



**Research Note: Modelling Coalition Personal Income Tax Policies 2017 to 2029**

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## Introduction

The Coalition Government has passed through the Australian Parliament several stages of personal income tax cuts starting from the 2018-19 financial year. This paper models the average household tax rate, fiscal and distributional consequences of these personal income tax policy changes over the period 2018-19 to 2029-30. We consider which household types gain the most in terms of reduced tax paid and whether or not the tax cuts are sufficient to overcome bracket creep.

For the purpose of this research note the Coalition personal income taxation policies include the changes outlined in the 2018-19 Federal Budget and subsequent changes in 2019-20 and 2020-21 Federal Budgets. The Government rationale for the tax cuts are designed to 'be simpler, reward effort and maintain progressivity' (Commonwealth of Australia, 2019). The tax cuts are also claimed to return to taxpayers some of the fiscal drag being generated by the non-indexation of tax thresholds.

## Methodology

The approach adopted in this paper is to use the ANU PolicyMod microsimulation model of the Australian tax and transfer system. This model is based on an ABS income survey for 2017-18 and has been adjusted to better reflect the population of 2017/18 and beyond using a range of administration data and official statistics and budget forecasts and projections. The model simulates the current policy settings of most of the tax and transfer system in Australia. In this paper we simulate the proposed tax changes and apply the assumptions in the Federal Budget around wages, prices and population change. We compare the legislated policy (termed Base Case Policy Setting) with the previous settings of the personal income tax system to model the overall fiscal impact of the policy change and the distributional impact for each year for Australian households.

In determining the impact of tax cuts it's important to define the appropriate counter-factual. To do this we compare the legislated tax changes with the following two counter-factual policies:

- 1) The personal income tax legislation in 2017-18 (Counterfactual 1); and
- 2) The personal income tax legislation in 2017-18 with tax thresholds indexed to budget projections of wage growth (Counterfactual 2).

Counterfactual 1 is the type of comparison made in the budget papers when estimating 'costings'. For the accounting purposes of the Commonwealth Government this is appropriate. For economic and social analysis purposes this approach is problematic, particularly when considering impacts beyond the forward estimates.

For those parts of the tax and transfer system that are indexed with inflation or wages, such as the age pension or unemployment payments, this counter-factual may still be appropriate. However, for the personal income tax system, thresholds are not indexed on a regular basis. They require legislation to adjust rates and thresholds and this is usually not done on a regular basis.

Forward projections of tax revenue benefit from 'bracket creep' where incomes tend to increase and push people into higher tax rates, or a larger share of their income onto higher tax rates. Such revenue projections tend to be overstated as it is unlikely continually increasing tax rates through

bracket creep will be viewed favourably by voters. Governments usually respond by lowering taxes through the adjustment of tax thresholds and rates.

The Government has recently begun estimating ‘costings’ or ‘tax savings’ over the medium term 10-year time horizon. This is a much longer time period than in previous budgets and due to bracket creep tends to generate significant tax savings since tax rate income thresholds and tax rates are usually adjusted, albeit on an irregular basis.<sup>23</sup> These estimates tend to over-state tax savings. Counterfactual 2 which involves adjusting tax thresholds in line with projections for wage growth, overcomes this problem and provides a more realistic estimate of the true policy impact of any tax changes into the future. If changes to the tax system are estimated to lower average tax rates relative to what they would have been had tax thresholds been indexed we can say there are genuine tax savings. Whereas with the first counter-factual the tax savings may be an illusion generated by higher wages pushing tax payers increasingly into higher tax thresholds. Taken to the extreme, over a long enough time period (perhaps 50-years) and assuming some growth in wages, using Counterfactual 1 both the median and average income earner income would eventually increase to be greater than the income threshold for the top tax bracket. In reality, tax thresholds would increase over time to account for bracket creep. The second counterfactual appropriately accounts for this problem.

