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Productivity Commission

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Trade and Assistance Review 2023-24: Methodological annex

Annual report series

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The Productivity Commission

The Productivity Commission (PC) 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.

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About this annex

This annex provides an overview of the Productivity Commission's (PC) industry assistance measurement framework and information about how the PC produces annual assistance estimates. While published annually updates to this annex are done on an as needed basis. A full list of the PC's annual *Trade and Assistance Reviews* (TARs) can be found at www.pc.gov.au/ongoing/trade-assistance.

The methods, scope and data sources for assistance estimates have changed over time. For example, early estimates by the PC's predecessors reflected the importance of the costs of protecting the manufacturing sector against imports, and of domestic marketing arrangements for the agricultural sector. As the form of industry assistance has changed over time subsequent estimates have shifted focus to behind-the-border measures such as budgetary outlays, tax concessions, concessional finance and the compliance costs of tariffs.

1. Overview of the PC's assistance measurement framework

Assistance measures covered

Section 10(3) of the *Productivity Commission Act 1998* (Cth) defines assistance to industry as:

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

Reflecting this broad definition, measures that assist industry include:

- tariffs, quotas, anti-dumping duties and regulatory restrictions on imported goods and services, such as local design rules and quarantine requirements
- policies that lower the effective price of goods and services below their supply price (the price that producers need to supply that good or service)
- grants and subsidies that are selectively available for domestic producers
- grants and subsidies that are selectively available for specific industries
- tax expenditures and offsets that are selectively available for domestic producers
- tax expenditures and offsets that are selectively available for specific industries
- 'in kind' assistance provided by publicly funded intermediaries, such as certain research undertaken by the Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- regulatory restrictions on domestic competition, such as those provided by some statutory marketing arrangements and legislation that reserves markets for particular groups (for example, pharmacies)
- services provided by government agencies at concessional prices
- preferences for domestic producers under government procurement policies.

It is not practicable to cover all forms of government assistance to industry in the estimates. Rather, the estimates focus on the main forms of assistance for particular businesses, activities or industries that *can be quantified* on an annual basis given the practical constraints of measurement and data availability. Some examples of the types of assistance that are not included in the estimates are in box 1.1.

Box 1.1 – What is not included in the PC's assistance estimates

The PC's assistance estimates cover measures that are available to particular firms, industries or activities, and that can be quantified given practical constraints in measurement and data availability. Some significant government measures that selectively confer industry assistance are not included in assistance estimates because they cannot be adequately or easily quantified. From time to time these types of measures may be examined qualitatively in the TAR or experimental frameworks for measuring their assistance value might be explored. Examples include:

- programs with expenditure not for publication, such as the Capacity Investment Scheme which does not publish its actual or estimated spending due to commercial sensitivities, meaning they are excluded from the estimates, despite acting as assistance.
- regulatory restrictions on competition such as those relating to pharmacies, air services, media and broadcasting, and importing books and second-hand cars
- government purchasing preferences and local content arrangements, such as defence procurement
- concessional debt and equity finance
- State, Territory and local government support to businesses
- anti-dumping and countervailing duties
- access to and pricing of resources (for example, mineral, forestry, fishery or water resources), on favourable economic terms
- support for professional sport (such as tax concessions for international tournaments in Australia and support for sporting venue redevelopment).

Some arrangements have been examined in PC inquiries, reports and previous TARs. While certain businesses benefit significantly from some government measures, the benefit is not classified as industry assistance, because it is not preferential, or more generally because the purpose of the measure is to promote a broader public objective. Examples include:

- superannuation tax concessions and mandatory contributions
- private health insurance rebates
- government funding of non-government community service providers
- support for businesses owned or operated by Aboriginal and Torres Strait Islander people
- employment incentives for businesses
- remote housing concessions in mining regions
- expenditure on improved public infrastructure, for example, an upgraded road in a concentrated beef producing area would be expected to lower logistics costs for beef producers, but the road is not for the sole use of beef producers.

The estimates in the TAR cover industry assistance provided by the Australian Government through budgetary assistance, assistance provided through concessional finance, and the cost of complying with the preferential trading system. For detail on historical estimates of the effective rate of assistance (no longer published since TAR 2021-22) see a detailed discussion of the framework is provided in the Industry Commission's Information Paper on *Assistance to Agricultural and Manufacturing Industries* (IC 1995).

