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Trade and Assistance Review 2023-24

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July 2025



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The Productivity Commission

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Foreword

This Trade and Assistance Review (TAR) is released at a time of increasing uncertainty and volatility for the world economy.

Recent editions of the TAR have discussed the risks to global living standards resulting from the resurgence of ‘behind the border’ forms of industry assistance, strategic competition between major economies, supply chain disruptions during the COVID-19 pandemic, and potential distortions from climate change policy responses.

These trends have continued over the past year with one significant change: tariffs have re-emerged as a form of industry assistance in major economies, following actions by the United States. The United States’ announcement of wide-ranging tariffs has led to retaliatory measures from their targets and policy responses from affected countries including Australia. This TAR looks in detail at the effects of the introduction of tariffs and the associated global economic uncertainty for Australia, including modelling the likely magnitude and direction of the impacts.

One clear finding from our modelling of tariff scenarios is that Australia should not retaliate to tariffs imposed on Australian goods and services. Increasing our direct barriers to trade and investment, even if in retaliation, would come at a cost.

Instead, tariff reform in Australia should focus on further reduction and removal of tariffs on imports, building on the Government’s previous action to remove around 500 nuisance tariffs. This TAR identifies over 300 additional tariffs which impose a high indicative compliance burden and generate little policy or revenue benefit.

Despite developments in tariff policy, budgetary assistance remains the main form of industry assistance in Australia, with the Government’s Future Made in Australia agenda cementing this growing role. This mirrors international practice seen in the European Green Deal, the Made-in-Canada plan, China’s industrial subsidy programs and the Inflation Reduction Act in the United States.

While well-designed industry policy can offer benefits, when poorly designed it can be costly for governments, act as a form of trade protection and distort the allocation of Australia’s resources. This underscores the critical need for transparency, as is delivered through the TAR, ongoing evaluation and review and clear exit strategies.

This year marks 50 years since the introduction of the *Foreign Acquisition and Takeovers Act 1975* (Cth), which provides an opportunity to look in more detail at regulatory trends over this period. As a small open economy, foreign investment is vital to assist in driving economic growth and productivity enhancements.

We would like to take this opportunity to thank the many government agencies that provided advice and data to assist us in developing this year’s TAR.

Alex Robson
Deputy Chair

Catherine de Fontenay
Commissioner

July 2025

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Disclosure of interests

The Productivity Commission Act 1998 (Cth) specifies that where the Commissioners have or acquire interests, pecuniary or otherwise, that could conflict with the proper performance of the functions they must disclose those interests. The Commissioners working on this report have no interests requiring disclosure.

Executive summary

The Trade and Assistance Review (TAR) is the Productivity Commission's annual report on developments in Australian trade and industry assistance policies. The TAR has a broad remit, based on our obligation to report on assistance from section 10 of the *Productivity Commission Act 1998* (Cth), which 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 accruing to, a person in respect of carrying on a business or activity.

Reflecting recent policy developments globally and in Australia, this year's TAR focuses on:

- the impact on Australia of international policy developments, including a discussion of the effect of trade policy uncertainty on economic outcomes (chapter 1)
- Australian trade policy developments and options for further tariff reform (chapter 2)
- developments in Australian industry policy settings (chapter 3)
- estimates of the cost of budgetary assistance to industry in 2023–24 (chapter 4)
- trends in foreign investment impacting Australia (chapter 5).

Australia should continue to advocate for free and open markets

Rapid and wide-ranging changes to United States (US) trade policy have driven significant changes in global trade policy settings, including the introduction of new tariffs and increases in existing tariffs.

The PC has modelled three scenarios, based on recent tariff announcements, to estimate the potential impacts of tariffs and possible retaliatory actions on Australia. Our modelling shows that many of the proposed US trade policy measures would likely have a small (positive) impact on Australian production in the long run.

But these direct economic impacts are likely to be minor compared to the costs associated with growing economic uncertainty. In 2025, economic uncertainty in Australia and globally reached its highest level since the COVID-19 pandemic. This uncertainty is expected to slow global economic activity, household consumption and business investment.

Australia's best response is to continue to work towards open and free markets. Australia can proceed unilaterally, such as by lowering and binding tariff levels to give prospective exporters certainty about Australia's markets, and multilaterally, such as by committing to free trade agreements and international institutions that can promote long-term economic stability.

Further tariff reform would support Australia's economy in the face of continuing uncertainty and change

The Australian Government is taking action to address the costs of complying with Australia's preferential trade agreements, with 457 tariffs to be abolished from this year. Australia has also furthered its regional and bilateral trading relationships, which contribute to addressing uncertainty and volatility.

While these are positive steps, there remain many more 'nuisance tariffs' which generate little revenue and impose high costs on business. We estimate that, in 2023-24, the tariff regime imposed compliance costs of between \$1.3 billion and \$4 billion, while collecting \$2 billion in revenue. We have identified over 300 further nuisance tariffs to prioritise for a removal assessment, by examining the ratio of indicative compliance costs to tariff revenue.

The Australian Government is increasingly focusing on industry assistance

The Australian Government's Future Made in Australia (FMIA) agenda has cemented industry policy's growing role in Australia's economy. In December 2024, the *Future Made in Australia Act 2024* (Cth) commenced. The Act enshrines a National Interest Framework (NIF) sector assessment process. How the framework is applied in practice will start to be seen throughout 2025 and in future years. At this stage, most FMIA spending is via production tax incentives for critical minerals and hydrogen production that will take effect from 2027–28.

The PC has found that the costs of FMIA interventions can be minimised through using alternatives or complements to domestic production. Such policy options could be explicitly considered as part of the legislated sector assessments process.

Budgetary assistance for trade and industry continued to grow in 2023-24

In 2023-24, Australian government trade and industry budgetary assistance increased by 3.9% to \$16.1 billion but stayed flat as a percentage of gross domestic product. Of this total, tax concessions contributed 52.3% and budgetary outlays contributed 47.7%. There was an additional \$1 billion in assistance in new measures. Existing measures fell by \$351 million and about \$91 million in funding was discontinued – largely due to COVID-19 measures ceasing.

Our analysis of budgetary assistance shows that the industries that benefited the most from this assistance (relative to their share of the economy) were farmers, filmmakers and manufacturers. Filmmakers (under the information, media and telecommunications industry) benefitted from an expanded tax credit, drawing in approximately three times more assistance than their share of the economy.

The PC has also continued to examine off-budget industry assistance provided through concessional financing activities. Concessional finance refers to loans provided by government entities on more favourable terms than borrowers could otherwise find in the marketplace (Finance 2020, p. 5). We estimate that the Australian Government provided \$127.2 million in assistance to industry through concessional finance in 2023-24 (excluding Export Finance Australia), which represents a slight fall from 2022-23. However, programs such as the National Reconstruction Fund suggest that governments are making increasing use of concessional finance, so it is likely to grow in the medium term.

Foreign investment in Australia also continued to grow

International policy settings also impact financial capital flows. As a small open economy, Australia benefits from net savings from the foreign sector and continues to be a net exporter of equity investment and a net importer of debt investment.

In 2023-24, the value of foreign investment approvals increased, with the value of foreign investment applications increasing to \$193.6 billion, up from \$181 billion the previous year. At the same time, the number of applications fell by 13.8%, from 7,891 in 2022-23 to 6,805 in 2023-24, meaning the fewer approvals had a higher average value.

Australia's international investment position grew by the end of 2024. The increasing international investment position was driven by Australia's growing net asset position in equity, which increased from 14.7% to 27% of GDP over 2024. The superannuation sector is the main holder of Australian equities and is a key driver in this underlying trend. Net foreign debt has risen to 51% of GDP at the end of 2024 from 45.9% at the end of 2023.

Over the year, the Australian Government has progressed reforms to encourage foreign investment in 'build to rent' housing and in sectors aligned with 'Future Made in Australia'. The Government has also put in place a temporary ban on certain types of foreign residential real estate investment.

1. International trade policy developments

Key points

- ✱ **The past year has seen significant changes in global trade policy settings.**
 - The US has imposed tariffs on particular products and several trading partners, while some trading partners have responded with tariffs of their own.
 - Tariffs, retaliatory tariffs and protectionist settings risk the gains to Australian and global living standards that have been achieved because of the economic consensus on the benefits of trade liberalisation.
- ✱ **Our modelling indicates that in the long run, the direct impacts on Australia from US tariff changes are likely to be small (and positive), despite negative impacts on the global economy.**
 - Cheaper imports from the rest of the world, and an outflow of productive capital from the US and high-tariffed economies, would stimulate Australian production. For example, US 'Liberation Day' tariffs and tariffs on aluminium, steel and automobiles and parts could lead to an increase in Australian real Gross Domestic Product (GDP) of 0.37%.
 - Australia should not retaliate with its own tariffs in response to tariffs imposed by the US or other trading partners. Imposing retaliatory tariffs leads to worse economic outcomes for Australia – for example, if the US imposed a 10% tariff on all imports and Australia retaliated alongside other countries by imposing a 10% tariff on imports from the US, Australian GDP would be 0.14 percentage points lower than if Australia chose not to retaliate.
 - Australia's best response to US tariffs is to continue embracing free trade. Removing Australia's remaining tariffs would maximise the benefits to Australian production from other countries imposing tariffs.
- ✱ **However, growing economic uncertainty will slow global economic activity, household consumption and business investment.**
 - In 2025, economic uncertainty in Australia and globally reached their highest levels since COVID-19 according to several measures constructed by leading academic researchers.
 - Uncertainty has a chilling effect on economic decisions by increasing the relative benefit of waiting to act.
 - Trade policy uncertainty will particularly slow irreversible investment decisions by firms, including entry into new export markets and the adoption of new imported inputs and production technologies.
 - Reducing trade policy uncertainty, such as by committing to low tariff rates and rebuilding multilateral institutions that promote a stable trading environment, can reverse the negative consequences of uncertainty.

1.1 The international trade environment has deteriorated

The past year has seen significant changes in global trade policy settings. These changes have been primarily driven by rapid and wide-ranging changes to US trade policy. These policy changes are occurring at the same time as global volatility and uncertainty are increasing from economic slowdowns, war and division in some parts of the world (Chalmers 2025).

The introduction of new tariffs and increases in existing tariffs have been a central feature of trade policy changes over this period.

Australia relies heavily on international trade, with exports accounting for 27% of Gross Domestic Product (GDP) and imports for 24% in 2023-24 (ABS 2024a). Trade with the US and China in particular accounted for 33% of imports into Australia and 38% of exports from Australia in 2023-24 (DFAT 2025b). This trade is vital for maintaining Australian living standards but makes us potentially vulnerable to disruptions in the international trade environment.

In this context, the PC has modelled the possible effects of several likely tariff scenarios to assess the potential long-run impacts on Australia. Whole-of-economy modelling can indicate the magnitude and direction of effects throughout the domestic economy in response to proposed trade policy measures, as well as the flow-on effects on the Australian economy from tariffs levied on other countries.

But the importance of free and open global markets extends beyond the consequences of any single set of protectionist trade policy changes.

In last year's Trade and Assistance Review, the PC (2024c, p. iii) noted that trade liberalisation has played a major part in the growth of Australian living standards since the 1970s. A return to the protectionism that predominated in that period risks the gains to living standards that have been achieved. This means that Australia should not only avoid retaliatory tariffs but continue to advocate for free and open global trade.

Australia may be less likely than other countries to be a target for major tariffs from the US

Australian imports into the US have been subject to an additional ad valorem tariff of 10% since 5 April 2025 (The White House 2025q). Higher tariff rates have been announced for many other US trading partners, but not Australia. These higher tariffs have been suspended until 9 July 2025 (DFAT 2025d). Some goods Australia exports into the US are subject to higher tariffs, including derivative products that contain steel and aluminium, currently subject to 50% tariffs (The White House 2025a).

While future tariff decisions are highly uncertain, it is possible that Australia faces a lower likelihood of major tariffs being levied by the US relative to other countries, due to several features of the Australia–US bilateral trade relationship and the priorities of US trade policy (The White House 2025p):

- Australia tends to maintain a trade deficit with the US (that is, the US has a trade surplus with Australia) (ABS 2025d). Higher tariffs have, to date, been targeted at countries that contribute to the US trade deficit, based on the view that the US trade deficit 'threatens [the US] economic and national security' (The White House 2025p). The PC notes that countries need not be inherently concerned about the balance of payments position (box 1.1).
- Australia does not levy tariffs on US imports under the United States–Australia Free Trade Agreement (USTR 2024, p. 21). Other countries imposing tariffs on imports from the US has been used to justify higher tariffs by the US (The White House 2025p).

Box 1.1 – Trade deficits are not inherently bad

Trade deficits are not inherently bad nor representative of a lack of competitiveness of domestic industries. This can be demonstrated by the balance of payments (BOP).

The BOP is a systematic record of all economic transactions between a nation and the rest of the world. The BOP is structured around two accounts: the current account (CA) and the combined capital and financial accounts ($KA + FA$). These accounts are linked through an accounting identity, expressed as:

$$CA + KA + FA = 0 \text{ (the BOP identity),}$$

Which can be rearranged to $CA = -(KA + FA)$.

The current account captures the net flow of money that results from a country engaging in international trade (both trade and income flows), while the capital and financial accounts capture a country's net change in ownership of assets and liabilities. The accounting identity indicates that the balance of payments always balances. A trade deficit, where imports exceed exports (resulting in a negative CA), signifies that a country's domestic expenditure surpasses its production. This current account deficit necessitates a corresponding capital and financial account surplus, as per the BOP identity ($KA + FA > 0$). This surplus manifests as net capital or financial inflows typically in the form of foreign investment or borrowing, which finances the trade deficit.

A common critique posits that trade deficits are detrimental, suggesting a nation is 'losing' by remitting more funds for imports than it earns from exports, even though it is enjoying goods and services that it did not have to contribute real resources towards. However, this critique misses that the financial and capital account surplus financing the deficit can reflect international investor confidence in a nation's economic prospects, which may not be inherently negative.

On the other hand, these deficits can be symptomatic of underlying structural issues that give rise to capital account imbalances, for example where the country running the deficit is effectively relying on foreign savings to fund domestic capital expenditure. This may occur when governments run large and sustained fiscal deficits (where their spending exceeds the revenue they raise).

Efforts to 'fix' the trade deficit by imposing tariffs ignore the underlying forces driving capital to flow into a country. Policies targeting the current account while ignoring the capital and financial accounts will only affect the country's exchange rate and real interest rate.

The normative policy concern lies not in the existence of a deficit per se, but in the composition, stability and productive use of the capital financing it.

Source: Adams and Atkin (2022).

Australia is well placed to weather the impact of global tariffs

The PC modelled the following scenarios to assess the potential impacts of global tariffs on Australia and to understand the transmission mechanisms involved (box 1.2). The scenarios are loosely based on US trade policy announcements but abstract from the policies announced in several ways (appendix A).

- **Universal 10:** an additional 10% tariff on all goods imports to the US from all trading partners.

- **Liberation Day+**: additional tariffs on all goods imports to the US, varying by product and foreign trading partner roughly in line with the Liberation Day announcements.¹
- **China 50**: an additional 50% tariff on all goods imports to the US from China.²

Each scenario consists of two parts:

- The policy is implemented unilaterally by the US (that is, without retaliation from the rest of the world).
- The economies targeted by the policy retaliate in an identical manner (including Australia).³

Box 1.2 – Modelling the potential impacts of global tariffs on Australia

The PC used PC Global, a computable general equilibrium (CGE) model of the world economy, to model the potential impacts of global tariffs on Australia. The model, its key assumptions and limitations are outlined in appendix A and further documented in previous PC reports (PC 2017c, 2017a, 2024a).⁴

PC Global does the following:

- Fit actual economic data, using 2017 as a reference year, to a set of equations describing the structure of the global economy.
- Model trade, production and consumption flows between 35 regions and 65 production sectors. Government revenue and expenditure are also included and modelled stylistically.
- Estimate the long-run impacts of the specified policies after the economy has fully adjusted to the shocks – for example, after all importers and exporters have found alternative markets and wages have adjusted to changes in industry demand. The aggregate supply of labour is fixed in the long run.
- Include international capital flows, allowing changes in production in each region to differ from changes in national income and the purchasing power of that income.

PC Global does not do the following:

¹ This scenario consists of the US levying tariffs of 50% on all imported ferrous metals and non-ferrous metals products, of 25% on imported motor vehicles and parts, and between 10% to 59% on all other goods imports from different US trading partners as per the Liberation Day announcements (appendix A). Tariffs on ferrous metals and non-ferrous metals are intended to approximate tariffs on steel and aluminium, which are not disaggregated from the broader metals sectors in PC Global. The shocks applied to aggregate regions (such as the rest of Europe) were calculated as the weighted average of the Liberation Day tariffs levied on each country in that region, where the weight used reflects each country's share of imports from that region into the US in 2024 (US Census Bureau nd).

² The PC originally sought to model a flat 145% tariff on all goods imports to the US from China, based on US Executive Orders 14266 and 14228 (The White House 2025m, 2025g). However, PC Global is unable to accommodate the long-run effects of tariffs of this magnitude levied on a single country (appendix A). CGE models are designed to estimate the effect of small changes, whereas such high tariffs prevent the model from solving accurately, if at all. The scenario we have modelled serves only as an indicative estimate of the potential effects from large tariffs levied on China by the US.

³ These scenarios abstract from the retaliatory strategies that countries have implemented in practice in response to US tariffs. For example, Canada and China have imposed tariffs on imports of several American farm products and machinery (DoFC 2025; MoF PRC 2025), which have been interpreted as targeting Republican voting states (Djuric 2025; Maxim et al. 2025).

⁴ The PC Global model is documented in the technical paper that accompanied the 2017 study (PC 2017b). The version of the model and database used in this paper was most recently used to examine the implications of potential trade liberalisation in the Asian region (PC 2024a).

Box 1.2 – Modelling the potential impacts of global tariffs on Australia

- Estimate the short-run impacts of a policy shock, or an adjustment path to the long-run results. There are likely to be short-term distributional impacts not reflected in the results.
- Include bilateral nominal exchange rates or other adjustment mechanisms, such as monetary policy responses.⁵ PC Global is predominantly a model of real economic activity.
- Disaggregate all regions and production sectors. The economy is modelled as 35 regions and 65 production sectors, resulting in more substitutability than would actually be the case.
- Include the most recent trade and wider economic developments, particularly those that have occurred since the outbreak of COVID-19 in 2020.⁶

These central assumptions and limitations should inform the interpretation of our results. The capital mobility assumption in particular drives many of the differences between our results and similar studies.

Figure 1.1 summarises the effects on Australian production (real GDP) and national income (real Gross National Product or GNP) associated with each scenario.⁷

The modelling indicates that many of the proposed US trade policy measures would likely lead to a small, positive impact on Australian production, national income, and purchasing power in the long run, despite falls in global production and international trade (appendix A).

The modelled effects on Australia tend to be strongest for domestic production, generally reflecting two factors:

- First, since the tariffs levied on Australia are low relative to other countries, the tariffs make US imports from Australia relatively cheaper. American consumers would shift their import demand from other countries toward Australia.⁸ Additionally, lower US demand for other imports decreases the global price of imports from other countries, reducing the cost of imported inputs to Australian production.
- Second, the tariffs are likely to create an outflow of capital from the US and high-tariffed countries that benefits production in other economies like Australia. US tariffs increase the price of domestic consumption and investment in the US and high-tariffed countries relative to the rest of the world, reducing the competitiveness of these economies and leading to lower real rates of return on capital.

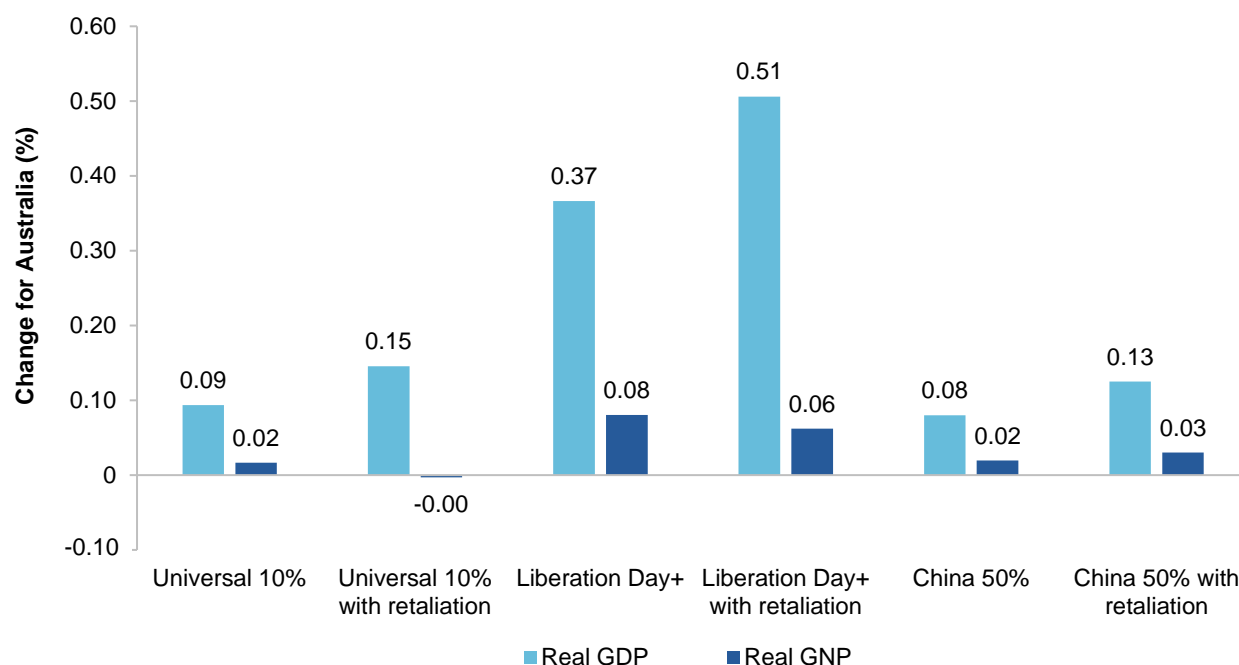
⁵ Global CGE models typically do not identify nominal exchange rates because they have no impact on the real results (Zhang 2018). In the long run, all prices are fully adjustable such that exchange rates are consistent with price parity. Nonetheless, their inclusion could make it easier to explain how international relative prices adjust to balance external accounts for all countries.

⁶ The database includes the effects of the Regional Comprehensive Economic Partnership (RCEP) and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) trade agreements, and the Australian tariff data was adjusted for consistency with the data reported by the ABS (PC 2024a, p. 79).

⁷ GDP measures production activity, calculated as the sum of the value added of domestic industries plus other taxes on production. GNP measures the income that a country earns. It accounts for all income that accrues to the economy, including net income transfers from abroad such as to owners of capital.

⁸ PC Global contains more products than some international models (such as G-Cubed). This additional product detail means that production and trade in PC Global are more differentiated, and less standardised, than in other models. Nonetheless, the aggregated nature of the 65 products in PC Global means that some products may be more substitutable for the same product produced by other countries in the model than would actually be the case. For example, the types and mix of metal ores that make up the composite product 'non-ferrous metal ores' in the model database may differ materially across countries. The consequence is that non-ferrous metal ores from a country such as Australia may not be particularly substitutable for those from, say, Canada. The substitution parameters in the model database control for such differences, but only to a limited extent.

Figure 1.1 – The modelled impacts on Australia from US tariffs are small and positive
Change in real GDP and real GNP for Australia in each scenario



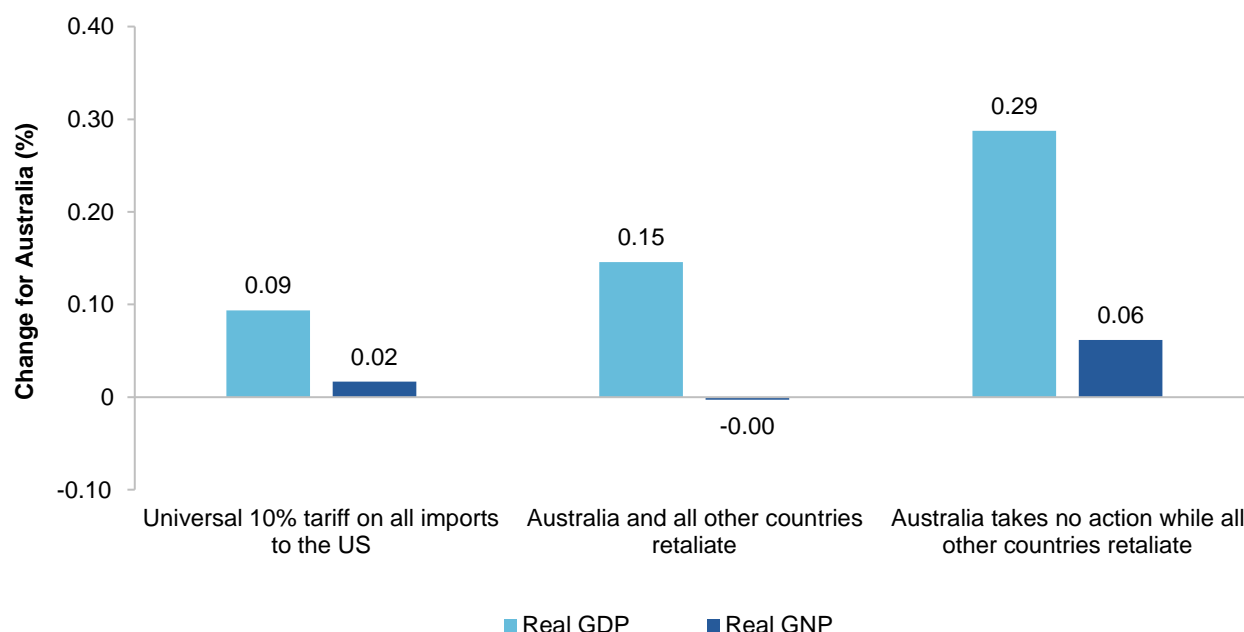
Source: PC estimates.

These results reflect a new, long-run equilibrium where Australia has adjusted to the new policy settings, including our exporters having found new markets for their products. These adjustments may happen quickly, as was observed in the resilience of Australian exports to Chinese trade restrictions in early 2020 (PC 2023b, pp. 86–88). Indeed, in the scenarios where China would be heavily affected by US tariffs, lower Chinese demand for Australian exports would be offset by higher demand from other economies. In the short run, it is likely that the modelled policies would impose costs as distributional impacts lead to an unequal impact on different regions and sectors.

The modelled scenarios indicate that the gains to Australian production and purchasing power would likely be higher if the economies affected by US tariffs were to retaliate. This is because while the aggregate effect of retaliation is to lower global production and international trade even further, the harms are concentrated among countries imposing and receiving relatively higher tariffs. Retaliation benefits Australia because the relatively high retaliatory tariffs imposed by other countries lead to an even larger outflow of productive capital from the rest of the world, further benefitting Australian production. Moreover, the tariff rates levied on Australia by the US are low relative to other countries, such that Australia imposes low tariffs in retaliation.

Our results indicate that Australia should not retaliate with its own tariffs to tariffs imposed by other trading partners. While the modelling may demonstrate a marginal positive benefit for Australia from the world retaliating against US tariffs, the benefits do not come from Australia's retaliation per se. Moreover, global retaliation carries the risk of further escalation and ultimately worse outcomes for Australia.

Indeed, the gains to Australia would be higher if Australia chose not to retaliate with the rest of the world. The PC modelled an additional variant of the Universal 10 scenario, where Australia takes no action while the rest of the world retaliates by imposing 10% tariffs on US imports, to illustrate this point (figure 1.2).

Figure 1.2 – Australia’s best response to tariffs is to embrace free trade**Change in real GDP and real GNP from Australia’s response**

Source: PC estimates.

The modelling indicates that Australia’s best response to global tariffs is to continue to embrace and advocate for free trade. While we cannot predict or control the trade policies of other countries, we can calibrate our own response to maximise the benefits to Australia given the policies of other countries. Moreover, by advocating for free trade with like-minded international partners, we can reduce the risk that retaliation spirals into a broader trade war that leads to worse outcomes for Australia.

The benefits of embracing free trade, such as by taking no retaliatory action, would outweigh any benefits from imposing retaliatory tariffs. Indeed, going further by removing Australia’s remaining tariffs would lead to even greater benefits for Australia. In another modelled scenario where Australia eliminated its remaining tariffs in response to a 10% import tariff levied by the US, while the rest of the world retaliated, Australian GDP could increase by 0.35%, or 0.06 percentage points more than if Australia took no action (appendix A).

The results presented illustrate the potential impacts on Australia from global tariffs and explain their primary mechanisms, namely trade and capital flows. The modelling cannot account for all impacts from global tariffs, such as the effects of economic uncertainty which are discussed separately (box 1.3).

1.2 Growing uncertainty will have negative consequences of its own

Although the direct economic impacts from tariffs being imposed on Australian exports are likely to be small in the long-run, the indirect impacts from growing economic uncertainty may be more significant.

In 2025, economic uncertainty in Australia and globally reached their highest levels since COVID-19 according to measures constructed by leading academic researchers (figure 1.3).⁹ Recent developments in US trade policy have seen the largest changes in tariff rates since the Smoot-Hawley Tariff Act of 1930 (Bishop-Henchman 2025; Evenett and Fritz 2025), resulting in the highest effective US tariff rate since 1909 (The Budget Lab 2025). The speed and frequency of these changes, their varying scope and the range of justifications under emergency executive powers, contribute to a new environment where perceptions are that trade policies could change significantly, at any time and without warning.

These changes have substantially increased economic uncertainty, which is expected to slow global economic activity, household consumption and business investment (OECD 2025, p. 9; RBA 2025; Treasury 2025d, p. 2). In addition, challenges in the Chinese economy, lingering inflationary pressures and ongoing conflicts in the Middle East and Europe compound the uncertainty facing the Australian economy (The Commonwealth of Australia 2025c, p. 1).

The economic effects of uncertainty

Uncertainty can have a chilling effect on economic decisions by increasing the relative benefits of waiting to act. Many important economic decisions are at least partly irreversible and have uncertain outcomes. When uncertainty is elevated, there is a benefit from waiting to act if it will help economic actors to avoid making a 'bad' decision they would otherwise regret (Bernanke 1983). This dynamic can exacerbate the vicissitudes of business cycles, which can generate broader financial and macroeconomic risks.

Waiting to act retains the option value associated with not making irreversible decisions. Irreversible decisions expend irrecoverable resources and forgo the option of making an alternative decision at the time or in the future. This foregone option is an opportunity cost, increasing in uncertainty and irreversibility,¹⁰ that must also be included as part of the decision to act (Dixit and Pindyck 1994, p. 6; Folta et al. 2006, p. 433). Waiting to act can allow valuable information to emerge about this opportunity cost and the potential outcomes of a decision. For example, a firm deciding whether to invest in a new factory can wait to observe whether local demand and economic conditions are sufficient to justify the investment. If not, by waiting, the firm reserves the option to build the factory in the future or use the capital for another purpose entirely.

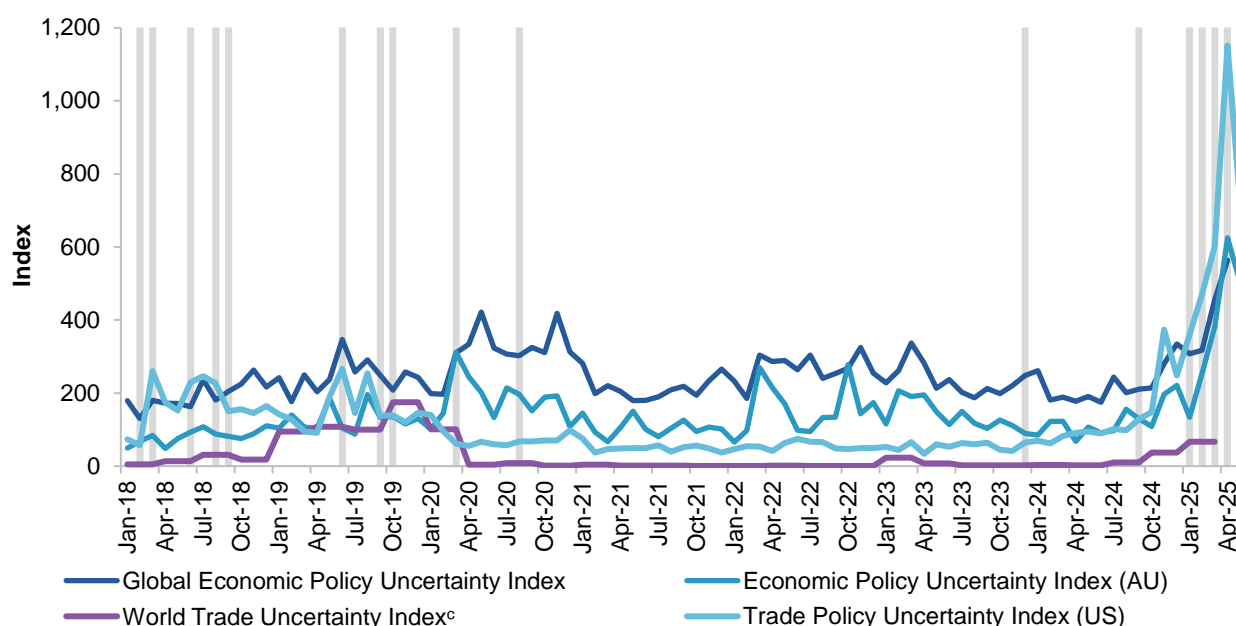
Agents also effectively insure against uncertainty by requiring the returns from their optimal decision to exceed the expected value of all other available options *and* the uncertainty-elevated option value of waiting (Bernanke 1983, p. 90). This can make waiting the optimal decision when there is uncertainty, depressing

⁹ Economic uncertainty can be measured through specially constructed indices, which reflect the frequency of terms relating to the economy, trade or uncertainty in settings like domestic newspapers and earnings calls for publicly listed companies (Baker et al. 2016; Caldara et al. 2020). Global uncertainty indices have also been constructed by applying similar text analysis or by aggregating national indices (Ahir et al. 2022; Davis 2016). Rising indices indicate more frequent mentions of uncertainty and its related topics throughout the global and Australian economies.

¹⁰ Irreversible decisions are sensitive to 'downside' uncertainty – the potential for regret over sunk costs and worse outcomes than agents would have accepted under perfect information (Bernanke 1983, pp. 91–92). This is the 'Bad News Principle of Irreversible Investments': that of the possible future outcomes of a particular investment, only the unfavourable outcomes affect the current propensity of undertaking the investment.

economic decisions such as job switching, household consumption on long-term goods and many forms of business investment (Benguria et al. 2022; Caldara et al. 2020; Handley 2014).

Figure 1.3 – Economic uncertainty has been volatile and rising, especially since 2024^{a,b}
Four indices for economic and trade policy uncertainty, 2016 to 2025



a. Shaded bars denote tariffs imposed or increased by the United States. **b.** Data unavailable for World Trade Uncertainty Index beyond March 2025 and for Global Economic Policy Uncertainty Index beyond April 2025. **c.** Quarterly index shown monthly.

Source: Ahir et al. (2022), Baker et al. (2016), Bown (2019, 2025), Caldara et al. (2020) and Davis (2016).

The economic effects of trade policy uncertainty

Trade policy settings, including tariffs, trade agreements, and other regulations, can increase or decrease economic uncertainty. Policies that credibly commit to creating a more stable trading environment have been shown to spur economic activity by reducing uncertainty (box 1.3). Conversely, trade policy uncertainty (TPU) arising from a lack of clarity or predictability regarding a country's trade policies can have the opposite effect.