The modelling of the impact of the tax cuts from 2017-18 involves creating a PolicyMod base data set for each year using the existing legislated policy (including all tax cuts) (Base Case). Comparison data sets are also created in PolicyMod for each of the two counterfactual worlds. All of the data sets are based on the same population (same survey data and underlying assumptions used to make the survey data represent the population) but differ in terms of the personal income tax policies which are being compared. Using the three base data sets the average tax rate paid by each of PolicyMod’s income units is calculated and the impact of the policy change (Base Case) relative to each of the counterfactual policy settings estimated<sup>4</sup>. These impacts are then aggregated to household groups, such as low income or high income households.

While it is expected that the Base Case tax cuts would lead to some behavioural change, our model does not incorporate any such changes.<sup>5</sup>

### **Policy changes modelled**

The tax policy changes included in the Base Case modelling are the personal income taxation changes over the forward estimates and some more substantial changes that are proposed beyond

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<sup>2</sup> <https://budget.gov.au/2019-20/content/tax.htm>

<sup>3</sup> <https://cdn.treasury.gov.au/uploads/sites/1/2018/05/Senate-Estimates-May-2018-Attachment-1.pdf>

<sup>4</sup> Each record in PolicyMod is an income unit. Tax and Transfer amounts are calculated at either the individual level (most often for personal income tax) (within an income unit) or at the income unit level (for example, family tax benefits or childcare payments). Income unit results are then aggregated to the household level.

<sup>5</sup> Estimating the behavioural impacts requires complex econometric modelling beyond the scope of this paper. Such modelling tends to only tell a partial story with changes in workforce participation not necessarily being modelled alongside labour force demand. It is also the case that behavioural modelling can lead to double counting of the policy impact as broad budget assumptions such as wages growth and employment growth already account for behaviour and economic change in response to policy change.

the forward estimates for 2024-25. The modelling extends through the period 2017-18 to 2029-30.<sup>6</sup> The tax policy settings used in 2017-18 are the same for our policy change scenario and the two counterfactuals and then start to differ from 2018-19.

Modelled tax changes:

- 1) **Low and Middle Income Tax Offset (LMITO):** A tax offset of up to \$255 for taxpayers with taxable income of \$37,000 or less. Between \$37,000 and \$48,000, the value of the offset increases at a rate of 7.5 cents per dollar to the maximum benefit of \$1,080. Taxpayers with taxable incomes from \$48,000 to \$90,000 will be eligible for the maximum offset of \$1080. From \$90,001 to \$126,000, the offset will phase out at a rate of 3 cents per dollar. The benefit of the Low and Middle Income Tax Offset is in addition to the existing Low Income Tax Offset (LITO). The Low and Middle Income Tax Offset is available for the 2018-19 to 2021-22 financial years only.
- 2) From 2020-21 the Low Income Tax Offset increases from \$445 to \$700 and the personal income tax bracket for the 19 per cent rate is increased from \$37,000 to \$45,000. The LITO is withdrawn at 5 per cent for incomes between \$37,000 and \$45,000 and then removed at a rate of 1.5 per cent.
- 3) The 32.5 per cent tax rate threshold increased from \$90,000 to \$120,000 in 2020-21.
- 4) From 2024-25 the 32.5 per cent tax rate threshold extended to \$200,000 and reduced to 30 per cent. The top rate of 45 per cent applied beyond that threshold (up from the previous \$180,000).

### Average tax rates 2000 to 2020

When considering the impact of the Coalition personal income tax policies it is important to have an understanding of the trends in average tax rates. Figure 1 shows average tax rates for households over the period 2000 to 2018 (based on *National Accounts* rather than PolicyMod). Over this period average tax rates for households peaked in the first half of the 2000s roughly between 14 and 15 per cent. The Howard Government significantly lowered tax rates thereafter and tax rates declined to under 12 per cent by 2010.

Between 2010 and 2018 there were not significant changes to tax rates or thresholds and as incomes increased the average tax rate returned to above 14 per cent in 2018, similar to the level in the early 2000s.<sup>7</sup>

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<sup>6</sup> Caution should be taken in analysis of tax cuts particularly beyond the forward estimates where it is likely that other tax changes will be taken by future governments.