A walk through the decision process

In most cases programs fit neatly into the list of included measures or excluded measures outlined above. However, some programs require more careful consideration. To assess programs inclusion in the TAR, researchers look at the following six step process to help determine whether a program should be included.

As TAR is primarily a transparency exercise, TAR researchers prefer inclusion when uncertain about a given measure while making said decisions clear. From time-to-time revisions may also be made when the nature or effect of a program is made clearer.

Step 1: Scope checks

The initial step in the framework correctly identifies the essential prerequisites for a measure to be considered for inclusion in the TAR's estimates.

- Key questions:
  - Does the measure directly or indirectly assist a person to carry on a business or activity; or confers a pecuniary benefit on, or results in a pecuniary benefit accruing to, a person in respect of carrying on a business or activity? (If no: exclude)
  - Is from the Australian Government? (If no: exclude)
  - Can be reasonably quantified annually? (If no: exclude)
  - Is not a specific scope exclusion (like on healthcare provision or public infrastructure spending)? (If it is an exclusion: exclude)

Step 2: Selectivity check

Following the foundational checks, the framework employs selectivity as the next filter.

- Key question: Is the measure available selectively based on industry, activity, size, location, technology or other criteria? (If no, then exclude).

Step 3: Crisis response check

The PC recognises the role that government plays in managing fluctuations in the business cycle and mitigating the fallout from acute shocks. Measures implemented in response to major crises, such as COVID are filtered out if they are broadly available and designed as temporary stabilising assistance; even if they have some selectivity (since they pass step 2). The filter helps maintain the focus of the TAR estimates, including massive, temporary, economy wide stabilisation programs such as JobKeeper which would overwhelm the data on structural budgetary assistance obscuring long term trends and making year on year comparisons difficult. More targeted crisis aid that meets other criteria is still included. See TAR 2020-21 for further discussion (PC 2022b, pp. 3–4).

- Key question: Is the measure mainly a broad, temporary response to a major economy-wide crisis? For example, JobKeeper or expanded COVID-19 Instant Asset Write-Off (if yes, then exclude).

Step 4: System interaction check

Some measures appear to provide assistance to business when in reality they are simply providing a subset of businesses with some equivalent leg-up that those excluded already have. An example includes the lower tax rate on small businesses – which over time expanded to include most businesses. PC analysis found that those excluded from the program already had equivalent advantages due to franking credits. In effect

this meant that the program was economy wide – despite appearing selective based on the usual criteria. TAR 2021-22 provides further detail (PC 2023, pp. 13–14).

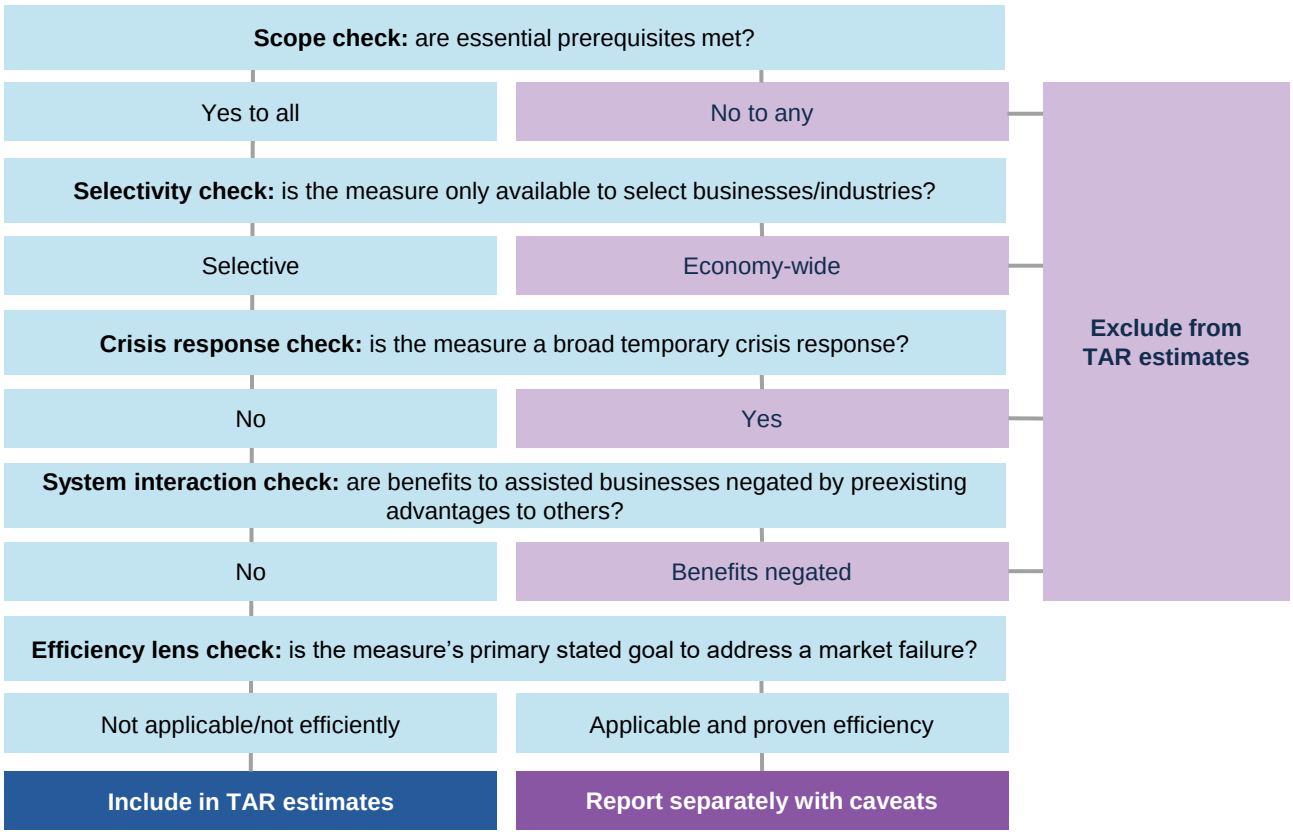
- Key question: Does analysis conclude that interactions with other economic or tax system features cancel out the selective benefit for classification purposes? (if yes, then exclude).