TPU has many of the economic effects of general uncertainty, with a particular impact on firms' investment decisions. Choosing whether to enter a new export market, import a new intermediate input or adopt a new production technology all require partially irreversible investments. The potential for trade policy changes that make firms regret having spent their limited resources prompts profit-maximising firms to delay making major decisions under uncertainty (Handley 2014). An exporter may face a new tariff that makes their products uncompetitive after having spent the logistics costs to operate in a new export market, while a domestic producer may face new import tariffs raising the price of their inputs after having entered a contract with an overseas supplier.

The disincentive to invest is stronger the more irreversible a firm's capital is (Chinn et al. 2018, p. 209), and the more dependent a firm is on export destinations and import sources affected by uncertainty (Benguria et al. 2022). Uncertainty is costlier in industries with high fixed capital costs and concentrated supply chains, like heavy manufacturing, than those with more flexible and distributed assets like services and technology. Risk premia tend to rise under TPU, which can restrict credit flow to businesses as well as households (Chinn et al. 2018, p. 209). While particularly productive firms may be able to achieve sufficiently high returns from

investments under uncertainty and choose to undertake them, TPU tends to reduce levels of firm investment overall and alter the composition of investment across firms and industries away from an efficient allocation.

TPU also has direct and indirect consequences for households. By slowing firms' capital investment and hiring decisions, TPU dampens firms' hiring rates (Stein and Stone 2013, p. 24). Additionally, lower levels of investment in market entry, overseas inputs and production technologies can limit product varieties and increase consumer prices for households (Kyriazis 2021, pp. 2–6). Consumer prices may also rise if the threat of trade barriers associated with TPU leads firms to expect higher marginal costs and increase their markups (Caldara et al. 2020, p. 55). In turn, consumers may respond by increasing precautionary savings and reducing spending (Chinn et al. 2018, p. 209), reducing aggregate demand and putting further downward pressure on wages and employment if TPU is prolonged.

A growing literature has sought to quantify the effects of trade policy uncertainty, using measurable differences in TPU before and after major policy changes (box 1.3). This method is not directly applicable to estimating the effect of persistent and ongoing economic uncertainty such as the world is facing now, but can still generate useful insights on the effects of TPU.

Box 1.3 – Estimates of the economic effects of trade policy uncertainty

Much of the TPU literature draws on Handley and Limao (2012, 2015, 2017, 2022), who demonstrated how TPU can be introduced into a general equilibrium model to quantify its effects.¹¹ By increasing the real option value of waiting, uncertainty is shown to decrease the relative value of entering an export market and increase the productivity that a firm requires for entry to be profitable, with downstream economic effects.

TPU and the World Trade Organisation

Membership to the World Trade Organisation (WTO) lowers TPU by binding members' maximum tariffs to most-favoured-nation (MFN) levels, providing more predictability over future trade policy settings. Several studies have investigated the TPU-related effects of a country's membership to the WTO.

- Handley (2014) finds that lower tariff bindings spur investment by reducing foreign firms' incentive to delay market entry. He also finds that tariffs have a lasting effect – while lower applied tariffs spur firm entry, the effect is 70% weaker under TPU. Applying his estimates to a simulation where Australia reduced and bound tariffs to zero in 2001, faster firm entry increases the number of imported product varieties by 17% – with more than half of new product growth due to lower TPU.¹²

¹¹ Handley and Limao (2015) model TPU as part of a stochastic process for tariff policies, which affects heterogeneous firms' future profit flows and export market entry decisions. They model tariffs as a Poisson point process, where trade policy shocks occur at a rate of γ and result in a tariff, $\tau \in [1, \tau^H]$, drawn from a probability distribution of tariff outcomes $H(\tau)$. A rise in TPU can be modelled as an increase in the arrival rate γ or as a change in the distribution of possible outcomes $H(\tau)$, depending on the context.

¹² Handley (2014) extends Handley and Limao's (2012) general equilibrium model to incorporate binding tariff rates. Handley uses a latent variable specification for a firm's value of export market entry to estimate a structural probability model for observing imports of a particular product. The model is identified using time-product variation in Australia's applied and binding tariff rates from 1991 to 2001.

Box 1.3 – Estimates of the economic effects of trade policy uncertainty

- Handley and Limao (2017) find that lower TPU due to China's accession to the WTO accounted for over one-third of the growth in imports from China to the US from 2000 to 2005. Lower TPU also lowered US prices by the equivalent of a 13 percentage point tariff decrease.¹³

Other studies suggest that lower TPU from China's WTO accession also increased Chinese export product quality (Imbruno 2019) and increased Chinese patent applications in TPU-affected sectors (Liu and Ma 2020).

TPU and the 2018 China–United States trade war

Caldara et al. (2020) estimated the effects of TPU on the US from its 2018 trade dispute with China.

- In a time series regression, firms with median measured concerns regarding TPU have a lower capital stock than firms not concerned about TPU – by 2% after a year. Firms' concern about TPU was measured using text analysis of quarterly earnings calls.
- In a multivariate VAR framework, a trade policy shock sized to match the 2018 China–US trade war reduces US GDP by increasing firms' marginal costs and decreasing the mass of US exporters. GDP is almost 0.8% lower six months after the shock, driven by investment and exports falling by 1.5%, with one third of the declines attributable to uncertainty alone.

Benguria et al. (2022) measured the effects of the same dispute on Chinese firms.¹⁴

- The 2017-18 increase in TPU led to a cumulative ~2.3% decline in firm investment by quarter three of 2019, but the authors find no significant impact on firm profits over the same horizon. They also highlight stronger responses among firms with a narrower range of import sources and export destinations as well as fewer varieties of imported inputs and final products.

Australia's best response is to continue to advocate for free trade

Our modelling shows that the long-run impact of current changes to global tariff settings on Australia is likely to be small overall, and that the current approach of the Australian Government to not implement retaliatory tariffs is sound.

Increasing our direct barriers to trade and investment, even if in retaliation, would come at a cost. Retaliatory action by Australia also risks harm to specific industries if it leads to further targeted and strategic action on specific goods and services produced in Australia. Moreover, the potential gains to Australia from liberalisation are higher than the gains from taking no action, let alone from implementing retaliatory tariffs.

The same principles apply to indirect retaliation through non-tariff measures, such as stronger anti-dumping protections or local content rules. These forms of behind-the-border assistance have a similar protectionist effect to import tariffs, while also being less transparent. To the extent that they protect particular industries, indirect assistance measures do so at a cost to the overall economy by raising costs for producers and

¹³ Prior to China's accession to the WTO, the US granted China 'Normal Trade Relations' status (i.e. MFN) subject to annual reviews by congress. Handley and Limao (2017) exploit variation in tariff risk across industries (that is, by how much tariffs would rise if Normal Trade Relations ceased) to estimate a TPU-augmented gravity equation.

¹⁴ Benguria et al. (2022) constructed firm-specific measures of TPU using Chinese firms' annual company reports and link these to firm-level customs data in a series of first-differences regressions.

prices for consumers. They prevent the domestic economy from fully benefitting from the trade policies of other countries and may raise the risk of further retaliation.

Amidst heightened global uncertainty about resurgent trade barriers, Australia's best response is to continue to work towards reducing trade policy uncertainty (both globally and for Australian firms). Australia can proceed unilaterally, such as by lowering and binding tariff levels to give prospective exporters certainty about Australia's markets, and multilaterally, such as by committing to free trade agreements and international institutions that can promote long-term economic stability.

Australia should continue to advocate for the rules-based international trading system that has underpinned our post-war prosperity and seek out likeminded countries receptive to the benefits of freer international trade to progress this as far as possible among themselves.

2. Australian trade policy developments

Key points

- ✱ **Despite the worsening global trade environment, Australia is continuing to liberalise its trade policy settings through resolving trade disputes, new bilateral agreements and refinements to existing regional agreements.**
- ✱ **However, compliance with Australia's preferential trade agreements continued to impose significant costs.**
 - In 2023-24 the tariff regime imposed compliance costs of between \$1.3 billion and \$4 billion, while collecting \$2 billion in revenue.
- ✱ **These costs could be reduced if remaining opportunities to eliminate nuisance tariffs are taken up.**
 - The Australian Government is making the largest unilateral tariff reform in two decades by abolishing 457 tariffs from 2024-25 onwards.
 - There remain many 'nuisance tariffs' in Australia which generate little revenue and impose high costs on businesses seeking to avoid them.
- ✱ **We have identified a further 315 nuisance tariffs to prioritise for review for potential removal.**
 - Tariffs were grouped into four priority levels based on the ratio of indicative compliance costs to tariff revenue alongside the absolute tariff revenue collected by the Government in 2023-24.
 - A few imported product categories made up a substantial number of nuisance tariffs, particularly boilers and appliances, plastics and iron and steel products.

The role of tariffs in the global economy has changed dramatically. Consistent with the analysis presented in chapter 1, there has been a greater use of tariffs as a trade measure in 2025 compared with previous years, with 18% of harmful trade measures coming from import tariffs,¹⁵ compared to 5.1% in 2024 (Global Trade Alert 2025). However, the increases in tariff overseas do not call into question the long-term direction of Australia's tariff policy (section 2.1). As is becoming clear from estimates by the Productivity Commission and others, raising Australia's tariffs in response would not be optimal.

¹⁵ As at 19 June 2025.

In this environment, Australia has progressed its trade relations through resolving disputes and furthering regional and bilateral trade agreements. Australia has also committed to unilateral actions designed to protect domestic industries (section 2.2).

‘At the border’ assistance’s role through tariffs is set to fall following the abolition of around 500 ‘nuisance tariffs’ from 1 July 2024. This term refers to tariffs on goods, mostly imported under trade agreements, that generate little revenue relative to the administrative costs of complying with trade agreements. The aggregate cost of these nuisance tariffs has been reported in the Trade and Assistance Review (TAR) since the release of the *Nuisance Cost of Tariffs* research report (PC 2022) (section 2.3). This year’s TAR builds on this work by proposing a framework for prioritising the removal of remaining nuisance tariffs (section 2.4).

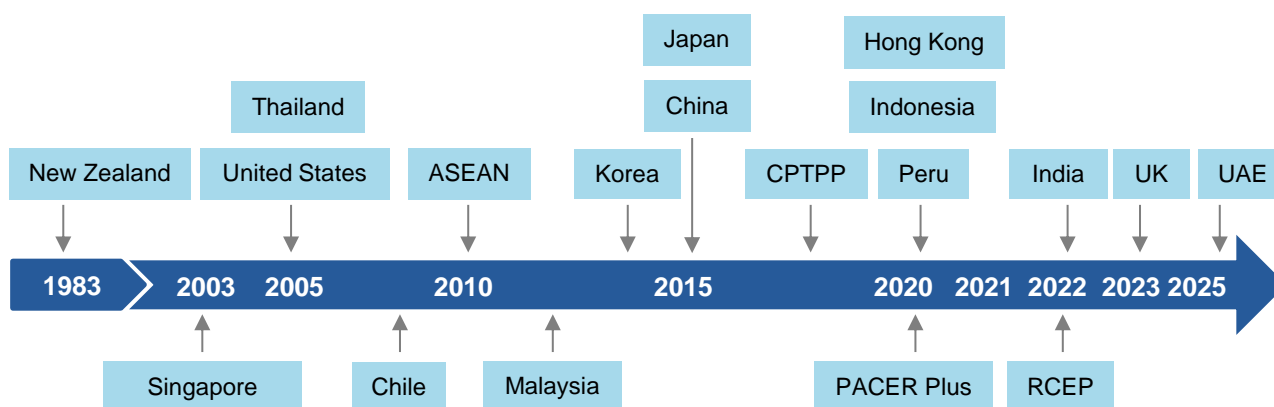
2.1 Australia has a long history of trade liberalisation

Australia has progressively dismantled the system of quotas and tariffs that previously protected domestic industry from international competition. This process took three forms:

- Australia actively participated in multilateral forums to reduce trade barriers. Australia has actively participated in multilateral trade forums, firstly through the General Agreement on Tariffs and Trade (1948) and subsequently through the World Trade Organisation (1995). Notable actions include the Uruguay Round (1986-1994) and joining the Information Technology Agreement (1996) to reduce technology trade barriers which was later extended to eliminate a further 201 tariffs in 2015 (Centre for International Economics 2017, pp. 5–7, 22–25; WTO 2025b).
- Australia took unilateral action to directly remove barriers to trade. Australia began unilaterally cutting tariffs in the 1970s, notably with a 25% across-the-board reduction in 1973 (Millmow 2023). Subsequent reforms lowered most tariffs, reaching 10% by 1992 and a general rate of 5% by 1996. However, sectors like motor vehicles and textiles, clothing and footwear were reduced more slowly, not reaching the 5% rate until 2010 for vehicles and 2015 for textiles (Centre for International Economics 2017, pp. 22–25).
- Australia negotiated trade agreements with major trading partners. From the early 2000s, Australia increasingly pursued bilateral and regional trade agreements. These agreements now cover most of Australia’s major trading partners (figure 2.1).

All three of these forums continue to be used today in different capacities as explored in this chapter.

Figure 2.1 – Australia’s trade agreements by year entered into force^{a,b}



a. ASEAN = Association of Southeast Asian Nations. CPTPP = Comprehensive and Progressive Agreement for Trans-Pacific Partnership. PACER = Pacific Agreement on Closer Economic Relations. RCEP = Regional Comprehensive Economic Partnership. **b.** UAE agreement is expected to enter into force in mid-2025.

Source: DFAT (2025a, 2025c).

2.2 Australia's trade agreements, disputes and relationships

Developments in Trade Agreements

Australia has continued to negotiate and implement regional and bilateral trade agreements over the past year. While progress on some trade agreements have stalled, recent global uncertainty has revived the possibility of further developments, even though the ability for parties to act in a manner contrary to the aims of a bilateral agreement potentially reduces the benefits of the agreement. There has also been expansion in membership for some multilateral trade agreements that Australia is a party to.

Regional agreements

On 19 September 2024, the Australian Government initiated the process for ratifying agreements between the members of the *Indo-Pacific Economic Framework*. The Australian Government had previously signed these agreements on 6 June 2024 (DFAT 2024b). The ratified agreements were:

- the IPEF Clean Economy Agreement
- the Fair Economy Agreement and
- the Agreement on the Indo-Pacific Economic Framework for Prosperity.

Australia ratified the United Kingdom's accession to the *Comprehensive and Progressive Trans-Pacific Partnership* (CPTPP), with trade between Australia and the UK covered by the CPTPP from December 2024 (UK Department of Business and Trade and UK Department of International Trade 2024). Further, in November 2024, Costa Rica received an invitation to join the CPTPP. Detailed discussions for Costa Rica's accession to membership of the CPTPP are expected to begin this year (UK Department of Business and Trade 2024).

Bilateral agreements

In November 2024, Australia and the United Arab Emirates finalised the Comprehensive Economic Partnership Agreement, which removed tariffs on over 99% of Australia's exports to the UAE, including on meat, dairy, grains and oilseeds, chickpeas, lentils, nuts, horticulture and honey. The agreement also included provisions for further economic cooperation, digital trade and skilled labour mobility, intellectual property and First Nations trade (Farrell 2024a). The agreement is expected to commence in the second half of 2025 (DFAT 2025a).

Australia has continued progress towards further trade engagement with India, including through the Australian Government releasing a roadmap for economic engagement with India in February 2025 (Albanese et al. 2025). In addition, negotiations continue for the Australia-India Comprehensive Economic Cooperation Agreement, which is aimed at increasing economic cooperation beyond the existing Economic Cooperation and Trade Agreement (Farrell 2024b).

Some existing agreements were modified to provide further trade opportunities. Australia ratified an upgraded ASEAN-Australia-New Zealand Free Trade Area agreement in February 2025 (Farrell 2025b). Further market access agreements were entered into between Australia and Vietnam to provide access for additional products (Farrell and Collins 2024).

The Australian Trade Minister has also indicated that further talks are being held with the European Union for a free trade agreement, after negotiations stalled for this agreement in late 2023 (Farrell 2025a).

Developments in the multilateral trading system affecting Australia

The main developments in the multilateral trading system affecting Australia concern trade disputes through the World Trade Organisation (WTO). Over this year, Australia has continued to resolve ongoing trade disputes in the absence of effective formal dispute resolution procedures (box 3.5).

In December 2024, China lifted trade restrictions on live rock lobsters from Australia (Albanese et al. 2024c). In addition, China lifted its suspension on imports from the remaining Australian meat processing establishments, following the removal of restrictions on five processing establishments discussed in last year's TAR (Albanese et al. 2024d).

Australia's WTO dispute with China (DS603), in which China disputed Australia's anti-dumping and countervailing measures on certain steel products, was finalised in January 2025, when the Australian Government advised the WTO that it had fully implemented the recommendations of the Dispute Settlement Body (WTO 2025c).

Australia's trade dispute with India (DS580), in which Australia has disputed India's sugarcane and sugar policies remains stalled until the WTO Appellate Body resumes operation (WTO 2022). As noted in previous TARs, the Dispute Settlement Body had previously found that India's domestic support and export subsidies were inconsistent with WTO trade rules.

Box 2.1 – The World Trade Organisation Appellate Body continues to be inoperative

The World Trade Organisation's (WTO) appellate body is designed to assist members in resolving trade disputes where they have been unable to resolve the matter between the relevant parties, and a party is dissatisfied with a decision of the WTO's dispute settlement mechanism.

As reported in previous TARs, the appellate body has been unable to function since 2019, due to disagreements over the appointment of new members leaving it without a quorum to be able to adjudicate over trade disputes (PC 2024c, p. 53). This leaves trade disputes that are appealed from the dispute settlement body unable to be finalised, like Australia's current dispute with India (DS580).

Over the past year, the WTO General Council has continued discussions on reforms to the dispute settlement mechanism, including the role of the appellate body (WTO 2024). However, to date, these discussions have not resulted in any substantial outcomes (Suarez 2024). Some parties, particularly the US, hold concerns about the powers and functions of the appellate body (Grieger 2024). The US has recently blocked a proposal by 130 members of the WTO to start the selection process for new members to the appellate body, noting that its concerns about the appellate body have not been addressed (WTO 2025d).

The recent increase in trade policy uncertainty has revived interest in strengthening international trade dispute resolution for some countries, particularly as parties seek to resolve disputes concerning newly imposed tariffs and retaliatory measures. For example, some commentators advocate more nations joining a 'coalition of the willing' in the Multi-Party Interim Arbitration Arrangement to support rules-based trade (Smith et al. 2025). The European Union has also placed greater focus on using the dispute settlement provisions of applicable regional and bilateral agreements, as these provisions are often based on WTO dispute settlement rules (Grieger 2024).

Australia's unilateral actions in response to tariffs and trade policy uncertainty

The Australian Government has announced measures to address the current global trading environment and economic uncertainty. During the 2025 Federal election campaign, the Labor Party responded to the US Liberation Day tariff announcements with a 'five point plan' (box 2.2). Aspects of the government's response are discussed further in chapter 3, as they provide direct forms of industry assistance.

Box 2.2 – Australian Government's response to 'Liberation Day' tariff announcements

On 3 April 2025, during the 2025 Federal election campaign, the Prime Minister, the Hon Anthony Albanese MP, announced a five point plan for responding to the tariffs announced by the United States earlier that day. The Prime Minister announced:

1. A strengthening of Australia's anti-dumping regime to safeguard against unfair competition in specific sectors, such as steel, aluminium and manufacturing.
2. \$50 million for affected sectors (and particularly for their peak bodies) to grow new global markets for products.
3. A new Economic Resilience Program to deliver \$1 billion in zero interest loans through the National Reconstruction Fund, to assist firms to take up new export opportunities.
4. Expanding the Australian Government's 'Buy Australian' campaign, through changes to government procurement processes to favour Australian businesses.
5. Establishing a critical minerals reserve.

Source: Albanese (2025b)

Measures targeting dumping are designed to protect domestic producers from unfair and unsustainable competition through dumping. Dumping occurs when a product is imported at less than its 'normal value', which occurs where the export price is less than the ordinary price of the product when supplied for consumption in the exporting country (WTO 1994). The PC has previously recommended changes to the anti-dumping system to *reduce* the protectionist impact of the system (PC 2010a), and has more recently observed that the most significant changes since the 2009 inquiry have *increased* protectionism (PC 2016). Changes to Australia's anti-dumping regime should only proceed where it can be established that the benefits to protected industries outweigh the costs to the community of increased protectionism. The PC noted in this previous work that it is likely to be rare for this threshold to be met.

Strengthening Australia's anti-dumping regime will impact Australia's relationships with several trading partners that have been or may be subject to the anti-dumping measures.

2.3 Australia continues to have many nuisance tariffs

The Australian Government has made the largest unilateral tariff reform in two decades by abolishing 457 tariffs from 2024–25 (Treasury 2024f). The selected tariffs were chosen on the basis of being 'nuisance tariffs' – goods predominantly imported under trade agreements or concessions that generate little revenue

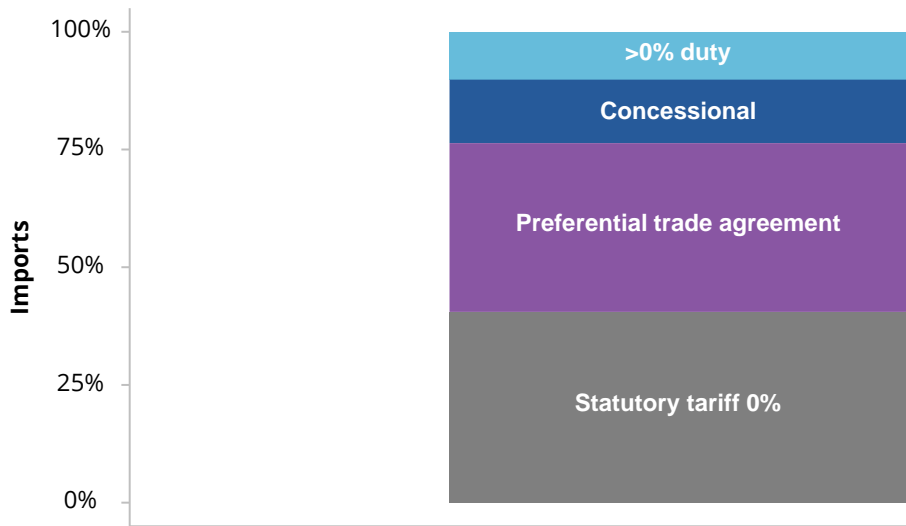
while imposing compliance costs on businesses accessing the agreement to avoid the tariff. This continues a long history of tariff reform in Australia and supports the prospects for further unilateral action.

Despite these reforms, Australia continues to impose tariffs on many products. Under the Customs Tariff classification system:¹⁶

- Australia levies most-favoured-nation (MFN) duties on 3,470 products (51% of count of imported products)
- the remaining 3,358 products (49%) can enter the country duty free
- most of these tariffs are levied at the statutory (maximum) rate of 5% (85%), while the remaining tariffs are levied at rates above 0% but below 5% and
- tariffs are almost all on manufactured goods (~95% by count of products), with the remainder being primarily on agricultural products (WTO 2025a).

A large proportion of products with tariffs in Australia are avoidable mainly due to Australia’s wide ranging preferential trade agreements (PTAs), which now cover most of Australia’s major trading partners, apart from the European Union. Importers can also reduce tariffs through the Tariff Concession Scheme for some goods not produced locally. Concessions can also be granted for imports with certain uses (such as aids for persons with a disability) or for certain users (such as goods for international bodies) (ABF 2024). As a result, in 2023-24 approximately 90% of imports entered the country duty free. As shown in figure 2.2, 36% are duty free due to accessing a PTA, a further 13% through other forms of concessional treatment, and a further 41% enter Australia duty free without the need of any concession or preference.

Figure 2.2 – About 90% of imports enter Australia duty free
Imports by type of tariff, Australia 2023-24



a. Imports recorded to have claimed either a preference or concession but still paid a non-zero tariff are classified as paying a non-zero tariff. b. Excludes imports of goods with excise equivalent tariffs (like tobacco).

Source: Commission estimates using ABS (2025a).

¹⁶ All goods imported into Australia under a full customs declaration are classified using a ten-digit Harmonized Tariff Item Statistical Code (HTISC). The first six digits come from the internationally standardised Harmonised System (HS). The Department of Home Affairs adds the seventh and eighth digits for duty rates (Customs Tariff code), and the Australian Bureau of Statistics (ABS) adds the ninth and tenth digits for statistical purposes (ABS 2018).

The prevalence of PTAs and concessions means that many of Australia's remaining tariffs are 'nuisance tariffs' – tariffs that raise little revenue (due to preferences or concessions) but impose compliance burdens for businesses (PC 2022, p. 6). Compliance costs are the costs incurred to avoid tariffs by accessing a preferential rate under a PTA or a concession. Since TAR 2021-22, compliance costs have been the primary method by which the Commission monitors the effects of tariffs. These costs have two primary forms:

- the costs of paperwork needed to obtain a preference (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 which are then passed on to importers through higher costs (PC 2022, p. 33).

The PC estimates these costs to be \$1.3-4 billion in 2023-24 (table 2.1). Most of this range exceeds the \$2 billion in tariff revenue collected in the same period. Despite higher imports under PTAs, the cost of the preferential trading system fell due to a slightly lower modelled compliance costs of accessing PTAs. To better understand compliance costs a literature review is provided in appendix C, the methodology underpinning the estimates can also be found in *appendix C of the Nuisance Cost of Tariffs* report (PC 2022).

Table 2.1 – Estimated costs imposed by Australia's preferential tariff system^{a,b,c}
Estimated costs for 2021-22 to 2023-24, \$ billions and % where marked

Year	Imports	Imports under PTA	PTA access costs (modelled)	Compliance costs (C)	Tariff revenue (R) ^c	Imports attracting tariffs (V)	Costs as a share of tariffed imports (C+R)/V
2021-22	\$371.2	\$108.7	2.1%	\$1.1-3.4	\$1.8	\$37.1	8-14.1%
2022-23	\$419.1	\$121.9	2.1%	\$1.3-3.8	\$2.1	\$42.7	7.9-13.9%
2023-24	\$424.1	\$134.1	2.0%	\$1.3-4	\$2.0	\$40.0	8.3-15%

a. Compliance costs are calculated by multiplying the value of imports that benefitted from a preferential agreement by the estimated compliance costs as a percentage of values of imports plus the cost of administering the tariff concessional system, estimated to be at least \$5 million per annum (PC 2022, p. 33). **b.** To avoid false precision a 50% range is applied. **c.** Total imports includes excisable goods and as a result cannot be directly compared to figure 2.2.

Source: PC estimates using ABS (2025a).

2.4 Prospects for further unilateral trade liberalisation

The next 500 tariffs (... or more)

Unilateral action continues to be the most straightforward way in which Australia can further liberalise trade. Further multilateral action through the World Trade Organisation is unlikely in the current trade policy environment (chapter 1). Further trade agreements might liberalise trade to a degree but may also increase the number of nuisance tariffs. As shown in recent PC modelling, removing all tariffs in Australia could grow GDP by \$3 to \$7 billion and reduce consumer prices by 0.13% to 0.25% (PC 2024b, p. 18). However, fiscal and political constraints may prevent the removal of all tariffs. History has shown that trade liberalisation is often incremental. This section provides a simple framework for prioritising nuisance tariffs for potential removal as well as some other considerations that could help identify option for further reform.

Australia's low statutory tariff rate of 5% coupled with trade agreements covering most major trading partners means that tariffs have limited economic incidence in Australia. An initial prioritisation of tariffs as targets for a removal assessment can instead focus on examining:

- the indicative compliance cost to tariff revenue ratio and
- the duties collected by the tariffs.

This method recognises that while a high indicative compliance cost relative to revenue signals inefficiency, the absolute revenue amount still matters, especially for short-term budgetary considerations. While we cannot estimate a precise compliance cost for each tariff we can apply the lower bound average from the PC model to get a rough barometer which helps identify tariffs that incentivise high compliance behaviour.¹⁷ It serves as a starting point to develop a list of tariffs to investigate further.

Table 2.2 prioritises nuisance tariffs for further investigation into four groups based on their indicative compliance cost-to-revenue ratio and total revenue collected. Tariffs with a medium priority or higher have indicative compliance costs exceeding revenue even using the lower bound estimate of average compliance costs from the PC's model as shown in the table. The table also shows the share of products imported under PTA for each group, indicating how often agreements lower their duties.

Products subject to the 315 'urgent priority' tariffs are imported under PTA 97% of the time, while products in the lowest priority group have lower PTA use (62%). This may be due to these products not being covered by existing PTAs or being imported from countries which do not have a PTA with Australia.

Table 2.2 – A simple framework for prioritising tariffs for a removal assessment^a

Classification of analysed 2023-24 import data, summarised to 8-digit Customs Tariff

Prioritisation	Indicative compliance cost to revenue ratio	Tariff revenue	Count	Revenue (\$ million)	Compliance cost (\$ million)	PTA use
Urgent priority	Very high > 5 ratio	Any revenue	315	\$13.0	~\$145.8	97%
High priority	High ($1 < ratio \leq 5$)	Low (bottom 50 percentiles)	285	\$4.0	~\$8.8	92%
Medium priority	High ($1 < ratio \leq 5$)	High (top 50 percentiles)	396	\$290.9	~\$597.7	91%
Lower priority	Low to Moderate (≤ 1 ratio)	Any revenue	1644	\$1,511.0	~\$502.4	62%

a. Imports with non-MFN duties are excluded such as anti-dumping duties, additional duties levied on Russia and excise duties imposed at customs. Confidential imports and imports by Government are also excluded. It also excludes the almost 500 tariffs removed from 2024-25. **b.** Note this list only looks at imports of products with tariffs that have been imported under PTA at least once in 2023-24. **c.** For compliance costs, the lower bound estimate of system wide average compliance costs is used (~1% of customs value under PTA). **d.** PTA use calculation excludes concessional imports.

Source: Productivity Commission estimates using ABS (2025a).

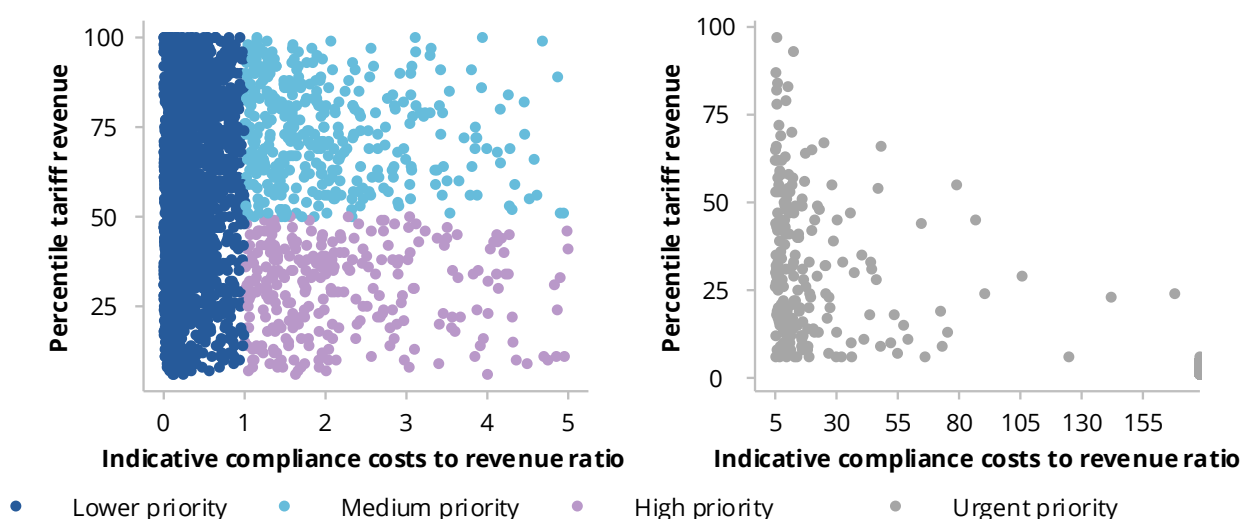
Figure 2.3 shows the four clusters. Per-tariff indicative compliance costs are based on average system wide compliance costs as a percentage of the value imported under PTAs. This method does not account for product-specific or agreement specific complexity nor the characteristics of the importing firm that could result in costs being higher or lower. A tariff-by-tariff compliance cost estimate would require transaction level

¹⁷ Using the lower bound average incurred compliance costs as a share of import value from the PC model as a rough estimate (1% of import value under PTA). Products with high compliance costs will be those with high PTA use relative to imports under normal duties. This means they are 'friction points' in the trading system to consider for removal.

data that the PC has not obtained. As such it is an indicative measure only, not a precise estimate. However, the lower bound compliance cost estimate is conservative compared to the literature (Appendix C).

Figure 2.3 – Nuisance tariffs have been categorised into four groupings^{a,b,c}

Indicative compliance cost to revenue ratio (illustrative only) compared to tariff revenue percentile by identified priority level



a. Imports with non-MFN duties are excluded such as anti-dumping duties, additional duties levied on Russia and excise duties imposed at customs. Confidential imports and imports by Government are also excluded. **b.** 98 outlier products are not visible in the chart. **c.** For compliance costs, the lower bound estimate of system wide average compliance costs is used (~1% of customs value under PTA). It is a high-level indicator, not a precise estimate.

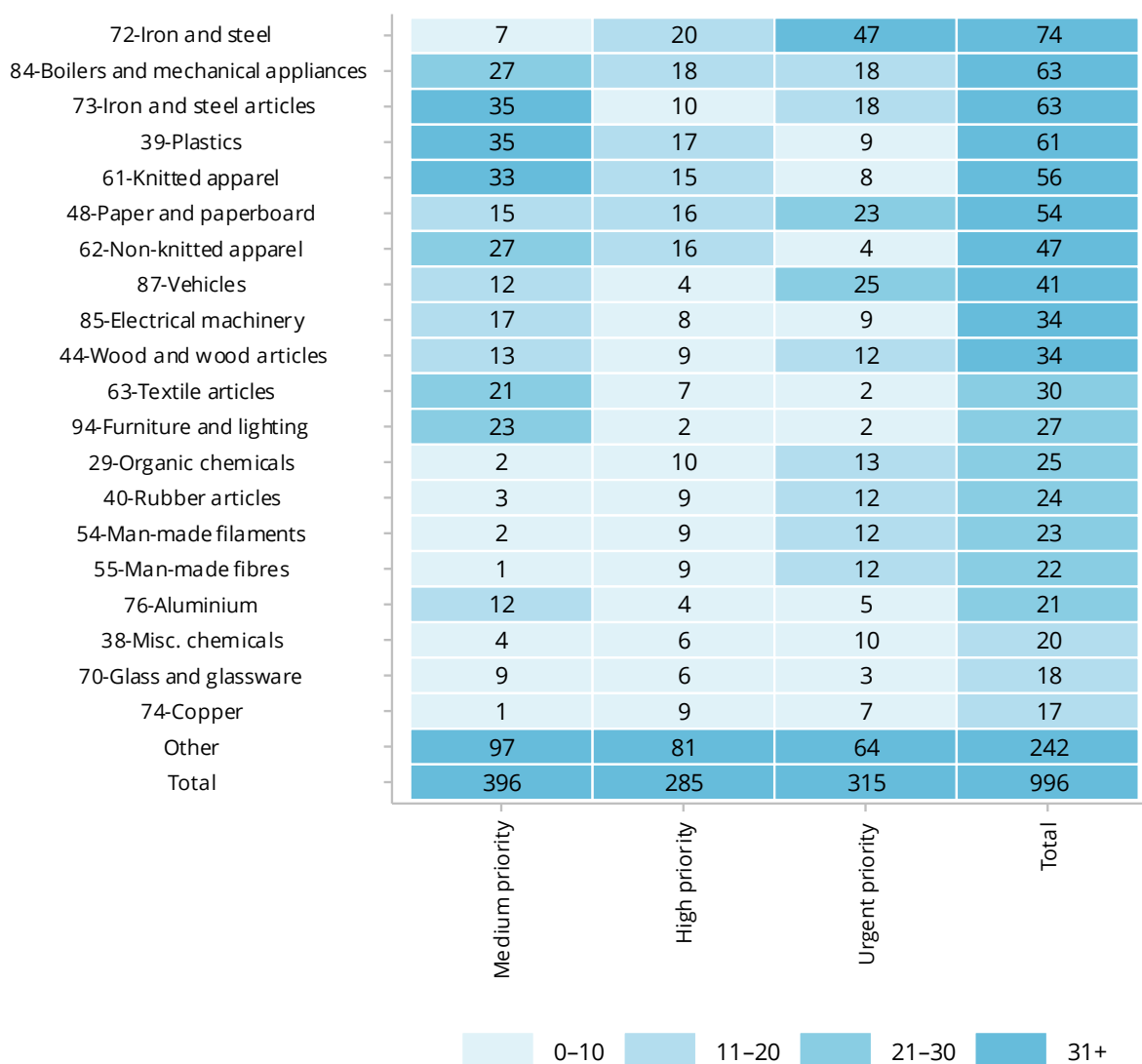
Source: PC estimates using ABS (2025a).

