



Australian Government
Productivity Commission

Trade & Assistance Review
2016-17

Methodological
Annex

© Commonwealth of Australia 2018



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

Terms of use for the Coat of Arms are available from the Department of the Prime Minister and Cabinet's website: <https://www.pmc.gov.au/government/commonwealth-coat-arms>

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 and Assistance Review 2016-17: Methodological Annex.*

If you have adapted, modified or transformed this work in anyway, please use the following, *Source: based on Productivity Commission data, Trade and Assistance Review 2016-17: Methodological Annex.*

An appropriate reference for this publication is:

Productivity Commission 2018, *Trade and Assistance Review 2016-17: Methodological Annex*, Annual Report Series, Canberra.

Publications enquiries

Media, Publications and Web, phone: (03) 9653 2244 or email: mpw@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).

Contents

1	About this annex	1
2	Programs added to the assistance estimates in 2016-17	3
3	Programs previously included in the estimates that had zero assistance in 2016 17	8
4	Methodological changes to the estimates	10
	References	13

1 About this annex

Under its establishing Act, the Productivity Commission is required to report annually on industry assistance and its effects on the economy. As part of fulfilling this function, the Commission publishes quantitative estimates of assistance to Australian industry each year in its *Trade & Assistance Review*. Quantifying industry assistance helps to show who is advantaged and who is disadvantaged by industry assistance and can enable governments to make better informed policy decisions, potentially leading to improvements in the allocation of the community's scarce resources and, through this, improve community welfare.

The Commission and its predecessors commenced publishing assistance estimates in the early 1970s. The estimates initially focused on the main forms of import protection for the manufacturing sector and domestic marketing arrangements for agriculture. Over time, the coverage has been expanded to include a broader range of measures, most notably budgetary outlays and tax concessions.

The Commission's estimates focus on the main forms of support — tariffs, budgetary outlays and tax concessions — that selectively assist firms, activities or industries and that can be quantified on an annual basis given practical constraints in measurement and data availability.

This annex reports on changes made to the Commission's assistance estimates for *Trade & Assistance Review 2016-17*. These changes comprise:

- programs added to the estimates for 2016-17 (chapter 2)
- programs for which funding ceased in 2016-17 (chapter 3)
- methodological changes to the assistance estimates for the R&D Tax Incentive scheme (chapter 4).

This annex is the latest in a series that provides detailed information and updates on the Commission's assistance estimates and methodologies. Other relevant annexes, published since 2000, are listed in table 1.1. The Methodological Annex to the *Trade & Assistance Review 2011-12*, *Estimation Framework, Coverage and Re-benchmarking of Estimates*, contains a comprehensive benchmark listing of budgetary items included in assistance estimates. Updates to that list are notified in each subsequent annex.

Table 1.1 Previous methodological annexes to *Trade & Assistance Review*

<i>Date</i>	<i>Title</i>	<i>Details</i>
December 2000	Allocating Budgetary Assistance by 27 ANZSIC-based Industry Groupings	Methodological Annex: Trade & Assistance Review 1999-2000
December 2002	The Commission's Assistance Measurement System	Methodological Annex A: Trade & Assistance Review 2001-02
December 2002	Allocating Budgetary Assistance to Primary Production by 10 ANZSIC-based Industry Groupings	Methodological Annex B: Trade & Assistance Review 2001-02
June 2006	Allocating Budgetary Assistance by Industry Groupings: Recent Revisions	Methodological Annex: Trade & Assistance Review 2004-05
December 2008	The '2001 02' series of assistance estimates	Methodological Annex: Trade & Assistance Review 2005-06 and 2006-07
December 2011	Methodological Annex: for Reviews Commencing 2008 09	Methodological Annex: Trade & Assistance Review 2008-09
June 2012	Changes to the Commission's Assistance Estimates	Methodological Annex: Trade & Assistance Review 2010-11
February 2014	Estimation Framework, Coverage and Re-benchmarking of Estimates	Methodological Annex: Trade & Assistance Review 2011-12
October 2014	Changes to the Commission's Assistance Estimates	Methodological Annex: Trade & Assistance Review 2012-13
November 2015	Changes to the Commission's Assistance Estimates	Methodological Annex: Trade & Assistance Review 2013-14
October 2017	Estimation Framework, Coverage and Re-benchmarking of Estimates	Methodological Annex: Trade & Assistance Review 2015-16

Source: www.pc.gov.au/research/ongoing/trade-assistance.

A full list of the Commission's *Trade & Assistance Reviews* can be found at <http://www.pc.gov.au/research/ongoing/trade-assistance>.

