	765.9	530.1	1295.9
Horticulture and fruit growing	74.6	57.7	132.3
Sheep, beef cattle and grain farming	273.3	335.8	609.1
Other crop growing	51.3	30.4	81.7
Dairy cattle farming	34.4	29.3	63.7
Other livestock farming	23.7	20.0	43.6
Aquaculture and fishing ^a	51.9	13.1	65.0
Forestry and logging	14.5	17.0	31.5
Primary production support services	4.9	24.1	29.0
Unallocated primary production ^b	237.3	2.7	240.0
Mining	265.8	254.9	520.7
Manufacturing	1119.1	636.6	1755.7
Food, beverages and tobacco	89.8	44.9	134.7
Textiles, leather, clothing and footwear	51.8	12.2	64.0
Wood and paper products	11.4	11.2	22.6
Printing and recorded media	7.1	12.0	19.1
Petroleum, coal, chemical and rubber products	260.7	37.6	298.3
Non-metallic mineral products	26.7	5.2	31.9
Metal and fabricated metal products	52.5	372.6	425.1
Motor vehicles and parts	358.2	34.3	392.5
Other transport equipment	14.8	4.4	19.2
Machinery and equipment manufacturing	95.9	25.3	121.2
Furniture and other manufacturing	20.5	8.6	29.1
Unallocated manufacturing ^b	129.8	68.2	198.0
Services	1544.4	2760.7	4305.2
Electricity, gas, water and waste services	201.1	29.3	230.4
Construction	31.1	311.3	342.4
Wholesale trade	45.5	113.7	159.2
Retail trade	18.5	150.4	169.0
Accommodation and food services	4.9	119.5	124.4
Transport, postal and warehousing	49.8	135.9	185.7
Information, media and telecommunications	122.8	25.7	148.5
Financial and insurance services	192.6	767.9	960.5
Property, professional and admin. services	430.0	549.0	979.0
Public administration and safety	6.5	7.2	13.8
Education and training	15.6	21.4	36.9
Health care and social assistance	123.9	116.6	240.5
Arts and recreation services	125.6	327.0	452.6
Other services	19.7	85.8	105.5
Unallocated services ^b	156.8	—	156.8
Unallocated other^b	437.4	773.5	1211.0
Total	4132.6	4955.8	9088.4

— Nil. ^a Aquaculture and fishing includes *Hunting and trapping*. ^b Unallocated includes programs for which details of the initial benefiting industry cannot be readily identified.

Source: Commission estimates.

statistics, accounts for around 60 per cent of the category. Other budgetary assistance not classified to industry included the Australia Centre for Renewable Energy, Austrade and the TCF Corporate Wear Program.⁴⁶

5.4 Combined assistance and effective rates of assistance

This section presents the results for combined tariff, budgetary and agricultural pricing assistance by industry group. Combined assistance is reported in terms of the net value of assistance and its components (reported for broad industries in figure 5.1) and the effective rate of assistance (box 5.4).

Box 5.4 Summary measures of combined assistance

In reporting on its estimates of net combined assistance, the Commission adopts two summary measures.

- First, it reports total net assistance (also referred to in assistance methodologies as the net subsidy equivalent (NSE)), which is the dollar value of net assistance to the land, labour and capital resources used in a particular industry or activity. It indicates the level of transfers of income to benefiting producers from consumers, taxpayers and other firms. NSE estimates are reported for the four broad industry sectors and 34 industry groupings.
- The second summary measure is the effective rate of assistance (ERA). It measures the NSE of combined assistance to a particular industry in proportion to that industry's unassisted net output (value added). It provides an indication of the extent to which assistance to an industry enables it to attract and hold economic resources relative to other sectors. That is, where there is some competition between industries for resources, those industries with relatively high effective rates of assistance are more likely, as a result of their assistance, to be able to attract resources away from those with lower rates of effective assistance. ERA estimates are reported for industries in the primary production, mining and manufacturing sectors. Effective rates of assistance are not separately published for the services sector. In line with the 'Corden' method for estimating effective assistance, services are treated as not directly traded but as contributing to value-added inputs of the merchandise traded-goods sectors.

These measures, and the treatment of services, are discussed in more detail in the Commission's Methodological Annex to *Trade & Assistance Review 2011-12* (PC 2014b).

⁴⁶ Up to 2009-10, Austrade provided the Commission with information on the industry incidence of Austrade appropriation funding. This information indicated that around two thirds of Austrade funding was directed towards the services sector, 20 per cent to manufacturing and the remainder split equally between primary production and mining. Austrade, however, modified the way it allocated its resources to a market or geography basis that does not support the provision of information according to industry.

Combined assistance by industry grouping

Table 5.5 summarises, at the industry level, tariff and budgetary assistance for 2013-14. Reflecting the earlier summary discussion and the discussion on individual elements of assistance, the manufacturing division receives the highest level of net combined assistance because of tariff assistance on its outputs. Although services industries receive most budgetary assistance (around 4.3 billion in identifiable support), such assistance is outweighed by the estimated input tariff penalty (around \$4.9 billion). The primary production division received the majority of support from budgetary assistance, although some tariff protection continues to be afforded to a range of horticultural, crop and forestry products. By value, the highest level of combined assistance is afforded to the manufacturing industries *Food, beverages and tobacco* and *Metal and fabricated products* industries mainly due to tariff assistance, while the highest tariff penalty on inputs is born by the *Construction* and *Property, professional and administration* industries. A time series of net combined assistance (table 5.5, right hand column) by industry grouping for the period 2008-09 to 2013-14 is presented in appendix A.

Table 5.5 Combined assistance by industry grouping, 2013-14^a
\$ million (nominal)

	Tariffs		Net tariff assistance	Budgetary		Net combined assistance
	Output	Input penalty		Outlays	Tax concess.	
Primary production	314.4	-86.3	228.1	765.9	530.1	1524.0
Horticulture and fruit growing	251.1	-13.7	237.4	74.6	57.7	369.7
Sheep, cattle and grain farming	0.2	-16.0	-15.8	273.3	335.8	593.3
Other crop growing	2.4	-4.6	-2.2	51.3	30.4	79.5
Dairy cattle farming	—	-2.7	-2.7	34.4	29.3	61.0
Other livestock farming	—	-4.4	-4.4	23.7	20.0	39.2
Aquaculture and fishing	1.0	-14.9	-14.0	51.9	13.1	51.0
Forestry and logging	59.8	-11.8	47.9	14.5	17.0	79.5
Primary production services	—	-18.1	-18.1	4.9	24.1	10.9
Unallocated primary production	—	—	—	237.3	2.7	240.0
Mining	1.1	-236.0	-234.9	265.8	254.9	285.7
Manufacturing	7604.5	-2070.9	5533.6	1119.1	636.6	7289.3
Food, beverages and tobacco	1873.6	-532.8	1340.8	89.8	44.9	1475.5
Textiles, clothing and footwear	328.4	-67.1	261.4	51.8	12.2	325.4
Wood and paper products	631.8	-128.0	503.8	11.4	11.2	526.4
Printing and recorded media	188.1	-30.5	157.6	7.1	12.0	176.8
Petroleum, coal and chemicals	902.8	-263.7	639.1	260.7	37.6	937.4
Non-metallic mineral products	275.8	-47.3	228.5	26.7	5.2	260.4
Metal and fabricated products	1723.1	-409.2	1314.0	52.5	372.6	1739.0
Motor vehicles and parts	802.4	-295.5	506.9	358.2	34.3	899.4
Other transport equipment	74.2	-66.2	8.0	14.8	4.4	27.3
Machinery and equipment	603.3	-181.8	421.5	95.9	25.3	542.7
Furniture and other products	201.0	-49.0	152.0	20.5	8.6	181.2
Unallocated manufacturing	—	—	—	129.8	68.2	198.0
Services	—	-4928.3	-4928.3	1544.4	2760.7	-623.2
Electricity, gas, water and waste	—	-93.8	-93.8	201.1	29.3	136.6
Construction	—	-1804.9	-1804.9	31.1	311.3	-1462.5
Wholesale trade	—	-262.0	-262.0	45.5	113.7	-102.9
Retail trade	—	-191.3	-191.3	18.5	150.4	-22.4
Accommodation & food services	—	-543.8	-543.8	4.9	119.5	-419.4
Transport, postal & warehousing	—	-216.1	-216.1	49.8	135.9	-30.4
Information & communications	—	-151.0	-151.0	122.8	25.7	-2.5
Financial & insurance services	—	-10.5	-10.5	192.6	767.9	950.0
Property, professional & admin.	—	-637.2	-637.2	430.0	549.0	341.9
Public administration and safety	—	-228.2	-228.2	6.5	7.2	-214.4
Education and training	—	-126.8	-126.8	15.6	21.4	-89.8
Health care & social assistance	—	-281.6	-281.6	123.9	116.6	-41.1
Arts and recreation services	—	-82.7	-82.7	125.6	327.0	370.0
Other services	—	-298.5	-298.5	19.7	85.8	-193.0
Unallocated services	—	—	—	156.8	0.0	156.8
Unallocated other	—	—	—	437.4	773.5	1211.0
Total	7920.0	-7321.5	598.5	4132.6	4955.8	9686.9

— Nil.^a Read in conjunction with notes to tables 5.1 and 5.4.

Source: Commission estimates.

Estimated effective rates of combined assistance by industry grouping

As noted, the effective rate of assistance (ERA) measures the net combined assistance to a particular industry in proportion to that industry's unassisted net output (value added). It provides an indication of the extent to which assistance to an industry enables it to attract and hold economic resources relative to other sectors.

For the manufacturing sector, the estimated effective rate of assistance was 4.3 per cent in 2013-14, in line with the estimate for previous years (table 5.6). The effective rate for the primary sector in 2013-14 was 2.8 per cent, down from 4.7 per cent in 2008-09 — largely reflecting the decline in assistance afforded through drought relief to 2012-13 following the easing of drought conditions. The fractional increase in the effective rate of assistance to primary production from 2012-13 was mainly due to an increase in effective assistance to *Sheep, cattle and grain farming* which outweighed the decline for *Forestry and logging* (discussed below).⁴⁷ The estimated effective rate of assistance from tariff and budgetary assistance for *Mining* is negligible.

Textiles, leather, clothing and footwear and Motor vehicles and parts

The *Textiles, leather, clothing and footwear* and *Motor vehicles and parts* industry groupings continue to have higher effective rates of combined assistance than other manufacturing activities, 8 per cent and 8.4 per cent, respectively. While remaining relatively high, the estimated effective rates of assistance to both industry groups have declined significantly over recent decades following substantial reductions in tariff rates and the removal of import quotas.⁴⁸ Effective rates of assistance for these industries have also declined significantly since 2008-09, from 13.8 per cent and 13.1 per cent, respectively, following the legislated tariff cuts in January 2010 and net reductions in budgetary assistance following the closure of the Automotive Competitiveness and Investment Scheme and introduction of the less generous Automotive Transformation Scheme in 2010-11.

⁴⁷ For the primary production and mining sectors, fuel tax credits (formerly known as the diesel fuel rebate) are not included in the Commission's assistance estimates. Certain differential tax arrangements including in relation to excise taxes, the GST and superannuation, while potentially having assistance implications, are not also included in the Commission's assistance estimates. These arrangements are considered part of the broader taxation system which falls outside the coverage of the Commission's estimates. In this context, as the fuel tax credits (to primary production, mining and other off-road users) are effectively rebates of the excise tax, it has not been included in the assistance estimates. Revenue raised from the earlier fuel excise taxes were regarded as a cost recovery tax as they were hypothecated to road construction (Treasury 2001).

⁴⁸ In the 1980s, tariffs on motor vehicles were 45 per cent and the highest estimated tariff rate for any one textiles, leather, clothing and footwear line item (inclusive of the effect of tariff quotas) was 125 per cent. The effective rates of assistance for the *Motor vehicles and parts* industry and *Textiles, leather, clothing and footwear* industry was 140 per cent and 157 per cent, respectively, in 1984-85 (PC 2000).

Table 5.6 Effective rate of combined assistance by industry grouping, 2008-09 to 2013-14^a
per cent

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Primary production^b	4.7	4.8	3.6	3.4	2.7	2.8
Horticulture and fruit growing	4.4	3.5	3.0	2.8	2.7	2.8
Sheep, cattle and grain farming	6.3	6.6	4.2	3.2	2.7	3.2
Other crop growing	2.0	2.2	1.1	2.0	1.9	1.7
Dairy cattle farming	4.5	6.6	4.0	4.4	2.1	1.9
Other livestock farming	1.2	1.3	1.0	1.5	0.9	0.9
Aquaculture and fishing	3.5	4.5	4.0	3.1	2.5	2.7
Forestry and logging	-1.3	4.7	5.4	6.7	5.1	4.3
Primary production services	0.3	0.4	0.3	0.1	0.1	0.2
Mining	0.2	0.3	0.6	0.3	0.2	0.1
Manufacturing^b	4.6	4.6	4.3	4.3	4.2	4.3
Food, beverages and tobacco	3.4	3.5	3.6	3.4	3.5	3.4
Textiles, clothing and footwear	13.8	12.3	9.7	8.0	7.9	8.0
Wood and paper products	5.2	4.9	5.0	4.8	5.0	4.9
Printing and recorded media	3.5	3.6	3.6	3.6	3.6	3.7
Petroleum, coal, & chemicals	3.1	3.1	3.4	3.1	3.2	3.3
Non-metallic mineral products	2.9	3.0	3.0	2.9	3.0	3.1
Metal and fabricated products	4.5	4.5	4.5	5.0	4.7	5.4
Motor vehicles and parts	13.1	13.0	9.9	10.1	8.7	8.4
Other transport equipment	0.9	0.9	0.8	0.6	0.6	0.6
Machinery and equipment	3.2	3.3	3.0	2.9	2.9	2.8
Furniture and other products	4.6	4.8	4.7	4.8	4.8	4.8

^a Combined assistance comprises tariff, budgetary, and agricultural pricing assistance. ^b Sectoral estimates include assistance to the sector that has not been allocated to specific industry groupings.

Source: Commission estimates.

With the legislated reduction of remaining textiles, leather, clothing and footwear tariffs from 10 to 5 per cent in January 2015 and announced rationalisation of the automotive industry, effective assistance to those industries is likely to decline further (chapter 6).

Dairy cattle farming and Sheep, beef cattle and grain farming

The estimated effective rate of assistance for *Dairy cattle farming* declined markedly from 2009-10 to 2013-14 — from 6.6 per cent to 1.9 per cent. This largely reflects a decline in Exceptional Circumstances drought support. Prior to the dairy industry's deregulation in July 2000, the effective rate of combined assistance was estimated to exceed 30 per cent.

Reflecting lower claims for Exceptional Circumstances drought support largely following the easing of drought conditions to 2012-13, the effective rate of assistance for the *Sheep, beef cattle and grain farming* group declined from 6.6 per cent in 2009-10 to 3.2 per cent

in 2013-14. Although the general reduction of drought and other support since 2008-09 has been associated with lower effective assistance to *Sheep, beef cattle and grain farming*, effective assistance to the group increased from 2012-13 to 2013-14 with higher budgetary assistance from the Carbon Farming Futures program (an additional \$30 million in 2013-14 relative to 2012-13), R&D support (an additional \$24 million) and the Small Business Depreciation Rules scheme (an additional \$75 million).

Declines were also estimated over the period for some other agricultural industry groupings because of lower claims for drought support.

Forestry and logging

The estimated effective rate of assistance to *Forestry and logging* has changed markedly over recent years. The effective rate of assistance for *Forestry and logging* was 6.9 per cent in 2007-08. The change to negative 1.3 per cent in 2008-09 and then back to 4.7 per cent in 2009-10, reflects the impact of changes in the direction of accelerated write-offs on forestry-managed investments from positive assistance in 2007-08 (the acceleration stage) to increased taxation in 2008-09 (the pay-back stage). The Forestry Managed Investment Scheme was terminated on 30 June 2008.

Effective rates of assistance to *Forestry and logging* have stabilised in more recent years at around 4 to 5 per cent reflecting the effect of structural adjustment packages for the Tasmanian forestry industry, the small business capital gains tax concessions schemes and net tariff assistance to forestry and logging.

Effective rates at the firm level

While present effective rates for agriculture and manufacturing are historically low, the effective rate of assistance for an individual company or project can be substantial. This can be particularly so when a grant program is targeted at particular goods-producing and services activities and provides a subsidy equivalent for the supported projects well above industry averages (box 5.5). This can be quite distortionary, both within an industry as well as at the economy-wide level.

Box 5.5 Assistance measures that provide above average levels of support

It is an empirical question as to whether the level of effective assistance that may accrue to a company or project from a grant program is above an industry average or not. Estimation of effective assistance would require information about the output and value-added from an activity as well as information on goods and services inputs to production on a consistent basis as the industry total. The collection of such information across programs is not undertaken for this review. Because not all firms in any industry receive government grants, assistance accruing to specific firms and projects will deliver above average assistance compared to the industry as a whole. Grant programs that afford matched funding or which target one or a small range of firms (or projects) will potentially also confer higher levels of relative assistance. Some examples of government support with the potential to provide above industry-average assistance levels include the following.

- Film industry offsets — government support provided by the producer tax offset (part of the Australian Screen Production Incentive) amounted to \$223 million in 2013-14. This assistance was used to support \$822 million in production budgets for the Australian film and television industry which amounted to over 25 per cent of production costs.
- Tasmanian Freight Equalisation Scheme (TFES) — eligibility for the TFES is arbitrary and the direct recipients are concentrated, with 50 per cent of the total amount claimed going to 10 recipients (PC 2014f).
- Co-investment grants — over the three years to 2013-14, nearly \$50 million in co-investment grants has been paid to four firms by the Australian Government and an (unanswered) call for a further \$375 million to other entities has been made. These payments can confer high levels of assistance at the individual firm or project level (chapter 3).
- Ethanol production subsidy — between 2003-04 and 2013-14, participants in the program ranged from between 1 and 5 firms, with a single firm receiving over 70 per cent of funding over the life of the program (ANAO 2015).

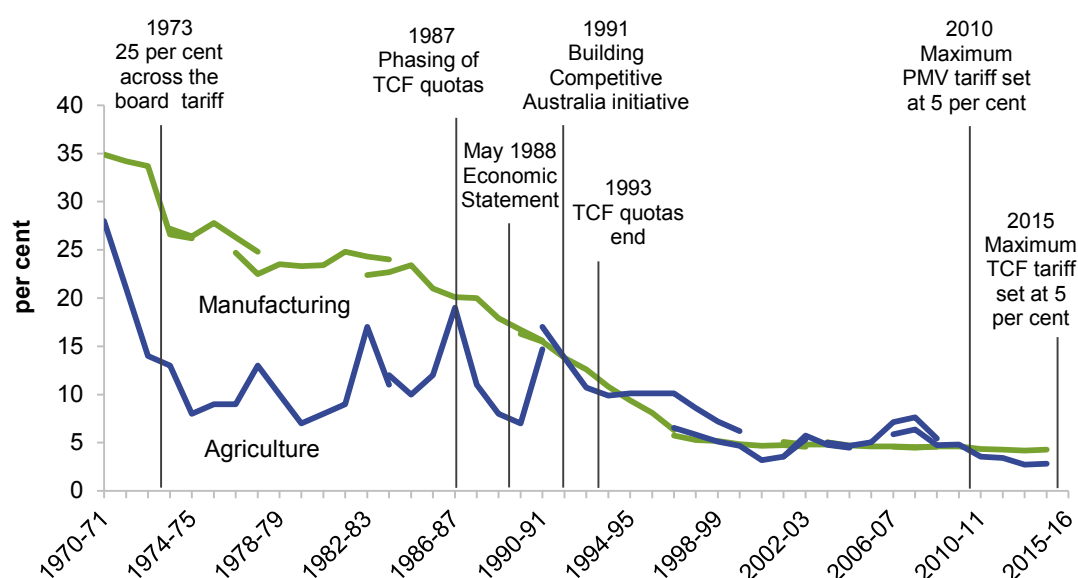
5.5 Effective rates of assistance since 1970

The Commission's combined assistance estimates comprise tariff assistance, budgetary outlays, tax concessions and agricultural pricing assistance. Combined assistance is reported in terms of the net value of assistance and its components, and as a proportion of unassisted value-added (the effective rate of assistance — section 5.4).

The Commission has estimated effective rates of assistance to the manufacturing and agricultural sectors since the early 1970s. The estimates have been derived in several 'series', each spanning a number of consecutive years, with each series retaining a common methodology, coverage of measures and data sources across those years. While methodologies and data sources have changed between series, taken together, the series provide a broad indication of directions and trends in assistance at the sectoral level.

Figure 5.8 presents effective rate of assistance estimates from the different series from 1970-71 to the present. Breaks in the series are represented by gaps in the chart, and overlaps are included to show the effects of the methodological and data changes made in moving between series. In figure 5.8, estimates of the effective rate of assistance for the previous 2004-05 benchmarked series are reported for the years 2005-06 to 2008-09. Estimates for the current 2008-09 benchmark series are reported for the years 2006-07 to 2013-14.

Figure 5.8 Effective rates of assistance to manufacturing and agriculture,^a 1970-71 to 2013-14
per cent



^a Refers to selected agriculture activities up to and including the year 2000-01. From 2001-02, estimates refer to division A of the Australian and New Zealand Standard Industrial Classification which covers agriculture, forestry, fishing and hunting activities.

Source: Commission estimates.

Manufacturing

The estimates indicate a marked decline in measured assistance to the manufacturing sector over the last 35 years. The estimated effective rate of assistance for manufacturing as a whole (as calculated in the first series) was around 35 per cent in 1970-71, whereas since 2000, the rate has been around 5 per cent, declining to around 4 per cent in more recent years.

Major influences on this decline over the past four decades have been the 25 per cent across-the-board tariff cut of 1973, the removal of all quantitative import restrictions (except for textiles, clothing and footwear) by 1988 and the broad programs of tariff reductions that commenced in the late 1980s with the May 1988 *Economic Statement* under which the Government introduced an across-the-board program to phase down all

tariffs (except for passenger motor vehicles and textiles, clothing and footwear activities which had their own tariff reduction programs) to either 10 per cent or 15 per cent by 1992.

Reductions in general tariff rates were continued with the 1991 *Building a Competitive Australia* initiative under which general tariff rates were reduced from 15 and 10 per cent to a single rate of 5 per cent over the four years from 1992 to 1996. As part of the initiative, tariffs on passenger motor vehicles were reduced to 15 per cent by 2000 and for textiles, clothing and footwear activities import quotas were abolished by 1993 and tariffs phased down to a maximum of 25 per cent by 2000.

Subsequent declines in effective assistance to manufacturing have been associated mainly with reductions in tariff assistance to the textile, clothing and footwear, and passenger motor vehicle industries. Tariffs on passenger motor vehicles were further reduced from the 15 per cent set in January 2000 to 10 per cent in January 2005 and 5 per cent in January 2010. After the termination of tariff quotas in 1993 and the phasing of tariffs to a maximum of 25 per cent by the year 2000, maximum textiles, clothing and footwear tariffs were reduced to 17.5 per cent in January 2005, 10 per cent in January 2010 and 5 per cent in January 2015.

The 5 per cent tariff, now levied on over 50 per cent of manufactured items of merchandise trade, continues to provide some assistance to many manufacturing activities, and an associated impost on consumers, industry and government administration. The tariffs also afford a margin of preference to eligible foreign exporters under Australia's preferential bilateral and regional trade agreements. To satisfy eligibility requirements, exporters in partner economies must satisfy complex rules of origin (chapter 4).

Agriculture (primary production)

For agriculture, the estimated effective rate of assistance (as calculated in the first series) was over 25 per cent in 1970-71 and, by 1974-75, it had fallen to about 8 per cent. The subsequent volatility in the agricultural estimates, particularly through the 1970s and 1980s, reflects variation in domestic support prices and world prices (used for assistance benchmarks) as well as the impact of drought and other factors on output.

The rise in the effective rate of assistance to agriculture in 2006-07 and 2007-08 reflects significant increases in Exceptional Circumstances drought relief payments and interest rate subsidies at the height of the drought through much of Australia, as well as the Dairy Industry Structural Adjustment package. Such assistance has since declined significantly and the estimated assistance to the sector overall has declined to around 2.8 per cent.

6 Recent developments in industry assistance

Key points

- Budgetary industry assistance in 2013-14 was about 17 per cent, (\$1.3 billion) higher than in 2012-13. The largest increase was the Small Business Simplified Depreciation Rules (\$1.5 billion).
- In the year to May 2015, the Government announced distinguishable additional industry assistance of around \$1.5 billion and reductions of around \$1.3 billion in budget outlays and concessions, over the coming years. Much of this was included in the May 2014 Budget.
- During the period, an additional \$203 million over four years for freight and shipping to Tasmania under the Tasmanian Freight Equalisation Scheme.
- Other notable changes in assistance arrangements announced involved additional funding or more liberal access arrangements for farm support. They included:
 - the introduction of a concessional Loans Scheme to help farmers recover from drought and other disruptions
 - a Farm Household Allowance Scheme to support eligible farmers to improve their longer-term situation.
- The main Government initiated reduction in support comprised the now passed legislation denying large companies access to the R&D Tax Incentive — expected to reduce assistance by around \$1.1 billion over the forward estimates.
- While individual proposed expenditures can be identified, ascertaining the net additional assistance implied by the announcements, however, is not always straightforward.
 - For example, around half of the announced \$1.7 billion in the *Industry Innovation and Competitiveness Agenda* is offset by reductions from the cessation of other industry programs.
- Noteworthy among several reviews relating to industry assistance were recommendations to remove numerous restrictions on competition by the Competition Policy Review (Harper review) and the Financial System Inquiry (Murray inquiry).

This chapter provides an overview of the main Australian Government announcements and related developments pertaining to industry assistance since May 2014, the reporting date for the previous *Trade & Assistance Review 2012-13*, to the end of April 2015 (before the 2015 Budget). The announcements are grouped according to category (such as research and development and regional development) for measures applying across industries, or major industry divisions (such as agriculture and manufacturing) for measures focused on an industry. Public policy reviews with assistance implications are also reported.

The principal purpose of the chapter is to afford greater transparency into the potential direction and nature of industry assistance over the coming year(s) based on announcements during the year. As such, the chapter does not provide budget details of current or future assistance. The level of estimated assistance is reported in chapter 5 together with changes in assistance in recent years. Forecasts of the financial impact on the current policies and Budget provisions are not provided in the *Trade & Assistance Review*.

Nonetheless, some insight into the changing quantum and scale of industry assistance can be deduced from the announcements, but caution is required. The major and readily distinguishable announcements of expenditures and concessions with industry assistance implications since May 2014 (identified for reporting in this *Review*) involve around \$4 billion — mostly to be expended over the budget forward estimates. Announced expenditure and concession reductions of over \$1.3 billion are also reported. However, ascertaining the net *additional* assistance implied by the announcements is not straightforward and caution needs to be exercised in drawing inferences about the future of assistance levels.

- Some of the measures reported refer to major announcements and variations in major grant programs for which funding has previously been announced and provisioned, for example, as is the case with the On Farm Efficiency grants program under the Murray Darling Basin Plan for which major announcements were made that included some funding increases.
- Some policy announcements brought forward or transferred funds from previous programs. For example, some programs and expenditures announced under the Government's 2014 Industry Innovation and Competitiveness Agenda were offset by reductions in expenditure on programs contained in the former Government's 2013 Industry and Innovation Statement.
- In other cases, a new program may be announced, but the announcement does not refer to a former program being superseded or replaced, including where the former program had higher funding. In such cases, the announcement could be associated with a reduction in funding, rather than an increment, for example as is the case with the new Landcare program.

After account is taken of factors such as these, the announcements identified in this chapter suggest additional new expenditures with assistance implications in the order of about \$1.5 billion in budget outlays and concessions, over the coming years.⁴⁹ Much of this was included in the May 2014 Budget with new commitments (covered in this chapter), made after the May 2014 Budget but before the 2015 Budget, total around \$400 million. Reductions in budget outlays and concessions of around \$1.3 billion have also been announced. The net cost of assistance to the budget in any one year would depend on related offsets within or between programs and the scheduling of payments of on-going

⁴⁹ Other considerations in forecasting the fiscal impact of announced measures include whether the measure has received legislative backing, and for demand driven measures, the eventual level of support may be different to the announced estimate.

programs. The assistance estimates reported in chapter 5 of the *Review* take account of the net of variations in assistance.

6.1 Research, development and innovation

Support for business research and development (R&D), including innovation and commercialisation, forms a significant component of the Australian Government's budgetary assistance to industry. As measured by the Commission, it accounted for around 34 per cent of distinguishable and measurable budgetary assistance to industry in 2013-14 or some \$3.1 billion (chapter 5). This section reports on developments relating to research, development and innovation since May 2014.

Cooperative Research Centres

The CRC Programme was established in 1990 to support industry-led collaborations between researchers, industry and the community. Since then, a total of 209 CRCs have been funded by the Australian Government with about \$3.8 billion provided (McFarlane 2014b). In 2014-15 there are 35 active CRCs.

In the May 2014 Budget, the Australian Government reduced funding for the Cooperative Research Centres Programme by \$80 million over the forward estimates. As a result of this decision, the 17th selection round did not proceed for new applicants. This decision does not impact on existing CRC contracts.

In September 2014, a review of the CRC Programme was announced, with the final report and recommendations expected in 2015. The CRC programme was last reviewed in 2008 by Professor Mary O'Kane as part of the wider review of the national innovation system. *Trade & Assistance Review 2007-08* (p.38) outlines the recommendations of the O'Kane Review, the Government's response, and the earlier findings about the CRC programme by the Productivity Commission (PC 2007).

Rural R&D for Profit grant programme

In the May 2014 Budget, the Australian Government announced \$100 million in new funding over four years, for the existing fifteen rural research and development corporations (RDCs) through the Rural R&D for Profit grant programme (Joyce 2014a). The intention is to fund collaborative research activities that focus on enhancing the productivity of agricultural industries. The RDCs outlay around \$500 million each year, with funding provided by government and industry.

To be eligible for grant funding, RDCs must partner with one or more researchers, research agencies, other RDCs, funding bodies, businesses, producer groups or not-for-profit organisations, and the partnership should provide funding (cash or cash plus an in-kind

contribution) at least equal to the requested Australian Government grant funding. Successful projects will be approved by the Minister for Agriculture based upon the department's recommendations, which will be informed by an expert assessment panel.

In Round One, applications must address one or more priorities in the following research, development and extension areas:

- increase the profitability and productivity of primary industries
- increase the value of primary products
- strengthen on-farm adoption and improve information flows
- strengthen primary producers' ability to adapt to opportunities and threats.

It is expected that no more than \$30 million will be allocated (across multiple years) in the First Round of the programme, with approximately \$19.2 million to be paid in 2014-15. (Department of Agriculture 2015a). Successful projects are expected to be announced in May 2015.

The 2011 Productivity Commission inquiry into Rural Research and Development Corporations (PC 2011a) found that a significant part of the Government's funding contribution to RDCs appears to have supported R&D for which producers and industries would have commercial motivation to fund themselves. The Commission recommended at that time that the existing dollar-for dollar matching by the government of industry contributions be halved over a ten year period. The then Government rejected the Commission's recommendation in the 2012 Rural Research and Development Policy Statement (Department of Agriculture 2015).

Reduced access to the R&D Tax Incentive for large companies

The R&D Tax Incentive replaced the previous long running scheme (the R&D tax concession) from 1 July 2011. The two components of the R&D Tax Incentive are:

- a 45 per cent refundable R&D tax offset for eligible entities with a turnover of less than \$20 million
- a non-refundable 40 per cent R&D tax offset for all other eligible entities.

In February 2013, the previous Government announced its intention to deny access to the R&D offset for very large companies. The current Government announced the reintroduction of this access limiting measure in November 2013.

In February 2015, the *Tax Laws Amendment (Research and Development) Bill 2013* was passed by both houses of the Australian Parliament. The Bill denies access to the research and development tax incentive for companies with aggregate Australian turnover of \$20 billion or more, on the grounds that R&D spending of small firms is more responsive than that of large firms to government incentives. This measure is estimated to reduce the

tax expenditure by \$1.1 billion over the forward estimates period (Australian Government 2013).

Extension of funding for NICTA

National ICT Australia Ltd (NICTA), Australia's Information Communications Technology Research Centre of Excellence, was established in 2002 to increase the scale and quality of Australian ICT research and development. It builds new technology-focused start-ups and conducts research.

In May 2014, the Australian Government announced \$84.9 million of new funding for (NICTA) over two years (Turnbull 2014b). The Department of Communications and the Australian Research Council will each contribute \$21.4 million in 2014–15 and \$21.0 million in 2015–16, with zero contributions thereafter under the Forward Estimates. The Minister for Communications also noted that NICTA has experienced 'rapid recent growth in commercial revenue' through its partnerships with domestic and overseas firms (Turnbull 2014b). In recognition of NICTA's maturity and current stage of development, the Government indicated NICTA should move to self-funding from private sector investment and research grants from July 2016. The portfolio budget papers 2014-15 show that NCITA earned commercial revenue of \$9.9 million in 2013-14 and forecast to earn \$9.9 million in 2014-15 and \$10.8 million in 2016-17.

6.2 Primary production

In 2013-14, Australian Government direct support for primary production that is readily distinguishable and measurable is estimated to be around 17 per cent of industry-allocated budgetary support provided through budgetary outlays and taxation concessions amounting to \$1.3 billion in 2013-14 (chapter 5).⁵⁰ This section reports certain developments since May 2014 with the Farm Household Allowance, drought related concessional loans, the National Landcare Programme and the Murray-Darling Basin Plan.

Farm Household Allowance

In July 2014, the Farm Household Allowance commenced operation. The Farm Household Allowance provides eligible farmers and their partners who are experiencing financial hardship with assistance and support to improve their longer-term financial situation (Department of Agriculture 2015b).

⁵⁰ In addition to Australian Government support, farm businesses also receive support from state and territory governments. In 2008-09, grants and other support to the primary industries (and resources) sector by state and territory governments was estimated to be around \$640 million (*Trade & Assistance Review 2008-09*, chapter 4).

The Australian Government allowance is paid fortnightly at a rate equivalent to Newstart Allowance (or Youth Allowance for those under 22 years). A Health Care Card is provided to recipients. Support is also provided through a dedicated case manager to help recipients assess their situation and develop a financial plan. Eligible farmers and their partners are able to access (cumulatively) up to three years of payment. The Farm Household Allowance is available regardless of the cause of financial hardship and does not rely on a climatic trigger (such as a drought declaration).

The (new) Allowance replaces the Interim Farm Household Allowance, which had commenced in March 2014, ahead of the intended start of the Farm Household Allowance in July 2014. The Interim Allowance was a ‘temporary’ response to drought circumstances.

The Farm Household Allowance (and the Interim arrangement) replaces the previous Transitional Farm Family Payment, the major change being an increase in the assets threshold test by over \$1 million to a new threshold of \$2.55 million, making income support accessible to more farmers (Department of Human Services 2012). The 2014-15 Budget estimated the Farm Household Allowance would cost \$70.2 million (2014-15), \$118.4 million (2015-16), \$172.5 million (2016-17) and \$160.9 million (2017-18).

Concessional Loans Schemes

The Australian Government has committed \$700 million for the provision of concessional loans to farm businesses (provided for in the 2013–14 and the 2014–15 budgets) — the Farm Finance Concessional Loans Scheme, the Drought Concessional Loans Scheme and the Drought Recovery Concessional Loans Scheme (table 6.1).

In April 2013, the Australian Government announced \$420 million for the Farm Finance Concessional Loans Scheme to provide assistance to farm businesses experiencing debt servicing difficulties through concessional loans for productivity enhancement projects and debt restructuring. Loans are for five years at a concessional variable interest rate currently set at 4.34 per cent. This assistance is not drought specific.

In February 2014, the Australian Government announced \$280 million for the Drought Concessional Loans Scheme over the 2013–14 and 2014–15 financial years. These loans are for debt restructuring, operating expenses or drought recovery and preparedness activities to provide farm businesses with in-drought support and the resources to recover. The Drought Concessional Loans Scheme offers loans of up to \$1 million over five years at a concessional variable interest rate currently set at 3.84 per cent.

Table 6.1 Comparison of the three farm concessional loans schemes

	<i>Farm Finance Concessional Loans</i>	<i>Drought Concessional Loans</i>	<i>Drought Recovery Concessional Loans</i>
Announced	April 2013	February 2014	December 2014
Funding	\$420 million	\$280 million	\$100 million (re-allocated from existing concessional loan measures)
Funding allocated as at March 2015	\$330 million	\$270 million	\$100 million
Expenditure provisioned years	2013-14 and 2014-15	2014-15	2014-15
Jurisdiction	All States and Northern Territory	New South Wales, Victoria, Western Australia, Northern Territory, South Australia and Queensland	Queensland and New South Wales
Purpose	Debt restructuring (and productivity enhancements in WA, Vic. and Tas.)	Debt restructuring, operating expenses, drought recovery and preparedness	Planting and/or restocking
Loan term	5 years	5 years	10 years
Interest rate	Currently 4.34%	Currently 3.84% ^a	Initially 3.21%
Loan limit	50% of eligible debt to a maximum of between \$650 000 and \$1 million depending upon the jurisdiction	50% of eligible debt to a maximum of \$1 million	50% of eligible debt to a maximum of \$1 million
Drought dependent	No	Yes	Yes
No. of approved loans as at 31 March 2015	348	180	3
Value of approved loans as at 31 March 2015	\$163.9 million	\$105.1 million	\$0.6 million

^a The interest rate is to be maintained 0.5 percentage points below the Farm Finance Concessional Loan interest rate.

Source: Department of Agriculture (2015c).

Drought Recovery Concessional Loans Scheme

In December 2014, the Australian Government announced the \$100 million Drought Recovery Concessional Loans Scheme, funded from underspends from the 2013–14 Farm Finance Concessional Loan round and uncommitted funding from the Drought Concessional Loans Scheme. The Drought Recovery Concessional Loans Scheme is intended to target farm businesses in Queensland and New South Wales in financial need of assistance that have experienced unprecedented drought. The scheme is intended to help fund planting and restocking activities to help farm businesses recover from drought and return to normal operating conditions as quickly as possible, when seasonal conditions

allow. In Queensland, the loans are also available to farm businesses directly impacted by the combined effects of drought and the mid-2011 disruption to live cattle exports to Indonesia. Farm businesses are able to apply for a loan of up to \$1 million over 10 years at a concessional variable interest rate currently set at 3.21 per cent.

Concessional loan funding by the Australian Government is capped and the annual provisioned amount is allocated across the states on a needs basis. State delivery agencies assess applications, administer loan agreements and collect interest. Loans under all of the schemes are only available to farm businesses that, subject to national guidelines and assessed by state delivery agencies, are commercially viable in the long term, have the capacity to repay the loan; have sufficient security against the loan, and have support from their commercial lender(s).

National Landcare Programme

In the 2014–15 Budget, the Government announced the establishment of the National Landcare Programme through the merger of the former Caring for our Country and Landcare programmes. The National Landcare Programme is intended to help attain sustainable agriculture as well as supporting the protection, conservation and rehabilitation of Australia's natural environment (Department of the Environment 2015). The Australian Government has provided \$1 billion over the four years from 2014-15 to establish the Programme.⁵¹

The new National Landcare Programme is comprised of two funding streams:

- the regional funding stream which will provide \$454 million through Australia's 56 regional natural resource management organisations over four years; and
- the national funding stream which will provide around \$500 million to support measures intended to protect and restore the environment and make agriculture more sustainable and productive.

Under the regional stream, regional natural resource management organisations, together with their local communities, are determining local priorities and deliver projects at the local and regional level.

The national stream is being delivered directly by the Australian Government and includes a range of initiatives. Part of the national funding stream includes grants to agricultural producers. The Government announced in December 2014 that \$5 million had been allocated in 2014-15 under the 25th Anniversary Landcare Grants, with \$2.5 million

⁵¹ The first phase of Caring for Our Country (2008-2013) had provided more than \$2 billion. The second phase of Caring for Our Country (2013-2018), as originally announced, was also expected to cost over \$2 billion. Although the new Landcare program involves less expenditure than the previous program, the Government is nonetheless investing \$2 billion in natural resource management over the four years from 2014-15. This includes funding the National Landcare Programme, the Green Army programme and other measures (Department of the Environment 2014a).

provided to 148 agriculture focused projects and \$2.5 million to 143 environment focused projects (Joyce and Hunt 2014).

Murray Darling Basin Plan

The genesis of the Murray Darling Basin Plan was the passing of the Water Act in 2007, which required the development of a Murray-Darling Basin Plan, to allocate water between consumptive and environmental uses, in each catchment. The proposed Basin Plan underwent extensive consultation and subsequent refinement before being adopted in November 2012. The Basin Plan is to be implemented over seven years taking full effect from 1 July 2019 when binding ‘sustainable diversion limits’ take effect.

Contemporaneously to the Plan being developed, the Australian Government embarked on a \$3.1 billion program of purchasing water entitlements from irrigators in 2008, called Restoring the Balance, and a \$5.8 billion program to upgrade irrigation infrastructure, called Sustainable Rural Water Use and Infrastructure, focused mainly on recovering water for the environment by reducing Basin water losses and enhancing irrigation efficiency. In December 2013, the Government merged the Restoring the Balance program with the Supply Measures and the Sustainable Rural Water Use and Infrastructure Program to provide greater flexibility in managing the Government’s water reform priorities. The combined \$10 billion program has retained the name ‘Sustainable Rural Water Use and Infrastructure Program’ (SRWUIP).

Water purchasing and irrigation infrastructure upgrades under the Murray Darling Basin Plan has implications for industry assistance to agricultural businesses, through payments to farm businesses and the provision of infrastructure to alter water-use efficiency. Assistance may be conferred, for example, if the compensation for water rights is higher than the underlying economic value, or if water-use efficiency expenditures that are commercially justified receive publicly funded support. In 2013-14, the Australian government expended over \$350 million on Department of the Environment water programs (Department of the Environment 2014d) of which around \$186 million was expenditure of the Murray Darling Basin Authority (MBDA 2014). In addition, the Australian Government paid State Governments around \$150 million under the infrastructure component of the SRWUIP.

The Australian Government has capped the level of purchasing at 1500 billion litres, signed agreements with all states to implement the Basin Plan and re-prioritised spending away from non-strategic purchasing, giving infrastructure investment greater priority (Birmingham 2014b). Over the four years 2014-15 to 2017-18, the Government expects to spend \$2.3 billion on rural water use and infrastructure projects (Birmingham 2014c).

The 2010 Productivity Commission study of *Market Mechanisms for Recovering Water in the Murray-Darling Basin* found that purchasing water from willing sellers (at appropriate prices) is a cost effective way of meeting a Government’s liability for policy-induced

changes in water availability. It further found that subsidising water infrastructure is rarely cost effective in obtaining water for the environment.

Outlined below are some recent developments in expenditure on water infrastructure and purchasing under the Murray-Darling Basin Plan, with some indication of the expected water recovery.

On-Farm Irrigation Efficiency Program

The \$575 million On-Farm Irrigation Efficiency Program is part of the Sustainable Rural Water Use and Infrastructure Program. Four Rounds of applications have been completed since 2009. In April 2014, the Australian Government announced an increase in funding for Round Four, from an initially announced \$100 million, to a revised \$158 million, on the basis that the ‘quality and value of applications under this program was so good’ (Birmingham 2014a). The April 2014 decision provided in-principle approval for grants to support up to 476 farming projects and is expected to deliver 60 billion litres of water to the environment. This recovery contributes to the over 1900 billion litres the Commonwealth had acquired or contracted as at 31 March 2015 of the 2750 billion litres required to be implemented the 2019 Murray-Darling Basin Plan targets.

In November 2014, the Australian Government announced the opening of the Fifth and final round of the On-Farm Irrigation Efficiency Program (Birmingham 2014e). The Australian Government expects to make available \$125 million in the Fifth round.

South Australian River Murray irrigation and industry projects

In July 2014, the Australian Government and South Australian Government jointly announced grants amounting to more than \$100 million to fund almost 100 South Australian River Murray irrigation and industry projects. The \$100 million of grants is expected to return about 20 billion litres of water. This was the first round of the Australian Government’s six year \$240 million South Australian River Murray Sustainability Irrigation Industry Improvement Program (3IP), which in turn is part of the Basin Plan package, and expected to recover around 40 billion litres of water (Birmingham and Weatherill 2014).

Water Purchasing in Queensland and New South Wales Catchments of the Murray-Darling Basin.

In June 2014, the Water Recovery Strategy for the Murray-Darling Basin was released which sets out the water recovery priorities for 2014-15.

As part of the strategy to recover water to meet the sustainable diversion limits as set out in the Murray-Darling Basin Plan, a tender was held for groundwater in Queensland’s Condamine Central Alluvium in July 2014 with a budget of up to \$10 million (Department

of the Environment 2014b). The need for a reduction in groundwater extractions for the Central Condamine Alluvium was included in the Basin Plan due to concern about declining groundwater levels. Water purchasing for the environment is expected to help protect the productive base of the groundwater resource for the long term benefit of irrigators and the local community.

In September and October 2014, the Government held a tender to purchase surface water in the Queensland Lower Balonne area which forms part of the Condamine-Balonne catchment (Birmingham 2014d). This tender included un-supplemented and overland flow water-harvesting licenses.

