

Bracket creep

The imaginary monster

*Australian taxpayers have been overcompensated
for bracket creep and there is no need for further
income tax cuts to reduce its effects*

Discussion paper

Matt Grudnoff
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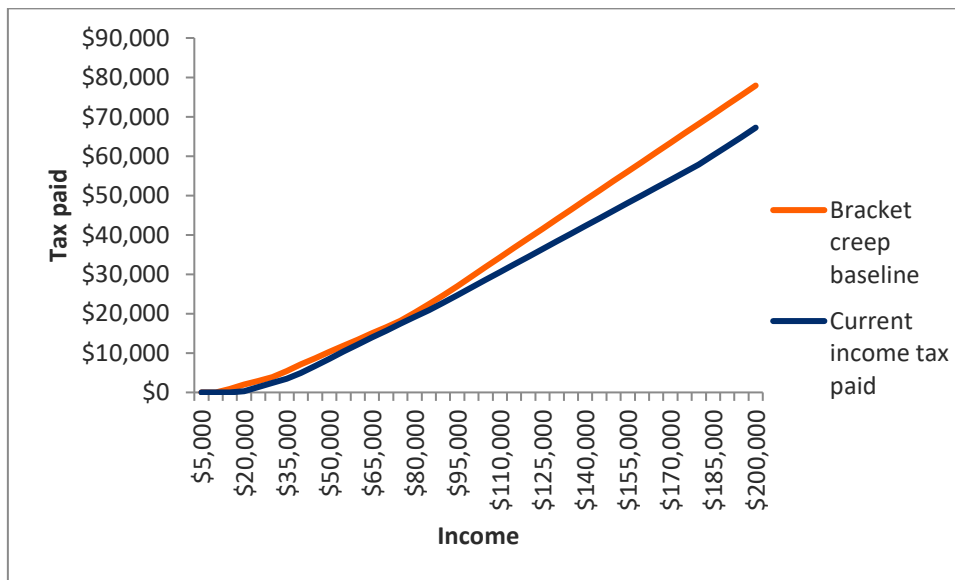
Summary

The government uses bracket creep to justify the income tax plan outlined in the 2018 Budget. The government claims that bracket creep is having a negative impact on the economy and income tax needs to be cut, particularly for those on high incomes.

Our analysis of the long term impacts of bracket creep shows that Australian taxpayers at all income levels have received more in tax cuts than they have lost through bracket creep – in other words, they have already been overcompensated for bracket creep. Further income tax cuts cannot be justified by arguing that they will reduce the impact of bracket creep. In addition, the government’s tax plan would further overcompensate those who have already been most overcompensated for bracket creep.

This paper analyses the impact of bracket creep from 2000-01 to 2017-18. It compares a bracket creep baseline (i.e. hypothetical tax rates if tax cuts had just accounted for bracket creep) to current rates of tax for various income levels. Figure 1 shows the results.

Figure 1: Comparison of tax paid under current tax rates and the bracket creep baseline in 2017-18

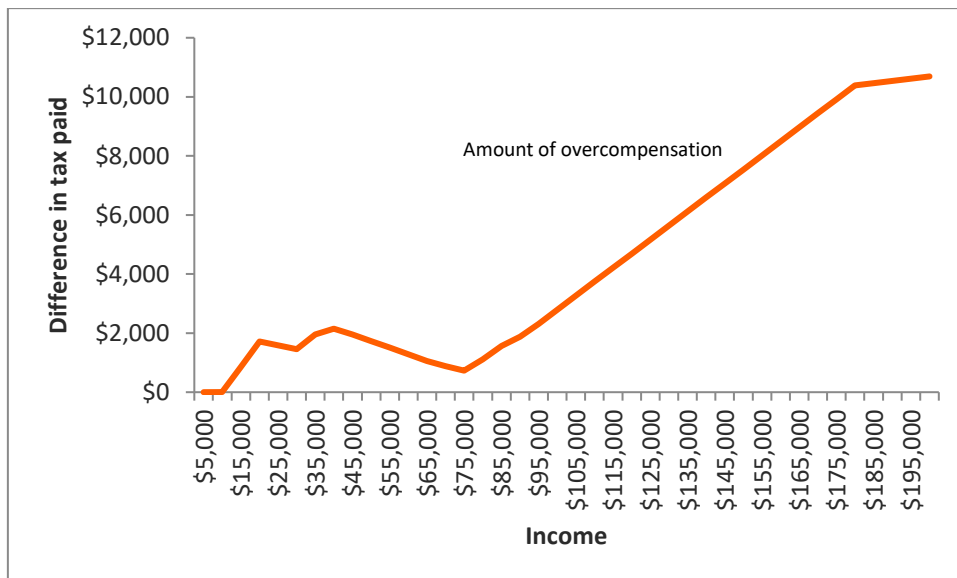


Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Australia Institute modelling

It shows that current tax paid at all income levels is lower than it would be if tax cuts had been limited to removing bracket creep.