Step 5: Efficiency lens check

This step is aimed at assessing measures whose primary objective is addressing some market failure or non-economic objective. In practice, it is advisable to still track these measures for transparency separately noting their propensity to act as assistance. See TAR 2021-22 for more detail (PC 2023, pp. 20–30).

- Key questions:
  - Applicability Check: Is the measure's primary stated goal to address a market failure for example externalities like pollution or R&D spillovers or another non-economic objective like social equity or cultural heritage? (if not applicable, then report in TAR as normal, otherwise go to assessment).
  - Assessment: Does the measure's design significantly differ from an efficient way to achieve its primary goal? (Consider factors like high costs or unjustified selectivity.) Or is there not enough information to decide?
    - » If applicable and efficient then it is not working as industry assistance however it may be recorded and reported separately to help monitor if the measure diverges over time from its purpose and acts as assistance. Likewise, as these are selective measures even if efficient the measure is unlikely to be fully adjusting for the externality on its own making careful reporting important.
    - » If applicable but not efficient then report.

Figure 1.1 – Assessment process for inclusion in the TAR



Some examples

To help understand what does and does not go into the TAR some examples are provided below (table 1.1).

Table 1.1 – Some examples of the rationale behind including or excluding certain measures

Measure	Status	Rationale
Small business capital gains tax concessions	Included	Selective by business size, quantifiable pecuniary benefit.
Lower small business tax rate	Excluded (from 2020-21 onwards, per TAR 2021-22)	Benefit deemed neutralised for domestic investors by dividend imputation; broad application (fails step 5).
JobKeeper	Excluded	Considered a broad-based temporary crisis response measure (fails step 4).
State government grants	Excluded	Not provided by Australian Government (fails step 1).
Expanded instant asset write off (post COVID)	Excluded (temporarily)	Temporarily expanded to the point it is economy wide as a temporary broad-based measure (fails step 4).
R&D tax incentive (refundable & non-refundable)	Included	Selective by activity; quantifiable benefit from Australian Government. Is correcting for R&D but unclear whether it is over or under-pricing positive externality so still included with caveats.

Data sources

Annual information about budgetary assistance programs comes from:

- the Treasury's *Tax Expenditure Insights Statement*
- various departmental annual reports
- various media releases and program documentation including grants connect
- and information provided by relevant government departments on assistance programs.

Information about the compliance cost of tariffs comes from:

- ABS International Trade Imports and Import Clearances data collection, and
- the PC's previous work on estimating the share of compliance costs (PC 2022a).

Information about concessional finance comes from:

- annual reports of the relevant concessional finance entities and affiliated agencies or departments, and
- the RBA statistical table F3 (aggregate measures of Australian corporate bond yields).