<sup>7</sup> The ABS National Accounts estimate of income is higher than that estimated in PolicyMod. The National Accounts has a broader range of income sources (such as capital gains, imputed rent) and also includes income for the not-for-profit sector.

**Figure 1: Household average tax rates (%), 2000-2018**



Source: ABS National Accounts, December 2018, 5206.0

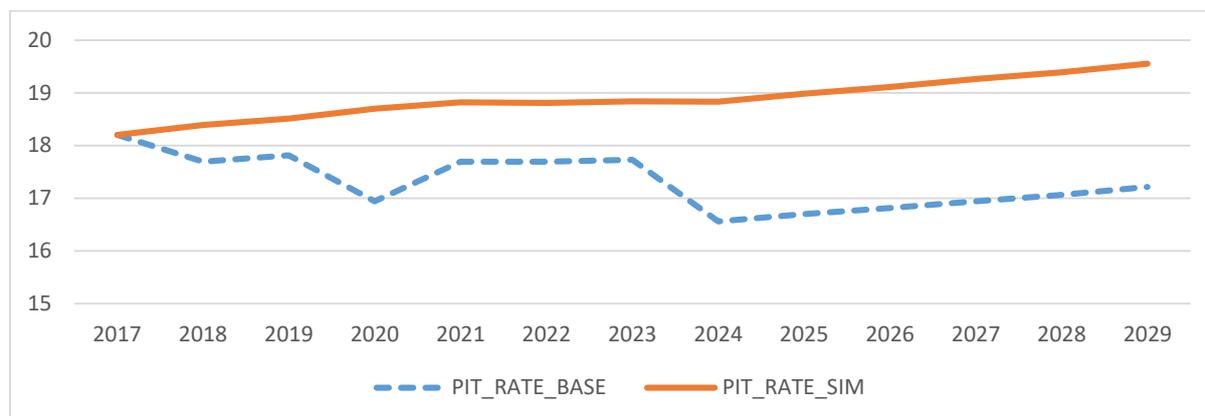
**The impact of the tax policy changes compared with no change in the tax system from 2017-18**

As described above counterfactual 1 applies the 2017-18 tax system to each year out to 2029-30 and compares this policy with the legislated policy of the Coalition Government which introduced a range of tax cuts between 2018-19 and 2024-25. The Base Case policy change scenario case is the average tax rates trajectory for the Coalition’s legislated tax changes.

Figure 2 shows the modelled household average tax rate under the scenario of a continuation of the 2017-18 tax changes with no adjustment to tax thresholds (Counterfactual 1) and the tax policy change scenario. The Counterfactual scenario 1 shows that in the absence of policy change bracket creep results in the average tax rate increasing continuously from 2017-18 to 2029-30 through the modelled years to 2029-30. This effect is somewhat muted for 2021 to 2024 with relatively low wage and employment growth as the COVID pandemic impact is felt. From 2024 wage growth is assumed to return to 3 per cent per year and this again pushes up average tax rates<sup>8</sup>.

<sup>8</sup> The Federal Government Retirement Income Review uses a growth rate for nominal wages of just over 4 per cent for long term projections. Given our modelling is only for the medium term and recent wage growth has been closer to 2.5 percent per annum we use a moderately lower wage growth assumption of 3 per cent.

**Figure 2: Household average tax rates (%), Base Case Policy Change and Counterfactual 1 Scenarios, 2017-18 to 2029-30,**



Source: ANU PolicyMod.

Quite clearly, the bringing forward of some tax cuts into 2020-21 and the tax cuts in 2024-25 lower tax rates relative to the Counterfactual 1. We also estimate that by 2024-25 (the last of the Coalition’s tax legislated tax cuts) average tax rates will be 1.6 percentage points lower than in 2017-18 and a full 2.2 percentage points lower than in the absence of policy change (Counterfactual 1). In total, we estimate that the tax cuts legislated will lower tax revenue by \$297 billion for the years 2018-19 to 2029-30.