From November 2014 to April 2015, a rolling tender was held in New South Wales Southern Connected Basin (Murrumbidgee, Murray and Lower Darling catchments) for purchases of high security and general security entitlements (Department of the Environment 2014c). Water recovery progress is published monthly on the Department of the Environment's website.

6.3 Manufacturing

Australian Government support for the manufacturing sector comprised around 22 per cent of industry-allocated budgetary assistance in 2013-14 amounting to \$1.7 billion (chapter 5). This section reports on developments directly affecting the manufacturing sector since May 2014.

Reduced protection for domestic ethanol production

Prior to the 2014 Budget, ethanol fuel was subject to an excise of 38.143 cents per litre on users. The Ethanol Production Grants (EPG) Programme provides a grant of 38.143 cents per litre to domestic ethanol producers on fuel supplied for transport where production inputs are sourced domestically. The effect of the EPG is to reduce the 'effective' rate of excise to zero. Imported ethanol is subject to a customs duty of 38.143 cents per litre and a value duty of five per cent. Together, the duties and the EPG protect the domestic industry against imports.

In the May 2014 Budget, the Australian Government announced it would reduce the excise on domestic production to zero on 1 July 2015 and cease the Ethanol Grants Programme (Australian Government 2014d and Webb 2014). The fuel excise on domestically produced ethanol will then be increased by 2.5 cents per litre per year for five years, starting 1 July 2016, until it reaches 12.5 cents per litre in 2020, which represents 50 per cent of the energy content equivalent rate. The customs duty and the value duty will remain unchanged at 38.143 cents per litre and 5 per cent, respectively. The changes will reduce the level of protection to domestic ethanol production.

Opening of Round One of the Manufacturing Transition Programme

In September 2014, the Australian Government announced the opening of Round One of the Manufacturing Transition Programme (MacFarlane 2014a). Total funding of \$50 million has been allocated over the three years, 2014-15 to 2016-17. The Programme supports capital investment projects, with the intention of helping businesses move or expand into higher value or niche manufacturing activities and build skills in higher value and knowledge intensive activities in new or growing markets.

The programme provides support over two years in the form of grants of between \$1 million and \$10 million, up to a maximum of 25 per cent of the expenditure incurred by the business in transitioning to new business activities (Department of Industry and Science 2014a). Eligible activities include: extending premises; commissioning new machinery and equipment; training in the use of new machinery and equipment; and buying technology or intellectual property. Applicants must currently be manufacturing in Australia. A merit selection process applies. The application must score highly against each of the following merit criteria to be recommended for funding:

- the extent to which a project represents a transition or expansion of a business' operations or activity to higher value-added or more knowledge intensive manufacturing (25 points);
- the level of net economic benefit a project will achieve (25 points);
- the value for money offered by a project (20 points);
- demonstration of a capacity and capability to carry out the project (20 points); and
- the expected productivity improvements a project will achieve (10 points).

The assessment criteria do not test for an identifiable market failure (that would be overcome by the support) or require it be demonstrated that the activity would not have proceeded in the absence of the assistance. (Concerns about the governance of unconditional grants is discussed in detail in chapter 3 of this *Review*).

Inquiry on automotive manufacturing

In October 2013, the Australian Government asked the Commission to undertake a public inquiry into public support for Australia's automotive manufacturing industry, including passenger motor vehicle and automotive component production. The Commission's final report was released by the Australian Government on 26 August 2014 (PC 2014a). The inquiry concluded that there was a weak rationale for industry-specific assistance to automotive manufacturing firms and the economy-wide costs of such assistance outweigh the benefits. The Commission recommended that governments ensure appropriate resourcing of the delivery of generally available welfare, training and employment services in regions that are placed under pressure by automotive manufacturing retrenchments. The final report also found that regional adjustment funds, infrastructure and defence spending,

and industry support programs are costly and ineffective ways to facilitate workforce adjustment.

In its response to the report in August 2014, the Government supported the key recommendation to repeal the *Automotive Transformation Scheme 2009* after Holden, Ford and Toyota have ceased manufacturing vehicles in Australia (by the end of 2017).

The Government rejected the recommendation to not extend or replace the Automotive New Markets Program (ANMP) or other programs under the Automotive New Market Initiative after the scheduled closure of the vehicle manufacturers in 2015-16. The Government stated it would replace and extend the ANMP with the Automotive Diversification Program to run through to June 2018 — the objective being to help automotive supply chain firms to diversify and find new markets.

In March 2015, the Government announced that it will maintain the Automotive Transformation Scheme in its original form as legislated (McFarlane and Birmingham 2015). Under this announcement, the legislated Scheme will remain in place through to 2020. Actual expenditure under the Scheme relative to the budgeted values will depend on the extent to which eligible firms remain after the exit from Australia of the main passenger motor vehicle manufacturers by 2017.

Research report on dairy product manufacturing

In October 2014, the Australian Government released the Productivity Commission's research report into the costs of doing business in Australia's dairy product manufacturing industry (PC 2014d). The study found that Australian dairy product manufacturers face some cost pressures (such as energy and labour) relative to their competitors, but also some advantages, including highly competitive raw milk costs (the largest single input cost). Whilst some cost pressures may warrant government corrective action, most costs are largely driven by market factors and the commercial decisions of businesses. Manufacturers and farmers will need to continue innovating and improving the efficiency of their operations in the face of a potential expansion in global supply (for example, the lifting of the European Union milk production quotas in 2015).

In assessing suggestions that Australian dairy manufacturing should emulate the so-called New Zealand model, with a 'national champion', the study noted such suggestions are based on an overly simplistic comparison of the export performance of the two countries' dairy industries; tend to gloss over the regulatory arrangements that underpin the New Zealand dairy industry (for example, domestic price regulation); and over-emphasize the role of plant scale.

The study also found that certain forms of drought assistance, biofuel subsidies and genetically modified crop regulations in some states and territories act to reduce adjustment and innovation, affecting the efficiency of the dairy industry and the rest of the economy.

Cadbury withdrawal of application for support

In 2013, it was announced that the Australian Government funding would provide \$16 million funding to support a \$66 million upgrade of the Claremont factory (*Trade & Assistance Review* 2012-13). Subsequently, the Commission of Audit recommended the abolition of the grant, saying there was no genuine market failure warranting government assistance (Australian Government 2014f).

In March 2015, the parent company of Cadbury Australia, Mondelez withdrew its application for the \$16 million grant, as it was unable to comply with Government's funding guidelines (Robb 2015a). The Minister noted that in withdrawing its application, Mondelez committed to \$20 million in investment in the chocolate plant, having invested \$100 million in the previous five years.

The Government announced that it intends to spend the \$16 million in Tasmania in other ways (Abetz 2015).

6.4 Industry Innovation and Competitiveness Agenda

In October 2014 the Australian Government released its *Industry Innovation and Competitiveness Agenda* (Australian Government 2014b). The Agenda is intended to strengthen Australia's productivity and competitiveness including Australia's export (and import competing) competitiveness. In seeking to improve Australia's competitiveness the Agenda proposes four 'ambitions':

1. a lower cost, business friendly environment with less regulation, lower taxes and competitive markets;
2. a more skilled labour force;
3. better economic infrastructure; and
4. industry policy that fosters innovation and entrepreneurship. (Australian Government 2014b, p.ii)

The first three ambitions involve measures intended to improve the general business environment, such as, lowering the company tax rate by 1.5 percentage points to 28.5 per cent, examination of coastal shipping regulations, fostering further student engagement with science, technology engineering, and mathematics (STEM), task the Productivity Commission to review Australia's workplace relations framework, and progress infrastructure reforms in response to the Productivity Commission's completed inquiry into Public Infrastructure.

The industry policy ambition includes measures that have industry assistance implications. The measures are listed in table 6.2 where they are divided into two categories: those actions already taken; and those actions to come. The announced measures notionally amount to around \$1.7 billion spread over the next four years. The net impact on the

Budget will depend on, for instance, program commencement and the extent to which some measures replace previous programmes. The *net* impact will also depend on whether announced funding is incorporated in previously announced outlays or is offset by reductions in spending on other similar programs. For example, ceasing other industry programs including those in the former Governments 2013 *Industry and Innovation Statement*, afforded a reduction of \$845.6 million (Australian Government 2014b).

Chapter 2, of this *Review*, raises some concerns about the export assistance measures in the Agenda and the selection of priority sectors for support under other industry measures. Chapter 3 discusses the importance of appropriate governance of industry support programmes, particularly due diligence in the selection of businesses for support, transparency, monitoring and evaluation of outcomes.

Table 6.2 Industry assistance related measures in the Industry Innovation and Competitiveness Agenda

	<i>Announced cost</i>	<i>Costing period</i>
Actions already taken		
Entrepreneur's Infrastructure Program	\$484 million	Four years
Industry Skills Fund	\$476 million	Four years
Increased EFIC funding	\$200 million	2014-15
Increased EMDG funding	\$50 million	Four years
A 'Team Australia' approach to trade missions led by the Prime Minister and senior Cabinet Ministers	No allocated funding	
Manufacturing Transition Programme	\$50 million	Three years
Growth Fund	\$155 million (Australian Government \$100 million; Victorian and South Australian State Governments and companies \$50 million)	Approximately \$67 million provision in 2014-15 Budget (covering 2014-15 to 2017-18)
Actions to come		
Industry Growth Centres	\$188.5 million	Four years
Refocus existing \$9.2 billion support of research to get better commercial return	na	na
Establish a Medical Research Future Fund, funded from health reforms	Up to \$20 billion	(subject to health reforms)
Improved tax treatment of Employee Share Schemes	\$200 million	Four years
Consultations with industry on appropriate regulatory approach for 'start-ups' that seek access to crowd-sourced equity funding	No allocated funding	na
The government will adopt Small Business engagement principles	No allocated funding	na

Source: Australian Government (2014b).

6.5 Regional assistance programs

This section reports on assistance announcements which have a significant regional focus, such as those relating Tasmanian shipping and freight and Natural Disaster Relief Arrangements. These arrangements affect multiple industries. The business assistance conferred by these arrangements is classified as ‘regional & structural adjustment’ category in the estimates of chapter 5. There are several other major industry assistance programs that have a significant regional dimension, included in the agriculture section of this chapter on the basis that farming enterprises are the ‘initial benefiting industry’, for example, drought and farming assistance, and aspects of the Murray Darling Basin Plan and Landcare program.

Inquiry into Tasmanian shipping and freight

In November 2013, the Australian Government asked the Commission to undertake an inquiry into Tasmanian shipping and freight. The Commission’s final report was released by the Australian Government on 24 June 2014 (PC 2014f). The Australian Government has outlaid more than \$2 billion since the inception of the Tasmanian Freight Equalisation Scheme (TFES) and the Bass Strait Passenger Vehicle Equalisation Scheme (BSPVES). Without change a further \$2 billion can be expected over the next 15 years. In 2011-12 total outlays for the schemes amounted \$128 million.

The inquiry concluded that the Tasmanian Freight Equalisation Scheme (TFES) is costly, complex and has unintended consequences. It mostly benefits a handful of large recipients. It also, perversely, increases prices for Tasmanian consumers. The Commission made a number of recommendations focused on addressing some of the perverse incentives created by the TFES and reducing complexity to lower the compliance burden on business and administrative costs to government. On the TFES the Commission found that there was potentially an economic case to extend eligibility to exports (trans-shipped through Port of Melbourne) whilst lowering the overall rate of assistance — ‘broaden the base and lower the rate’ — contingent on a direct international containerised shipping service not being commercially available to Tasmanian shippers. As such, a decision on extending the eligibility of the TFES would be premature prior to the Tasmanian Government resolving the possible resumption of a direct international service, for which the economics is impacted by potential coastal shipping reform.

In regard to the Bass Strait Passenger Vehicle Equalisation Scheme (BSPVES) it was found there is no clearly articulated objective and that at least part of the subsidy is captured by TT-Line, the Tasmanian Government-owned and sole provider of passenger vehicle shipping services across the Bass Strait. The Commission recommended greater scrutiny of TT-Line’s competitive neutrality obligations, and greater transparency and clarity around the scheme itself.

Overall, the Commission recommended that to address the broader economic and social challenges confronting Tasmania, the Australian Government should put less emphasis on freight subsidy schemes in favour of reforms that have national and Tasmanian benefits, such as coastal shipping reform and those that directly enhance the competitiveness and productivity of the Tasmanian economy. The Commission also recommended that the Joint Commonwealth and Tasmanian Economic Council should initiate a stocktake of existing programs specific to Tasmania, including assessing whether the suite of initiatives represents a coordinated, consistent, targeted, and efficient approach to Tasmania's economic development

The Australian Government, in its response in March 2015, announced a \$203 million expansion of the TFES over four years, an increase of over 40 per cent in the annual cost (Truss and Abbott 2015).

Review of Natural Disaster Funding

In April 2014, the Australian Government asked the Productivity Commission to undertake a public inquiry into the efficacy of current national natural disaster funding arrangements, taking into account the priority of effective natural disaster mitigation and the reduction in the impact of disasters on communities.

The Commission's final report was provided to Government in December 2014 and publicly released on 1 May 2015 (Keenan 2015). The Report noted that over the past decade, the Australian Government has spent around \$8 billion on post-disaster relief and recovery, with another \$5.7 billion to be spent over the forward estimates. State and territory governments have spent a further \$5.6 billion over the past decade. The amounts are substantially higher than a decade before.

The majority of disaster expenditure is for restoring infrastructure assets. Other components include assistance to individuals and businesses. Small businesses and farmers who can demonstrate loss of income as a direct result of a disaster can be eligible for the National Disaster Relief and Recovery Allowance (NDRRA), which provides payments equivalent to the maximum rate of Newstart Allowance or Youth Allowance for up to 13 weeks. In addition, state governments provide assistance to businesses, and can be reimbursed for some types of assistance through categories B and C of the NDRRA.

The report recommended a major restructure of Australian Government funding for natural disasters — financial support to the states and territories for natural disaster relief and recovery should be reduced while mitigation funding be increased. Some key points underpinning the case for such a restructure included the following.

- Current government natural disaster funding arrangements are not efficient, equitable or sustainable. They are prone to cost shifting, ad hoc responses and short-term political opportunism.

-
- The evolution of the funding arrangements can be characterised by growing generosity by the Australian Government during the previous decade, followed by a swing to constrain costs and increase oversight after the recent concentrated spate of costly disasters.
 - Governments generally overinvest in post-disaster reconstruction, and underinvest in mitigation that would limit the impact of natural disasters in the first place. As such, natural disaster costs have become a growing, unfunded liability for governments, especially the Australian Government.

Against the background that governments make no explicit budgetary provision for the costs of recovery from future natural disasters, the report suggested that there is a systematic bias against mitigation and insurance. It recommended the Australian Government should treat natural disaster contingent liabilities more transparently in its budget by quantifying the size of these liabilities in the Statement of Risks. It should also provision costs in recognition of the fact that some level of Australian Government expenditure on natural disasters can be reasonably anticipated each year.

The report observed that governments have a role in providing emergency relief payments to individuals (and businesses) who have been seriously affected by natural disasters, to avoid immediate economic and social hardship. Assistance to businesses include interest rate subsidies and grants, freight subsidies for primary producers. The report found that the case for government assistance to businesses and primary producers after a natural disaster is weak. If governments do provide assistance to businesses and primary producers, a finding was that that untied grants are a more efficient, effective and equitable instrument than loans and subsidies.

6.6 Broadcasting and communications

Since May 2014, the Australian Government has made several announcements regarding broadcasting and communications policies and related activities with assistance implications.

New measures to tackle online copyright infringement

Copyright law affords legal protection to owners of copyright with the intention of encouraging and supporting creative activities, but it can restrict the availability or raise the cost of copyright protected materials to consumers. In July 2014, the Australian Government released a Discussion Paper on Online Copyright Infringement (Australian Government 2014h).

In December 2014, the Minister for Communications and the Attorney-General wrote to industry leaders requiring them to immediately develop an industry code that will be registered with the Australian Communications and Media Authority (ACMA) under

Part 6 of the *Telecommunications Act 1997* (Brandis and Turnbull 2014 and Turnbull 2014a). The ministers expect the code to include a process to notify consumers when a copyright breach has occurred and provide information on how they can gain access to legitimate content.

The correspondence to industry leaders also noted that failing agreement within 120 days, the Government would impose binding arrangements either by an industry code prescribed by the Attorney-General under the *Copyright Act 1968* or an industry standard prescribed by the ACMA, at the direction of the Minister for Communications under the *Telecommunications Act*.

Existing arrangements in the United States of America, the United Kingdom, and New Zealand were outlined in the Discussion Paper and discussed at a subsequent Online Copyright Infringement Forum. Key issues in designing a regulatory response include potential compliance costs, and changes in consumer behaviour and industry product offerings. Communications Alliance (a peak telecommunications industry body) coordinated the work of telecommunications providers and rights holder organisations, in consultation with representatives of consumer organisations, to develop an agreed Code, which was lodged with the ACMA on 8 April 2015. Prior to lodging this Code, a draft version was released for public comment from 20 February to 23 March 2015. The ACMA is currently considering whether to register the Code.

In addition to the development of a Code, the Australian Government introduced a Bill in Parliament on 26 March 2015 (Copyright Amendment (Online Infringement) Bill 2015) to amend the Copyright Act, to enable rights holders to apply for a court order requiring Australian ISPs to block access to a website, operated *outside* of Australia, which has the primary purpose of infringing copyright, or facilitating the infringement of copyright. The power will only apply to websites outside Australia as rights holders are not prevented from taking direct action against websites operated *within* Australia. The Bill has been referred to the Senate Legal and Constitutional Affairs Legislation Committee for consideration.

In light of these regulatory changes, an issue that has arisen is whether it is illegal for Australian consumers to access overseas based subscription services, such as Netflix, by bypassing geo-blocking restrictions, either by using a Virtual Private Network (VPN) or by re-routing their internet connection through an overseas-based Domain Name Server (DNS) (box 6.1). The legality issue has several dimensions: the position of the Australian consumer; the overseas content provider and internet service providers; and Australian or overseas law. In response, the Minister for Communications has stated:

The Copyright Act does not make it illegal to use a VPN to access overseas content. While content providers often have in place international commercial arrangements to protect copyright in different countries or regions, which can result in ‘geoblocking’, circumventing this is not illegal under the Copyright Act (Turnbull 2015).

Box 6.1 Overseas-based online content services: legality and local competitors

Many Australians use a Virtual Private Network (VPN) to subscribe to overseas based online content services. For instance, Netflix, Hulu and Amazon all offer online content services to US residents. While these services are not marketed directly to Australians, consumers bypass geo-blocking restrictions by using a Virtual Private Network (VPN) or by rerouting their internet connection through an overseas-based Domain Name Server. (DNS).

Legality of transactions with overseas based content providers

The legality of these transactions has been a contentious issue. However, when posing the question of legality it is often not made clear whether it is a question of the legal position of the Australian consumer or the overseas provider (or even domestic internet service providers). Nor is it made clear whether the legality is questioned in the context of whether there is an Australian-use copyright license, held by the overseas content provider, or by a competing Australian content provider, or no Australian geographic license at all. Finally, when questioning legality it needs to be clarified whether it is legal under Australian or overseas law.

The Minister for Communications indicated that this practice is not illegal under existing Australian copyright law (Turnbull 2014a). The Terms and Conditions of one overseas service provider (Hulu) in 2012 warns that consumers of Hulu's product are prohibited to use technologies to access material from territories for which the provider (Hulu) does not have rights or does not offer services' (ACMA 2012). The Australian Copyright Council, amongst other things, has pointed out that the use of virtual private networks to circumvent local copyright licensing arrangements may infringe copyright (Australian Copyright Council 2015).

Competition in the Australian market for online video content

Research conducted by the Australian Communications and Media Authority (ACMA) indicates that take-up of these services is already substantial. According to recent reports, the US-based Netflix service alone has somewhere between 200 000 and 340 000 Australian subscribers, and as many as 680 000 Australian households may be accessing overseas-based video content services at November 2014 (ACMA 2015). The active subscriber rates are, however, considered uncertain (Department of Communications, pers. comm., 18 May 2015).

The product available from overseas based online content services competes with similar Australian based services, such as Quickflix and EzyFliz. Paying customers of Quickflix reached 122 862 in June 2014 — an increase of 7221 (six per cent) since June 2012. (ACMA 2015).

Overseas content suppliers also compete with other locally accessed substitutable product providers, such as free-to-air broadcasters, subscription broadcasters (for example, Foxtel, Stan and Presto), internet service-provider services (for example, BigPond Movies and Fetch TV), and consumer electronic device companies services (for example, iTunes, Google Play, and PlayStation).

Netflix launched its Australian service in March 2015. An issue is whether existing Australian subscribers to the United States based service will switch to the Australian version. This will depend upon the price and quality of the Australian library. International price differences (discrimination) for the 'same' product have been addressed in the Harper review of Competition Policy and the House of Representatives Standing Committee on Infrastructure and Communications Inquiry into IT Pricing. Generally, these reviews made recommendations intended to reduce geographic price discrimination.

The legality position has implications for local competition and protection. Overseas content suppliers compete in Australia with similar local online content providers and substitutable products such as free-to-air and subscription broadcasting content. Subscriptions to overseas based content providers may reduce domestic demand for local content providers.

Another competition issue that has arisen is that some recently established local content providers have acquired Australian-use licenses for content for which overseas based providers only have a US licence. Australian consumers may be able to pay less for the content (and even access it earlier) by continuing to subscribe to overseas based content providers. This scenario is broadly analogous (from an economic perspective) to the case of ‘parallel importation of goods’. Parallel importing refers to the importation into Australia of genuine goods (as opposed to digital material) by someone other than the licensed or authorised distributor or manufacturer in Australia. The Harper review of Competition Policy (below) recommended that remaining restrictions on parallel imports be reviewed, with the intention of removing them unless shown to be in the national interest.⁵² The Review Panel noted that the July 2013 report of the House of Representatives Standing Committee on Infrastructure and Communications into IT pricing in Australia had also recommended the removal of restrictions on parallel imports.

6.7 Other industry assistance developments

Export Market Development Grants

The EMDG scheme, established in 1974, is intended to encourage small and medium sized Australian businesses to develop export markets, by reimbursing up to 50 per cent of eligible export promotion expenses. The maximum grant value is \$150 000. The total value of grants paid in the 2013-14 financial year was \$113.6 million.

In March 2014, the Australian Government announced that an increase in funding for the EMDG scheme of \$50 million over four years. (Robb and Billson 2014). At the same time, the Government increased the maximum number of grants any one applicant may receive from seven to eight and reduced the minimum expenditure threshold from \$20 000 to \$15 000.

In December 2014, the Australian Government announced the mandatory review of the EMDG scheme was to commence and would be completed by 30 June 2015 (Robb 2014d).

⁵² Parallel imports of goods that are protected by certain forms of IP are currently restricted by legislation. For example, parallel importation of some copyright products, including books, is restricted under the *Copyright Act 1968*. General prohibitions regarding parallel imports were removed for sound recordings in 1998 and computer software and electronic forms of books, periodicals and sheet music in 2003. The general prohibition against parallel importing continues to apply to hard copies of literary works (other than books), dramatic, musical and artistic works, broadcasts and cinematographic films. There is a separate regime for books that allows limited parallel importation.

The Report is to be tabled within 15 parliamentary sitting days of the Minister receiving it. Mr Michael Lee, the former CEO of Zip Industries, was announced as the Reviewer. The Terms of Reference, amongst other things, requires the reviewer to ascertain whether the EMDG scheme, as currently structured, is effective. The Review will take into consideration existing Austrade and Australian Bureau of Statistics research information, including, Austrade's annual client satisfaction survey and client feedback data, previous EMDG reviews and a literature review of firms' export promotional activities and their effects. Related research, including a survey of EMDG recipients and a control group of non-EMDG recipients will inform an economic impact (econometric) study which builds on similar work carried out in 2008 and 2009 (Austrade 2015).

Government procurement of Antarctic icebreaker vessel

In May 2014, the Australian Government announced two companies had been shortlisted to build a new Antarctic icebreaker (Hunt 2014). In the next stage of procurement, a Request for Tender (RFT) was issued in July 2014 and the two companies were invited to submit Tenders that must include an approved Australian Industry Participation plan to ensure the highest possible input from Australian businesses.

The RFT closed in March 2015 and an evaluation process is being conducted to determine whether the single Tender submitted by DMS Maritime Pty Ltd represents appropriate value for money. The Australian Government expects to make a final decision on the new icebreaker in late 2015.

While the 2014-15 Portfolio Budget Statement for the Department of the Environment does not separately identify an estimated cost for the new ice-breaker, the project has been described as the largest investment in Antarctica in Australian history.

Tax treatment of employee share schemes

Employee Share Schemes (ESSs) refer to arrangements where an employer provides a financial interest in their company (usually through shares or options) to their employee(s) as a form of 'aligned income' for their employment. Under general income tax law, any discount that the employee is provided in acquiring the shares or options, relative to the assessed market price, would usually be considered income of the employee. The ability to confer higher remuneration on staff through discounted shares would constitute a pecuniary benefit (assistance) to business afforded the scheme.

Before 2009 there were tax rules that acted to reduce the taxation of ESSs. In 2009, the rules were changed which had the effect of employees paying tax on share options conferred without charge, before the options were converted to shares and before the receipt of a return from selling the shares. This was considered to be an impediment to business, particularly for start-up businesses, as it reduced the effectiveness of ESSs as a remuneration tool to attract talented staff (Australian Government 2014b).

In October 2014, the Australian Government announced the following changes to the tax treatment of employee share schemes (Abbott, Hockey and Billson 2014):

- options will be taxed when they are converted to shares rather than at the time that they are allocated to employees;
- shares provided to employees by small start-up companies will not be subject to up front taxation as long as they are held for at least three years; and
- the maximum time for tax deferral will be extended from seven years to fifteen years.

Legislation is proposed to come into effect on 1 July 2015. The government estimates these changes will reduce taxation revenues by around \$200 million over four years. The value of the total tax concession under the current ESS arrangements is not quantified by Treasury in the annual Tax Expenditures Statement, however, it provides an indicative estimate of between \$100 million and \$1 000 million.

ANAO audit of the Biodiversity Fund program

In December 2014, Australian National Audit Office's report of the administration of the Biodiversity Fund Program was tabled (ANAO 2014).

The Biodiversity Fund Program was announced in July 2011 as part of the 'Clean Energy Future' package. It was established as a competitive, merit-based grants scheme, intended to assist land managers to store carbon, enhance biodiversity and build greater environmental resilience across the Australian landscape. It provides support for the establishment of native vegetation or better management of existing native vegetation.

The initial budget allocation was \$946.2 million over six years from 2011-12 to 2016-17. In the 2013-14 Federal Budget, overall funding was reduced by \$32.3 million and re-phased \$225.4 million to 2017-18 and 2018-19.

In December 2013 the Government decided there would be no more funding rounds and the fund would be closed, returning all uncommitted funds to budget. This also resulted in the programme termination date of 30 June 2018. At closure, 361 projects worth \$350.5 million will have been funded between 2011-12 to 2017-18.

In addition to the grants selected through the competitive merit-based assessment process, there were an additional four discretionary grants awarded under the Biodiversity Fund program, with a total value of \$7.6 million (ranging from \$176 000 to \$6 million).

The ANAO audit found that, in the main, the Department of the Environment established suitable arrangements for the administration of the Biodiversity Fund program, including: a governance framework that provided appropriate visibility of program delivery to departmental management; generally sound processes and procedures to underpin the complex grant assessment process; and funding agreements and management arrangements

with grant recipients that, in general, supported the delivery of funded projects while protecting the Commonwealth's interests.

There were, however, some shortcomings in aspects of the Department of the Environment's administration of the program, relating to assessment of eligibility criteria and the compliance strategy. In addition, the audit found that the availability of discretionary grant funding as an element of the program alongside the delivery of competitive, merit-based funding rounds increased the risks of the inequitable treatment of applicants, as not all applicants for program funding were assessed using common criteria.

Exploration Development Incentive

In March 2015, legislation was passed, giving effect to the announcement in the May 2014 Budget, of a tax incentive to encourage investment in small exploration companies undertaking greenfields minerals exploration in Australia. The total value of the tax incentive is restricted to \$25 million for 2014-15, \$35 million for 2015-16 and \$40 million for 2016-17.

Unlike grant-based programs, tax concessions are generally not taxed. However, this scheme does employ concession limits and therefore an 'ex-post modulation' approach has been designed (Australian Government 2014e and 2014g).

The Department of Industry and Science will monitor greenfields exploration throughout the program's operation, with a review of the scheme in 2016.

6.8 Policy framework reviews

Competition Policy Review (Harper review)

In March 2015, the Final Report of the Australian Government's Competition Policy Review (Competition Policy Review 2015) was released. The recommendations relating to industry assistance largely revolved around existing restrictions on competition. Among other matters, the Harper review recommended removal of restrictions on competition, for liner and coastal shipping, and that there be reviews of other regulations to ensure that unnecessary restriction on competition be removed. It identified three areas as priorities for immediate review — planning and zoning rules, the regulation of taxis and mandatory product standards (in particular greater acceptance on international product standards). Other areas of restrictions on competition identified for review include professional occupational licensing, broadcast media rules, liquor and gambling regulation, private health insurance regulation, agricultural marketing rules and air services restrictions. It also identified three areas for consideration of immediate reform — restrictions on retail trading hours, parallel import restrictions on books and second-hand cars and pharmacy ownership and location.

The Report also recommended an overarching review of intellectual property by an independent body such as the Productivity Commission. It recommended that the review focus on competition policy issues in intellectual property, including the incorporation of intellectual property provisions in international trade agreements.

The Review Panel argued that the focus of competition policy should be widened beyond infrastructure, public monopolies and government businesses, to encompass the provision of government services. It noted that even small productivity improvements (driven by competition) in these large and growing sectors, especially human services, have the potential to deliver worthwhile gains across the community. The Report recommended that each Australian government should adopt choice and competition principles in the domain of human services. Guiding principles should include: a diversity of providers should be encouraged, while taking care not to crowd out community and volunteer services; and innovation in service provision should be stimulated, while ensuring minimum standards of quality and access in human services.

Financial System Inquiry (Murray inquiry)

In December 2014, the final report of the Financial System Inquiry (Financial System Inquiry 2014) was released. The report stated that competition and competitive markets are at the heart of the Inquiry's philosophy for the financial system. The Inquiry considered that although competition is generally adequate, the high concentration and increasing vertical integration in some parts of the Australian financial system has the potential to limit the benefits of competition in the future and should be proactively monitored over time.

The Inquiry's approach to encouraging competition was to seek to remove impediments to its development, including barriers to international competition and finance innovators. The report included 12 recommendations pertaining to competition.

It also made recommendations relating to stronger capital requirements, primarily for resilience purposes, but which were also seen as reducing assistance to the industry through the implicit Government guarantee of authorised deposit taking institutions, and thereby introducing an element of competitor neutrality (box 6.2).

Box 6.2 **Implicit guarantee of banks**

The Financial System Inquiry report explained the implicit guarantee of Authorised Deposit Taking Institutions and the competition (efficiency) consequences.

Actions taken by governments both in Australia and overseas to support their financial sectors during the GFC have reinforced perceptions of an implicit guarantee. Implicit guarantees arise when creditors believe that, if a bank were to fail, the government would step in to rescue the institution.

Implicit guarantees reduce banks' funding costs by moving risk from private investors onto the Government balance sheet — a contingent liability for Government. As a result, the creditor takes no (or a reduced) loss, making it less risky to invest in the institution. Creditors will therefore accept a lower interest rate, which lowers funding costs for the bank and provides a competitive advantage to those institutions most affected.

Empirical studies have found that Australian ADIs, especially the largest ADIs, benefit from an implicit guarantee. This is also evident in the credit ratings of the major Australian banks, which all receive a two-notch credit rating uplift from credit rating agencies Standard & Poor's and Moody's due to expectations of Government support. Implicit guarantees create inefficiencies by:

- Providing a funding cost advantage for banks over other corporations.
- Giving large banks an advantage over smaller banks.
- Weakening the market discipline provided by creditors.
- Potentially creating moral hazard that encourages inefficiently high risk taking.

The report explained the rationale for reducing the implicit guarantee and how raising capital requirements would bring this about.

Perceptions of an implicit guarantee introduce a range of damaging distortions into the financial sector that reduce efficiency. They also transfer risk from the banking sector to taxpayers. In the Inquiry's view, such factors make it appropriate to take steps to minimise implicit guarantees.

Raising capital requirements means that a larger share of bank funding would be in the form of equity — which is not perceived to have a guarantee — rather than debt. In addition, the perceived value of the guarantee for remaining debt would be lessened, as the ADI is safer and there is less chance the guarantee will be called upon. This reduces the implicit guarantee.

Source: Financial System Inquiry (2014).

7 Recent developments in trade policy

Key points

- Over the past year, Australia's trade policy environment was influenced by several developments at the multilateral, plurilateral, regional and bilateral level.
- Where agreement can be reached, multilateral trade reform is the most effective way to improve national and global welfare, but it continues to be hampered by a lack of consensus among the 161 WTO members.
 - During the last year, progress towards agreement on a Trade Facilitation Protocol was held over pending the reaching of a permanent solution on public stockholding of food.
- As part of their trade and growth strategies, G20 members made undertakings to reduce trade barriers and the cost of trade. They also variously indicated an intention to pursue bilateral and regional trade agreements.
- Negotiations continued on the Environmental Goods Agreement between WTO members, a WTO Information Technology Agreement and the Trade in Services Agreement.
 - Australia announced its intention to join the WTO Government Procurement Agreement.
- A number of countries, including Australia, have sought to negotiate preferential trading agreements.
 - During the last year, Australia concluded a bilateral agreement with China and bilateral agreements with Korea and Japan entered into force. Australia also continued negotiations on bilateral agreements with India and Indonesia, and participated in negotiations for two significant regional agreements — RCEP and TPP.
- The ongoing costs to Australian taxpayers of funding the preparation and defence of the tobacco plain packaging legislation are likely to be substantial.
 - This highlights the need for advance liability provisioning and transparency about the true cost of including ISDS provisions in Australia's trade agreements and investment treaties.

Australia's trade policy environment was influenced by several developments at the multilateral, regional and bilateral level during the course of the last year. While some progress was made in advancing the long running Doha round of trade negotiations under the World Trade Organization (WTO), these negotiations continue to be hampered by the inherent difficulties in reaching consensus among the 161 member countries under the single undertaking approach to the package of associated measures. Nevertheless, multilateral trade reform remains the most effective way to improve national and global welfare compared with preferential agreements which discriminate against non-parties to those agreements (PC 2010a). This point is reinforced by the evolution and recent measurement of global value chains and value-added trade flows (chapter 2).

The slow progress in multilateral forums has prompted the acceleration of agreement-making at the bilateral and regional or plurilateral level. During the year, Australia's bilateral agreements with Korea and Japan entered into force, negotiations of a trade agreement with China concluded and negotiations for bilateral agreements with several countries including India and Indonesia continued. Australia also participated in negotiations for two significant regional agreements which are nearing finalisation — the Trans Pacific Partnership (TPP) Agreement and Regional Comprehensive Economic Partnership (RCEP) Agreement (figure 7.1).

In addition to reporting on these developments in trade policy negotiations and agreement formation, this chapter also reports on legal actions against the Australian Government (and potential liabilities under those actions) by other country governments under WTO processes and private investors from other countries under Investor State Dispute Settlement (ISDS) provisions contained in certain trade and investment treaties Australia is a signatory to. Anti-dumping actions over the last year are also covered.

7.1 Multilateral, plurilateral and regional developments

Multilateral agreements

WTO members agreed to a package of matters at the 9th Ministerial Conference in Bali in December 2013 that would contribute to a conclusion of the Doha Round of multilateral trade negotiations which began in 2001. Those matters included the Agreement on Trade Facilitation (heralded as a reinvigoration of the WTO process), some decisions on agriculture and some developing country initiatives (PC 2014g).

In July, however, the WTO Director-General reported that members had been unable to reach consensus on the adoption of the Protocol for the Agreement on Trade Facilitation (WTO 2014b). At issue was a small group of countries (led by India) insisting that a permanent solution on public stockholding for food security in developing countries should be finalised before members finalised the Agreement on Trade Facilitation. India also insisted that the permanent solution on public stockholding be finalised by the end of 2014 instead of the previously agreed timeline of 2017 reached in Bali. The impasse was met with widespread concern and brought into question the credibility of the WTO negotiating function and on how to proceed with other decisions reached at the Bali Ministerial Conference (APEC 2014a, WTO 2014d).

Reflecting the importance of securing the Bali package, the President of the United States and the Indian Prime Minister met to discuss the impasse. Following negotiations between the United States and India, the WTO General Council agreed to fast-track the discussion on public stockholdings with a view to reaching agreement by the end of 2015. WTO members also adopted the Protocol of Amendment for the Agreement on Trade Facilitation and agreed to advance the development of the post-Bali work program.

Figure 7.1 **Australia's recent trade policy developments**

May 2014

April 2015

Multilateral forums

World Trade Organization Doha Round

Negotiations began 2001
Negotiation Rounds 9
Latest: 9th Ministerial Conference Bali December 2013

Plurilateral forums/agreements

APEC

Negotiations began 1989
Negotiation Rounds Annual
Latest: November 2014

G20

Negotiations began 2008
Negotiation Rounds Annual
Latest: November 2014

Trade in Services Agreement

Negotiations began 2013
Negotiation Rounds 11
Latest: April 2015

WTO Environmental Goods Agreement

Negotiations began 2014
Negotiation Rounds 5
Latest: March 2015

WTO Information Technology Agreement

Negotiations began 2012
Negotiation Rounds na
Latest: November 2014

WTO Government Procurement Agreement (Revised)

Negotiations began 2014
Negotiation Rounds na
Implemented: April 2014

Regional agreements

Regional Comprehensive Economic Partnership

Negotiations began 2013
Negotiation Rounds 7
Latest: February 2015

Trans Pacific Partnership

Negotiations began 2010
Negotiation Rounds 31
Latest: March 2015

Bilateral agreements

In force

Korea-Australia Trade Agreement

Negotiations began 2009
Negotiation Rounds na
In force: December 2014

Japan-Australia Economic Partnership Agreement

Negotiations began 2007
Negotiation Rounds 17
In force: January 2015

Concluded

China-Australia Trade Agreement

Negotiations began 2005
Negotiation Rounds 21
Concluded: November 2014

Negotiating

Australia-India Comprehensive Economic Cooperation Agreement

Negotiations began 2011
Negotiation Rounds 7
Latest: April 2015

Indonesia-Australia Comprehensive Economic Partnership Agreement

Negotiations began 2012
Negotiation Rounds 2
Latest: July 2013

Source: Derived from DFAT website and information provided by DFAT.

Plurilateral agreements and cooperation

A common theme among the plurilateral forums discussed in this section is their ongoing support for the multilateral trading system and non-discriminatory trade liberalisation under the auspices of the WTO.

Group of 20 (G20)

The first G20 Leaders Summit was held in 2008 and since that time G20 leaders have met nine times. The most recent meeting was held in Brisbane, Australia on 15-16 November 2014. The agenda for the 2014 G20 Brisbane Summit included anti-corruption, development, employment, energy, financial regulation, growth strategies, investment and infrastructure, reforming global institutions, tax and trade.

The communique issued by G20 Leaders focused on aspirational ways to raise global growth to deliver higher living standards and employment. It noted the importance of trade (and facilitating global value chains) to delivering these aims and the strategies to be pursued to boost world trade:

Trade and competition are powerful drivers of growth, increased living standards and job creation. In today's world we don't just trade final products. We work together to make things by importing and exporting components and services. We need policies that take full advantage of global value chains and encourage greater participation and value addition by developing countries. Our growth strategies include reforms to facilitate trade by lowering costs, streamlining customs procedures, reducing regulatory burdens and strengthening trade-enabling services. (G20 2014a)

On trade-related reform matters, G20 members focused on ways to remove obstacles to trade in their G20 growth strategies, including measures that will ease the cost of trading across borders and facilitate participation by businesses in regional and global value chains. The actions chosen varied across each member economy and included undertakings to reduce tariffs, deregulatory measures, enhanced logistics, faster customs procedures and upgrades to trade-related infrastructure.⁵³

Overall, unilateral implementation of trade facilitation measures related to the WTO Trade Facilitation Agreement discussed earlier (and which is yet to be concluded) dominated country commitments (table 7.1). This underlines the importance placed on improving the efficiency of goods trade across borders. Other common commitments related to measures

⁵³ Eight participants — Australia, Brazil, Canada, the European Union, India, Saudi Arabia, South Africa and the United States — listed trade as a top 5 commitment in their G20 undertaking. The twelve participants not listing trade as a top 5 commitment were Argentina, China, France, Germany, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Turkey, the United Kingdom and Spain (as a permanent guest).

to support exports through, for example, measures to assist small to medium sized enterprises, provide financial support via export guarantees, loans and the promotion of specific sectors. There were also trade-related commitments to boost infrastructure and competition and the pursuit of preferential trade agreements. Participants commonly included the negotiation of bilateral, regional and plurilateral trade agreements within action plans. Despite leaders agreeing that in the current world of trade, imports were as important as exports, there were few commitments to lower tariffs unilaterally.

Table 7.1 Analysis of G20 country members' trade actions on the Brisbane Action Plan

<i>Type of Trade Related Policy Commitment</i>	
	Number
Trade Facilitation Measures	39
Trade agreements, including bilateral, regional and plurilateral	18
Support for exports	33
Support to the services sectors	13
Unilateral tariff measures on exports and imports	4
Other trade related measures, that is, those aimed to boost infrastructure, competition or other areas but also improve trade flows ^a	31
Total	138

^a Included in other topics of the growth strategies not trade.

Source: DFAT (pers. comm., 21 May 2015).

In terms of individual country undertakings, Australia committed to lower trading costs and reducing the regulatory burden for business by expeditiously implementing and ratifying the WTO Agreement on Trade Facilitation (G20 2014b). By comparison, the United States cited the creation of a single window documentation process to facilitate faster processing of cargo and also efforts to conclude regional trade agreements with Asia-Pacific (TPP) and European (TTIP) trading partners (G20 2014c). Japan similarly referred to promoting regional and bilateral economic partnership agreements and also streamlining trade-related administrative procedures and resisting protectionism (G20 2014d). The European Union listed the full and timely implementation of the Agreement on Trade Facilitation and also a bilateral trade agenda as its key trade policy imperatives (G20 2014e).

As indicated above, a common feature of many G20 country commitments in the trade arena has been the negotiation of preferential trade agreements. As a group, the G20 alluded to the need for such agreements to be compatible with multilateral trade forums.

... we will work together to ensure our bilateral, regional and plurilateral agreements complement one another, are transparent and contribute to a stronger multilateral trading system under World Trade Organization (WTO) rules. These rules remain the backbone of the global trading system that has delivered economic prosperity. (G20 2014a)

Asia-Pacific Economic Cooperation

APEC leaders, ministers and senior officials met in Beijing, China in November 2014 — the 25th anniversary of APEC's founding. The meetings focused on a series of new measures to deepen regional economic integration including through trade, productivity, sustainable development, economic reform and innovative development and building infrastructure investment and connectivity. The APEC Leaders meeting on 10-11 November considered a roadmap for a Free Trade Area of the Asia-Pacific (FTAAP) — a comprehensive preferential trade agreement building on emerging regional undertakings such as the Trans Pacific Partnership and Regional Comprehensive Economic Partnership.

The APEC Ministerial Meeting on 7-8 November agreed to launch a collective strategic study on issues related to the realisation of the FTAAP. The taskforce responsible for that study is due to report by the end of 2016. Ministers also discussed the next steps for reviving global trade given the unexpected challenge to implementation of the WTO Agreement on Trade Facilitation and the implications for the Bali Package and Doha Round of multilateral trade negotiations.

Other matters considered related to: facilitating business travel including by extending the APEC Business Travel Card (box 7.1); actions to strengthen cooperation on global value chains; improving conditions for research and development and commercial innovation and sustainability; facilitating APEC economies' commitment to reduce tariffs on environmental goods, furthering measures to help double the share of renewable energy in the region by 2030 and increase energy efficiency; undertaking actions to fight corruption and open opportunities for small businesses to play a larger role in global production chains; the APEC scholarships and internships initiative to promote cross-border education and people-to-people connectivity; and bridging infrastructure and broader connectivity gaps created by rapid development and the increasing volume of goods, services, people and capital flows between economies.

The APEC Joint Ministerial Statement reaffirmed support for the multilateral system and recommended to Leaders an extension of the standstill commitment until the end of 2018, rollback of existing trade-distorting and protectionist measures and the exercise of maximum restraint in implementing measures that may be WTO compliant but have a significant protectionist effect. APEC leaders agreed to the recommendations in the APEC Leaders' Declaration of 11 November 2014 (APEC 2014a).

Box 7.1 **APEC Business Travel Card**

The APEC Business Travel Card (ABTC) was introduced in 1997 to expedite travel and border entry between all 19 fully participating APEC member economies. The card currently offers business people short-stay, multiple entry to participating member economies and expedited access at airport immigration checkpoints for three years. In-principle agreement was reached in Beijing to extend the validity of the card to five years. According to the APEC Policy Support Unit, the ABTC reduces the cost of business travel between APEC economies by 38 per cent overall with application fees cut by 28 per cent, application times cuts cut by 43 per cent and immigration processing time costs cut by 52 per cent (APEC 2014b).