Understanding each grouping

Figure 2.4 shows the number of 2023-24 tariffs (ranked medium or higher priority) for imported product categories (HS 2-digit). A few imported product categories made up a substantial number of nuisance tariffs, particularly boilers and appliances, plastics and tariffs on iron and steel products.

Figure 2.4 – Tariffs on iron and steel, boilers and mechanical, and plastics make up a large share of identified nuisance tariffs

Number of tariffs in each prioritisation group 2023-24 import data, 2-digit HS code



a. Imports with non-MFN duties are excluded such as anti-dumping duties, additional duties levied on Russia and excise duties imposed at customs. Confidential imports and imports by Government are also excluded. **b.** HS 2-digit groupings with less than 15 total nuisance tariffs are grouped into 'Other'. **c.** Names of HS 2-digit groupings have been simplified.

Source: PC estimates using ABS (2025a).

Urgent priority

Tariffs in this category imposed at least five times more in indicative compliance costs than they provided the Australian Government in tariff revenue in 2023-24. This category consisted of 315 nuisance tariffs which were imported under trade agreements 97% of the time and brought in only \$13 million in revenue. HS 2-digit codes within this grouping included 65 tariffs on iron and steel or articles of iron or steel (HS 73 and 72) alongside 18 tariffs on boilers and mechanical appliances (HS 84). This included tariffs on imports such as:

- tubes, pipes and hollow profiles of cast iron (e.g. 7303000043)¹⁸
- products of iron or non-alloy steel, in coils, not further worked than hot-rolled, of differing widths (e.g. 7208360035 or 7208390038)
- air conditioning machines (e.g. 8415100037 and 8415810020).

This category also includes 25 vehicle¹⁹ tariffs, such as:

- motor vehicles for the transport of goods of particular weights and engine sizes (e.g. 8704211010, 8704311069) and
- new passenger vehicles of certain specifications (e.g. 8703401913, 8703321936).

Some of the tariffs within the urgent priority category provided the Australian Government with zero revenue in 2023-24. This included items such as tariffs on Diesel-electric locomotives (8602100003), which were only ever imported via PTA or concessional treatment (as occurs when a government entity purchases the item) but also products as diverse as fresh or chilled mushrooms of the genus *Agaricus* (07095100) and the chemical compound HCFC-22 (2903710050). Removing such tariffs will have no impact on Australian Government revenue^{20,21} but save businesses compliance costs to access these preferences.

High priority

Tariffs in this category's indicative compliance costs exceeded tariff revenue and brought in under ~\$50,000 in revenue each. This category consisted of 285 nuisance tariffs that were imported under trade agreements 92% of the time, bringing in only \$4 million in tariff revenue. Like the urgent priority tariffs, there were many tariffs on boilers and mechanical appliances (18 tariffs; HS 84) and tariffs on iron and steel (30 tariffs; HS 72). Both knitted and non-knitted apparel (HS 61 and 62) also made up a significant proportion of these nuisance tariffs (31 tariffs). This included tariffs on imports such as:

- many different clothing or textile items like handkerchiefs (e.g. 6213200057, 6104230052, 6207190030)
- processed iron and steel products like steel wool or flat rolled iron (e.g. 7323100014, 7210500005)
- machines like fridges, cranes and vending machines (e.g. 8418290021, 8426300013, 8476290030).

Medium priority

The indicative compliance costs of tariffs in this category exceeded tariff revenue, but they still provided the Australian Government with relatively high tariff revenue in 2023-24. This broad grouping includes 396 nuisance tariffs which were imported under trade agreements in aggregate 91% of the time and brought in \$291 million in tariff revenue. Furniture and lighting (HS 94) items made up a substantial component of this grouping, relative to other groupings, as did plastics (HS 39), clothing items (HS 61, 62 and 63), and other electrical (HS 85) or mechanical machinery (HS 84). Examples include tariffs on imports such as:

- electronic lighting like lamps and chandeliers (e.g. 8513100004, 9405110001)
- footwear (e.g. 6404119001, 6401929068, 6404119001)

¹⁸ This represents a 10-digit HTISC code, the first 8-digits represent the customs tariff code while the last two specify the item. See ABF (2024) for a full list.

¹⁹ Note that compliance costs stem from two sources: paperwork and adapted production to meet rules of origin. Removing a tariff always eliminates the direct administrative costs but not always the indirect production costs. This may be especially true for complex products like vehicles which are mostly manufactured by large multinational corporations with complex supply chains which could 'bake in' processes to meet many types of rules of origin. But tariff elimination would give importers greater choice if they are products which do not meet the rules of origin.

²⁰ Removal of these tariffs could result in Australia importing from other countries out of Australia's current PTA system. Given the low rate of tariffs and high coverage of trade agreements this would likely only be true for products with a highly elastic import demand. This might hold especially true for expensive products.

²¹ While some argue such tariffs could still provide negotiating leverage, their low rates, high compliance costs and the fact that most Australian trade is already covered by PTAs could negate much of this potential benefit.

- machinery including heat pumps and fork-lift trucks (e.g. 8418610032, 84272000)
- furniture for home and office use (9401690007, 9403100040).

Further considerations that could be overlaid over the nuisance cost prioritisation framework

There are many other considerations that could be embedded into the nuisance cost prioritisation framework- which is intended as a starting point only. Some of these considerations are explored below.

Further consideration: Abolish tariffs on intermediate goods

Empirical research demonstrates that tariffs on intermediate goods are particularly damaging to economic performance, suggesting their removal could be prioritised. Studies such as those conducted by Bas and Strauss-Kahn (2015) using Chinese transaction data found that cutting input tariffs resulted in firms upgrading the quality of their inputs to upgrade the quality of exported products, leading to higher export prices. Though cutting output tariffs can also boost productivity, Amiti and Koning's (2007, p. 1613) analysing Indonesian firms, found that reducing tariffs on imported inputs produced productivity gains for domestic firms roughly double those from cutting tariffs on final goods. While worth considering, the low applied rate of tariffs in Australia mean that the effects of prioritising intermediate goods could still be small.

Import data can be mapped by broad economic category to distinguish between tariffs on intermediate and final use products. By broad economic category about 57.8% of analysed customs tariffs were on intermediate goods and 13.5% on capital goods as defined by broad economic category end use. Intermediate goods made up 59.2% of tariffs categorised as 'lower priority' under the nuisance tariff framework. These lower priority tariffs could be reprioritised based on this consideration.

Further consideration: Abolish tariffs that offer close to zero industry protection

Australia has tariffs on many products for which there is little or seemingly no industry domestically to protect. These tariffs generate revenue and compliance costs at the cost of lost consumer welfare. Policymakers may wish to prioritise these tariffs over other tariffs while following the simple nuisance cost prioritisation framework outlined above.

Australia's Tariff Concession Order (TCO) system waives import duties for goods that have no equivalent domestically produced substitute. However, obtaining a TCO incurs administrative costs, and a concession can be challenged and revoked later (PC 2022, pp. 38–39). Furthermore, certain product categories, notably, types of clothing, motor vehicles and foodstuffs are explicitly excluded from the TCO scheme meaning they incur tariffs even when there is no local industry to protect (Australian Government 2025a; Curlett, Cannon & Galbell 2025). Such tariffs protect little or nothing and impose costs on businesses, making them potential candidates to be prioritised.

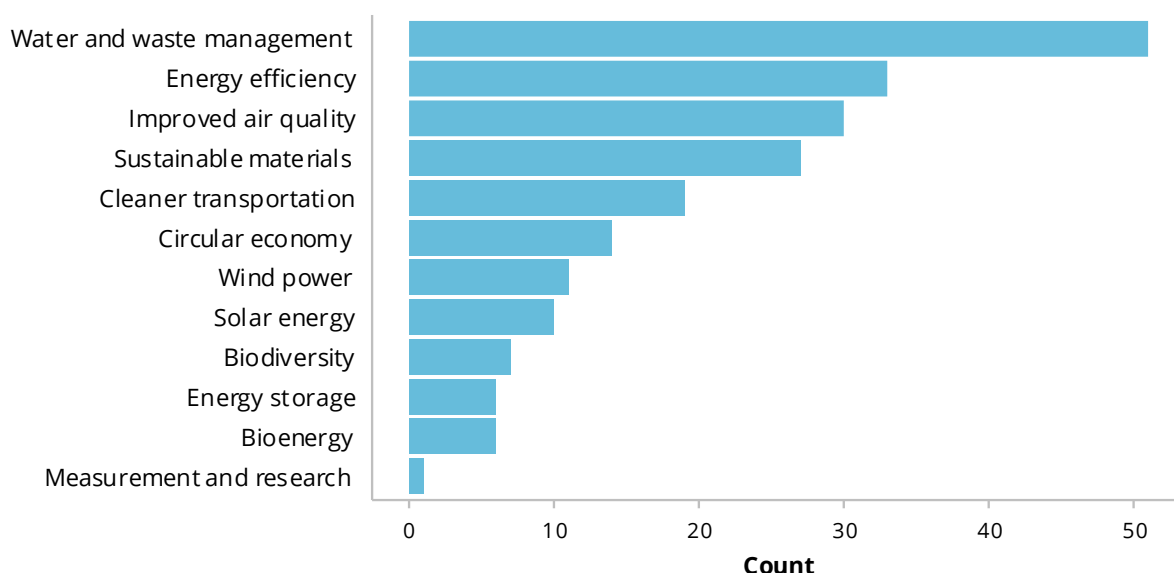
However, even industries making products that are exported by Australia can benefit from abolishing tariffs. A significant portion of trade, especially between developed countries with similar resources and technology, involves intra-industry trade – simultaneous import and export of goods within the same industry category. Firms can achieve economies of scale by focusing on particular niches within a product category. This specialisation leads countries to export specific niche goods they produce efficiently while importing other goods demanded by their consumers. This is why, for example, the North American Free Trade Agreement historically increased North American automotive trade, and led to more specialisation of manufacturing between countries as opposed to everything relocating to one location (Schott 2016).

Further consideration: Abolish tariffs that have social or environmental harms

Consideration should be given to abolishing tariffs that inflict social or environmental harms. For example, tariffs on environmentally beneficial products can impede progress on the net zero transition and provide other environmental benefits. Figure 2.5 shows the 215 tariffs analysed with identified environmental benefits. Most of these tariffs on environmental products are in the 'lower priority' category from the nuisance tariff prioritisation framework but could be prioritised more highly based on the benefits they provide. For instance, tariffs exist on ultra-violet lamps, but they have environmental benefits due to their use in water and waste management. Many tariffs are on products that can have energy efficiency benefits or provide cleaner transportation such as heat pumps, and bicycles. Other examples include many tariffs on sustainable materials like wood products.

Figure 2.5 – Many of the analysed tariffs target products with environmental benefits^a

Classification of analysed 2023-24 import data, based on Customs Tariffs with identified benefits at the HS 6-digit level



a. Products often had many benefits defined by the New Zealand Ministry of Foreign Affairs and Trade. For simplicity of reporting, only an overarching identified benefit was assigned to each tariff.

Source: PC estimates using ABS (2025a). Identified benefits are based on New Zealand Ministry of Foreign Affairs and Trade (2024) at the HS 6-digit level, mapped to analysed Customs Tariff data.

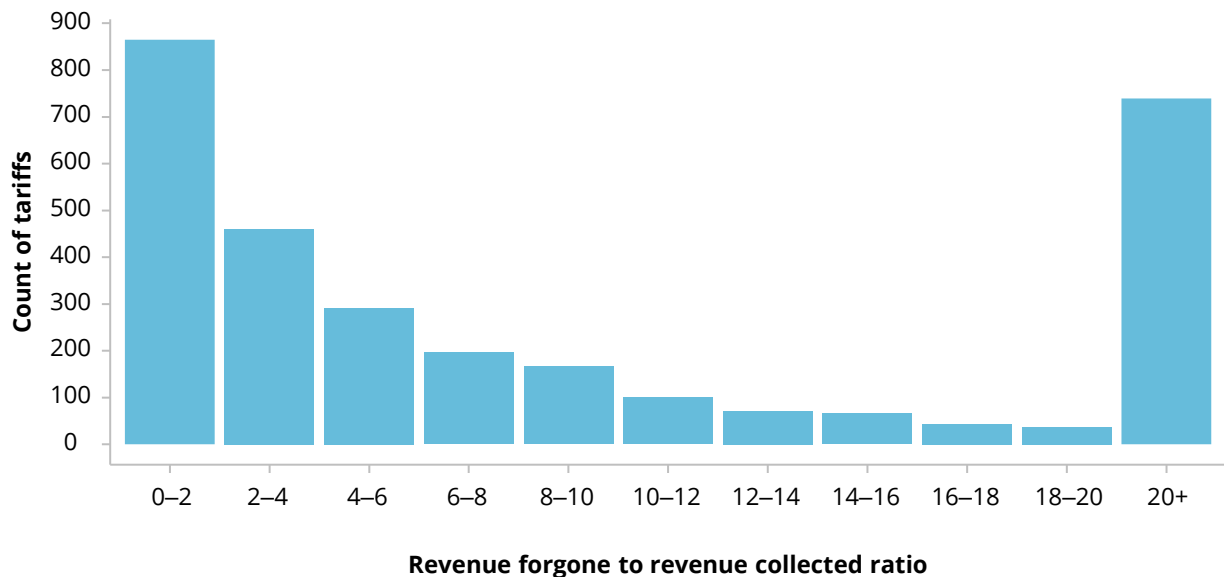
Further consideration: Abolish tariffs that have high revenue forgone relative to revenue collected

Avoidance of tariffs through concessions and PTAs both lead to system complexity. While the compliance cost to revenue ratio focuses on the inferred costs imposed by PTAs there is a more general argument that can be made about the administrative inefficiency of tariff revenue collection. In aggregate in 2023-24, for every \$1 collected in tariff revenue \$4.3 was avoided through PTAs or concessions. This means total revenue forgone was ~\$8.6 billion compared to ~\$2 billion in revenue collected by tariffs.

Some tariffs had exceptionally high rates of revenue forgone to revenue collected. Prioritising these tariffs for removal could simplify the system at little cost to the Australian Government. Figure 2.6 shows the distribution of revenue forgone to revenue collected. In total, 739 tariffs have a system inefficiency ratio above 20, meaning for every dollar collected at least \$20 dollars in tariff revenue are forgone. Removing

such tariffs could simplify Australia’s tariff system and reduce administrative burdens on business and on the Australian Government.

Figure 2.6 – Revenue forgone exceeds revenue collected for most tariffs^{a,b}
Classification of analysed 2023-24 import data, based on Customs Tariffs



a. Revenue foregone calculated as the revenue that would have been collected based on the applicable statutory rate, had the PTA or concession not been used. **b.** Each bar in the chart represents a group of tariffs whose inefficiency ratios fall within a 2-point range, for example, the '0-2' bin includes all tariffs with a ratio greater than or equal to zero but below two.
Source: PC estimates using ABS (2025a).

3. Australian industry assistance developments

Key points

- ✳ **The Australian Government's Future Made in Australia (FMIA) agenda has cemented industry policy's growing role in Australia's economy.**
 - In December 2024, the *Future Made in Australia Act 2024* (Cth) commenced, and legislation providing production tax credits for processing critical minerals and green hydrogen passed.
 - The legislation enshrines a National Interest Framework (NIF) sector assessment process, how this framework will be applied will be seen throughout 2025 and in future years.
 - FMIA budgetary assistance is largely via the legislated production tax incentives for critical minerals processing and green hydrogen production. These will not take effect until 2027-28.
- ✳ **Alternatives or complements to domestic production can minimise the costs of FMIA interventions for economic security.**
 - The development of stockpiles and club good style international partnerships can be used to reduce the cost of the FMIA economic resilience and security stream.
 - The Australian Government has embarked on these approaches in the critical minerals sector. These policy options could be explicitly considered as part of the legislated sector assessments.

As discussed in chapter 2, over the 51-year life of the Trade and Assistance Review (TAR), Australia has largely dismantled the system of quotas and tariffs that previously protected domestic industry from international competition. As these traditional forms of 'at-the-border' trade protections have receded, the relative importance of 'behind-the-border' industry assistance such as budgetary assistance and concessional finance has grown.

'Behind the border' assistance is set to grow further under the Future Made in Australia initiative, first discussed in TAR 2022-23. Since then, FMIA's future role in Australia's economy has become clearer. This year's TAR explores these developments, looks at how announced spending compares with overseas initiatives to date, and discusses the opportunities for the role of alternatives or complements to onshoring industry to minimise the costs of these interventions.

3.1 Future Made in Australia's rationale and risks

Industry policy is set to play a growing role in Australia's economy

Industry assistance provided by the Australian Government is expected to increase in future years as industry policy is used in response to a broader range of policy challenges, such as changing geostrategic circumstances and the net zero transition. Our two most recent TARs have explored this emerging form of industry policy – most recently in the form of the 'Future Made in Australia' (FMIA) agenda.

In the past year, the FMIA agenda has been refined. In December 2024, the *Future Made in Australia Act 2024* (Cth) commenced, cementing FMIA's scope, including Treasury's role in assessing whether supported sectors align with the National Interest Framework (NIF) (Parliament of Australia 2024). In February 2025, the green hydrogen and critical minerals production tax incentives passed through the Parliament (Parliament of Australia 2025). On 20 January 2025 the Australian Government also announced a green aluminium production tax credit, however legislation to enable this tax credit has not yet been introduced into parliament (Husic 2025). Box 3.1 provides an overview of FMIA.

Box 3.1 – Understanding 'Future Made in Australia'

Future Made in Australia (FMIA) is a broad industry policy agenda first announced by the Australian Government in the 2024-25 budget. It aims to build a 'more diversified and resilient economy powered by clean energy and creat[e] more secure, well paid jobs' (*Future Made in Australia Act 2024* (Cth) Preamble).

Investments made under FMIA are guided by the National Interest Framework (NIF) which was legislated in the *Future Made in Australia Act 2024* (Cth). The NIF is designed to impose "rigour on Government's decision making on significant public investments, particularly those used to incentivise private investments at scale" (Australian Government 2024a, p. 6).

Future Made in Australia Act 2024 (Cth) subsections 7(3) – (4) outline two streams for FMIA investment:

- **Net Zero Transformation Stream** – relates to where a sector could have a sustained comparative advantage in a net zero global economy; and public investment is likely to be needed for the sector to make a significant contribution to emissions reduction at an efficient cost.
- **Economic Security and Resilience Stream** – relates to where some level of domestic capability in the sector is a necessary or an efficient way to deliver economic resilience and security; and the private sector will not deliver the necessary investment in the sector in the absence of government support.

Under the legislation, the Minister can ask for a 'sector assessment' to determine whether support for a given sector aligns with the NIF. To date no sector assessments have been undertaken, however preliminary analysis to identify potential sectors was carried out as part of the NIF supporting paper. This paper claimed Australia has an enduring comparative advantage in hydrogen, green metals, and low carbon liquid fuels (Australian Government 2024a, pp. 15–20). It also stated that critical minerals processing aligns with the economic security and resilience stream (Australian Government 2024a, p. 24).

Source: Australian Government (2024a) and Parliament of Australia (2024).

Industry policy initiatives come with risks that require careful policy design and implementation. Poorly designed industry policy can be costly for governments, act as a form of trade protection and distort the allocation of Australia's resources towards activities that Australia is not best placed to undertake.

At the same time, well-designed industry policy can offer benefits. It presents an opportunity to address persistent market failures, such as unpriced carbon externalities and innovation spillovers, thereby accelerating the transition to a net zero economy in the absence of economy-wide pricing mechanisms. Crucially, the process for determining who gets assistance must be transparent and rigorous. It needs to guard against arbitrary bias towards one activity or industry over another. If implemented carefully, such policies can steer investments towards activities with long-term social and economic advantages that might otherwise be overlooked.

Ultimately the success of FMIA will depend on the application of frameworks like the NIF, which can help guide spending to its best use; and shed light on the costs of such policies compared to the realised benefits. This underscores the critical need for transparency and ongoing evaluation and review of these and other industry policies, as well as the need for exit strategies to be incorporated into policy frameworks.

Domestic industry subsidies are often unlikely to be the lowest cost way of reducing supply chain disruptions

Domestic industry is not a guarantee of secure supply

Achieving FMIA's goal of minimising supply chain disruptions at efficient cost will require careful strategy. While there are cases for intervention through assistance, relying on domestic industry for supply chain security has several limitations:

- Investment in domestic industry to manage supply chain risks may simply shift a vulnerability rather than reduce it. Many complex goods have globally integrated supply chains with components sourced from all over the world. For instance, shortages of the diesel exhaust fluid AdBlue prompted government investment in Australia's domestic manufacturing facility. Yet the plant ultimately closed due to urea import and gas feedstock shortages (Pandergast and Jose 2022).
- Domestic production capability can still be subject to its own disruptions, including by natural disasters or input disruptions. For example, wet conditions in 2022 slowed the delivery of coal, resulting in energy shortages (Skinner 2022).
- Domestic production capability does not guarantee local supply if producers can export goods at higher prices on the global market during supply shocks. For example, Australia's domestic production of natural gas on the east coast did not shield domestic consumers from global price spikes following Russia's invasion of Ukraine (ACCC 2022; Salazar 2023).
- Finally, domestic supply may itself be insufficient to avoid shortages. For example, Australia makes 75% of its intravenous fluid but has recently experienced shortages due to unexpected increases in demand and manufacturing issues, among other factors (Robinson and Panagopoulos 2024; TGA 2025).

These factors, plus the high costs of supporting an otherwise uncompetitive domestic industry, mean that using domestic production subsidies as a resilience measure requires careful evaluation. Creating or maintaining some limited manufacturing capability might be a more efficient option while using other complementary policy tools. The Australian Government has taken steps in this direction. As it is applied, economic frameworks like the NIF's sector assessments could serve as a vehicle to help policymakers identify where club goods approaches or stockpiling could be suitable alternatives or complements to domestic production subsidies.

Club goods style international partnerships can spread risks and lower the costs of mitigating supply chain disruptions

Club goods are ‘excludable’, meaning people can be prevented from using them, and ‘non-rival’, meaning one person’s use does not diminish availability to others (up to a certain point). Clubs, whether of individuals or countries, form to share costs for such goods (Buchanan 1965; Kinne and Kang 2023).

The Mineral Security Partnership established in 2022 is a US-led initiative that exemplifies the concept of a club good approach to collectively manage a common challenge. Current partners include Australia, Canada, India, Japan, the Republic of Korea, the United Kingdom and several European countries (United States Department of State 2024). Such partnerships allow each country to complement each other’s strengths and pool resources to establish a critical minerals supply chain for countries aligned with the objectives and rules of the club.

Stockpiling is an effective tool to manage supply chain vulnerabilities for some goods

Government stockpiling is another option to manage supply chain vulnerabilities. It involves accumulating a reserve of goods to ensure availability during supply chain interruptions or sudden surges in demand. A stockpile manager’s primary goal can be viewed as minimising the costs of a disruption and the cost of managing the stockpile, including maintenance costs and refreshment of supplies (Oliveira et al. 2023). Depending on the good, stockpile managers may achieve this goal by giving stock directly to a specific user (such as emergency support staff) or by selling it to alleviate local supply shortages and reduce local prices (NEMA 2024; Newell and Prest 2017).

The Critical Minerals Strategic Reserve announced in April 2025 is one example of stockpiling being used to complement industry policy and could ultimately reduce the costs of avoiding a disruption. Details of the reserve will be developed throughout 2025, but it will involve a selective stockpile and off-take agreements between the Australian Government and suppliers of minerals (Albanese 2025a).

It should be noted that tariffs have been excluded as a proposed option as they are less flexible and less likely to be World Trade Organisation compatible than other methods like subsidies (box 3.2).

Box 3.2 – Targeted subsidies are preferable to tariffs

Tariffs have key limiting factors impacting their suitability for achieving specific security objectives.

Under certain conditions targeted subsidies can be less distortionary than an equivalent tariff

Tariffs and domestic production subsidies both distort markets and create deadweight loss (DWL) by encouraging domestic production that costs more than importing, however – as a tool to address specific domestic market failures – they are not always equivalent in their overall DWL impact. DWL represents the value of transactions that do not happen, meaning nobody benefits from them, due to market distortions like taxes. A tariff raises the domestic price for consumers creating DWL from two sources:

- Inefficient production (as those goods could be imported more cheaply) and
- reduced consumption (as consumers buy less due to the higher price).

In contrast, a production subsidy (in a small open economy) primarily creates DWL from inefficient production; it does not directly raise consumer prices which are determined by the world price, thus

Box 3.2 – Targeted subsidies are preferable to tariffs

avoiding the additional welfare loss associated with distorted consumption decisions (Jordan 2024, pp. 159–162; Krugman et al. 2022, p. 228). This can be especially true for small countries that are unable to raise their terms of trade through tariffs, reducing any potential welfare gains from tariffs (Krugman et al. 2022, pp. 201–202).

Production subsidies may result in additional DWL arising from the government needing to raise additional taxes or cut spending to pay for the subsidies. These introduce their own distortions which could result in a subsidy causing a greater DWL than an equivalent tariff (Jordan 2024, pp. 159–162). Caution is always necessary for any distortionary economic policy; but in principle under certain conditions, subsidies can be less distorting given they do not directly raise prices in a small open economy.

Tariffs themselves create supply chain disruptions

Tariffs have the potential to create negative spillovers that complicates their use to achieve targeted goals. Tariffs on upstream products can hurt downstream users of those products that use imports. For instance, Amiti et al. (2019, p. 37), found in their analysis of the 2018 US tariffs that the primary channel through which these tariffs increased US producer prices was by raising costs for domestic manufacturers reliant on global supply chains of upstream products.

High tariffs may be incompatible with World Trade Organisation (WTO) rules and norms

International trade rules also present different challenges: while tariffs exceeding agreed WTO bound rates typically face clear non-compliance issues, the WTO compliance of domestic subsidies often depends more on their specific design and demonstrable effects on trade partners, with certain types being prohibited but others potentially permissible if not causing adverse effects (WTO nd).

Source: Amiti et al (2019, p. 37); Jordan (2024); Krugman et al (2022); and WTO (nd).

But targeted support may also be helpful to address market failures impeding the net zero transition

Economic frameworks like the NIF can help balance spending restraint with a process for identifying where intervention may be justified. While not without risk, targeted support warrants careful consideration as a potential tool to address specific market failures, particularly those that may hinder Australia's ability to meet its emissions reduction commitments. Examples of these market failures include:

- **Indirectly pricing negative externalities:** Carbon emissions create environmental and economic costs not factored into business decisions without intervention. Carbon pricing, directly or indirectly via regulation or subsidies for cleaner technology can help address this market failure. For sectors of the economy where underpriced carbon externalities are the dominant constraint to emissions reductions, efficient abatement might be defined as that estimated to be below or equal to the estimated social cost of carbon. A methodology for doing so is provided in volume six of the 2023 Productivity Inquiry (PC 2023a).
- **Funding innovation and knowledge in emerging green tech:** Innovation and knowledge can have the characteristics of public goods – non-rivalry and non-excludability. This means firms can be incentivised to free ride on other's investment into innovation. This can lead to underinvestment in research and development, as firms cannot fully capture the benefits resulting in innovation levels below what is socially

optimal (Stern and Stiglitz 2021, pp. 22–23). Government support through subsidies or other means like intellectual property protection can help correct this market failure.

- **Resolving coordination failures:** Coordination failures occur when agents cannot coordinate decision-making to achieve the socially optimal allocation of resources. For example, consumers might avoid purchasing electric vehicles without adequate charging infrastructure while producers might avoid investing in charging infrastructure without a sufficient consumer base. In some cases, policy interventions can help address these failures (Stern and Stiglitz 2021, pp. 23–24).
- **Reducing information asymmetries:** Information gaps can prevent firms, consumers and investors from making optimal low-carbon decisions. Firms might not know what low or zero emissions technologies best suit their needs; consumers might not know which goods and services are emissions-intensive; and investors might not know which climate friendly businesses are best to support (Stern and Stiglitz 2021, pp. 28–29). Governments can help to address information asymmetries through support for information dissemination mechanisms with industry, product labelling measures for consumers, and reporting provisions for financial markets.

These market failures provide a theoretical basis for some kind of government intervention. In many cases, economy-wide market-based methods like a carbon price are preferable. Market based approaches to emissions reductions create incentives for a broad range of businesses to support the ordering of emissions abatement and innovation activity in a way that gives scope for higher cost abatement to become less costly and drives productivity improvements over time. Businesses may have better information about their production processes and potential abatement options than policy makers. In certain circumstances, these approaches can be expected to achieve emissions reduction goals at a lower cost than government-targeted approaches to abatement such as technology-specific subsidies.

Volume six of the 2023 Productivity Inquiry (PC 2023a) provides a more thorough exploration of some of these issues. It provides a methodology to estimate the indirect carbon price paid by different policies. Some measures were found to have an indirect carbon price many times higher than what would be expected to emerge from an economy-wide carbon pricing scheme (PC 2023a, p. 14). This may prove helpful in future TARs to examine whether net zero industry policy is under correcting or overcorrecting for a given market failure. In addition, the PC's inquiry on *Investing in cheaper, cleaner energy and the net zero transformation* to be released later this year will provide a more in-depth analysis.

However, for a variety of reasons economy-wide pricing mechanisms may be infeasible or in some cases unsuitable for policymakers to implement to address a given market failure. In that case, industry policy like FMIA – if guided with disciplining frameworks – can, in principle, help correct these shortcomings and guide industry towards decarbonisation.

3.2 Decomposing FMIA's spending profile

To date, Australia's modern industry policy has not grown to the size of its international peers

FMIA has been described as Australia's response to major industry policy initiatives by the United States (US) and European Union (EU) among other economies. In introducing FMIA, Prime Minister, the Hon Anthony Albanese MP outlined these similarities, stating that this modern approach to industry policy is “not old-fashioned protectionism or isolationism – it is the new competition” (Albanese 2024).

In examining this shifting global environment, previous TARs have raised concerns around the prospect of competing industrial policies, noting that:

- attempting to directly compete with the large-scale industry policies of major economies like the US and EU is likely to be a net negative for a small open economy like Australia
- the costs of trying to distort Australian production away from its comparative advantages by trying to match these policies are clear, whereas the benefits of such a strategy are less obvious
- it is uncertain whether Australian industry policy could create domestic industries capable of capturing meaningful market share from competing industries in major economies, which are likely to outspend and out-subsidise Australia
- supply chain vulnerability concerns in Australia may be addressed by the investments already being made by other nations to diversify their own supply chains (PC 2023b, pp. 52–58).

The overarching concern involves Australia investing significant taxpayer funds into an increasingly crowded marketplace only to see diminishing returns. These concerns highlight the need for restraint with clear guardrails on Australia's industry policy spending. To date however FMIA has been relatively smaller than its counterparts in the EU, US and Canada. Announced spending on FMIA is equivalent to only ~1–1.3% of a year of GDP compared to ~4–5% for its international peers (table 3.1). For further benchmarking, the OECD (2023) found that green industry policies introduced as part of COVID-19 recovery packages in Italy, Denmark, and Romania amounted to 5.2–6.1% of a year of GDP. Taken together, this data indicates that (at least so far) Australia is exercising relative caution in its approach to this emerging form of industry policy compared to many of its international peers.²²

Table 3.1 – Announced funding for FMIA is currently smaller as a share of GDP in a given year than US, EU and Canadian equivalents^{a,b,c,d}

FMIA compared to other modern industry policy initiatives

Economy	Industry policy initiative	Announced size (approximate)	Total announced spending relative to a year of GDP
Australia	Future Made in Australia	~\$26-33 billion AUD	~1-1.3%
US	Inflation Reduction Act	~\$900 billion USD	~3.4%
	CHIPS and Science Act	~\$280 billion USD	~1.1%
EU	European Green Deal	~€770 billion Euros	~5.2%
Canada	Made-in-Canada plan	~\$129 billion CAD	~4.6%

a. FMIA lower bound reflects budget measures announced in the 2024-25 budget papers (\$22.7 billion) alongside announced new spending in the 2025-26 budget for green metals (\$3.2 billion) (Husic 2025; The Commonwealth of Australia 2024a, p. 14, 2025a, p. 63). Upper bound includes announced new off-budget spending linked to FMIA. **b.** Most spending announcements size estimates are over a ~10-year period (where 10-year estimate is available). **c.** Made-in-Canada plan refers to the industry policy measures announced under this heading in Canada's 2023 budget; and subsequent expansions in the 2024 budget. **d.** US announced spending does not reflect repeals in 2025, see sources for more information.

Source: US IRA estimates are an average of multiple sources (Bistline et al. 2023; Cato Institute 2025; CFRB 2024; Goldman Sachs 2023; Tax Foundation 2024; US Treasury 2025). CHIPS and Science act estimates as per (Cooper 2022; Library of Congress 2023; McKinsey 2022). EU spending estimates based on D'Alfonso (2021) and European Commission (nd). Made in Canada plan estimates estimated from budget documents (DoFC 2023, 2024; Giswold 2023). Local currency GDP estimates are from World Bank (2025) and ABS (2025b).

²² The OECD (2023) also found that green industry policy spending announced during the pandemic across Australia was equivalent to 1.5% of GDP (including state and territory measures). However, this was before FMIA was announced.

FMIA's relatively small size may be due to the restraint imposed by the NIF. For instance, the NIF Supporting Paper argued that supply chain resilience concerns for solar panel and battery manufacturing might be best managed through the development and maintenance of close trading relationships with the growing number of countries that are currently building their own domestic battery and solar manufacturing capacity (Australian Government 2024a, pp. 28–29). This may have contributed to Australia committing relatively little investment in downstream battery manufacturing compared to Canada, the EU and USA. Instead, funding has focused on critical minerals processing which supports these sectors upstream.