Industry groupings

Industry classification has changed over time. The initial focus was on assistance within the traded-goods sectors – particularly manufacturing and agriculture – where levels of assistance were high. Over time, trade protection measures assisting these sectors declined, while budgetary assistance to both the goods and services producing sectors has increased. The PC has included estimates of assistance to the services sector since the 2001-02 TAR, and has integrated these with estimates for other sectors.

The TAR estimates combined assistance for four sectors, comprising 38 'industry groupings' (table 1.2) based on the classification of industries in the 2006 edition of the Australian and New Zealand Standard Industrial Classification (ANZSIC). The fours sectors are:

- the primary production sector (nine industry groupings including 'other')
- the mining sector
- the manufacturing sector (12 industry groupings including 'other')
- the services sector (15 industry groupings including 'other')
- and a general 'other' category.

Table 1.2 – Industry groupings used for reporting assistance in the TAR

Sector/industry grouping	ANZSIC 2006 codes
Primary production	**A**
Horticulture and fruit growing	011, 012, 013
Sheep, beef cattle and grain farming	014
Other crop growing	015
Dairy cattle farming	016
Other livestock farming	017, 018, 019
Aquaculture and fishing	02, 04
Forestry and logging	03
Primary production support services	05
Unallocated primary production	–
Mining	**B**
Manufacturing	**C**
Food, beverages and tobacco	11, 12
Textile, leather, clothing and footwear	13
Wood and paper products	14, 15
Printing and recorded media	16
Petroleum, coal, chemical and rubber products	17, 18, 19
Non-metallic mineral products	20
Metal and fabricated metal products	21, 22
Motor vehicles and parts	231
Other transport equipment	239
Machinery and equipment manufacturing	24
Furniture and other manufacturing	25
Unallocated manufacturing	–
Services	**D–S**
Electricity, gas, water and waste services	D
Construction	E
Wholesale trade	F
Retail trade	G
Accommodation and food services	H
Transport, postal and warehousing	I
Information, media and telecommunications	J
Financial and insurance services	K
Property, professional and insurance services	L, M, N

Sector/industry grouping	ANZSIC 2006 codes
Public administration and safety	O
Education and training	P
Health care and social assistance	Q
Arts and recreation services	R
Other services	S
Unallocated services	–
Unallocated other	**–**

Source: PC derived industry groupings based on ABS (2013).