Figure 2 shows the difference between the bracket creep baseline and the current rates. A positive number is the amount of overcompensation the income level would receive in 2017–18, relative to the baseline.

Figure 2 – Difference between bracket creep baseline and current tax in 2017-18



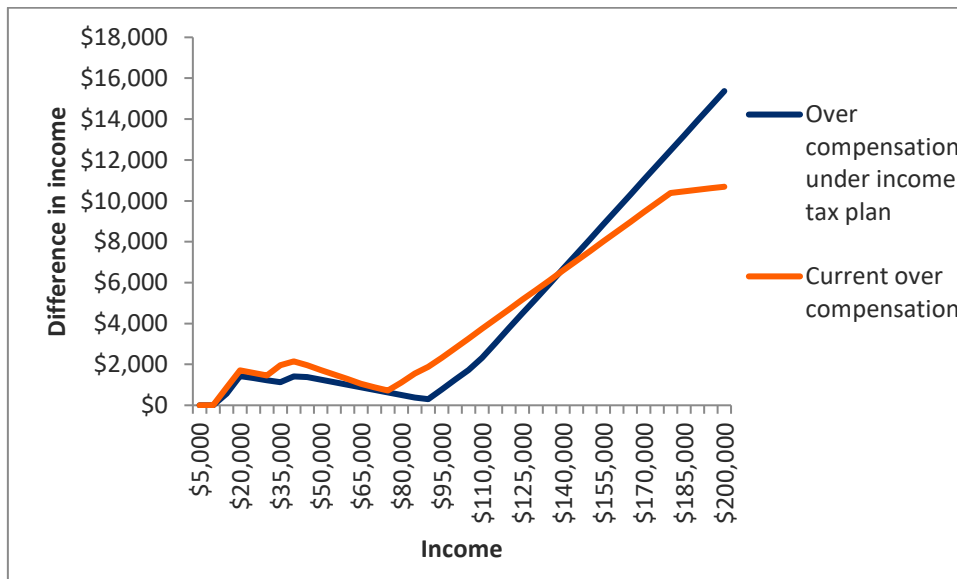
Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Australia Institute modelling

This shows that all income levels have been overcompensated but overcompensation is highest at very high incomes. While someone on \$75,000 per year has been overcompensated by about \$730, someone on \$200,000 has been overcompensated by \$10,700.

If the government is concerned about bracket creep in future years then its focus should be on the 32.5 per cent tax bracket that currently goes from incomes of \$37,000 to \$87,000. The tax brackets that require the least compensation are the highest and second highest tax brackets. These brackets have currently received the largest amounts of overcompensation.

Figure 3 compares the current overcompensation with the amounts of overcompensation in 2024-25 if the government implements its income tax plan.

Figure 3 – Comparison of bracket creep baseline and current tax in 2017-18 and bracket creep baseline and tax plan in 2024-25



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Treasury (2018) Budget 2018-19: Budget Paper No. 1, Australia Institute modelling

Unfortunately, the government’s proposed income tax plan gives most of the benefit to those tax brackets that have already been overcompensated the most. After the government’s proposed tax plan is in place, overcompensation will rapidly rise for those earning more than \$140,000. Claims by the government that this income tax plan is needed to reduce the impacts of bracket creep are not supported by the data.

Introduction

Bracket creep is a hot issue at the moment. The government has claimed that a major part of the reason that it needs to cut income taxes, particularly for those on high incomes, is to combat bracket creep.

This paper will look at how large an impact bracket creep has had and whether that impact is larger than the benefit that previous tax cuts have provided. While bracket creep happens every time your income rises, income tax cuts offset bracket creep. It is the net impact that will determine if bracket creep is an issue or not.