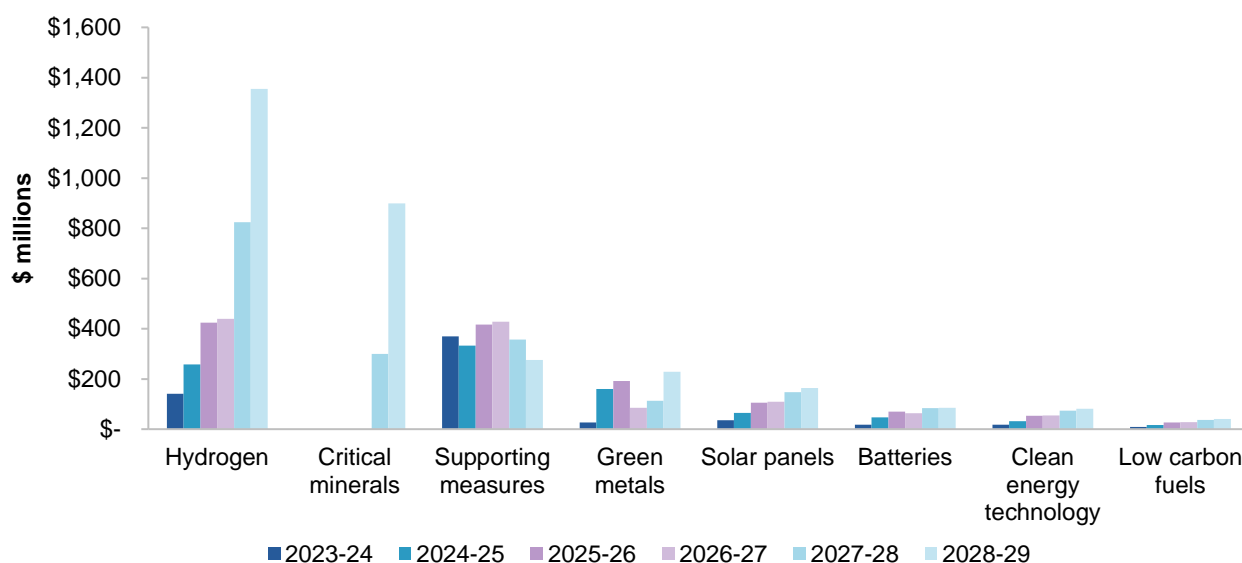
Most announced FMIA support is for the critical minerals, hydrogen and green metals sectors

Most FMIA spending will come through the planned production tax incentives directed at the critical minerals, green hydrogen and eventually (pending legislation) green aluminium. Of the at least ~\$26 billion in announced on-budget FMIA spending, about 60% comes through these production tax incentives. Given the production tax incentives are both demand-driven and uncapped, actual spending could be significantly higher or lower than this estimate.

Through these tax credits, FMIA spending is backloaded towards the end of the forward estimates. Only approximately \$4 billion will be spent before the first production tax incentives commence in 2027-28. Figure 3.1 shows the first few years of FMIA spending broken down by sector. Once the production incentives begin operation, FMIA related spending will rise significantly in the green hydrogen and critical minerals sectors. If legislated the green aluminium tax credits will begin operation in 2028-29 and will spending will likely increase further in 2029-30 as the tax incentives mature. Prior to 2027-28, most FMIA budgetary assistance will consist of funding for the Australian Renewable Energy Agency's grant programs for clean energy technologies (batteries, low carbon liquid fuels, and solar panels) and hydrogen, alongside spending on supporting measures.

Figure 3.1 – Spending will ramp up from 2027-28 when tax incentives for processing critical minerals and producing green hydrogen begin and will continue for the next decade^{a,b}

FMIA budgetary measures in the first few years (2023-24 to 2028-29), by sector supported, \$ millions



a. Supporting measure include spending to improve workforce skills and training, encourage diversity and streamline regulation impeding FMIA goals. It also includes funding for free-fee TAFE which has been listed as supporting FMIA

(Australian Government 2025). **b.** Spending profile of Australian Renewable Energy Agency is estimated based on the proportion of funding announced by sector. It is an approximation for illustrative purposes only.

Source: PC estimates based on measures listed on FMIA website or explicitly identified as FMIA elsewhere (Australian Government 2025b; The Commonwealth of Australia 2024b). Funding estimates taken from 2025-26 portfolio budget statements where available, else, they are taken from the 2024-25 budget announcements.

Monitoring these policies over time can help reveal the extent to which they are correctly pricing the social cost of carbon and helping Australia's transition to a net zero economy. The TAR will monitor these measures while shedding light on the profile of future spending and how they are helping Australia's net zero transition where relevant.

Not all FMIA budget measures fall into the TAR's remit of selective industry assistance. For instance, FMIA includes many supporting measures and schemes such as:

- the guarantee of origin scheme, legislated under *Future Made in Australia (Guarantee of Origin Charges) Act 2024* (Cth) which creates an emissions accounting framework to support FMIA's net zero stream
- funding to encourage diversity in scientific fields related to FMIA goals
- funding on workforce skills and training.

All these measures are outside the TAR's scope and will not be regularly monitored through the estimates in chapter 4. See the TAR methodological annex for further information.

A lot of spending is set to be administered through off-budget concessional finance

Off-budget spending through concessional finance is integral to the delivery of FMIA. Assistance provided by concessional finance can be less transparent than budgetary assistance. While budgetary assistance involves central reporting of itemised cash flows, concessional finance involves delegated decision making by entities with separate, less granular, corporate reporting. As these loans are disbursed, they will gradually enter the TAR estimates, which rely on aggregate figures (chapter 4.2).

Table 3.2 highlights some of the key announcements. The largest fund by size is the critical minerals facility under the National Interest Account which has made investments in critical minerals refining.

Table 3.2 – Off-budget funding will play a significant role in implementing FMIA^a
Concessional finance funds announced linked to FMIA

Program / Initiative	Entity	Amount	Details and examples
Economic resilience program	National Reconstruction Fund	\$1 billion	Loans are yet to be made but includes zero-interest loans for firms to access new markets.
Funding expansion	Clean Energy Finance Corporation	\$2 billion	Invests in projects contributing to greenhouse gas reduction. Example: Neoen Culcairn Solar Farm (\$100 million CEFC commitment).
National interest account	Export Finance Australia	Uncapped with case-by-case assessments by Government	Invests in any 'strategic domestic industries'. Example: PsiQuantum investment (\$466.4 million) announced under FMIA.

Program / Initiative	Entity	Amount	Details and examples
Critical minerals facility	Export Finance Australia with some loans partnering with Northern Australia Infrastructure Facility	\$4 billion allocated	Examples: high-purity alumina facility (\$400 million) and the Eneabba Rare Earths Refinery project (\$475 million).

a. Critical minerals facility loans are administered through Export Finance Australia's National Interest Account.

Source: AlphaHPA (2024), EFA (2024b), Treasury (2024e), Albanese et al. (2024b, 2024a), Albanese (2025b), Bowen (2025), CEFC (2024b).

However, there is ambiguity surrounding the full scope of FMIA

The full suite of measures constituting FMIA is unclear. Decision makers have discretion under the legislation regarding which measures fall under FMIA's umbrella. Sector assessments are also not mandatory, meaning assistance does not need to neatly align with the NIF's objectives.²³ As a result, many policies within the current TAR budgetary assistance estimates align with FMIA's objectives but are not formally listed as a component of FMIA. In 2023-24, budgetary assistance from these FMIA-aligned measures totalled ~\$527 million. These fall into two categories:

- Measures supporting sectors aligned with a NIF stream that are not explicitly listed as part of FMIA in official publications.²⁴ Examples include the Regional Hydrogen Hubs program.
- Measures announced with references to 'Future Made in Australia', which have not been listed as part of FMIA in official documents (or websites) and have not been assessed under the NIF (not mandatory under the legislation). An example is the Powering the Regions Fund, which includes funding to lower emissions for a cement manufacturer and an iron ore mine. This is not listed as part of FMIA elsewhere but was announced saying 'the Albanese Government is ensuring a future made in Australia' implying a connection to the broader agenda (Bowen 2024).

The *Future Made in Australia Act 2024* (Cth) section 11A outlines that FMIA support for both Australian Government entities and Australian Government Departments need to be compiled into an annual report. Once published, these annual reports may clarify FMIA's scope. For the TAR, it may be more appropriate to analyse assistance by its alignment to FMIA goals rather than its official relationship with FMIA, which could be highly discretionary.

²³ In the PC's submission to the Senate inquiry on the Future Made in Australia Bill 2024 (Cth), the PC recommended that sector assessments should be mandatory to better understand the economic effects of industry policy and ensure that spending is aligned with Australia's industrial and strategic objectives.

²⁴ Official sources include the 'Future Made in Australia' websites list of measures and the Budget paper announcements explicitly labelled as Future Made in Australia (Australian Government 2025b; The Commonwealth of Australia 2024b).

4. Australian industry assistance estimates for 2023-24

Key points

- ✱ **Budgetary assistance for industry and trade increased by 3.9% to \$16.1 billion in 2023-24 but stayed flat as a percentage of gross domestic product**
 - Tax concessions contributed 52.3% and budgetary outlays contributed 47.7%.
 - New measures contributed an additional \$1 billion in budgetary assistance, existing measures fell by \$351 million while about \$91 million in funding was discontinued, largely due to the cessation of COVID-19 measures.
- ✱ **Farmers, filmmakers and manufacturers benefitted the most from Australian Government budgetary assistance relative to their share of the economy**
 - Filmmakers (part of the information, media and telecommunications industry) benefitted from an expanded tax credit, drawing in approximately three times more budgetary assistance than other sectors relative to their share of the economy.
 - The agriculture, forestry and fisheries and manufacturing sectors received approximately five times and approximately two times more budgetary assistance relative to their shares of the Australian economy, respectively.
- ✱ **The Productivity Commission estimates the Australian Government provided \$127.2 million in assistance to industry through concessional finance in 2023-24 (excluding Export Finance Australia)**
 - Concessional finance fell slightly as a form of budgetary assistance.
 - Concessional finance is likely to be a growing form of assistance in the medium term due to increased utilisation of this form of assistance by government, including through the National Reconstruction Fund.

The Australian Government assists industries and businesses through a broad range of programs, regulations and policies. Under section 10 of the *Productivity Commission Act 1998* (Cth), the PC has an obligation to report annually on the effect of assistance on industry and on the economy as a whole and fulfills this obligation through the Trade and Assistance Review (TAR). The Act 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 accruing to, a person in respect of carrying on a business or activity.

The effects of measures that might confer assistance to industry on the wellbeing of the community and the economy overall depends on their type and design. Many measures are intended to stimulate activities that markets under-provide (such as research and development) or support environmental, social, or national security objectives. Others, like tariffs, provide targeted assistance but generally impose negative net impacts on the wider community. Whatever their net impacts, it is useful to transparently monitor the magnitude and nature of measures that benefit industries – a task that the TAR fulfils annually. As a document intended to provide transparency, the TAR reports on the form and magnitude of industry assistance. It does not assess the cost-effectiveness of individual policies. However, publishing the industry assistance value of policies contributes to the transparency required to undertake such an assessment.

Accordingly, successive TARs update and publish estimates of the assistance provided by:

- import tariffs (now covered through the compliance costs of tariffs in chapter 2)
- budgetary outlays (predominantly subsidies, grants and concessional loans)
- tax concessions.

As trends in industry assistance have evolved over the years, the TAR has adapted to continue to provide transparency on new ways the government provides assistance. The TAR 2021-22 began the process of reviewing the range of alternative forms of industry assistance that exist in Australia by exploring concessional finance. The TAR 2022-23 continued that process by exploring local content rules, domestic price controls and the conditions under which any future Australian carbon border adjustment mechanism might act as a form of trade protection. This TAR builds on the work in previous TARs on concessional finance.

This chapter presents an overview of the 2023-24 assistance estimates. The chapter provides:

- estimates of assistance to industry from budgetary outlays and tax concessions, including an overview of total industry assistance, and assistance broken down by the benefiting sectors and by the types of assistance provided by the Australian Government (section 4.1)
- estimates of industry assistance provided through concessional finance (section 4.2).

This chapter should be read in conjunction with the TAR Methodological Annex and appendix B. The TAR Methodological Annex includes further detail on how the assistance estimates are produced and what types of assistance are typically within scope. Appendix B contains detailed tables of estimates covering budgetary assistance, by program and by industry, and concessional finance estimates.

4.1 A look at budgetary assistance in 2023-24

Budgetary assistance is included in the PC's estimates when an Australian Government budget measure confers a selective advantage to some businesses but not to others. This differential treatment can be based on various factors, including business size, industry or location. For instance, a grant program for regional manufacturers would exemplify a budgetary assistance measure included in the TAR.

Programs or measures are included in the estimates to provide transparency on the composition of budgetary assistance, not to judge their individual merit. In doing so, the TAR reveals both how assistance is provided and who benefits.

The TAR budgetary assistance estimates, like all estimates, have limitations. Some forms of assistance cannot be adequately quantified. For example, the Capacity Investment Scheme acts as budgetary assistance, but is not included in the TAR estimates as the spending on this scheme has not been published (DCCEE 2025, pp. 34–35).

As detailed in box 4.1, the PC divides budgetary assistance by different types of spending, to examine changes in the composition and nature of assistance. These include two forms of budgetary assistance (budgetary outlays and tax concessions), the ‘type’ of spending, and estimates of the benefitting industries from each program or measure. Each breakdown gives insight into the policy objectives associated with budgetary assistance and how they evolve over time.

Box 4.1 – How the PC categorises budgetary assistance

Two forms of budgetary assistance

- Budgetary outlays – funding provided by the Australian Government that selectively assists businesses. This is typically through grants, subsidies, or funding for organisations to perform commercially beneficial services. Outlays may provide financial assistance directly to businesses or deliver assistance indirectly through organisations such as the Commonwealth Scientific and Industrial Research Organisation.
- Tax concessions – differential tax treatment that benefits some businesses but not others.

Types of budgetary assistance measures

- Industry specific – measures which encourage production in particular industries.
- Sector specific – measures which encourage production across a specific sector.
- Small business – a measure which restricts eligibility to small businesses (variously defined).
- R&D – a measure which supports business research and development.
- Export – a measure which supports or facilitates exports.
- Regional/structural adjustment – a measure which encourages production in particular locations.
- Other – schemes that do not fall within any of the above categories.

Initial benefitting industry

Assistance from each measure is allocated to an Australian and New Zealand Standard Industrial Classification (ANZSIC) 2-digit industry code for agriculture, forestry and fishing and manufacturing and then at the ANZSIC division level for services and mining. Spending from one program or measure can be allocated across multiple industries. Where possible, the PC allocates budgetary assistance to the industry or sector that benefits from it. This is undertaken on an ‘initial benefitting industry’ basis – that is, assistance is allocated to the industry that ‘hosts’ the business or businesses that initially benefits from a program or measure. The accompanying TAR Methodological Annex provides more detailed information.

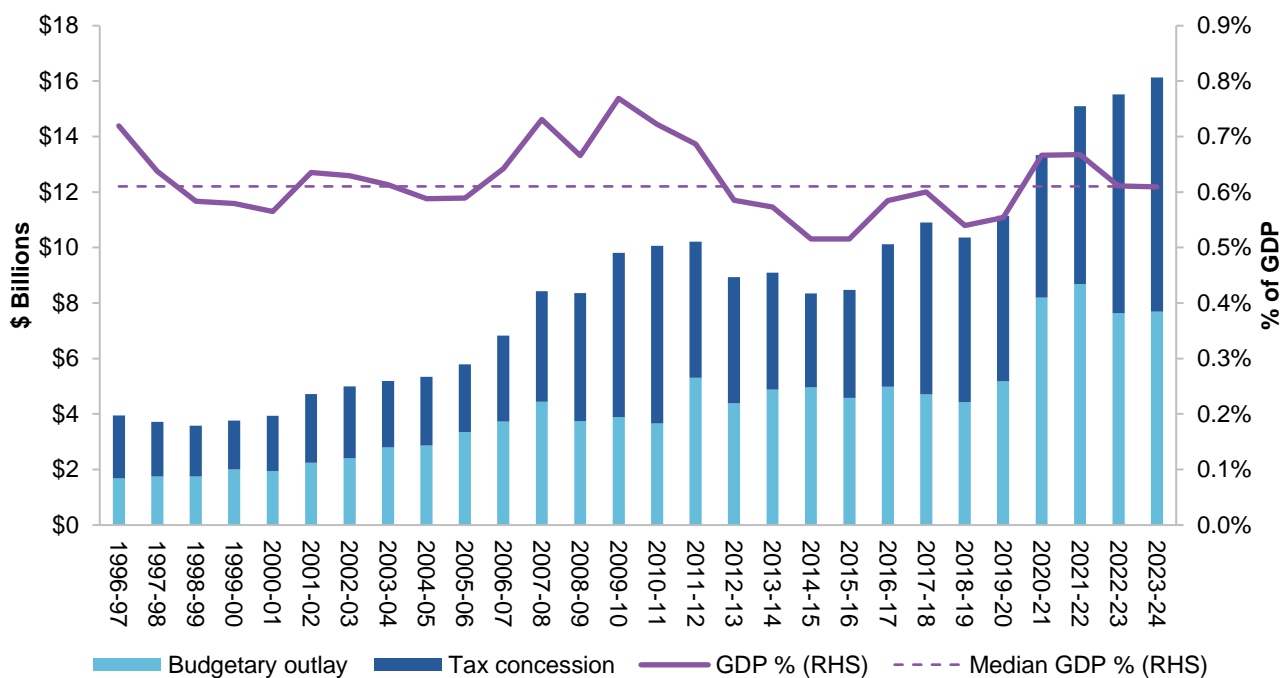
Budgetary assistance stabilised in 2023-24

In 2023-24, the Australian Government provided approximately \$16.1 billion in budgetary assistance. Tax concessions made up just over half of budgetary assistance (52.3%), while budgetary outlays from government measures make up the remaining 47.7%. While budgetary assistance grew year-on-year by \$0.6 billion (3.9%) (figure 4.1), it remained flat as a percentage of gross domestic product (GDP), holding steady at 0.61%. This figure is below its recent high of 0.67% of GDP during the COVID-19 pandemic and is in line with Australia’s median level over the last 28 years (0.61%).²⁵

²⁵ Budgetary assistance estimates from the TAR prior to 1996-97 are not directly comparable.

It is important to note that budgetary assistance related to the Australian Government's Future Made in Australia (FMIA) policy agenda will largely not commence until future years (as explored in chapter 3), meaning estimates for 2023-24 largely do not reflect these commitments.

Figure 4.1 – Budgetary assistance is currently at its 28-year median share of GDP
Outlays and tax concessions, current dollars and % of GDP, 1996-97 to 2023-24



Source: PC estimates.

Budgetary assistance grew nominally in 2023-24 as spending from new measures exceeded declines in spending from established measures (figure 4.2). The decline in budgetary assistance resulted from 16 measures being discontinued (\$91 million) and a fall in year-on-year expenditure from the remaining 102 existing measures (\$350.6 million). This decline was offset by the introduction of 20 new measures accounting for \$1 billion in new budgetary assistance spending. The decline in expenditure on existing measures was pronounced in 2023-24, primarily explained by a few demand-driven measures rather than cuts in funding:

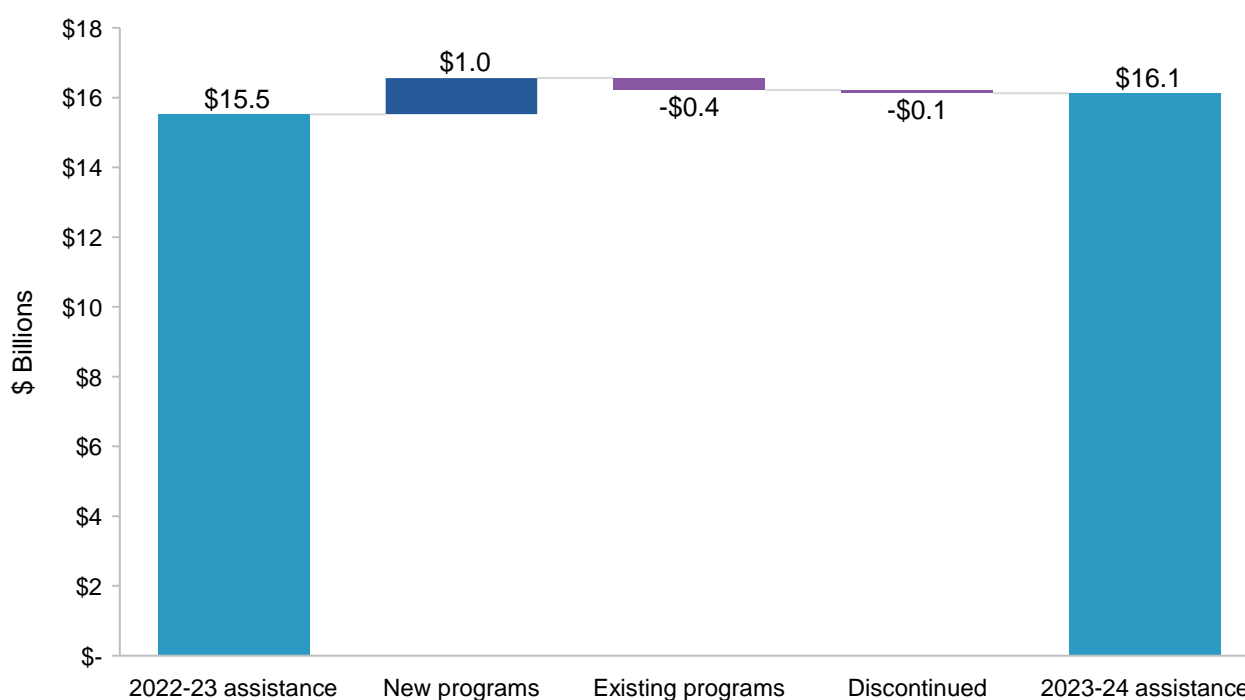
- The largest reduction came from HomeBuilder, the last 'enduring' COVID-19 budgetary assistance measure, with remaining spending set to end in 2025-26. Actual spending in 2023-24 on HomeBuilder was \$121 million lower than budgeted, possibly reflecting smaller claims from the applications than anticipated (The Commonwealth of Australia 2024c, p. 62, 2025b, p. 61).
- The Farm Management Deposits Scheme also experienced a large year-on-year drop in expenditure (\$60 million), as this measure supports farmers with variable growing conditions.
- Additionally, some tax concessions, such as the small business capital gains tax exemption, had notable falls in spending.

These drops do not appear to be from changes in the measures themselves, but from slightly lower demand.

Close to half (48%) of discontinued spending came from expiring COVID-19 support measures such as the Waiver of the Environmental Management Charge and the Regional Small Business Support Program. The remaining discontinued measures were primarily grant measures which have been completed (appendix B contains a full list).

Figure 4.2 – New measures offset a reduction in expenditure on existing measures and discontinuing measures

Budgetary assistance, current dollars, 2022-23 to 2023-24

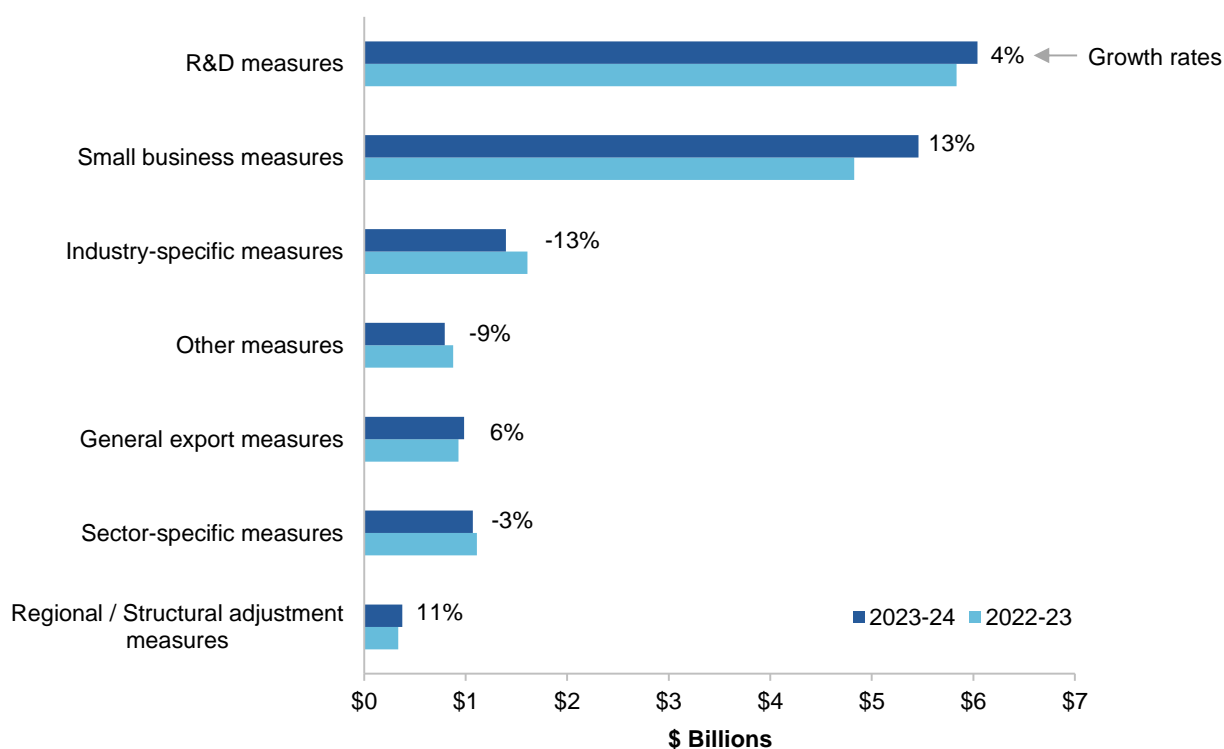


Source: PC estimates.

Figure 4.3 shows spending broken down by 'type' of budgetary assistance. In both 2022-23 and 2023-24 the largest types of budgetary assistance were small business measures and research and development (R&D) measures. Spending for small business measures grew the most due to two new tax deductions for small businesses. However, while labelled as small business tax incentives, they apply to a large set of businesses, reflecting disparities in the use of the term 'small business' across government (box 4.2). 'Regional adjustment measures' also grew over 2023-24. This was due to a range of regional measures aiming to support the development of emerging green industries including hydrogen. 'Industry specific measures' experienced the largest drop in spending, largely due to the winding down of HomeBuilder and reductions in tax concessions for offshore banking units. 'General export measures' grew modestly, purely from increases in spending on existing measures. Many of these types of measures experienced modest growth in expenditure.

Figure 4.3 – Assistance for R&D was the largest type of budgetary assistance; while small business measures grew the most^{a,b}

Budgetary assistance in current dollars and percentage growth rates by type of measure, 2022-23 and 2023-24



a. See appendix B, table A.6 for definitions of types of measures. b. Data labels are the percent change, year-on-year. Source: PC estimates.

Box 4.2 – The meaning of ‘small business’ is variable

The concept of ‘small businesses’ or ‘small to medium sized businesses’ underpins many aspects of Australian economic policy, influencing eligibility for grants, tax concessions and regulatory frameworks. However, there is no standardised definition, leading to multiple criteria based on the purpose and administering body.

- The Australian Taxation Office defines a small business as any entity with an aggregated turnover under \$10 million, except for:
 - the small business income tax offset, available to businesses with an aggregated turnover of less than \$5 million
 - the capital gains tax concessions where the aggregated turnover threshold is \$2 million
 - lastly, incentives like the ‘small business technology investment boost’, ‘small business energy incentive’ and ‘small business skills and training boost’ are available to businesses with a turnover of under \$50 million.

Box 4.2 – The meaning of ‘small business’ is variable

- Grant programs often focus on small to medium sized businesses, but these also contain inconsistent definitions. Some examples include:
 - the Export Market Development Grants apply to small and medium sized businesses with turnover between \$100,000 to \$20 million
 - the Industry Growth Fund targets small to medium enterprises defined as those with turnover of less than \$20 million for each of the previous three financial years.
- The Australian Bureau of Statistics (ABS) defines a small business as one with fewer than 20 employees, this is mainly used for demographic analysis.
- The Fair Work Commission (FWC) defines a small business as those with under 15 employees, this is used in employment law.
- The Australian Securities Investment Commission (ASIC) defines a small proprietary company for regulatory purposes as those meeting at least two of the following criteria:
 - consolidated revenue less than \$50 million
 - gross assets less than \$25 million at the end of the financial year
 - fewer than 100 employees.

Such variability may result in situations where businesses qualify as a small business for certain purposes, such as regulations or some tax incentives, but not for others. This could mitigate disincentives businesses face in growing past a certain point, like higher marginal tax rates. However, to enhance transparency, future TARs may aim to clarify these varying definitions, where they apply to budgetary assistance measures.

Source: ABS (2008); FWC (2025); ASIC (2014), Australian Government (2024b, p. 9), Austrade (2024) and ATO (ATO 2023, 2024b, 2024c, 2025b, 2025c)

Figure 4.4 shows the year-on-year change in spending allocated to industry for the 19 industry divisions with allocated assistance (4.1). Of these 19, seven divisions had increased budgetary assistance in 2023-24, totalling \$386 million of extra funding across these industries. Across the remaining 12 divisions, assistance fell by a total of \$555 million year-on-year. This excludes funding that could not be allocated to a specific industry division.

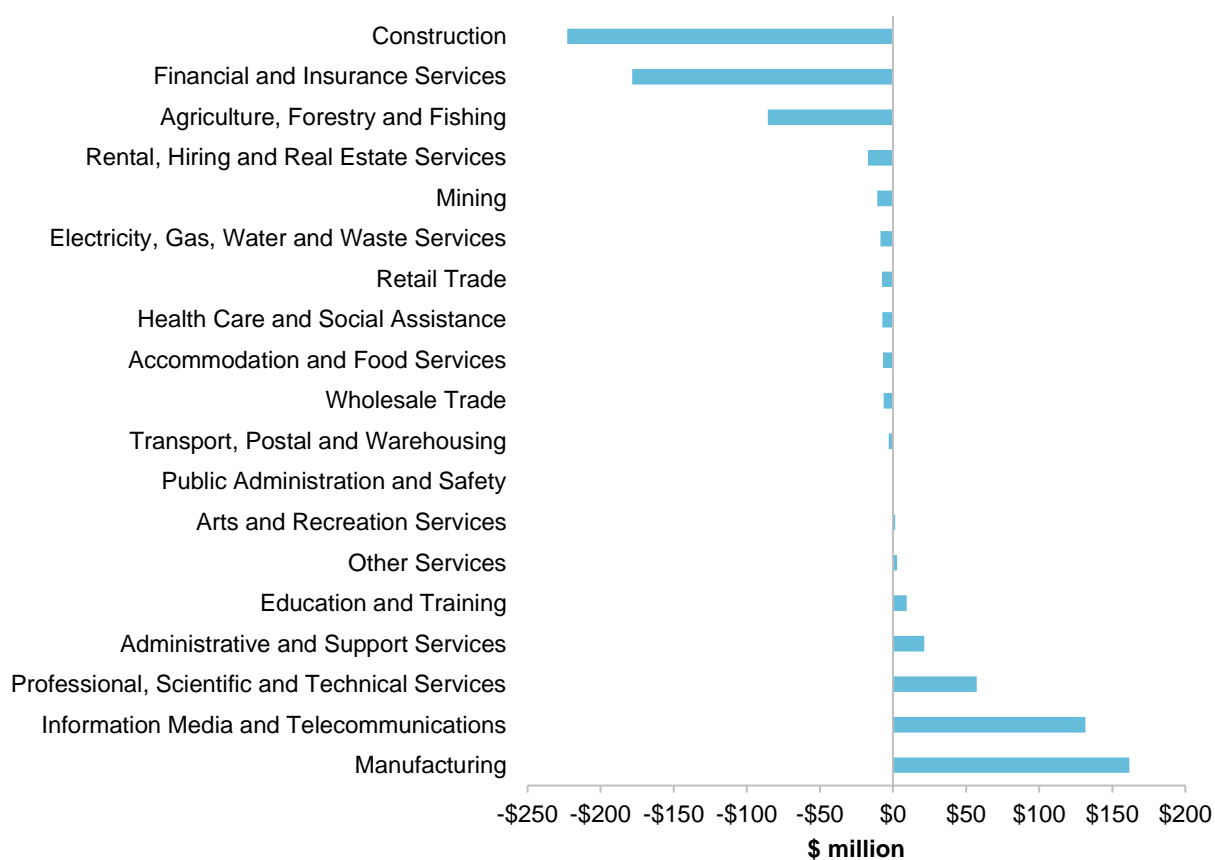
In 2023-24, the average increase in budgetary assistance by industry division was \$55 million. Manufacturing assistance grew by \$162 million due in large part to the Powering the Regions Fund (\$110 million). The information, media, and telecommunications industry saw the second largest increase (\$132 million), driven by expanded film location and producer offsets.²⁶ Professional, scientific, and technical services had a net increase of \$57 million, including increased assistance from the refundable R&D tax offsets (\$69.7 million).

Of the 12 industries shown in figure 4.4 that were allocated less budgetary assistance in 2023-24, the bottom three accounted for around 88% of the total decrease. The average decrease was \$46 million. As previously discussed, reduced assistance to the construction and agriculture sectors' is attributable to reduced expenditure on HomeBuilder and the Farm Management Deposit Scheme, respectively.

²⁶ The location offset rebate increased from 16.5% to 30%, and the producer offset now allows drama series that meet a spending per season threshold to qualify for the rebate even if they do not meet the pre-existing spending per hour threshold (Burke 2024).

The \$178 million decline in assistance to financial and insurance services largely stemmed from the Australian Government's decision in 2021 to abolish the Offshore Banking Unit tax concession (which fell by \$125 million). This was in response to Australia's commitments to align with the Organisation for Economic Co-operation and Development's standards on harmful tax practices by eliminating preferential regimes that could encourage profit shifting and base erosion (Treasury 2023c, pp. 3–4). The 10% concessional tax rate ended in 2022-23, and the interest withholding tax exemption ended on 1 January 2024 (Treasury 2024a, p. 82).

Figure 4.4 – Despite overall year-on-year growth, several industries' assistance fell sharply
Change in industry allocation by industry division 2022-23 to 2023-24

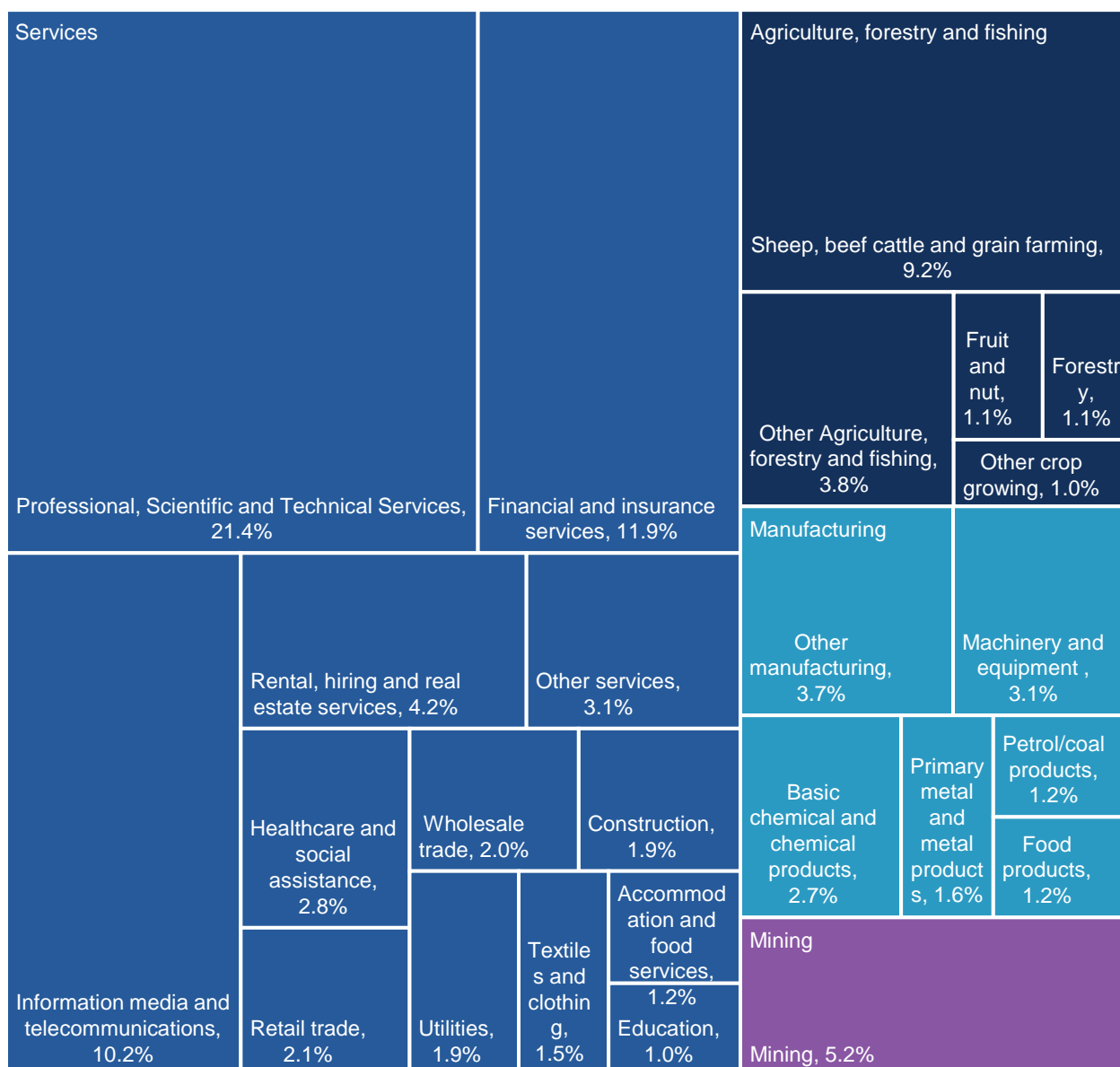


Source: PC estimates.