In spite of these apparent benefits, there were only 185 000 active users of the ABTC as at March 2015 (corresponding to an increase of 17 per cent over 2014). The low-take up rate is consistent with a number of operational weaknesses identified in a recent review of the scheme including widespread frustration among officials and ABTC cardholders with lengthy pre-clearance processing times for some member economies, cumbersome card renewal requirements and poor lines of communication in certain economies (APEC Business Mobility Group 2014c). In addition, the need for each APEC member economy to vet and pre-clear all ABTC applications is placing a disproportionate administrative burden on smaller APEC members which are hosts to fewer business travellers. To address these issues, the APEC Business Mobility Group is investigating capacity-building initiatives including options for online application lodgement and sharing best practice processing experiences.

ASEAN member countries (most of which are also members of APEC) are themselves considering the introduction of a business travel card in 2015 that would allow extended business stays without the need for a visa. While reductions in red tape associated with business (and other) forms of travel are to be encouraged, the introduction of multiple travel cards may simply act to increase the administrative complexity of business travel and compliance costs for business travellers.

Sources: APEC (2014b, 2014c).

East Asia Summit

The East Asia Summit (EAS) is a regional leaders forum for strategic dialogue and cooperation on key challenges facing the East Asian region. Australia participated as a founding member in the inaugural EAS held in Kuala Lumpur on 14 December 2005. Membership of the EAS comprises the ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam), Australia, China, India, Japan, New Zealand, the Republic of Korea, the United States and Russia. The 18 EAS member countries represent collectively 55 per cent of the world's population and account for around 56 per cent of global GDP (DFAT 2015a). EAS countries received more than 75 per cent of Australia's total exports and two-way trade with EAS countries was worth \$440 billion in 2013-14.

At the 25th EAS held in Nay Pyi Taw, Myanmar in November 2014 ministers underlined the importance of cooperation between ASEAN and EAS partners to facilitate the ASEAN Economic Community (AEC) and further integration of ASEAN and the wider region.

The AEC, to be declared effective at the end of 2015, is integral to the regional economic architecture. By providing a framework for governance reform and institutional coordination, the AEC is intended to increase the free movement of goods, services, investment, skilled labour and free flow of capital within ASEAN and thereby enhance the region's competitiveness, narrow the wealth gap across ASEAN and optimise ASEAN's integration into the global economy. It also seeks to use RCEP as a mechanism to achieve broader economic integration across East Asia. Ministers also discussed progress on connectivity, collaboration with APEC, and underscored the need for strong intellectual property rights policies, better understanding of industrial policies and access to regional and global value chains.

While the Summit reaffirmed the importance of trade liberalisation in East Asia, the chosen vehicle for that liberalisation appears to be via preferential rather than concerted unilateral action. For example, the Summit urged RCEP participating countries to reach a comprehensive and commercially meaningful agreement that would support the AEC and deepen regional economic integration by the end of 2015. Continued negotiations for the TPP (see below) were also supported as were developments regarding ASEANs existing preferential trading agreements with EAS participating countries (EAS 2014).

Other plurilateral negotiations

In addition to its involvement in these regional forums, Australia participated in WTO negotiations related to four plurilateral agreements over the past year.

Environmental goods

Negotiations towards an Environmental Goods Agreement were launched in January 2014 and are being undertaken by 17 WTO members (including Australia) that comprise the 'Supporters of Environmental Goods Agreement Negotiations' group. The group commenced negotiations — which will consider the substance of an Agreement, including the goods to be covered, with the aim of eliminating all tariffs on an MFN basis on a negotiated list of environmental goods — with the release of a 'Joint Statement Regarding the Launch of the Environmental Goods Agreement Negotiations.' This release covered matters the group proposes to consider during framework negotiations which began in Geneva in July 2014. Participants agreed to build on the list of 54 environmental goods agreed by APEC in 2012 and consider technical issues relating to those product nominations, including HS nomenclature (DFAT 2015b). Four rounds of negotiations have since focused on product nominations by each party under an agreed list of categories with input from experts. From May 2015, the process will move into the negotiations phase.

WTO Information Technology Agreement

Negotiations to review the WTO's Information Technology Agreement (ITA) continued during the year. The Agreement entered into force in 1997 with Australia being one of 29 original signatories. The Agreement now covers 80 countries which account for 97 per cent of global trade in IT products (WTO 2014c). In joining the ITA, participants commit to eliminating tariffs on all products covered under the Agreement, including computers, telecommunications equipment, software, scientific equipment, and parts and accessories for these products. The tariff commitments undertaken in the Agreement are made on a most-favoured nation basis with the cumulative value of import duties eliminated since the inception of the ITA estimated at US\$1.6 trillion in 2013 (WTO 2014c).

The ITA also provides for a work program to develop non-binding principles on Non-Tariff Barriers including: the use of international standards; conformity assessment procedures related to the safety, electromagnetic compatibility, and radio emissions of IT products, registration requirements for IT products, good regulatory practices for the IT sector, and transparency of regulatory measures affecting IT products.

Efforts to extend the Agreement to cover around 200 additional products including many new generation communication (such as smart phones), data and medical devices have been underway since 2012. The speed of technology development in these areas suggests ITA coverage will lag market realities. Nevertheless, estimates of the value of ITA expansion in the products being proposed range from US\$0.8 trillion to US\$1.4 trillion of annual trade (WTO 2014b). An expanded ITA received further impetus through from a bilateral meeting between United States and Chinese negotiators at the APEC Leader's Summit in Beijing in November 2014. The Director General of the WTO commented:

Agreement on expanding the ITA would be the first successful tariff-cutting negotiation in the WTO for over a decade and a half – and, crucially, would benefit all WTO members, not just the ITA participants, because the tariff cuts would be applied in a non-discriminatory manner. (WTO 2014c)

Trade in Services Agreement

Australia is also jointly leading (with the United States and the European Union) negotiations on a Trade in Services Agreement (TISA) with 51 WTO members participating. Negotiations began in early 2013 and are focused on improved market access commitments and rules in areas where there have been significant developments since the Uruguay Round of multilateral trade negotiations in 1991. These areas include financial services, domestic regulation and transparency, information and communications technology services, professional services, maritime and aviation services, and temporary entry of business persons (DFAT 2015d).

There are five rounds of negotiations scheduled in 2015 with the latest round chaired by the European Union from 13-17 April 2015. Continuing the pattern of short time lags

between negotiating rounds, Australia will host the twelfth round of negotiations from 6-10 July 2015 in Geneva.

WTO Government Procurement Agreement

The Australian Government also announced its intention to work towards Australia joining the WTO Agreement on Government Procurement (GPA) (Robb 2014b). Membership of the Agreement is intended to lower the impediments and improve access to the government procurement markets of 45 agreement partners on the same conditions as other members. The government procurement market of member economies is estimated to worth over \$US 1.7 trillion in total (Robb 2014b). Membership of the agreement will also require the Australian Government to lower impediments and improve market access to member exporters. Current members of the GPA include the European Union's 28 Member States, Canada, Japan, South Korea, the United States, Hong Kong, Iceland, Israel, Norway, Singapore, Switzerland, Liechtenstein and Taiwan. GPA coverage is expected to expand materially with several other countries currently negotiating to join, including China.

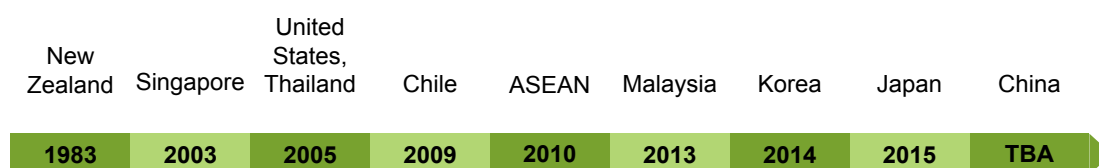
According to DFAT (2015e), a revised GPA which came into effect in April 2014 is more in line with the principles underlying Australia's current government procurement regime. While Australia is already largely compliant with the revised GPA, implementation would require some changes to current practices. Australia would be required to implement review procedures for suppliers that are effective, timely, transparent and non-discriminatory. Some changes would also be required to procedures for pre-qualification and for limited tendering. Submissions from interested parties to inform Government consideration of accession to the GPA are currently being considered.

7.2 Bilateral and regional agreements

Bilateral agreements

Over the past year, Australia concluded negotiations on a bilateral trade agreement with China and entered into force bilateral agreements with Korea (2014) and Japan (2015). An amendment to the ASEAN-Australia-New Zealand trade agreement (in force since 2010) was also signed. Australia also has trade agreements currently in force with New Zealand (in force since 1983), Singapore (2003), Thailand (2005), the United States (2005), Chile (2009) and Malaysia (2013) and is negotiating agreements with a number of other countries including India and Indonesia (figure 7.2).

Figure 7.2 Australia's bilateral trade agreements in force



Source: Derived from DFAT (2015c).

Although the priority given to these and future bilateral agreements is often justified on the basis of the value of gross export flows from Australia (and the potential for expanded market opportunities) these gross measures of trade are misleading indicators of actual trade. They do not take account of the trade diverted from non-partners which may be lower-cost producers, the efficiency costs of preferential arrangements or the opportunity costs of preferential arrangements relative to unilateral or multilateral approaches.⁵⁴ They also do not reflect the ultimate destination of Australian raw material and other exports processed through global value chains. For example, China accounted for an average 18 per cent of Australia's exports measured on a gross basis between 2002 and 2011. When account is taken of the flow through of Australian value added in trade to third countries, China accounted for around 15 per cent of trade measured in value-added terms over the same period (Kelly and La Cava 2014). Comparisons of Australian gross and value-added exports to North America and Europe indicate their indirect use of Australian value-added in exporting. The share of gross exports to North America between 2002 and 2011 averaged around 10 per cent in gross terms compared to 16 per cent in value-added terms while the respective figures for Europe were 12 per cent and 16 per cent (chapter 2).

China-Australia trade agreement

Australia and China agreed to commence negotiations on a bilateral trade agreement in April 2005. In November 2014 (after 21 rounds of negotiations), the Australian and Chinese Governments announced the conclusion of negotiations for a bilateral trade agreement between the two countries. Formal signing of the agreement will take place once the text has been translated and subject to legal review. The negotiated text of the agreement along with a national interest analysis will then be tabled in the Australian Parliament. The agreement will then be considered by the Joint Standing Committee on Treaties which will report back to the Australian Parliament. Once both countries have completed their domestic treaty-making processes, there will be an exchange of diplomatic notes to certify the agreement is ready to enter into force. Thirty days after this exchange, or an otherwise agreed date, ChAFTA will enter into force. The Australian and Chinese Governments have indicated a desire to have the agreement enter into force in 2015.

⁵⁴ The risk of trade diversion is likely to have receded through the significant reduction of MFN tariffs since the 1980s in Australia and trading partner economies. The risk of trade diversion is also lessened by the increased coverage of Australia's two-way trade by preferential trade agreements.

Australia has provided China with substantially equivalent treatment to that in other recent bilateral agreements such as those with Japan and Korea (DFAT pers. comm., 21 May 2015). For instance, Australian tariffs on qualifying Chinese imports will either be eliminated on entry into force or phased out within two or four years for certain automotive, steel, aluminium, plastics, canned fruit, carpets, and clothing and footwear products. Services and investment outcomes are equivalent to commitments made in agreements with Japan and Korea including access to a higher foreign investment screening threshold (box 7.2). The agreement also partly met China's request for improved temporary visa access including through an investment facilitation arrangement for projects above \$150 million; up to 1800 skilled migrant visas and a separate agreement under which Australia will grant up to 5000 working holiday visas. Key features of the China-Australia agreement from Australia's export market access viewpoint are listed in box 7.2.

In parallel to the agreement on trade, a Memorandum of Understanding (MOU) to establish official renminbi (RMB) clearing arrangements in Australia was signed.⁵⁵ The clearing arrangements will provide a more direct means of facilitating cross-border RMB trade and investment transactions between Australian and Chinese entities (RBA 2014). Using RMB (as opposed to the traditional reliance on USD) for trade can offer significant advantages for firms engaged in trade including better management of foreign exchange risk, lower transactions costs and faster processing times. Chinese authorities have also announced that Australian domiciled financial institutions will be allowed to invest in China's bond and equity markets using RMB (RBA, pers. comm., 1 December 2014).

The conclusion of the China-Australia agreement continues the recent acceleration in efforts by the current Australian Government in pursuing bilateral preferential trade deals. It follows the signing and entry into force of the Korea-Australia and Japan-Australia agreements in 2014 and 2015 respectively. These agreements share a number of similarities including at times lengthy phasing arrangements for tariff reductions; product-specific rules of origin on merchandise trade; carve-outs for sensitive sectors (particularly agriculture but also in services through locational restrictions on establishing commercial presence); and increases in the screening threshold for private investment in Australia relative to MFN thresholds. But there are notable differences across the agreements as well such as the inclusion of an investor-state dispute settlement provision in the China and Korean agreements but not in the agreement with Japan (though this is subject to a review).

⁵⁵ The funds an Australian company sends to pay a foreign supplier must be first cleared by an intermediary bank (or clearing house) before being credited to the foreign receiving bank.

**Box 7.2 Key features of the China-Australia trade agreement —
Australian export market access perspective**

Subject to origin requirements, duty-free access for 93 per cent of Australian exports to China will be phased in within 4 years with immediate duty-free access for 85 per cent of current exports on the agreements entry into force. Review mechanism within 3 years to consider further liberalisation and expanded market access.

Agriculture and processed food

- Phased duty-free access for Australian exports of hides, skins and leather products over 2 to 7 years; live animals, wine, seafood and most horticulture products over 4 years; dairy products over 4 to 11 years; sheepmeat over 8 years and beef over 9 years. Barley on entry into force. Australia-only duty free quota for wool in addition to continued access to China's WTO wool quota.

Resources, Energy and Manufacturing

- Duty-free access for all Australian originating resources and energy products including coking coal immediately on entry into force and thermal coal within 2 years; all pharmaceutical products either on entry or over 4 years; other eligible manufactured products within 4 years. Removal of tariffs on many transformed resources/energy products on entry into force.

Services trade and investment

- Agreement includes improved market access for eligible projects for a range of Australian service suppliers including:
 - legal firms to establish commercial associations with Chinese law firms in the Shanghai Free Trade Zone
 - new or improved market access for qualifying Australian financial services providers
 - qualifying mining services suppliers allowed to provide technical consulting and field services in coal bed methane and shale gas extraction and to joint-venture consulting services in oil and gas exploitation, iron, copper and manganese resources
 - architectural and urban planning firms allowed access to higher value Chinese projects, taking into account Australian experience in applications for higher-level qualifications
 - certain qualifying service sectors allowed to wholly-own subsidiaries in China such as in software implementation, R&D, printing, real estate and environmental services.
- Increase in the screening threshold for Chinese private investment in Australia in non-sensitive sectors from \$252 million to \$1094 million (current levels) in line with the threshold applied to New Zealand, the United States, Korea and Japan.
- Provision for an investor-state dispute settlement mechanism. The agreement includes safeguards to protect government's ability to regulate in the public interest, such as in the areas of public health, safety, and the environment.

Other areas

- Establishment of a framework for the growth of bilateral electronic commerce.
- Re-affirmation of existing international intellectual property obligations.
- Scope for future negotiations on reciprocal access to government procurement markets.
- Streamlined customs processes to improve trade facilitation.

Source : Abbott and Robb (2014); DFAT (2014a).

ASEAN-Australia-New Zealand agreement

Another development during the year was the signing of the First Protocol to amend the ASEAN-Australia-New Zealand trade agreement. Ministers from the Parties to the Agreement signed the Protocol in Nay Pyi Taw, Myanmar on 26 August 2014. The aim was to enhance business utilisation of the tariff preferences by simplifying rules of origin requirements and associated administrative arrangements that raised business concerns regarding the need to provide commercially sensitive information (Robb 2014e). Rules of origin issues are discussed in more detail in chapter 4. It is expected the First Protocol will enter into force in the last quarter of 2015.

Regional agreements

In addition to bilateral agreements, Australia is a negotiating party to two possible regional trade agreements — the Regional Comprehensive Economic Partnership (RCEP) and the Trans-Pacific Partnership (TPP). Both proposals could serve to harmonise the disparate provisions (for example, with respect to rules of origin) contained in existing bilateral agreements among negotiating parties to the respective agreements. Although the TPP will

be open to other Asia-Pacific economies to join, there is the likelihood that a RCEP or a TPP bloc will discriminate against non-parties to the respective agreements. There is also a risk that specific provisions within these agreements including those relating to intellectual property, investor-state dispute settlement and product-specific rules of origin will impose net costs on trading partner economies.

These concerns are heightened by the continuing absence of two critical areas of transparency. First, the lack of contemporaneous transparency of the provisions being negotiated.⁵⁶ Second, the absence of any rigorous and transparent assessment of the negotiated text of an agreement before signing (noting that post-negotiation assessments can only result in the Government deciding not to proceed with ratification).⁵⁷ An assessment of the post-negotiation review process undertaken by the Australian Government for the Japan-Australia Economic Partnership Agreement is provided in chapter 4.

Regional Comprehensive Economic Partnership

Singapore hosted the fifth round of negotiations of RCEP from 21 to 27 June 2014. Negotiations focused on key issues for RCEP Ministers' consideration and guidance,

⁵⁶ The Australian Government has stated that public release of the negotiating text of agreements prior to signing would both undermine confidence in Australia as a negotiating partner and also the negotiations themselves (Robb 2015b).

⁵⁷ The treaty-making process does involve consultation with industry and other stakeholders as well as scope for written submissions by interested groups.

including on the scope of the RCEP agreement and the level of ambition for negotiations on tariffs, services and investment. New negotiating groups on legal and institutional issues; sanitary and phyto-sanitary measures; and standards, technical regulations and conformity assessment procedures met for the first time. Negotiations on good services, investment, economic and technical cooperation, intellectual property, rules of origin and customs procedures and trade facilitation continued.

The Economic Ministers from the 16 RCEP Participating Countries attended the 2nd RCEP Ministerial Meeting held in August 2014 in Nay Pyi Taw, Myanmar. Ministers discussed progress to date and sought expedited work on core negotiating issues including the modality for initial tariff offers and scheduling of services and investment commitments. The Ministers reiterated the aim set in 2012 to complete the RCEP negotiations by the end of 2015.

Four inter-sessional meetings of various working groups were held in the lead-up to the sixth round of RCEP negotiations held between 1 and 5 December 2014 in Greater Noida, India. These inter-sessional meetings related to economic and technical cooperation (16-18 September, Bali), rules of origin (10-14 October, Cairns), services and investment (27-31 October, Sydney), and tariff modalities in the Trade Negotiating Committee (27-28 October, Jakarta). The seventh round of negotiations was held on 9-13 February 2015 in Bangkok, Thailand.

The chapter text is progressing on agreed areas under negotiation including goods and services trade, investment, competition, intellectual property, economic and technical cooperation, and dispute settlement. Detailed consideration has also been given to other issues including electronic commerce and small and medium enterprises. Market access negotiations have not yet commenced with officials working on an agreed pathway toward that aim. Deliberations have focused on addressing the challenges of adding value to the existing ASEAN+1 agreements that vary in scope, scale, depth, and degrees of comprehensiveness.

Trans-Pacific Partnership

The proposed TPP aims to create a comprehensive model agreement that would facilitate a consolidation of differences (particularly rules of origin) in existing bilateral agreements and provide scope to be expanded to include additional members. The agreement would cover trade in goods and services, rules of origin, trade remedies, sanitary and phyto-sanitary measures, technical barriers to trade, intellectual property, government procurement, competition policy, temporary entry of business persons and dispute settlement procedures. There are currently 12 negotiating parties – Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States and Vietnam.⁵⁸ Together they account for around 40 per cent of global GDP, one third of

⁵⁸ Five of these countries (United States, Japan, Singapore, Malaysia and New Zealand) were among Australia's top ten trading partners in 2013-14. The same countries (with the exception of Malaysia) were also among the top ten destinations of Australian outward investment in 2013.

world trade and have a combined population of around 800 million. The latest TPP ministerial meeting was held in Hawaii from 9-15 March 2015. According to the Ministers and Heads of Delegation for the TPP countries:

... we have made significant progress on both component parts of the TPP Agreement: the market access negotiations and negotiations on the trade and investment rules, which will define, shape and integrate the TPP region once the agreement comes into force. (Robb 2014f)

The timeline for completion of negotiations is unclear.

Proponents of the TPP argue that the agreement will strengthen Australia's existing trade and investment relationships with key partner economies, open new market opportunities, promote further integration into regional supply chains, and improve productivity. The establishment of a common set of agreed rules (including those to determine origin) and transparency of new laws and regulations is also argued to provide certainty for business and reduced costs and red tape (DFAT pers. comm., 21 May 2015).

However, the confidential nature of the TPP negotiating text makes an objective assessment of these aspirations problematic. This has been an ongoing and contentious issue (despite a broad-based consultation process) particularly in respect of intellectual property and investor-state dispute settlement provisions. As stated above, the absence of any rigorous and transparent assessment of the agreement before government commitment is a critical failure in transparency. Post-negotiation assessment cannot lead to amendments of the agreed text only in the Government deciding not to proceed with ratification (PC 2014g). And the Commission is unaware of any trade agreement that has been rejected in response to such post-negotiation assessment.

7.3 Dispute settlement

Investor-state dispute legal proceedings against the Australian Government

Pursuant to the *Agreement between the Government of Australia and the Government of Hong Kong for the Promotion and Protection of Investments*, which entered into force in 1993, Philip Morris Asia Limited lodged a dispute against the Australian Government over tobacco plain packaging requirements, which is subject to third-party arbitration being administered by the Permanent Court of Arbitration (PCA). The most recent arbitration hearing relating to this case (PCA Case No. 2012-12) was held from 16-18 February 2015 in Singapore. At that hearing, two of Australia's preliminary jurisdictional objections were heard but a decision is not expected until the second half of 2015. Should those objections prove successful, this will likely lead to an accelerated conclusion to the proceedings. In the case where Australia's objections are dismissed, arbitration will then move into the merits phase.

The Australian Government was first served with a notification of claim by Philip Morris Asia on 27 June 2011. The final outcome of the case is not expected to be known for some

time. This means that the ongoing costs to Australian taxpayers of funding the preparation and defence of the tobacco plain packaging legislation are likely to be substantial. Since the dispute was lodged, there have been eleven procedural orders determined by the PCA requiring legal representation by both parties.

In addition, the Commission understands that three tobacco taskforces have been established in the Australian Department of Health (which is funding the defence), the Australian Attorney General's Department and the Australian Department of Foreign Affairs and Trade (which also has primary responsibility for the Australian Government's tobacco litigation defence in the WTO disputes mentioned below). Although the Commission sought advice from the relevant Department's regarding expenditures related to defending the ISDS claim by Philip Morris Asia, it was told that both the previous and current Australian Government's had determined that this information should not be disclosed on strategic grounds. The basis for that determination was explained in the following way:

The Government does not intend to disclose in advance, figures associated with defending the legal challenges to the tobacco plain packaging measure. Public disclosure of this information may confer a tactical advantage on the other parties in the litigation. Accordingly, funding for the tobacco plain packaging litigation has been designated as 'not for publication'. (Australian Department of Health pers. comm., 1 December 2014)

While there may be some basis for non-disclosure, the obvious tradeoff is a lack of transparency regarding the true cost of including ISDS provisions in Australia's trade agreements and investment treaties. The open-ended nature of these costs needs to be taken into account in any discussion regarding the appropriateness of such provisions and consideration of the net benefits (costs) that they entail.

While the orders and amount of compensation sought by Philip Morris Asia in its claim against the Australian Government is also covered by a confidentiality order, the company has publicly stated it will be seeking substantial remedies:

[Philip Morris Asia] is asking an arbitration panel to suspend the law and award substantial compensation for the financial damage that plain packaging will cause by commoditizing the cigarette market in Australia. (PMI 2014)

Disputes under the WTO

Since the Commission last reported on dispute settlement activity in the WTO (PC 2014g, pp. 119-120), Australia has had no new complaints brought against it. Australia has five outstanding complaints related to its tobacco plain packaging laws which were brought by Indonesia (DS467 - 20 September 2013), Cuba (DS458 - 6 May 2013), Dominican Republic (DS441 - 18 July 2012), Honduras (DS435 - 4 April 2012) and Ukraine (DS434 - 13 March 2012). In addition to the complainant countries, a large number of other countries have requested (and been granted permission) to join the dispute as third parties.

According to the WTO (2014e), all five complainants claim that Australia's tobacco plain packaging measures appear to be inconsistent with certain provisions of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, the Technical Barriers to Trade (TBT) Agreement and the General Agreement on Tariffs and Trade (GATT 1994).

WTO dispute settlement panels have been established in relation to all five complaints against Australia's tobacco plain packaging laws and on 5 May 2014, the Director-General of the WTO appointed the panellists who will hear these disputes. On 10 October 2014, the Chair of the panel informed the Dispute Settlement Body that the panel expects to issue its final report to the parties not before the first half of 2016, in accordance with the timetable adopted by the panel on 17 June 2014 and on the basis of a draft timetable proposed by the parties (WTO 2014e).

7.4 Anti-dumping activity

The present anti-dumping regime and administration reflects changes made since the Productivity Commission Review in 2009 and the 2012 Brumby review (PC 2013). The latter review resulted in the establishment of the Australian Anti-Dumping Commission in July 2013 and an increase in funding of \$27.4 million for the operation of the Commission over four years. At the same time, stricter remedies came into force, including provisions which increased the scope for dumping duties to be imposed at the highest permissible rate, and for retroactive duties.⁵⁹

During 2013-14, there were 19 new investigations initiated — compared to 13 in 2012-13 and 22 in 2011-12 (Appendix D). Also during 2013-14, 15 new measures were imposed and 7 existing measures expired. Overall, at 30 June 2014, there were 48 measures in force up from 40 at June 2013 and 25 at June 2012.

Given the significant recent changes in the anti-dumping regime and the potential for an increase in the number and size of anti-dumping actions, there is a need for close monitoring of outcomes. It would be timely for a formal and independent review of the anti-dumping arrangements and outcomes to be undertaken. This is important to ensure that the arrangements do not impose undue costs on the product users, and to examine whether there is evidence of any emerging trend towards increasing protectionism. Such a review should re-consider the need for a national interest test as recommended by the 2009 Productivity Commission review.

⁵⁹ Anti-dumping duties are based on the assessed dumping margin — the difference between the 'ascertained' normal value of the like goods and the ascertained export price. The dumping margin or the amount of subsidy sets the maximum rate of any measure. However, this may exceed the price at which the local industry might reasonably sell its product if there were no dumped or subsidised imports under.

APPENDICES

A Detailed estimates of Australian Government assistance to industry

Chapter 5 provides an overview of the Commission's estimates of Australian Government assistance to industry. This appendix provides supporting details of those estimates for the period 2008-09 to 2013-14.

Tables A.1 to A.3 provide estimates of net tariff assistance, budgetary assistance and net combined assistance by industry grouping. Tables A.4 to A.7 provide estimates of output tariff assistance, input tariff penalties, budgetary outlays and tax concessions by industry grouping. Tables A.8 and A.9 provide estimates of the nominal rate of combined assistance on outputs and the nominal rate of combined assistance on materials, respectively.

Tables A.10 to A.13 detail budgetary assistance to primary, mining, manufacturing and services industry groupings, respectively. For each industry, budgetary assistance measures are also identified according to the activity assisted, such as exports and R&D. Table A.14 covers budgetary measures for which information about the industry benefiting is not available.

The budgetary assistance estimates are derived primarily from actual expenditures shown in departmental and agency annual reports, and the Australian Treasury's Tax Expenditures Statement. Industry and sectoral disaggregations are based primarily on supplementary information provided by relevant departments or agencies.

Further information on the assistance estimation methodology, program coverage, industry allocation and implementation of the current input-output series is provided in the Methodological Annex to the *Trade & Assistance Review 2011-12*. The treatment of new programs and other methodological revisions from the previous review are provided in the methodological annex to this Review.

Tables in this appendix are also available on the Commission's website (www.pc.gov.au/research/recurring/trade-assistance).

Table A.1 Net tariff assistance by industry grouping, 2008-09 to 2013-14^a
\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	125.0	142.3	136.3	130.0	171.4	228.1
Horticulture and fruit growing	135.7	144.2	145.3	139.7	180.0	237.4
Sheep, beef cattle and grain farming	-15.0	-12.4	-15.2	-17.0	-16.2	-15.8
Other crop growing	-1.8	-2.2	-1.9	-2.2	-2.2	-2.2
Dairy cattle farming	-2.9	-1.8	-2.0	-1.5	-2.0	-2.7
Other livestock farming	-3.8	-3.5	-4.0	-4.2	-4.2	-4.4
Aquaculture and fishing	-15.4	-12.7	-12.3	-13.0	-13.6	-14.0
Forestry and logging	42.1	45.4	42.1	44.7	46.6	47.9
Primary production support services	-13.7	-14.7	-15.7	-16.4	-16.9	-18.1
Unallocated primary production ^b	—	—	—	—	—	—
Mining	-179.5	-186.9	-183.9	-197.5	-214.5	-234.9
Manufacturing	6408.8	5967.8	5699.1	5771.2	5531.3	5533.6
Food, beverages and tobacco	1230.5	1245.9	1280.4	1313.9	1320.0	1340.8
Textiles, leather, clothing and footwear	591.2	370.6	266.6	257.2	250.3	261.4
Wood and paper products	586.6	587.4	535.7	497.2	488.3	503.8
Printing and recorded media	212.1	191.2	188.1	169.6	164.5	157.6
Petroleum, coal, chemical and rubber	722.5	733.6	706.9	730.1	670.0	639.1
Non-metallic mineral products	245.0	231.5	240.9	227.5	222.7	228.5
Metal and fabricated metal products	1436.4	1329.9	1361.0	1398.3	1268.0	1314.0
Motor vehicles and parts	756.0	672.3	521.4	548.3	534.4	506.9
Other transport equipment	5.2	7.1	8.2	8.7	8.5	8.0
Machinery & equipment manufacturing	453.2	443.4	433.5	455.9	444.3	421.5
Furniture and other manufacturing	170.1	154.9	156.4	164.4	160.3	152.0
Unallocated manufacturing ^b	—	—	—	—	—	—
Services	-4135.1	-4192.6	-4273.0	-4627.7	-4782.0	-4928.3
Electricity, gas, water & waste services	-71.3	-71.1	-73.8	-83.5	-94.8	-93.8
Construction	-1359.2	-1428.5	-1507.7	-1667.4	-1728.9	-1804.9
Wholesale trade	-249.6	-248.2	-250.4	-260.2	-263.2	-262.0
Retail trade	-167.4	-165.5	-169.6	-182.1	-186.9	-191.3
Accommodation & food services	-450.4	-469.3	-493.1	-526.2	-540.9	-543.8
Transport, postal & warehousing	-225.2	-203.0	-187.3	-204.7	-214.0	-216.1
Information & telecommunications	-148.7	-150.4	-143.3	-145.8	-146.8	-151.0
Financial and insurance services	-8.4	-8.5	-9.0	-9.3	-9.8	-10.5
Property, professional & admin.	-511.9	-528.0	-543.9	-589.7	-619.7	-637.2
Public administration and safety	-204.3	-202.0	-200.5	-212.8	-219.4	-228.2
Education and training	-101.9	-105.0	-105.8	-115.0	-120.7	-126.8
Health care and social assistance	-242.5	-242.9	-244.3	-255.4	-269.1	-281.6
Arts and recreation services	-74.5	-74.7	-73.3	-77.0	-77.6	-82.7
Other services	-319.7	-295.5	-270.9	-298.6	-290.1	-298.5
Unallocated services ^b	—	—	—	—	—	—
Unallocated other^b	—	—	—	—	—	—
Total	2219.3	1730.5	1378.5	1076.0	706.1	598.5

— Nil. Figures may not add to totals due to rounding. ^a Tariff assistance estimates are derived using ABS Industry Gross Value Added and other supporting data. ^b Unallocated includes budgetary measures where details of beneficiaries are unknown. These categories are not applicable for tariff assistance.

Source: Commission estimates.

Table A.2 Budgetary assistance by industry grouping, 2008-09 to 2013-14
\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	1835.2	1837.6	1527.9	1547.9	1205.7	1295.9
Horticulture and fruit growing	185.4	187.0	160.9	135.9	121.5	132.3
Sheep, beef cattle and grain farming	1057.8	938.2	760.6	660.1	523.0	609.1
Other crop growing	66.1	95.2	46.8	92.5	87.5	81.7
Dairy cattle farming	144.6	133.9	96.6	77.6	50.7	63.7
Other livestock farming	47.6	47.6	43.9	66.2	41.6	43.6
Aquaculture and fishing	75.3	83.6	77.8	67.1	60.2	65.0
Forestry and logging	-63.5	38.7	46.1	72.3	46.3	31.5
Primary production support services	24.6	32.5	33.0	21.9	24.3	29.0
Unallocated primary production ^a	297.5	281.1	262.2	354.3	250.5	240.0
Mining	441.0	647.2	1156.5	745.6	492.2	520.7
Manufacturing	1738.8	2080.4	1933.6	1851.3	1620.3	1755.7
Food, beverages and tobacco	114.7	157.7	192.6	108.5	153.0	134.7
Textiles, leather, clothing and footwear	127.6	139.2	134.8	61.0	56.4	64.0
Wood and paper products	72.0	33.6	36.3	17.3	30.0	22.6
Printing and recorded media	10.2	18.3	17.9	16.3	13.0	19.1
Petroleum, coal, chemical and rubber	249.4	276.9	353.0	279.2	293.7	298.3
Non-metallic mineral products	14.4	26.4	27.5	16.7	23.5	31.9
Metal and fabricated metal products	120.8	132.9	140.5	288.7	195.2	425.1
Motor vehicles and parts	558.0	747.6	573.2	625.4	446.6	392.5
Other transport equipment	32.1	36.1	29.3	22.0	21.1	19.2
Machinery & equipment manufacturing	181.1	209.8	166.2	154.0	153.4	121.2
Furniture and other manufacturing	24.4	30.6	25.5	32.3	31.3	29.1
Unallocated manufacturing ^a	234.2	271.4	236.8	229.8	203.0	198.0
Services	3487.7	4521.3	4510.4	5068.9	3680.9	4305.2
Electricity, gas, water & waste services	107.5	174.3	460.2	1106.1	118.2	230.4
Construction	160.1	301.2	208.9	210.5	155.5	342.4
Wholesale trade	195.6	328.0	439.1	285.4	214.2	159.2
Retail trade	338.0	263.5	197.7	136.1	107.5	169.0
Accommodation & food services	80.2	85.8	71.1	67.7	65.7	124.4
Transport, postal & warehousing	128.1	275.8	266.4	245.6	172.2	185.7
Information & telecommunications	141.2	209.4	263.2	293.6	354.7	148.5
Financial and insurance services	923.5	1003.5	901.3	1036.2	929.4	960.5
Property, professional & admin.	684.8	908.2	936.9	858.6	714.3	979.0
Public administration and safety	18.8	27.4	21.3	15.9	13.9	13.8
Education and training	36.0	41.7	30.2	32.7	27.4	36.9
Health care and social assistance	178.7	217.7	179.2	184.3	172.6	240.5
Arts and recreation services	276.2	406.4	301.3	349.2	406.1	452.6
Other services	58.8	83.7	64.1	68.0	58.5	105.5
Unallocated services ^a	160.2	194.7	169.3	179.0	170.8	156.8
Unallocated other^a	849.8	721.8	929.1	962.2	770.3	1211.0
Total	8352.4	9808.3	10057.5	10176.0	7769.5	9088.4

– Nil. Figures may not add to totals due to rounding. ^a Unallocated includes budgetary measures where details of beneficiaries are unknown.

Source: Commission estimates.

**Table A.3 Net combined assistance by industry grouping,
2008-09 to 2013-14^a**
\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	1960.4	1979.9	1664.2	1677.9	1377.1	1524.0
Horticulture and fruit growing	321.1	331.2	306.2	275.5	301.5	369.7
Sheep, beef cattle and grain farming	1042.8	925.8	745.4	643.0	506.8	593.3
Other crop growing	64.3	92.9	44.9	90.3	85.3	79.5
Dairy cattle farming	141.9	132.1	94.6	76.1	48.7	61.0
Other livestock farming	43.7	44.0	40.0	62.0	37.4	39.2
Aquaculture and fishing	59.9	70.8	65.6	54.1	46.6	51.0
Forestry and logging	-21.5	84.1	88.1	117.0	92.9	79.5
Primary production support services	10.8	17.8	17.3	5.5	7.4	10.9
Unallocated primary production ^b	297.5	281.1	262.2	354.3	250.5	240.0
Mining	261.5	460.3	972.6	548.0	277.7	285.7
Manufacturing	8147.6	8048.1	7632.6	7622.6	7151.6	7289.3
Food, beverages and tobacco	1345.2	1403.6	1473.0	1422.4	1473.1	1475.5
Textiles, leather, clothing and footwear	718.8	509.8	401.3	318.2	306.7	325.4
Wood and paper products	658.6	621.0	571.9	514.5	518.4	526.4
Printing and recorded media	222.2	209.5	206.1	185.9	177.5	176.8
Petroleum, coal, chemical and rubber	972.0	1010.5	1059.9	1009.3	963.7	937.4
Non-metallic mineral products	259.4	257.8	268.3	244.2	246.2	260.4
Metal and fabricated metal products	1557.2	1462.8	1501.5	1687.1	1463.3	1739.0
Motor vehicles and parts	1314.0	1419.9	1094.6	1173.7	980.9	899.4
Other transport equipment	37.3	43.2	37.6	30.7	29.6	27.3
Machinery & equipment manufacturing	634.3	653.2	599.7	609.9	597.7	542.7
Furniture and other manufacturing	194.5	185.5	181.9	196.8	191.6	181.2
Unallocated manufacturing ^b	234.2	271.4	236.8	229.8	203.0	198.0
Services	-647.4	328.7	237.4	441.2	-1101.1	-623.2
Electricity, gas, water & waste services	36.1	103.2	386.5	1022.6	23.4	136.6
Construction	-1199.1	-1127.3	-1298.7	-1456.9	-1573.5	-1462.5
Wholesale trade	-54.0	79.8	188.7	25.2	-49.0	-102.9
Retail trade	170.5	98.0	28.1	-46.0	-79.4	-22.4
Accommodation & food services	-370.2	-383.5	-422.0	-458.5	-475.2	-419.4
Transport, postal & warehousing	-97.1	72.8	79.1	40.9	-41.7	-30.4
Information & telecommunications	-7.5	59.0	119.9	147.8	207.9	-2.5
Financial and insurance services	915.1	995.0	892.2	1026.9	919.5	950.0
Property, professional & admin.	172.9	380.2	393.0	269.0	94.7	341.9
Public administration and safety	-185.5	-174.5	-179.2	-196.9	-205.5	-214.4
Education and training	-65.9	-63.3	-75.6	-82.3	-93.3	-89.8
Health care and social assistance	-63.7	-25.2	-65.1	-71.2	-96.5	-41.1
Arts and recreation services	201.7	331.6	228.1	272.2	328.5	370.0
Other services	-260.9	-211.8	-206.8	-230.6	-231.6	-193.0
Unallocated services ^b	160.2	194.7	169.3	179.0	170.8	156.8
Unallocated other^b	849.8	721.8	929.1	962.2	770.3	1211.0
Total	10571.9	11538.9	11436.0	11252.0	8475.6	9686.9

– Nil. Figures may not add to totals due to rounding. ^a Tariff assistance estimates are derived using ABS Industry Gross Value Added and other supporting data. ^b Unallocated includes budgetary measures where details of beneficiaries are unknown.

Source: Commission estimates.

**Table A.4 Output tariff assistance by industry grouping,
2008-09 to 2013-14^a**
\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	200.4	214.7	211.3	208.8	253.0	314.4
Horticulture and fruit growing	143.8	154.1	155.9	149.6	191.5	251.1
Sheep, beef cattle and grain farming	0.1	0.1	0.1	0.2	0.2	0.2
Other crop growing	1.7	2.2	2.0	2.4	2.4	2.4
Dairy cattle farming	–	–	–	–	–	–
Other livestock farming	–	–	–	–	–	–
Aquaculture and fishing	0.9	0.9	0.8	0.9	0.9	1.0
Forestry and logging	53.9	57.4	52.4	55.7	58.1	59.8
Primary production support services	–	–	–	–	–	–
Unallocated primary production ^b	–	–	–	–	–	–
Mining	0.8	0.8	0.9	0.9	1.0	1.1
Manufacturing	8735.1	8180.5	7823.4	7943.0	7617.8	7604.5
Food, beverages and tobacco	1733.4	1745.6	1789.2	1836.0	1844.5	1873.6
Textiles, leather, clothing and footwear	727.2	459.5	334.9	323.2	314.5	328.4
Wood and paper products	737.9	737.8	671.7	623.5	612.4	631.8
Printing and recorded media	254.8	229.0	224.5	202.4	196.3	188.1
Petroleum, coal, chemical and rubber	1015.5	1034.6	998.6	1031.3	946.4	902.8
Non-metallic mineral products	296.2	279.6	290.7	274.6	268.8	275.8
Metal and fabricated metal products	1896.2	1749.3	1784.8	1833.8	1662.9	1723.1
Motor vehicles and parts	1126.1	1025.6	825.3	867.9	845.9	802.4
Other transport equipment	67.3	76.8	76.3	80.3	78.2	74.2
Machinery & equipment manufacturing	649.8	635.2	620.5	652.6	636.0	603.3
Furniture and other manufacturing	230.6	207.4	206.7	217.4	211.9	201.0
Unallocated manufacturing ^b	–	–	–	–	–	–
Services	0.0	0.0	0.0	0.0	0.0	0.0
Electricity, gas, water & waste services	–	–	–	–	–	–
Construction	–	–	–	–	–	–
Wholesale trade	–	–	–	–	–	–
Retail trade	–	–	–	–	–	–
Accommodation & food services	–	–	–	–	–	–
Transport, postal & warehousing	–	–	–	–	–	–
Information & telecommunications	–	–	–	–	–	–
Financial and insurance services	–	–	–	–	–	–
Property, professional & admin.	–	–	–	–	–	–
Public administration and safety	–	–	–	–	–	–
Education and training	–	–	–	–	–	–
Health care and social assistance	–	–	–	–	–	–
Arts and recreation services	–	–	–	–	–	–
Other services	–	–	–	–	–	–
Unallocated services ^b	–	–	–	–	–	–
Unallocated other^b	–	–	–	–	–	–
Total	8936.3	8396.0	8035.5	8152.8	7871.8	7920.0

– Nil. Figures may not add to totals due to rounding. ^a Tariff assistance estimates are derived using ABS Industry Gross Value Added and other supporting data. ^b Unallocated includes budgetary measures where details of beneficiaries are unknown. These categories are not applicable for tariff assistance.

Source: Commission estimates.

Table A.5 Input tariff penalty by industry grouping, 2008-09 to 2013-14^a
\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	-75.4	-72.4	-75.0	-78.8	-81.6	-86.3
Horticulture and fruit growing	-8.1	-9.9	-10.5	-10.0	-11.5	-13.7
Sheep, beef cattle and grain farming	-15.2	-12.5	-15.4	-17.2	-16.4	-16.0
Other crop growing	-3.5	-4.5	-3.9	-4.6	-4.6	-4.6
Dairy cattle farming	-2.9	-1.8	-2.0	-1.5	-2.0	-2.7
Other livestock farming	-3.8	-3.5	-4.0	-4.2	-4.2	-4.4
Aquaculture and fishing	-16.3	-13.6	-13.1	-13.9	-14.5	-14.9
Forestry and logging	-11.8	-12.0	-10.4	-11.0	-11.5	-11.8
Primary production support services	-13.7	-14.7	-15.7	-16.4	-16.9	-18.1
Unallocated primary production ^b	—	—	—	—	—	—
Mining	-180.2	-187.7	-184.7	-198.5	-215.5	-236.0
Manufacturing	-2326.3	-2212.7	-2124.3	-2171.8	-2086.5	-2070.9
Food, beverages and tobacco	-502.9	-499.7	-508.8	-522.1	-524.5	-532.8
Textiles, leather, clothing and footwear	-136.1	-88.9	-68.4	-66.0	-64.2	-67.1
Wood and paper products	-151.3	-150.4	-136.1	-126.3	-124.0	-128.0
Printing and recorded media	-42.8	-37.8	-36.4	-32.8	-31.8	-30.5
Petroleum, coal, chemical and rubber	-293.0	-301.0	-291.6	-301.2	-276.4	-263.7
Non-metallic mineral products	-51.2	-48.1	-49.9	-47.1	-46.1	-47.3
Metal and fabricated metal products	-459.8	-419.4	-423.8	-435.5	-394.9	-409.2
Motor vehicles and parts	-370.1	-353.4	-303.9	-319.6	-311.5	-295.5
Other transport equipment	-62.1	-69.7	-68.1	-71.6	-69.8	-66.2
Machinery & equipment manufacturing	-196.6	-191.8	-187.0	-196.7	-191.7	-181.8
Furniture and other manufacturing	-60.5	-52.5	-50.4	-53.0	-51.6	-49.0
Unallocated manufacturing ^b	—	—	—	—	—	—
Services	-4135.1	-4192.6	-4273.0	-4627.7	-4782.0	-4928.3
Electricity, gas, water & waste services	-71.3	-71.1	-73.8	-83.5	-94.8	-93.8
Construction	-1359.2	-1428.5	-1507.7	-1667.4	-1728.9	-1804.9
Wholesale trade	-249.6	-248.2	-250.4	-260.2	-263.2	-262.0
Retail trade	-167.4	-165.5	-169.6	-182.1	-186.9	-191.3
Accommodation & food services	-450.4	-469.3	-493.1	-526.2	-540.9	-543.8
Transport, postal & warehousing	-225.2	-203.0	-187.3	-204.7	-214.0	-216.1
Information & telecommunications	-148.7	-150.4	-143.3	-145.8	-146.8	-151.0
Financial and insurance services	-8.4	-8.5	-9.0	-9.3	-9.8	-10.5
Property, professional & admin.	-511.9	-528.0	-543.9	-589.7	-619.7	-637.2
Public administration and safety	-204.3	-202.0	-200.5	-212.8	-219.4	-228.2
Education and training	-101.9	-105.0	-105.8	-115.0	-120.7	-126.8
Health care and social assistance	-242.5	-242.9	-244.3	-255.4	-269.1	-281.6
Arts and recreation services	-74.5	-74.7	-73.3	-77.0	-77.6	-82.7
Other services	-319.7	-295.5	-270.9	-298.6	-290.1	-298.5
Unallocated services ^b	—	—	—	—	—	—
Unallocated other^b	—	—	—	—	—	—
Total	-6717.0	-6665.5	-6657.0	-7076.8	-7165.7	-7321.5

— Nil. Figures may not add to totals due to rounding. ^a Tariff assistance estimates are derived using ABS Industry Gross Value Added and other supporting data. ^b Unallocated includes budgetary measures where details of beneficiaries are unknown. These categories are not applicable for tariff assistance.