2 Programs added to the assistance estimates in 2016-17

This chapter describes Australian Government budgetary programs, including both new and existing programs, added to the assistance estimates for *Trade & Assistance Review 2016-17*. Table 2.1 lists these measures.

Table 2.1 Budgetary measures added to the assistance estimates for Trade & Assistance Review 2016-17

<i>Program</i>	<i>Form^a</i>	<i>Initial benefiting industry</i>	<i>Assistance value 2016-17</i>
			<i>\$m</i>
Farm Business Concessional Loans Scheme	BO	Unallocated primary production	3.6
Alcoa Portland Assistance	BO	Primary metal and metal products	30.0
Centre for Defence Industry Capability Program	BO	Unallocated manufacturing	0.4
Data Retention Industry Grants Programme	BO	Information media and telecommunications services	120.1
Exploration Development Incentive	TE	Mining	13.3
Funding for major films – Alien: Covenant and Thor: Ragnarok	BO	Arts and recreation services	17.6
Funding for major films – Pirates of the Caribbean: Dead Men tell No Tales	BO	Arts and recreation services	21.6
Unincorporated Small Business Tax Discount	TE	Unallocated other	550.0
TOTAL			756.6

^a BO: budgetary outlay. TE: tax expenditure.

Source: Australian Government department and agency reports (various years) and departmental personal communications.

Farm Business Concessional Loans Scheme

In November 2016, the Australian Government announced the introduction of the new Farm Business Concessional Loans Scheme intended to support farm businesses dealing with and recovering from drought. The scheme forms part of the government's \$2.5 billion 10 year commitment to concessional loans as outlined in the government's Agricultural Competitiveness White Paper. The scheme brings together differing loan products previously provided by the government including drought concessional loans, drought recovery concessional loans and dairy recovery concessional loans. Under the scheme, loans will be provided at 2.47 per cent interest rate over a 10 year term while loan amounts will be up to 50 per cent of a farm business' final debt position to a maximum of \$1 million (Joyce 2016).

The value of Australian Government administered expenses for 2016-17 was \$3.6 million (DAWR 2017, pp. 128, 129).

The program is assessed as initially benefiting primary production activities. However, information on the specific industry incidence of the program has not been readily available. Accordingly, the budgetary outlay has been classified to the Unallocated primary production industry grouping.¹

Alcoa Portland Assistance

In January 2017, the Australian Government announced it would provide a \$30 million direct grant to the Alcoa Portland Aluminium Smelter. The grant is intended to restore operations at the smelter following a power supply failure in 2016 that caused damage to production lines and reduced the operating capacity of the smelter. The funds provided can be used for capital improvements, maintenance and repairs to damage caused by the power outage. The support is conditional on operations at the smelter continuing until at least 30 June 2021 and maintaining production to at least 90 per cent of pre-power outage levels (Hunt 2017).

The value of Australian Government administered expenses for 2016-17 was \$30 million (DIIS 2017, pers. comm., November 2017).

The program is assessed as initially benefiting Alcoa's Aluminium smelting operations in Portland Victoria and has been allocated to the *Metal and fabricated metal products* industry grouping.

¹ 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 currently part of the estimates include State and Territory government support to industry, although state-based agricultural marketing arrangements were included in earlier Commission assistance estimates.

Centre for Defence Industry Capability Program

The Centre for Defence Industry Capability (CDIC) program is an initiative announced as part of the Australian Governments 2016 Defence Industry Policy Statement. The CDIC is intended to help consolidate existing defence industry programs and to provide a transparent, focused interface between Defence and Australian industry. The CDIC focuses on three core streams of activity: industry development, facilitating innovation and business competitiveness and exports.

- The Industry Development Stream will identify and support sector-wide initiatives
- The Business Competitiveness and Exports Stream will provide defence-specific business advice and development support for small to medium enterprises to improve their productivity and global competitiveness in areas of specific interest to Defence
- Facilitating innovation will assist Australian industry to access Defence innovation funding, develop industry awareness and provide information about Defence innovation requirements (DD 2016).

The CDIC will be headquartered in Adelaide and will receive around \$230 million in funding over the next decade to 2025-26 (Pyne 2016).

The value of Australian Government administered expenses for 2016-17 was \$0.4 million (DD 2017).

The program is assessed as initially benefiting firms predominately in the manufacturing sector. However, information on the specific industry incidence of the program has not been readily available. Accordingly, the budgetary outlay has been classified to the *Unallocated manufacturing* industry grouping.