2. How the assistance estimates are calculated

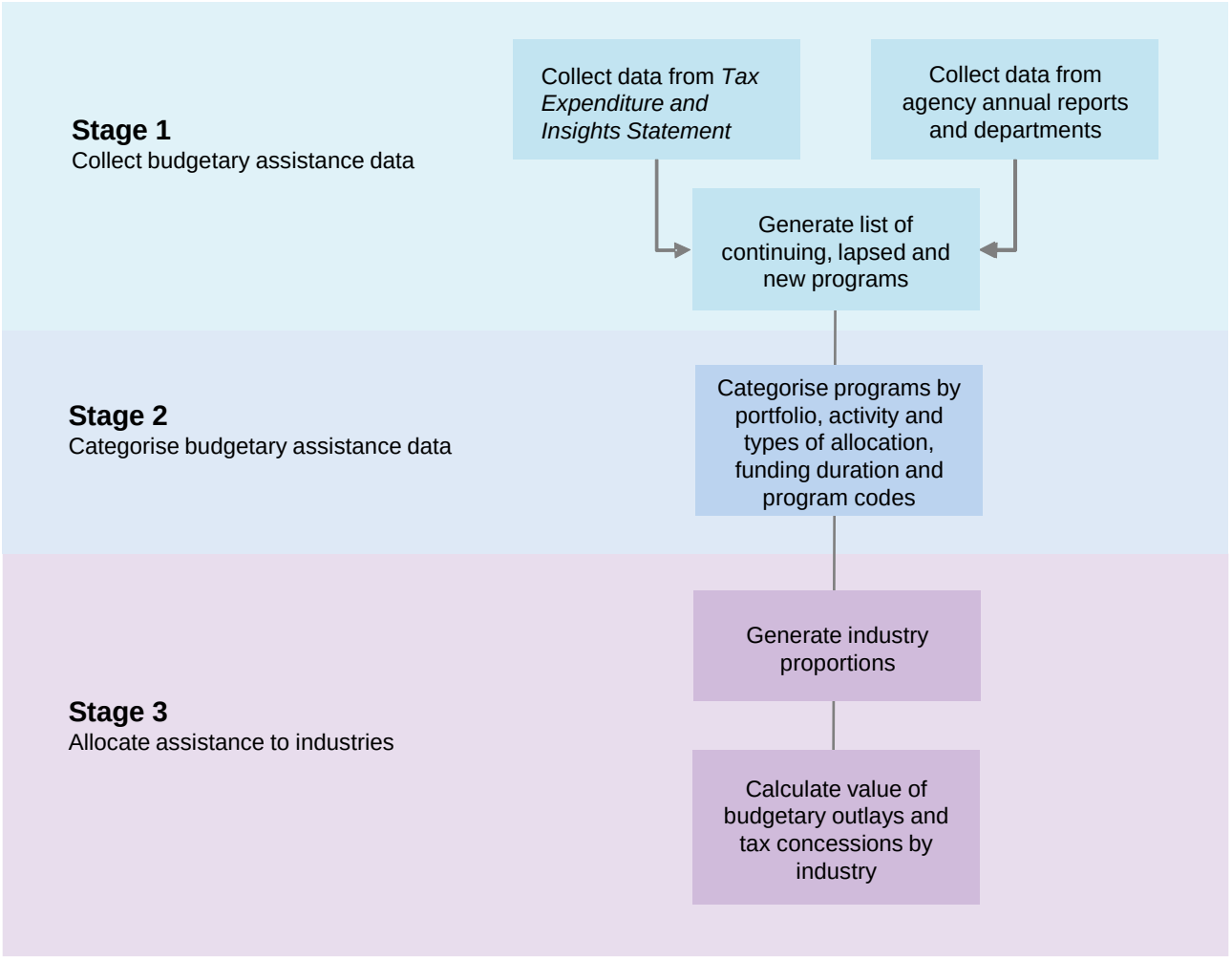
The PC's approach to estimating assistance varies depending on the instruments used to provide support.

- Where governments provide grants and subsidies directly to firms, the assistance is the value of the outlay. This excludes the cost of policy advice and general administration for the agencies that administer grants and other assistance programs.
  - Where governments fund services that indirectly assist an industry, the full funding (excluding any industry contributions) is deemed to be assistance. For the assistance provided to industry through the CSIRO, the PC excludes appropriations for certain public research functions such as environmental research and development (R&D), some renewable energy R&D and general research towards expanding knowledge in various fields.
- Where governments provide tax concessions on a selective basis – such as exemptions, deductions, offsets, rebates, lower tax rates or tax liability deferrals – the value of the assistance provided is estimated as the amount of tax revenue forgone.
- Where governments provide finance at a concessional rate, the assistance is taken to be the difference between the cost at which the government provided the funds, and the cost of those funds if they were borrowed at a commercial rate. As the commercial rate is not known, and the information about concessional loans varies across agencies, estimates of assistance provided by concessional finance are provided as a range.
- Where governments impose tariffs on imports, and businesses can apply to have their tariff reduced, the assistance is assumed to be the cost of complying with the tariff system. These compliance costs increase the relative cost of imports and can act as a form of assistance by protecting import-competing domestic producers.

Estimating budgetary assistance

Estimating the value of budgetary assistance – and allocating such assistance across industries – requires a detailed itemisation and classification of programs that qualify as Australian Government budgetary assistance for the purpose of the TAR. The PC primarily uses the annual Treasury *Tax Expenditure Insights Statement*, agency annual reports and consultation with departmental staff to construct a database of programs that constitute budgetary assistance, which are then allocated to particular industry groupings on an 'initial benefiting industry' (IBI) basis (figure 2.2, box 2.2).

Figure 2.1 – Estimating budgetary assistance by industry



Box 2.2 – The 'initial benefiting industry' allocation method

The PC allocates budgetary assistance to industries on an 'initial benefiting industry' (IBI) basis. This means that assistance is allocated to the industry of the businesses that benefit initially from a program or measure.

The IBI approach does not attempt to identify all the beneficiaries of assistance from flow-on effects. For example, budgetary assistance to the Australian film industry is allocated to the 'arts and recreation services' industry group. However, the benefits of this assistance could extend beyond this industry, such as to construction services in the case where film production requires these services as inputs. Further, an increase in demand for construction services may increase demand in the wood and paper products industry, and so on.