This is similar to the overall fiscal impact of a cumulative reduction in tax revenue of \$302 billion for 2018-19 to 2029-30 implied by the Federal Budget papers. The discrepancy between our estimate and the estimates in the Federal Budget are likely to be due to the fact that we have derived the Federal Budget estimate using the 2018-19 and 2019-20 budgets and as such is based on slightly different longer term macroeconomic projections relative to our estimate which is based on the latest Federal budget (2020-21) and incorporates a somewhat more depressed labour market for some years which results in a lower projected amount of personal income tax.

While the estimates presented in Figure 2 are consistent with the approach taken in the Federal Budget, for the reasons outlined above we don’t believe this to be the best counterfactual because it is, in our view, improbable that tax thresholds/rates would not have been altered to avoid the impact of bracket creep and as shown in Counterfactual 1 significant bracket creep takes place during these years with the average tax rate increasing from 18.2 per cent to 19.6 per cent.

### Comparison 2017-18 Tax system, thresholds updated with wages

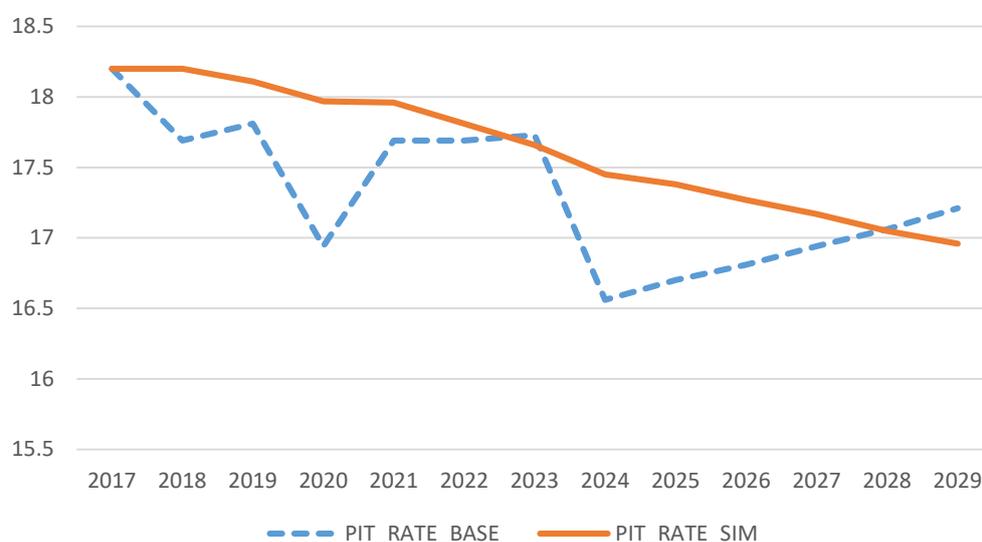
Counterfactual 2 adjusts income tax thresholds in line with wages and therefore eliminates bracket creep. There are still other factors such as changes in demographic make-up of the population that mean that tax rates can change. These other factors explain the reduction in average tax rates, even with indexation of thresholds, from around 18.2% to just under 17% by 2029. Comparing the Coalition policy with this counter-factual provides a pure policy change perspective on the tax changes.

Figure 3 shows the impact of policy change is now much less significant. The government’s changes do lower tax rates relative to this counter-factual in most years, but by the end of the period we

actually find that the Coalition’s tax policy leads to an increase in tax rates. What this means is that, as is usually inevitable, the government will need more tax adjustments in the medium term if it wishes to overcome the effect of bracket creep.

The Coalition Government’s policy sets the average tax rate in 2023 almost exactly as it would be under the counterfactual i.e. it almost fully compensates for bracket creep by 2023. The policy is most effective at actually reducing tax rates in 2020 (lower by 2 percentage points) and slightly less so in 2024 at 1.8 percentage points. Overall, we find that the quantum of tax cuts relative to this counter-factual is a much lower \$54.1 billion over the medium term (to 2029), well down on the \$297 billion estimated for Counterfactual 1.