Data Retention Industry Grants Programme

In January 2016, the Australian Government announced the opening of the \$128.4 million Data Retention Industry Grants (DRIG) Programme. The program is intended to assist the telecommunications industry with upfront costs of meeting their data retention obligations as stated in the *Telecommunications (Interception and Access) Amendment (Data Retention) Act 2015*. The DRIG consists of a single funding round open to telecommunications service providers who have data retention obligations. These service providers will be required to retain limited communications data for up to two years (Truss 2016).

The value of Australian Government administered expenses for 2016-17 was \$120.1 million (AG 2018, pers. comm., January 2018).

The program is assessed as initially benefiting firms engaged in telecommunications activities and has been allocated to the *Information media and telecommunications* industry grouping.

Exploration Development Incentive

In the 2014-15 Budget, the Australian Government announced that it would introduce a tax incentive to Australian resident shareholders of small mineral exploration companies intended to support ‘greenfields’ minerals exploration undertaken by these companies in Australia. The scheme is intended to provide an economic incentive to invest in the Australian mining sector. Under the scheme, eligible exploration companies will be able to create exploration credits by giving up a portion of their tax losses from ‘greenfields’ minerals expenditure, and distributing these exploration credits to equity shareholders. Australian resident shareholders that are issued with an exploration credit will be entitled to a refundable tax offset or additional franking credits. The exploration company’s carry forward losses are reduced proportionately to reflect the amount of exploration credits created (ATO 2018a).

The value of Australian Government administered expenses for 2016-17 was \$13.3 million (ATO 2018a). Expenditure reported in the *Trade & Assistance Review* in the two prior years has been rectified in the 2016-17 edition (\$21.1 million for 2014-15 and \$13.7 million for 2015-16).

This program is assessed as initially benefiting firms engaged in mining activities and has been allocated to the *Mining* industry grouping.

Funding for major films

In October 2014, the Australian Government announced that it would provide a one off grant of \$21.6 million towards the production of the film ‘Pirates of the Caribbean: Dead Men tell No Tales’ (Brandis 2014).

In October 2015, the Australian Government announced that it would provide a one off grant of \$47.3 million over two years from 2016-17 for production of two major films in Australia: ‘Alien: Covenant’ and ‘Thor: Ragnarok’ (Bishop 2015).

The value of Australian Government administered expenses for 2016-17 was \$39.2 million (Australian Government 2013, p. 241; 2015a, p. 152).

Funding for the films has been allocated to the *Arts and recreation services* industry grouping.

Unincorporated Small Business Tax Discount

In the 2014-15 Budget, the Australia Government announced it would introduce a tax discount for unincorporated small businesses. Under the discount unincorporated small businesses will receive a 5 per cent discount on the tax payable on their business income,

with the discount capped at \$1000 per individual in an income year, with the discount to be delivered as a tax credit in their return. The discount was broadly in-line with the government's 1.5 percentage point tax cut for small incorporated companies (Australian Government 2015b).

In the 2016-17 Budget, the Government announced an increase to the tax discount for unincorporated small businesses incrementally over 10 years from 5 per cent to 16 per cent. From 1 July 2016, the tax discount will increase to 8 per cent and be extended to individual taxpayers with business income from an unincorporated business that has aggregated annual turnover less than \$5 million. The tax discount will remain constant at 8 per cent for eight years, then increase to 10 per cent in 2024-25, 13 per cent in 2025-26 and finally 16 per cent in 2026-27. The discount is capped at \$1000 per individual for each income year and is delivered as a non-refundable tax offset (ATO 2018b).

The value of the Australian Government tax concession for 2016-17 was \$550 million (Australian Government 2018).

This concession is assessed as initially benefiting unincorporated small businesses. However, information on the specific industry incidence of the concession has not been readily available. Accordingly, the tax concession has been classified to the *Unallocated other* industry grouping.

3 Programs previously included in the estimates that had zero assistance in 2016-17

This chapter presents information on 15 programs which were included in the assistance estimates for 2015-16 (and earlier years where applicable), but which had zero assistance in 2016-17. Assistance provided by these programs was \$85.4 million in 2015-16 (table 3.1).