When a measure initially benefits businesses in a single industry, the entire value of assistance is assigned to that industry. When a measure initially benefits businesses in multiple industries, the value of the assistance is apportioned across multiple industries as well.

Where assistance is delivered via an intermediate organisation – such as Austrade providing export promotion services or the CSIRO undertaking industry-benefiting research – the initial benefiting industry

Box 2.2 – The 'initial benefiting industry' allocation method

is the industry in which the businesses that use the services operate. For example, wheat research by the CSIRO would be allocated as assistance to the wheat growing industry (which is part of the 'sheep, beef cattle and grain farming' industry grouping).

Some programs where the initial beneficiaries are consumers (rather than businesses or intermediary bodies) are included in the PC's estimates of assistance. In such cases, the assistance is allocated to the industry providing the good or service to the consumer. As an example, in the past, assistance has been provided to consumers to convert cars to liquified petroleum gas, with the PC classifying this assistance as accruing to the industry providing the conversion service.

Similarly, where assistance is provided to an intermediary service, such as transport or financial services, and that assistance lowers the cost of a good or service to a consumer, the initial benefiting industry is deemed to be that of the consumer, rather than the intermediary.

Where the initial beneficiary cannot be identified, the assistance is 'unallocated'. This means that the assistance is included in the aggregate estimates, but not in industry totals.

In allocating assistance to industry groupings, each measure is examined individually. Programs that assist a single industry, such as the Automotive Transformation Scheme or the Grape and Wine R&D Corporation, are allocated directly to that industry (motor vehicle and parts, and horticulture and fruit growing, respectively).

Many programs assist multiple industries. The PC draws on a variety of sources to allocate the assistance provided by such programs across the benefitting industries.

Where the PC can obtain sufficiently detailed data for a program, it uses this information to distribute the program's funding among the initial benefiting industries. For example, the PC obtains claims data by ANZSIC industry for the Export Market Development Grants scheme from the Australian Taxation Office, and these data are sufficiently detailed to determine the initial benefiting industries for the program. Similarly, the Department of Industry, Science, Energy and Resources has published details of grant recipients for many of its administered programs.

Where there are no data identifying the industries that initially benefit from a particular program, the assistance given under that program is recorded as 'unallocated'. There are four 'unallocated' categories: one each for primary production, manufacturing and the services sectors (used when the initial benefitting sector can be identified but not the initial benefitting industry or industries within it), and an 'unallocated other' category for assistance that cannot be assigned to particular sectors based on available information. 'Unallocated' funding forms part of the PC's aggregate estimates of assistance.

The IBI approach does not attempt to identify all the industries that might ultimately benefit from a program because of its 'flow on' effects. Care is therefore required when drawing inferences about the resource allocation effects of budgetary assistance given the static nature of the underlying model. This aspect of the model, coupled with the IBI approach of allocating assistance, means that only the initial effects of assistance are captured, while the responses of producers and consumers to the incentives created by the assistance are not.

Estimating assistance provided by concessional finance

The PC provides estimates of industry assistance from the following (non-exhaustive) list of entities.

- Export Finance Australia (EFA), which has provided finance to Australian exporters since 1991.
- The Clean Energy Finance Corporation (CEFC), which has provided finance to clean energy and low emissions technology businesses since 2012.
- The Northern Australia Infrastructure Facility (NAIF), which has provided finance to some businesses in Western Australia, the Northern Territory and Queensland since 2016.
- Housing Australia (formerly the National Housing Finance and Investment Corporation (HA)), which has been providing finance to community housing providers since 2018.
- The Regional Investment Corporation (RIC), which has been providing low interest loans to farm businesses since 2018.

The PC reports two approaches to estimating the industry assistance value of concessional finance. The first reports the annual unwind of concessional loan charges, published by a number of governments-owned finance entities. The second is a bespoke estimate of the overall 'return gap' of these entities, the difference between what these loan portfolios earned in a given year, relative to what they would have earned had those funds been invested at prevailing market rates of interest.

Method 1 – Annual unwind of bottom-up concessional loan charges

A loan discount (also called a concessional loan charge) is calculated by comparing the net present value (NPV) of a loan at a commercial rate with the NPV of the loan given its concessional terms. This loan discount estimates the *overall* value of the concessional component of the loan.

This overall value or benefit of the concessional loan is then 'spread out' over time. Instead of counting the whole benefit upfront, the value is recognised bit by bit as income over the life of the loan. This is expressed as a concessional loan charge 'unwind' for a given year.