Budgetary assistance favours some industries over others

Of the \$16.1 billion in budgetary assistance in 2023-24, the PC allocated \$12 billion to specific sectors (figure 4.1 explains the industry allocation). Most assistance went to services (\$7.3 billion or 46% of budgetary assistance). The services sector encompasses a wide variety of activities including construction, retail trade, the arts, and professional services.

Figure 4.5 shows the breakdown of budgetary assistance by sector and their corresponding ANZSIC division or 2-digit industry where available. As a share of allocatable 2023-24 budgetary assistance, the top recipients were professional, scientific and technical services (\$2.3 billion), financial and insurance services (\$1.3 billion), and the information, media and telecommunications sector (\$1.1 billion). The largest share of assistance in the goods sector was received by the sheep, beef, cattle and grain farming industry (\$1 billion).

Figure 4.5 – Services received the most budgetary assistance^{a,b}**Sectoral share of budgetary assistance, broken down by industry, 2023-24**

a. Figure excludes \$4.13 billion that cannot be allocated to any sector and \$1.01 billion that can be allocated to a sector but not to a specific PC industry (e.g. unallocated services). **b.** For readability some industries are grouped into 'Other'. See appendix B for full industry estimates.

Source: PC estimates of initial benefitting industries using ANZSIC divisions for services and mining and 2-digit ANZSIC for other sectors (PC industry).

Figure 4.6 shows the types of measures used to support different sectors of the economy. R&D measures exist in every sector and are the main type of budgetary assistance. Almost all mining assistance (87.4%) and most manufacturing support (71.1%) is delivered through R&D. Conversely, assistance for services and the agriculture, forestry and fishing sector are more varied with just 47.8% of services support and 42.7% of agriculture, forestry and fishing support coming from R&D measures.

Small business measures are major forms of support for the services sector and for primary producers. The manufacturing sector receives the smallest share of assistance from small business measures (2.8%). The

bulk of allocatable small business assistance comes from tax concessions for businesses below \$2 million. These tax concessions offer small businesses capital gains incentives. Based on ABS data (2024b), manufacturers make up 3.1% of businesses with a turnover below \$2 million eligible for these concessions. Yet manufacturers only receive 2.1% of the value from these tax concessions. In comparison, miners make up 0.3% of Australian businesses with a turnover below \$2 million yet receive 0.9% of all assistance from these tax concessions. So, despite the low share of support from small business measures, miners are still benefitting substantially from these measures given the sectors' small share of small businesses.

As for other measure types, industry and sector specific measures mostly benefitted the agriculture, forestry and fishing and manufacturing sectors, making up 31.6% and 20.3% of these sectors' assistance, respectively. Meanwhile, regional adjustment measures made up a small proportion of all sectors' assistance – they are not a substantial form of assistance. For instance, primary producers receive 0.9% of their assistance from regional adjustment measures, despite almost all activity being regional.

Figure 4.6 – R&D measures are the largest form of assistance across all sectors^a
Sectoral share of budgetary assistance by type of assistance received, 2023-24

R&D measures	42.7%	71.7%	87.4%	47.8%
Industry and Sector specific measures	31.6%	20.3%	8.6%	18.9%
Small business measures	24.7%	2.8%	3.3%	21%
Regional / Structural adjustment measures	0.9%	0.2%	0.1%	0.2%
General export measures	0.1%	4.3%	0.1%	2%
Other measures	0.1%	0.7%	0.5%	10.1%
Total	100%	100%	100%	100%
	Agriculture forestry and fishing	Manufacturing	Mining	Services

a. See appendix B: table A.6 for definitions of types of measures.

Source: PC estimates.

Some industries are favoured by assistance relative to their size

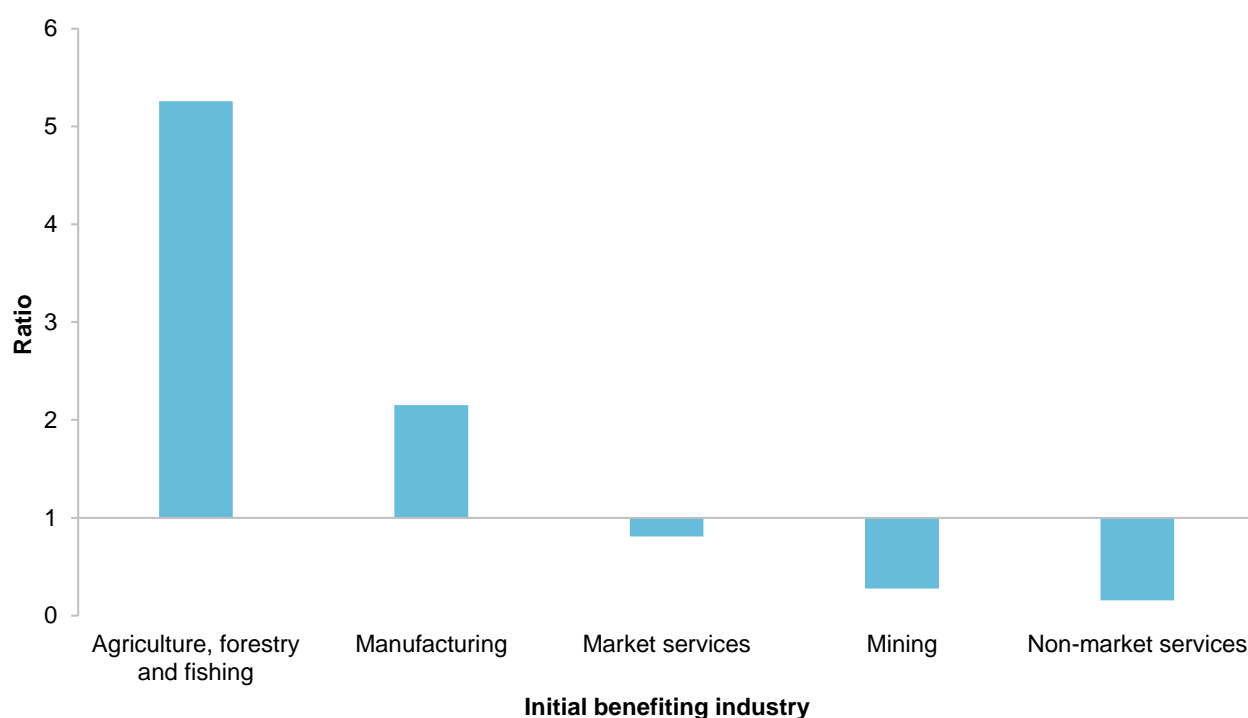
Relative to their share of the economy, the agriculture, forestry and fishing sector and manufacturing sector continued to receive a disproportionately large amount of assistance (figure 4.7). Services (broken into market and non-market services)²⁷ and mining all received a lower share of assistance than their share of the economy, despite services receiving the greatest share of budgetary assistance in absolute terms. Conversely, the agriculture, forestry and fishing and manufacturing sectors received more budgetary assistance than their share of the economy at a ratio of 5.3 and 2.1, respectively.

²⁷ Non-market services refers to services where government provision is the primary driver of activity, for example education and training, healthcare and social assistance and public administration services. Government provision of services is excluded from budgetary assistance estimates in the TAR. For example, funding for schools, universities, government agencies and hospitals is out of the TAR's scope as they support a broader public purpose and are involved in non-market service delivery.

Non-market services (education, health and public administration) received the least assistance relative to their share of the economy, but this is to be expected, as most Australian Government funding for non-market industries is explicitly out of scope for the TAR.²⁸ In the past five years, the median ratio of budgetary assistance to its share of the economy for the non-market sector has only been 0.1, compared to 0.9 for market sector services.

Figure 4.7 – Agriculture and manufacturing attracted large shares of budgetary assistance relative to their size^a

Ratio of sectoral shares of allocated assistance to sectoral share of industry gross value added, 2023-24



GVA = gross value added, which is the sectoral share of GDP. **a.** The ratio of share of assistance to share of GVA is the share of each sector's budgetary assistance divided by the sector's share of GVA. A ratio above one indicates that the sector received a share of assistance greater than its share of GVA.

Source: PC estimates.

Figure 4.8 breaks down the ratio of assistance to its share of the economy for each of the industries making up the services sector. Most services receive proportionately less assistance, with a few key exceptions. Information, media and telecommunications has the highest ratio due to various film industry tax concessions, including the expansion of these incentives discussed previously in figure 4.4. These concessions provide financial support and incentives to the Australian film and television industry, contributing to production budgets and attracting offshore productions to Australia.

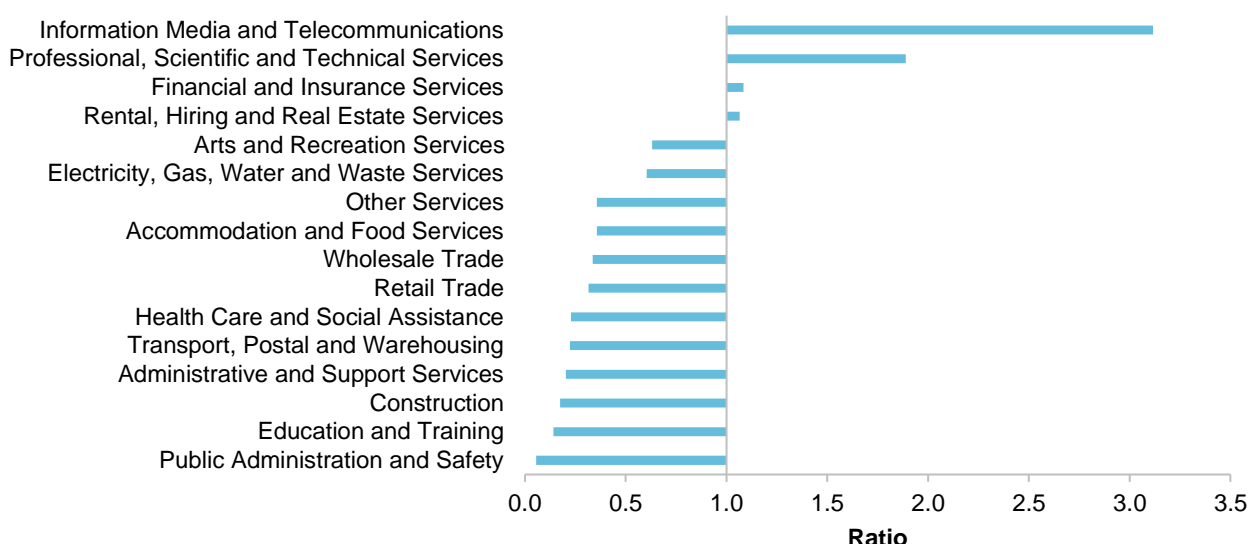
Further, professional services (ratio of 1.9), financial services (ratio of 1.1) and rental services (ratio of 1.1) received proportionately more assistance due to the variety of small business and R&D tax concessions that support these industries. This includes the new digital games production tax credit, which falls under

²⁸ See previous footnote or the TAR methodological annex for further information.

professional services within the industry classification system. Other measures supporting these industries can be found in appendix B.

Figure 4.8 – Some market services receive more assistance than their share of the economy^a

Ratio of service industry shares of budgetary assistance to industry share of GVA, 2023-24



GVA = gross value added, which is the sectoral share of GDP. **a.** The ratio of share of assistance to share of GVA is the share of each industries budgetary assistance divided by the sector's share of GVA. A ratio above one indicates that the sector received a share of assistance greater than its share of GVA.

Source: PC estimates.

4.2 A look at concessional finance in 2023-24

Concessional finance refers to loans or equity investments provided on more favourable terms than would otherwise be available. When the government provides concessional finance, the amount of 'concessional' is the difference between the interest that the borrower actually pays and the interest they would have paid if they obtained the loan at the prevailing market interest rate.

Concessional finance can act as a form of industry assistance when it is selectively available to one domestic firm or sector, but not others. A key exception is where subsidies provided through concessional finance programs efficiently price in positive externalities that are generated, or negative externalities that are avoided. For example, subsidising finance for low emissions technologies might not constitute industry assistance where the level of the subsidy is designed to account for the social benefit of greenhouse gas emissions avoided.

The TAR 2020-21 identified five entities that are responsible for the allocation of the majority of finance supported by the Australian Government that is considered industry assistance. These entities are listed in table 4.1. The National Reconstruction Fund (NRF), established in 2023 (NRFC 2024a, p. 6) provided its first loan in 2024-25 and will be incorporated into next year's TAR (NRFC 2024b).

Table 4.1 – Entities providing concessional finance in Australia**Major providers of concessional finance to industry by statute of the Australian Government**

Entity	Targeted sector/s	Year established
Export Finance Australia (EFA)	Exporting businesses	1991
Clean Energy Finance Corporation (CEFC)	Clean energy and low emissions technology	2012
Northern Australia Infrastructure Fund (NAIF)	Northern Australia businesses	2016
Housing Australia (HA) ²⁹	Social and affordable housing	2018
Regional Investment Corporation (RIC)	Farm businesses	2018

Source: Finance (2025a, 2025b, 2025c, 2025d, 2025e).

Box 4.3 describes the PC's approaches to estimating concessional finance. Both should be interpreted with caution as they are not directly comparable. Method one (annual unwind of bottom-up concessional loan charges) is the more appropriate figure because it only uses information directly reported by the agencies under a standardised accounting framework (Finance 2020, p. 9). However, not all agencies report the necessary figures, so method one only provides a limited view of concessional finance. Method two (return gap) offers a more complete view of agencies offering concessional finance, but it is less preferred because it relies on external data which cannot be interpreted as confidently as agencies' own information.

Box 4.3 – Approaches to estimating the value of concessional finance

The PC has two methods for estimating concessional finance. Both methods measure the subsidy conferred by providing finance at below market rates – but do so from different perspectives.

Method one: Loan-by-loan (bottom up) unwind of concessional loan charges

Concessional loans are initially recorded at their present value – the sum of future repayments discounted at the prevailing market interest rate – which is lower than the nominal (concessional) loan amount. The concessional loan charge representing the discount provided, is calculated by taking the difference between the net present value of the loan were it to be provided at commercial rates and the net present value of the loan given the concessional terms on which it is offered. It is an estimate of the value of the concessional component of the concessional loan activities of the entity.

Each year some of this total concessional discount is 'unwound' or 'used up'. When an agency gives a loan at a discount, the value of this discount is recorded as an expense on the agency's books. As the value of the whole loan depreciates over time, so too does the value of the expense for the agency. The amount the expense reduces by is called the unwinding of the concessional loan charge and is recorded as income for the lending agency. This 'unwinding' can be taken as an indicative annual value of the concessional component of the outstanding stock of concessional loans in that year.

²⁹ The extent to which HA loans act as industry assistance is unclear because community housing providers often partner with private developers. Loan-by-loan data would be needed for a more thorough assessment. In the absence of this these loans are included in the TAR for transparency.

Box 4.3 – Approaches to estimating the value of concessional finance

As the TAR is focussed on the benefits provided to industry in any given year, the unwind is considered to be the most appropriate figure for this report. While this method is preferred, it lacks completeness as not all agencies report consistent information on the concessional unwind charge, and some provide no information. The TAR methodological annex provides more information on the available data and a worked example to understand the unwind.

Method two: Portfolio (top down) 'return gap' methodology

The second method is a top-down 'return gap' applied to the whole portfolio of loans. This is reported as a range and calculated^a as follows:

Lower bound =

(Return if stock of loans was invested in five year A bonds) – (Actual return on loans)

Upper bound =

(Return if stock of loans was invested in ten year BBB bonds) – (Actual return on loans)

More detailed information can be found in the TAR methodological annex.

a. The range is calculated using the five-year A rated debt security yield series from the RBA F3 statistical tables for the lower bound and the ten-year BBB rated debt security yield series for the upper bound.

Concessional finance provided in 2023-24

Based on our two methodologies, concessional finance entities in 2023-24:

- provided concessional finance of \$127.2 million based on the unwinding of the concessional loan discount (method one – this value excludes EFA who do not report the unwinding), with an estimated \$71.2 million in concessional value 'used' by farm businesses and farm-related small businesses in 2023-24
- provided concessional finance of between \$104 million and \$225.8 million based on the return gap method (method two), with Housing Australia having the largest return gap with an upper bound of \$101.1 million.

Table 4.2 details the value of concessional finance by each agency based on the PC's two methods. Note that, while both measures aim to estimate the amount of 'concessionality', the two estimates are not directly comparable with estimates between agencies varying significantly.

Table 4.2 – In 2023-24 the Australian Government provided approximately one to two hundred million dollars through concessional finance^{a,b,c,d,e}**Value of concessional finance to industry based on two methods, \$ millions, 2023-24**

Entity	Outstanding loan (\$m) ^a	Unwind of charges	Market return gap (basis points) ^b	Market return gap (\$m) ^{c,d}
EFA	\$1,299.8	N/A	-69 – 35	-\$8.9 – \$4.6
CEFC	\$2,863.7	\$6.2	0 – 104	\$0.1 – \$29.9
HA	\$3,084.8	\$23.3	224 – 382	\$69 – \$101.1
RIC	\$2,838.2	\$71.2	94 – 198	\$26.8 – \$56.2
NAIF	\$1,642.8	\$26.4	103 – 207	\$17.0 – \$34.0
Total	\$11,729.3	\$127.2 (sans EFA)	89 – 192	\$104.0 – \$225.8

a. Stock of outstanding loans provided by each entity, drawn from the annual report of each entity, gross of concessions and impairments. For RIC, this is a best estimate based on information provided in the Department of Agriculture's annual report. **b.** Basis point difference between the rate of return the portfolio would have earned had those funds being invested at prevailing market interest rates, and the rate of return actually earned on that portfolio of loans. A positive number implies concessionality. The range of estimates reflects the range of tenor and credit rating assumptions used for the commercial portfolio return comparator, ranging from the average rate of return on an A rated five year tenor (5.2%) to a BBB rated ten year tenor (6.3%) that prevailed during 2023-24. **c.** The rate of return actually earned is estimated using interest income provided in each entities annual report. However, for EFA, RIC and NAIF, interest income earned on the portfolio of loans of interest to this analysis is not provided. For these entities, the rate of return is the PC's best estimate, based on available data and a number of assumptions. **d.** Dollar value of the return gap range applied to the outstanding stock of loans held by each entity. **e.** Weighted average of basis point gaps of individual entities.

Source: PC estimates using CEFC (2024a, pp. 119, 126), DAFF (2024, p. 157), DITRDCA (2024, p. 198), EFA (2024a, p. 129), HA (2024, pp. 76, 92), unwind values for RIC and NAIF provided directly to the PC.

Concessional finance fell from its 2022-23 high

As shown in 4.3, the return gap method found that assistance from concessional finance decreased from the previous year. This may be because the value of the 10-year BBB rated bonds (used to calculate the upper bound) decreased slightly in 2023-24, however the precise cause of the fall in concessional finance is difficult to isolate without more granular loan level data.

Table 4.3 – The return gap declined from the level seen in 2022-23 TAR**Return gap value of concessional finance, \$ millions, 2021-22 to 2023-24**

Year	Outstanding loan (\$m) ^a	Market return gap (basis points) ^b	Market return gap ^{c,d}
2021-22	\$10,047	64–219	\$64.8–\$220.2
2022-23	\$10,171	208–350	\$211.4–\$356.0
2023-24	\$11,729	89–192	\$103.9–\$225.6

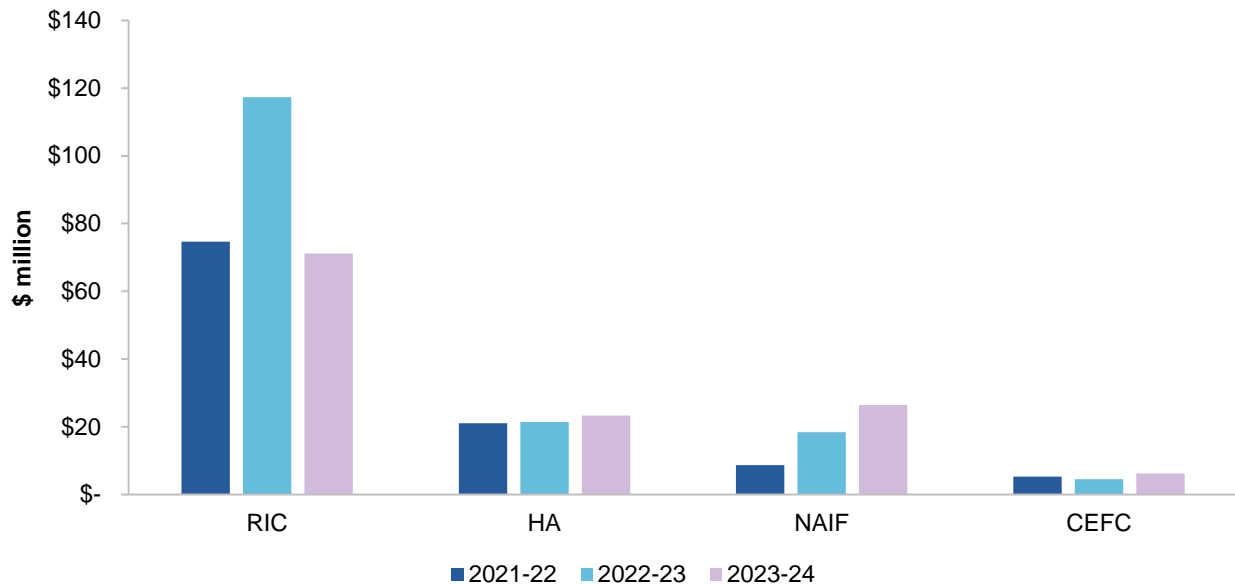
Source: PC estimates using CEFC (2023, p. 134, 2024a, p. 126), DAFF (2023, p. 138, 2024, p. 157), DITRDCA (2023, p. 174, 2024, p. 198), EFA (2023, p. 126, 2024a, p. 129), HA (2023, p. 112, 2024, p. 92).

Figure 4.9 shows the change in the reported unwind of concessional loan discounts from 2021-22 (excluding EFA). The total change in reported unwind year-on-year is largely driven by RIC. CEFC and HA provided steady concessional finance via unwind estimates, while NAIF provisions of concessional finance grew

consistently year-on-year. Again, it is impossible to determine what caused the drop in concessional finance in 2023-24 without loan level data.

Figure 4.9 – RIC is consistently the largest provider of concessional loans^a

Unwinding of concessional finance, 2021-22 to 2023-24



a. RIC and NAIF unwinds for 2021-22 and 2022-23 adjusted from previous TAR reports as per advice from the agencies.

Source: PC (2023b, p. 35, 2024c, p. 23), numbers for RIC have been adjusted as per advice from the Department of Agriculture, Forestry and Fisheries.

5. Australian foreign investment policy developments

Key points

- ✱ **The Australian Government progressed reforms to encourage foreign investment in ‘build to rent’ housing and in sectors aligned with ‘Future Made in Australia’, while introducing a temporary ban on foreign persons purchasing established dwellings.**
 - A temporary ban on foreign investors purchasing established dwellings is in place from 1 April 2025 to 31 March 2027.
 - New laws and policies have been implemented which aim to incentivise foreign investment in the ‘build to rent’ sector through tax concessions and lower foreign investment application fees for these investments.
 - The Australian Government progressed plans to create a ‘Front Door’ for investors in Future Made in Australia aligned sectors.
- ✱ **The value of foreign investment approvals increased despite a fall in the number of applications.**
 - In 2023-24, the value of commercial foreign investment approvals grew to \$187 billion, up from \$173 billion.
 - Most foreign investment approvals are subject to conditions.
 - The number of investment approvals fell by 13.8% over the last year, from a high of 7,891 in 2022-23 to 6,805 in 2023-24. This decrease is almost entirely attributable to a fall in the number of residential real estate approvals.
 - Residential real estate approvals have made up most of the number of applications over the past eight years (average ~83%), but a tiny portion of foreign investment overall by value (average 6%).
- ✱ **Australia’s international investment position grew, based the ABS’s data on flows of investment.**
 - The increasing international investment position was driven by Australia’s growing net asset position in equity, which increased from 14.7% to 27% of GDP over 2024. The superannuation sector is the main holder in Australia of international equities and is a key driver of this underlying trend.
 - Net foreign debt had risen to 51% of GDP at the end of 2024 compared with 45.9% at the end of 2023.
- ✱ **The United States remains the largest source of foreign direct investment (FDI) inbound to Australia, while the mining industry remains the largest destination for inbound FDI.**
 - The top source countries for inbound FDI continued to be the United States, the United Kingdom, Japan, Canada and China. FDI from these sources was equivalent to 24.8% of GDP.
 - The top destination sectors continued to be mining, finance and insurance, and property and business services. Inbound FDI into these sectors was equivalent to 26.2% of GDP.

As a small open economy, Australia relies on foreign investment to drive economic and productivity growth. It allows for greater investment, increasing the stock of capital available to workers and promoting an efficient allocation of resources. Foreign investment enables the international transfer of knowledge, methods and technology. In doing so, foreign investors bring valuable advantages to their Australian affiliates, bringing Australia closer to the productivity frontier (PC 2020, p. 58).

While beneficial, foreign investment can present policy challenges. Foreign direct investment (FDI), defined as investment allowing foreign influence over domestic firms or assets, can create competition policy issues or national security concerns. As a result, FDI is governed by policy frameworks, legislation and regulation, which can address these issues, but also potentially create barriers to productivity-enhancing investment.

Understanding these dynamics is crucial for Australia. Accordingly, the Trade and Assistance Review (TAR) monitors flows of investment and the policy frameworks affecting those flows.

5.1 Changes to foreign investment policy

Fifty years of Australian foreign investment policy (1975 to 2025)

Since its formalisation through the *Foreign Acquisitions and Takeovers Act 1975* (Cth) (FATA), Australia's foreign investment framework has aimed to balance the benefits of foreign investment with the risks of foreign control of Australian assets. Restrictive measures on foreign investment include screening processes, national interest tests and increased scrutiny for entities investing in sensitive areas.

Restrictions on foreign investment can protect national interests, but they can also be distortionary. For example, the Productivity Commission (2020, pp. 56–57) modelled that increasing Australia's restrictions on foreign investment to a similar level of restrictiveness as New Zealand would reduce Gross National Income by between \$0.8 billion and \$7.1 billion (or \$82–\$731 per household per year).

Figure 5.1 provides a brief overview of major reforms in the past five decades and the various measures the Australian Government has introduced which balance restrictiveness and openness to foreign investment.

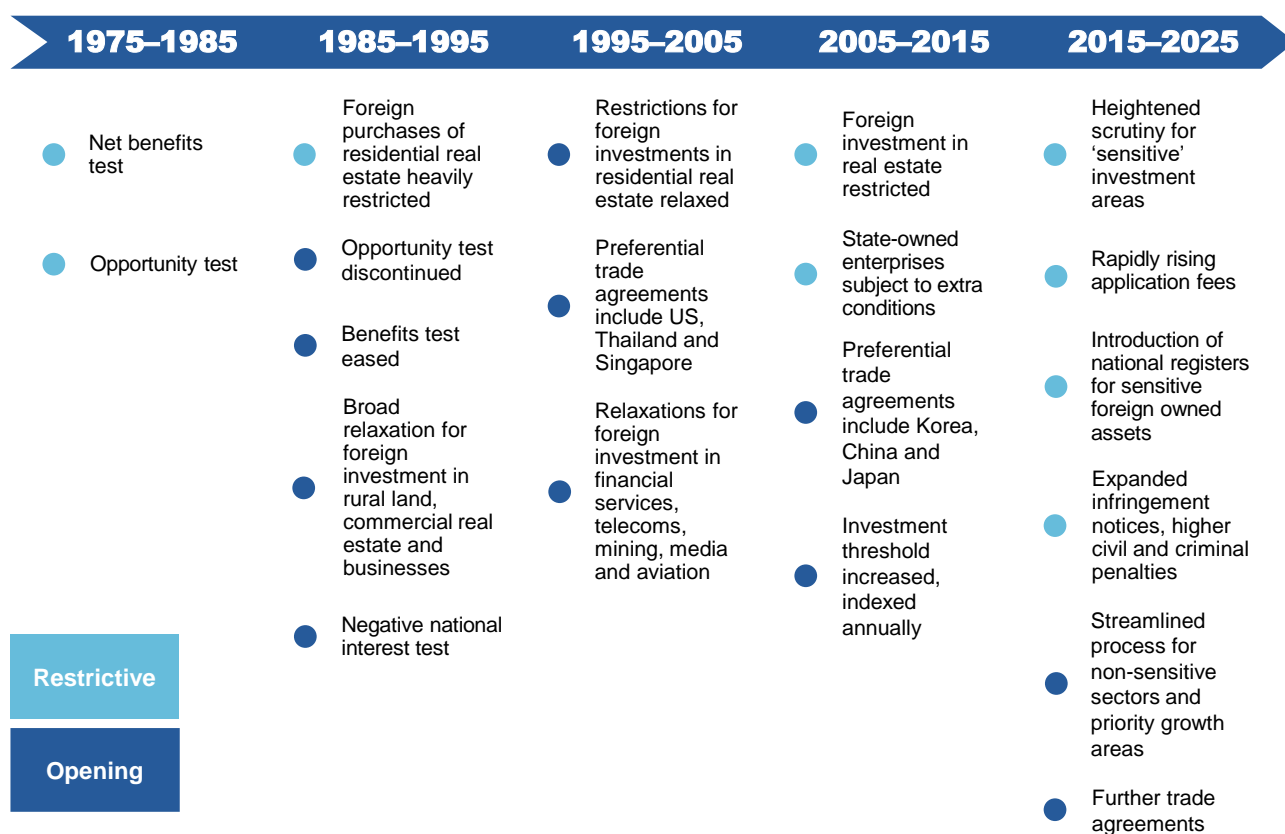
- **Formalisation (1975 to 1985):** foreign investment policy was formalised through FATA³⁰ – this resulted in the establishment of the Foreign Investment Review Board (FIRB) to advise the Treasurer on foreign investment decisions and to administer the new regulatory framework. At the time of its establishment, Australia's foreign investment regime was more restrictive, with a complex 'net economic benefits test' applied (Treasury 1999, p. 64). There was also an opportunities test, where Australians had to be given the opportunity to buy the asset before a foreign entity could purchase it (FIRB 1988, p. 2).
- **Liberalisation (1985 to 2005):** restrictions were gradually liberalised in the following decades. The opportunity test was abolished in 1985 and the net benefits test was replaced with a negative national interest test – which allows foreign investments to proceed unless they can be shown to be contrary to the national interest – meaning economic benefits are automatically assumed (FIRB 1988, p. 2; PC 2020, p. 19). The proliferation of preferential trade agreements over the period also facilitated some modest liberalisation in investment (PC 2010b, pp. 159–161).
- **Balancing (2005 to 2025):** targeted reform heightening scrutiny of sensitive sectors while continuing to focus on maintaining investment attractiveness. For instance, since 2015 all agricultural land investments need to be listed on a foreign ownership register. Likewise, the 2020-21 national security test

³⁰ Prior to this Act, foreign investment flows were largely regulated through the foreign exchange control mechanism, with the Australian Government directly intervening on proposals on an ad hoc basis (Treasury 1999, p. 64).

amendments granted the government greater enforcement powers and heightened screening rigour (FIRB 2021, p. 56). Treasury has cited 'evolving geopolitical risks' as justification for these changes (Treasury 2021, p. 16). At the same time, efforts have focused on streamlining processes for lower risk proposals (PC 2024c, pp. 66–69). Further policy changes were implemented in 2024 and are discussed in more detail below.

Figure 5.1 – Australia's foreign investment policy changes to calibrate the balance between restrictiveness and openness^a

Timeline of key foreign investment policy changes, 1975 to 2020



a. PC (2020, pp. 111–114) provides a more detailed breakdown of recent changes.

Source: Evans (1999, p. 110), FIRB (2008, pp. 103–113, 2010, p. 11, 2019, p. 60, 2021, p. 13), Treasury (2017, p. 21).

Recent developments in foreign investment policy

The TAR 2022-23 (2024c, pp. 66–69) noted three major developments in foreign investment policy, namely:

- Foreign investment application fees doubled from July 2022 (Treasury 2023a, p. 233), with further increases in April 2024 tripling fees for established home purchases and doubling vacancy fees. Doubled penalties for investors that fail to gain prior approval or do not comply with the conditions imposed on the acquisition from January 2023 (Treasury 2023a, p. 233).
- Monetary screening thresholds were adjusted following trade agreements with India and the UK (Treasury 2023a, p. 233).
- Tweaks to foreign investment framework policies and processes were announced in May 2024 to apply heightened scrutiny for high-risk proposals while streamlining assessments for lower risk investment proposals (Treasury 2024c, p. 221).

Since the TAR 2022-23, the Australian Government has made further changes to policy settings relevant to foreign investors.

The Australian Government progressed plans for establishing a 'Front Door' to simplify processes for major, transformational investment projects aligned with Future Made in Australia. This applies to international and domestic investors. This approach prioritises certain projects by helping coordinate engagement across government agencies, helping investors navigate regulatory requirements and by connecting proponents with public financing opportunities through Specialist Investment Vehicles.³¹ Consultation for the Front Door was carried out from September to October 2024 and pilot services are slated to commence from September 2025 (The Commonwealth of Australia 2024b, p. 15, 2025c, p. 26; Treasury 2024d, p. 1).

Treasury's recent foreign investment fees guidance note provides details for new provisions where foreign investment applicants can have fees refunded if they were unsuccessful in competitive bid processes. Under the policy, bidders can choose between a 75% refund or a 100% credit for a subsequent foreign investment application that is made within 24 months of the detailed bid. The policy applies for competitive bid processes only where the outcome is uncertain at the time the bids are made. Some further exclusions and criteria apply, for instance, residential land is not included, even if it is bought at a public auction. Refunds are not automatic and will be made on a case-by-case basis (Treasury 2025b, p. 46).