Table 3.1 Assistance programs in 2015-16 with zero assistance in 2016-17

<i>Program</i>	<i>Form^a</i>	<i>Initial benefiting industry</i>	<i>Assistance value 2015-16</i>
			<i>\$m</i>
Clothing and Household Textile Building Innovative Capability Program	BO	Textile, leather, clothing and footwear	21.2
ICT centre of excellence	BO	Information media and telecommunications	21.0
Bindaree Beef assistance	BO	Food products	11.1
Australian Tropical Medicine Commercialisation Grants	BO	Basic chemical and chemical products	7.0
Commercialisation Australia	BO	Horticulture and fruit growing; Aquaculture and fishing; Primary production support services; Food, beverages and tobacco; Petroleum, coal, chemical and rubber products; Non-Metallic mineral products; Metal and fabricated metal products; Other transport equipment; Machinery and equipment manufacturing; Electricity, gas, water and waste services; Construction; Retail trade; Information, media and telecommunications; Financial and insurance services; Property, professional and administrative services; Public administration and safety; Education and training; Health care and social assistance	5.9
Skilling Australian Defence Industry	BO	Unallocated manufacturing	5.5

(continued next page)

Table 3.2 (continued)

<i>Program</i>	<i>Form^a</i>	<i>Initial benefiting industry</i>	<i>Assistance value 2015-16</i> \$m
Clean Technology Investment - General Program	BO	Textile, leather, clothing and footwear; Wood and paper products; Petroleum, coal, chemical and rubber products; Non-Metallic mineral products; Metal and fabricated metal products; Machinery and equipment manufacturing	3.3
Taxation assistance for victims of Australian natural disasters	TE	Unallocated other	3.0
Capital expenditure deduction for mining, quarrying and petroleum operations	TE	Mining	2.0
Clean Technology Innovation Program	BO	Machinery and equipment manufacturing; Electricity, gas, water and waste services	1.4
National Urban Water and Desalination Plan	BO	Unallocated other	1.0
Enterprise Connect Innovation Centres	BO	Mining; Food, beverages and tobacco; Textile, leather, clothing and footwear; Wood and paper products; Printing and recorded media; Petroleum, coal, chemical and rubber products; Non-Metallic mineral products; Metal and fabricated metal products; Motor vehicle and parts; Other transport equipment; Machinery and equipment manufacturing; Furniture and other manufacturing; Electricity, gas, water and waste services; Construction; Wholesale trade; Retail trade; Accommodation and food services; Transport, postal and warehousing; Information, media and telecommunications; Property, professional and administrative services; Education and training; Health care and social assistance; Arts and recreation services; Unallocated other	1.0
Carbon Farming Initiative	BO	Sheep, beef cattle and grain farming; Forestry and logging	0.9
Illawarra Region Innovation and Investment Fund	BO	Unallocated manufacturing	0.8
Automotive New Markets Initiative	BO	Motor vehicle and parts	0.3
TOTAL			85.4

^a BO: budgetary outlay. TE: tax expenditure.

Source: Commission estimates.

4 Methodological changes to the estimates

For this year's *Review*, the Commission has revised the industry allocation method for the R&D Tax Incentive scheme. The change applies to 2011-12 through to 2016-17.

Commencing in 2011-12, the R&D Tax Incentive scheme (the replacement scheme for the R&D tax concession and Premium R&D tax concession schemes) provides a tax offset for eligible R&D activities to encourage firms to engage in R&D that benefits Australia (ATO 2018). The Incentive has two main components:

- a refundable tax offset for certain eligible entities whose aggregated turnover is less than \$20 million and payable at a rate of 43.5 per cent of expenditure on eligible R&D activities²
- a non-refundable tax offset for all other eligible entities payable at a rate of 38.5 per cent on eligible R&D expenditure.

Aggregate estimate

An estimate of the aggregate assistance provided by the each of the two components of the R&D Tax Incentive is published in the Science, Research and Innovation Budget Tables (Department of Industry, Innovation and Science). This estimate is based on the year in which the R&D activity occurs. However, the financial benefit of the Tax Incentive is realised after tax returns are completed. The Commission assumes a one year lag, such that the Commission's estimate of aggregate assistance, in year T (say 2016-17), uses the Department's estimate in year T-1 (2015-16). A lag between conduct of R&D activity and realisation of the assistance is consistent with the Treasury treatment of the Tax Incentive in the Tax Expenditure Statement.

² For example, a company with a turnover of \$10 million and R&D expenditure of \$1 million would receive a \$435 000 refundable offset (because they have a turnover less than \$20 million and are therefore eligible for the 43.5% refundable tax offset). If the company is profitable, the benefit/assistance is only the amount over and above what they would have received in the absence of the program (i.e. a standard deduction at the company tax rate = \$275 000). The benefit is therefore the difference between these amounts (\$160 000). If the company was in tax loss, they are not able to benefit from a standard tax deduction and the benefit/assistance amount is therefore the entire \$435 000.

Industry allocation

To allocate the R&D Tax Incentive across the Commission's ANZSIC-based industry grouping, the Commission uses data supplied confidentially by the ATO and the ABS survey of Business Expenditure on R&D (BERD) (Cat. no. 8104.0).