This analysis will look at the long term impacts of bracket creep. We have chosen to look at the impact over an 18 year period. Looking at it over the long term reduces the chance that the chosen start date will have an impact on measurement of bracket creep and the impact of the periodic income tax cuts. The reason for the choosing this particular start date is discussed under the heading “Picking a start date”.

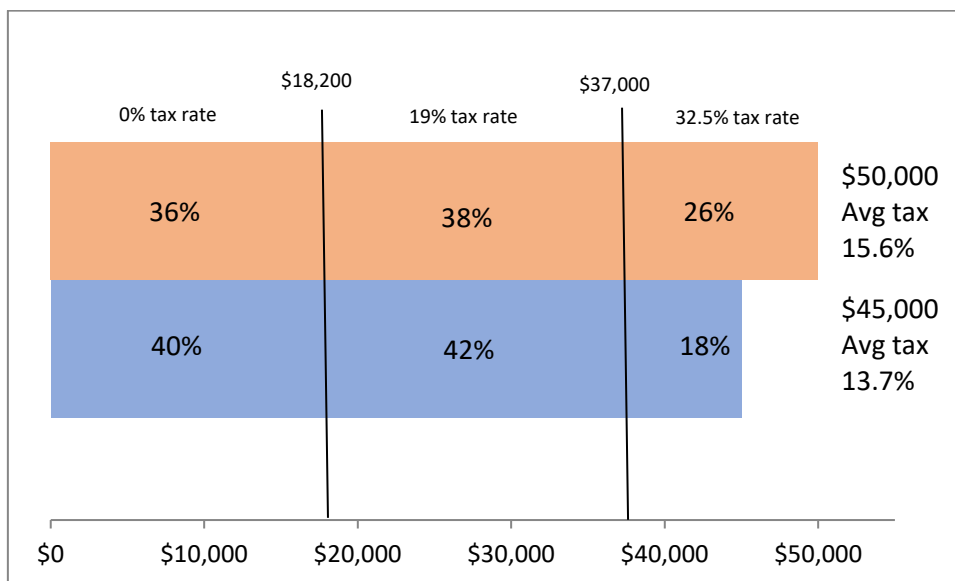
WHAT IS BRACKET CREEP?

Bracket creep occurs in tax systems with progressive rates of tax – such as Australia’s income tax system. Because higher incomes pay a higher marginal rate of tax, as your income increases because of inflation, so does the average rate of tax paid on your whole income.

Take for example take someone earning \$45,000 per year. They pay \$6,172 in tax and have an average tax rate of 13.7 per cent. This person gets a pay rise because of inflation and they now earn \$50,000 per year. They now pay \$7,797 in tax and have an average tax rate of 15.6%. They not only pay more tax because their income has gone up but they also pay a larger percentage of their income in tax.

As you can see from Figure 4, this is because an increasing percentage of their income is in higher tax brackets. When they earned \$45,000 only 18% of their income was in the 32.5% tax bracket. After they got the pay rise 26% of their income was in the 32.5% tax bracket. After the pay rise more of their income is in higher brackets and is therefore taxed at higher rates.

Figure 4 – Breakdown of tax paid on \$50,000 and \$45,000



Source: ATO (2017a) *Individual income tax rates*

Bracket creep affects every additional dollar you earn, even if your extra earnings do not put you in a higher tax bracket. Treasurer Scott Morrison was mistaken when, in a radio interview about the impacts of his proposed tax cuts after the 2018 Budget, he said:

But for the vast majority of working Australians, you're right. They won't face bracket creep again and I think that's a good thing.¹

As the example in Figure 4 shows this is not the case. Every extra dollar earned causes someone's average rate of tax to increase.

GOOD AND BAD BRACKET CREEP

Is bracket creep always bad?

Bracket creep is usually couched in negative terms, but it is not always negative. There are potentially two kinds of bracket creep:

- bracket creep caused by wage increases in line with inflation and
- increases in someone's average rate of tax caused by increases in real wages.