- Calculating the loan discount

  $$Loan\ discount = Concessional\ loan - Market\ based\ loan$$

- Calculating the value of the concessional loan

  $$Concessional\ loan = Market\ based\ loan + Loan\ discount$$

- Calculating the unwind each year, the sum of this value is equal to the loan discount

  $$Unwinding\ of\ discount = Potential\ interest\ at\ market\ rate - actual\ interest\ at\ concessional\ rate$$

The unwinding of the discount is the difference between interest income calculated under the effective interest method (the hypothetical market interest rate income) and the interest income calculated using the loan's contract interest rate. The unwinding of the loan discount component, which was expensed on initial recognition over the life of the loan, is treated as income (Finance 2020, p. 9).

The unwind represents the amount of the concessional benefit 'used' each year. It is analogous to asset depreciation where the concessional value is the stock and the unwind is the depreciation or decrease in value each year. Alternatively, consider the initial concessional component of the loan is recorded as a cost on the loan maker's books. As the NPV of the loan decreases over time, so too does the value of the discount. This reduction of the discount is recorded as income on the loan makers books.

As the TAR focuses on the benefits provided to industry each year, the year-on-year characteristic of the unwind figure make it the most relevant figure for reporting in the TAR. However, not all entities that offer concessional finance report concessional loan charges meaning it is an incomplete measure.

Of the five agencies identifies as being responsible for the majority of concessional finance, only HA and CEFC publish concessional loan charges in their annual reports. RIC and NAIF provided estimates of their concessional loans upon request.

EFA do not report any concessional finance activity. Despite this, the below-market returns on their loan activity show that EFA loans are being provided at concessional rates. It is impossible to determine the unwind for EFA without their reported concessional loan charge, thus the unwind method excludes them.

Detailed examples can be found in the Department of Finance guide '*Accounting for concessional loans resource management guide (115)*' (Finance 2020).

Method 2 – Top down portfolio 'return gap' methodology

The top down portfolio 'return gap' approach to estimating the 'concessionality' of government owned finance entities is calculated using the following formula:

$$\boldsymbol{Lower\ bound} =$$

$$(Return\ if\ stock\ of\ loans\ was\ invested\ in\ five\ year\ A\ rated\ bonds) - (Actual\ return\ on\ loans)$$

$$\boldsymbol{Upper\ bound} =$$

$$(Return\ if\ stock\ of\ loans\ was\ invested\ in\ ten\ year\ BBB\ rated\ bonds) - (Actual\ return\ on\ loans)$$

Data sources

For EFA, CEFC and NHFIC, the stock of loans and portfolio interest earnings are taken from the respective annual reports.

For RIC the stock of loans and portfolio interest earnings are taken from the Department of Agriculture, Fisheries and Forestry annual report, noting this likely overstates the loans and earnings that are attributable to RIC.

For NAIF, the stock of loans is available in the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) annual report. However, interest earned is aggregated across the DITRDCA portfolio. As such, the interest earned that is attributable to NAIF is derived.

- The yield on DITRDCA portfolio (without NAIF loans) is assumed to be the three-year portfolio yield average, prior to 2021-22 (i.e. before NAIF was included as part of DITRDCA reporting).[1]
- This yield is multiplied by the stock of loans in the DITRDCA annual report that are not attributable to NAIF or the National Broadband Network.
- The difference in this figure, and the total interest earned on the DITRDCA portfolio (net of interest earned on loans to the National Broadband Network) is assumed to the interest earned on the NAIF loan portfolio.

As the risk-profile of concessional loans is unknown, the benchmark market yield range is calculated as a range. The upper bound is taken to be the 5 year A rated non-financial corporate debt security yield and the lower bound is taken to be the 10 year BBB rated non-financial corporate debt security yield. Both series for the benchmark market yield are taken from the RBA F3 statistical table.

[1] This assumption is based on the fact that most loans by DITRDCA are made for a period ranging from 9 to 118 years, with interest rates fixed.

Estimating the compliance cost of tariffs

In 2022 the PC researched the nuisance costs of tariffs (PC 2022a). As part of this research, we estimated the compliance costs incurred by businesses when they import goods at a preferential tariff rate under a preferential trade agreement (PTA) or a concessional rate under the tariff concession system (TCS) (where a higher tariff rate would otherwise have applied).