Step 1 — Converting the ATO data to industry shares

The ATO provides data on eligible R&D expenditure by type of claim and ANZSIC industry. The actual tax benefit depends on the subsidy rate and whether the claiming business is in tax loss or profit.

For any given industry (i), we define two shares:

$$\alpha_i = \frac{(NR1_i + NR2_i)}{\sum_{i=1}^N (NR1_i + NR2_i)}$$

$$\theta_i = \frac{R_i}{\sum_{i=1}^N R_i}$$

where NR1 is the non-refundable R&D tax offset to be used in a given year (say 2015-16), NR2 is the non-refundable tax offset carried forward to the next year (which would be 2016-17 for R&D undertaken in 2015-16), and R is the refundable R&D tax offset. The share α is based on both NR1 and NR2 because this will give a more accurate estimate of the true share of total industry assistance for any given industry compared with using one or other of these spending amounts alone.

The estimated shares α and θ were based on the most recent ATO data (which related to 2015-16). It was assumed that these would be a reasonable approximation for the shares that would apply in 2016-17.

The level of assistance for any given industry in 2016-17 was then estimated by applying the industry shares α and θ to the relevant aggregate non-refundable and refundable assistance amounts in the Budget Tables described above.

Step 2 — Adjustment for the finance and insurance industry share, 2011-12 and 2012-13

In 2011-12 and 2012-13, the industry share for the finance and insurance industry from ATO data was the highest (by far) of all industries, for the non-refundable components. In contrast the ABS BERD survey recorded a much lower share of total R&D by the finance and insurance industry. For 2011-12 and 2012-13, the Commission used the ABS BERD share rather than the ATO share for the *finance and insurance* industry, and the ATO shares for all other industries were all slightly increased, maintaining the relativities.

For 2013-14, 2014-15 and 2015-16 the ATO data shows much lower industry shares for the *finance and insurance* industry for the *non-refundable component*, and no longer the highest ranking. For these years the Commission has used the ATO data.

For the *refundable component* of the scheme, the ATO share for the *finance and insurance* industry has been relatively low for the life of the scheme (2011-12 to 2016-17) and no adjustments have been made.

References

- Australian Government 2013, *Budget Paper No. 2 Budget Measures 2013-14*, Canberra, May.
- 2015a, *Mid-Year Economic and Fiscal Outlook 2015-16*, Canberra, December.
- 2015b, *Budget 2014-15 – Growing Jobs and Small Businesses*, Canberra, May.
- 2018, *Tax Expenditure Statement 2017*, Department of Treasury, Canberra, January.
- ATO (Australia Taxation Office) 2018a, *Exploration Development Incentive*, <https://www.ato.gov.au/Business/Exploration-Development-Incentive/> (accessed 30 May 2018).
- 2018b, *Increase the unincorporated small business tax discount*, <https://www.ato.gov.au/General/New-legislation/In-detail/Direct-taxes/Income-tax-for-businesses/Increase-the-unincorporated-small-business-tax-discount/> (accessed 20 June 2018).
- Bishop, J. (Minister for Foreign Affairs) 2015, *Australia secures two blockbuster films*, Media Release, 22 October.
- Brandis, G. (Minister for the Arts) 2014, *Walt Disney Studios to film fifth Pirates of the Caribbean movie in Queensland, Australia*, Media Release, 2 October.
- DAWR (Department of Agriculture and Water Resources) 2017, *Department of Agriculture and Water Resources Annual Report 2016-17*, Canberra.
- DD (Department of Defence) 2016, *2016 Defence Industry Policy Statement*, Canberra.
- 2017, *Defence Disclosures*, [www.defence.gov.au /Disclosures.asp](http://www.defence.gov.au/Defence-Disclosures.asp) (accessed 1 December 2017).
- Hunt, G. (Minister for Industry, Innovation and Science) 2017, *Turnbull Government secures jobs for Aloc workers*, Media Release, 17 January.
- Joyce, B. (Deputy Prime Minister and Minister for Agriculture and Water Resources) 2016, *New loans scheme to support farm businesses*, Media Release, 1 November.
- PC (Productivity Commission) 2017, *Methodological Annex: Changes to the Commission's Assistance Estimates, Trade & Assistance Review 2016-17*, Canberra.
- Pyne, C. (Minister for Defence Industry) 2016, *Board announced for Centre for Defence Industry Capability*, Media Release, 22 October.
- Truss, W. (Deputy Prime Minister) 2016, *Data Retention Grants Program open to industry*, Media Release, 7 January.