In November 2024, the Parliament of Australia enacted *Treasury Laws Amendment (Responsible Buy Now Pay Later and Other Measures) Act 2024* (Cth). The act contains incentives for institutional investors to support the construction of new 'build to rent' developments by increasing the capital works deduction rate to 4% per year and reducing the final withholding tax rate on eligible fund payments from eligible managed investment trust investments to 15% (The Parliament of the Commonwealth of Australia 2024, p. 1). Build to rent developments are multi-unit buildings, where the units are rented as opposed to sold on the market.

The Australian Government also provides concessional application fees to foreign investment applications for new build to rent developments. The concessional treatment would treat land that has or will have a build to rent development as commercial land for fee purposes, if certain conditions are met. Treasury provides the example of a build to rent development on \$10 million of residential land. Under the normal fee schedule the development would incur \$796,500 in fees; while under the concessional treatment (with land assessed as commercial) it would only incur \$14,700 in fees (Treasury 2025b, pp. 48–49).

While encouraging investment in build to rent developments; other housing investment is being restricted. On 16 February 2025, the Australian Government announced a temporary ban on foreign investors purchasing established homes from 1 April 2025 to 31 March 2027. The ban applies to foreign persons, including temporary residents and to foreign-owned companies. Some exceptions will be made under the policy, including for investments that significantly increase housing supply or support the availability of housing on a commercial scale (ATO 2025a).

Treasury and the Australian Tax Office (ATO) are increasing scrutiny of tax arrangements 'which pose a risk to revenue to ensure that multinational companies are adhering to Australia's taxation laws' (Treasury 2025a, p. 3). Treasury's 'particular focus is on investments that are structured through effectively low or no tax jurisdictions where there is limited economic activity taking place' (Treasury 2025a, p. 10).

The Australian Government also announced increased funding for the ATO and Treasury to enhance compliance activities to target land banking by foreign investors – referring to 'investors who are acquiring vacant land, not developing it while prices rise and then selling it for a profit'. Treasury and the ATO will jointly receive '\$8.9 million over four years from 2025-26 and \$1.9 million ongoing from 2029-30 to implement

³¹ Specialist Investment Vehicles include the National Reconstruction Fund Corporation, Clean Energy Finance Corporation, Export Finance Australia, the Future Fund and the Australian Renewable Energy Agency (Treasury 2024d, p. 4).

an audit program and enhance their compliance approach to target land banking by foreign investors' (O'Neil and Chalmers 2025).

The extent of land banking in Australia is unclear. In the absence of specific evidence, available data on foreign purchases of vacant land indicate the maximum scope of such behaviour. In 2022-23, foreign purchases of vacant land rose to 16.7% of total residential real estate purchases (\$818.3 million) from 16.2% (\$631.8 million) in 2021-22 (ATO 2024a, p. 3). While this growth is not evidence of land banking occurring, it suggests that the upper bound for possible land banking is growing modestly.

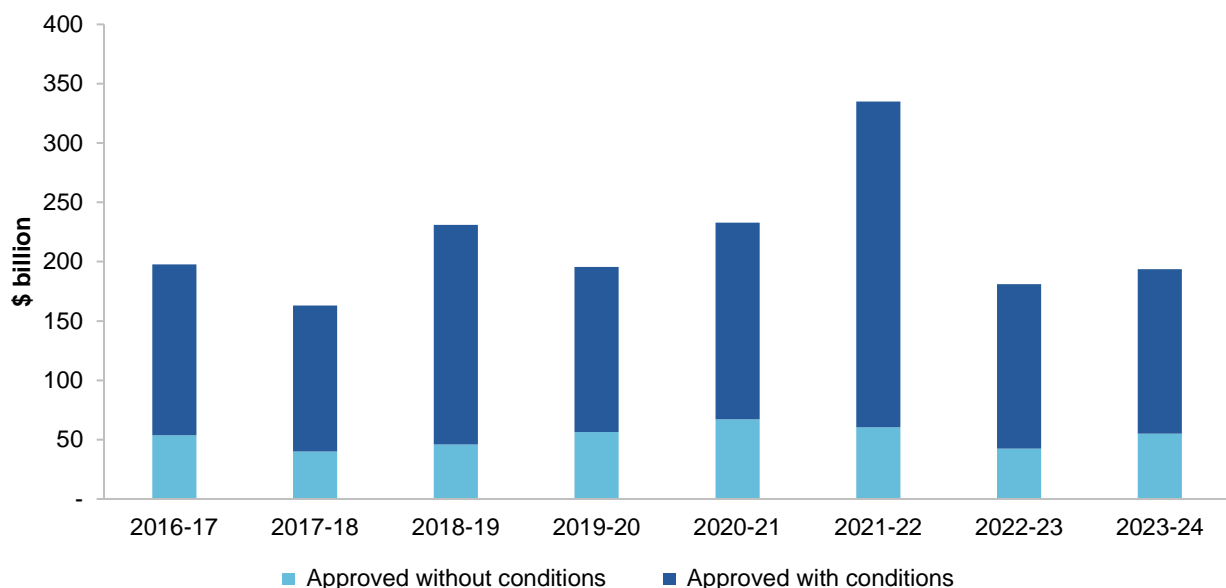
5.2 Foreign direct investment applications

Under the foreign investment framework, the Australian Government reviews foreign investment proposals that meet certain criteria on a risk-based, case-by-case basis, to restrict proposals that are not in the national interest. Proposed foreign investments may be screened under a 'national interest test' or a narrower 'national security test'. If the Australian Government believes that a proposed investment is contrary to the national interest or national security, it will not be approved or there will be conditions applied to it.

Figure 5.2 shows the value of foreign investment applications by approval status. The value of foreign investment applications varies year-on-year. In 2023-24, approved foreign investment applications grew to \$193.6 billion, up from \$181.0 billion the previous year, with both years down from \$335 billion in 2021-22. Consistent with previous years, most approved investment is subject to conditions. These conditions can include requirements for investors to provide audited financial statements or submit to compliance audits. They can also impose board and governance requirements, such as mandating a certain proportion of directors be Australian citizens or permanent residents, or restricting directors from access to potentially sensitive information (Treasury 2023b, pp. 6–8). Over 2023-24, 72% of investment was subject to conditions.

Figure 5.2 – The value of foreign investment applications is variable year-on-year^a

Value of foreign investment applications; \$ billions; 2016-17 to 2023-24



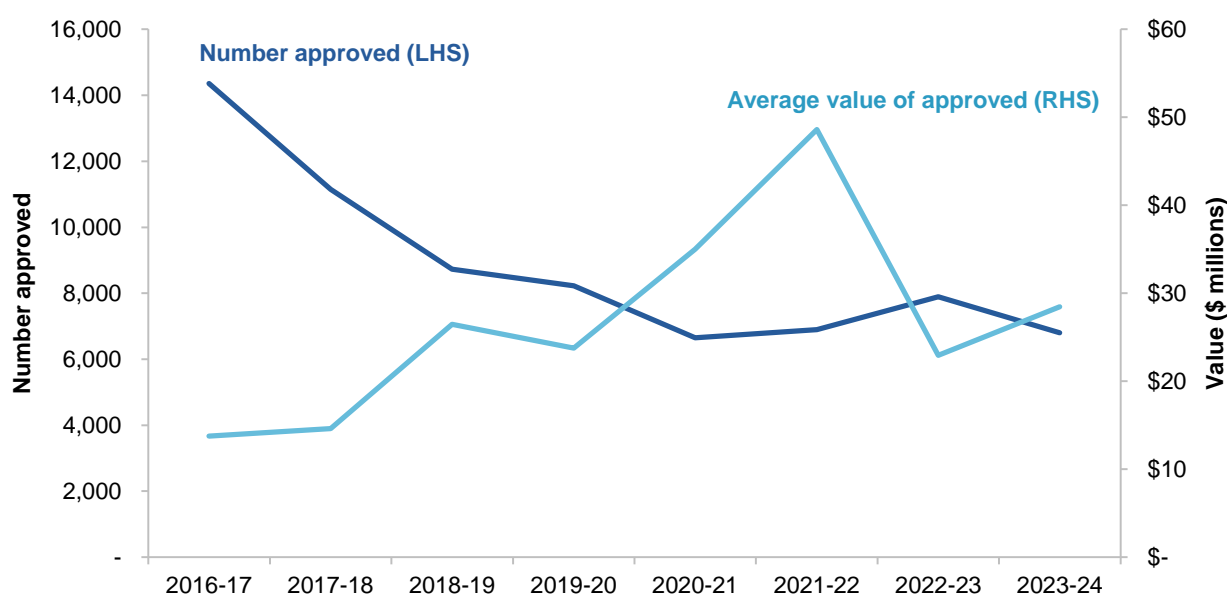
a. FIRB statistics on foreign investment approvals relate to the administration of foreign investment policy and are substantially different from the ABS statistics on foreign investment detailed in section 5.3. These are approvals as opposed to the actual flows of FDI into Australia each year.

Source: Treasury (2023a, p. 226, 2024b, p. 223) and FIRB (2020, p. 24, 2021, pp. 19–20).

Figure 5.3 shows the number of applications and average value of applications over time. While the value of approved investments grew, the number of investment approvals fell by 13.8% over the last year, from 7,891 in 2022-23 to 6,805 in 2023-24. This decrease is almost entirely attributable to the 995 fewer residential approvals in 2023-24. In general, residential real estate applications make up the bulk of the number of applications, but a minority of the value of applications. From 2016-17 to 2023-24, commercial investments accounted for the vast majority (94%) of the value of investments, but only 17% of the number of approvals.

Figure 5.3 – In the past nine years the number of applications has declined, while their value has increased^a

Foreign investment applications, 2016-17 to 2023-24



Source: Treasury (2023a, p. 226, 2024b, p. 223) and FIRB (2020, p. 24, 2021, pp. 19–20).

Understanding the impact of changes in the fee structure or the screening regime since 2021 on FDI approvals is not straightforward,³² as the number and size of foreign investment applications can be driven by a wide range of external factors. The frequency of policy adjustments further complicates the ability to isolate the impact of any one specific change.

Quasi-experimental econometric techniques with appropriate controls could help evaluate the impact of these reforms. For example, a difference-in-differences approach could examine changes in the number of applications that triggered the national interest test before the reforms with the number that trigger the test after the reforms. Or it could examine the number of investments from certain countries that are less exposed to the reforms due to trade agreements, compared to those that are not.³³ A difference-in-difference allows researchers to pinpoint the effect of an intervention by removing the influence of unobserved factors assumed to affect both groups equally. Such approaches cannot be done with publicly reported data,

³² Specifically, the effect of the *Foreign Investment Reform (Protecting Australia's National Security) Act 2020* (Cth) which took effect on 1 January 2021 (The Parliament of The Commonwealth of Australia 2020, p. 3).

³³ For instance, FIRB's monetary thresholds for investment in agricultural land are significantly higher for Chile, New Zealand and the United States (Treasury 2025c). This indicates that investments from these countries in agriculture may be considered 'low risk' and thus would be unaffected by the new policy regime.

however, Treasury have stated they will evaluate the 2021 reforms in 2025 (Treasury 2021, p. 3). Such techniques could be employed depending on the scope of the review.

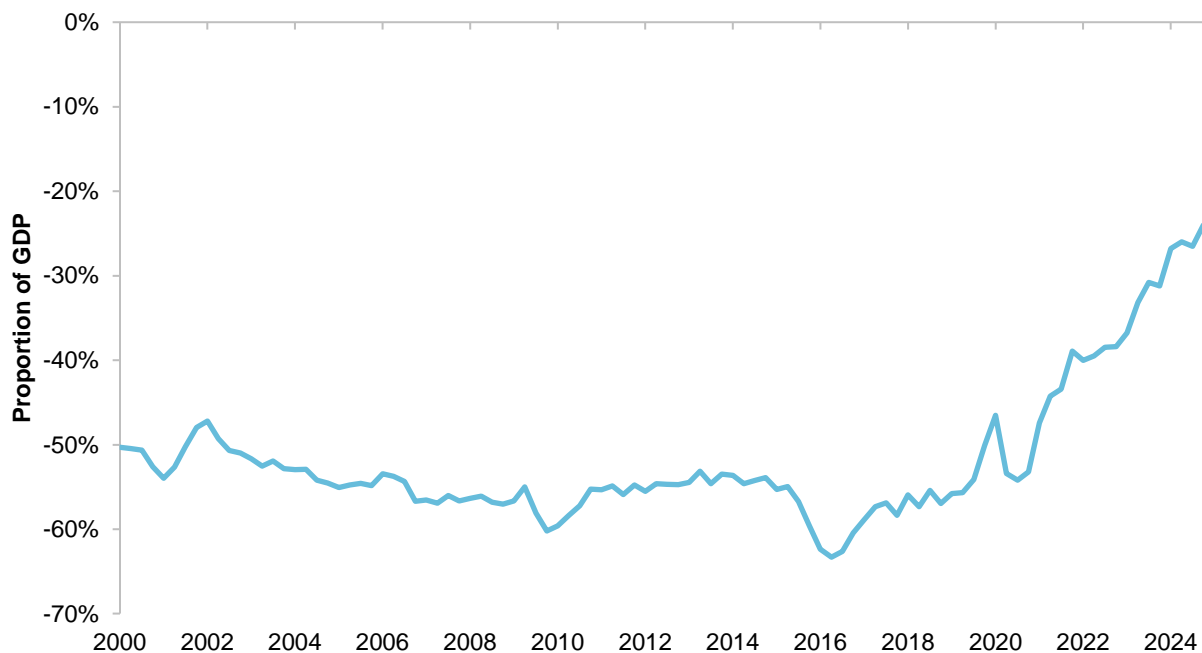
5.3 Trends in foreign investment

Trajectory of Australia's international investment position

Figure 5.4 shows that Australia's international investment position (foreign assets owned by Australia minus Australian assets owned by foreign investors expressed as 'debts') is rising. However, the overall investment position remains negative, meaning Australia has a net foreign liability. This means Australia attracts more foreign investment than it invests overseas. While Australia has a net foreign liability overall, the international investment position as a percentage of GDP has been trending towards zero over the past decade. At the end of 2024, the total amount Australia owes to the rest of the world – after subtracting what it owns overseas – decreased to -24% of GDP from -31.2% at the end of 2023.³⁴

Figure 5.4 – Australia's international investment position is rising

International investment position as a proportion of GDP, 1 January 2000 to 31 December 2024



Source: PC estimates based on ABS (2025e).

Figure 5.5 decomposes the international investment position into net debt and net equity.³⁵ While Australia's net debt remains negative as a percent of GDP – meaning it owes more in debt to the world than it is owed –

³⁴ Data is reported quarterly and is in calendar years. Note that this represents flows in foreign investment and does not correspond with foreign investment approvals data in chapter 5.2.

³⁵ Debt refers to loans, bonds and other interest-bearing obligations, while equities refer to financial instruments such as stocks or shares which represent an ownership stake in a company.

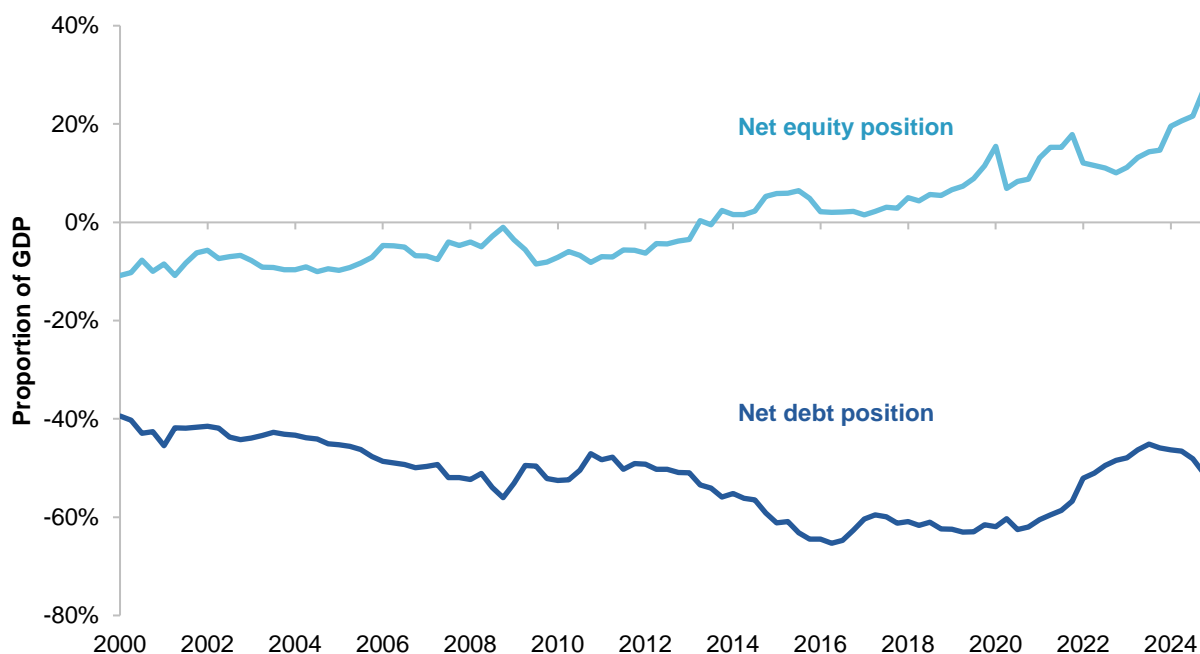
it has maintained a positive net equity position as a percent of GDP since 2013. This means Australians own more shares and equities overseas than foreign investors own in Australia.

Australia's net equity position became positive in 2013 and has continued to climb ever since. At the end of 2024, net equity was 27% of GDP, up from 14.7% at the end of 2023.

At the same time the net debt position fell to -51% of GDP by the end of 2024, from -45.9% the year prior. However, overall, in the past 24 years net debt has been within a band of -65.3% to -39.4% of GDP, without a clear trend in either direction.

Figure 5.5 – Australia holds more shares in overseas companies, offsetting debt increases

Net equity and debt positions as a proportion of GDP, to 31 December 2024

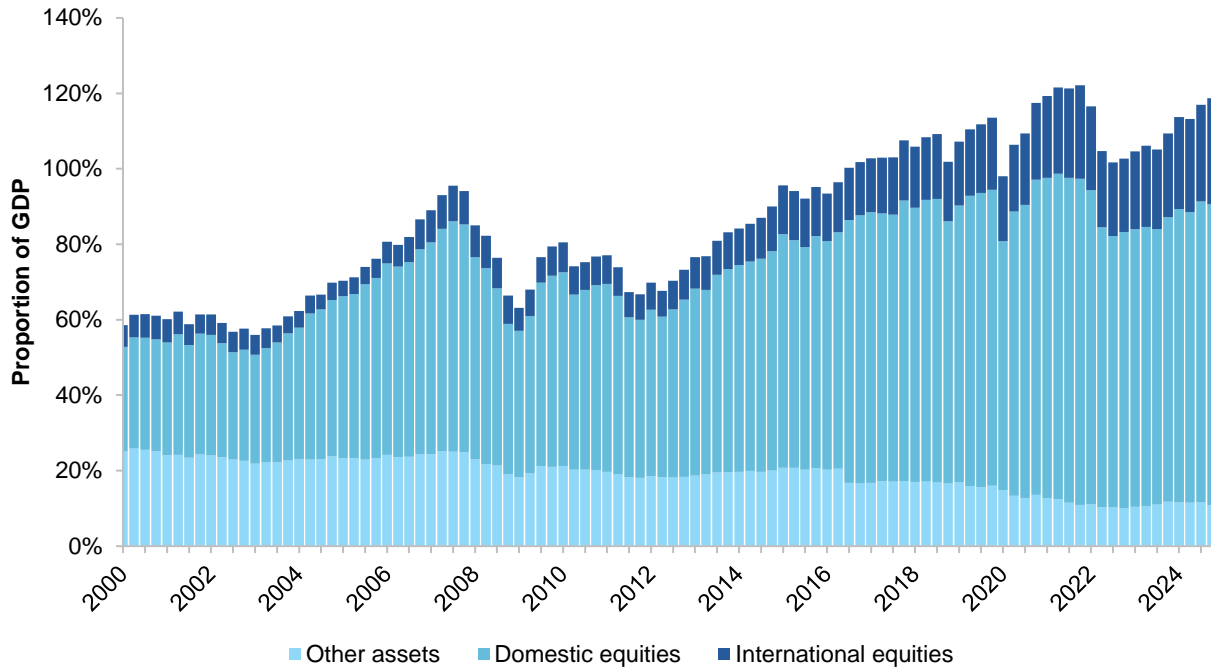


Source: PC estimates based on ABS (2025e).

Figure 5.6 helps explain Australia's rising net equity by showing the growth of domestic and international equities as a share of GDP over time. As the major owner of equities, the superannuation sector is a substantial force behind this trend. By December 2024, international equities held by Australian entities were 28% of GDP, up from 22% at December 2023. Over 2024, the total value of assets held by super funds increased by 12.2% in nominal terms, and by 8.1% as a proportion of GDP. This is partially driven by more funds flowing into the sector as the superannuation guarantee has continued to increase and is legislated to grow to 12% of gross income in mid-2025 (RBA 2023, p. 3).

In recent years, super funds have steadily increased their international equity as a share of total equity holdings – from 17.3% in 2000 to 26% in 2024. From 2023 to 2024, the proportion of funds invested in international equity rose from 22.8% of GDP to 26%.

Figure 5.6 – Australia increasingly holds more shares in overseas companies^a
Gross assets as a proportion of GDP, quarterly data to 31 December 2024



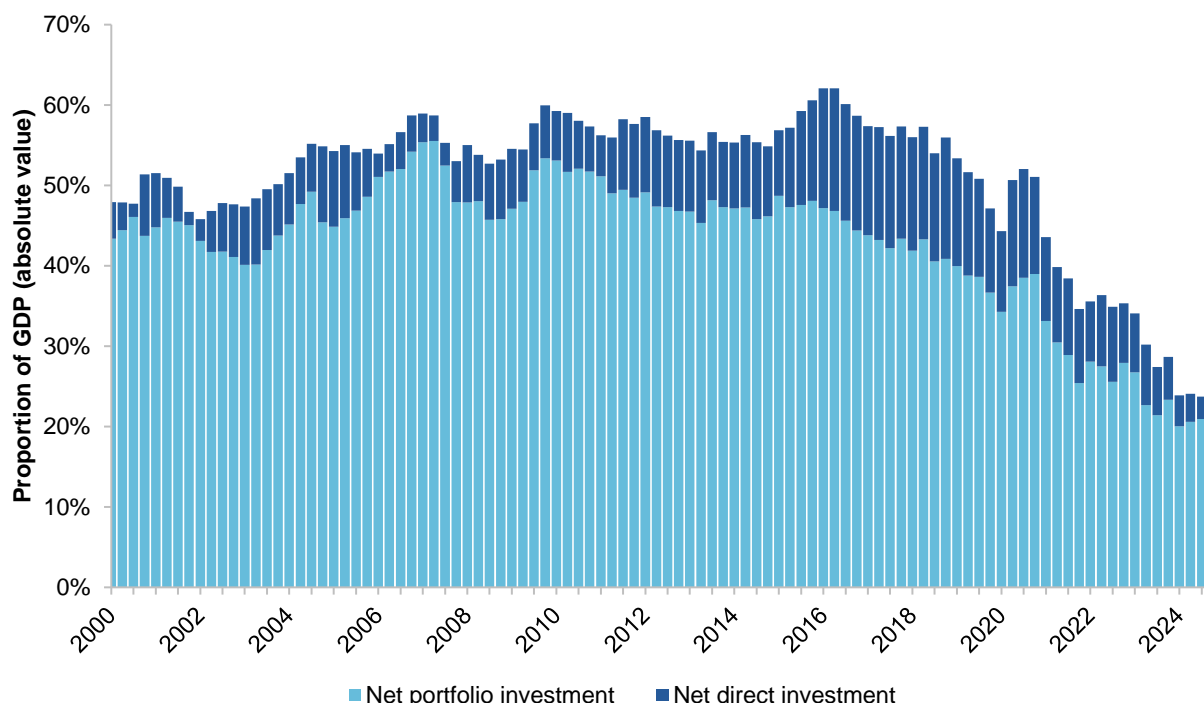
Source: PC estimates based on ABS (2025b).

Figure 5.7 partially breaks down the overall 'net debt' into net portfolio investment (investment that does not come with a controlling interest in firms or assets) and net direct investment (investment that grants the foreign investor a significant degree of influence over their management).³⁶ The bulk of investment into Australia comes from portfolio investment.

Net portfolio investment and net direct investment in Australia both fell as a proportion of GDP. Net portfolio investment fell to 17.1% at the end of 2024, down from 23.3% of GDP at the end of 2023, while net direct investment fell to 3% from 5.3% at the end of 2023. Both fell in nominal terms and as a proportion of GDP.

³⁶ The two other components of net debt – net reserve assets and other investment – have been excluded from this figure for readability. They were relatively stable year-on-year and did not drive the headline result.

Figure 5.7 – Foreign investment in Australia fell in both portfolio and direct investment
Net investment by type as a proportion of GDP (absolute value), to 31 December 2024



Source: PC estimates based on ABS (2025c).

Composition of foreign investment flows into Australia

Figure 5.8 shows the composition of total portfolio investment and total foreign direct investment by country. Note that the values in figure 5.8 (total investment into Australia) are not directly comparable with figure 5.7 (net investment or the difference between outflows and inflows). Total portfolio investment into Australia (92.5% of GDP) remains significantly larger than total foreign direct investment into Australia (50% of GDP). This is because portfolio investment involves lower risk securities like cash or bonds and is subject to fewer regulatory hurdles.

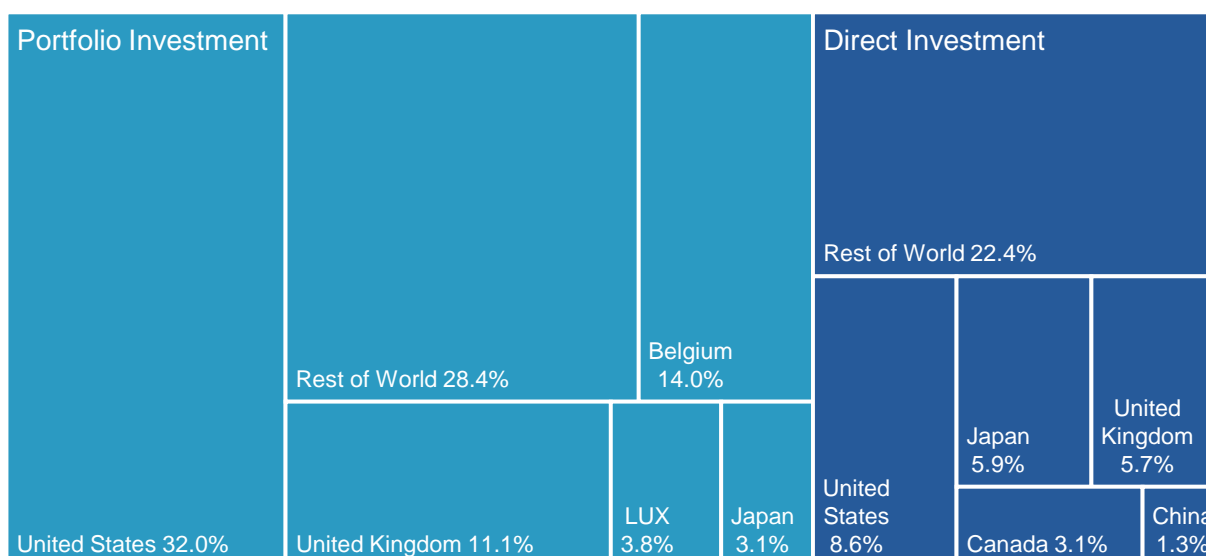
The largest source of FDI is the United States (8.6% of GDP), followed by Japan (5.9%) and the United Kingdom (5.7%). Most countries' FDI flows did not change significantly compared to previous years. However, Japan continued to increase its FDI into Australia. The Japan–Australia Investment Report 2024 highlights that Japan 'remains the only foreign investor to have increased its FDI into Australia in every single year over the past 11 years' (Herbert Smith Freehills 2024, p. 2). Japanese direct investment into Australia in 2024 (5.9% of GDP) notably included a \$9 billion acquisition of electronics design software company Altium by semiconductor company Renesas Electronics (Bennett 2024).

The United States was also the largest source of inbound portfolio investment in 2024 (32% of GDP). Countries that are hubs for financial institutions feature heavily in the top sources of inbound portfolio investment.³⁷ This is because the ABS records where the money entered Australia from, not necessarily the originating source of the funds.

³⁷ Belgium (14% of GDP) hosts Euroclear, one of Europe's biggest clearing houses and depositories for bonds and securities (DFAT 2024a). Similarly, Luxembourg (3.8% of GDP) hosts the European Investment Bank (DFAT 2024c).

Figure 5.8 – The United States remains the largest source of direct and portfolio investment inbound to Australia^{a,b,c,d}

Total foreign investment into Australia as a proportion of GDP in 2024

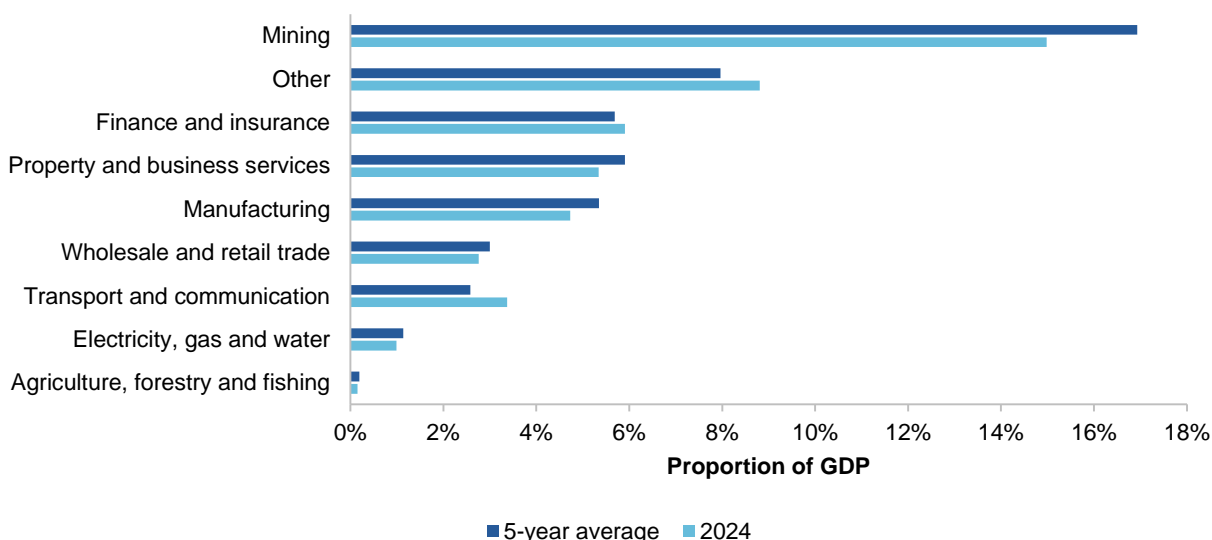


a. LUX = Luxembourg. **b.** Investment from China excludes Hong Kong. **c.** The 'Rest of World' category comprises countries which all individually contributed less than 3% of GDP in foreign investment. **d.** Categories do not add to 100%, investment is calculated by taking the investment value and dividing by nominal GDP in 2024.

Source: PC estimates based on ABS (2025f).

Figure 5.9 shows the breakdown of FDI into Australia by sector in 2024. The mining sector remained the largest destination for inbound FDI in 2024 (15% of GDP) but was below its five-year average (17%). Transport and communication saw the largest year-on-year increase in FDI, from 2.2% of GDP in 2023 to 3.4% in 2024.

Figure 5.9 – Mining remains the largest sector for FDI inbound to Australia^{a,b}
FDI into Australia as a proportion of GDP 2023-24, by industry



a. Other includes direct investments not allocated to one sector, those allocated to healthcare and social assistance, administrative and support services and other sectors with data not available for publication. **b.** 5-year average refers to the average value of inbound FDI flows from 2019 to 2023.

Source: PC estimates based on ABS (2025f).

Appendices

A. Modelling the impact of global tariffs

A.1 About the global tariff modelling

The PC used the PC Global computable general equilibrium (CGE) model to assess the potential economy-wide impacts of global tariff scenarios on the Australian economy. This modelling uses the same approach, model and assumptions that the PC documented in its *Rising protectionism* and *Modelling Asian trade integration* research papers (PC 2017b, 2017a, 2024).

CGE models are designed to account for the economy-wide effects of a specified economic shock (Burfisher 2021, p. 12). They fit economic data, typically from officially published input-output tables, to a system of equations and assumptions designed to stylistically model the behavioural responses of firms, households and governments (typically in response to changes in relative prices). CGE models can explicitly account for economy-wide resource constraints, such as on the national supply of labour. Consequently, in the absence of productivity improvements, industries need to draw resources away from other sectors to increase their output.

PC Global is a comparative-static model (box A.1), comparing the state of the world economy with and without a specified policy shock, at some future point in time after the economy has had time to adjust. PC Global is a streamlined version of the Global Trade Analysis Project (GTAP) Model,³⁸ with additional assumptions about how capital is allocated across the world.³⁹

The PC Global database used here covers 35 regions – consisting of 30 major economies and five residual regional aggregates (table A.4 at the end of this appendix) – and 65 sectors, including 45 goods sectors and 20 service sectors (table A.5 at the end of this appendix). It has a reference year of 2017 and corresponds to the latest GTAP database (version 11), predating the disruptions to global production and trade caused by the COVID-19 pandemic. Hence, it may not account for all of the latest developments in global trade.⁴⁰

³⁸ The GTAP Model was introduced in 1997 and is maintained by the GTAP network (Corong et al. 2017).

³⁹ PC Global includes bilateral capital stocks, capital income, investment data and mechanisms for their reallocation across regions (PC 2024, p. 78).

⁴⁰ The database does include the Regional Comprehensive Economic Partnership (RCEP) and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (PC 2024, p. 12). The modelling assumes that the US trade policies being examined do not cause the non-US members of these agreements to backslide on their efforts to date or to renege on their future commitments.

Box A.1 – Overview of the PC Global model

PC Global is a computable general equilibrium model (CGE) of the world economy. Each economy in the model database is linked to the others through trade, foreign investment, international capital income flows and, given the long-run closure used here, movements of productive capital (see below).

Producers in each region use primary factors and intermediate inputs (products) to produce goods and services. Producers seek to minimise production costs based on constant returns to scale production technology to achieve the level of output demanded. Demand for primary factors in aggregate and for intermediate inputs moves with industry output (Leontief technology) and input productivity. Producers substitute between factors (labour and capital for all industries, land for agricultural industries and natural resources for forestry, fishing and mining industries) based on the relative price and productivity of those factors. Producers substitute between intermediate inputs from different sources based on two nested constant elasticity of substitution demands (using Armington elasticities) between:

- domestically produced inputs and composite imports
- composite imports that are comprised of imports from different countries.

Using Armington elasticities implies that domestic production and imports are imperfect substitutes for each other (as are imports from different regions). First, and at the highest level, producers (and consumers) switch between domestically produced goods and imports based on their relative price. Imports are then sourced from different trading partners based on the price of imports from each country relative to the weighted-average price of imports from all countries.

The elasticities of substitution between domestic goods and imports vary by product and are typically half the value of the corresponding elasticity between imports from different sources. Consequently, producers (and consumers) are relatively less responsive to changes in the price of domestic goods than imported goods from different sources. Imports from different regions are more substitutable for each other than they are for domestic production.