Source: Commission estimates.

Table A.6 Budgetary outlays by industry grouping, 2008-09 to 2013-14

\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	1424.6	1274.9	1044.4	947.1	717.7	765.9
Horticulture and fruit growing	132.8	125.1	118.3	85.9	71.3	74.6
Sheep, beef cattle and grain farming	739.4	601.5	447.5	253.3	213.1	273.3
Other crop growing	40.9	58.0	25.7	48.9	43.6	51.3
Dairy cattle farming	104.4	99.1	67.4	41.4	28.9	34.4
Other livestock farming	28.5	25.4	23.5	41.3	26.8	23.7
Aquaculture and fishing	68.3	66.5	64.6	53.8	48.5	51.9
Forestry and logging	14.9	18.2	34.2	64.2	36.0	14.5
Primary production support services	5.6	5.2	2.3	5.7	3.8	4.9
Unallocated primary production ^a	289.8	275.9	261.0	352.5	245.7	237.3
Mining	115.6	171.4	186.3	398.1	171.0	265.8
Manufacturing	810.4	971.1	947.4	1376.1	1033.3	1119.1
Food, beverages and tobacco	62.5	53.0	51.4	27.4	41.8	89.8
Textiles, leather, clothing and footwear	112.9	122.2	122.6	50.4	46.0	51.8
Wood and paper products	60.3	14.5	10.5	5.6	16.8	11.4
Printing and recorded media	5.4	5.2	3.4	6.1	4.2	7.1
Petroleum, coal, chemical and rubber	197.3	209.6	234.2	220.1	226.8	260.7
Non-metallic mineral products	6.7	8.3	6.2	7.3	12.8	26.7
Metal and fabricated metal products	61.6	62.1	50.6	205.4	49.5	52.5
Motor vehicles and parts	26.9	150.6	192.9	580.4	408.7	358.2
Other transport equipment	23.0	24.4	16.4	13.4	14.0	14.8
Machinery & equipment manufacturing	121.3	124.8	86.1	71.0	59.5	95.9
Furniture and other manufacturing	16.6	19.7	17.8	25.9	23.8	20.5
Unallocated manufacturing ^a	115.8	176.8	155.2	163.0	129.4	129.8
Services	1199.6	1176.4	1174.8	2234.8	1155.4	1544.4
Electricity, gas, water & waste services	90.8	119.8	71.6	1072.2	87.2	201.1
Construction	20.7	23.1	15.0	18.3	20.4	31.1
Wholesale trade	54.6	58.1	35.0	38.6	33.3	45.5
Retail trade	200.3	82.9	52.9	32.2	16.3	18.5
Accommodation & food services	7.0	8.0	5.4	4.6	4.6	4.9
Transport, postal & warehousing	53.2	56.5	52.1	57.9	43.4	49.8
Information & telecommunications	112.3	111.4	96.9	88.0	107.4	122.8
Financial and insurance services	49.8	62.0	120.4	137.2	126.4	192.6
Property, professional & admin.	184.2	185.6	302.8	328.6	273.4	430.0
Public administration and safety	13.2	19.0	13.9	10.6	7.1	6.5
Education and training	19.7	22.6	19.2	18.6	14.9	15.6
Health care and social assistance	93.6	96.1	95.8	113.5	109.1	123.9
Arts and recreation services	128.7	120.5	112.0	116.0	121.8	125.6
Other services	11.6	16.1	12.3	19.4	19.1	19.7
Unallocated services ^a	160.2	194.7	169.3	179.0	170.8	156.8
Unallocated other^a	195.2	293.4	303.8	329.7	281.2	437.4
Total	3745.3	3887.4	3656.6	5285.8	3358.7	4132.6

– Nil. Figures may not add to totals due to rounding. ^a Unallocated includes budgetary measures where details of beneficiaries are unknown.

Source: Commission estimates.

**Table A.7 Budgetary tax concessions by industry grouping,
2008-09 to 2013-14**

\$ million (nominal)

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary production	410.6	562.7	483.5	600.9	488.0	530.1
Horticulture and fruit growing	52.6	61.9	42.6	50.0	50.2	57.7
Sheep, beef cattle and grain farming	318.4	336.7	313.1	406.7	309.9	335.8
Other crop growing	25.2	37.1	21.1	43.6	43.9	30.4
Dairy cattle farming	40.2	34.8	29.2	36.2	21.8	29.3
Other livestock farming	19.1	22.1	20.5	24.9	14.8	20.0
Aquaculture and fishing	7.0	17.1	13.2	13.4	11.7	13.1
Forestry and logging	-78.4	20.5	11.9	8.2	10.3	17.0
Primary production support services	18.9	27.3	30.7	16.2	20.5	24.1
Unallocated primary production ^a	7.6	5.1	1.2	1.8	4.8	2.7
Mining	325.4	475.8	970.2	347.5	321.2	254.9
Manufacturing	928.3	1109.2	986.2	475.2	587.0	636.6
Food, beverages and tobacco	52.2	104.6	141.1	81.1	111.2	44.9
Textiles, leather, clothing and footwear	14.7	17.1	12.2	10.5	10.4	12.2
Wood and paper products	11.7	19.1	25.8	11.7	13.2	11.2
Printing and recorded media	4.8	13.1	14.5	10.3	8.7	12.0
Petroleum, coal, chemical and rubber	52.1	67.2	118.8	59.0	66.9	37.6
Non-metallic mineral products	7.7	18.1	21.3	9.4	10.6	5.2
Metal and fabricated metal products	59.1	70.8	89.9	83.4	145.7	372.6
Motor vehicles and parts	531.1	597.0	380.3	45.0	37.9	34.3
Other transport equipment	9.1	11.7	12.9	8.6	7.2	4.4
Machinery & equipment manufacturing	59.7	85.0	80.1	83.0	93.9	25.3
Furniture and other manufacturing	7.8	11.0	7.7	6.5	7.5	8.6
Unallocated manufacturing ^a	118.4	94.6	81.6	66.8	73.6	68.2
Services	2288.1	3344.9	3335.6	2834.1	2525.5	2760.7
Electricity, gas, water & waste services	16.7	54.5	388.6	33.9	31.0	29.3
Construction	139.5	278.1	193.9	192.1	135.0	311.3
Wholesale trade	141.0	270.0	404.1	246.8	180.8	113.7
Retail trade	137.7	180.6	144.8	104.0	91.2	150.4
Accommodation & food services	73.2	77.8	65.7	63.1	61.1	119.5
Transport, postal & warehousing	74.9	219.3	214.2	187.7	128.8	135.9
Information & telecommunications	28.9	98.0	166.3	205.5	247.3	25.7
Financial and insurance services	873.7	941.4	780.9	898.9	802.9	767.9
Property, professional & admin.	500.6	722.6	634.1	530.0	441.0	549.0
Public administration and safety	5.6	8.4	7.4	5.2	6.8	7.2
Education and training	16.3	19.1	11.0	14.1	12.5	21.4
Health care and social assistance	85.1	121.7	83.4	70.8	63.4	116.6
Arts and recreation services	147.5	285.8	189.4	233.2	284.2	327.0
Other services	47.3	67.6	51.8	48.6	39.5	85.8
Unallocated services ^a	—	—	—	—	—	—
Unallocated other^a	654.6	428.4	625.3	632.5	489.1	773.5
Total	4607.1	5921.0	6400.9	4890.2	4410.8	4955.8

— Nil. Figures may not add to totals due to rounding. ^a Unallocated includes budgetary measures where details of beneficiaries are unknown.

Source: Commission estimates.

**Table A.8 Nominal rate of combined assistance on outputs
by industry grouping, 2008-09 to 2013-14^a**
per cent

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary Production^b	0.3	0.4	0.3	0.3	0.4	0.4
Horticulture and fruit growing	1.3	1.1	1.0	1.0	1.1	1.2
Sheep, beef cattle and grain farming	0.0	0.0	0.0	0.0	0.0	0.0
Other crop growing	0.0	0.0	0.0	0.0	0.0	0.0
Dairy cattle farming	0.0	0.0	0.0	0.0	0.0	0.0
Other livestock farming	0.0	0.0	0.0	0.0	0.0	0.0
Aquaculture and fishing	0.1	0.2	0.2	0.2	0.2	0.2
Forestry and logging	2.0	2.1	2.1	2.1	2.1	2.1
Primary production support services	0.0	0.0	0.0	0.0	0.0	0.0
Mining	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing^b	2.5	2.4	2.3	2.2	2.2	2.2
Food, beverages and tobacco	2.1	2.1	2.1	2.1	2.1	2.1
Textiles, leather, clothing and footwear	8.4	6.7	4.9	4.9	4.9	4.9
Wood and paper products	3.8	3.7	3.7	3.7	3.7	3.7
Printing and recorded media	2.9	2.9	2.9	2.9	2.9	2.9
Petroleum, coal, chemical and rubber	1.6	1.6	1.7	1.6	1.6	1.7
Non-Metallic mineral products	2.0	2.0	2.0	2.0	2.0	2.0
Metal and fabricated metal products	1.9	1.9	1.9	1.9	1.9	1.9
Motor vehicles and parts	8.0	7.1	5.1	3.8	3.8	3.8
Other transport equipment	0.9	0.9	0.9	0.9	0.9	0.9
Machinery and equipment manufacturing	2.0	2.0	1.9	1.9	1.9	1.9
Furniture and other manufacturing	3.2	3.2	3.2	3.2	3.2	3.2

– Nil. Figures may not add to totals due to rounding. ^a Combined assistance comprises tariff, budgetary and agricultural pricing and regulatory assistance. ^b Sectoral estimates include assistance to the sector that has not been allocated to specific industry groupings.

Source: Commission estimates.

**Table A.9 Nominal rate of combined assistance on materials
by industry grouping, 2008-09 to 2013-14^a**
per cent

<i>Industry grouping</i>	<i>2008-09</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
Primary Production^b	0.3	0.2	0.2	0.2	0.2	0.3
Horticulture and fruit growing	0.2	0.2	0.2	0.2	0.2	0.2
Sheep, beef cattle and grain farming	0.2	0.1	0.1	0.1	0.1	0.1
Other crop growing	0.2	0.2	0.2	0.2	0.2	0.2
Dairy cattle farming	0.1	0.1	0.1	0.1	0.1	0.1
Other livestock farming	0.2	0.2	0.2	0.2	0.2	0.2
Aquaculture and fishing	1.4	1.3	1.2	1.2	1.2	1.2
Forestry and logging	1.1	1.0	1.0	1.0	1.0	1.0
Primary production support services	0.6	0.5	0.5	0.5	0.5	0.5
Mining	0.5	0.1	0.5	0.5	0.5	0.5
Manufacturing^b	1.1	0.2	1.0	1.0	1.0	1.0
Food, beverages and tobacco	1.1	1.1	1.1	1.1	1.1	1.1
Textile, leather, clothing and footwear	3.6	2.9	2.3	2.3	2.3	2.3
Wood and paper products	2.1	2.1	2.1	2.1	2.1	2.1
Printing and recorded media	1.8	1.8	1.8	1.8	1.8	1.7
Petroleum, coal, chemical and rubber	0.7	0.8	0.7	0.7	0.7	0.7
Non-Metallic mineral products	0.9	0.9	0.9	0.9	0.9	0.9
Metal and fabricated metal products	0.7	0.7	0.7	0.7	0.7	0.7
Motor vehicle and parts	3.3	2.9	2.6	2.6	2.6	2.5
Other transport equipment	2.0	1.9	1.8	1.8	1.8	1.8
Machinery and equipment manufacturing	1.4	1.4	1.3	1.3	1.3	1.3
Furniture and other manufacturing	1.9	1.8	1.7	1.7	1.7	1.7

– Nil. Figures may not add to totals due to rounding. ^a Combined assistance comprises tariff, budgetary and agricultural pricing and regulatory assistance. ^b Sectoral estimates include assistance to the sector that has not been allocated to specific industry groupings.

Source: Commission estimates.

Table A.10 Australian Government budgetary assistance to primary industry, 2008-09 to 2013-14^a

\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Horticulture and fruit growing						
<i>Industry-specific measures</i>						
Assistance to the vegetable industry	<0.1	–	–	–	–	–
Australian Wine Industry Support	–	–	–	–	0.5	0.5
Premium Fresh Tasmania assistance	–	–	–	–	0.5	–
Tax Deduction for horticultural plantations	5.0	5.0	6.0	6.0	6.0	–
Tax deductions for grape vines	-4.0	-7.0	-7.0	-7.0	-6.0	-6.0
Wine Australia Corporation	–	–	2.7	2.8	2.7	2.9
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	0.3	0.2	4.7
Exceptional Circumstances – interest rate subsidies	34.0	27.6	26.0	8.7	–	–
Exceptional Circumstances – relief payments	26.6	23.2	17.6	0.8	–	–
Farm Help	0.3	<0.1	–	<0.1	–	–
Farm Management Deposits Scheme	20.5	14.7	4.2	20.4	18.2	17.8
Income tax averaging provisions	9.9	8.9	10.7	12.8	16.4	16.4
Industry partnerships program	0.9	–	–	–	–	–
Interim Income Support	–	0.1	<0.1	<0.1	–	–
Rural Financial Counselling Service	2.1	2.1	2.1	2.3	2.1	2.3
Tax deduction for conserving or conveying water	2.0	3.7	1.9	4.7	4.2	0.4
<i>Rural R&D measures</i>						
Grape and Wine R&D Corporation	11.7	13.7	12.3	10.3	9.7	11.9
Horticulture Australia Limited R&D	39.8	40.5	40.5	42.0	41.4	41.9
Rural Industries R&D Corporation	2.7	2.2	2.3	3.4	2.1	2.4
<i>General export measures</i>						
Export Market Development Grants Scheme	1.4	1.0	1.3	1.0	1.0	0.8
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.2	0.2	<0.1	–	–	–
COMET Program	<0.1	0.1	<0.1	–	–	–
Commercial Ready Program	0.5	0.1	–	–	–	–
Commercialisation Australia	–	–	0.2	0.3	<0.1	–
CSIRO	7.9	8.6	8.7	9.7	7.3	2.5
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	0.1	0.2	0.1	–	–	–
R&D tax concession	0.9	1.5	1.5	3.3	1.5	0.5
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	1.3	1.9
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.6	4.7
R&D tax offsets – Refundable	4.0	4.4	3.0	3.4	–	–

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.7	0.6	0.5	0.5	0.5	–
Enterprise Connect Innovation Centres	–	–	–	0.1	<0.1	<0.1
North East Tasmania Innovation and Investment Fund	–	0.4	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	1.0	1.5	–	–	–
Scottsdale Industry and Community Development Fund	0.5	–	–	–	–	–
Small Business – Simplified depreciation rules	0.8	1.1	1.7	0.1	-0.5	19.0
Small business capital gain tax asset exemption	–	1.8	0.6	2.1	2.2	2.6
Small business capital gain tax 50 per cent reduction	9.1	7.5	3.6	3.2	3.3	3.5
Small business capital gain tax retirement exemption	6.0	4.1	2.6	2.2	2.2	2.3
Small business capital gain tax rollover deferral	1.7	1.2	0.7	0.5	0.6	0.7
South East South Australia Innovation and Investment Fund	–	–	–	0.5	0.9	–
Tasmanian Innovation and Investment Fund	–	–	–	0.4	0.3	0.1
Small Business and General Business Tax Break	–	18.7	15.3	1.1	0.4	<0.1
<i>Total</i>	<i>185.4</i>	<i>187.0</i>	<i>160.9</i>	<i>135.9</i>	<i>121.5</i>	<i>132.3</i>
Sheep, beef cattle and grain farming						
<i>Industry-specific measures</i>						
Beef Australia 2015	–	–	–	–	–	2.5
National Livestock Identification System	0.2	0.2	–	–	–	–
Northern Australia Beef Industry Strategy	–	–	–	–	–	–
Indigenous Pastoral Project	–	–	–	0.5	–	–
<i>Sector-specific measures</i>	–	–	–	–	–	–
Carbon Farming Futures	–	–	–	13.6	7.7	36.4
Carbon Farming Initiative	–	–	–	–	–	0.2
Exceptional Circumstances – interest rate subsidies	359.1	256.2	182.8	15.8	–	–
Exceptional Circumstances – relief payments	230.3	168.3	93.4	4.1	–	–
Farm Help	1.0	–	–	–	–	–
Farm Management Deposits Scheme	80.4	57.3	19.5	168.3	103.7	100.4
Income tax averaging provisions	54.4	48.2	109.5	93.4	92.9	92.9
Industry partnerships program	0.2	–	–	–	–	–
Interim Income Support	1.0	0.4	0.2	<0.1	–	–
Rural Financial Counselling Service	7.8	7.8	6.6	6.7	7.8	11.3
Tax deduction for conserving or conveying water	13.3	11.4	11.2	31.3	32.5	3.0

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Rural R&D measures</i>						
Wool R&D	11.4	10.5	11.3	12.5	13.3	13.0
Grains R&D Corporation	36.9	50.1	53.4	55.9	62.8	68.6
Harvesting Productivity Initiative	–	1.1	0.1	–	–	–
Meat and Livestock Australia R&D	31.4	38.1	35.6	37.1	38.3	46.7
Rural Industries R&D Corporation	1.0	0.8	0.8	1.0	2.5	3.8
<i>General export measures</i>						
Export Market Development Grants Scheme	0.6	0.8	0.6	0.4	0.4	0.5
<i>General R&D measures</i>						
COMET Program	<0.1	<0.1	–	–	–	–
Cooperative Research Centres	12.1	11.5	9.8	6.1	3.7	0.2
CSIRO	44.3	47.8	48.9	81.9	70.7	81.4
New Industries Development Program	<0.1	–	–	–	–	–
R&D tax concession	1.7	2.8	2.8	2.4	1.1	0.4
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	6.4	5.3
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.6	4.7
R&D tax offsets – Refundable	2.1	7.2	3.0	3.4	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.7	1.7	1.6	1.6	1.3	–
Enterprise Connect Innovation Centres	–	–	<0.1	<0.1	<0.1	0.1
Live Animal Exports Business Assistance	–	–	–	13.3	2.3	3.1
Small Business – Simplified depreciation rules	3.1	4.1	6.7	0.5	-2.1	73.1
Small business capital gains tax asset exemption	18.8	10.8	3.6	12.7	13.3	16.3
Small business capital gains tax 50 per cent reduction	79.6	43.7	21.1	18.8	19.5	20.5
Small business capital gains tax retirement exemption	30.3	22.8	14.8	12.2	12.2	12.8
Small business capital gains tax rollover deferral	35.0	17.8	9.6	7.8	9.2	10.2
Tasmanian Freight Equalisation Scheme	–	0.8	0.8	0.8	0.9	0.9
Temporary Assistance for Tasmanian Exporters	–	–	–	0.1	–	–
The Small Business and General Business Tax Break	–	116.0	112.5	57.7	20.0	2.4
Total	1057.8	938.2	760.6	660.1	523.0	609.1
Other crop growing						
<i>Industry-specific measures</i>						
Sugar Industry Reform Program - 2004	4.5	–	–	–	–	–
Tobacco Grower Adjustment Assistance	0.3	–	0.1	–	–	–

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	3.1	1.7	3.4
Exceptional Circumstances – interest rate subsidies	7.8	31.8	–	2.1	–	–
Exceptional Circumstances – relief payments	0.9	<0.1	–	<0.1	–	–
Farm Help	0.2	–	–	–	–	–
Farm Management Deposits Scheme	9.0	6.5	1.9	11.9	9.0	10.1
Income tax averaging provisions	3.4	6.7	4.2	5.7	6.8	6.8
Interim Income Support	0.1	<0.1	–	<0.1	–	–
Rural Financial Counselling Service	0.8	0.9	0.8	0.9	0.6	0.8
Tax deduction for conserving or conveying water	1.8	1.5	3.5	20.5	23.4	2.2
<i>Rural R&D measures</i>						
Cotton R&D Corporation	2.4	3.0	5.7	9.5	11.8	11.2
Rural Industries R&D Corporation	0.8	1.4	0.9	0.8	0.7	0.7
Sugar R&D Corporation	6.1	5.8	5.9	5.4	4.3	6.7
<i>General export measures</i>						
Export Market Development Grants Scheme	0.4	0.6	0.4	0.5	0.6	0.6
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.1	0.5	0.3	<0.1	–	–
COMET Program	0.2	<0.1	<0.1	–	–	–
Commercialisation Australia	–	–	–	–	0.1	0.1
Cooperative Research Centres	8.3	6.5	3.5	3.0	–	–
CSIRO	7.0	7.5	7.7	23.0	23.2	27.0
New Industries Development Program	<0.1	–	–	–	–	–
R&D tax concession	0.6	1.1	1.1	0.7	0.3	0.1
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.3
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	–	1.0
R&D Tax Incentive – refundable tax offset	–	–	–	–	0.5	0.9
R&D tax offsets – Refundable	0.9	–	0.6	0.6	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.1	0.1	0.1	0.1	0.1	–
Small Business – Simplified depreciation rules	0.3	0.3	0.5	<0.1	-0.2	6.0
Small business capital gains tax asset exemption	–	0.5	0.2	0.5	0.6	0.7
Small business capital gains tax 50 per cent reduction	6.0	5.3	2.6	2.3	2.4	2.5
Small business capital gains tax retirement exemption	2.1	1.3	0.9	0.7	0.7	0.7
Small business capital gains tax rollover deferral	2.0	1.0	0.6	0.5	0.5	0.6
The Small Business and General Business Tax Break	–	12.8	5.5	0.7	0.3	<0.1
Total	66.1	95.2	46.8	92.5	87.5	81.7

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Dairy cattle farming						
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	2.6	1.5	5.8
Exceptional Circumstances – interest rate subsidies	45.3	38.1	23.3	2.9	–	–
Exceptional Circumstances – relief payments	36.5	35.0	17.9	0.8	–	–
Farm Help	0.2	–	–	–	–	–
Farm Management Deposits Scheme	11.4	7.2	2.1	15.4	9.5	9.9
Income tax averaging provisions	15.0	4.4	10.2	10.1	6.6	6.6
Interim Income Support	0.5	0.1	<0.1	<0.1	–	–
Rural Financial Counselling Service	1.3	1.7	1.2	1.0	1.6	1.6
Tax deduction for conserving or conveying water	1.3	1.5	2.0	6.2	1.8	0.2
<i>Rural R&D measures</i>						
Dairy Research & Development	19.2	19.6	18.8	18.6	19.3	20.4
<i>General export measures</i>						
Export Market Development Grants Scheme	–	<0.1	–	–	–	0.1
TRADEX	0.5	0.5	0.3	0.3	0.4	0.4
<i>General R&D measures</i>						
Cooperative Research Centres	–	3.0	4.8	4.8	4.8	4.8
CSIRO	1.3	1.4	1.5	10.7	1.8	1.7
New Industries Development Program	<0.1	–	–	–	–	–
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	<0.1
R&D Tax Incentive – refundable tax offset	–	–	–	–	<0.1	<0.1
R&D tax offsets – Refundable	–	–	<0.1	<0.1	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.1	–
North East Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
Scottsdale Industry and Community Development Fund	0.1	–	–	–	–	–
Small Business – Simplified depreciation rules	0.4	0.5	0.8	0.1	-0.2	8.4
Small business capital gains tax 50 per cent reduction	5.6	4.9	2.4	2.1	2.2	2.3
Small business capital gains tax retirement exemption	3.1	1.8	1.2	0.9	0.9	1.0
Small business capital gains tax rollover deferral	2.8	0.9	0.5	0.4	0.5	0.5
The Small Business and General Business Tax Break	–	13.0	9.6	0.4	0.1	<0.1
Total^b	144.6	133.9	96.6	77.6	50.7	63.7

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Other livestock farming						
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	6.7	3.8	1.0
Exceptional Circumstances – interest rate subsidies	5.9	3.4	1.5	0.4	–	–
Exceptional Circumstances – relief payments	4.3	2.0	1.5	0.1	–	–
Farm Help	<0.1	–	–	–	–	–
Farm Management Deposits Scheme	6.1	4.1	1.1	12.3	4.8	4.2
Income tax averaging provisions	3.7	3.6	4.5	4.9	4.5	4.5
Industry partnerships program	0.3	–	–	–	–	–
Interim Income Support	<0.1	<0.1	<0.1	<0.1	–	–
Rural Financial Counselling Service	0.2	0.2	0.3	0.3	0.7	0.8
Tax deduction for conserving or conveying water	1.1	1.6	0.7	1.0	0.8	0.1
<i>Rural R&D measures</i>						
Egg Research & Development	1.0	1.0	1.6	1.9	1.8	1.9
Pig Research & Development	2.8	4.0	4.3	4.6	4.5	4.8
Rural Industries R&D Corporation	4.9	4.1	3.9	4.4	4.6	3.9
<i>General export measures</i>						
Export Market Development Grants Scheme	0.9	0.6	0.6	0.2	0.6	0.4
<i>General R&D measures</i>						
Cooperative Research Centres	7.2	8.0	8.2	6.8	7.2	7.0
CSIRO	0.9	1.0	1.0	15.3	3.1	3.0
New Industries Development Program	<0.1	–	–	–	–	–
R&D tax concession	0.3	0.6	0.6	4.1	1.8	0.6
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.3
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	0.7	2.2
R&D Tax Incentive – refundable tax offset	–	–	–	–	0.5	0.9
R&D tax offsets – Refundable	–	0.9	0.6	0.7	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.3	–
Enterprise Connect Innovation Centres	–	<0.1	–	–	<0.1	–
North East Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
Small Business – Simplified depreciation rules	0.3	0.4	0.6	<0.1	-0.2	6.6
Small business capital gains tax 50 per cent reduction	4.9	2.2	1.1	1.0	1.0	1.0
Small business capital gains tax retirement exemption	1.9	1.4	0.9	0.7	0.7	0.8
Small business capital gains tax rollover deferral	0.5	0.4	0.2	0.2	0.2	0.2
The Small Business and General Business Tax Break	–	7.7	10.6	0.6	0.2	<0.1
Total	47.6	47.6	43.9	66.2	41.6	43.6

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Aquaculture and fishing						
<i>Industry-specific measures</i>						
Fisheries Structural Adjustment Package	16.7	9.6	1.8	–	–	–
<i>Sector-specific measures</i>						
Exceptional Circumstances – interest rate subsidies	0.1	0.1	13.3	<0.1	–	–
Exceptional Circumstances – relief payments	0.2	0.2	0.1	<0.1	–	–
Farm Help	<0.1	–	–	–	–	–
Income tax averaging provisions	5.4	5.5	5.8	6.6	7.5	7.5
Industry partnerships program	0.1	–	–	–	–	–
Interim Income Support	–	<0.1	<0.1	<0.1	–	–
Rural Financial Counselling Service	0.1	0.1	0.1	0.1	0.1	0.1
Tax deduction for conserving or conveying water	–	<0.1	0.1	0.5	0.3	<0.1
<i>Rural R&D measures</i>						
Fisheries R&D Corporation	16.3	16.3	16.5	16.6	17.2	17.9
Fisheries Research Program	1.9	2.2	–	–	–	–
Fisheries Resources Research Fund	3.2	3.8	1.6	0.1	2.1	2.0
Torres Strait Prawn Fisheries Program	0.2	–	–	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	0.5	0.9	0.6	0.4	0.4	0.3
TRADEX	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	–	0.3	0.1	–	–	–
Commercial Ready Program	1.9	1.2	0.2	<0.1	–	–
Commercialisation Australia	–	–	0.1	1.1	1.7	2.1
Cooperative Research Centres	5.0	5.4	5.4	5.4	5.1	4.8
CSIRO	15.6	16.8	17.1	21.0	13.9	15.0
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	0.1	0.4	0.3	1.5	0.4	0.2
R&D tax concession	1.1	2.5	2.5	2.8	1.3	0.4
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.7
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	0.7	0.2
R&D Tax Incentive – refundable tax offset	–	–	–	–	3.2	5.7
R&D tax offsets – Refundable	5.7	5.4	3.6	4.1	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.1	0.7	0.7	0.7	0.7	–
Enterprise Connect Innovation Centres	<0.1	0.1	–	<0.1	<0.1	<0.1
Industry Cooperative Innovation Program	0.3	–	0.1	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.5	0.4	–	–	–

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Small Business – Simplified depreciation rules	0.2	0.3	0.5	<0.1	-0.1	5.3
Small business capital gains tax 50 per cent reduction	0.1	1.8	0.9	0.8	0.8	0.9
Small business capital gains tax retirement exemption	–	0.3	0.2	0.1	0.1	0.2
Small business capital gains tax rollover deferral	–	0.4	0.2	0.2	0.2	0.2
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	<0.1	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	0.1	–	–
Tasmanian Freight Equalisation Scheme	0.7	3.6	3.7	3.5	4.1	3.8
Tasmanian Innovation and Investment Fund	–	–	–	0.8	0.7	0.2
Temporary Assistance for Tasmanian Exporters	–	–	–	0.5	–	–
The Small Business and General Business Tax Break	–	5.3	2.2	–	–	–
Total	75.3	83.6	77.8	67.1	60.2	65.0
Forestry and logging						
<i>Industry-specific measures</i>						
12-month prepayment rule	-95.0	–	–	–	–	–
Tasmanian Contractors Assistance Program	–	–	16.9	–	–	–
Tasmanian Forest Industry Adjustment Package	–	–	–	42.4	0.3	–
Tasmanian Forests Agreement – Implementation Package	–	–	–	–	20.3	–
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	1.1	0.6	–
Carbon Farming Initiative	–	–	–	–	–	<0.1
Exceptional Circumstances – interest rate subsidies	<0.1	–	–	<0.1	–	–
Income tax averaging provisions	3.1	3.9	2.7	1.9	3.4	3.4
Industry partnerships program	<0.1	–	–	–	–	–
Rural Financial Counselling Service	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Tax deduction for conserving or conveying water	0.1	0.1	0.1	0.1	0.3	<0.1
<i>Rural R&D measures</i>						
Forest and Wood products R&D	2.1	1.8	2.6	2.4	1.8	2.2
Rural Industries R&D Corporation	1.1	–	–	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	<0.1	0.1	0.1	0.1	–	0.2
<i>General R&D measures</i>						
Commercial Ready Program	0.4	–	–	–	–	–
Cooperative Research Centres	4.6	4.8	3.8	3.2	–	–
CSIRO	6.2	6.7	6.8	10.5	8.5	7.8
R&D tax concession	0.1	0.2	0.2	0.3	0.1	<0.1

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures (continued)</i>						
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.2
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	0.7	0.6
R&D Tax Incentive – refundable tax offset	–	–	–	–	0.3	0.5
R&D tax offsets – Refundable	–	1.0	0.3	0.4	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.3	0.3	0.3	0.3	0.2	–
North East Tasmania Innovation and Investment Fund	–	0.2	–	–	–	–
Scottsdale Industry and Community Development Fund	0.2	–	–	–	–	–
Small Business – Simplified depreciation rules	0.3	0.4	0.6	<0.1	-0.2	6.9
Small business capital gains tax asset exemption	0.4	–	–	–	–	–
Small business capital gains tax 50 per cent reduction	6.9	6.6	3.2	2.8	2.9	3.1
Small business capital gains tax retirement exemption	3.1	3.3	2.1	1.8	1.8	1.9
Small business capital gains tax rollover deferral	2.2	2.1	1.1	0.9	1.1	1.2
Tasmanian Freight Equalisation Scheme	0.3	3.7	3.7	3.5	4.2	3.9
Temporary Assistance for Tasmanian Exporters	–	–	–	0.5	–	–
The Small Business and General Business Tax Break	–	3.6	1.4	–	–	–
Total	-63.5	38.7	46.1	72.3	46.3	31.5
Primary production support services						
<i>Sector-specific measures</i>						
Carbon Farming Futures	–	–	–	–	–	2.3
Carbon Farming Initiative	–	–	0.3	2.0	1.8	–
Exceptional Circumstances – interest rate subsidy	1.2	1.6	–	1.8	–	–
Exceptional Circumstances – relief payments	–	–	–	0.3	–	–
Income tax averaging provisions	5.2	3.9	7.3	9.6	12.0	12.0
Interim Income Support	–	–	–	<0.1	–	–
Tax deduction for conserving or conveying water	0.3	0.1	0.3	0.6	1.8	0.2
<i>General export measures</i>						
Export Market Development Grants Scheme	0.7	0.7	0.4	0.3	0.4	0.6
TRADEX	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.3	0.7	0.3	<0.1	–	–
COMET Program	0.1	0.1	0.1	<0.1	–	–
Commercial Ready Program	0.9	0.3	<0.1	–	–	–
Commercialisation Australia	–	–	<0.1	0.1	0.4	0.3

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures (continued)</i>						
R&D tax concession	0.9	1.7	1.7	1.9	0.9	0.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	1.6	–
R&D Tax Incentive – refundable tax offset	–	–	–	–	1.0	1.7
R&D tax offsets – Refundable	2.5	1.8	1.1	1.2	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.8	1.2	1.2	1.2	1.5	–
Enterprise Connect Innovation Centres	–	–	<0.1	<0.1	–	<0.1
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.3	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
Small Business – Simplified depreciation rules	0.4	0.5	0.8	0.1	-0.3	9.0
Small business capital gains tax 50 per cent reduction	6.2	3.5	1.7	1.5	1.6	1.6
Small business capital gains tax retirement exemption	1.7	0.8	0.5	0.4	0.4	0.5
Small business capital gains tax rollover deferral	2.5	1.9	1.0	0.8	1.0	1.1
The Small Business and General Business Tax Break	–	13.7	16.2	–	–	–
Total	24.6	32.5	33.0	21.9	24.3	29.0
Unallocated primary production						
<i>Industry-specific measures</i>						
Australian Animal Health Laboratory	7.1	7.2	7.3	7.4	7.5	7.7
Exotic Disease Preparedness Program	1.0	1.7	0.6	0.6	0.6	–
<i>Sector-specific measures</i>						
Caring for Our Country – Landcare	35.2	32.1	34.0	36.8	35.1	17.2
Climate Change Adjustment Program	3.5	12.4	8.7	16.2	0.6	–
Drought assistance – Murray Darling Basin Grants to Irrigators	60.4	0.8	–	–	0.1	–
Drought assistance – professional advice	14.2	12.5	7.1	1.9	<0.1	–
Drought assistance – re-establishment assistance	17.6	20.0	23.9	16.4	2.2	–
Drought Assistance Package - concessional loans	–	–	–	–	–	2.0
Environmental Stewardship Program	–	8.9	13.3	13.2	11.0	14.0
Exceptional Circumstances – interest rate subsidies	3.9	–	–	<0.1	–	–
Exceptional Circumstances – relief payments	22.8	13.9	14.6	0.3	1.6	<0.1
Farm Finance - concessional loans	–	–	–	–	–	9.8
Farm Help	–	0.1	–	–	–	–

(continued next page)

Table A.10 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Sector-specific measures (continued)</i>						
Farm Management Deposits Scheme	7.6	5.1	1.2	1.8	4.8	2.7
Industry partnerships program	0.1	–	–	–	–	–
Interim Income Support	–	<0.1	<0.1	<0.1	–	–
Promoting Australian Produce Program	3.0	1.3	3.8	–	–	–
Rural Financial Counselling Service	2.3	2.2	1.7	1.9	0.6	0.5
Sustainable Rural Water Use and Infrastructure Program	17.3	54.2	59.2	191.8	140.5	143.7
<i>Rural R&D measures</i>						
Climate Change Adaption Partnerships Program	10.1	19.3	10.8	8.5	–	–
Climate Change and Productivity Research Program	10.0	15.0	15.0	6.2	–	–
Land & water resources R&D	13.0	5.7	–	–	–	–
National Weeds and Productivity Research Program	3.1	4.1	4.0	4.0	–	–
Rural Industries R&D Corporation	5.8	5.0	5.2	5.4	4.3	4.2
<i>General R&D measures</i>						
Cooperative Research Centres	22.4	19.1	10.8	9.5	9.3	6.9
CSIRO	24.4	26.3	26.9	17.1	15.5	15.2
<i>Other measures</i>						
Indigenous Carbon Farming Fund	–	–	–	–	0.9	1.5
Tasmanian Freight Equalisation Scheme	12.6	14.1	14.1	13.3	15.9	14.6
Temporary Assistance for Tasmanian Exporters	–	–	–	2.0	–	–
Total	297.5	281.1	262.2	354.3	250.5	240.0
Total outlays	1424.6	1274.9	1044.4	947.1	717.7	765.9
Total tax concessions	410.6	562.7	483.5	600.9	488.0	530.1
Total budgetary assistance	1835.2	1837.6	1527.9	1547.9	1205.7	1295.9

– Nil. Figures may not add to totals due to rounding. ^a The estimates are derived primarily from Australian Government departmental annual reports and Treasury's Tax Expenditure Statements and unpublished information provided by relevant agencies. ^b Does not include funding provided under the Australian Government's Dairy Industry Adjustment Package, which has been included in the estimates of 'agricultural pricing and regulatory assistance' reported in recent *Reviews*. It is estimated that the package provided dairy farmers remaining in the industry with assistance totalling \$0.2 million in 2008-09.

Source: Commission estimates.

Table A.11 Australian Government budgetary assistance to mining, 2008-09 to 2013-14^a
\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Industry-specific measures</i>						
Coal Mining Abatement Support Package	–	–	–	–	1.0	24.0
Coal Sector Jobs Package	–	–	–	218.8	–	–
Greenhouse Gas Abatement Program	0.1	–	–	–	–	–
National Low Emissions Coal Initiative	8.7	32.3	47.6	25.6	22.4	44.1
<i>Sector-specific measures</i>						
Capital expenditure deduction for mining	15.0	10.0	7.0	2.0	2.0	2.0
<i>General export measures</i>						
Export Market Development Grants Scheme	1.6	2.2	1.4	1.8	1.2	2.0
TRADEX	0.5	0.5	0.3	0.3	0.3	0.3
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.9	1.6	0.9	0.3	–	–
COMET Program	0.1	0.3	<0.1	<0.1	–	–
Commercial Ready Program	3.7	0.2	–	–	–	–
Commercialisation Australia	–	–	0.1	0.9	1.9	2.5
Cooperative Research Centres	3.5	6.7	10.6	11.3	10.7	11.3
CSIRO	59.1	63.8	65.2	71.2	80.7	87.3
Innovation Investment Fund	0.4	–	–	–	–	–
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	111.4	129.9	111.7	88.8	24.2	10.1
R&D Start	0.1	–	–	–	–	–
R&D tax concession	195.4	222.6	222.6	252.5	112.7	38.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-28.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	178.1	223.7
R&D Tax Incentive – refundable tax offset	–	–	–	–	52.6	94.1
R&D tax offsets – Refundable	36.1	63.3	60.0	67.7	–	–
Renewable Energy Development Initiative	0.8	0.3	–	–	–	–

(continued next page).

Table A.11 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Others measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.3	–
Enterprise Connect Innovation Centres	<0.1	0.2	0.2	0.1	0.2	0.2
Innovation Investment Fund for South Australia	0.3	0.3	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.2	<0.1	–	–	–
Small Business – Simplified depreciation rules	0.2	0.3	0.5	<0.1	-0.1	5.0
Small business capital gains tax 50 per cent reduction	1.9	2.1	1.3	2.6	2.7	2.9
Small business capital gains tax retirement exemption	0.5	0.9	0.8	0.9	0.9	0.9
Small business capital gains tax rollover deferral	0.2	–	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	0.1	–
Tasmanian Freight Equalisation Scheme	0.1	0.2	0.2	0.2	0.2	0.2
Temporary Assistance for Tasmanian Exporters	–	–	–	<0.1	–	–
The Small Business and General Business Tax Break	–	109.5	625.8	0.1	<0.1	<0.1
Total	441.0	647.2	1156.5	745.6	492.2	520.7
Total outlays	115.6	171.4	186.3	398.1	171.0	265.8
Total tax concessions	325.4	475.8	970.2	347.5	321.2	254.9
Total budgetary assistance	441.0	647.2	1156.5	745.6	492.2	520.7

– Nil. Figures may not add to totals due to rounding. ^a The estimates are derived primarily from Australian Government departmental annual reports and Treasury's Tax Expenditure Statements and unpublished information provided by relevant agencies.

Source: Commission estimates.