When wages increase in line with inflation, people's average rate of tax rises but their purchasing power does not because the price of the things they're buying has also

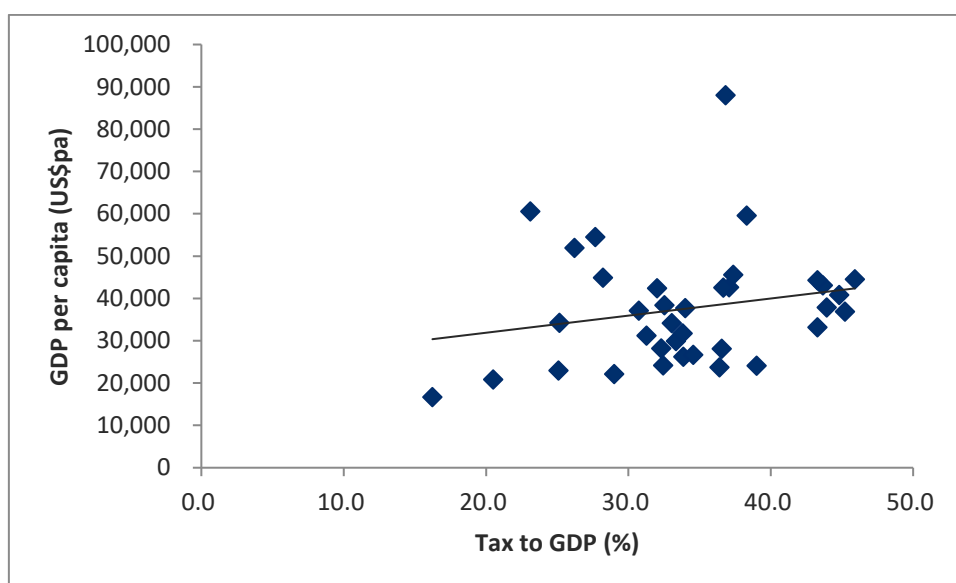
¹ Morrison (2018a) *Interview with Gareth Parker*

increased. This kind of bracket creep leaves people worse off overall. For the purposes of this paper this is what we will refer to as bracket creep.

When wages rise faster than inflation (a “real wage increase”), people’s purchasing power (the amount of stuff they can buy) increases. This process does not leave people worse off, even though their average rate of tax increases. Real wage rises represent the growth in people’s living standards. As real wages rise across the country it becomes wealthier and people tend to demand higher quality services from their government. It is reasonable then that some of the gain from higher real wages should be spent on high quality services.

If we look at average income across countries we see that as it rises so does the proportion of income going to tax. Figure 5 looks at developed countries and compares GDP per capita (average income) and the tax to GDP ratio (the amount of income going to tax). It shows that as average income rises so does the proportion paid in tax.

Figure 5 – OECD countries tax and average income for 2015



Source: OECD (2018) *OECD Statistics*

For this reason increases in average rates of tax because of increases in real wages will not be considered as bracket creep. Bracket creep will only include wage increases in line with inflation because these are destructive to people’s purchasing power.

CREATING A BRACKET CREEP BASELINE

In order to compare the impact of bracket creep with income tax cuts we need to create a baseline where bracket creep has been removed. This has been done by

indexing income tax thresholds to our chosen measure of inflation, the Consumer Price Index (CPI), from the start date of 2000-01. The reason we have chosen this start date is discussed under the heading 'Picking a start date'. By indexing the thresholds we remove bracket creep and we can then compare how much tax is paid now with how much tax would be paid if bracket creep was removed. The difference is therefore the impact of bracket creep.

Table 1 shows the tax thresholds and rates in 2000-01 and what those thresholds would be today (2017-18) if they had been indexed to the CPI. It also shows the thresholds and rates we have today.

Table 1: Threshold and rate comparison between current and bracket creep baseline