Land, labour and natural resources are owned in the economy in which production occurs. The capital stock in each industry in each economy is owned by domestic and foreign investors in differing proportions. This entitles foreign investors to a proportionate share of the capital income that the industry generates. Foreign investors pay income tax on their capital income in the economy in which the income is earned. The after-tax foreign capital income feeds into the income account of the investor's home region and into its national income. These income flows account for the difference between gross domestic production (GDP) and gross national product (GNP) in the model. The model also accounts for the change in purchasing power of national income (Gross Domestic Absorption, or GDA). All other primary factor income accrues to households in the economy in which production occurs.

Households consume goods and services from their after-tax income that is not saved. The quantity of each good and service demanded is based on the price of that good or service assuming a Cobb-Douglas demand function. Household savings fund investment, alongside government savings.

Government is modelled stylistically. It levies various taxes – on primary factor incomes (including capital income), production, the domestic sale of goods, imports (tariffs) and exports. Revenue from these taxes funds government savings and expenditure. The quantity of government demand for each good and service is based on their price assuming a Constant Demand Elasticity function.

The modelling assumes that, over the long run, investors in each country reallocate their productive capital across regions to equalise the changes in the rate of return that they earn on the capital that they own in different destinations and industries.^{41,42} The aggregate supply of labour in each economy is held fixed, with wages and each industry's share of labour supply allowed to vary in response to industry demand. This 'closure' assumption is consistent with assuming that the economy has adapted fully to the modelled changes.⁴³

This long-run closure also allows a high degree of flexibility in the trade response of each economy to a given shock. The elasticities of substitution between imports from different sources are sufficiently high to allow for economies to pivot their sources and destinations to mitigate economic harm. Consistent with a long-run environment, it is typically prices, instead of volumes, that bear the brunt of adjustment.

The model does not include bilateral nominal exchange rates between countries, such that export prices, and with them export volumes, adjust to ensure that there is no change in the model's stylised balance of payments (referred to as restoring external balance).⁴⁴ The balance on the current account (which reflects, among other things, exports, imports and income flows) must offset the balance on the capital account (investment minus savings).

The results represent a new long-run global equilibrium after all quantities and prices (including wages and capital flows) have fully adjusted to the new policy settings, subject to these assumptions.

PC Global is a model of real, rather than nominal, economic activity. Although it has prices, all prices in the model are implicitly relative to a fixed model numeraire that is set exogenously. The numeraire in this analysis is the world price of capital goods. As the model does not contain bilateral or country-specific exchange rates, all prices in the database have been converted to US dollars.

A.2 Global tariff modelling scenarios

The PC modelled three scenarios to illustrate the potential impacts of recent global tariff developments on Australia. These scenarios are loosely based on recent US trade policy developments and are designed to explain the different ways that global tariffs may impact the Australian economy. Our modelling scenarios abstract from policy settings to focus on the mechanisms at play.

The PC modelled the following scenarios to estimate the potential impacts of global tariffs on Australia.⁴⁵

⁴¹ The modelling assumption that foreign capital is mobile drives many of the differences between our results and those of other studies. Namely, this assumption explains the positive effects on Australian production due to greater foreign investment – without it, we would expect more detrimental effects in Australia. Our assumption reflects the long-run nature of the modelling environment, in which foreign capital ought to be mobile between investment destinations.

⁴² The model assumes that there are no restrictions on the movement of capital between economies, which may exist in some countries.

⁴³ CGE models include more variables than equations, so they tend to be under-identified. The equations do not provide sufficient information to solve all variables. To overcome this, the model closure specifies variables to be determined outside of the model ('exogenous' variables), which affects the nature and interpretation of the results produced (PC 2024, pp. 81–82). Generally, there are more rigidities in a short-run closure that prevent the economy from fully adjusting to a shock compared to a long-run closure. The closure used in this analysis is the same as was used in PC (2024).

⁴⁴ The balance of payments is an international accounting convention that records transactions between each country and the rest of the world (RBA nd). By definition, the balance of payments is zero.

⁴⁵ Tariffs are only applied to the 45 goods sectors and two service sectors: electricity and gas manufacturing and distribution.

- **Universal 10:** an additional 10% tariff on all goods imports to the US from all trading partners.
- **Liberation Day+:** additional tariffs on all goods imports to the US, varying by product and foreign trading partner roughly in line with the Liberation Day announcements.
- **China 50:** an additional 50% tariff on all goods imports to the US from China.

Each scenario consists of two parts:

- The policy is implemented unilaterally by the US (that is, without retaliation from the countries targeted).
- The economies targeted by the policy retaliate in an identical manner (including, where relevant, Australia).⁴⁶

Universal 10: an additional 10% tariff on all goods imports to the United States from all trading partners

On 2 April 2025, the President of the US issued Executive Order 14257 declaring a national emergency over the US trade deficit and imposing 'an additional ad valorem duty on all imports from all trading partners' (subject to limited exemptions), starting at a baseline of 10% (The White House 2025s).⁴⁷ Further tariffs varied by trading partner but were paused for 90 days while the 10% baseline remained in force (The White House 2025p, 2025o).

The PC modelled a scenario where the US levies an additional 10% tariff on all goods imports from all trading partners. For example, if the US levied a 2% ad valorem tariff on all imports of a particular good prior to the policy change, the ad valorem tariff rate would increase by 10 percentage points to 12% for imports of that good from all countries.^{48,49}

The PC also modelled three retaliation scenarios for the Universal 10 scenario, where the rest of the world levies an additional 10% tariff on all goods imports from the US, while Australia's response differs across scenarios:

- Australia joins with the rest of the world and imposes a 10% retaliatory tariff on all imports from the US.
- Australia takes no action while the rest of the world imposes a 10% tariff on all imports from the US.
- Australia removes all tariffs while the rest of the world imposes a 10% tariff on all imports from the US.

⁴⁶ The retaliation version of each scenario does not include any further retaliatory action undertaken by the US.

⁴⁷ Tariffs levied on goods of Canada and Mexico are covered by other Executive Orders (The White House 2025l, 2025m). Countries with which the US does not have Normal Trade Relations status – Cuba, North Korea, Russia and Belarus – are also exempt, with their rates of duty specified under Column 2 of the Harmonised Tariff Schedule (CBP 2025). Column 2 rates were set by the Smoot-Hawley Tariff Act and estimated conservatively at 47.1% of dutiable imports (Irwin 1998, p. 327). In our analysis, US tariffs on imports from Russia (the only Column 2 region modelled separately in PC Global) are increased by an additional 60 percentage points relative to the GTAP database to avoid trade diversion and represent stylistically US sanctions on the Russian Federation (ITA nd).

⁴⁸ Ad valorem tariffs refer to where the amount of duty payable is specified as a proportion of the value of imports (e.g. a 2% tariff applied to a product's total customs value). This contrasts with specific tariffs, where the amount of duty payable is based on the quantity or weight of imported products (for example, \$12,000 per car or \$1 per kilo of cheese), irrespective of the total value of goods being imported.

⁴⁹ This scenario abstracts from US policy by omitting the specific exemptions outlined in Executive Order 14257, which may overestimate the effects of the policy. Executive Order 14257 excludes several goods, including information or informational materials (Cornell Law School nd), minerals and mineral by-products, pharmaceuticals, semiconductors, lumber articles, and energy and energy products (The White House 2025s). This scenario also abstracts from other US Executive Orders that may affect final import tariff rates.

Liberation Day+: additional tariffs on all goods imports to the United States, varying by product and foreign trading partner

On 1 February 2025, the President of the US issued Executive Orders 14193 and 14194 announcing additional tariffs to be imposed on goods imported from Canada and Mexico, respectively (The White House 2025l, 2025m). The Executive Orders impose a 25% ad valorem rate of duty on products of Canada and Mexico, except for energy and energy resources from Canada, which are subject to a 10% ad valorem rate of duty. The additional tariffs on Canada and Mexico were paused until 4 March following negotiations with the US (The White House 2025r, 2025q), and suspended indefinitely from 7 March for goods that satisfy US-Mexico-Canada-Agreement (USMCA) rules of origin (The White House 2025e, 2025f).

On 10 February, the President issued Proclamations 10895 and 10896 increasing the rate of duty on imports of aluminium and steel articles, respectively, to 25% for all trading partners (The White House 2025b, 2025d). These Proclamations increase pre-existing tariffs on aluminium imports from 10% to 25% and remove tariff exemptions that had previously been granted to aluminium and steel imports from Australia and other trading partners. On 3 June, the President issued Proclamation 10947 which doubled the additional rate of duty on aluminium and steel articles from 25% to 50% for all trading partners (The White House 2025a).

On 26 March, the President issued Proclamation 10908 imposing an additional 25% tariff on imports of automobiles and automobile parts (The White House 2025c). On 20 April, the President issued Proclamation 10925 which temporarily reduced the effective rate of duty on imports of automobiles parts used to assemble automobiles in the US (The White House 2025h). The Proclamation introduced an import adjustment offset valued at 3.75% of the value of automobiles assembled in the US, available until 30 April 2026 and at a lower rate of 2.5% until 30 April 2027.

On 2 April, US Executive Order 14257 announced further tariffs to be imposed on imports from 57 countries from 5 April (The White House 2025s). These further tariffs varied by trading partner and were described as 'reciprocal tariffs', aiming to balance asymmetries in US trade relationships including the US trade deficit, differences in tariff rates, and the use of non-tariff barriers by foreign trading partners. US reciprocal tariffs were paused for 90 days from 10 April for all trading partners except China (The White House 2025p), whose tariffs were paused from 14 May (The White House 2025o).

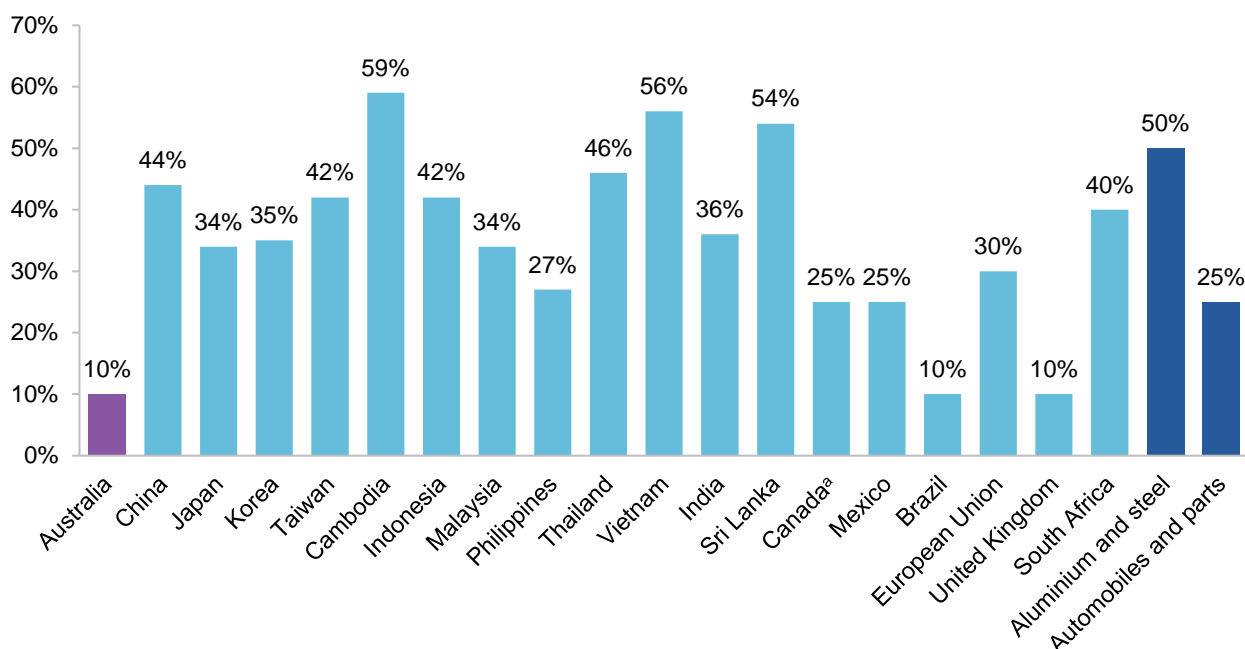
The PC modelled a scenario where the US levies the additional tariffs shown in figure A.1, as outlined in:

- Executive Order 14193 (tariffs on imports from Canada)
- Executive Order 14194 (tariffs on imports from Mexico)
- Executive Order 14257 (tariffs on all other trading partners)
- Proclamation 10908 (25% tariffs on imports of automobiles and automobile parts)
- Proclamation 10947 (50% tariffs on imports of aluminium and steel).⁵⁰

⁵⁰ Tariffs of 50% are levied on all imported ferrous metals and non-ferrous metals products, as PC Global does not disaggregate metals sufficiently to target aluminium and steel exclusively. Hence, the results are likely to overestimate the effects of US tariffs on aluminium and steel.

Figure A.1 – Tariffs levied by the United States in this scenario vary by product and trading partner

Rate of duty on imports of select products and trading partners, ad valorem tariff rate



a. Tariffs on energy imports (coal, oil, gas, electricity, and the gas distribution and transmission model industries) from Canada to the US are set at 10%, as per Executive Order 14193.

Source: The White House (2025s, 2025m, 2025l, 2025h, 2025a).

Tariffs do not stack in this scenario. This means tariffs on particular products like aluminium and steel or automobiles and parts will take precedence over tariffs on trading partners. For example, aluminium from Australia imported into the US faces a 50% tariff instead of Australia's baseline 10% tariff.

This scenario also abstracts from US policy by omitting the specific exemptions outlined in the Executive Orders and Proclamations, as well as any other presidential actions that may affect final import tariff rates.

China 50: an additional 50% tariff on all goods imports to the United States from China

On 1 February, the President of the US issued Executive Order 14195 imposing an additional 10% ad valorem tariff on all goods imported from China from February 4 (The White House 2025n).⁵¹ On 4 February, China announced tariffs of 10–15% on imported farm products from the US, imposed export controls and unreliable entity designations for some US companies, and announced an anti-trust investigation into Google (PIIE 2025). Additional Executive Orders by the US and retaliatory actions from China followed (box A.2).

⁵¹ Executive Orders affecting imports from the People's Republic of China also include the Special Administrative Regions of Hong Kong and Macau (The White House 2025o, 2025s).

Box A.2 – A non-exhaustive timeline of trade actions between the United States and People’s Republic of China (3 March to 12 May 2025)

- **3 March.** Executive Order 14228 increased the tariffs previously imposed on imports from China by 10 percentage points to 20% (The White House 2025j).
- **2 April.** Executive Order 14256 eliminated *de minimis* treatment for all products of China and imposed a 30% ad valorem tariff on ‘low-value’ items from China received through the international postal network that would otherwise qualify for *de minimis* treatment, from 2 May (The White House 2025k).⁵² The Executive Order also imposed an additional, specific duty of US\$25 per postal item from 2 May scheduled to increase to US\$50 per postal item from 1 June (The White House 2025k).
- **2 April.** Executive Order 14257 imposed an additional 34% ‘reciprocal’ tariff on imports from China, on top of the additional 10% baseline tariff imposed on all US trading partners and the 20% tariff under Executive Order 14228, starting from 5 April (The White House 2025s). Low-value imports under Executive Order 14256 were exempted.
- **8 April.** Executive Order 14259 increased the additional 34% ‘reciprocal’ tariff on imports from China by 50 percentage points to 84% from 9 April, following China’s imposition of an additional 34% tariff on goods imported from the US (The White House 2025g). The Executive Order also tripled the rates of duty introduced in Executive Order 14256 for low-value and postal items.
- **9 April.** Executive Order 14266 increased the additional 84% ‘reciprocal’ tariff on imports from China by 41 percentage points to 125% from 10 April, following China’s increase of its additional tariffs on US imports by 50 percentage points to 84% (The White House 2025p). US tariffs on Chinese imports peaked at 145% (including Executive Order 14228) and ‘reciprocal’ tariffs on other trading partners were paused. Executive Order 14266 also increased the rates of duty for low-value and postal items by a third. China’s additional tariffs on imports from the US increased to 125% from 12 April (PIIE 2025).
- **12 May.** Executive Order 14298 reduced the additional ‘reciprocal’ tariffs on imports from China to the 34% originally announced and lowered this rate further to 10% for 90 days from 14 May (The White House 2025o). The additional 20% tariffs under Executive Order 14228 remain in place, for a total of 30% in additional tariffs (The White House 2025i). Executive Order 14298 also reduced the rate of duty on low-value imports to 54% and the rate per postal item duty to 100 dollars. China also removed some retaliatory measures, including by lowering its additional tariffs on US imports to 10% (PIIE 2025).

PC Global was unable to model a scenario where the US levies the additional tariffs on imports from China as outlined in Executive Orders 14228 and 14266, specifically the additional ad valorem rate of duty of 145% on goods from China (including Hong Kong and Macau).

CGE models, like PC global, are designed to estimate the effect of small changes. Large tariffs can prevent the model from solving accurately, if at all. This is because, in the long run, the model assumes a high degree of substitutability between imports of the same product from different countries. The tariffs in this scenario imply a large increase in the price of imports from China relative to all other countries, which would lead to a large switch away from Chinese imports by US consumers. The size of the price difference is such that, in the real world, trade would cease. However, in the model, the price increases and high elasticities of substitution lead US demand for Chinese products to decline by well over 100%, which cannot happen in the real world. The implied responses are unfeasible and make the model unable to solve.

⁵² De minimis treatment refers to the practice of admitting imports into a country free of duty, up to a threshold value. The maximum value is US\$800 for the United States (OLRC 2025).

Instead, the PC modelled a scenario where the US levies an additional 50% ad valorem tariff on imports from China (including Hong Kong).⁵³ The results are an indicative underestimate of the effects on Australia from large tariffs levied on China by the US.

A.3 Global tariff modelling results

As a general equilibrium model, PC Global presents the final state of the world economy after it has adjusted completely to a policy shock. By design, the model does not provide the dynamics behind these changes. The model derives results by solving its system of equations simultaneously, which makes it difficult to explain the intuition underpinning the effects reported, the transmission mechanisms involved and the relative contributions made by various factors (many of which may have opposing effects).

To illustrate how the effects of tariffs are transmitted through the economy, the discussion that follows is presented as a stylised sequence of effects, though these effects occur simultaneously in the model. The discussion focusses on the base scenario without retaliation unless otherwise specified. Aside from in tables, numbers are rounded to the nearest significant figure. All results are reported as percentage changes unless otherwise specified.

Universal 10

The modelled impacts of this scenario are driven by a fall in the relative competitiveness of the US economy compared to the rest of the world (table A.1).

Table A.1 – Modelled impacts of an additional 10% tariff on all goods imports to the United States from all trading partners

Scenario with and without retaliation by the rest of the world (% change from base)

	Australia		United States		China		European Union	
	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>
Real GDP^a	0.09	0.15	-0.61	-1.18	0.04	0.11	0.28	0.46
Real GNP^b	0.02	0.00	-0.21	-0.42	-0.02	-0.02	0.04	0.02
Real GNA^c	-0.03	0.08	0.13	-0.45	-0.11	-0.03	0.02	0.02
Prices^d	-0.64	0.23	3.11	-0.81	-0.91	-0.05	-0.73	-0.09
Import volumes	-0.31	0.09	-8.68	-17.23	-0.63	-0.28	0.01	0.70
Export volumes	0.07	-0.01	-14.97	-24.43	-0.09	-0.23	0.34	1.24
Terms of trade^e	-0.26	0.51	3.74	-0.49	-0.35	0.05	-0.15	0.06

a. Real GDP is a measure of real national production. **b.** Real GNP is a measure of real national income. **c.** Real GNA is a measure of the real purchasing power of national income. **d.** Prices are the GDP deflator in each region. **e.** The terms of trade are an index of the price of exports divided by the price of imports.

Source: PC estimates.

Impacts on the United States

- Tariffs increase the price of goods imported into the US, reducing their demand in favour of domestically produced goods. US tariff revenue increases by roughly \$200 billion (3.7% of government revenue in the model database).

⁵³ The modelling does not levy the additional tariffs on Macau as it is not a standalone region in PC Global.

- Higher domestic demand stimulates the US manufacturing sector, which draws labour and capital from other, more productive sectors of the economy to meet the additional domestic demand.
- Higher import prices and domestic demand feed through into higher prices in the US (3.1%). This increases the price of US exports (by 2.8%) and the resulting loss in international competitiveness leads to a fall in US export volumes (by –15%).
- Together, these effects lead to lower real GDP in the US (by –0.6%). Aggregate production falls across all sectors, including manufacturing (by –1.1%), with lower export demand more than offsetting the increase in domestic demand.
- Lower aggregate production reduces the demand for labour and capital, resulting in lower real wages (by –1.6%). In conjunction with the higher cost of investment goods in the US due to higher prices, the net rate of return on capital earned by investors also falls (by –0.9%).
- Lower rates of return lead US and foreign investors to move capital out of the US in search of higher real returns, which becomes available for use by other economies in their production. The real capital stock in the US falls (by –1.2%).

Impacts on Australia

The impacts of this scenario for Australia are marginally positive and modest compared to those on the US.

- Australian production increases (by 0.1%), due to an inflow of productive capital from overseas investors and the comparatively higher price of imports from the US, which incentivises some import substitution.
- The increase in the supply of capital makes the domestic economy more capital intensive, leading to a lower rental price (by –0.8%). The relative scarcity of labour means that there is a slight increase in Australian real wages (by 0.1%) to produce the additional output.
- Lower US demand for exports leads producers globally to seek alternate markets, which requires exporters to reduce the price of goods previously exported to the US. Access to cheaper imports lowers the price that Australia pays for its imports (by –0.3%).
- China, whose largest export market is the US by far, exports slightly less but at an appreciably lower price (by –0.8%), including to Australia. China's imports fall in value to restore external balance, including a marginal fall in imports from Australia.
- Lower import prices reduce the cost of imported inputs used in Australian production and ultimately flow through to lower consumer prices (by –0.6%).
- Australia needs to find alternative markets for the goods that were previously exported to the US, which also requires the price (and income) of Australian exports to fall (by –0.6%). Australian exports pivot to regions such as the United Kingdom, Korea and Canada.
- Australia's terms of trade deteriorate slightly (by –0.3%) as export prices fall by more than import prices. Nonetheless, the trade effects for Australia are small compared to those on the US (figure A.2). Australian imports fall slightly due to higher domestic production, with falls in manufactured and service imports from the US partly counteracted by higher imports from the rest of the world. Australian export volumes rise slightly overall, offsetting falls in exports to the US.

Figure A.2 – Trade with the rest of the world offsets lower trade with the United States
Change in Australian exports and imports with selected trading partners



Source: PC estimates.

Impacts on the rest of the world

The modelled impacts on the rest of the world are generally positive (in relative terms) and small, reflecting the net effect of opposing factors. However, some economies face concentrated downturns and global production falls in aggregate.

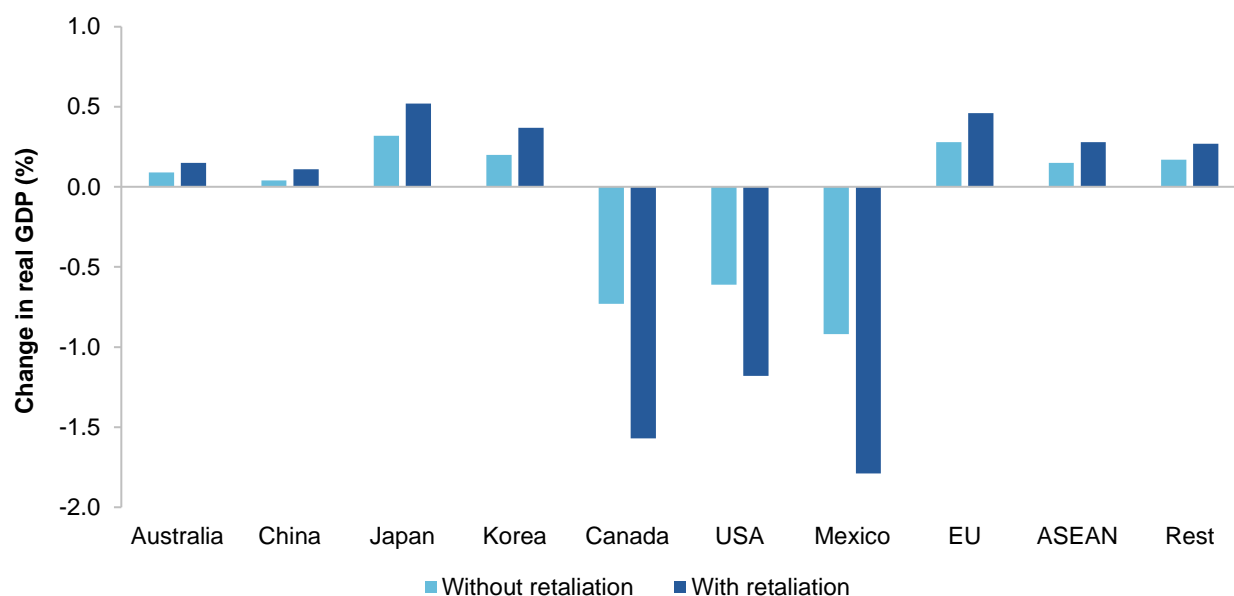
- Lower US demand for imports causes an oversupply of products previously exported to the US, resulting in lower prices for these exports. However, in many economies, this is more than offset by the outflow of productive capital from the US, which increases manufacturing output in economies such as Japan (by 0.4%) and Korea (by 0.3%).
- US tariffs reduce the international competitiveness of *all* US exports, benefitting economies that produce similar goods and services to those exported by the US. This leads to trade diversion, as patterns of trade shift away from the US, increasing real GDP in comparable economies like the European Union (by 0.3%).
- Mexico and Canada, being highly integrated with the US economy, face larger negative impacts than the US. These economies rely on US exports and demand for their imports (namely oil, gas and motor vehicles and parts), leading to concentrated downturns on their manufacturing sectors and their economies more broadly. Real GDP falls in both Mexico (by –0.9%) and Canada (by –0.7%).
- The rest of the world benefits in relative terms from the significant outflow of capital from the US, Mexico and Canada that occurs because of lower production in these economies. The rental price of capital in the rest of the world falls, lowering production costs and increasing output in most of the world.
- China is a beneficiary of this capital outflow, which limits the harm to its economy despite its dependence on US markets for its exports. Chinese production grows marginally as the economy becomes more domestically oriented, but the purchasing power of national income falls (by 0.1%) as producers pay more capital income to US investors.
- The aggregate effect of US tariffs in this scenario is to reduce global production (by –0.04%) and divert international trade away from the US.

The effect of retaliation

Global retaliation – whereby regions that export to the US respond with a 10% tariff on goods imported to the US – exacerbates the effects of the initial policy (figure A.3).

Figure A.3 – Retaliation by affected economies exacerbates the effect of the initial policy on real output

Change in real GDP for selected economies



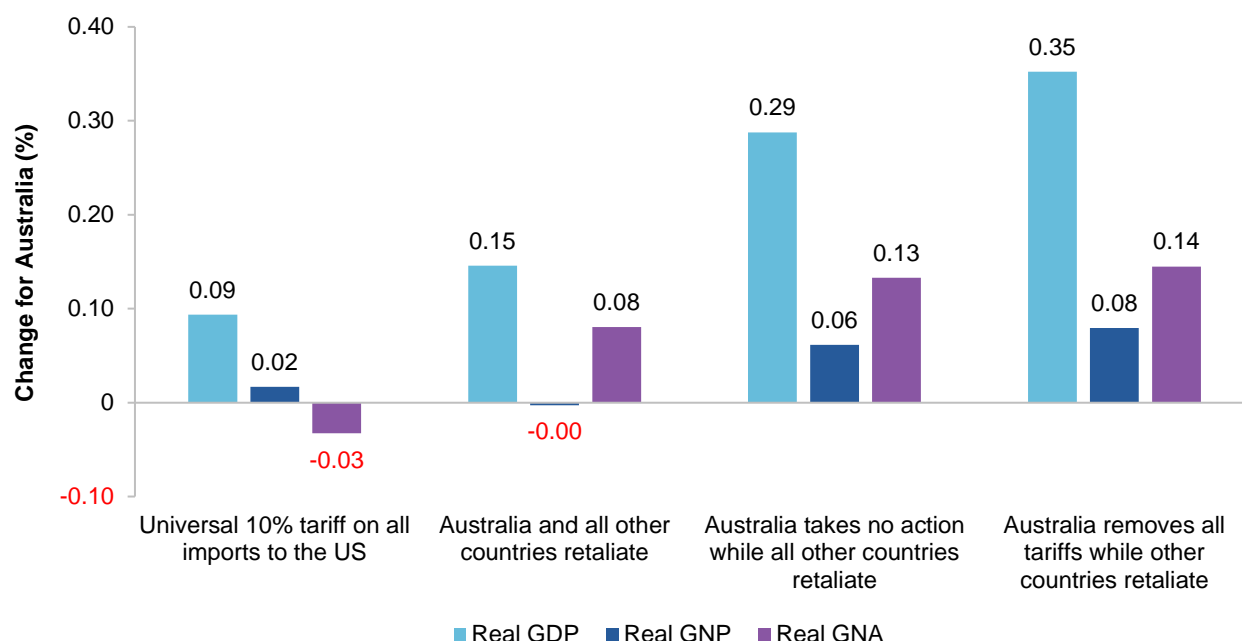
Source: PC estimates.

- Retaliation leads to much larger declines in world trade and world production, with the latter declining by approximately three times as much as in the case without retaliation (by -0.1%).
- US tariff revenue is just over \$20 billion lower than what the US would have collected in the case without retaliation, at just under \$180 billion.
- Australian production increases (by 0.2%), slightly more than in the case without retaliation, due to the additional capital freed up by lower production in other parts of the world.
- However, prices increase relative to the case without retaliation, both in Australia (by 0.2%) and abroad, generally leading to lower real wages and returns to capital. Prices fall in the US (by -0.8%), but due to lower production reducing demand for labour and capital and consequently nominal wages and the rental price of capital. Real wages and returns to capital fall furthest in Mexico, Canada and the US.
- Australian terms of trade improve (by 0.5%) as export prices increase on the back of higher mineral prices and import prices fall due to the need to find alternative markets. Higher purchasing power relative to the rest of the world drives higher national welfare (by 0.1%) compared to the case without retaliation.

The effect of Australia's response

Australia's best response to global tariffs between the US and the rest of the world is not to participate in the trade war, but to reduce its remaining tariffs (figure A.4).

Figure A.4 – Australia’s best response to global tariffs is to eliminate its remaining tariffs
Change in real GDP, real GNP and real GNA for Australia



Source: PC estimates.

- Australia joining the rest of the world in retaliatory action against the US increases Australian production (by 0.2%), more than if no one retaliated. This is because the tariffs imposed by the rest of the world generate a larger outflow of capital than the case without retaliation – especially from economies more dependent on trade with the US (such as Mexico and Canada) – and not because of the retaliatory tariffs that Australia imposes.
- In fact, Australia taking no action when the rest of the world retaliates leads to a larger increase in Australian production (by 0.3%), real consumer wages (by 0.3%), and import and export volumes (by 0.5% each). Retaliatory tariffs by Australia effectively limit the extent to which Australia can benefit from the changes in international trade and capital flows caused by others’ tariffs, by attempting to lock in existing production and trade patterns.
- The largest benefit to the Australian economy comes from Australia unilaterally removing its remaining tariffs while the rest of the world retaliates against the US.⁵⁴ Australian production, real wages and import volumes and export volumes all increase by more than in the other retaliatory strategies (by 0.4%, 0.3%, 0.7% and 0.8%, respectively).

Although Australia has few remaining tariffs, their removal would allow Australian production, Australian workers and Australian firms to fully benefit from the trade policies of other economies.

Liberation Day+

The modelled impacts of this scenario are driven by the differential nature of the tariffs applied (table A.2).

⁵⁴ This scenario involves Australia unilaterally removing all its remaining tariffs other than the excise-duty equivalent tariffs on tobacco and alcohol, which are assumed to remain unchanged.

Table A.2 – Modelled impacts of additional tariffs on all goods imports to the United States, varying by product and foreign trading partner**Scenario with and without retaliation (% change from base)**

	Australia		United States		China		European Union	
	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>
Real GDP ^a	0.37	0.51	–2.10	–3.03	–0.13	–0.10	0.72	0.88
Real GNP ^b	0.08	0.06	–1.02	–1.40	–0.15	–0.22	0.11	–0.02
Real GNA ^c	0.12	0.37	–0.35	–1.36	–0.61	–0.51	0.06	–0.05
Prices ^d	–0.81	0.69	8.44	1.38	–3.59	–1.81	–1.78	–0.62
Import volumes	0.47	1.50	–20.19	–33.00	–3.87	–2.74	–0.19	1.12
Export volumes	0.86	0.91	–33.97	–48.08	–1.21	–1.13	0.63	2.26
Terms of trade ^e	0.05	1.49	9.40	1.39	–1.94	–1.12	–0.41	–0.06

a. Real GDP is a measure of real national production. **b.** Real GNP is a measure of real national income. **c.** Real GNA is a measure of the real purchasing power of national income. **d.** Prices are the GDP deflator in each region. **e.** The terms of trade are an index of the price of exports divided by the price of imports.

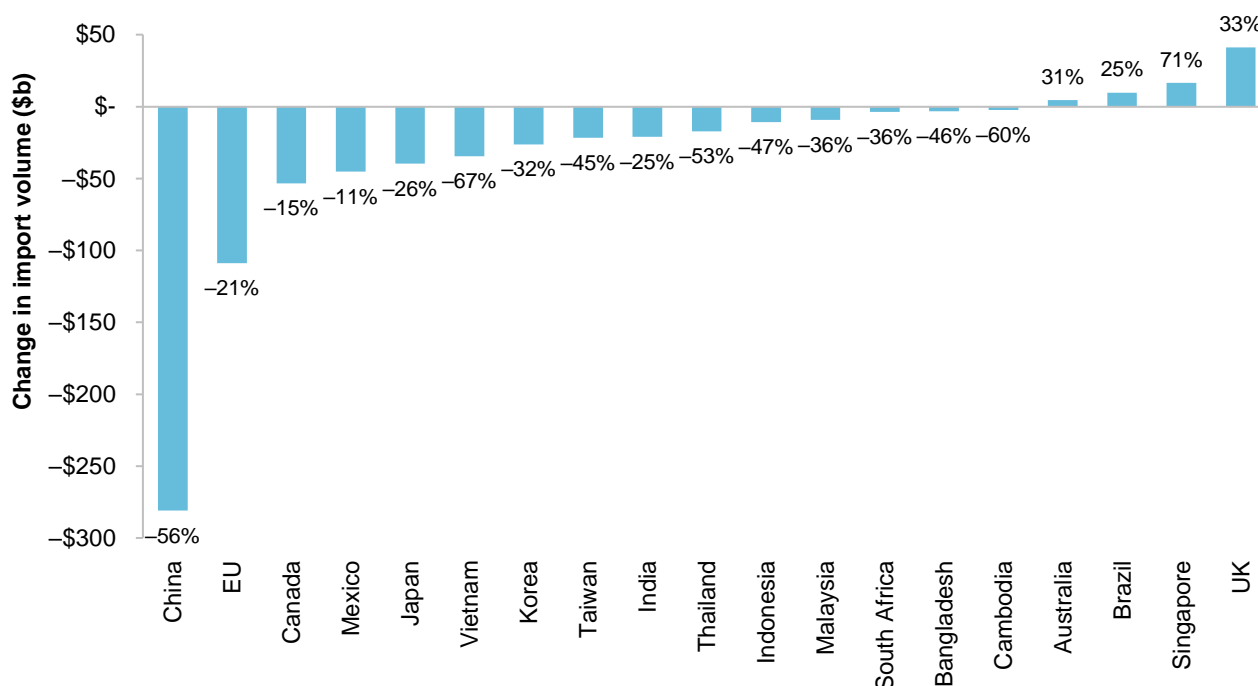
Source: PC estimates.