Table A.12 Australian Government budgetary assistance to manufacturing, 2008-09 to 2013-14^a

\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Food, beverages and tobacco						
<i>Industry-specific measures</i>						
Assistance for upgrade of Simplot Processing Plant (Tasmania)	–	–	2.0	1.0	–	–
Australian Wine Industry – Support	–	–	–	–	0.5	0.5
Brandy preferential excise rate	5.0	4.0	4.0	4.0	4.0	4.0
Clean Technology Investment – Food and Foundries Program	–	–	–	1.2	20.8	61.1
Regional Food Producers' Innovation and Productivity Program	–	3.0	5.1	0.4	–	–
Wine Australia Corporation	–	–	2.7	2.8	2.7	2.9
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	–	0.2
<i>General export measures</i>						
Export Market Development Grants Scheme	16.0	14.4	11.4	8.1	6.6	4.9
TRADEX	0.8	0.7	0.5	0.5	0.5	0.5
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	–	0.4	0.3	0.3	–	–
COMET Program	0.1	<0.1	0.1	–	–	–
Commercial Ready Program	2.0	0.3	0.1	–	–	–
Commercialisation Australia	–	0.1	0.8	0.4	1.4	3.0
Cooperative Research Centres	0.4	0.3	–	–	–	–
CSIRO	17.8	19.2	19.6	5.1	3.1	2.6
Manufacturing Technology Innovation Centre	–	–	–	–	–	4.0
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	13.9	20.2	17.3	15.6	4.2	1.8
R&D Start	0.3	–	–	–	–	–
R&D tax concession	25.8	41.0	41.0	40.8	18.2	6.2
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-2.9
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	70.8	16.7
R&D Tax Incentive – refundable tax offset	–	–	–	–	5.4	9.6
R&D tax offsets – Refundable	6.3	10.2	6.1	6.9	–	–
Renewable Energy Development Initiative	1.8	0.2	–	–	–	–

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.3	–
Enterprise Connect Innovation Centres	0.2	0.6	0.9	0.8	0.6	0.7
Geelong Innovation and Investment Fund	1.0	–	0.2	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.2	–
Innovation Investment Fund for South Australia	1.6	1.4	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	2.5	1.9	–	–	–
Small Business – Simplified depreciation rules	0.3	0.4	0.7	0.1	-0.2	8.0
Small business capital gains tax 50 per cent reduction	3.0	3.1	4.1	4.6	4.8	5.0
Small business capital gains tax retirement exemption	1.8	1.8	2.2	3.3	3.3	3.5
Small business capital gains tax rollover deferral	1.3	1.0	1.4	1.3	1.5	1.7
South Australia Innovation and Investment Fund and Labour Assistance Package	0.3	0.5	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	<0.1	–
Tasmanian Freight Equalisation Scheme	14.8	–	–	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.5	0.5	0.3
The Small Business and General Business Tax Break	–	32.3	69.8	10.9	3.8	0.5
Total	114.7	157.7	192.6	108.5	153.0	134.7
Textile, leather, clothing and footwear						
<i>Industry-specific measures</i>						
Clothing and Household Textile Building Innovative Capability Program	–	–	–	22.6	22.3	22.0
Howe leather – loan repayment	-3.1	–	–	–	–	–
TCF Product Diversification Scheme	4.5	4.6	4.2	–	–	–
TCF Small Business Program	2.1	1.7	2.1	2.0	1.8	2.5
TCF Strategic Capability Program	–	<0.1	5.2	8.7	7.2	7.2
TCF Strategic Investment Program Scheme – Post 2005	96.5	98.5	99.2	–	–	–
TCF Structural Adjustment Scheme	1.3	5.9	2.3	6.2	1.3	1.3
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	0.3	4.3
<i>General export measures</i>						
Export Market Development Grants Scheme	8.0	6.9	5.3	4.6	6.4	5.6
TRADEX	6.1	5.5	3.5	3.7	3.9	3.9

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures</i>						
COMET Program	<0.1	<0.1	<0.1	–	–	–
Commercial Ready Program	0.9	0.7	0.2	–	–	–
Commercialisation Australia	–	–	–	0.1	0.1	0.1
CSIRO	4.9	5.3	5.4	3.1	4.1	3.9
Manufacturing Technology Innovation Centre	–	–	–	–	–	1.2
Premium R&D tax concession	0.4	0.5	0.4	0.9	0.3	0.1
R&D tax concession	0.9	1.0	1.0	2.4	1.1	0.4
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.1
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	2.8	2.2
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.0	3.6
R&D tax offsets – Refundable	2.2	2.7	2.3	2.6	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.9	0.9	0.9	0.9	0.7	–
Enterprise Connect Innovation Centres	0.1	0.2	0.4	0.4	0.4	0.2
Geelong Innovation and Investment Fund	–	–	0.2	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.2	<0.1	–	–	–
Small Business – Simplified depreciation rules	0.2	0.3	0.5	<0.1	-0.1	5.3
Small business capital gains tax 50 per cent reduction	1.2	0.4	0.5	0.6	0.6	0.6
Small business capital gains tax retirement exemption	–	0.3	0.4	0.6	0.6	0.6
Small business capital gains tax rollover deferral	0.5	0.1	0.1	0.1	0.1	0.2
Tasmanian Freight Equalisation Scheme	0.2	–	–	–	–	–
The Small Business and General Business Tax Break	–	3.5	0.6	1.2	0.4	0.1
Total	127.6	139.2	134.8	61.0	56.4	64.0
Wood and paper products						
<i>Industry-specific measures</i>						
Australian Paper's Maryville Pulp and Paper	–	–	–	–	4.2	2.9
Australia's Forest Industry – Preparing for the Future	3.3	6.9	3.5	–	–	–
Tasmanian Community Forest Agreement	35.3	–	–	–	–	–
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	8.0	3.7
<i>Rural R&D measures</i>						
Forest and Wood Products R&D	1.7	1.7	1.8	1.5	0.9	0.7
<i>General export measures</i>						
Export Market Development Grants Scheme	0.9	0.8	0.7	0.4	0.3	0.3
TRADEX	0.6	0.5	0.3	0.4	0.4	0.4

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.1	–	–	–	–	–
COMET Program	<0.1	–	<0.1	–	–	–
Commercial Ready Program	0.4	<0.1	–	–	–	–
CSIRO	2.2	2.4	2.4	0.9	0.7	0.7
Premium R&D tax concession	0.3	–	–	0.1	<0.1	<0.1
R&D tax concession	6.0	7.9	7.9	7.4	3.3	1.1
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.7
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	5.0	2.5
R&D Tax Incentive – refundable tax offset	–	–	–	–	1.4	2.4
R&D tax offsets – Refundable	2.1	2.5	1.5	1.7	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.3	0.3	0.3	0.3	1.1	–
Enterprise Connect Innovation Centres	<0.1	0.2	0.5	0.4	0.4	0.4
North East Tasmania Innovation and Investment Fund	–	<0.1	–	–	–	–
Scottsdale Industry and Community Development Fund	1.1	–	–	–	–	–
Small Business – Simplified depreciation rules	0.2	0.2	0.4	<0.1	-0.1	4.1
Small business capital gains tax 50 per cent reduction	2.8	1.2	1.7	1.9	1.9	2.0
Small business capital gains tax retirement exemption	1.4	0.9	1.1	1.6	1.6	1.7
Small business capital gains tax rollover deferral	0.1	–	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	0.3	0.6	–
Tasmanian Freight Equalisation Scheme	13.2	–	–	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.4	0.3	0.1
The Small Business and General Business Tax Break	–	8.0	14.1	–	–	–
Total	72.0	33.6	36.3	17.3	30.0	22.6
Printing and recorded media						
<i>Industry-specific measures</i>						
TCF Small Business Program	–	<0.1	<0.1	–	–	–
<i>Sector-specific measures</i>						
Clean Technology Investment - General Program	–	–	–	–	1.9	3.1
<i>General export measures</i>						
Export Market Development Grants Scheme	0.6	0.4	0.2	0.2	0.1	0.2
TRADEX	0.2	0.2	0.1	0.1	0.1	0.1

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures</i>						
COMET Program	<0.1	–	<0.1	–	–	–
Commercial Ready Program	1.1	0.3	<0.1	–	–	–
CSIRO	0.6	0.7	0.7	–	–	–
Premium R&D tax concession	0.2	–	–	1.1	0.3	0.1
R&D tax concession	0.6	0.9	0.9	2.1	0.9	0.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.1
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	1.0	2.1
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.0	3.7
R&D tax offsets – Refundable	3.1	3.5	2.3	2.6	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.4	–
Enterprise Connect Innovation Centres	<0.1	0.2	0.2	0.2	0.2	0.2
Illawarra Region Innovation and Investment Fund	–	–	–	2.9	–	–
Small Business – Simplified depreciation rules	0.2	0.3	0.4	<0.1	-0.1	4.5
Small business capital gains tax 50 per cent reduction	1.3	2.2	3.0	3.3	3.4	3.6
Small business capital gains tax retirement exemption	2.0	1.2	1.5	2.2	2.2	2.3
Tasmanian Innovation and Investment Fund	–	–	–	0.1	<0.1	<0.1
The Small Business and General Business Tax Break	–	8.1	8.4	1.1	0.4	<0.1
Total	10.2	18.3	17.9	16.3	13.0	19.1
Petroleum, coal, chemical and rubber products						
<i>Industry-specific measures</i>						
Clean Technology Investment - Food and Foundries Program	–	–	–	–	–	<0.1
CSL – Commonwealth assistance	–	–	9.3	10.6	8.0	2.1
Ethanol production subsidy	79.8	102.7	124.7	115.3	108.9	102.5
Greenhouse Gas Abatement Program	0.3	–	–	–	–	–
Pharmaceuticals Partnerships Program	8.1	1.7	–	–	–	–
Product Stewardship for Oil Program	40.5	33.0	35.0	36.0	33.4	40.0
Small scale mammalian cell production facility	–	1.0	1.0	4.0	4.0	–
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	8.0	19.2
<i>General export measures</i>						
Export Market Development Grants Scheme	8.2	9.7	7.0	5.3	6.2	5.4
TRADEX	2.2	2.0	1.3	1.4	1.4	1.4

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	1.3	1.8	0.8	0.2	–	–
Clean Technology Innovation Program	–	–	–	–	–	1.4
COMET Program	0.5	0.5	0.3	<0.1	–	–
Commercial Ready Program	5.9	1.1	0.5	0.1	–	–
Commercialisation Australia	–	0.5	2.5	2.5	3.5	2.3
Cooperative Research Centres	8.2	9.0	8.0	7.0	2.6	10.0
CSIRO	17.1	18.5	18.9	16.6	33.2	44.6
Innovation Investment Fund	–	0.5	0.9	1.2	1.4	1.6
Manufacturing Technology Innovation Centre	–	–	–	–	–	2.4
National Stem Cell Centre	5.5	5.0	4.5	–	–	–
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	9.9	13.2	11.3	14.2	3.9	1.6
R&D Start	0.1	–	–	–	–	–
R&D tax concession	38.3	38.6	38.6	40.6	18.1	6.2
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-8.7
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	41.5	32.7
R&D Tax Incentive – refundable tax offset	–	–	–	–	16.1	28.8
R&D tax offsets – Refundable	20.7	23.9	18.3	20.7	–	–
Renewable Energy Development Initiative	0.7	–	–	–	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.1	0.1	0.1	0.1	0.4	–
Enterprise Connect Innovation Centres	<0.1	0.5	0.9	0.6	0.8	0.5
Geelong Innovation and Investment Fund	–	–	0.2	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.8	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.3	–	–	–	–
Scottsdale Industry and Community Development Fund	0.1	–	–	–	–	–
Small Business – Simplified depreciation rules	0.1	0.2	0.3	<0.1	-0.1	3.3
Small business capital gains tax 50 per cent reduction	0.4	0.7	0.9	1.0	1.0	1.1
Small business capital gains tax retirement exemption	1.2	–	–	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	1.4	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	<0.1	<0.1	–
The Small Business and General Business Tax Break	–	12.5	66.2	1.7	0.6	0.1
Total	249.4	276.9	353.0	279.2	293.7	298.3

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Non-Metallic mineral products						
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	5.7	16.8
<i>General export measures</i>						
Export Market Development Grants Scheme	0.5	0.7	0.4	0.4	0.3	0.6
TRADEX	0.2	0.2	0.1	0.1	0.2	0.2
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	–	0.4	<0.1	–	–	–
Clean Technology Innovation Program	–	–	–	–	0.1	–
COMET Program	0.2	0.1	<0.1	–	–	–
Commercial Ready Program	0.4	<0.1	–	–	–	–
Commercialisation Australia	–	–	0.1	0.3	0.6	0.3
CSIRO	0.3	0.4	0.4	1.5	1.9	1.8
Premium R&D tax concession	1.3	2.4	2.0	0.2	<0.1	<0.1
R&D Start	<0.1	–	–	–	–	–
R&D tax concession	5.2	8.7	8.7	6.6	2.9	1.0
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-2.1
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	6.1	3.4
R&D Tax Incentive – refundable tax offset	–	–	–	–	3.9	7.0
R&D tax offsets – Refundable	5.1	6.2	4.5	5.0	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.2	0.2	0.2	0.2	0.4	–
Enterprise Connect Innovation Centres	<0.1	0.1	0.1	0.1	0.1	0.2
Geelong Innovation and Investment Fund	–	–	0.7	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.1	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.4	<0.1	–	–	–
Small Business – Simplified depreciation rules	0.1	0.1	0.2	<0.1	-0.1	2.2
Small business capital gains tax 50 per cent reduction	0.7	0.3	0.3	0.4	0.4	0.4
South East South Australia Innovation and Investment Fund	–	–	–	–	0.2	–
Tasmanian Innovation and Investment Fund	–	–	–	<0.1	–	<0.1
The Small Business and General Business Tax Break	–	6.2	9.6	1.9	0.7	0.1
Total	14.4	26.4	27.5	16.7	23.5	31.9

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Metal and fabricated metal products						
<i>Industry-specific measures</i>						
Clean Technology Investment – Food and Foundries Program	–	–	–	–	0.9	1.0
Greenhouse Gas Abatement Program	0.2	–	–	–	–	–
Steel Transformation Plan	–	–	–	164.0	–	–
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	3.1	2.4
<i>General export measures</i>						
Export Market Development Grants Scheme	3.8	3.0	2.6	2.2	2.2	2.6
TRADEX	1.9	1.7	1.1	1.1	1.2	1.2
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.9	1.8	0.1	–	–	–
Clean Technology Innovation Program	–	–	–	–	0.1	0.2
COMET Program	0.3	0.2	0.1	–	–	–
Commercial Ready Program	2.4	2.4	0.4	–	–	–
Commercialisation Australia	–	–	<0.1	1.1	2.4	1.6
Cooperative Research Centres	8.3	8.1	7.8	5.5	–	–
CSIRO	26.5	28.6	29.2	22.5	31.9	31.9
Innovation Investment Fund	–	0.1	0.2	0.2	0.3	0.3
Premium R&D tax concession	13.9	7.8	6.7	24.8	6.8	2.8
R&D tax concession	31.1	40.8	40.8	50.4	22.5	7.6
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-3.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	110.5	350.9
R&D Tax Incentive – refundable tax offset	–	–	–	–	6.2	11.1
R&D tax offsets – Refundable	12.4	13.4	7.1	8.0	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.1	1.0	1.0	1.0	1.4	–
Enterprise Connect Innovation Centres	0.2	0.9	1.3	0.9	1.0	1.1
Geelong Innovation and Investment Fund	–	–	<0.1	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.1	–
Innovation Investment Fund for South Australia	0.3	0.3	–	–	–	–
North East Tasmania Innovation and Investment Fund	–	<0.1	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.8	1.3	–	–	–
Small Business – Simplified depreciation rules	0.4	0.6	1.0	0.1	-0.3	10.6
Small business capital gains tax asset exemption	0.9	–	–	–	–	–
Small business capital gains tax 50 per cent reduction	5.1	0.8	1.1	1.2	1.3	1.3

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Small business capital gains tax retirement exemption	4.2	0.5	0.6	1.0	1.0	1.0
Small business capital gains tax rollover deferral	0.5	0.2	0.2	0.2	0.3	0.3
South Australia Innovation and Investment Fund and Labour Assistance Package	1.6	2.5	0.5	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	0.1	0.5	–
Tasmanian Freight Equalisation Scheme	4.8	–	–	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.8	0.7	0.1
The Small Business and General Business Tax Break	–	17.4	37.3	3.5	1.2	0.1
Total	120.8	132.9	140.5	288.7	195.2	425.1
Motor vehicles and parts						
<i>Industry-specific measures</i>						
Automotive competitiveness and investment scheme – Stage 2	479.1	520.9	282.7	–	–	–
Automotive Industry Structural Adjustment Program	7.9	18.1	17.0	16.8	–	–
Automotive Market Access Program	–	0.5	0.5	0.5	–	–
Automotive New Markets Initiative	–	–	–	–	2.9	6.3
Automotive Supply Chain Development Program	0.1	3.9	5.8	5.4	4.4	–
Automotive Transformation Scheme	–	–	93.3	381.0	334.4	332.8
Ford Australia Assistance	–	–	–	34.0	–	–
Green Car Innovation Fund	–	108.1	63.0	125.5	47.4	6.0
Investment incentive for Holden	–	2.7	–	–	–	–
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	0.8	1.8
<i>General export measures</i>						
Export Market Development Grants Scheme	1.6	2.0	1.3	0.9	1.0	0.9
TRADEX	39.7	35.7	22.9	24.4	25.6	25.4
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.3	1.0	0.2	0.2	–	–
COMET Program	0.2	0.2	0.1	<0.1	–	–
Commercial Ready Program	0.5	0.2	–	–	–	–
Commercialisation Australia	–	–	0.5	1.2	0.8	0.1
Cooperative Research Centres	6.1	6.1	5.5	5.0	10.7	1.1
CSIRO	0.5	0.6	0.6	4.4	2.2	1.8
Premium R&D tax concession	0.7	4.7	4.0	3.7	1.0	0.4
Pre-seed fund	0.1	–	–	–	–	–
R&D Start	<0.1	–	–	–	–	–
R&D tax concession	11.1	13.6	13.6	15.5	6.9	2.3

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures (continued)</i>						
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-2.2
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	2.9	5.0
R&D Tax Incentive – refundable tax offset	–	–	–	–	4.1	7.3
R&D tax offsets – Refundable	9.6	7.1	4.7	5.3	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.1	0.1	0.1	0.1	0.1	–
Enterprise Connect Innovation Centres	<0.1	0.2	–	0.2	0.1	0.1
Small Business – Simplified depreciation rules	0.1	0.1	0.2	<0.1	-0.1	1.8
Small business capital gains tax 50 per cent reduction	0.1	0.9	1.2	1.4	1.4	1.5
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	0.5	–	–	–
The Small Business and General Business Tax Break	–	21.0	55.5	–	–	–
Total	558.0	747.6	573.2	625.4	446.6	392.5
Other transport equipment						
<i>General export measures</i>						
Export Market Development Grants Scheme	1.2	1.3	1.5	1.1	1.0	0.5
TRADEX	0.2	0.2	0.1	0.1	0.1	0.1
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	–	0.3	0.2	–	–	–
COMET Program	0.2	0.1	0.1	–	–	–
Commercial Ready Program	0.3	<0.1	–	–	–	–
Commercialisation Australia	–	–	–	0.6	0.5	0.3
Cooperative Research Centres	6.7	7.4	5.2	5.1	6.0	5.3
CSIRO	5.2	5.6	5.8	3.1	3.5	3.5
Innovation Investment Fund	0.2	–	–	–	–	–
Premium R&D tax concession	1.1	0.8	0.7	1.2	0.3	0.1
R&D tax concession	5.9	7.2	7.2	5.2	2.3	0.8
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	3.0	1.7
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.8	5.0
R&D tax offsets – Refundable	7.7	7.4	3.2	3.6	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.5	0.4	0.4	0.4	0.4	–
Enterprise Connect Innovation Centres	<0.1	0.1	0.4	<0.1	0.1	0.1
Geelong Innovation and Investment Fund	0.1	–	–	–	–	–
Industry Cooperative Innovation Program	0.3	0.3	0.1	–	–	–
North East Tasmania Innovation and Investment Fund	–	0.2	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	<0.1	–	–	–

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Scottsdale Industry and Community Development Fund	0.2	–	–	–	–	–
Small Business – Simplified depreciation rules	0.1	0.1	0.2	<0.1	-0.1	2.4
Small business capital gains tax 50 per cent reduction	0.1	0.5	0.6	0.7	0.7	0.7
Small business capital gains tax retirement exemption	1.3	–	–	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	0.9	1.5	–	–	–	–
The Small Business and General Business Tax Break	–	2.5	3.7	0.9	0.3	<0.1
Total	32.1	36.1	29.3	22.0	21.1	19.2
Machinery and equipment manufacturing						
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	1.3	1.9
Exceptional Circumstances – interest rate subsidies	–	–	<0.1	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	16.3	19.5	11.6	9.7	8.1	8.9
TRADEX	4.9	4.4	2.8	3.0	3.1	3.1
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	7.2	11.8	7.3	2.9	–	–
Clean Technology Innovation Program	–	–	–	–	0.8	10.3
COMET Program	1.8	1.7	0.8	0.1	–	–
Commercial Ready Program	17.0	4.5	0.7	<0.1	–	–
Commercialisation Australia	–	0.1	4.1	11.4	12.6	12.4
Cooperative Research Centres	3.8	2.8	2.5	2.0	–	–
CSIRO	19.1	20.6	21.1	3.7	5.0	6.9
Innovation Investment Fund	0.3	–	–	–	–	–
New Industries Development Program	<0.1	–	–	–	–	–
Premium R&D tax concession	13.8	22.3	19.2	19.1	5.2	2.2
Pre-seed fund	0.3	0.8	–	–	–	–
R&D Start	<0.1	–	–	–	–	–
R&D tax concession	35.2	47.1	47.1	54.5	24.3	8.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-16.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	58.1	20.3
R&D Tax Incentive – refundable tax offset	–	–	–	–	30.5	54.6
R&D tax offsets – Refundable	51.5	58.8	34.8	39.3	–	–
Renewable Energy Development Initiative	0.2	0.1	–	–	–	–

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.3	0.3	0.3	0.3	0.4	–
Enterprise Connect Innovation Centres	0.2	1.0	1.1	1.1	0.9	0.9
Geelong Innovation and Investment Fund	1.0	–	0.1	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	0.7	0.1	–
Innovation Investment Fund for South Australia	2.6	2.2	–	–	–	–
North East Tasmania Innovation and Investment Fund	–	<0.1	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.9	0.6	–	–	–
Small Business – Simplified depreciation rules	0.3	0.4	0.6	<0.1	-0.2	6.4
Small business capital gains tax 50 per cent reduction	3.3	0.8	1.0	1.2	1.2	1.3
Small business capital gains tax retirement exemption	2.0	–	–	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	1.5	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.1	<0.1	<0.1
The Small Business and General Business Tax Break	–	9.7	9.0	4.9	1.7	0.2
<i>Total</i>	<i>181.1</i>	<i>209.8</i>	<i>166.2</i>	<i>154.0</i>	<i>153.4</i>	<i>121.2</i>
Furniture and other manufacturing						
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	0.1	1.1
<i>General export measures</i>						
Export Market Development Grants Scheme	6.0	7.6	5.7	6.0	6.1	4.5
TRADEX	1.9	1.7	1.1	1.2	1.2	1.2
<i>General R&D measures</i>						
COMET Program	0.3	0.6	0.3	<0.1	–	–
Commercial Ready Program	0.9	0.5	<0.1	–	–	–
Commercialisation Australia	–	0.1	0.3	2.1	3.0	2.2
Cooperative Research Centres	4.0	6.0	6.8	6.8	6.8	2.1
CSIRO	<0.1	<0.1	–	6.7	4.5	4.4
Manufacturing Technology Innovation Centre	–	–	–	–	–	1.2
Premium R&D tax concession	0.4	1.5	1.3	0.4	0.1	0.1
Pre-seed fund	–	0.2	–	–	–	–
R&D Start	0.1	0.1	–	–	–	–
R&D tax concession	1.7	2.3	2.3	2.3	1.0	0.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	3.1	1.8
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.6	4.7
R&D tax offsets – Refundable	3.8	4.1	3.0	3.4	–	–

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.6	0.7	0.7	0.7	0.9	–
Enterprise Connect Innovation Centres	0.2	0.4	0.3	0.3	0.2	0.2
Illawarra Region Innovation and Investment Fund	–	–	–	0.3	0.2	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	1.5	–	–	–
Small Business – Simplified depreciation rules	0.2	0.3	0.5	<0.1	-0.2	5.6
Small business capital gains tax 50 per cent reduction	1.7	0.6	0.8	0.9	0.9	1.0
Small business capital gains tax retirement exemption	1.2	–	–	–	–	–
Structural Adjustment Fund for South Australia	<0.1	–	–	–	–	–
Tasmanian Freight Equalisation Scheme	1.1	–	–	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.2	0.1	<0.1
The Small Business and General Business Tax Break	–	3.8	1.0	1.0	0.3	<0.1
<i>Total</i>	<i>24.4</i>	<i>30.6</i>	<i>25.5</i>	<i>32.3</i>	<i>31.3</i>	<i>29.1</i>
Unallocated manufacturing						
<i>Industry-specific measures</i>						
Advanced Electricity Storage	8.7	–	–	–	–	–
Industry Skilling Program Enhancement	–	5.5	2.9	1.2	0.2	0.2
New Aircraft Combat Capability	–	–	–	3.3	2.0	1.9
Priority Industry Capability Innovation Program	–	–	–	13.3	10.4	–
Skilling Australian Defence Industry	12.4	6.4	9.0	14.6	16.9	12.2
<i>Sector-specific measures</i>						
Clean Business Australia – Re-tooling for Climate Change	0.7	4.9	7.6	4.2	–	–
Clean Technology Investment – General Program	–	–	–	<0.1	–	–
<i>General export measures</i>						
Duty Drawback	118.4	94.6	74.5	62.5	69.1	62.7
<i>General R&D measures</i>						
Cooperative Research Centres	2.5	2.0	–	–	–	–
CSIRO	20.8	22.5	23.0	12.8	12.3	12.0
Defence Materials Technology Centre	4.0	4.0	4.3	5.4	6.8	6.8
Energy Innovation Fund	5.8	49.8	30.0	32.7	–	–
Manufacturing Technology Innovation Centre	–	–	–	–	2.8	1.2

(continued next page)

Table A.12 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
Enterprise Connect Innovation Centres	–	10.6	9.2	0.1	<0.1	–
Innovation Investment Fund for South Australia	0.2	0.2	–	–	–	–
Melbourne's North Innovation and Investment Fund	–	–	–	–	–	18.8
Small business capital gains tax asset exemption	–	–	7.1	4.3	4.5	5.5
South Australia Innovation and Investment Fund and Labour Assistance Package	1.2	2.0	–	–	–	–
Structural Adjustment Fund for South Australia	0.3	–	–	–	–	–
Tasmanian Freight Equalisation Scheme	59.1	69.0	69.2	65.5	78.0	71.4
Tasmanian Jobs and Growth Package	–	–	–	–	–	5.1
Temporary Assistance for Tasmanian Exporters	–	–	–	9.9	–	–
<i>Total</i>	<i>234.2</i>	<i>271.4</i>	<i>236.8</i>	<i>229.8</i>	<i>203.0</i>	<i>198.0</i>
Total outlays	810.4	971.1	947.4	1376.1	1033.3	1119.1
Total tax concessions	928.3	1109.2	986.2	475.2	587.0	636.6
Total budgetary assistance	1738.8	2080.4	1933.6	1851.3	1620.3	1755.7

– Nil. Figures may not add to totals due to rounding. ^a The estimates are derived primarily from Australian Government departmental annual reports and Treasury's Tax Expenditure Statements and unpublished information provided by relevant agencies.

Source: Commission estimates.

Table A.13 Australian Government budgetary assistance to services, 2008-09 to 2013-14^a

\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Electricity, gas, water and waste services						
<i>Industry-specific measures</i>						
Carbon Capture and Storage Flagships Program	–	61.8	7.1	6.8	13.8	102.2
Diamond Energy Assistance	–	–	–	–	–	0.3
Energy Brix Australia Corporation	–	–	–	–	9.1	36.0
Energy Security Fund – transitional assistance	–	–	–	1000.0	–	–
Greenhouse Gas Abatement Program	0.7	–	–	–	–	–
Low-Emission Technology Development Fund	1.6	–	–	–	–	–
Remote Renewable Power Generation Program	39.1	4.4	–	–	–	–
Solar Flagships Programs	–	0.1	17.3	3.8	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	0.6	0.8	0.5	0.3	0.3	0.4
TRADEX	0.1	0.1	0.1	0.1	0.1	0.1
<i>General investment measures</i>						
Infrastructure bonds scheme	2.6	0.3	0.3	0.3	–	–
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	1.3	3.3	0.3	<0.1	–	–
Clean Technology Innovation Program	–	–	–	–	0.2	4.3
COMET Program	0.6	0.3	0.3	–	–	–
Commercial Ready Program	0.7	0.3	0.1	–	–	–
Commercialisation Australia	–	–	0.3	0.9	0.4	2.3
CSIRO	32.4	34.9	35.7	48.6	52.0	39.7
Innovation Investment Fund	–	1.2	2.2	2.8	3.3	3.9
Premium R&D tax concession	3.8	10.5	9.0	13.5	3.7	1.5
R&D tax concession	8.5	17.7	17.7	19.3	8.6	2.9
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-3.6
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	17.8	24.2
R&D Tax Incentive – refundable tax offset	–	–	–	–	6.7	12.0
R&D tax offsets – Refundable	7.1	9.6	7.7	8.6	–	–
Renewable Energy Development Initiative	6.1	2.3	–	–	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.3	0.2	0.2	0.2	0.4	–
Enterprise Connect Innovation Centres	<0.1	0.1	0.2	0.3	0.2	0.1
Illawarra Region Innovation and Investment Fund	–	–	–	0.2	1.2	–
Industry Cooperative Innovation Program	0.1	0.1	<0.1	–	–	–
Innovation Investment Fund for South Australia	0.4	0.4	–	–	–	–
Small Business – Simplified depreciation rules	0.2	0.2	0.3	<0.1	-0.1	3.6
Small business capital gains tax 50 per cent reduction	0.8	1.1	2.7	0.5	0.5	0.5
Small business capital gains tax retirement exemption	0.5	1.5	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	0.1	–
The Small Business and General Business Tax Break	–	22.8	358.3	–	–	–
Total	107.5	174.3	460.2	1106.1	118.2	230.4
Construction						
<i>Sector-specific measures</i>						
Clean Technology Investment – General Program	–	–	–	–	4.0	1.8
<i>General export measures</i>						
Export Market Development Grants Scheme	1.6	1.1	0.6	0.9	0.3	0.9
TRADEX	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.6	0.4	–	<0.1	–	–
Clean Technology Innovation Program	–	–	–	–	–	0.1
COMET Program	<0.1	0.2	<0.1	–	–	–
Commercial Ready Program	1.8	0.9	<0.1	0.5	–	–
Commercialisation Australia	–	–	–	–	0.3	2.9
Cooperative Research Centres	–	0.4	–	–	2.0	2.8
CSIRO	1.2	1.3	1.4	2.8	2.6	3.0
Premium R&D tax concession	5.9	12.5	10.8	15.0	4.1	1.7
R&D Start	0.4	0.3	–	–	–	–
R&D tax concession	13.1	20.0	20.0	41.2	18.4	6.3
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-5.8
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	20.7	44.4
R&D Tax Incentive – refundable tax offset	–	–	–	–	10.6	19.1
R&D tax offsets – Refundable	14.9	17.4	12.1	13.7	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	50.4	52.1	50.8	50.8	52.0	–
Enterprise Connect Innovation Centres	<0.1	0.2	0.3	0.5	0.5	0.5
North East Tasmania Innovation and Investment Fund	–	<0.1	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.9	0.6	–	–	–
Small Business – Simplified depreciation rules	9.9	13.2	21.4	1.6	-6.6	234.0
Small business capital gains tax asset exemption	4.3	2.0	2.1	2.8	2.9	3.5
Small business capital gains tax 50 per cent reduction	30.4	16.4	11.2	15.1	15.7	16.5
Small business capital gains tax retirement exemption	16.0	8.9	8.7	6.2	6.2	6.6
Small business capital gains tax rollover deferral	9.5	5.0	2.1	1.2	1.5	1.6
Small business programs	0.1	0.1	–	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	<0.1	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	<0.1	–
The Small Business and General Business Tax Break	–	147.9	66.8	58.2	20.2	2.4
<i>Total</i>	<i>160.1</i>	<i>301.2</i>	<i>208.9</i>	<i>210.5</i>	<i>155.5</i>	<i>342.4</i>
Wholesale trade						
<i>Industry-specific measures</i>						
Ethanol Distribution Program	2.0	–	–	–	–	–
TCF Small Business Program	–	0.2	<0.1	<0.1	<0.1	–
<i>Sector-specific measures</i>						
Exceptional Circumstances – interest rate subsidies	–	–	<0.1	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	14.3	13.8	11.1	10.3	10.6	8.6
TRADEX	2.9	2.6	1.7	1.8	1.9	1.9
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.4	1.2	0.1	0.1	–	–
COMET Program	0.2	0.1	0.1	–	–	–
Commercial Ready Program	1.6	0.8	–	–	–	–
Commercialisation Australia	–	–	0.2	1.8	0.8	0.5
Premium R&D tax concession	27.7	63.9	55.0	31.5	8.6	3.6
R&D tax concession	62.2	99.3	99.3	91.7	41.0	13.9
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-10.9
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	71.9	30.1
R&D Tax Incentive – refundable tax offset	–	–	–	–	20.2	36.1
R&D tax offsets – Refundable	36.2	41.6	23.0	25.9	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.1	1.2	1.2	1.2	1.1	–
Enterprise Connect Innovation Centres	0.1	0.1	0.3	0.3	0.3	0.3
North West and Northern Tasmania Innovation and Investment Fund	–	0.2	<0.1	–	–	–
Small Business – Simplified depreciation rules	1.9	2.5	4.1	0.3	-1.3	45.2
Small business capital gains tax asset exemption	2.6	2.2	2.3	3.0	3.2	3.9
Small business capital gains tax 50 per cent reduction	21.8	11.7	16.4	12.8	13.3	14.0
Small business capital gains tax retirement exemption	15.4	8.2	4.9	7.6	7.6	8.0
Small business capital gains tax rollover deferral	5.3	3.3	8.0	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	0.1	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	0.1	1.5	–
The Small Business and General Business Tax Break	–	74.9	211.2	96.9	33.7	4.0
Total	195.6	328.0	439.1	285.4	214.2	159.2
Retail trade						
<i>Industry-specific measures</i>						
Ethanol Distribution Program	5.0	–	–	–	–	–
Greenhouse Gas Abatement Program	<0.1	–	–	–	–	–
LPG Vehicle Scheme	175.8	65.2	40.9	18.8	5.2	–
TCF Small Business Program	–	<0.1	<0.1	–	<0.1	–
<i>Sector-specific measures</i>						
Exceptional Circumstances – interest rate subsidies	–	–	0.1	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	2.1	1.4	1.2	1.2	1.0	1.6
TRADEX	3.7	3.4	2.2	2.3	2.4	2.4
<i>General R&D measures</i>						
COMET Program	0.1	0.1	<0.1	–	–	–
Commercial Ready Program	0.2	<0.1	–	–	–	–
Commercialisation Australia	–	–	<0.1	0.1	0.6	0.2
Premium R&D tax concession	0.7	1.8	1.6	3.4	0.9	0.4
R&D tax concession	8.8	11.1	11.1	14.0	6.2	2.1
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-5.0
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	15.3	2.4
R&D Tax Incentive – refundable tax offset	–	–	–	–	9.2	16.5
R&D tax offsets – Refundable	16.9	15.6	10.5	11.9	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	2.8	2.9	2.8	2.8	3.1	–
Enterprise Connect Innovation Centres	0.1	0.1	0.1	0.2	0.1	0.2
North East Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.3	<0.1	–	–	–
Small Business – Simplified depreciation rules	3.7	4.9	8.0	0.6	-2.4	86.9
Small business capital gains tax asset exemption	3.6	8.3	1.6	2.1	2.2	2.7
Small business capital gains tax 50 per cent reduction	58.9	35.4	28.1	29.6	30.7	32.3
Small business capital gains tax retirement exemption	33.0	21.3	19.0	17.0	17.0	17.9
Small business capital gains tax rollover deferral	22.5	16.2	5.9	5.6	6.6	7.2
South East South Australia Innovation and Investment Fund	–	–	–	–	0.2	–
The Small Business and General Business Tax Break	–	75.4	64.7	26.6	9.2	1.1
<i>Total</i>	<i>338.0</i>	<i>263.5</i>	<i>197.7</i>	<i>136.1</i>	<i>107.5</i>	<i>169.0</i>
Accommodation and food services						
<i>General export measures</i>						
Export Market Development Grants Scheme	5.0	6.5	4.3	3.2	3.3	2.8
<i>General R&D measures</i>						
COMET Program	–	0.1	<0.1	–	–	–
Commercialisation Australia	–	–	–	0.1	<0.1	–
CSIRO	<0.1	<0.1	–	–	–	–
R&D tax concession	0.4	0.5	0.5	0.8	0.3	0.1
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	0.5	2.8
R&D Tax Incentive – refundable tax offset	–	–	–	–	1.0	1.8
R&D tax offsets – Refundable	2.0	1.2	1.2	1.3	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.0	1.0	1.0	1.0	0.8	–
Enterprise Connect Innovation Centres	–	<0.1	<0.1	<0.1	0.3	0.3
North East Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
Small Business – Simplified depreciation rules	2.3	3.0	4.9	0.4	-1.5	53.6
Small business capital gains tax asset exemption	8.1	0.6	0.6	0.8	0.8	1.0
Small business capital gains tax 50 per cent reduction	33.5	22.1	23.5	32.3	33.5	35.2

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Small business capital gains tax retirement exemption	13.3	8.6	11.7	13.0	13.0	13.7
Small business capital gains tax rollover deferral	14.7	6.8	2.8	10.3	12.1	13.3
The Small Business and General Business Tax Break	–	35.3	20.7	4.6	1.6	0.2
Total	80.2	85.8	71.1	67.7	65.7	124.4
Transport, postal and warehousing						
<i>Industry-specific measures</i>						
Bass Straight Passenger Vehicle Equalisation	35.1	36.5	36.5	34.6	34.5	37.5
Payment scheme for Airservices Australia's en route charges	4.7	4.1	4.0	4.2	1.0	1.0
<i>Sector-specific measures</i>						
Exceptional Circumstances – interest rate subsidies	–	–	0.4	0.3	–	–
Exceptional Circumstances – relief payments	–	–	0.9	<0.1	–	–
Interim Income Support	–	–	<0.1	<0.1	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	6.0	8.3	5.6	2.7	2.6	2.1
TRADEX	0.5	0.4	0.3	0.3	0.3	0.3
<i>General investment measures</i>						
Infrastructure bonds scheme	2.4	0.2	0.2	0.2	–	–
Infrastructure borrowing's tax offset scheme	0.4	–	–	–	–	–
<i>General R&D measures</i>						
Clean Business Australia - Climate Ready Program	0.7	0.8	–	–	–	–
COMET Program	0.1	0.1	<0.1	<0.1	–	–
Commercialisation Australia	–	<0.1	<0.1	0.7	0.6	<0.1
CSIRO	1.1	1.2	1.2	5.3	1.4	3.5
Premium R&D tax concession	6.2	15.3	13.2	14.0	3.8	1.6
R&D tax concession	9.1	15.2	15.2	22.8	10.2	3.5
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.6
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	48.5	25.8
R&D Tax Incentive – refundable tax offset	–	–	–	–	3.0	5.4
R&D tax offsets – Refundable	5.4	5.1	3.4	3.9	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	12.4	12.6	12.3	12.3	13.3	–
Enterprise Connect Innovation Centres	<0.1	0.1	0.1	0.1	0.1	0.3
Illawarra Region Innovation and Investment Fund	–	–	–	–	<0.1	–
Industry Cooperative Innovation Program	0.2	0.2	–	–	–	–
North East Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	–	–	–	–
Small Business – Simplified depreciation rules	3.8	5.0	8.1	0.6	-2.5	88.9
Small business capital gains tax asset exemption	4.8	1.3	1.4	1.8	1.9	2.3
Small business capital gains tax 50 per cent reduction	17.1	10.7	6.2	7.9	8.1	8.6
Small business capital gains tax retirement exemption	13.2	5.2	2.1	1.3	1.3	1.4
Small business capital gains tax rollover deferral	5.0	2.5	–	–	–	–
Tasmanian Innovation and Investment Fund	–	–	–	0.2	0.2	<0.1
Temporary Assistance for Tasmanian Exporters	–	–	–	5.9	–	–
The Small Business and General Business Tax Break	–	150.9	155.2	126.4	43.9	5.3
Total	128.1	275.8	266.4	245.6	172.2	185.7
Information, media and telecommunications						
<i>Industry-specific measures</i>						
ABC and SBS Digital Interference Scheme	<0.1	<0.1	–	–	–	–
Community Broadcasting Program	–	–	–	<0.1	14.9	18.2
Rebate for broadcasting licence fees	–	–	45.0	130.0	155.0	–
Regional Equalisation Plan	0.3	1.3	1.3	1.1	1.0	4.7
Vodafone Hutchison Australia – Tasmania Call Centre Expansion	–	–	–	–	4.0	–
<i>General export measures</i>						
Export Market Development Grants Scheme	27.7	27.8	19.4	19.2	18.2	17.0
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.2	0.1	0.1	–	–	–
Clean Technology Innovation Program	–	–	–	–	0.8	1.1
COMET Program	1.2	1.0	0.6	<0.1	–	–
Commercial Ready Program	1.8	0.4	–	–	–	–
Commercialisation Australia	–	0.4	2.6	8.1	9.3	11.1
Cooperative Research Centres	4.4	4.4	4.4	4.4	4.4	4.4
CSIRO	24.2	26.1	26.7	12.1	17.0	21.9
ICT centre of excellence	27.3	25.4	25.9	25.0	23.8	22.5
Innovation Investment Fund	–	<0.1	0.1	0.1	0.1	0.2
Premium R&D tax concession	2.2	6.2	5.3	28.9	7.9	3.3
Pre-seed fund	0.7	0.4	–	–	–	–
R&D tax concession	21.2	33.9	33.9	39.2	17.5	5.9
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-7.9
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	60.6	5.6
R&D Tax Incentive – refundable tax offset	–	–	–	–	14.7	26.3
R&D tax offsets – Refundable	23.2	24.1	16.8	18.9	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	1.5	1.4	1.4	1.4	3.0	–
Enterprise Connect Innovation Centres	0.1	0.1	0.1	0.1	0.1	0.1
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.1	–
Industry Cooperative Innovation Program	0.5	0.3	0.3	–	–	–
Innovation Investment Fund for South Australia	0.9	0.8	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	<0.1	–	–	–
Small Business – Simplified depreciation rules	0.5	0.7	1.1	0.1	-0.4	12.4
Small business capital gains tax 50 per cent reduction	3.1	3.5	3.3	1.4	1.4	1.5
Small business capital gains tax retirement exemption	0.2	–	–	–	–	–
Small business capital gains tax rollover deferral	–	0.2	–	–	–	–
The Small Business and General Business Tax Break	–	50.9	75.0	3.5	1.2	0.1
Total	141.2	209.4	263.2	293.6	354.7	148.5
Financial and insurance services						
<i>Industry-specific measures</i>						
High Costs Claims Scheme	19.5	21.4	24.5	20.3	33.4	30.1
Offshore Banking Unit Tax Concession	265.0	245.0	180.0	145.0	185.0	185.0
TCF Small Business Program	–	<0.1	–	–	–	–
Venture Capital Limited Partnerships	11.5	11.5	11.5	11.5	11.5	11.5
<i>General export measures</i>						
Export Market Development Grants Scheme	0.9	1.2	0.6	0.2	0.8	1.1
TRADEX	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<i>General investment measures</i>						
Infrastructure borrowing's tax offset scheme	0.1	–	–	–	–	–
<i>General R&D measures</i>						
COMET Program	0.2	<0.1	0.1	–	–	–
Commercialisation Australia	–	–	–	0.9	1.1	1.2
CSIRO	0.7	0.7	0.7	2.2	–	2.3
Innovation Investment Fund	1.9	3.0	5.3	6.9	8.1	9.5
Premium R&D tax concession	68.1	81.0	69.6	71.7	19.6	8.1
Pre-seed fund	–	2.0	–	–	–	–
R&D tax concession	95.6	158.7	158.7	182.5	81.5	27.7
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-44.8
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	176.0	182.5
R&D Tax Incentive – refundable tax offset	–	–	–	–	82.9	148.4
R&D tax offsets – Refundable	26.2	33.6	89.2	106.7	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	6.0	5.6	5.5	5.5	1.2	–
Concessional rate of withholding tax	30.0	70.0	155.0	190.0	195.0	200.0
Enterprise Connect Innovation Centres	–	<0.1	<0.1	–	<0.1	–
Industry Cooperative Innovation Program	0.3	–	–	–	–	–
Pooled development funds	10.0	5.0	5.0	40.0	0.5	–
Small Business – Simplified depreciation rules	4.7	6.3	10.3	0.8	-3.2	112.3
Small business capital gains tax asset exemption	34.6	21.9	4.1	5.4	5.6	6.9
Small business capital gains tax 50 per cent reduction	169.7	100.8	31.5	25.1	26.0	27.4
Small business capital gains tax retirement exemption	113.9	72.6	21.0	27.7	27.7	29.2
Small business capital gains tax rollover deferral	64.4	33.7	13.3	11.2	13.1	14.5
Small business programs	0.1	0.1	–	–	–	–
The Small Business and General Business Tax Break	–	129.2	115.2	182.6	63.4	7.6
<i>Total</i>	<i>923.5</i>	<i>1003.5</i>	<i>901.3</i>	<i>1036.2</i>	<i>929.4</i>	<i>960.5</i>
Property, professional and administrative services						
<i>Industry-specific measures</i>						
Pharmaceuticals Partnerships Program	–	0.3	–	–	–	–
Solar cities initiative	7.2	11.7	–	–	–	–
TCF Small Business Program	0.3	0.5	0.3	0.3	0.6	0.3
<i>Sector-specific measures</i>						
Clean Technology Investment - General Program	–	–	–	–	0.2	–
Exceptional Circumstances – interest rate subsidies	–	–	<0.1	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	35.7	37.2	26.8	27.1	25.7	22.5
TRADEX	0.4	0.3	0.2	0.2	0.2	0.2
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	1.1	4.5	3.1	0.6	–	–
Clean Technology Innovation Program	–	–	–	–	0.3	2.2
COMET Program	3.9	3.1	1.4	<0.1	–	–
Commercial Ready Program	36.2	11.6	3.2	0.1	–	–
Commercialisation Australia	–	1.0	10.0	13.6	18.7	16.3
Cooperative Research Centres	7.7	9.3	11.5	11.9	12.4	7.9
CSIRO	2.0	2.2	2.2	2.1	1.8	1.9
Innovation Investment Fund	2.3	1.3	2.3	3.0	3.6	4.1
Manufacturing Technology Innovation Centre	–	–	–	–	–	2.0
National Enabling Technologies Strategy	–	0.2	0.2	0.3	0.5	–
Premium R&D tax concession	43.3	96.2	82.7	84.9	23.2	9.6
Pre-seed fund	2.2	1.9	–	–	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures (continued)</i>						
R&D Start	1.1	0.2	–	–	–	–
R&D tax concession	103.5	153.1	153.1	196.0	87.5	29.7
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-111.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	132.9	91.9
R&D Tax Incentive – refundable tax offset	–	–	–	–	206.4	369.3
R&D tax offsets – Refundable	69.9	96.2	235.3	265.5	–	–
Renewable Energy Development Initiative	8.8	1.4	–	–	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	39.7	38.4	37.4	37.4	44.4	–
Enterprise Connect Innovation Centres	2.8	1.4	2.6	3.7	2.4	3.3
Illawarra Region Innovation and Investment Fund	–	–	–	0.3	0.8	–
Indigenous Tourism Business Ready Program	0.4	–	–	–	–	–
Industry Cooperative Innovation Program	0.6	0.1	<0.1	–	–	–
Innovation Investment Fund for South Australia	0.8	0.7	–	–	–	–
Small Business – Simplified depreciation rules	16.0	21.3	34.7	2.7	-10.7	378.8
Small business capital gains tax asset exemption	23.5	14.8	9.2	12.1	12.6	15.5
Small business capital gains tax 50 per cent reduction	136.2	82.2	61.0	64.1	66.4	69.9
Small business capital gains tax retirement exemption	81.6	54.9	33.5	38.0	38.0	40.0
Small business capital gains tax rollover deferral	56.5	31.9	3.7	16.5	19.5	21.4
Small business Online Program	–	–	2.4	–	–	–
Small business programs	1.2	0.6	–	–	–	–
South Australia Innovation and Investment Fund and Labour Assistance Package	–	–	1.5	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	0.1	–
Tasmanian Innovation and Investment Fund	–	–	–	0.1	–	<0.1
The Small Business and General Business Tax Break	–	229.3	218.6	78.1	27.1	3.3
Total	684.8	908.2	936.9	858.6	714.3	979.0
Public administration and safety						
<i>General export measures</i>						
Export Market Development Grants Scheme	0.4	0.3	0.2	0.1	0.2	0.1
TRADEX	0.2	0.1	0.1	0.1	0.1	0.1