**Figure 3: Household average tax rates %(%), Base Case Policy Change and Counterfactual 2 Scenarios, 2017-18 to 2029-30,**



Source: ANU PolicyMod.

### Household Distributional Impacts

There has been considerable interest around the impact of the Coalition tax cuts. Much of the analysis has focussed around the share of the tax cuts relative to our first counterfactual. This approach provides estimates with much larger dollar tax cuts and larger cuts with respect to average tax reductions. It should also be remembered that the bottom 40 per cent of the household income distribution pays little or no tax<sup>9</sup>. In fact, the bottom half of the income distribution only pays around 10 per cent of total tax revenue. This means that most changes to the tax system, will impact the top half by more than the bottom half. The bottom half has a heavy concentration of households with pensioners, unemployed and some low pay employment households, most tend to pay no or little personal income tax.

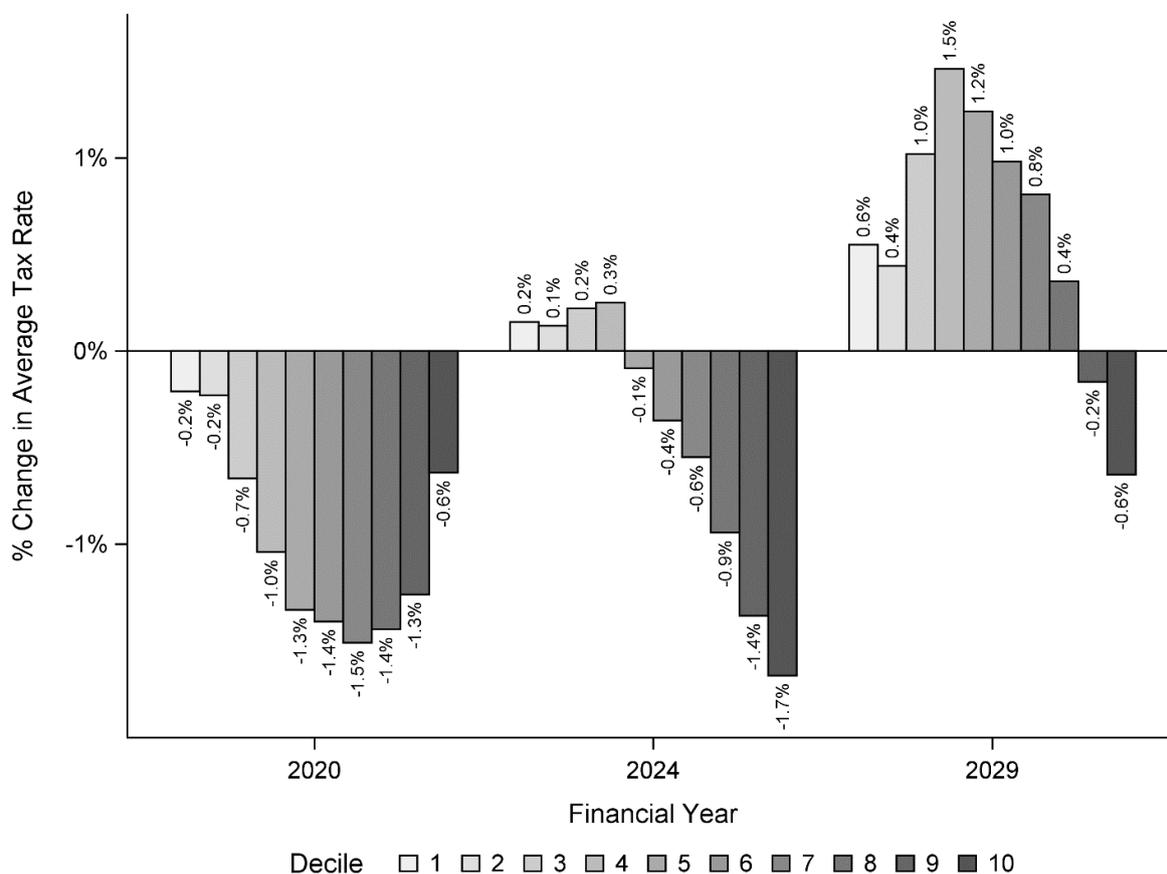
Figure 4 shows some considerable differences in changes in tax paid at different points in the income distribution compared to the second counterfactual. The bottom income deciles will eventually pay