Impacts on the United States

- The tariffs cause large increases, and relative differences, in the price of imports into the US from different trading partners. US imports decrease overall (by –20.2%), with demand increasing for goods produced domestically (by 0.7%) and for imports from economies with lower tariff levels, like the United Kingdom and Australia. US tariff revenue increases by just over \$400 billion (7.2% of government revenue).
- The fall in US imports is led by large falls in import volumes from China and the European Union (figure A.4). Imports also fall significantly in percentage terms from Cambodia, Vietnam, and other regions with high tariff rates, but less so in volume terms given the smaller trade flows involved.
- The high tariffs and their wide coverage lead to a large increase in US prices (by 8.4%). This leads to an increase in US export prices (by 7.5%), which reduces their international competitiveness, and leads to an appreciable fall in US export volumes (by –34%).
- US exports also fall because of the need to restore external balance following lower import volumes. Both US exports and imports fall by similar amounts in volume terms (just over \$600 billion each).
- Higher US prices and the loss of competitiveness in international markets leads to a decrease in US aggregate production (by –2.1%), across all sectors of the economy. National income and its purchasing power are less affected due to the capital income paid to US overseas investors, but still fall (by –1% and –0.3%, respectively).
- This decrease in production leads to a fall in the demand for capital in the US, leading to a lower real rental price (by –1.2%) and rate of return (by –2.4%). This leads to a large fall in real investment in the US (by –4.5%) and to a fall in the capital stock (by –3.3%) as capital flows outwards in search of higher returns.

Figure A.5 – Falls in United States imports are driven by lower imports from China and the European Union

Changes in import volumes to the United States from selected economies



Source: PC estimates.

Impacts on Australia

The effects on Australia are slightly positive, and more so than in the Universal 10 scenario, as Australia benefits from the US imposing relatively higher tariffs on other trading partners.

- The relatively low additional US tariff rate on imports from Australia makes Australian imports cheaper for the US compared to imports from many trading partners. As a result, US demand for Australian exports increases (by 30.9%), led by electronics and other manufactured products.
- US tariffs on other trading partners lead to a global oversupply of imports previously sent to the US, decreasing Australia's import prices (by -1%). Australian imports rise overall (by 0.5%), as lower imports from the US (by -36.1%) are more than offset by imports from the rest of the world.
- Australia's increase in imports is led by electronics and other manufactured imports from China. The increase in imports from China is similar to the increase in Australian exports to the US.⁵⁵ Australian

⁵⁵ The fact that Australia imports and exports the same product may appear counterintuitive, but reflects trade diversion that flows from the different price signals faced by American and Australian consumers in the model. The much higher additional US tariff on, say, Chinese electronic goods, makes Australian-made electronic goods relatively cheaper in the US than those from China. US consumers respond by increasing their consumption of Australian-made electronic goods and decreasing their consumption of Chinese-made electronic goods. In contrast, Australian consumers benefit from access to cheaper Chinese electronic goods that would have been exported to the US. As these Chinese imports are now relatively cheaper than their Australian-made counterparts, Australian consumers respond by increasing their consumption of imported Chinese electronic goods and decreasing their consumption of the locally made product. This means that Australia simultaneously increases its exports and imports of electronic goods. In practice, we may also expect the re-exporting of Chinese-made electronic goods into the US by diverting them through Australia to avoid the higher additional US tariffs on Chinese products.

exports increase overall (by 0.9%), with lower exports to China (by –2.1%) more than offset by higher exports to the US (by 30.9%).

- As outlined in the discussion on the effects of the Universal 10 scenario, the outflow of capital from the US increases Australian production (by 0.4%). The rental price of capital falls (by –1.4%) as domestic production pivots away from capital-intensive sectors like resources and some manufacturing industries, in part due to lower export demand and more imports from China.
- Given the fixed supply of labour in each region, the increased use of capital in Australian production requires the expanding industries to draw labour away from other industries. This increased demand leads to an increase in real wages (by 0.5%).

Impacts on the rest of the world

The effects of this scenario on the rest of the world in aggregate are detrimental.

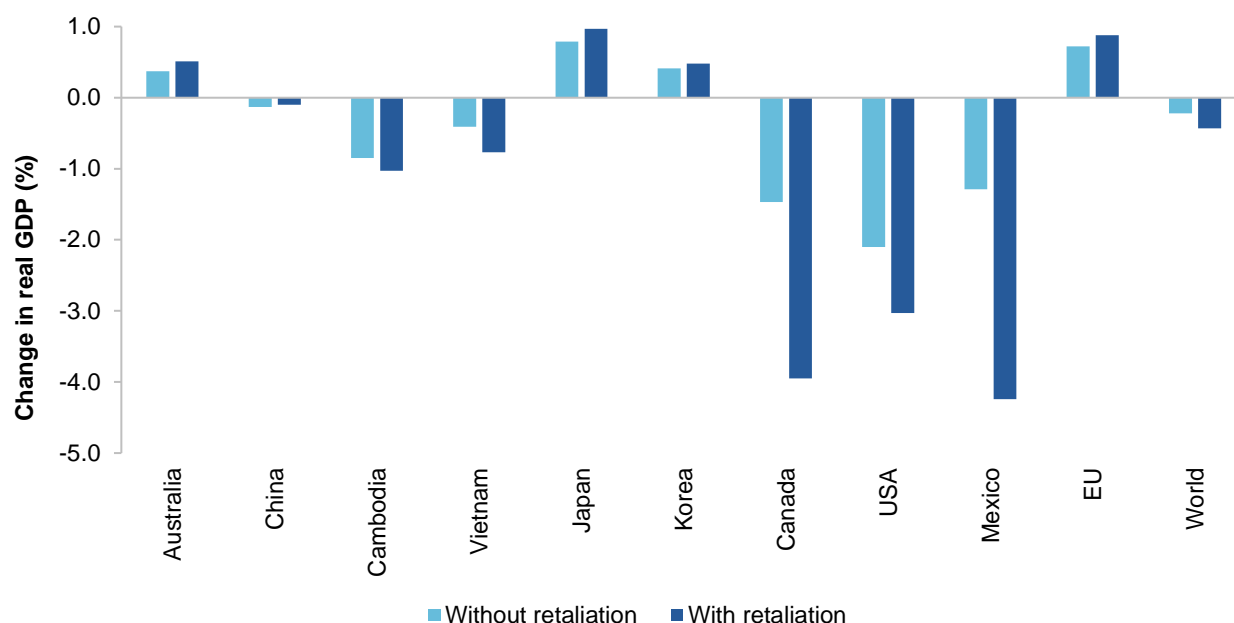
- Many of the trading partners that previously exported to the US need to find alternative markets for these products and lower their price to find new buyers. Subsequent lower export prices result in lower export income for these economies. Export prices fall for almost all economies, particularly Vietnam (by –3.9%), Cambodia (by –3.9%) and China (by –3.2%).
- Canada and Mexico face significant downturns due to their close links with the US economy and the relatively high tariffs levied on them and the products they export (such as cars, aluminium and steel). Their real GDP falls (by –1.5% and –1.3%, respectively) and real GNA falls further (by –2.1% each).
- The outflow of capital from the US, Mexico and Canada benefits production in most of the world. Real GDP and real wages increase in every other region except Cambodia, Vietnam and China.
- Real GDA falls further than real GDP in these three economies, as the lower prices for their exports further reduce the purchasing power of their national income.
- The welfare effects for other economies are mixed, as the effect on other region's imports and exports differ. Manufacturing economies, like Korea and Taiwan, are negatively affected, while some service-oriented economies and economies facing lower tariffs, like the UK and New Zealand, benefit from cheaper imports.
- The aggregate effect of US tariffs in this scenario is to reduce global production (by –0.2%) and international trade (by –3.7%).

The effect of retaliation

Retaliation – whereby each economy responds to the additional country-specific and product-specific tariffs levied on them by the US by levying identical tariffs on US exports – almost doubles the detrimental effect on global production (figure A.6).

Figure A.6 – Retaliation almost doubles the fall in global production despite complicated impacts on individual economies

Change in real GDP for selected economies



Source: PC estimates.

- Retaliation causes global production and international trade to fall further (by –0.4% and –4.8%, respectively).
- Retaliatory tariffs on US imports further divert trade away from the US, with larger declines in US exports (by –48.1%) and US imports (by –33%). US real GDP falls further (by –3%), led by manufacturing and primary production (by –5.2% each).
- The downturn in the US further impacts Canada and Mexico. Lower US demand causes large contractions in their manufacturing sectors (by –11% and –9%, respectively), driving falls in real GDP (by –4% and –4.2%, respectively).
- The effects on production in other economies are mixed, owing to complicated differences in relative prices between economies. Production declines further in Cambodia and Vietnam (by –1% and –0.8%, respectively), but declines only slightly in China (by –0.1%), compared to the case without retaliation.
- The effects on prices are similarly complicated, with price increases in some economies like Australia (primarily due to retaliatory tariffs making the goods that they produce more expensive) and price decreases in others like the US and Vietnam (primarily due to the retaliatory tariffs having larger adverse effects on US exports and requiring larger price falls to find alternative buyers).

China 50

The modelled impacts of this scenario are driven by a sharp reduction in trade between the US and China (table A.3).

Table A.3 – Modelled impacts of an additional 50% tariff on all goods imports to the United States from China**Scenario with and without retaliation (% change from base)**

	Australia		United States		China		European Union	
	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>	<i>Without retaliation</i>	<i>With retaliation</i>
Real GDP ^a	0.08	0.13	−0.78	−0.86	−0.62	−0.92	0.24	0.28
Real GNP ^b	0.02	0.03	−0.49	−0.52	−0.29	−0.51	0.06	0.06
Real GNA ^c	0.07	0.13	−0.44	−0.53	−0.89	−1.09	0.12	0.12
Prices ^d	0.24	0.46	1.67	0.98	−3.12	−3.00	0.51	0.54
Import volumes	0.25	0.50	−2.31	−3.79	−6.59	−7.40	0.38	0.50
Export volumes	0.14	0.25	−4.82	−6.49	−3.12	−3.96	0.43	0.60
Terms of trade ^e	0.18	0.40	0.84	0.13	−2.91	−2.79	0.10	0.10

a. Real GDP is a measure of real national production. **b.** Real GNP is a measure of real national income. **c.** Real GNA is a measure of the real purchasing power of national income. **d.** Prices are the GDP deflator in each region. **e.** The terms of trade are an index of the price of exports divided by the price of imports.

Source: PC estimates.

Impacts on the United States

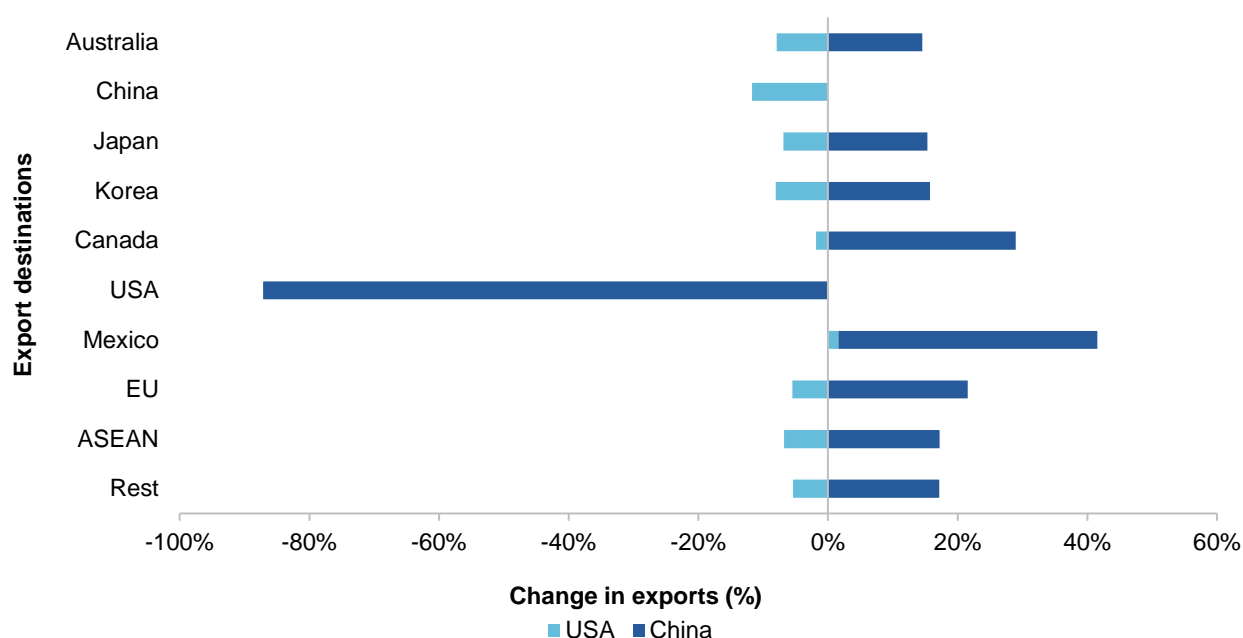
- Tariffs increase the price of goods imported from China into the US to such an extent that US demand for imports from China decreases sharply (by 87.1%). Manufactured goods, led by computer, electronic and optical products, are most affected.
- US demand shifts towards other exporters and domestically produced goods. US import volumes increase from other trading partners in the region, including Association of Southeast Asian Nations (ASEAN) countries (by 38.4%), Korea (29.6%) and Japan (22%).
- US manufacturing also increases real output (by 0.2%) to meet increased domestic demand for manufactured goods, drawing resources away from other sectors to expand. This puts upwards pressure on nominal wages (by 0.9%), which combined with higher import prices (by 0.6%) lead to higher consumer prices (by 1.7%). Real wages fall (by −0.8%).
- Higher prices hurt the competitiveness of the US economy across all sectors. US export prices rise (by 1.4%), and export volumes fall (by 4.8%) with all trading partners (figure A.7). Real output falls (by −0.8%), across all sectors except manufacturing.

Impacts on China

- The high US tariffs on Chinese exports reduces US demand for Chinese imports. China responds by finding alternative markets for these products, which requires them to reduce their prices (by −2.5%). Chinese exports increase to other economies (figure A.7), but not enough to offset the fall in US demand.
- Chinese export volumes fall in total (by −3.1%), reflecting lower Chinese production overall (by −0.6%). Chinese imports fall to restore external balance (by −6.6%), as the Chinese economy becomes more domestically oriented, with some products that were previously exported now consumed domestically.
- Lower Chinese production reduces demand for primary factors, decreasing nominal wages (by −3.9%) and the rental price of capital (−3%). In addition to the greater supply of products domestically, prices fall for Chinese consumers (by −3.2%) less than nominal wages such that real wages fall (by −0.7%).
- The real rate of return on capital in China also falls (by −1.6%). The capital stock declines (by −1.2%) as capital flows out of China in search of higher returns abroad.

Figure A.7 – United States exports fall to almost all trading partners whereas Chinese exports diversify from the United States

Change in export volumes for selected economies



Source: PC estimates.

Impacts on Australia

The modelled effects on Australia are slightly positive, due to capital inflows from China and export demand from the US.

- Australian consumers benefit from cheaper Chinese exports (by -2.5%), particularly manufactured goods, as China pivots away from the US. Australian imports from China increase in volume (by 14.5%) due to this price effect.
- Australian export volumes rise (by 0.1%) to fund these additional import volumes. Export volumes increase to the US (by 12.1%), predominantly in computers, electronics and other manufactured goods. This more than offsets a fall in export volumes to China (by -2.7%), which is led by non-ferrous metals, coal and other primary production.
- The outflow of capital from the US and the lower cost of intermediate inputs imported from China allow Australia to increase real production (by 0.1%). As capital flows into the Australian economy, production becomes more capital intensive. The real rate of return on capital falls and real wages increase (by -0.2% and 0.1% , respectively).
- Australian production reorients towards services, with real services output increasing (by 0.1%) and offsetting a small decline in real primary production (by -0.1%). Manufacturing output remains relatively flat despite the changes in imports and exports of manufactured goods, indicating that goods manufactured in Australia that were previously produced domestically are being exported to the US and substituted domestically by imports from China.

Impacts on the rest of the world

As for the rest of the world, the modelled impacts depend on each region's trading relationships and degree of product competition with the US and China. In general, the rest of the world benefits from cheaper imports from China, increased demand for exports from the US, and capital outflows from both China and the US.

- US tariffs on Chinese products make imports from other economies relatively cheaper for the US. US demand for exports from other manufacturing economies increases, with higher US demand leading to higher export prices and income overall for economies other than China.
- Capital outflows from the US and China benefits most other economies, allowing real output to increase in most of the world. However, the effect on the US and China is such that global output falls (by -0.1%).
- Export volumes increase for Mexico and Canada (by 6.1% and 1.7% , respectively), as these economies increase production to meet US demand. Real GDP increases in Mexico and Canada (by 1.2% and 0.2% , respectively), led by increases in manufacturing output (by 4.0% and 2.1% , respectively).
- Likewise, export volumes increase for ASEAN countries, Japan and Korea (by 1.6% , 1.1% and 0.8% , respectively). Real GDP increases in these economies (by 0.5% , 0.3% and 0.2% , respectively), also led by manufacturing (by 1% , 0.3% and 0.2% , respectively).
- The rest of the world generally diverts trade, importing more from China, which facilitates more domestic production and increased export volumes to the US.

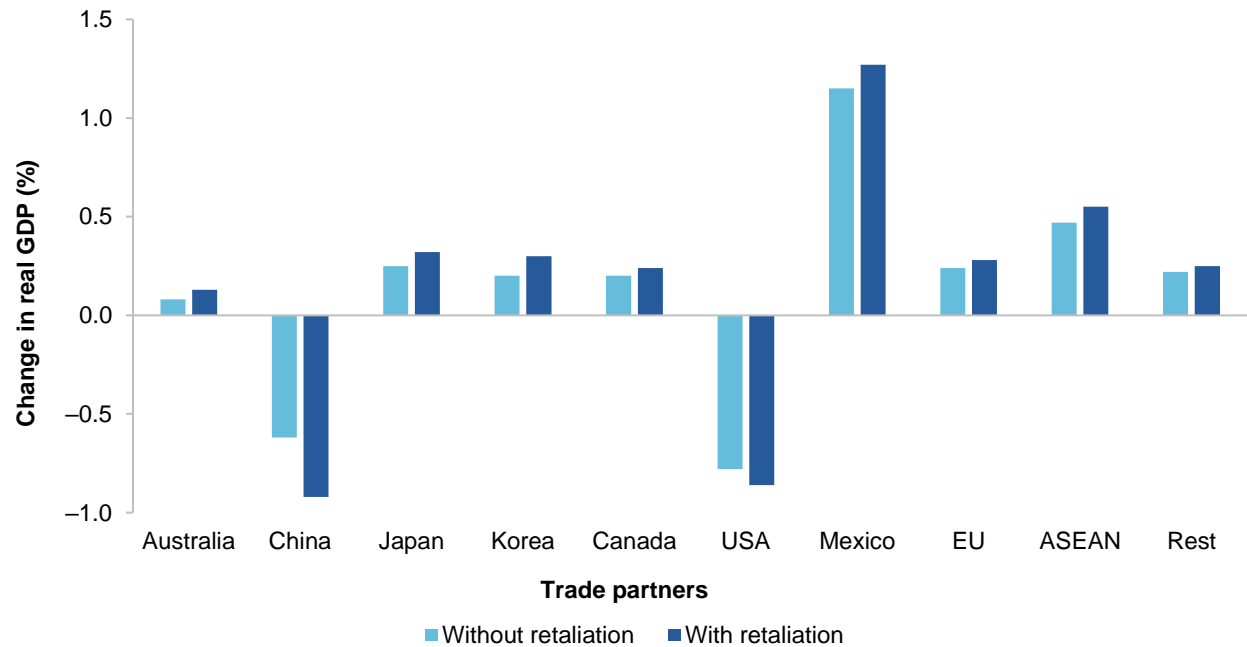
The effect of retaliation

Retaliation – whereby China imposes a 50% tariff on imports from the US in response to the US tariff – leads to more negative impacts on China, the US and closely linked economies, with further capital outflows benefitting the rest of the world.

- Chinese tariffs on goods imported from the US reduce Chinese demand for US produced goods, namely advanced manufacturing products like computers, electronics and chemical products. US export volumes to China fall (by -62.6%).
- US import volumes also fall overall (by -3.8%) to restore external balance, now from economies other than China given the reduction already caused by the initial tariffs. US production falls (by -0.9%) due to the combination of lower demand from China and costlier imported intermediate inputs. Real wages fall (by -0.8%).
- Despite the downturn in the US economy, exports from Mexico and Canada to the US still increase, albeit by less than in the case without retaliation. Exports from Mexico and Canada increase overall (by 6.4% and 2% , respectively), led by higher manufacturing output (by 4.2% and 2.1% , respectively) due to greater capital inflows from China and the US. As Mexico competes more directly with China in global markets, particularly in electronic goods, bilateral tariffs between China and the US lead to higher real GDP in Mexico (by 1.3%) compared to Canada (by 0.2%).
- Likewise, export volumes increase from ASEAN countries, Japan and Korea (1.9% , 1.6% and 1.2% , respectively) and more than in the case without retaliation. Growth in real GDP (by 0.6% , 0.3% and 0.3% , respectively) is led by higher real output in manufacturing (by 1.3% , 0.5% and 0.4% , respectively) from greater capital inflows.
- With even more foreign investment, the Australian economy becomes more capital intensive. Production increases slightly (by 0.1%), driven by higher output in capital-intensive sectors like primary production (by 0.2%) and services (by 0.1%). Wages rise (by 0.1%) and the real rate of return on capital falls (by -0.2%).
- Nonetheless, the impacts on China and the US cause world production to decrease (by -0.2%) and by more than in the case without retaliation.

Figure A.8 – Retaliation leads to lower production in economies dependent on the United States

Change in real GDP for selected economies



Source: PC estimates.

A.4 Regions and industries in the PC Global database

Table A.4 – Countries and regions in the PC Global database

Number	Region	Number	Region
1	Australia (AUS)	19	India (IND)
2	New Zealand (NZL)	20	Pakistan (PAK)
3	China (CHN)	21	Sri Lanka (SRI)
4	Hong Kong (HKG)	22	Rest of Asia and Oceania (ROA)
5	Japan (JPN)	23	Canada (CAN)
6	Korea (KOR)	24	United States of America (US)
7	Taiwan (TWN)	25	Mexico (MEX)
8	Brunei (BRN)	26	Brazil (BRA)
9	Cambodia (CAM)	27	Chile (CHL)
10	Indonesia (IDN)	28	Peru (PER)
11	Laos (LAO)	29	Rest of America (ROM)
12	Malaysia (MYS)	30	European Union (EU)
13	Philippines (PHL)	31	United Kingdom (UK)
14	Singapore (SGP)	32	Russian Federation (RUS)
15	Thailand (THA)	33	Rest of Europe (ROE)
16	Vietnam (VNM)	34	South Africa (ZAF)
17	Rest of South-East Asia (XSE)	35	Rest of Africa (ROF)
18	Bangladesh (BGD)		

Table A.5 – Industries in the PC Global database^{a,b}

Number	Industry	Number	Industry
1	Paddy rice	34	Basic pharmaceutical products
2	Wheat	35	Rubber and plastic products
3	Cereal grains nec	36	Mineral products nec
4	Vegetables, fruit, nuts	37	Ferrous metals
5	Oil seeds	38	Metals nec
6	Sugar cane, sugar beet	39	Metal products
7	Plant-based fibres	40	Computer, electronic and optical products
8	Crops nec	41	Electrical equipment
9	Bovine cattle, sheep and goats, horses	42	Machinery and equipment nec
10	Animal products nec	43	Motor vehicles and parts
11	Raw milk	44	Transport equipment nec
12	Wool, silk-worm cocoons	45	Manufactures nec
13	Forestry	46	Electricity
14	Fishing	47	Gas manufacture, distribution
15	Coal	48	Water
16	Oil	49	Construction
17	Gas	50	Trade
18	Other extraction	51	Accommodation, food and service activities
19	Bovine meat products	52	Transport nec
20	Meat products nec	53	Water transport
21	Vegetable oils and fats	54	Air transport
22	Dairy products	55	Warehousing and support activities
23	Processed rice	56	Communication
24	Sugar	57	Financial services nec
25	Food products nec	58	Insurance
26	Beverages and tobacco products	59	Real estate activities
27	Textiles	60	Business services nec
28	Wearing apparel	61	Recreational and other services
29	Leather products	62	Public administration and defence
30	Wood products	63	Education
31	Paper products, publishing	64	Human health and social work activities
32	Petroleum, coal products	65	Dwellings
33	Chemical products		

a. Industries 1 to 14 form the agricultural sector, 15 to 18 the mining sector, 19 to 45 the manufacturing sector and 46 to 65 the services sector. **b.** nec: not elsewhere classified.

B. Assistance estimates

A spreadsheet with the assistance estimates data is available online at: www.pc.gov.au/ongoing/trade-assistance/2023-24

C. Literature review on trade agreement compliance costs

C.1 How our model compares with other studies of compliance costs

The Productivity Commission is not the first organisation to estimate compliance costs. The same intuition that underpins our model also underpins many of the existing studies of preferential trade agreement (PTA) related compliance costs. This section compares our model with the wider literature.

There are two common approaches in the literature

Much of the literature uses either a revealed preference approach or a threshold regression approach. While there are other methodologies available to researchers (for example, Bureau et al. (2007) provides an investigation of European Union and United States agricultural imports using a probit model), these two approaches are common for studies looking at country level import data.

Many studies use aggregate (that is country-to-country level) import data, including the PC. Studies that use individual shipment, or 'transaction'-level data are less common (though recent studies do including Albert and Nilsson (2016); Kasteng et al. (2021); and Legge and Lukaszuk (2024)).

Revealed preference approach

A revealed preference approach assumes that we can measure importers' preferences using their observed behaviour when interacting with the tariff system. This assumption has allowed researchers to infer the costs of complying with rules of origin as a proportion of the shipment value. More specifically, it assumes that there is an upper bound and lower bound:

- **Upper bound:** For products with preference utilisation rates at or close to 100%, the cost of compliance is 'revealed' to be lower than the preferential margin – otherwise exporters would prefer not to comply and simply pay the MFN tariff.
- **Lower bound:** For products which do not enter using preferential tariffs, the margin is a lower bound for the cost of compliance.

The PC model draws on this same intuition as it infers compliance costs from the observable choices business make when faced with different tariff savings. A logistic function is then used to model the relationship between PTA uptake and tariff savings, identifying the distribution of compliance costs as a share of imports to find average incurred costs. See the appendix C of the *Nuisance Cost of Tariffs* report for further information (PC 2022).

Threshold regression approach

An alternate approach is to apply threshold regression to a model of trade flows such as a gravity equation.

A threshold regression approach is a type of regression model which assumes that the relationship between variables might change once a certain threshold (for example, a certain preference margin) is reached. Below this threshold the tariff saving is too small to justify the compliance cost; above it claiming the preference becomes worthwhile.

While drawing on similar logic, the PC's model is not a threshold regression as it aims to examine the whole distribution of decisions. In contrast, a threshold regression models an abrupt switch between two different states at a sharp cut of point.

PC estimates align with the lower end of other studies

Table C.1 reports estimates of average expected PTA-related compliance costs from other studies. As noted in appendix C of *The Nuisance Cost of Tariffs* (2022, pp. 61–67), the PC's estimates (~2% of import value) are aligned with the lower end estimates of existing studies. Most studies observed found higher compliance costs than the PC model. This may be a result of the varying complexities of rules of origin in other PTAs or differences in the data and methodology used.

Table C.1 – Studies of average expected PTA-related compliance costs^{a,b,c,d,e}

Study	PTA and/or countries	Production-related average compliance cost estimate	Administration-related average compliance cost estimate	Total average compliance cost estimate
		% of value of imports ^c	% of value of imports ^c	% of value of imports ^c
Francois, Hoekman and Manchin (2006, p. 201)	PANEURO agreements ^a ; African, Caribbean and Pacific exports to the European Union	-	-	4–4.5
Cadot et al. (2006, pp. 217–218)	PANEURO agreements ^a ; African, Caribbean and Pacific exports to the European Union; 2002	1.2	6.8	8.0
Cadot et al. (2006, p. 217)	NAFTA ^b ; Mexican exports to the United States; 2000	4.9	1.9	6.8
Anson et al. (2005, p. 511)	NAFTA ^b ; Mexican exports to the United States; 2000	4.30	1.83	6.13
Carrère and de Melo (2006, p. 197)	NAFTA ^b ; Mexican exports to the United States; 2000	4.30	1.81	6.11
Carrère and de Melo (2006, p. 197)	NAFTA ^b ; Mexican exports to the United States; 2001	4.44	1.72	6.16
Carrère and de Melo (2006, p. 208)	NAFTA ^b ; Mexican exports to the United States; 2001; alternative methodology	3	-	-
Hayakawa (2011, pp. 302–303)	All free trade agreements; 2001–2006	-	-	3.2

Study	PTA and/or countries	Production-related	Administration-related	Total average
		average compliance cost estimate	average compliance cost estimate	compliance cost estimate
		% of value of imports ^c	% of value of imports ^c	% of value of imports ^c
Cadot and Ing (2016, p. 129)	ASEAN PTA	-	-	2.1
Hayakawa et al (2019, pp. 2, 18)	Japanese trade agreements (study for exporters)	2 of production cost	4-8 increase in fixed costs	-
Gillson (2010, p. 6)	A firm case study of Shoprite in South Africa	-	Up to 4.3	-
Manchin (2004, p. 17)	EU imports from African, Caribbean and Pacific countries	-	-	4.5

a. 'PANEURO agreements' refers to the European Union's free trade agreements that have common rules of origin requirements. The countries in question accessed preferences under the Cotonou agreement. b. 'NAFTA' is the North American Free Trade Agreement c. Value free on board. d. Carrère and de Melo (2013, p. 289) report production-related compliance costs separately for tariff lines with different utilisation rates. The statistic reported here is the average over all utilisation rates, weighted by the number of tariff lines to which that utilisation rate applies. e. Gillson (2010) is based on case study of South African supermarket Shoprite. They found the company spent US \$5.8 million in administrative costs to save US \$13.6 million in duty savings under the Southern African Development Community free trade bloc. With South Africa's statutory rate of 10% (South African Revenue Service 2021) this represents compliance costs of up to approximately 4.3%.

C.2 What other factors determine PTA utilisation?

Many of the compliance costs models assume that the primary determinate of PTA utilisation are savings they can obtain from accessing an agreement. This assumption is often necessary to estimate compliance costs, but it is an abstraction from reality. A firm's decision to use a PTA is not solely based on the savings obtained from accessing the agreement. Instead, other factors can augment their decision-making: transport costs, what agreement is being used, and who the importer is.

The shipment value of the imported goods is a key determinant of whether a firm uses a PTA (Albert and Nilsson 2016; Ciuriak and Bienen 2014, p. 8; Kasteng et al. 2021, p. 98). Firms tend to use PTAs when their imports are of a higher shipment value.⁵⁶ One hypothesis is that the PTA utilisation rate might be driven by initial fixed administrative costs, rather than a cost proportional to the value of the imported goods (Keck and Lendle 2012, pp. 1–5). Some authors have estimated these fixed administrative costs. Using a kink regression model on Icelandic transaction data, Albert and Nilsson (2016, p. 16) find that the utilisation rate picks up at duty savings of roughly EUR 20 and levels off at EUR 260. Due to such costs, utilisation can be high despite low preferential margins if the trade volume is sufficiently large.

⁵⁶ Interestingly, this relationship appears to be weaker in the United States compared to other countries, and stronger in Australia. Keck and Lendle (2012, pp. 15–17) found that average utilisation rates in the US tend to be very high for all ranges of preferential margins, while they tend to be lower for small margins in other countries especially Australia. However, Australia's result was noted as potentially being influenced by a small sample size of low value import transactions in their data.

The structure of a PTA can affect its utilisation rate. More relaxed rules of origin can encourage utilisation. Diagonal cumulation, for example, allows products from one country of origin to have value added in another. Including this rule can allow an Australian exporter to New Zealand to count Chilean inputs, since both Australia and New Zealand have agreements with Chile. This rule has improved utilisation: Hayakawa (2014, p. 14) finds a 4% trade creation effect between Thailand and Japan when comparing uptake of agreements with and without diagonal cumulation between these two countries. On the other hand, more restrictive and complex rules of origin typically reduces utilisation (Ciuriak and Bienen 2014, pp. 12–13; Hayakawa 2014, pp. 6–9; Kunimoto and Sawchuk 2005, pp. 8–13; Takahashi and Urata 2009).

Firm characteristics can also play a role in determining utilisation. For instance, more experienced firms are more likely to use a PTA (Krishna et al. 2021; Legge and Lukaszuk 2024; 2014). This effect makes intuitive sense, as after a firm understands the administration required to comply with rules of origin, they may find it easier to access preferences for future imports. Whether the size of the importing firm affects utilisation is less clear. While it has been put forward that larger firms have the human and financial resources to handle the fixed administration costs, (Takahashi and Urata 2009; Wignaraja 2014, p. 39) some research has failed to find evidence in support of this hypothesis (Kasteng et al. 2021, pp. 101–102; Wignaraja 2014, p. 40).

All these additional factors are not incorporated into the PC's model. As such, results are reported with a wide range to encourage a cautious interpretation. It is a modelled estimate, not actuals. To incorporate these factors into the PC model, more granular, transaction level data would need to be acquired.

Abbreviations

ABC	Australian Broadcasting Corporation
ABF	Australian Border Force
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
AEMO	Australian Energy Market Operator
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASEAN	Association of Southeast Asian Nations
ASIC	Australian Securities and Investment Commission
ATO	Australian Taxation Office
BOP	Balance of Payments
CEFC	Clean Energy Finance Corporation
CEPA	Comprehensive Economic Partnership Agreement
CGE	Computable General Equilibrium
CGT	Capital Gains Tax
CHIPS	Creating Helpful Incentives to Produce Semiconductors
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DAFF	Department of Agriculture, Fisheries and Forestry
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DFAT	Department of Foreign Affairs and Trade
DITRDCA	Department of Infrastructure, Transport, Regional Development, Communication and the Arts
DWL	Deadweight loss
EFA	Export Finance Australia
EU	European Union
FATA	Foreign Acquisitions and Takeovers Act 1975 (Cth)
FDI	Foreign Direct Investment
FIRB	Foreign Investment Review Board
FMIA	Future Made in Australia
FTA	Free Trade Agreement
FWC	Fair Work Commission
GDA	Gross Domestic Absorption
GDP	Gross Domestic Product

ABC	Australian Broadcasting Corporation
GNA	Gross National Absorption
GNP	Gross National Product
GST	Goods and Services Tax
GTAP	Global Trade Analysis Project
IPEF	Ino-Pacific Economic Partnership
IRA	Inflation Reduction Act
MFN	Most Favoured Nation
NAFTA	North American Free Trade Agreement
NAIF	Northern Australian Infrastructure Facility
NEMA	National Emergency Management Authority
NIF	National Interest Framework
OECD	Organisation for Economic Co-operation and Development
OLRC	Office of the Law Revision Council
PACER	Pacific Agreement on Closer Economic Relations
PANEURO	European Union's free trade agreements that have common rules of origin requirements
PC	Productivity Commission
PTA	Preferential Trade Agreement
RBA	Reserve Bank of Australia
RCEP	Regional Comprehensive Economic Partnership
RIC	Regional Investment Corporation
TAR	Trade and Assistance Review
TGA	Therapeutic Goods Australia
TPU	Trade Policy Uncertainty
UAE	United Arab Emirates
VAR	Vector Autoregression
WTO	World Trade Organisation

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