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>General R&D measures</i>						
COMET Program	<0.1	0.2	0.1	–	–	–
Commercialisation Australia	–	–	0.2	0.1	0.3	0.1
CSIRO	10.5	11.3	11.6	7.7	5.1	3.7
Premium R&D tax concession	–	0.6	0.5	1.1	0.3	0.1
R&D tax concession	0.5	3.0	3.0	1.5	0.7	0.2
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.8
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	3.0	0.6
R&D Tax Incentive – refundable tax offset	–	–	–	–	1.5	2.6
R&D tax offsets – Refundable	1.6	6.4	1.7	1.9	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	0.9	0.8	0.8	0.8	1.1	–
Enterprise Connect Innovation Centres	0.2	0.7	0.2	0.8	<0.1	<0.1
Small Business – Simplified depreciation rules	0.2	0.3	0.5	<0.1	-0.1	5.1
Small business capital gains tax 50 per cent reduction	2.0	0.8	0.8	1.7	1.8	1.9
Small business capital gains tax retirement exemption	1.9	0.2	–	–	–	–
Small business programs	0.5	0.2	–	–	–	–
The Small Business and General Business Tax Break	–	2.6	1.8	0.1	<0.1	<0.1
<i>Total</i>	<i>18.8</i>	<i>27.4</i>	<i>21.3</i>	<i>15.9</i>	<i>13.9</i>	<i>13.8</i>
Education and training						
<i>General export measures</i>						
Export Market Development Grants Scheme	12.3	14.9	11.1	9.2	7.6	7.0
<i>General R&D measures</i>						
COMET Program	0.2	0.1	<0.1	0.1	–	–
Commercial Ready Program	0.6	0.5	0.2	0.1	–	–
Commercialisation Australia	–	–	0.5	0.8	1.2	0.2
CSIRO	0.6	0.7	0.7	2.2	3.1	3.1
Premium R&D tax concession	0.1	0.2	0.2	0.2	0.1	<0.1
R&D tax concession	0.4	0.7	0.7	1.5	0.7	0.2
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-1.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	0.5	–
R&D Tax Incentive – refundable tax offset	–	–	–	–	2.8	5.0
R&D tax offsets – Refundable	4.1	4.1	3.2	3.6	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	5.4	5.4	5.3	5.3	6.2	–
Enterprise Connect Innovation Centres	0.7	1.7	1.1	2.6	0.1	0.1
Indigenous Tourism Business Ready Program	0.2	–	–	–	–	–
Small Business – Simplified depreciation rules	0.7	1.0	1.6	0.1	-0.5	17.6
Small business capital gains tax asset exemption	–	0.1	0.1	0.2	0.2	0.2
Small business capital gains tax 50 per cent reduction	4.7	2.3	2.1	4.4	4.5	4.8
Small business capital gains tax retirement exemption	4.1	2.4	–	–	–	–
Small business capital gains tax rollover deferral	0.8	0.4	–	–	–	–
Small business Online Program	–	–	2.3	–	–	–
Small business programs	0.8	0.4	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	–	0.1	–
Structural Adjustment Fund for South Australia	0.2	–	–	–	–	–
Tasmanian Freight Equalisation Scheme	<0.1	0.1	0.1	0.1	0.1	0.1
Temporary Assistance for Tasmanian Exporters	–	–	–	<0.1	–	–
The Small Business and General Business Tax Break	–	6.7	1.1	2.5	0.9	0.1
Total	36.0	41.7	30.2	32.7	27.4	36.9
Health care and social assistance						
<i>Industry-specific measures</i>						
Premium Support Scheme	16.1	17.2	13.1	11.4	9.3	9.3
<i>General export measures</i>						
Export Market Development Grants Scheme	1.8	2.1	1.7	1.6	1.2	2.2
TRADEX	0.3	0.2	0.2	0.2	0.2	0.2
<i>General R&D measures</i>						
COMET Program	0.4	0.3	0.2	<0.1	–	–
Commercial Ready Program	2.3	0.2	–	–	–	–
Commercialisation Australia	–	<0.1	0.6	1.4	1.5	3.2
Cooperative Research Centres	23.9	22.6	29.6	38.9	35.4	43.8
CSIRO	40.5	43.6	44.6	53.1	53.4	55.4
Innovation Investment Fund	0.6	0.7	1.2	1.6	1.9	2.2
Premium R&D tax concession	0.6	1.6	1.4	1.0	0.3	0.1
Pre-seed fund	0.9	0.2	–	–	–	–
R&D tax concession	2.6	4.0	4.0	4.2	1.9	0.6
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-2.3
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	4.9	3.0
R&D Tax Incentive – refundable tax offset	–	–	–	–	4.3	7.6
R&D tax offsets – Refundable	6.7	8.9	4.9	5.5	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	12.7	10.4	10.2	10.2	11.6	–
Enterprise Connect Innovation Centres	–	<0.1	–	<0.1	0.1	<0.1
Illawarra Region Innovation and Investment Fund	–	–	–	–	2.0	–
Industry Cooperative Innovation Program	0.5	0.1	–	–	–	–
Small Business – Simplified depreciation rules	3.0	3.9	6.4	0.5	-2.0	69.9
Small business capital gains tax asset exemption	0.7	1.8	1.9	2.6	2.7	3.3
Small business capital gains tax 50 per cent reduction	36.4	18.1	15.7	19.3	20.0	21.1
Small business capital gains tax retirement exemption	21.5	15.5	11.0	18.2	18.2	19.1
Small business capital gains tax rollover deferral	7.5	4.4	0.9	0.8	1.0	1.1
The Small Business and General Business Tax Break	–	61.6	31.7	13.9	4.8	0.6
<i>Total</i>	<i>178.7</i>	<i>217.7</i>	<i>179.2</i>	<i>184.3</i>	<i>172.6</i>	<i>240.5</i>
Arts and recreation services						
<i>Industry-specific measures</i>						
Exemption of film tax offset payments	17.0	38.0	36.0	32.0	55.0	61.0
Film industry division – 10B & 10BA	-14.0	-22.0	-18.0	-17.0	-14.0	-11.0
Film industry offsets	128.2	242.0	152.0	204.0	226.0	252.0
Indigenous Broadcasting Program	13.7	14.4	14.7	15.0	15.4	16.0
Screen Australia	102.9	93.6	89.4	91.8	98.1	101.1
<i>General export measures</i>						
Export Market Development Grants Scheme	5.9	6.5	4.9	4.6	4.1	5.1
<i>General R&D measures</i>						
COMET Program	0.1	0.2	0.1	–	–	–
Commercialisation Australia	–	–	–	–	0.1	0.1
Cooperative Research Centres	3.0	2.0	–	–	–	–
CSIRO	1.4	1.6	1.6	1.2	1.1	1.3
Premium R&D tax concession	–	0.7	0.6	0.4	0.1	<0.1
R&D tax concession	0.8	1.6	1.6	2.6	1.2	0.4
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-0.5
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	3.3	1.1
R&D Tax Incentive – refundable tax offset	–	–	–	–	0.9	1.7
R&D tax offsets – Refundable	1.6	2.1	1.1	1.2	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	6.3	6.1	5.9	5.9	8.2	–
Enterprise Connect Innovation Centres	–	<0.1	0.1	0.1	0.1	0.2
Illawarra Region Innovation and Investment Fund	–	–	–	1.9	1.8	–
Small Business – Simplified depreciation rules	0.8	1.1	1.7	0.1	-0.5	18.9
Small business capital gains tax 50 per cent reduction	5.3	4.4	2.1	4.7	4.9	5.1
Small business capital gains tax retirement exemption	2.3	2.2	–	–	–	–
Small business capital gains tax rollover deferral	0.8	1.1	–	–	–	–
Tasmanian Freight Equalisation Scheme	<0.1	0.2	0.2	0.1	0.2	0.2
Temporary Assistance for Tasmanian Exporters	–	–	–	<0.1	–	–
The Small Business and General Business Tax Break	–	10.7	7.4	0.5	0.2	<0.1
Total	276.2	406.4	301.3	349.2	406.1	452.6
Other services						
<i>Industry-specific measures</i>						
TCF Small Business Program	–	<0.1	–	–	–	–
<i>General export measures</i>						
Export Market Development Grants Scheme	2.4	3.1	2.2	1.4	1.6	2.3
<i>General R&D measures</i>						
Clean Business Australia – Climate Ready Program	0.1	<0.1	–	–	–	–
COMET Program	0.1	<0.1	<0.1	–	–	–
Commercial Ready Program	<0.1	–	–	–	–	–
CSIRO	<0.1	<0.1	<0.1	–	–	–
Premium R&D tax concession	1.2	1.9	1.6	2.7	0.7	0.3
R&D tax concession	3.7	5.4	5.4	7.1	3.2	1.1
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	–	-2.4
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	6.1	12.2
R&D Tax Incentive – refundable tax offset	–	–	–	–	4.5	8.1
R&D tax offsets – Refundable	6.0	9.4	5.1	5.8	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	9.9	10.6	10.3	10.3	13.6	–
Enterprise Connect Innovation Centres	–	0.5	1.6	12.1	12.7	9.3
Industry Cooperative Innovation Program	2.2	2.6	0.9	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	0.1	<0.1	–	–	–

(continued next page)

Table A.13 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Small Business – Simplified depreciation rules	2.6	3.4	5.6	0.4	-1.7	61.2
Small business capital gains tax asset exemption	1.5	1.0	1.1	1.4	1.4	1.8
Small business capital gains tax 50 per cent reduction	15.1	8.0	7.9	8.3	8.6	9.1
Small business capital gains tax retirement exemption	8.0	3.6	4.0	1.8	1.8	1.9
Small business capital gains tax rollover deferral	5.2	1.5	–	–	–	–
Small business Online Program	–	–	2.4	–	–	–
Small business programs	0.7	0.4	–	–	–	–
South East South Australia Innovation and Investment Fund	–	–	–	<0.1	0.3	–
Tasmanian Innovation and Investment Fund	–	–	–	0.1	<0.1	–
The Small Business and General Business Tax Break	–	32.2	16.0	16.6	5.7	0.7
Total	58.8	83.7	64.1	68.0	58.5	105.5
Unallocated services						
<i>General export measures</i>						
Tourism Australia	137.6	141.6	136.1	136.8	129.7	130.4
<i>General R&D measures</i>						
CSIRO	2.3	2.5	2.6	1.3	1.2	1.3
<i>Other measures</i>						
Clean Business Australia – Green Building Fund	–	16.7	24.0	31.9	24.7	6.0
Enterprise Connect Innovation Centres	–	–	<0.1	–	–	–
Indigenous Tourism Business Ready Program	0.6	–	–	–	–	–
Queensland Tourism Assistance Package	0.3	–	–	–	–	–
Small business Online Program	–	7.2	–	–	–	–
Tasmanian Forest Tourism Initiative	15.2	18.1	3.3	–	–	–
Tourism Industry Regional Development	–	–	–	–	7.0	9.9
TQUAL Grants	4.2	8.6	3.3	9.0	8.3	9.3
Total	160.2	194.7	169.3	179.0	170.8	156.8
Total outlays	1199.6	1176.4	1174.8	2234.8	1155.4	1544.4
Total tax concessions	2288.1	3344.9	3335.6	2834.1	2525.5	2760.7
Total budgetary assistance	3487.7	4521.3	4510.4	5068.9	3680.9	4305.2

– Nil. Figures may not add to totals due to rounding. ^a The estimates are derived primarily from Australian Government departmental annual reports and Treasury's Tax Expenditure Statements and unpublished information provided by relevant agencies.

Source: Commission estimates.

**Table A.14 Australian Government budgetary assistance,
unallocated other, 2008-09 to 2013-14^{a,b}**
\$ million (nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Industry-specific measures</i>						
Asian Business Engagement Plan	–	–	–	–	–	1.8
Australian Space Science Program	–	4.8	11.2	12.2	12.7	–
National Energy Efficiency Initiative – Smart Grid, Smart City	–	–	33.7	51.0	9.1	–
National Urban Water and Desalination Plan	10.0	16.2	46.0	88.9	64.2	18.7
Pharmaceuticals Partnerships Program	7.3	–	–	–	–	–
Tasmanian wheat freight subsidy	0.3	0.1	–	–	–	–
TCF Small Business Program	–	–	–	0.2	<0.1	–
<i>Sector-specific measures</i>						
Farm Help	–	–	–	<0.1	–	–
<i>General export measures</i>						
Austrade	109.2	111.4	118.8	115.1	101.5	112.1
Australian Made Campaign – export strategy	0.4	1.1	–	–	–	–
Clean Energy Trade and Investment Strategy	–	5.0	5.0	4.9	–	–
<i>General investment measures</i>						
Regional headquarters program	0.5	0.5	0.5	0.5	0.5	–
<i>General R&D measures</i>						
Australian Centre for Renewable Energy	–	15.5	14.4	23.8	59.6	261.9
Clean Business Australia – Climate Ready Program	–	2.0	–	–	–	–
COMET Program	0.1	<0.1	–	–	–	–
Commercial Ready Program	0.1	–	–	–	–	–
Commercialisation Australia	–	–	–	–	–	0.2
Innovation Investment Follow-on Fund	–	40.9	17.2	1.0	2.2	0.1
Innovation Investment Fund	2.6	–	–	–	–	–
Manufacturing Technology Innovation Centre	–	–	–	–	0.8	–
National Enabling Technologies Strategy	–	0.1	0.4	0.6	0.3	–
Premium R&D tax concession	2.6	3.9	3.3	–	–	–
Pre-seed fund	2.7	–	–	–	–	–
R&D tax concession	7.0	13.6	13.6	–	–	–
R&D Tax Incentive – exemption of refundable tax offset	–	–	–	–	-185.0	<0.1
R&D Tax Incentive – non-refundable tax offset	–	–	–	–	23.7	19.0
R&D Tax Incentive – refundable tax offset	–	–	–	–	<0.1	<0.1
R&D tax offset payments - exemption	-140.0	-170.0	-200.0	-235.0	-200.0	-135.0
R&D tax offsets – Refundable	30.3	35.7	<0.1	<0.1	–	–
<i>Other measures</i>						
25 per cent entrepreneurs' tax offset	34.8	36.5	35.6	35.6	28.6	–
Asia Marketing Fund	–	–	–	–	8.5	12.5

(continued next page)

Table A.14 (continued)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<i>Other measures (continued)</i>						
Asia Pacific Partnership on Clean Development and Climate	–	19.8	11.0	2.3	0.2	–
Digital Enterprise Program	–	–	–	4.0	1.9	5.2
Energy Efficiency Information Grants	–	–	–	–	4.6	11.0
Enterprise Connect Innovation Centres	0.3	1.4	3.9	–	–	–
Geelong Innovation and Investment Fund	–	7.0	–	–	–	–
Illawarra Region Innovation and Investment Fund	–	–	–	–	0.1	–
Innovation Investment Fund for South Australia	<0.1	<0.1	–	–	–	–
Insulation Industry Assistance Package	–	–	22.9	–	–	–
Low Emissions Technology and Abatement Program	1.7	–	–	–	–	–
North West and Northern Tasmania Innovation and Investment Fund	–	<0.1	–	–	–	–
Procurement strategy	–	1.8	3.5	6.4	–	–
Regional Partnerships Program	14.5	6.2	0.2	–	–	–
Small Business – Simplified depreciation rules	1.6	2.1	3.5	0.3	-1.1	38.0
Small Business Advisory Services Program	11.9	16.4	9.0	12.1	8.0	7.1
Small business capital gains tax asset exemption	31.2	23.0	59.1	73.2	76.2	93.7
Small business capital gains tax 50 per cent reduction	334.7	203.7	284.5	270.7	280.5	295.3
Small business capital gains tax retirement exemption	191.7	113.5	204.3	210.6	210.6	222.0
Small business capital gains tax rollover deferral	108.4	66.1	127.5	111.4	131.1	144.2
Small business programs	0.3	0.2	–	–	–	–
Small business Support Line	–	1.3	–	–	–	–
Sustainable Regions Programs	0.9	–	–	–	–	–
Tasmanian Freight Equalisation Scheme	2.5	6.6	6.6	6.3	7.5	6.8
Taxation assistance for victims of Australian natural disasters	8.0	8.0	6.0	58.0	31.0	10.0
TCF Corporate Wear Program	74.1	93.1	85.4	85.4	85.4	85.4
Temporary Assistance for Tasmanian Exporters	–	–	–	0.9	–	–
The Small Business and General Business Tax Break	–	34.5	2.0	21.8	7.6	0.9
Total outlays	195.2	293.4	303.8	329.7	281.2	437.4
Total tax concessions	654.6	428.4	625.3	632.5	489.1	773.5
Total budgetary assistance	849.8	721.8	929.1	962.2	770.3	1211.0

– Nil. Figures may not add to totals due to rounding. ^a The estimates are derived primarily from Australian Government departmental annual reports and Treasury's Tax Expenditure Statements and unpublished information provided by relevant agencies. ^b Includes programs or amounts of funding where the initial benefiting industry is not stated and/or has not been ascertained.

Source: Commission estimates.

B Emerging patterns of production and trade

This appendix supports chapter 2. It provides information on global production, trade, global values chains and factor income distribution in manufacturing.

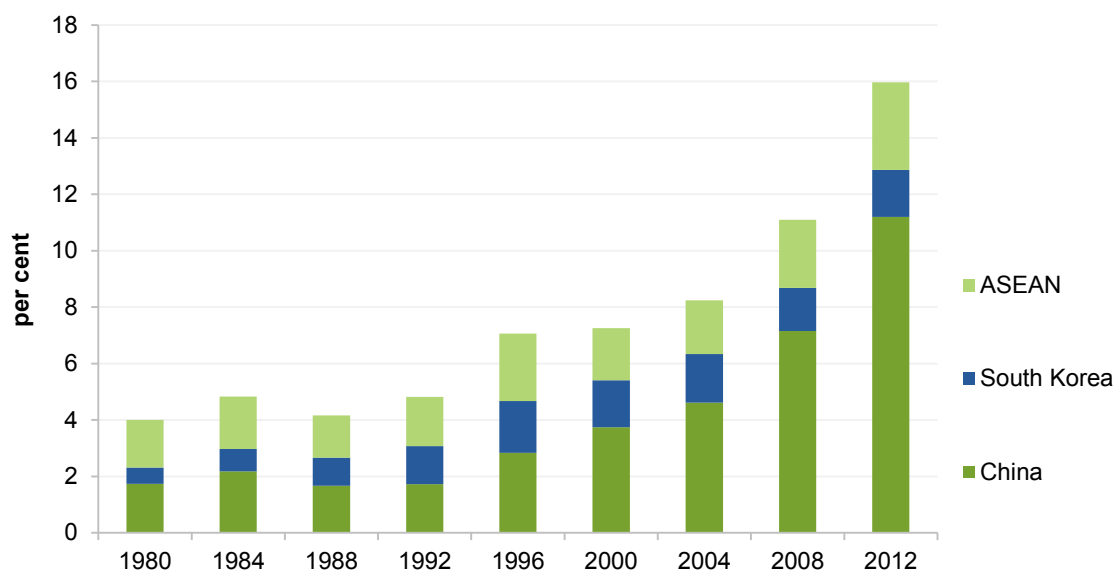
The level and distribution of global economic activity has important implications for international trade and investment. Generally, as countries grow and per capita incomes rise, so do the number and complexity of international trade and investment linkages.

B.1 Production

The rapid economic development of East and South Asia over recent decades has seen measured output increase more than sevenfold since 1980 and the relative contribution of the economies in the region to the global economy grow substantially — from 16 per cent of global production in 1980 to around 28 per cent by 2012 (World Bank 2015). Over the same period, while the level of production by the developed economies of Europe and North America increased fivefold, their share declined. The relatively slow growth of the Japanese economy over the last two decades has seen its share fall too, particularly after 1995.

The economic performance of some East Asian economies has been particularly pronounced. For example, the share of global production of China, South Korea and ASEAN combined has quadrupled since 1980, with most of the increase occurring since the early 1990s (figure B.1).

Figure B.1 The increasing contributions to global production of China, South Korea and ASEAN, 1980 to 2012^a
per cent

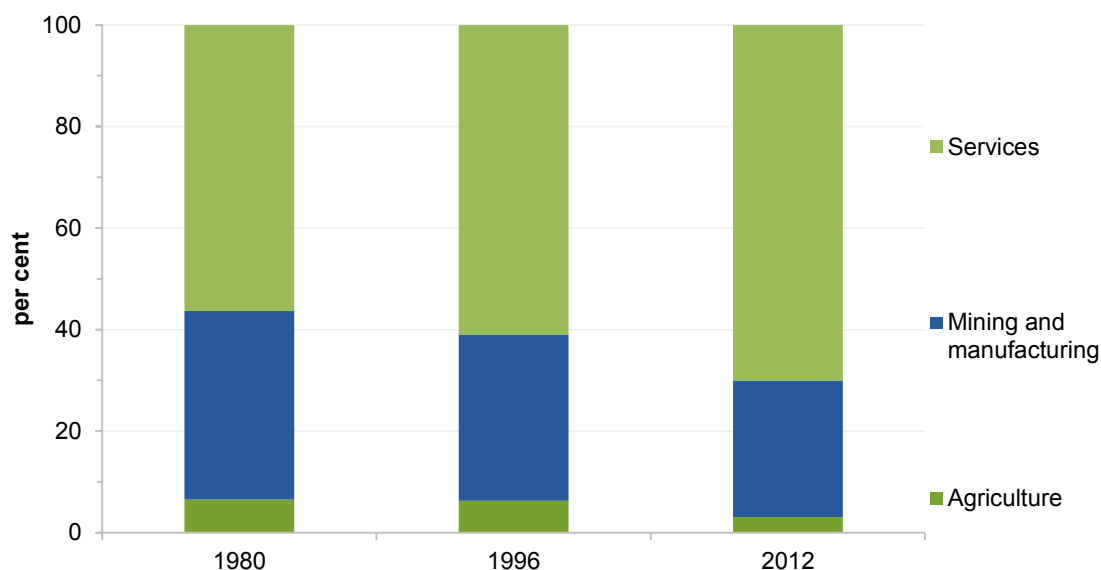


^a Formed in 1967, ASEAN originally comprised: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Burma (Myanmar) and Cambodia.

Source: World Bank (2015).

Accompanying this economic growth has been an increase in gross domestic product (GDP) per capita. Data from the World Bank show that per capita incomes in the East Asia and Pacific region have increased more than seven fold in constant US dollar terms since 1980 (World Bank 2015). As their economies grow and develop, the economic structure of countries also changes. The demand for services tends to increase faster than per capita incomes. Accordingly, the share of services in global production has increased over the last few decades, with a corresponding decline in the relative shares of agriculture, and mining and manufacturing (figure B.2).

Figure B.2 Value added by broad sector as a proportion of global production, 1980, 1996 and 2012^a
per cent



^a 2015 World Bank dataset for this series does not cover years prior to 1995, data from these years are obtained from a 2010 World Bank dataset.

Source: World Bank (2010 and 2015).

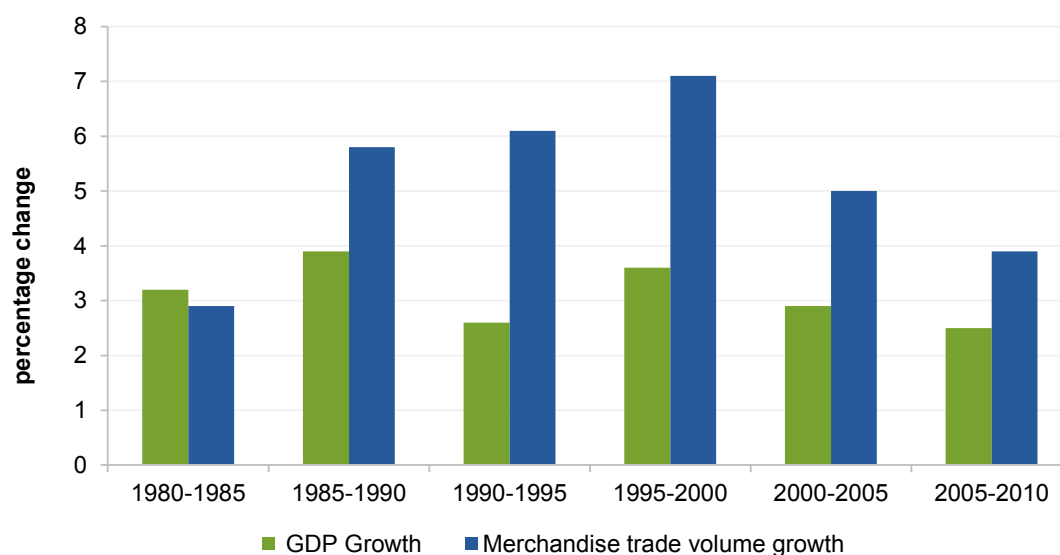
The propensity for services to expand in relative importance has, nevertheless, varied across economies. For example, in ‘high income’ countries, the percentage of value-added by the services sector grew from an average of around 60 per cent in 1980 to over 70 per cent in 2012. In the fast growing East Asia and Pacific region, the contribution of services to value-added increased from an average of approaching 50 per cent to around 65 per cent over the same period (World Bank 2010 and 2015).

B.2 Trade

With economic growth being accompanied by changes in the structure of economies, trade patterns have also changed in response to shifts in comparative advantage between countries.

World merchandise trade in the last three decades has grown much faster than world output for most of this period (WTO 2013). World trade (exports plus imports) has grown about twice as fast as output since the 1980s (figure B.3).

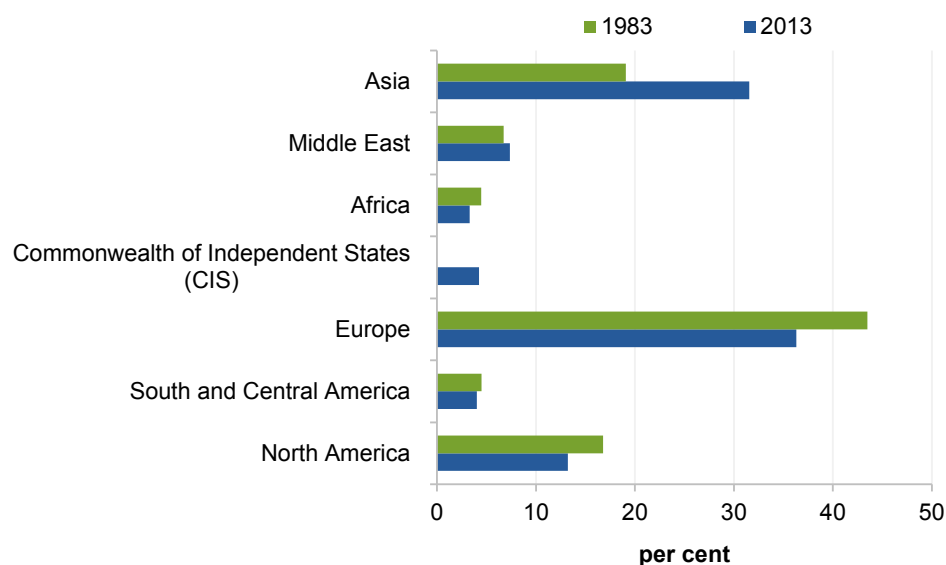
Figure B.3 **Merchandise trade has grown much faster than output, 1980 to 2010**
percentage change



Source: WTO (2013).

One of the most important changes in trade patterns in recent years has been the increased share of developing economies in world trade and the corresponding decline in the share of developed economies (figure B.4).

Figure B.4 The emergence of Asia in merchandise exports, 1983 and 2013^a
per cent



^a Data are not available for CIS for 1983. Official membership of CIS comprises Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Tajikistan and Uzbekistan, with Turkmenistan an unofficial associate member and Ukraine a participating state. Georgia is not a member of CIS but is included in this group. ^b Data for Europe includes intra-European Union trade.

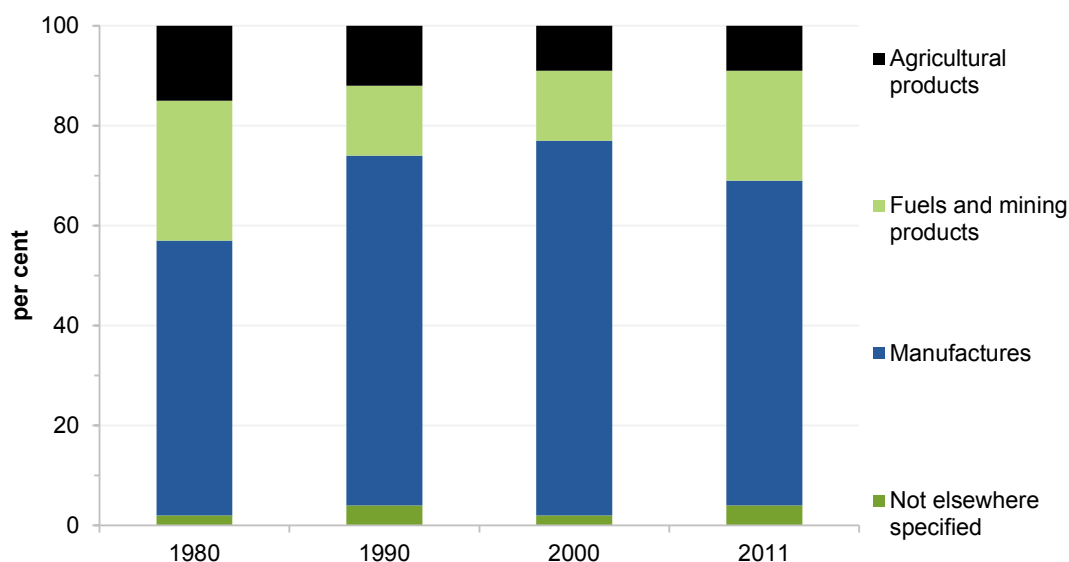
Source: WTO (2014a).

Another aspect of the changing country composition of trade is the degree to which trade that occurs within and between groups of countries. The share of global trade between developed countries declined from 56 per cent in 1990⁶⁰ to 36 per cent in 2011 (WTO 2013). Trade between developing/emerging economies increased from 8 per cent to 24 per cent of global trade over the same period.

Just as the relative importance of countries in international trade has shifted over time, so has the mix of traded goods and services. In terms of goods (that is, merchandise trade), the share of manufactures in world merchandise trade rose from about half of global trade in 1980 to over 60 per cent in 2011, with most of the share increase occurring pre-1990 (figure B.5). The share of agricultural products had fallen to under 10 per cent of global merchandise trade by 2011, from around 15 per cent in 1980.

⁶⁰ Excluding natural resources trade as fluctuations in commodity prices skew the shares.

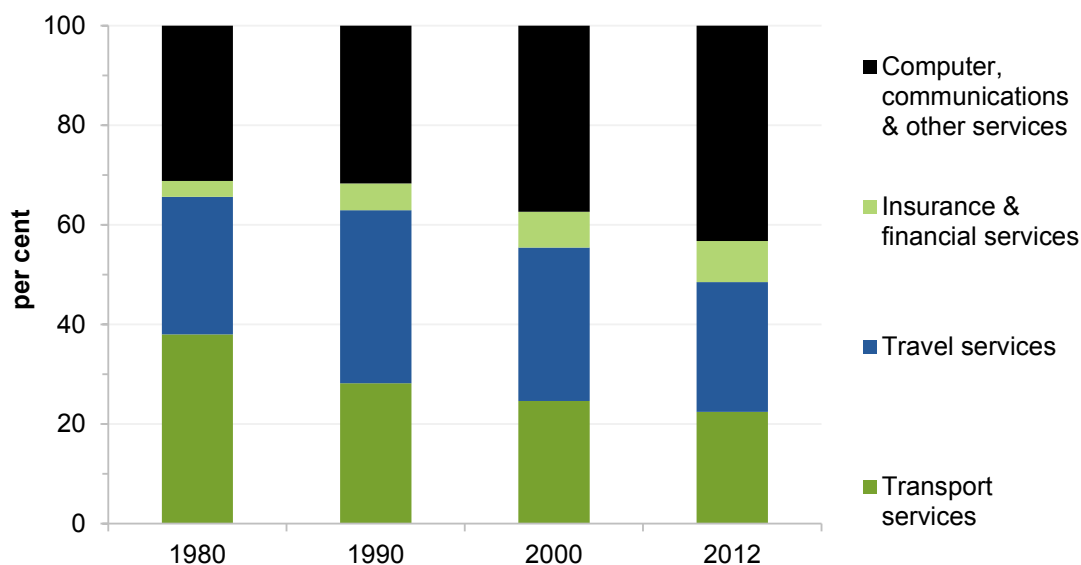
Figure B.5 The share of merchandise trade by sector, 1980 to 2011
per cent



Source: WTO (2013).

While services have increased in proportion to global production, the direct contribution of commercial services to global trade has also increased — from around 16 per cent in 1980 to around 19 per cent in 2011 (WTO 2013). Over the same period, there have been changes in the composition of services trade, with communications and computer services and banking and insurance services increasing their share of total services trade, while the share of traditional transport services, associated with the movement of merchandise, has declined (figure B.6). While the direct contribution of global services trade has increased and the composition of that trade has changed, most services produced are used in domestic final demand (consumption and investment) or as intermediate inputs to the supply of other goods and services — a topic that is taken up in the next section.

Figure B.6 The changing composition of services trade, 1980 to 2012^{a,b}
per cent



^a Percentage of commercial services exports (total services exports minus exports of government services). ^b 2015 World Bank dataset for this series does not cover years prior to 2005, data for these years are obtained from a 2010 World Bank dataset.

Source: World Bank (2010 and 2015).

B.3 Size and nature of global value-added trade patterns

Increased specialisation has resulted in production processes becoming more globally integrated, with final products often being comprised of inputs and components sourced from a number of countries. As a result, components and partly-finished manufactures and other products cross borders more often than in the past and world trade flows are now marked by greater vertical specialisation.

Traditionally, increased global production specialisation has been examined through the concept of intra-industry trade — the two-way exchange between countries of goods within standard industrial classifications. Such goods could be in differentiated consumer goods but also specialised parts and components for assembly. An OECD (2002) analysis of intra-industry trade reported on the increase in intra-industry, while a later study confirmed the continued growth in such trade (Brulhart 2008). The level of intra-industry trade for Australia was estimated to be half the global average reflecting the concentration of primary products in Australia's merchandise exports.⁶¹

⁶¹ An earlier study by the Industry Commission (1995) found that although Australia had a relatively low level of intra-industry trade because imports of the more differentiated consumer, intermediate and capital

The changing pattern of international trade can also be examined through the lens of ‘global value chains’ which emphasise the production of a single good or service as involving direct and indirect transactions with many other industries and many other countries. At any one point in the global supply chain, the cost of a good or service can be divided into two components: the cost of intermediate inputs of goods and services; and the cost of the primary factors of production — labour, capital and land. The cost (or returns) to labour, capital and land are known as the ‘value-added’ generated in production. As inputs pass through global supply chains they cross borders many times with the value added generated in upstream activities embodied in the price of the good or service. The WTO describe the implication:

Attributing the full commercial value to the last country of origin [and final industry] can lead to distorted statistics. Measuring trade in value-added terms seeks to address this distortion. (WTO 2013, p.181)

While the conceptual difference between gross trade and trade in value added has been long recognised, only recently have the differences been quantified on a comprehensive and consistent basis. This has been made possible by the increased availability of more refined national input-output tables (beyond those of the developed countries), particularly for the emerging countries with significant increased involvement in global supply chains, and international efforts to globally link the national tables. These global input-output tables allow the value added by country and industry-of-origin underlying gross trade flows to be traced to provide a fuller depiction of global production and trade (table B.1).

Table B.1 Public datasets on value added in trade flows

<i>Name of dataset</i>	<i>Key features</i>
Global Trade Analysis Project (GTAP) Database	Input-output tables for over 100 countries for various benchmark years, mostly after 2000. https://www.gtap.agecon.purdue.edu
World Input-Output Database (WIOD)	Global tables covering OECD countries and major emerging markets from 1995–2011. http://www.wiod.org
IDE-JETRO Asian Input-Output Tables	Regional tables covering 8 East Asian countries at five-year intervals between 1985 and 2000. http://www.ide.go.jp
WTO-OECD TiVA Database (Trade in Value added)	Value-added exports and other measures of global supply chain activity for 57 countries in 1995, 2000, 2005, 2008 and 2009. http://stats.oecd.org
OECD Input-Output Tables	Input-output tables for OECD countries and major emerging markets, available for various years from 1970–2005. http://www.oecd.org/trade/input-outputtables.htm

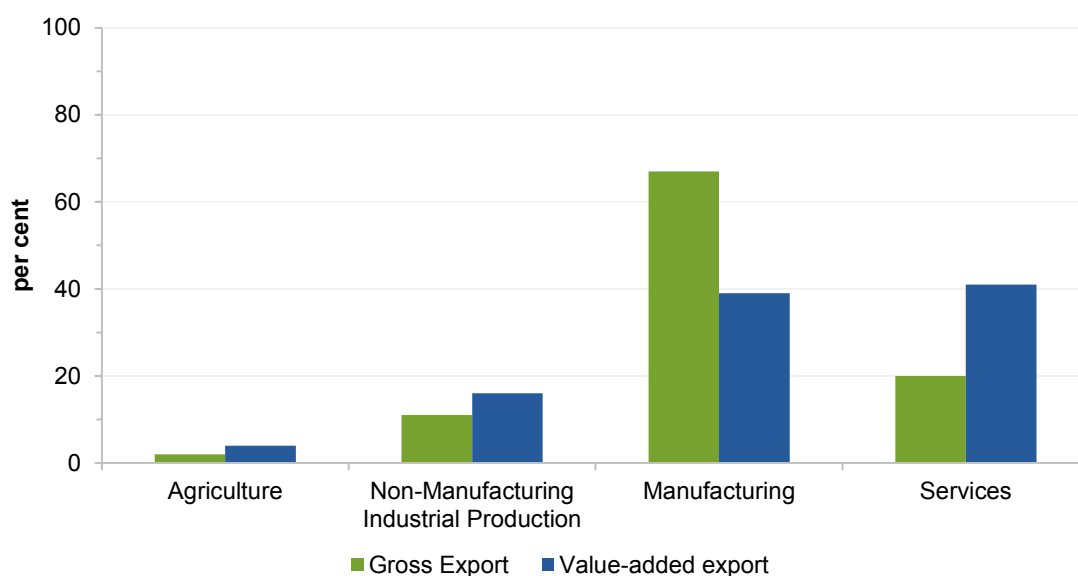
Source: Johnson (2014).

goods dominate exports of those products, the level of intra-industry trade had trended upwards over the period 1968-69 to 1992-93.

From gross trade to the value-added composition of global exports

In gross exports terms, for the world as a whole, manufacturing is estimated to account for 67 per cent and services is estimated to account for 20 per cent of global exports, respectively. However, this overstates the contribution of manufacturing in income generated in exporting in two ways. First, a significant proportion of manufactured exports are of intermediate inputs for further processing. Second, manufactured exports include the indirect value added embodied in raw materials and service inputs. When the sectoral origin of all direct and indirect value added is traced through national and global value chains, it is estimated that manufacturing and services each account for about 40 per cent of total value-added exports (figure B.7).

Figure B.7 **Sector shares in total world value-added and gross exports, 2008**
per cent



Source: Johnson (2014), figure 1.

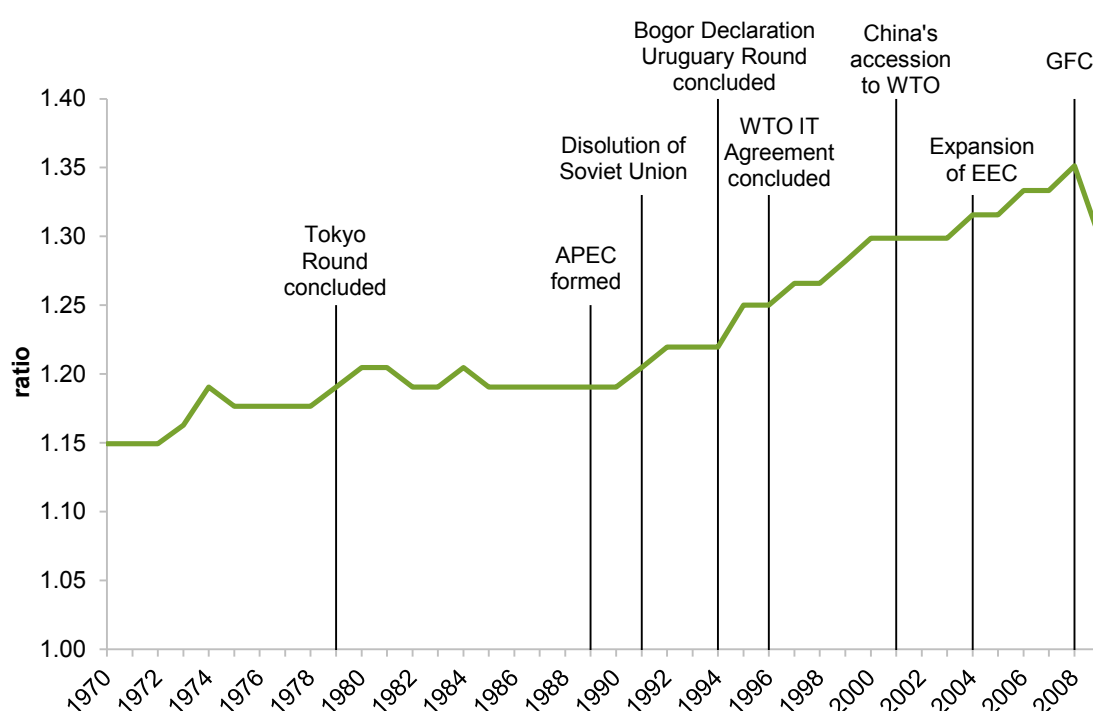
The global trade intensity of value added has increased

As production processes have increasingly been dispersed across countries to take advantage of lower-cost production opportunities, the gross value of exports to the value added generated in exporting has increased. Over the period 1970 to around 2009, available estimates indicate exports per unit of value added increased from 1.15 to 1.33 — that is, by around 15 per cent (figure B.8).⁶² Most of this increase occurred after 1990

⁶² ‘Gross exports per unit of value added’ is the inverse of what is commonly known in the empirical trade literature as the ratio of ‘value added exports’ (VAX) to gross exports (Johnson and Noguera 2012a).

coinciding with major trade liberalisations (including those associated with the formation of APEC in 1989 and the Bogor Declaration of 1994 and the accession of China into the WTO in 2001), the dissolution of the Soviet Union in 1991 and the expansion of the European Union to include former Soviet bloc economies, and the emergence and uptake of advanced information and communication technologies. With the contraction of global trade associated with the 2008 global financial crisis, global exports per unit of value added declined.

Figure B.8 Gross exports per unit of value-added has increased, 1970 to 2009



Source: Commission estimates based on Johnson and Noguera (2012a). The original estimates of Johnson and Noguera were expressed in terms of value added to gross exports (the VAX ratio)

Derivation of value-added trade flows is relatively recent and there is more than one database (comprising different years, country groupings and allocation assumptions). The Johnson and Noguera (2012a) estimates for 1970 to 2009 appear to be the only continuous, long time series. The robustness of the estimates was confirmed against a number of estimates for individual years provided in other studies (table B.2).

Aggregate value added exports is less than gross exports because of the existence of intermediate stages of production across countries.