These compliance costs are the costs that businesses incur to *avoid* tariffs. The costs have two main forms:

- the costs of paperwork needed to demonstrate eligibility for a preference or concession (e.g. the labour and time costs of additional interactions with the tariff administration, the cost of acquiring an authorised certificate of origin), and
- the costs of adapting production processes to abide by rules of origin (RoO), to access a preference (which is passed on to importers through more expensive imports).

In effect, businesses have two choices – to either pay the statutory rate or access a preferential or concessional rate and then incur the compliance costs of doing so. In the end, some of these costs are passed onto Australian consumers through higher prices.

Compliance costs matter because they are a product of trade policy. They would not exist if all imports were simply subject to the statutory rate, or if all statutory rates were 'free'. Compliance costs are wasteful uses of resources due to the combination of the remaining tariffs on Australian imports and the complexity of rules to access concessional or PTA treatment. Measuring the magnitude of this waste is therefore important so that policymakers understand the effect of the tariff system on Australian trade.

We limited the estimation to the costs of complying with preferential trade agreements (PTAs) and with the tariff concession system (TCS) , as these are the most common ways in which businesses reduce their tariff liabilities to zero. From 2021-22 onwards, the TAR has included an estimate these costs:

- We estimate annual TCS-related compliance costs to be at least $5 million. The $5 million calculation understates the true costs, because of the uncosted components outlined in the research paper.
- We estimated compliance costs associated with accessing preferences as a percentage of the value of imports that utilised a preference (PC 2022b, p. 66).

For the purposes of the TAR, the compliance cost of accessing a preferential rate on tariffs is estimated by multiplying the total value of imports entering Australia under a preferential trade agreement (taken from the ABS' *International Merchandise Trade dataset*) by the estimated compliance costs as a percentage of value of PTA-utilising imports, which is 2%. However, given the uncertainty of point estimates, a ±50% range around 2% is used to estimate compliance costs, so the range is 1% to 3%.

Model for estimating PTA-related compliance costs

Businesses do not record compliance costs from accessing tariff preferences, instead we can estimate the costs based on their behaviour. If we want to measure the costs that the tariff system imposes, we must estimate compliance costs through a model, based on partial information and making assumptions about the behaviour of importers.

To do so, we assume that if an importer used a tariff preference, it did so because the savings from the reduced tariff are greater than the cost of complying with the PTA's rules (e.g. paperwork or adapting production). We also make several other assumptions. Using detailed import data, we examined the relationship between the size of the potential tariff saving (the preference margin) and the percentage of imports that use the PTA (the utilisation rate). This observed relationship is then used to model the

distribution of anticipated (ex-ante) compliance costs as a share of PTA imports faced by businesses. Finally, based on the assumption that businesses only proceed if the savings exceed the costs, the model estimates the average cost as a share of PTA imports that were actually incurred (ex-post) only by those who successfully used a PTA.

More information can be found in *Appendix C of the Nuisance Cost of Tariffs* report (PC 2022a).

For TAR 2023-24 the estimated average incurred compliance cost was re-estimated. The results were very similar (moving from 2.1% to 2% of import value under PTA). The methodology followed was largely the same as the original *Nuisance Cost of Tariffs* report, with only small changes in the imputation of statutory rates of duty used to calculate preference margins.[2] In the future we may re-estimate the model again if there is some major change in available data or in the administration of Rules of Origin to justify it. In the absence of such changes, we will continue to apply a wide range to the estimate of average incurred compliance costs as a share of PTA imports to account for uncertainty and avoid false precision.

[2] In the first instance we imputed the statutory tariff rate by taking the maximum of the average applied tariff rate paid on imports from France, Germany, Italy, and the United Kingdom (excluding 2023-24 due to the new UK-Australia PTA) for the 10-digit tariff code in question and the year in question. Otherwise, we took the reported applied statutory rate from Australia's World Trade Organisation Reporting (WTO 2025).

Abbreviations

Acronym	Definition
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
CDF	Cumulative density function
CEFC	Clean energy finance corporation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
EFA	Export Finance Australia
IBI	Initial benefitting industry
NAIF	Northern Australia infrastructure facility
NHFIC	National Housing Finance and Investment Corporation
NPV	Net present value
PDF	Probability density function
PTA	Preferential trade agreement
RIC	Regional investment corporation
R&D	Research and development
TAR	Trade and Assistance Review
TCS	Tariff concession system

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