<sup>9</sup> This analysis here considers income deciles as defined by equivalised household income.

a larger average rate of tax, middle income households face even more substantial increases. The highest income groups receive quite substantial tax cuts from 2024-25 onwards.

In 2020-21 the LMITO (Low and Middle Income Tax Offset) was extended for that financial year and other tax cuts previously for 2022-23 brought forward. This led to large tax cuts in 2020-21 across the income distribution with real cuts of between 1 and 1.5 percentage points for deciles 5 to 9. The next wave of tax cuts is for 2024-25 but the shape of impact here is clearly dominated by the highest income households. Decile 10 receives a 1.7 percentage point reduction in tax that year while the first 4 deciles receive an effective (albeit modest) tax increase; decile 5 has a small decline in their average tax rate. For years beyond 2024-25 bracket creep, particularly the failure to adjust the basic tax threshold and low income tax offsets, further increases tax rates amongst lower deciles and reduces the size of the tax cuts at higher deciles. By 2029-30 only deciles 9 and 10 enjoy lower tax rates. Decile 5 will have a real average tax rate increase of 1.5 percentage points.

**Figure 4: Change in average tax rates % by household income decile Base Case Policy and Counterfactual 2 scenarios, 2020-21, 2024-25, 2029-30**



Source: ANU PolicyMod.

The progressivity reduction is largely related to the changes in rates and thresholds in 2024-25. For this year the Gini Coefficient increases by around 0.005 from a base of around 0.36 for 2024-25.

## Conclusion

Comparing the Coalition tax cuts with the 2017-18 tax system shows dramatic reductions in tax revenue – in the order of nearly \$300 billion to 2029-30. This comparison is unrealistic in that significant bracket creep is expected to occur between 2017-18 and 2029-30.

A more realistic comparison is between the Coalition tax cuts and the 2017-18 tax system where the thresholds are adjusted through time with wage growth. Here we estimate that the real size of the tax cut is \$54.1 billion through to 2029-30. We find that by 2028-29 the Coalition tax cuts disappear and by 2029-30 the 2017-18 wage inflation adjusted counter-factual has lower tax rates.

Average tax rates are lowering through time as a result of changes in the demography in Australia. We have an ageing population who tend to pay lower tax with lower incomes and who are less likely to be employed.

By 2023, the Coalition tax cuts basically represent adjustment for bracket creep with little impact on the distribution of tax. From 2024 the cuts do benefit high income households the most; indeed, low and middle income households generally face tax increases.

Overall, the impact of the tax cuts is significant for particular years and overall a reduction in tax of around \$54 billion or 1.8 per cent through the medium term. This is not as significant as the 9.4 per cent reduction when we compare the Coalition tax cuts to a non-indexed 2017-18 tax system counter-factual. The lower estimate is a more realistic assessment of the true magnitude of the tax cuts over the medium term.

The Coalition tax cuts while preserving the progressive nature of the Australian tax system does modestly lower that progressivity.

The major change in the Coalition tax cuts is the 2024-25 tax cut. The earlier measures do a reasonable job to remove the impact of bracket creep up until 2024 but the 2024 cuts go beyond bracket creep in lowering average tax rates and also provide some overall relief for a few years into the future. This will help maintain tax rates that are reasonably consistent with those of the past 20 years. The Coalition tax cuts have achieved this lowering of the average tax rate, however, mostly through reductions in the average rates of tax paid by the top 20 per cent of the income distribution.

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