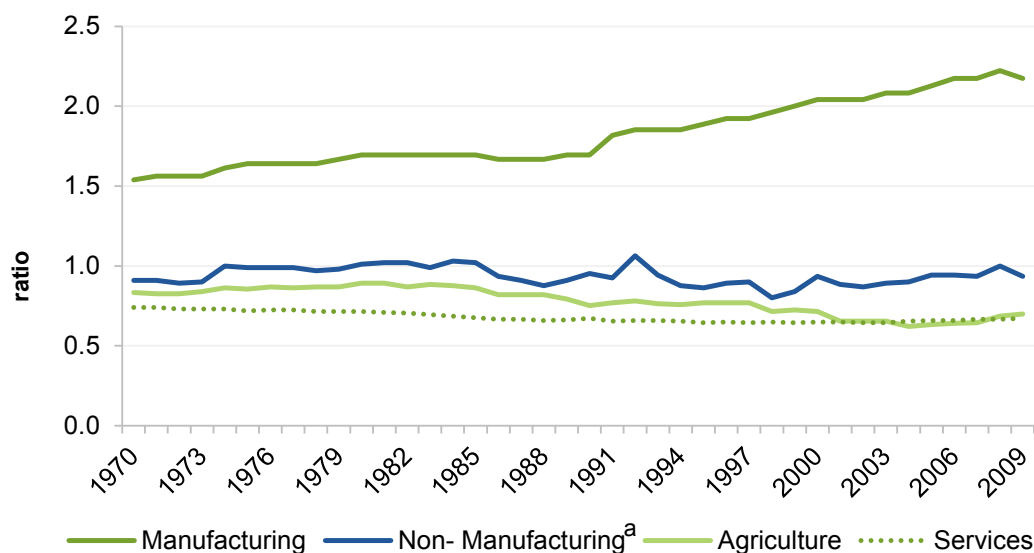
**Table B.2 Alternate estimates of value added to gross exports,
1970 to 2011**

	1970	1980	1995	2004	2008	2009	2011
WTO (2013)					73.6		
WTO (2014a)						75.5	
Johnson and Noguera (2012a)	87.0	83.0	80.0	73.0	74.0	77.0	
Johnson (2014)					71.0		
Koopman et al (2014)				74.4			
Kelly and La Cava (2014)			75.0				69.9

Sectoral trends have varied

The increase in the ratio of gross exports to value added, between 1970 and 2009, particularly after 1990, predominantly reflects structural changes within the global manufacturing sector (figure B.9). In particular, while exports of final manufactures has grown (steadily), the number of stages (or slicing up) of the stock of final manufactures has increased faster. As a result, the value of exports of manufactures relative to the value added exports of manufacturing has risen over 30 per cent — mainly since 1990. In contrast, exports of agricultural products and services per unit of value added in exports has slightly declined — as exports of agricultural products and services have grown slower than the use of those products as inputs into the increasingly fragmented manufacturing sector.

Figure B.9 Changes in global exports per unit value added in exporting by sector, 1970 to 2009



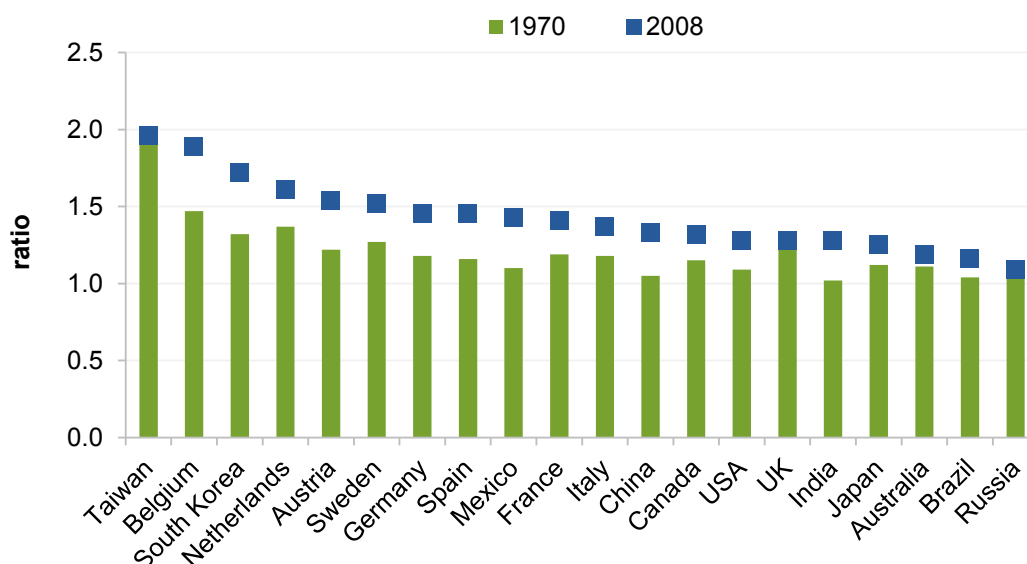
^a Non-manufacturing includes oil and gas, iron ores and other mining

Source: Johnson and Noguera (2012a, table 6, p.58).

Differences across countries

There is wide variation across countries in exports per unit of value added (figure B.10). The relative low value for Australia reflects its large endowment and export of natural resources which requires relatively few imported inputs. It also reflects Australia's geographic isolation, which has tended to exclude Australia from intermediate processing stages of global manufacturing supply chains. In contrast, gross exports per unit of value added is typically higher and increasing for countries close to production hubs, such as those in East Asia, Europe and North America. Most countries exhibited an increase in gross exports per unit of value added between 1970 and 2008. In general, increases have been larger in fast-growing emerging markets than other countries, largely due to the rapid increase in the share of manufactures in their gross exports over time. It has also been found that the intensity has increased more for nearby countries and countries within the same region, as well as for countries that have adopted regional trade agreements with one another (Johnson and Noguera 2012a).

Figure B.10 **Gross exports per unit of value added in exporting, top 20 exporting countries, 1970 and 2008**
Ranked by 2008 values



Source: Johnson (2014).

Further decomposition of Australia's gross exports into value-added components

Nearly 90 per cent of the value of Australia's exports is derived from value added generated in Australia. As noted, this contribution is relatively high compared to the global average of 75 per cent reflecting Australia's significant endowment of mineral resources and distance from foreign markets and suppliers. The remainder of the value of Australia's exports is the foreign value added embodied in inputs used in Australia to produce goods and services for export (Koopman et al. 2014).

The most detailed analysis of the value-added components of the gross value of exports is available for the year 2004 (for Australia and New Zealand combined) (table B.3 and figure B.11).⁶³ This analysis indicates that in 2004, of the Australian (and New Zealand) value added embodied in its gross exports, around 27 per cent was embodied in final goods and services consumed by immediate trading partners (table B.3, first row in first column). Around a further 50 per cent of Australian value added is embodied in exports of intermediate goods and services further processed by Australia's immediate trading partners for their own consumption or investment (table B.3, second row in first column).

⁶³ Koopman et al. (2014) provide the first complete accounting disaggregation of gross exports. They identify nine components. Most other studies disaggregate gross exports into five value added components, for example, WTO (2013).

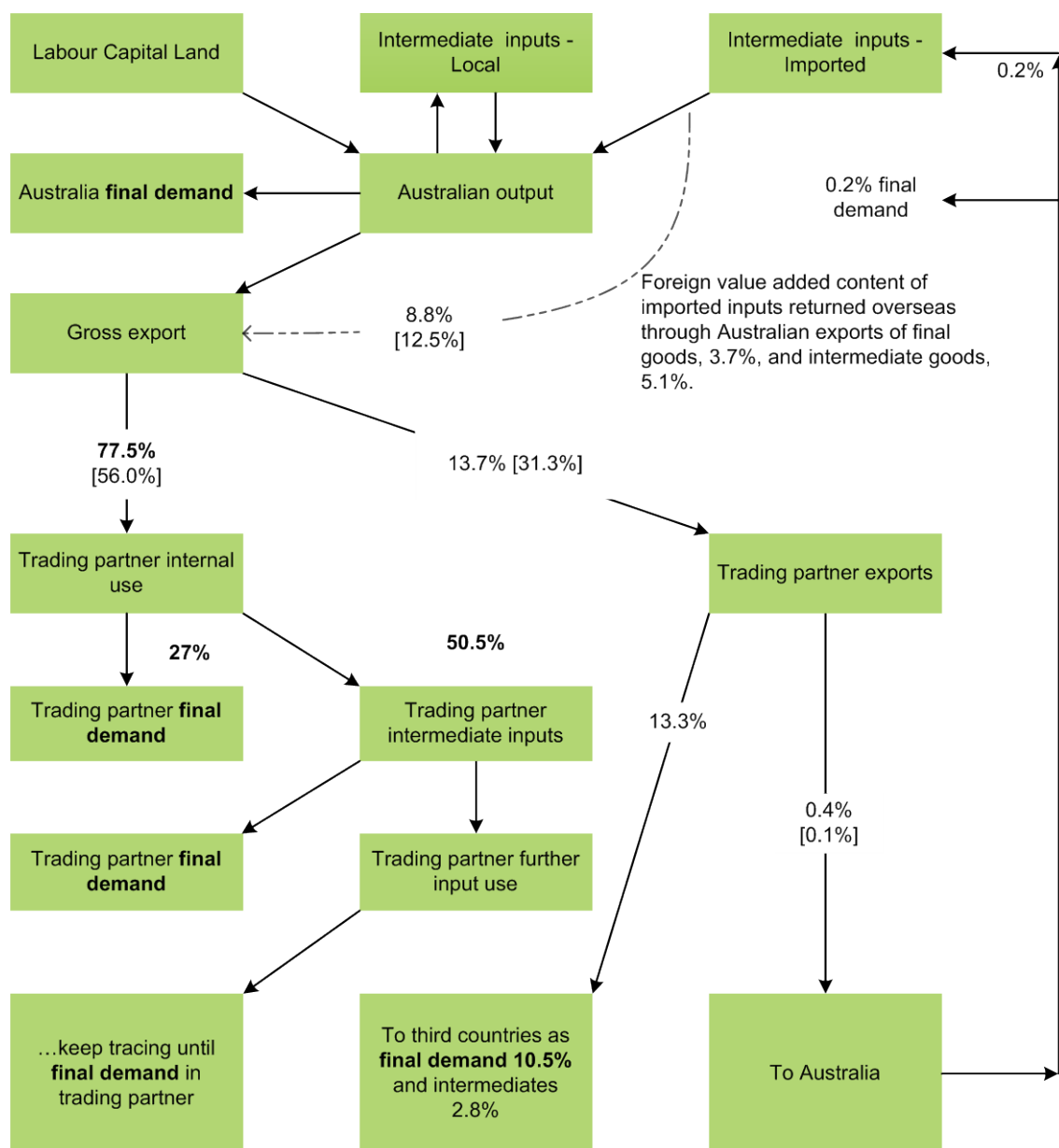
Table B.3 Components of gross exports, 2004

<i>Components of gross exports</i>	<i>Australia -New Zealand</i>	<i>World average</i>	<i>Comment</i>	<i>USA</i>	<i>China normal</i>	<i>China processing</i>
Direct final exports	27.0	29.2		32.5	44.2	28.8
Intermediate inputs within trading partner	50.5	38.4	Australia's exports get further processed more than the average.	36.6	31.8	12.6
Intermediate inputs exported to 3 rd countries	10.5	6.8	Australia's exports get processed and on-exported to other countries more than the average	5.5	8.1	1.7
Value added to exports (VAX)	88	74.2	VAX/Gross Exports is an indicator of the degree of fragmentation of trade. VAX ratio declining over time. VAX ratios differ by country and industry.	74.6	84.1	43.1
<i>Components which cross borders more than once</i>						
Domestic VA returns home	0.2 + 0.2	1.9+1.5	Little of Australia's exports return home. Contrast with USA.	11.3	1.1	0.0
Foreign VA returned home	8.8	16.7	Australia's imported inputs go relatively more into domestic production and final consumption. Contrast with Chinese 'processing' sector.	9.0	12.0	42.5
Double counting abroad	2.8	5.1	Lower second and third round, cross country, intermediate churning of Australia's exports. Consistent with Australia's high share exports of intermediate inputs staying within the direct trading partner (50.5% above)	4.0	2.7	10.1
Double counting home	0.1	0.6	As above, lower second and third round intermediate churning of Australia's exports and thus less flow back to Australia.	1.2	0.1	0.3

Source: Koopman et al. (2014).

Figure B.11 **Value added decomposition of gross exports, 2004 and 2008^a**

Australia and New Zealand combined, 2004; and Australia, 2008 [in square brackets]



^a Numbers in bold represent the domestic value added component of gross exports in 2004, thus, 77.5 + 10.5 = 88.0. The remaining 12 per cent comprises foreign value added returned home (8.8 per cent) domestic value added that returns home (0.4 per cent) and intermediate exports to third countries (2.8 per cent).

Sources: Koopman et al. (2014), WTO (2013).

In 2004, a further 10 per cent of Australian (and New Zealand) value-added was embodied in exports of intermediate goods and services which the immediate trading partner further processed and then exported the transformed product to third countries (table B.3, third cell

in first row) (for example, Australian iron ore sold to China which is processed into steel for sale to the United States). A later study, by the WTO (2013), suggests that the share of Australian export value-added embodied in third country exports rose substantially, from 10 per cent in 2004 to over 30 per cent by 2008 (table B.4, third row in first column). Although the data sources are different, the increase is consistent with the growth of trade in intermediate goods and services and global value chains, and the significant increase in the volume and prices of Australian raw material exports.. The shift highlights the substantial changes that can occur over relatively short periods in the structure of the global economy as it affects Australia.

Table B.4 Simplified value-added decomposition of gross exports, 2008

<i>Components of gross exports</i>	<i>Australia</i>	<i>New Zealand</i>	<i>World average</i>	<i>USA</i>	<i>China</i>
Direct to trading partner	52.1	38.1	42.0	48.8	24.7
To third countries	33.8	40.4	31.6	35.8	40.9
= Value-added exports	85.9	78.5	73.6	84.6	65.6
Re-imported	0.2	0.0	0.5	0.7	1.1
Foreign value-added	14.0	21.0	26.0	15.0	33.0
Total	100.0	100.0	100.0	100.0	100.0

Source: WTO (2013).

Australia's value-added trade pattern by sector and trading partner

Similar to the global aggregate pattern (above), manufacturing in Australia is relatively less important, and services relatively more important, when measured in value-added export terms, rather than conventional export sales statistics (figure B.12, left and right panels). Drawing on ABS input-output tables for 2008-09 for comparability with a number of other published studies on the value added composition of exports and a recent Australian study of global supply chains, the available data suggests that manufacturing exports from Australia historically have amounted to around 40 per cent of export sales — an average of 38 per cent between 2002 and 2011 and 36 per cent in 2008-09. In value-added terms, Australian manufacturing comprised about 20 per cent on average over the period 2002 to 2011 with a lower value of around 14 per cent in 2008-09 alone.

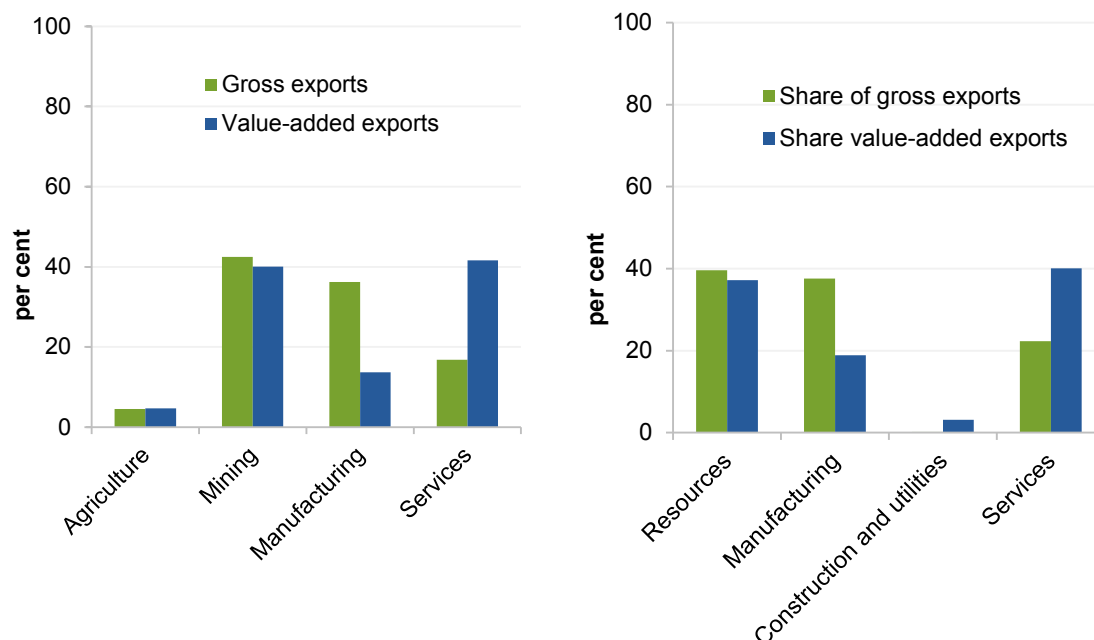
In contrast, direct export sales of services comprised around 20 per cent of Australia's exports, but in value-added terms represented over 40 per cent, both in average terms and for 2008-09.

Figure B.12 **Australian exports in gross and value-added terms**

per cent

Based on Australian input-output tables, 2008-09

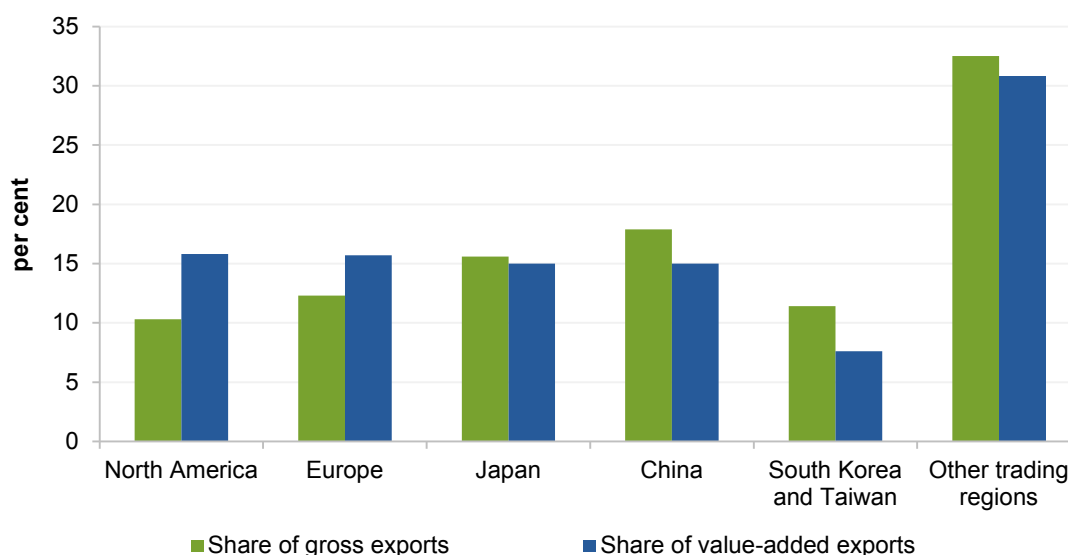
Based on TiVA data base, average 2002-2011



Sources: Commission estimates based on ABS (*Australian National Accounts: Input-Output Tables 2008-09*, issued September 2012, Cat. no. 5209.0), Kelly and La Cava (2014).

In terms of the destination of Australia's exports, the main difference between Australia's gross and value-added exports is the relative importance of emerging economies relative to advanced economies. Over the period 2002 to 2011, North America and Europe accounted for 23 per cent of Australia's gross exports but about 32 per cent in value-added terms (figure B.13). This is because a proportion of exports to Asia (such as China, South Korea and Taiwan), especially of resources, are used as intermediate inputs to produce goods that are then re-exported to North America and Europe.

Figure B.13 **Australian value-added exports by country of destination, average 2002 to 2011**

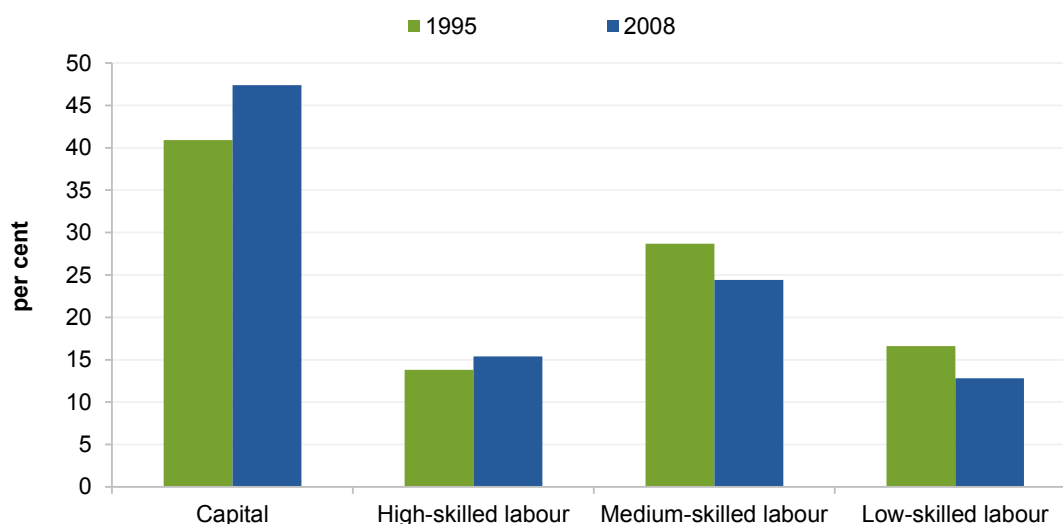


Source: Kelly and La Cava (2014).

B.4 Global patterns of value-added manufacturing production and factor income distribution

The newly available world input-output data also enables the links between increasing global production fragmentation and income distribution to be considered. A study of international manufacturing production chains for 14 industries and 40 countries between 1995 and 2008 estimated that the share of income for capital and high-skilled labour increased eight percentage points, whereas the income share for medium and low-skilled labour declined (figure B.14). That is not to say this pattern was observed in every value chain. For example, an increase in the share of value added by capital was observed for 64 per cent of manufacturing chains, whereas the increase in the labour income share for high-skilled labour was more pervasive, occurring in 92 per cent of chains. Decreases in labour income shares for medium and low-skilled labour occurred in, respectively, 56 per cent and 91 per cent of cases.

Figure B.14 **Factor income shares across 14 manufacturing industries, 1995 to 2008**



Source: Timmer et al. (2014).

The estimated shift in value-added towards capital and high-skilled labour occurred for almost all advanced nations (table B.5). Nevertheless, for the United Kingdom and Italy there was a decline for capital and only for the United Kingdom, Italy, Spain and France is there an increase in the share of income accruing to medium-skilled workers. For Australia, the increase in the return to capital share is above the average, but below the average for high-skilled labour. The decline in the share of income attributed to low-skill workers in Australian manufacturing is greater than the estimated world average.

The shift towards capital and high-skilled labour is also evident for most of the emerging economies (with Brazil and Turkey being the main exceptions). Although there has been a significant relocation of manufacturing from developed countries to low-wage developing and emerging countries over the last two decades, the share of income in manufacturing in emerging countries is nonetheless estimated (for this dataset) to have increased in favour of capital and away from low-skilled labour. Timmer et al. (2014) suggest that this trend is consistent with mobile capital moving to locations with high rental-wage ratios for low skill labour.

Globally, the share of high-income countries in total value-added in the sample of manufacturing chains declined from 74 per cent in 1995 to 56 per cent in 2008. China is responsible for half of the 18 percentage point increase in income share for the emerging regions.

Table B.5 Changes in factor shares from 1995 to 2008 in manufacturing global value chains, by economy
(in percentage points)

<i>Economy</i>	<i>Capital</i>	<i>High-skilled labour</i>	<i>Medium-skilled labour</i>	<i>Low-skilled labour</i>
United States	3.9	4.0	-5.9	-1.9
Japan	4.5	3.1	-2.1	-5.4
Germany	6.8	3.4	-7.4	-2.8
France	0.2	8.4	0.1	-8.7
United Kingdom	-3.4	10.2	1.2	-8.0
Italy	-1.1	5.5	10.4	-14.8
Spain	0.1	8.1	4.7	-12.9
Canada	1.8	4.8	-4.6	-2.0
Australia	6.0	3.3	-0.9	-8.4
South Korea	9.3	8.0	-5.6	-11.6
Netherlands	5.5	8.9	-7.1	-7.3
Total all high-income	2.9	5.0	-3.0	-4.9
China	9.3	2.0	-2.1	-9.3
Russian Federation	1.1	2.8	-2.4	-1.6
Brazil	-6.7	4.0	7.5	-4.8
India	4.5	3.1	-1.7	-5.9
Mexico	6.4	-1.7	-0.5	-4.2
Turkey	-12.7	3.1	5.2	4.5
Indonesia	5.3	1.6	1.3	-8.1
World minus all high-income	3.2	1.7	1.4	-6.3
World	6.5	1.5	-4.2	-3.8

Source: Timmer et al. (2014).

Beltramello et al. (2012) noted that a generalisation that emerging economies made significant gains in world export market shares mainly in low-technology industries, while OECD countries maintained an advantage in high technology products, is not representative of all components of trade, as emerging countries gained large shares of world exports over 1995 to 2007 in high and medium-high technology parts and components.

C Recent co-investment grant proposals

This appendix summarises the main features and stated objectives of individual co-investment proposals reported in chapter 3.

CSL Limited

In 2010, the Australian Government announced that it would contribute \$30 million to increase Australia's research and development infrastructure capacity and strengthen the ability to protect Australians from disease through CSL Limited. The grant would support the building of a new \$235 million recombinant biotechnology (cell culture) facility in Melbourne. The project was expected to result in over 333 ongoing, highly-skilled jobs and an average 320 fulltime jobs in the construction and commissioning phases.

In making the funding announcement, the then Minister for Innovation, Industry, Science and Research said:

The project will deliver a major expansion in R&D capacity at CSL Limited's facility in Broadmeadows, Victoria. It will help ensure that CSL can do medical research that will help save lives, provide lasting benefits to the community, and increase Australia's readiness to tackle future health threats. (Carr and Thomson 2010)

Simplot Australia

In 2011, the Australian Government announced it would provide a \$3 million grant to Simplot Australia Pty Ltd to support a \$15.6 million investment by the company to convert its coal-fired boilers to natural gas at its Ulverstone plant in Northern Tasmania. The Tasmanian Government also provided \$1 million in funding for the project. The investment was intended to reduce the plant's energy costs and cut annual carbon dioxide emissions by around 50 per cent. (Simplot Australia 2012)

According to Simplot:

This project has also had important benefits to the community by ensuring the future of our operations that help support the hundreds of farmers, contractors and service providers that service Simplot's business. It is also further confirmation of Simplot's commitment to Tasmania as a source for its potatoes. (Simplot Australia 2012, p. 1)

General Motors Holden

In 2012, a combined \$275 million assistance package for GM Holden was announced aimed at maintaining automotive manufacturing in Australia. This was to be part of an investment worth in excess of \$1 billion by GM Holden. The package was announced in the following terms:

Holden will be here in Australia producing cars for at least the next 10 years. That's great news. And it's as a result of a more than \$1 billion co-investment between the Federal Government, the South Australian Government, the Victorian Government and of course Holden, which is investing strongly in the future of manufacturing Holden cars here in Australia.

This is a co-investment in every sense of the word. Between the Federal, South Australian and Victorian Governments, we are making an investment of \$275 million. That joins with a more than billion-dollar investment from Holden to secure the future and because of the multiplier effect of making cars in this country, Holden's estimate is that that will generate more than \$4 billion of value to the Australian economy. (Gillard 2012)

In December 2013, GM Holden announced the closure of manufacturing operations in Australia in 2017. The co-investment funding offer was withdrawn.

Ford Australia

In January 2012, the Australian and Victorian Governments announced new funding for Ford Australia (Gillard, Carr, Ryan and Dalla-Riva 2012). The Australian Government contributed \$34 million out of a total outlay of \$103 million intended to help improve the fuel efficiency and emissions performance of the Ford Falcon and Ford Territory motor vehicles. The Victorian Government's contribution was not disclosed.

The basis for the provision of the funding included:

With a rising dollar and fierce competition from other countries in our region, we need to be investing in manufacturing products that are innovative and competitive.

This is exactly the type of investment we identified at the Future Jobs Forum and the PM's manufacturing taskforce to help shore up the future of our manufacturing sector.

Its smart, its competitive and best of all it will secure jobs, not only in Victoria but also across the nation. (Gillard et al. 2012)

In May 2013, Ford Australia announced that it would stop manufacturing vehicles in Australia in 2016.

Alcoa Australia

In June 2012, the Australian and Victorian Governments announced funding for the restructuring of Alcoa's Point Henry aluminium smelter in Geelong. The Australian

Government's commitment of \$40 million in new funding was aimed at ensuring economic sustainability and supporting 500 local jobs. The announcement was supported on the following basis:

The Minister for Industry and Innovation, Greg Combet, said the \$40 million in Federal funding recognised the challenges to the aluminium sector from the high Australian dollar and low world aluminium prices. "The aluminium industry is under significant pressure due to a substantial decline in world aluminium prices and the high value of the Australia dollar," Mr Combet said. (Combet, Baillieu and Napthine 2012b)

Alcoa announced the closure of the Point Henry smelter in August 2014.

Lion Dairy and Drinks

In June 2012, the Australian and Tasmanian Governments announced a \$4.25 million Federal Government grant to Lion Dairy and Drinks company in Burnie, Tasmania (Crean, Green and Sidebottom 2012). The grant was intended to assist the company in upgrading its stormwater infrastructure. The announcement also stated that the company would invest \$142 million towards expanding its cheese production facilities. The Tasmanian Government also contributed \$1.5 million to the project.

The stated benefits associated with the project included the creation of:

... 80 full-time jobs during construction, and support the retention of 220 full-time staff when operational. (Tasmanian Government 2012)

Norske Skog

In September 2012, Norske Skog announced an \$84 million investment to enable the conversion of a newsprint machine to the production of coated paper suitable for catalogues at the company's Boyer Mill in Tasmania. The Australian Government contributed \$28 million in grants to the project while the Tasmanian Government provided a \$13 million loan. At the time, all catalogue paper used in Australia was sourced from imports. In making the announcement, the regional president of Norske Skog said:

This project will support Boyer's current 330 direct and 900 indirect jobs, with 8-10 additional jobs being created in the coating operation and in the mining and transportation of fillers. It will improve Australia's Balance of Trade by around \$130 million per annum and create 100 construction jobs. (Leighton 2012)

Australian Paper

In October 2012, the Australia Government announced it would contribute \$9.5 million towards a \$90 million project to construct a de-inked pulp plant at Australian Paper's pulp

and paper mill at Maryvale in Victoria's Latrobe Valley. The project was expected to create 140 construction jobs in its initial phase to directly support the jobs of around 900 workers when initial production commenced in 2014, and support over 4000 indirect jobs connected to the mill's operations. The Victorian Government also contributed an unspecified amount to the project. In announcing the funding:

Federal Minister for Industry and Innovation, Greg Combet, said the Government was pleased to support this project which will create new jobs and skills and help secure Australian Paper's operations in the Latrobe Valley.

"Australian Papers decision to install this plant demonstrates a commitment to cleaner manufacturing and will provide Australians with greater access to recycled paper," Mr Combet said. (Combet, Ryan, Della-Riva 2012a)

Hobart Airport

In 2013, the Australian Government announced it would provide \$38 million to assist in upgrading the Hobart Airport (owned and operated by a Macquarie Bank managed syndicate) including through extension of the existing runway by 500 metres. The potential benefits of the project were described in the following way:

Hobart International Airport is regarded as a gateway to Antarctica and the improvement of the runway will further cement that status.

This project could bring significant international investment from countries with growing Antarctic programmes, including the United States, China and India. (Abetz 2015)

Toyota Camry

In 2013, the then Australian Government announced it would provide \$28.6 million towards a \$123 million 'facelift' upgrade for the Toyota Camry 2015 model year and the expansion of the company's supplier development program. The Victorian Government also contributed an undisclosed amount. The aims of the funding were described in the following terms:

Toyota Australia's investment is part of a long term strategy to secure and strengthen its manufacturing presence in Australia, including its supplier base.

The Government's contribution is a vital part of Toyota Australia's ongoing investment into its future operations.

Australia is one of only 13 countries that can make a motor car from start to finish. The Labor Government wants to retain the expertise, the investment, the cutting-edge technology and the high-skill jobs this industry attracts for generations to come. (Carr and Hodgett 2013)

In February 2014, Toyota announced it would cease vehicle manufacturing operations in Australia in 2017.

Cadbury

In August 2013, the then Opposition announced a \$16 million contribution toward a \$66 million upgrade of the Cadbury Chocolate factory in Claremont, Tasmania. The benefits associated with public funding were described in the following way:

Our commitment is aimed at boosting tourism and innovation, as well as to boost the export competitiveness of export-oriented businesses located in Tasmania and follows the release of the Coalition's Economic Growth Plan for Tasmania. (Abetz 2013)

The application for funding was withdrawn in March 2015 on the basis that the proposal did not meet Australian Government production and export volume commitment requirements.

SPC Ardmona

In 2014, the Victorian Government announced a \$22 million contribution to a \$100 million co-investment by SPC Ardmona (a subsidiary of Coca-Cola Amatil) to upgrade the operations of its processing plant in Shepparton, Victoria. Under the agreement, SPC Ardmona guaranteed full-time employment for around 500 employees at the plant and agreed to repay any funding received from the Victorian Government should SPC Ardmona cease operations. The contribution by the Victorian Government was justified in the following terms:

Premier Denis Napthine, together with Deputy Premier and Minister for Regional and Rural Development Peter Ryan, today announced the Victorian Coalition Government had committed \$22 million towards a \$100 million co-investment in the Shepparton company.

“Up to 2,700 jobs in the Goulburn Valley depend on SPC Ardmona and this co-investment secures these jobs which are vital to the region's economy,” Dr Napthine said. (Napthine and Ryan 2014)

SPC Ardmona also sought a \$25 million contribution from the Australian Government but this request was rejected on the grounds that Coca-Cola Amatil had the financial capacity to fund the project.

D Services commitments in the ASEAN-Australia-New Zealand trade agreement

The following table presents information on the services commitments made by members of the ASEAN-Australia-New Zealand preferential trade agreement which entered into force in 2010. A feature of that agreement was a requirement by parties to the agreement to list market access commitments in services (using a positive list approach) according to a common template. These commitments relate to limits on market access or national treatment in relation to cross-border supply, consumption abroad and commercial presence. This format facilitates, to some extent, comparisons of services commitments across countries on a consistent basis. As noted in chapter 4, most other preferential agreements to which Australia is a Party have adopted a negative list approach whereby only specified services activities are excluded from the commitments made in the agreement. The information presented in table D.1 is sourced from the Department of Foreign Affairs and Trade and is available at <http://dfat.gov.au/trade/agreements/aanzfta/official-documents/Pages/annex-3-schedules-of-specific-services-commitments.aspx>.

Key to the symbols used in table D.1

- — shaded dots represent unrestricted access and national treatment;
- — unshaded dots represent restrictions on access or national treatment,
- * — asterisks represent a service activity that is not specifically mentioned in a country's schedule of commitments.

Table D.1 **Services commitments in the ASEAN-Australia-New Zealand preferential trade agreement^a**

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
BUSINESS SERVICES												
Professional Services												
Legal	○	●	*	●	○	●	○	*	*	○	○	*
Accounting, Auditing, Bookkeeping	●	●	○	●	●	*	○	○	○	○	○	○
Taxation	●	●	●	*	●	*	○	*	*	●	○	*
Architectural	●	●	○	●	●	○	○	*	○	●	○	○
Engineering	●	●	○	●	●	○	○	*	○	●	○	*
Integrated Engineering	●	●	*	*	●	○	○	○	○	●	○	*
Urban Planning	●	●	*	●	●	○	●	*	*	●	○	*
Landscape Architectural	●	●	●	●	●	*	○	●	○	●	○	*
Medical Specialty	●	*	○	*	○	*	○	*	*	○	○	○
Veterinary	●	●	●	*	○	*	○	*	*	*	○	
Computer and Related Services												
Consultancy	●	●	●	●	●	○	●	●	○	●	*	○
Software Implementation/Development	●	●	●	●	●	○	●	●	○	●	*	○

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Data Processing	●	●	●	●	●	*	●	*	○	●	*	○
Database	*	●	●	●	●	*	●	●	○	●	*	○
Computer Maintenance and Repair	●	●	*	*	●	*	*	●	○	*	*	*
Other Computer	*	●	*	●	●	*	*	●	○	●	*	*
Research and Development Services												
Social Science and Humanities R&D	●	*	●	*	*	*	○	*	*	*	*	*
Natural Sciences R&D	*	*	●	*	●	*	*	*	*	*	*	*
Interdisciplinary R&D	*	*	●	*	*	○	*	*	*	*	*	*
Real Estate												
Leased Property Management	○	●	*	*	*	*	*	*	*	*	*	*
Fee or Contract Property Management	○	●	○	*	*	*	*	*	*	*	*	*
Rental/Leasing												
Shipping Related	○	●	●	*	*	*	○	*	*	*	*	*
Aircraft Related	●	●	●	*	●	*	○	*	*	*	*	○
Construction and Mining Related	●	●	*	*	*	*	○	*	*	*	*	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Machinery and Equipment	●	●	*	●	○	*	*	*	*	*	*	*
Other Business Services												
Advertising	●	●	●	●	○	*	○	*	●	●	*	*
Market Research	●	*	●	●	○	*	○	*	*	●	*	*
Management Consulting	●	●	●	●	●	○	○	*	●	●	*	*
Related Management Consulting	○	●	*	*	○	*	○	*	●	●	*	*
Technical Testing and Analysis	*	*	●	●	○	○	○	*	*	●	*	*
Agriculture and Fishing Incidental	●	●	*	●	○	*	○	*	*	*	*	*
Animal Husbandry Incidental	*	○	*	*	*	*	*	*	*			*
Building Cleaning	●	●	●	*	*	*	*	*	*	*	*	*
Photographic	●	●	●	*	*	*	*	*	*	*	*	*
Packaging	*	*	●	●	*	*	*	*	*	●	*	*
Publishing and Printing	*	*	*	●	*		*	*	●	*		*
Convention	●	●	●	*	*	*	○	*	*	*	*	*
Interior Design	●	●	●	*	*	*	*	*	*	*	*	*
Credit reporting	*	●	*	*	*	*	*	*	*	*	*	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Collection agency	*	●	*	*	*	*	*	*	*	*	*	*
Telephone answering	●	●	*	*	*	*	*	*	*	*	*	*
Duplicating	●	●	*	*	*	*	*	*	*	*	*	*
Incidental to Mining	●	*	*	●	○	*	*	*	*	●	○	*
Incidental to Manufacturing	*	*	*	*	○	○	○	*	*	*		*
Energy Distribution Incidental	●	*	*	*	*	*	*	*	*	●	○	*
Personnel Placement	●	●	*	*	*	*	*	*	*	●	*	*
Site Investigation	*	●	*	*	*	*	*	*	*	*	*	*
Site Preparation	*	●	*	*	*	*	*	*	*	*	*	*
Engineering Works	*	●	*	*	*	*	*	*	*	●	*	*
Water Well Drilling	*	●	*	*	*	*	*	*	*	*	*	*
Scientific/Technical Consulting	●	*	*	*	○	*		*	*	*	*	*
Geological, Geophysical and Other	*	●	*	*	*	*	*	*	*	*	*	*
Subsurface Survey	*	●	*	*	*	*	*	*	*	*	*	*
Equipment maintenance	*	*	*	*	○	○	*	*	*	*	*	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Map Making	*	●	*	*	*	*	*	*	*	*	*	*
Exhibition Management	*	●	*	*	*	*	○	*	*	*	*	*
Other Services									*			*
Translation and Interpretation	●	●	●	●	*	*	○	*	●	*	*	*
Student Placement	*	●	*	*	*	*	●	*	*	*	*	*
COMMUNICATIONS SERVICES												
Courier Services		*	●	*	●	*	*	*	*	●	○	*
Telecommunications Services	○	●	○	○	○	○	○	○	*	○	○	○
Basic Telecommunications	○	●	○	○	○	○	○	○	*	○	○	○
Mobile Services	○	●	○	*	○	○	○	*	*	●	○	○
Resale Services	○	●	●	*	*	*	○	*	*	○	○	○
Value Added Network Services	●	●	○	*	○	○	○	○	*	●	○	○
Audio-Visual Services	*	●	●	●	○	*	○	*	○	*	*	*
Production	*	●	●	●	○	*	*	*	○	*	*	*
Broadcasting/Distribution	*	●	●	*	○	*	○	*	*	*	*	*
Sound Recording	*	*	*	*	●	*	○	*	*	*	*	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Cinema and Theatre Services	*	*	*	*	*	*	*	*	●	*	*	*
Studio Recording Leasing	*	*	*	*	*	*	*	*	●	●	*	*
CONSTRUCTION AND RELATED ENGINEERING SERVICES	●	●	●	●	●	○	○	●	○	●	*	
Buildings	●	●	*	●	●	○	○	●	○	●	*	*
Civil Engineering	●	●	*	●	●	○	○	●	○	●	*	*
Installation and Assembly	●	●	*	●	●	○	○	●	○	●	*	*
Completion and Finishing	●	●	*	*	●	○	○	●	○	●	*	*
Other	●	●	*	*	●	○	○	●	○	●	*	*
DISTRIBUTION SERVICES												
Commission Agents	●	●	●	●	○	*	*	*	*	●	*	*
Wholesale Trade	●	●	●	*	○	*	*	*	*	●	*	*
Retail Trade	●	●	*	*	○	*	*	*	*	●	*	*
Franchising	●	*	*	*	●	*	*	*	*	●	*	*
Other Distribution	*	*	*	*	*	*	*	*	*	●	*	*

(continued next page)

Table D.1 (continued)

	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
EDUCATION SERVICES												
Adult Education	*	*	●	●	●	○	*	○	*	●	*	*
Primary and Secondary Education	●	●	*	●	●	○	○	○	○	*	*	*
Higher Education Services	●	*	*	●	●	○	○	●	●	●	○	*
International School Services	*	*	*	●	*	*	*	*	*	*	*	*
Other Education Services	●	*	*	●	●	○	○	●	●	●	*	*
Technical and Vocational Services	●	*	*	●	●	○	○	●	*	*	*	*
Other Higher Education Services	*	●	*	*	○	○	○	●	*	●	*	*
ENVIRONMENTAL SERVICES												
Wastewater Management	●	●	*	●	○	*	*	●	*	●	○	*
Waste Management	●	●	●	*	○	*	*	●	*	●	*	*
Ambient Air/Climate Protection	●	●	*	*	*	*	*	*	*	*	*	*
Soil/Water Remediation	●	●	*	*	*	*	*	*	*	*	*	*
Noise/Vibration Abatement	●	●	●	●	*	*	*	●	*	●	*	*
Biodiversity Protection	●	●	*	*	*	*	*	*	*	*	*	*
Other Environmental	●	●	*	●	*	*	*	*	*	●	*	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Exhaust Gas Cleaning	*	*	●	●	○	*	*	●	*	●	*	*
Nature and Landscape Protection	*	*	*	●	*	*	*	●	*	●	*	*
Environmental Impact Assessment	*	*	*	*	●	*	*	*	*	●	*	*
FINANCIAL SERVICES												
Offshore Financial	*	*	*	*	*	*	○	*	*	*	*	*
Commercial Banking	*	*	*	*	*	*	○	*	*	*	○	*
Direct Insurance	*	○	○	○	●	○	○	*	*	○	*	*
Banking and Other Financial Services												
Deposit Taking	*	●	○	○	○	○	○	●	*	○	○	*
Lending	*	●	○	○	○	○	○	●	*	○	○	*
Financial Leasing	*	●	○	○	○	○	○	●	*	●	○	*
Factoring	*	*	*	○	*	○	*	*	*	*	○	*
Payment and Money Transmission	*	●	○	○	○	○	○	●	*	○	○	*
Charge Cards	*	*	*	○	*	○	○	●	*	○	○	*
Guarantees and Commitments	*	●	○	○	○	○	○	●	*	●	○	*

(continued next page)

Table D.1 (continued)

	New											
	Australia	Zealand	Singapore	Thailand	Vietnam	Indonesia	Malaysia	Laos	Myanmar	Cambodia	Philippines	Brunei
Money and Forex Broking	*	●	*	*	○	○	○	*	*	*	○	*
Trading for Own Account	*	●	○	○	○	○	○	*	*	●	○	*
Securities Issuance	*	●	○	○	●	●	○	*	*	●	○	*
Money Broking	*	●	○	*	*	*	*	*		●	○	*
Underwriting	*	*	*	○	○	*	○	*	*	*	○	*
Asset Management	*	●	○	○	○	○	○	*	*	●	○	*
Settlement and Clearing	*	●	○	*	○	*	*	*		●	*	*
Financial Information	*	●	○	○	○	*	*	*	*	●	○	○
Financial Advisory	*	●	○	○	○	●	○	*	*	●	○	*
Operational Headquarters	*	*	*	*	*	*	○	*	*	*	*	*
Securities Broking	*	*	*	*	*	*	○	*	*	*	*	*
Commodities Futures Broking	*	*	*	*	*	*	○	*	*	*	○	*
Insurance Services												
Direct Non- Life Insurance	*	○	○	○	●	○	○	*	*	○	○	○
Direct Life Insurance	*	●	○	○	●	○	○	*	*	○	○	○
Reinsurance Non-Life	*	●	○	*	●	○	○	*	*	○	○	○

(continued next page)

Table D.1 (continued)

	<i>Australia</i>	<i>New Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
Reinsurance Life	*	●	○	*	●	○	○	*	*	○	○	○
Intermediation and Broking	*	○	○	○	●	○	○	*	*	*	*	○
Intermediation and Underwriting	*	○	○	*	●	*	○	*	*	*	*	*
Auxiliary Insurance	*	●	●	○	●	*	○	*	*	●	○	●
HEALTHCARE SERVICES												
Private Hospitals	*	*	●	*	○	○	○	*	*	○	*	*
Guidance and Counselling	*	*	○	*	*	*	*	*	*	*	*	*
TOURISM AND TRAVEL SERVICES												
Hotels, Resorts and Restaurants	●	●	●	●	●	○	○	○	*	○	○	○
Travel Agent, Tour and Tourist Guide	○	●	●	○	○	○	○	○	*	○	●	*
Congress Organisation	*	*	*	*	*	*	*	*	*	*	○	*
Meal Serving Services	*	*	*	*	*	○	*	○	*	*	○	*
Tourism Consultancy	*	*	*	*	*	○	*	*	*	*	*	*
Other	*	*	*	●	*	○	○	○	*	*	*	*

(continued next page)

Table D.1 (continued)

		<i>New</i>										
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
RECREATIONAL/CULTURAL SERVICES												
Circus, Amusement, Theme Park s	*	*	○	*	○	*	○	*	*	*	*	*
Library Services	*	*	●	*	*	*	*	*	*	*	*	*
Other Entertainment	*	*	*	*	○	*	*	*	*	●	*	*
Sports Event Management	*	*	*	*	*	*	○	*	*	*	*	*
Sporting and Recreational	●	*	*	●	*	*	*	*	*		*	*
TRANSPORT SERVICES												
Air Transport	○	●	*	○	○	○	*	*	○	●	○	○
Maritime Transport	○	●	○	○	○	○	○	*	○	●	○	○
Maritime Auxiliary Services	●	●	●	*	○	○	*	*	○	*	*	*
Internal Waterways Transport	*	*	*	*	○	*	*	*	*	*	*	*
Rail Transport	●	●	*	●	○	*	*	*	*	*	○	*
Commercial Road Transport	●	●	*	○	○	*	*	*	*	●	○	*
Other Transport	●	●	*	○	*	*	*	*	*	*	*	*
Pipeline Transport	●	●	*	*	*	*	*	*	*	○	○	*
Auxiliary Transport	●	*	*	*	○	*	*	*	○	*	○	*

(continued next page)

Table D.1 (continued)

	<i>New</i>											
	<i>Australia</i>	<i>Zealand</i>	<i>Singapore</i>	<i>Thailand</i>	<i>Vietnam</i>	<i>Indonesia</i>	<i>Malaysia</i>	<i>Laos</i>	<i>Myanmar</i>	<i>Cambodia</i>	<i>Philippines</i>	<i>Brunei</i>
ENERGY SERVICES												
Core Analysis and Other Testing	*	*	*	*	*	○	*	*	*	*	*	*
Geological and Geophysical	*	*	*	*	*	○	*	*	*	*	*	*
Engineering, Procurement Construction	*	*	*	*	*	○	*	*	*	*	*	*
Coal Liquefaction and Gasification	*	*	*	*	*	○	*	*	*	*	*	*
Electrical Logging and Perforation	*	*	*	*	*	○	*	*	*	*	*	*
Competency Certification Aviation	*	*	*	*	*	○	*	*	*	*	*	*
Competency Certification Power Plant	*	*	*	*	*	○	*	*	*	*	*	*
Land Clearing	*	*	*	*	*	○	*	*	*	*	*	*
Oil and Gas Exploration	*	*	*	*	*	*	*	*	*	*	○	*
Geothermal Exploration/Development	*	*	*	*	*	*	*	*	*	*	○	*
Coal Exploration/Development	*	*	*	*	*	*	*	*	*	*	○	*
Energy Distribution	*	*	*	*	*	*	*	*	*	*	○	*
Power Generation	*	*	*	*	*	*	*	*	*	*	○	*
Power Plant Operation	*	*	*	*	*	*	*	*	*	*	○	*

^a Shaded dots represent unrestricted access and national treatment. Unshaded dots represent restrictions on access or national treatment. An asterisk represents sector not mentioned in country schedule.

Source: ASEAN-Australia-New Zealand Country Schedules of Specific Services Commitments available at <http://dfat.gov.au/trade/agreements/aanzfta/official-documents/Pages/annex-3-schedules-of-specific-services-commitments> (accessed 7 May 2015).

E Anti-dumping and countervailing activity

Dumping is said to occur when an overseas supplier exports a good to Australia at a price below its ‘normal value’ in the supplier’s home market. If dumping causes, or threatens to cause, material injury to local producers of like goods, then remedial action — mainly the imposition of special customs duties — can be taken against the imported goods concerned.

Similarly, countervailing duties can be imposed on imports which benefit from certain subsidies from an overseas government and which cause or threaten injury to a local industry producing like goods.

Australia’s anti-dumping and countervailing legislation is based on WTO agreements that, amongst other things, aim to discipline the use of anti-dumping measures as an alternative form of protection. Though WTO members are not obliged to enact such legislation, they are required to comply with the agreed requirements should they wish to take action against dumped imports.

Australia’s anti-dumping system is administered by the Anti-Dumping Commission. It investigates claims of dumping and makes recommendations to the Minister, and also oversees anti-dumping and countervailing measures in force. The investigation process goes through several, time-limited, stages and includes appeal processes.

Under Australia’s anti-dumping rules, anti-dumping duties may be imposed up to the level of the assessed dumping margin (or the subsidy provided by an overseas government). Australian rules also include a ‘lesser duty rule’. Under this rule, a smaller duty sufficient to increase the price of the overseas good to a ‘non-injurious’ level may sometimes be imposed. As an alternative to the imposition of a duty, the overseas supplier (and also the overseas government in countervailing cases) can make a formal price undertaking on terms that would remove the injury or the threat of injury.

Once in place, anti-dumping measures typically remain in force for five years, with scope for extensions for additional five-year periods, following further review.

During 2013-14, 20 new investigations were *initiated* by the Anti-Dumping Commission (table E.1). This is a decrease from 22 new investigations in the previous year.

Table E.1 Australian anti-dumping and countervailing activity — initiation of investigations, 2013-14^a

<i>Commodity</i>	<i>Industry grouping</i>	<i>Country of export</i>
New cases initiated (= 20)^b		
Wind towers (Dumping)	Fabricated metal products manufacturing	People's Republic of China Republic of Korea
Copy paper (Dumping)	Pulp, paper and paper products manufacturing	People's Republic of China
Hot rolled structural steel sections (Dumping)	Metal products manufacturing	Japan Republic of Korea Taiwan Thailand
Quenched and tempered steel plate (Dumping)	Metal products manufacturing	Finland Japan Sweden
Silicon metal (Dumping and countervailing)	Metal products manufacturing	People's Republic of China
Certain deep drawn stainless steel sinks (Dumping and countervailing)	Fabricated metal products manufacturing	People's Republic of China
Rod in coils (Dumping)	Metal products manufacturing	Republic of Indonesia Taiwan Turkey
Newsprint (Dumping)	Pulp, paper and paper products manufacturing	France Republic of Korea
Certain crystalline silicon photovoltaic modules or panels (Dumping)	Machinery and equipment manufacturing	People's Republic of China

^a Formal investigations by the Anti-Dumping Commission. Complaints by industry must meet certain requirements before investigations are initiated. ^b Initiations are counted as actions applying to one commodity from one economy. Actions may be solely dumping, solely countervailing or both dumping and countervailing.

Source: Anti-Dumping Commission (2014, latest).

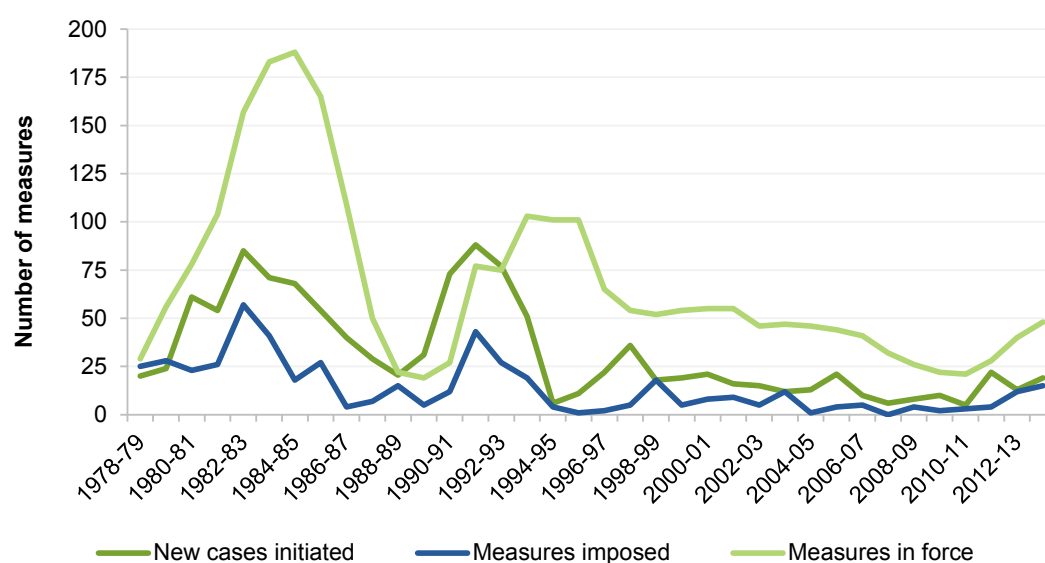
During 2013-14, 15 new measures were *imposed* (table E.2), an increase from 12 measures in the previous year. Also during 2013-14, 7 measures *expired*, compared with none the previous year.

Table E.2 Australian anti-dumping and countervailing activity — new measures imposed and measures expired, 2013-14

<i>Commodity</i>	<i>Industry grouping</i>	<i>Country of export</i>
New measures imposed (= 15)		
Aluminium zinc coated steel (1 tariff item) (Dumping)	Metal product manufacturing	People's Republic of China Republic of Korea
Aluminium zinc coated steel (1 tariff item) (Countervailing)	Metal product manufacturing	People's Republic of China
Hot rolled steel plate (4 tariff items) (Dumping)	Metal product manufacturing	People's Republic of China Indonesia, Japan, Republic of Korea
Hot rolled steel plate (4 tariff items) (Countervailing))	Metal product manufacturing	People's Republic of China
Tomatoes, prepared and preserved (1 tariff item) (Dumping)	Food, beverages and tobacco manufacturing	Italy
Wind towers (4 tariff items) (Dumping)	Fabricated metal products manufacturing	People's Republic of China Republic of Korea
Zinc coated (galvanised) steel) (2 tariff items) (Dumping)	Metal product manufacturing	People's Republic of China Republic of Korea, Taiwan
Zinc coated (galvanised) steel) (2 tariff items) (Countervailing)	Metal product manufacturing	People's Republic of China
Measures expired (= 7)		
Greyback cartonboard (5 tariff items) (Dumping)	Pulp, paper and paper products manufacturing	Republic of Korea
Greyback cartonboard (5 tariff items) (Price undertaking)	Pulp, paper and paper products manufacturing	Republic of Korea
Iron and steel grinding mill liners (1 tariff item) (Dumping)	Metal product manufacturing	Canada
Polyethylene, linear low density (2 tariff items) (Dumping)	Petroleum, coal, chemical and associated products	Thailand
Rims, certain tubeless demountable (1 tariff item) (Dumping)	Metal product manufacturing	People's Republic of China
Rims, certain tubeless demountable (1 tariff item) (Price undertaking)	Metal product manufacturing	People's Republic of China
<i>Source: Anti-Dumping Commission (2014, latest).</i>		

At 30 June 2014 there were 48 antidumping and countervailing measures *in force* (figure E.1), up from 40 the previous year. This is about half the level that existed around the early 1990s — when there was an upsurge in antidumping investigations after the June 1990 economic recession.

Figure E.1 **Australian anti-dumping and countervailing activity, 1978-79 to 2013-14^{a,b}**



^a Formal investigations by Anti-Dumping Commission. Complaints by industry must meet certain requirements before investigations are initiated. ^b Initiations are counted as actions applying to one commodity from one economy. Actions may be solely dumping, solely countervailing or both dumping and countervailing.

Source: Anti-Dumping Commission (2014, latest).

References

- Abbott, T. (Prime Minister) and Robb, A. (Minister for Trade and Investment) 2014, *Landmark China-Australia Free Trade Agreement*, Joint Media Release, 17 November.
- Abbott, T. (Prime Minister), Hockey, J. (Treasurer) and Billson, B. (Minister for Small Business) 2014, *Encouraging employee share ownership and entrepreneurship*, Joint Media Release, 14 October.
- Abbott, T. (Prime Minister) and Macfarlane, I. (Minister for Industry and Science) 2014a, Press Conference, <https://www.pm.gov.au/media/2014-01-30/joint-press-conference-hon-ian-macfarlane-mp-parliament-house-canberra> (accessed 1 June 2015).
- Abetz, E. (Liberal Senator for Tasmania) 2013, *\$16 million Cadbury funding to stay in Tasmania*, Press Release, 5 March.
- 2015, *Hobart Airport runway extension funding*, Press Release, 16 February.
- ABS (Australian Bureau of Statistics) 2014, *Australian System of National Accounts, 2013-14*, Cat. no. 5204.0, ABS, Canberra.
- 2015a, *International Trade in Goods and Services, Australia*, Cat. no. 5368.0, March 2015, ABS, Canberra.
- 2015b, *International Investment Position: Supplementary Statistics, 2014*, Cat. no. 5352.0, ABS, Canberra.
- ACC (Australian Copyright Council) 2015, *Geo-blocking, VPNs & Copyright*, http://www.copyright.org.au/acc_prod/ACC/Information_Sheets/Geo-blocking_VPNs_Copyright.aspx?WebsiteKey=8a471e74-3f78-4994-9023-316f0ecef4ef (accessed 5 June 2015).
- ACCI (Australian Chamber of Commerce and Industry) 2013, *Harmonising Administrative Procedures in PTA to Support Trade Facilitation*, <http://dfat.gov.au/trade/agreements/aifta/Documents/acci-1.pdf> (accessed 30 April 2015).
- ACMA (Australian Communication and Media Authority) 2012, *Report 1 – Online video content services*, Communications Report 2011-12 Series, Melbourne.
- 2015, *Supply & demand: Catch-up TV leads Australians' online video use*, <http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Supply-and-demand-Catch-up-TV-leads-Australians-use-of-catch-up#12> (accessed 22 May 2015).
- Amiti, M. and Konings, J. 2007, 'Trade liberalization, Intermediate Inputs, and Productivity: Evidence for Indonesia', *American Economic Review*, vol. 97, no. 5.

-
- ANAO (Australian National Audit Office) 2014, *Audit summary*, <http://www.anao.gov.au/Publications/Audit-Reports/2014-2015/Administration-of-the-Biodiversity-Fund-Program/Audit-summary> (accessed 24 February 2015).
- 2015, *The Ethanol Production Grants Program*, Report No. 18 2014-15.
- Anti-Dumping Commission 2014, *Anti-Dumping and Countervailing Actions — Status Report at 30 June 2014*, Anti-Dumping Notice No. 2014/54, Canberra.
- APEC (Asia Pacific Economic Cooperation) 2009, *APEC Elements for Simplifying Customs Documents and Procedures Relating to Rules of Origin*, http://www.apec.org/Groups/Committee-on-Trade-and-Investment/~media/Files/Groups/ROO/App3_09_cti_rpt_Simplifying%20Procedures.ashx (accessed 11 November 2013).
- 2014a, *The 26th APEC Ministerial Meeting Joint Ministerial Statement*, Beijing, China, News Release, 8 November.
- 2014b, *Landmark Agreement to Extend APEC Business Travel Card Announced*, Beijing, China News Release, 13 November.
- 2014c, *Supporting Continued Growth in Trade and Facilitation: End to End Review of the APEC Business Travel Card Scheme: Travel Study Report*, Business Mobility Group, July.
- APRA (Australian Prudential Regulation Authority) 2013a, *Prudential Practice Guide, SPG 530 — Investment Governance*, November.
- 2013b, *Prudential Standard, SPS 530 — Investment Governance*, July.
- Arkolakis, C., Ramondo, N., Rodríguez-Clare, A. and Yeaple, S. 2013, *Innovation and Production in the Global Economy*, National Bureau of Economics Research, Working Paper no. 18972, Cambridge.
- Armenter, R. and Koren, M. 2014, ‘A Balls-and-Bins Model of Trade’, *American Economic Review*, vol. 104, no. 7, pp. 2127-2151.
- AUSFTA (Australia-United States Free Trade Agreement) 2005, *Chapter Seventeen — Intellectual Property Rights*, <http://dfat.gov.au/about-us/publications/trade-investment/australia-united-states-free-trade-agreement/Pages/chapter-seventeen-intellectual-property-rights.aspx> (accessed 28 April 2015).
- Austrade 2014, *Annual Report 2013-14*, Canberra.
- 2015, *2015 Review of the Export Market Development Grants (EMDG) Scheme*, <http://www.austrade.gov.au/Export/Export-Grants/review> (accessed 22 May 2015).
- Australian Customs and Border Protection Service 2015, *Free Trade Agreements — Rules of Origin*, <http://www.customs.gov.au/site/page6010.asp> (accessed 10 April 2015).
- Australian Government 2012a, *How the GM Holden investment will benefit Australia: Fact Sheet*, http://www.afr.com/rw/2009-2014/AFR/2012/03/22/Photos/cebf2912-73b7-11e1-a601-5e50a8afd8be_120322%20FACT%20SHEET.pdf (accessed 7 May 2015).

-
- 2012b, *Rural Research and Development Policy Statement*, July, <http://www.agriculture.gov.au/SiteCollectionDocuments/ag-food/innovation2/rural-research-and-development/research-and-development-policy-statement.pdf> (accessed 30 April 2015).
- 2013, *Budget 2013-14*, Budget Measures, Budget Paper No. 2, May.
- 2014a, *The Australian Government Guide to Regulation*, March, at www.cuttingredtape.gov.au (accessed 10 April 2015).
- 2014b, *Industry Innovation and Competitiveness Agenda: An action plan for a stronger Australia*, October, <http://www.industry.gov.au/industry/Pages/Industry-Innovation-and-Competitiveness-Agenda.aspx#header> (accessed 1 May 2015).
- 2014c, *Budget 2014-15, Budget Paper No. 1, Statement 8: Statement of Risks*, http://www.budget.gov.au/2014-15/content/bp1/html/bp1_bst8-06.htm (accessed 5 May 2015).
- 2014d, *Budget 2014-15, Budget Paper No. 2*, Budget Measures, May.
- 2014e, *Exploration Development Incentive: Operational Details Treasury*, July 2014.
- 2014f, *Towards Responsible Government*, The Report of the National Commission of Audit, Canberra.
- 2014g, *Exploration Development Incentive*, Exposure Draft, Explanatory Material, October.
- 2014h, *Online Copyright Infringement*, Discussion Paper, July.
- 2015a, *Tax Expenditure Statement 2014*, Department of Treasury, Canberra, January.
- 2015b, 'Industry and competitiveness initiatives', Department of Industry and Science, Brochure, <http://industry.gov.au/industry/Documents/GrowthCentre-Booklet.pdf> (accessed 26 May 2015).
- Baldwin, J. and Yang, B. 2014, *Global value chains and the productivity of Canadian Manufacturing firms*, Research paper no 090, Statistics Canada.
- Baldwin, R. 2011, *Trade and Industrialisation after Globalisation's 2nd Unbundling: How Building and Joining a Supply Chain are different and why it matters*, National Bureau of Economic Research, Working Paper no 17716, Cambridge.
- and Lopez-Gonzalez, J. 2013, *Supply-Chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses*, National Bureau of Economic Research, Working Paper no 18957, Cambridge.
- Barnes, P., Soames, L., Li, C. and Munoz, M. 2013, *Productivity in Manufacturing: Measurement and Interpretation*, Productivity Commission Staff Working Paper, Canberra.
- Beltramello, A., De Backer, K. and Moussiégt, L. 2012, *The Export Performance of Countries within Global Value Chains (GVCs)*, OECD Science and Technology Working Paper no 2012/02, Paris.
-

-
- Birmingham, S. (Minister for the Environment) 2014a, *\$158 million for on-farm irrigation upgrades*, Media Release, 1 April.
- 2014b, *New water sale opportunities in the southern New South Wales Murray-Darling Basin*, Media Release, 8 April.
- 2014c, *Water Recovery Strategy to provide greater certainty to business*, Media Release, 2 June.
- 2014d, *New water purchase round for the Queensland Lower Balonne*, Media Release, 23 September.
- 2014e, *\$125 million OFIEP Round 5 Open*, Media Release, 24 November.
- Birmingham, S. (Minister for the Environment) and Weatherill, J. (Premier of South Australia) 2014, *Major economic stimulus for River Murray communities* Joint Media Release, 24 July.
- Brandis, G. (Attorney-General and Minister for the Arts) and Turnbull, M. (Minister for Communications) 2014, *Collaboration to tackle online copyright infringement*, Joint Media Release, 10 December.
- Brulhart, M. 2008, *An account of global intra-industry trade 1962-2006*, World Development Report, Background Paper.
- Carr, K. (former Minister for Innovation, Industry, Science & Research) and Thomson, K. (Federal Member for Wills) 2010, *Investing in CSL Research to Secure Australia's Health*, Joint Media Release, 16 July
- Carr, K. (former Minister for Innovation, Industry, Science & Research) and Hodgett, D. (former Victorian Minister for Manufacturing) 2013, *\$123 million investment in Toyota Australia's future*, Joint Media Release, 5 August.
- Chaney, T. 2011, *The Network Structure of International Trade*, National Bureau of Economic Research, Working Paper no 16753, Cambridge.
- Chaney, T. 2014, 'The Network Structure of International Trade,' *American Economic Review*, vol 104, no. 11, pp. 3600-3634.
- CIE (Centre for International Economics) 2003, *Review of the R&D Start Program*, Prepared for the Department of Industry, Tourism and Resources, June.
- Combet, G., (former Minister for Climate Change, Industry and Innovation) Ryan, P. (former Victorian Deputy Premier) and Dalla-Riva, R. (former Victorian Minister for Manufacturing, Exports and Trade). 2012a, *\$90 million paper investment supports Latrobe Valley jobs*, Joint Media Release, 10 October.
- Combet, G., (former Minister for Climate Change, Industry and Innovation), Baillieu, T. (former Premier of Victoria) and Naphthine, D. (former Victorian Minister for Regional Cities and Racing and Minister for Ports and Minister for Major Projects) 2012b, *\$40 million funding for Point Henry aluminium smelter*, Joint Media Release, 29 June.
- Competition Policy Review 2015, *Competition Policy Review Final Report* (Professor Ian Harper, Chairman), Canberra, March.

-
- Crean, S. (former Minister of Trade), Green, B. (former Tasmanian Deputy Premier) and Sidebottom, S. (former Parliamentary Secretary for Agriculture, Fisheries and Forestry) 2012, *Dairy expansion drives economic diversification in Burnie*, Media Release, 15 June.
- De Backer, K. and Yamano, N. 2012, *International Comparative Evidence on Global Value Chains*, OECD Science, Technology and Industry Working Papers, no 2012/13, Paris.
- Dee, P. 2005, *The Australia–US Free Trade Agreement: An Assessment*, Pacific Economic Papers, No. 345, Australia-Japan Research Centre, Asia Pacific School of Economics and Government, Australian National University.
- Deloitte 2014, *Positioning for prosperity? Catching the next wave*, https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Building%20Lucky%20Country/Deloitte_au_business_positioning_for_prosperity_2014.pdf (accessed 30 April 2015).
- Department of Agriculture 2015a, *Rural Research and Development for Profit*, Agriculture & Food Rural Research and Development for Profit, Department of Agriculture, <http://www.agriculture.gov.au/agriculture-food/innovation/rural-research-development-for-profit> (accessed 23 February 2015).
- 2015b, *Farm Household Allowance Questions and Answers*, <http://www.agriculture.gov.au/ag-farm-food/drought/assistance/income-support-for-farmers/farm-household-allowance/farm-household-allowance-questions-and-answers> (accessed 11 March).
- 2015c, *Drought Concessional Loans*, Information page, <http://www.agriculture.gov.au/ag-farm-food/drought/assistance/concessional-loans> (accessed 5 March).
- Department of the Environment 2014a, *Portfolio Budget Statements 2014-15*, Budget Related Paper No. 1.7, Environment Portfolio, Canberra.
- 2014b, *New groundwater purchase round in the Queensland Central Condamine Alluvium*, Media Release, 15 July.
- 2014c, *New water purchase tender in southern New South Wales*, Media Release, 28 November.
- 2014d, *Annual Report 2013-14*, Commonwealth of Australia, Canberra.
- 2015, *National Landcare Programme*, <http://www.nrm.gov.au/> (accessed 9 June 2015).
- DFAT (Department of Foreign Affairs and Trade) 2013, *Trade in value added*, Canberra.
- 2014a, *China-Australia Free Trade Agreement – Key Outcomes*, <http://www.dfat.gov.au/fta/chafta/fact-sheets/key-outcomes.html> (accessed 4 December 2014).
- 2014b, *International Investment Australia 2013*, Canberra.

-
- 2015a, *East Asia Summit*, <http://dfat.gov.au/international-relations/regional-architecture/eas/Pages/east-asia-summit-eas.aspx> (accessed 29 April 2015).
- 2015b, *Environmental Goods Agreement*, <http://www.dfat.gov.au/trade/agreements/environmental-goods-agreement/Pages/environmental-goods-agreement.aspx>, (accessed 10 April 2015).
- 2015c, *Free Trade Agreements*, <http://www.dfat.gov.au/fta/> (accessed 10 April 2015).
- 2015d, *Trade in Services Agreement*, <http://dfat.gov.au/trade/agreements/trade-in-services-agreement/Pages/trade-in-services-agreement.aspx> (accessed 29 April 2015)
- 2015e, *WTO Agreement on Government Procurement*, <http://dfat.gov.au/international-relations/international-organisations/wto/Pages/wto-agreement-on-government-procurement.aspx> (accessed 29 April 2015).
- Department of Human Services 2012, *Transitional Farm Family Payment*, <http://www.frcc.org.au/wp-content/uploads/T-F-F-P-factsheet.pdf> (accessed 5 June 2015).
- Department of Industry and Science 2014a, *Customer Information Guide: Manufacturing Transition Programme*, <http://www.business.gov.au/grants-and-assistance/manufacturing/Manufacturing-Transition-Programme/Pages/Guidelines.aspx> (accessed 12 May 2015).
- 2014b, *Portfolio Budget Statements 2014-15*, Budget Related Paper no. 1.12, Canberra.
- EAS (East Asia Summit) 2014, *Chairman's Statement of 9th East Asia Summit (9th EAS)*, 13 November, http://www.asean.org/images/pdf/2014_upload/Chairman%20Statement%20of%20the%2025th%20ASEAN%20Summit.pdf, (accessed on 1 June 2015).
- EFIC (Export Finance and Insurance Corporation) 2014a, *Annual Report 2013-14*, Sydney.
- 2014b, *Budget Announcement — Return of Capital*, <http://www.efic.gov.au/news-room/latest-news/2014/may/budget-announcement-retrun-of-capital>, (accessed 29 April 2015).
- Financial System Inquiry 2014, *Financial System Inquiry Final Report* (David Murray Chairman), Commonwealth of Australia, Canberra, November.
- Findlay, C. and Rammal, H. 2013, 'Australia-EU Trade in Services: The Case of Australian Architecture Firms', paper presented to: Bringing Australia and the EU Closer: Is an FTA the solution?, Conference, ANU Centre for European Studies, 27-28 November, Canberra.
- Fink, C. and Nikomborirak, D. 2007, *Rules of Origin in Services: A Case Study of Five ASEAN Countries*, World Bank Policy Research Working Paper no 4130.
- French, R. (Chief Justice) 2014, 'Trade Law and the Australia Courts', Law Council of Australia, International Trade Law Symposium, 18 September, National Portrait Gallery, Canberra.

-
- G20 (Group of 20) 2014a, *G20 Leaders' Communique*, Brisbane Summit, 15-16 November 2014.
- 2014b, *Comprehensive Growth Strategy — Australia*, http://www.g20australia.org/sites/default/files/g20_resources/library/g20_comprehensive_growth_strategy_australia.pdf (accessed 29 April 2015)
- 2014c, *Comprehensive Growth Strategy — European Union*, http://www.g20australia.org/sites/default/files/g20_resources/library/g20_comprehensive_growth_strategy_european_union.pdf (accessed 29 April 2015)
- 2014d, *Comprehensive Growth Strategy — Japan*, http://www.g20australia.org/sites/default/files/g20_resources/library/g20_comprehensive_growth_strategy_japan.pdf (accessed 29 April 2015)
- 2014e, *Comprehensive Growth Strategy — United States*, http://www.g20australia.org/sites/default/files/g20_resources/library/g20_comprehensive_growth_strategy_united_states.pdf (accessed 29 April 2015)
- Gillard, J. (former Prime Minister) 2012, *Speech to GM Holden*, 22 March, Canberra.
- , Carr K. (former Minister for Manufacturing), Ryan, P. (former Victorian Acting Premier) and Dalla-Riva, R. (former Victorian Minister for Manufacturing, Exports and Trade) 2012, *\$103 million upgrade for Ford Falcon and Territory*, Media Release, 10 January.
- Giovanni, J.D. and Levchenko, A. A. 2010, *Firm Entry, Trade and Welfare in Zipf's World*, National Bureau of Economic Research, Working Paper no 16313, Cambridge.
- Grattan Institute 2011, *Investing in regions: Making a difference*, Grattan Institute Report No. 2011-4, May.
- Gretton, P. 2013, *On Input-Output tables: uses and abuses*, Staff Research Note, October.
- and Gabbittas, O. 2003, *Firm Size and Export Performance: some empirical evidence*, Productivity Commission Staff Research Paper.
- Hanson, G.H., Lind, N. and Muendler, M.A. 2014, *The Dynamics of Comparative Advantage*, <http://www.princeton.edu/mwg-internal/de5fs23hu73ds/progress?id=YFTVBtGYcN>, (accesses 29 April 2015)
- Harper review 2015. *See* Competition Policy Review 2015.
- Helpman, E. 2013, *Foreign Trade and Investment: Firm level Perspectives*, National Bureau of Economics Research, Working Paper no 19057, Cambridge.
- Hunt, G. (Minister for the Environment) 2014, *Shortlisted companies announced to build new Antarctic icebreaker*, Media Release, 30 May.
- IBIS World 2013, *Australia's Top 5 New Exports*, Media Team, 12 November.
- IC (Industry Commission) 1992, *Review of Overseas Export Enhancement Measures*, Inquiry Report, no. 22, Canberra.

-
- 1995, *Assistance to agricultural and manufacturing industries*, Information Paper, Canberra.
- ICTSD (International Centre for Trade and Sustainable Development) 2014, *EU, Canada sign trade deal as Germany raises ISDS questions*, Media Release, 2 October.
- Johannson, A. and Olaberria, E. 2014 *New Evidence on the Determinants of Industrial Specialisation*, Organisation for Economic Co-operation and Development, Working Paper no 1112, Paris.
- Johnson, R. C 2014, 'Five Facts about Value-Added Exports and Implications for Macroeconomics and Trade Research', *Journal of Economic Perspectives*, vol. 28, no. 2, pp. 119-142.
- and Noguera, G. 2012a, *Fragmentation and Trade in Value Added over Four Decades*, National Bureau of Economic Research, Working Paper no 18186, Cambridge.
- and Noguera, G. 2012b, Accounting for Intermediates: Production Sharing and Trade in Value Added, *Journal of International Economics*, vol. 86 (2), pp. 224-236.
- Joyce, B. (Minister for Agriculture) 2014a, *100 million reasons for rural R&D innovation*, Media Release, 15 October.
- 2014b, *\$100 million new drought recovery loan announced*, Media Release, 4 December.
- Joyce, B. (Minister for Agriculture) and Hunt, G. (Minister of the Environment) 2014, *Christmas comes early for Landcare*, Joint Media Release, 18 December.
- JSCOT (Joint Standing Committee on Treaties) 2014, *Agreement between Australia and Japan for an Economic Partnership*, Report No. 144, October.
- Keenan, M. (Minister for Justice) 2015, *Australian Government to consult on changes to natural disaster funding*, Media Release, 1 May.
- Kelly, G. and La Cava, G. L. 2014, *International Trade Costs, Global Supply Chains and Value-added Trade in Australia*, Research Discussion Paper, Economic Group, Reserve Bank of Australia, August.
- Koopman, R., Wang, Z. and Wei, S.J. 2014, 'Tracing Value-Added and Double Counting in Gross Exports', *American Economic Review*, vol. 102, no. 2, pp. 459-494.
- Kowalski, P. 2011, *Comparative Advantage and Trade Performance: Policy Implications*, OECD Trade Policy, Working Papers, no 121, Paris.
- Krugman, P. and Obstfeld, M. 2009, 'International economics theory and policy', Eighth Edition, Pearson Addison-Wesley, Boston.
- Leighton, A. 2012, *Norske Skog to restructure Australian operations*, Regional Media Release, 9 September.

-
- Levchenko, A. A. and J. Zhang (2011), *The Evolution of Comparative Advantage: Measurement and Welfare Implications*, National Bureau of Economic Research, NBER Working Paper no. 16806, Cambridge MA.
- MacFarlane, I. (Minister for Industry and Science) 2014a, *Government delivers \$50m commitment to expand higher-value manufacturing*, Minister for Industry and Science, Media Release, 1 September.
- 2014b, *Business leader appointed to review Cooperative Research Centres*, Media Release, 16 September.
- and Birmingham, S., (Assistant Minister for Education and Training) 2015, *\$16M investment to drive diversification in the auto supply chain*, Joint Media Release, 10 March.
- MBDA (Murray Darling Basin Authority) 2014, *Annual Report 2013-14*, Canberra.
- McKinsey Australia 2014, *Compete to Prosper: Improving Australia's global competitiveness*, authors J. Lydon, D. Dyer, and C. Bradley., McKinsey.
- Miroudot, S., Lanz, R. and Ragoussi, A. 2009 *Trade in Intermediate Goods and Services*, OECD, Working Paper no 93, Paris.
- Murray review. See Financial System Inquiry 2014.
- Napthine, D. (former Premier, Victoria) and Ryan, P. (former Deputy Premier and Minister for Regional and Rural Development) 2014, *Victorian coalition government makes \$22 million co-investment in SPC*, Media Release, 6 June.
- OBPR (Office of Best Practice Regulation) 2014, *Final Assessment Regulation Impact Statement – Japan Australia Economic Partnership Agreement*, 9 May.
- OECD (Organisation for Economic Cooperation and Development) 2002, 'Intra-industry and intra-firm trade and the internationalisation of production', in *OECD Economic Outlook*, Volume 2002, Issue 1, No. 71, June.
- 2011a, *Comparative Advantage and Trade Performance: Policy Implications*, Paris.
- 2011b, *Globalisation, Comparative Advantage and the Changing Dynamics of Trade*, Paris.
- OECD/WTO 2013, *Trade in Value Added (TIVA) Indicators: Australia*, <https://stats.oecd.org/index.aspx?queryid=47807> (accessed 1 June 2015).
- Outlook Economics 2014 (unpublished) Aus-M, Canberra: Outlook Economics, quoted in Australian Government 2014b, *Industry Innovation and Competitiveness Agenda: An action plan for a stronger Australia*, p. 9.
- Parliament of the Commonwealth of Australia 2013, House of Representatives, *Tax Laws Amendment (Research and Development) Bill 2013*, Explanatory Memorandum.
- PC (Productivity Commission) 2000, *Trade & Assistance Review 1999-2000*, Annual Report Series, Canberra.

-
- 2004a, *Rules of Origin under the Australia-New Zealand Closer Economic Relations Trade Agreement*, Productivity Commission Research Report, Canberra.
 - 2004b, *Trade & Assistance Review 2003-04*, Annual Report Series, Canberra.
 - 2007, *Public Support for Science and Innovation*, Productivity Commission Research Report, Canberra.
 - 2008, *The '2001-02' series of assistance estimates*, Methodological Annex to Trade & Assistance Review 2005-06 and 2006-07, Canberra.
 - 2009a, *Government Drought Support*, Inquiry Report no. 46, Final Inquiry Report, Melbourne.
 - 2009b, *Trade & Assistance Review 2007-08*, Annual Report Series, Canberra.
 - 2010a, *Bilateral and Regional Trade Agreements*, Productivity Commission Research Report, Canberra.
 - 2010b, *Impacts and Benefits of COAG Reforms: Reporting Framework*, Productivity Commission Research Report, Canberra.
 - 2011a, *Rural Research and Development Corporations*, Inquiry Report, no. 52, Canberra.
 - 2011b, *Trade & Assistance Review 2009-10*, Annual Report Series, Canberra.
 - 2012a, *Australia's Export Credit Arrangements*, Inquiry Report no. 58, Canberra.
 - 2012b, *Trade & Assistance Review 2010-11*, Annual Report Series, Canberra.
 - 2013, *Trade & Assistance Review 2011-12*, Annual Report Series, Canberra.
 - 2014a, *Australia's Automotive Manufacturing Industry*, Inquiry Report no. 70, Canberra.
 - 2014b, *Methodological Annex: Estimation Framework, Coverage and Re-benchmarking of Estimates*, Trade & Assistance Review 2011-12, Canberra.
 - 2014c, *Natural Disaster Funding Arrangements*, Inquiry Report no. 74, Canberra.
 - 2014d, *Relative Costs of Doing Business in Australia: Dairy Product Manufacturing*, Productivity Commission Research Report, Melbourne.
 - 2014e, *Relative Costs of Doing Business in Australia: Retail Trade*, Productivity Commission Research Report, Melbourne.
 - 2014f, *Tasmanian Shipping and Freight*, Inquiry Report no. 69, Canberra.
 - 2014g, *Trade & Assistance Review 2012-13*, Annual Report Series, Canberra.
- PMI (Philip Morris International) 2014, *Bilateral Investment Treaty (BIT) Arbitration*, Company Statement, http://www.pmi.com/eng/media_center/company_statements/Pages/bilateral_investment_treaty.aspx# (accessed 2 December 2014).
- Primary Industries and Regions SA 2014, *South Australian River Murray Sustainability Irrigation Industry Improvement Program (3IP)*, Government of South Australia,

-
- http://www.pir.sa.gov.au/__data/assets/pdf_file/0003/225246/sarms3ip-guidelines_new.pdf (accessed 3 February 2015).
- PriceWaterhouseCoopers (PwC) 2013, 'Industry Sectors: Analysis and Forecasting', Report to Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, industry.gov.au/industry/.../PwC-Report-on-15-Industry-Sectors.pdf (accessed 5 June 2015).
- RBA (Reserve Bank of Australia) 2014, *New Measures to Facilitate the Development of the Renminbi Market in Australia*, Media Release, 2014-20, 17 November.
- RCEP (Regional Comprehensive Economic Partnership) 2014, *The Second Regional Comprehensive Economic Partnership (RCEP) Ministerial Meeting Joint Media Statement, 27 August, Nay Pyi Taw Myanmar, at* <http://www.dfat.gov.au/fta/rcep/140827-joint-statement.html> (accessed 4 December 2014).
- Riccaboni, M. and Shiavo, S. 2013, *Stochastic Trade Networks*, Institute For Advanced Studies Lucca, Working Paper no 01.
- Robb, A. (Minister for Trade and Investment) 2014a, *Australian Government's Statement of Expectations for the Export Finance and Insurance Corporation*, 13 November, http://www.efic.gov.au/media/2162/efic_soe_february_2015.pdf (accessed 9 April 2015).
- 2014b, *Government sets its sights on new trade deal*, Media release, 14 November.
- 2014c, *Landmark China-Australia Free Trade Agreement*, Media Release, 17 November.
- 2014d, *Robb announces review appointee*, Media Release, 10 December.
- 2014e, *Signature of AANZFTA Protocol*, Media Release, 27 August.
- 2014f, *Statement of the Ministers and Heads of Delegation for the Trans-Pacific Partnership countries*, Statement, 27 October.
- 2015a, *Cadbury Funding Application Withdrawn*, Media Release, 5 March.
- 2015b, *Robb strongly rejects TPP scaremongering*, Media Release, 3 March.
- and Billson, B. (Minister for Small Business) 2014, *\$50m boost to help small businesses exports*. Joint Media Release, 6 March.
- SCFTAAUSA (Select Committee on the Free Trade Agreement between Australia and the United States of America) 2004, *Final Report*, August.
- SFADTLC (Senate Foreign Affairs, Defence and Trade Legislation Committee) 2014, *Trade and Foreign Investment (Protecting the Public Interest) Bill 2014*, Final Report August.
- Shikher, S. 2013, 'Determinants of trade and specialization in the organization for Economic Co-operation and Development Countries', *Economic Inquiry*, Vol. 51, Issue 1, pp. 138-158, January.

-
- Simplot Australia 2012, *Simplot announces the completion of its cogeneration plant at Ulverstone*, Media release, 6 December.
- Tasmanian Government 2012, *Funding support for growth in the dairy industry*, News Item, 15 June.
- Timmer, M., Erumban, A. A., Los, B., Stehrer, R. and Vries, G. de, 2014, 'Slicing Up Global Value Chains,' *Journal of Economic Perspectives*, vol. 28, no. 2, pp. 99-118.
- Treasury 2001, *History of Fuel Taxation in Australia*, Background paper to the Fuel Taxation Inquiry, March.
- Truss, W. (Minister for Infrastructure and Regional Development) and Abbott, T. (Prime Minister) 2015, *Boosting Tasmanian Business, Investment and Jobs*, Media release, 13 March.
- Turnbull, M. (Minister for Communications) 2014a, *New measures to tackle online copyright infringement*, Malcolm Turnbull MP, <http://web.archive.org/web/20150408131532/http://www.malcolmturnbull.com.au/issues/new-measures-to-tackle-online-copyright-infringement> (accessed 5 June 2015).
- 2014b, *Transitioning NICTA to a self-sustainable model*, http://www.minister.communications.gov.au/malcolm_turnbull/news/transitioning_nicta_to_a_self-sustainable_model#.VMbjXPIPz_o (accessed 27 January 2015).
- 2015, *Online copyright infringement FAQs*, <http://www.malcolmturnbull.com.au/policy-faqs/online-copyright-infringement-faqs> (accessed 5 June 2015).
- Turnbull, M. (Minister for Communications), Brandis, G. (Attorney General) and Cormann, M. (Minister of Finance) 2014, *Cloud adoption streamlined for Government*, Media Release, 8 October.
- UNCTAD (United Nations Conference on Trade and Development) 2013, *Classification of Non-Tariff Measures*, February 2012 Version, United Nations, New York and Geneva.
- 2015a, *Database of Investor-State Dispute Settlement (ISDS) (reduced version)*, <http://unctad.org/en/Pages/DIAE/ISDS.aspx> (accessed 28 April 2015).
- 2015b, *Recent Trends in IIAS and ISDS*, No. 1 February.
- World Bank 2010, *World DataBank – World Development Indicators*, <http://databank.worldbank.org/data/home.aspx> (accessed 28 May 2015).
- 2015, *World DataBank – World Development Indicators*, <http://databank.worldbank.org/data/home.aspx> (accessed 28 May 2015).
- Webb, R. 2014, *Taxation Treatment of ethanol and biodiesel*, http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/BudgetReview201415/Ethanol (accessed 9 June 2015).
- WTO (World Trade Organisation) 2011a, *Dataset of services commitments in regional trade agreements*, https://www.wto.org/english/tratop_e/serv_e/dataset_e/dataset_e.htm (accessed 27 May 2015).

-
- 2011b, Services Commitments in Preferential Trade Agreements: An Expanded Dataset, Staff Working Paper ERSD-2011-18, https://www.wto.org/english/res_e/reser_e/ersd201118_e.htm (accessed 27 May 2015)
- 2013, *World Trade Report 2013: Factors shaping the future of world trade*, World Trade Organization, Geneva.
- 2014a, *International Trade Statistics 2014*, World Trade Organization, Geneva.
- 2014b, *Azevêdo: Members unable to bridge the gap on trade facilitation*, News Items, 31 July, https://www.wto.org/english/news_e/news14_e/tnc_infstat_31jul14_e.htm (accessed 22 May 2015).
- 2014c, *Azevêdo hails breakthrough on the WTO's Information Technology Agreement*, News Items, 11 November, http://www.wto.org/english/news_e/news14_e/ita_11nov14_e.htm (accessed 3 December 2014).
- 2014d, *Differences remain on deadlines and forums for post-Bali work on agriculture*, News Items, 16 September, http://www.wto.org/english/news_e/news14_e/agcom_16sep14_e.htm (accessed 3 December 2014).
- 2014e, Dispute Settlement : Australia — Certain Measures Concerning Trademarks, Geographical Indications and Other Plain Packaging Requirements Applicable to Tobacco Products and Packaging, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds467_e.htm, (accessed 10 April 2015).
- Yang, M. J. 2014, *Firm Heterogeneity and Trade in a Distorted-Gravity World*. University of Washington, Working Paper, 23 March.