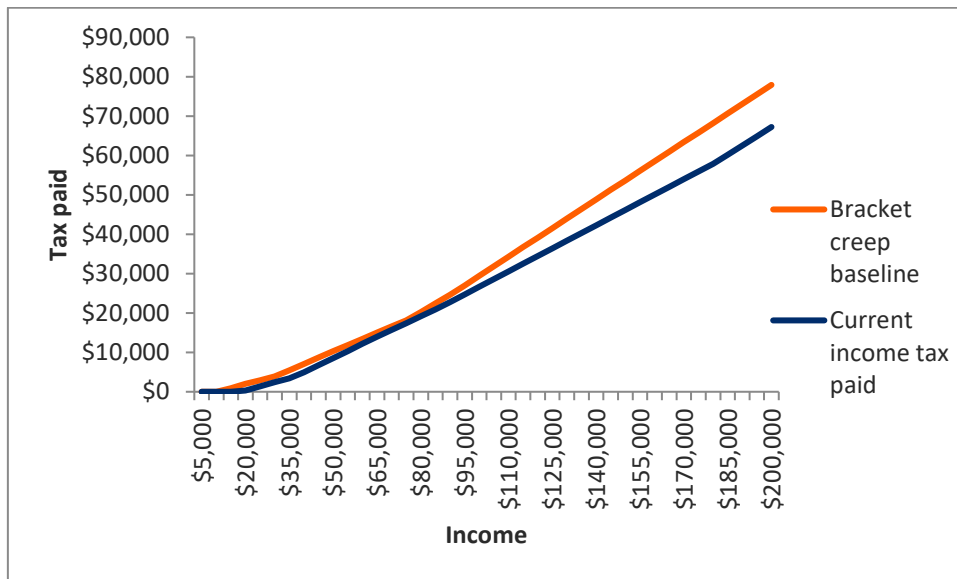
	Bottom bracket	Second bracket	Third bracket	Top bracket
Thresholds in 2017-18	\$18,200	\$37,000	\$87,000	\$180,000
Rates in 2017-18	19%	32.5%	37%	45%
Thresholds in bracket creep baseline	\$9,072	\$30,235	\$75,586	\$90,703
Rates in bracket creep baseline	17%	30%	42%	47%
Difference in thresholds	\$9,128	\$30,235	\$11,414	\$89,297
Difference in rates	-2%	-2.5%	5%	2%

Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Australia Institute modelling

As Table 1 shows, the bracket creep thresholds are all lower than the current thresholds – particularly in the case of the top threshold. We cannot directly compare thresholds as there has also been some movement in the income tax rates. To directly compare we need to compare the amount of tax paid under the bracket creep baseline with the amount of tax paid at the current rate for various income levels.

Figure 6 shows the amount of tax paid at \$5,000 intervals from \$5,000 to \$200,000. It shows that at all income levels more tax would be paid if past tax cuts had been limited to accounting only for bracket creep. This means that the periodic income tax cuts have overcompensated all income levels for bracket creep.

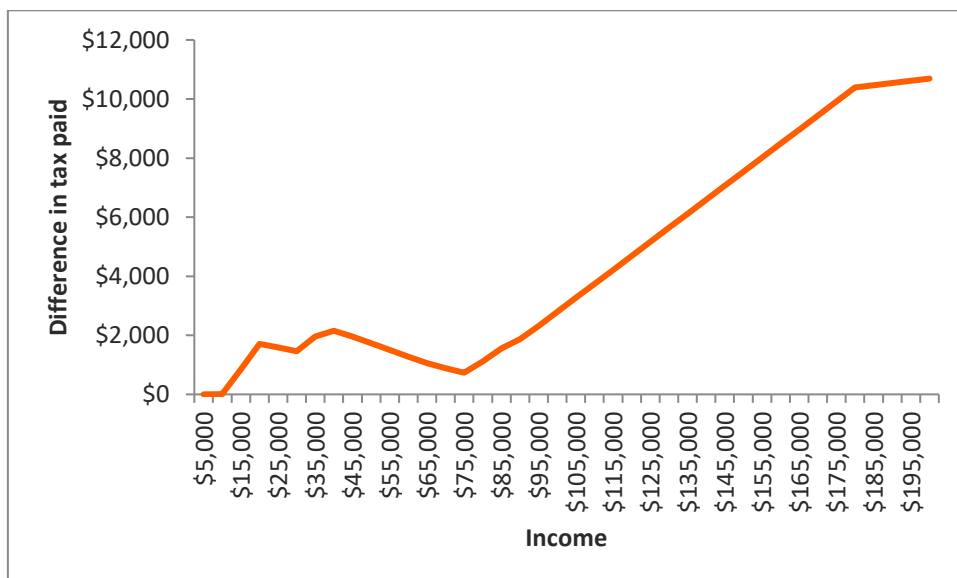
Figure 6 – Comparison of tax paid under current tax rates and the bracket creep baseline in 2017-18



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Australia Institute modelling

Figure 7 looks at the difference between the bracket creep baseline and the current payable tax. A positive number in this figure means that particular income level has been overcompensated while a negative number would mean that bracket creep has had a larger impact than the income tax cuts. All numbers are positive because at all income levels tax cuts have overcompensated for bracket creep.

Figure 7 – Difference between bracket creep baseline and current tax in 2017-18



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Australia Institute modelling

Figure 7 shows that the overcompensation for bracket creep is not evenly distributed. At lower incomes compensation peaks at an income level of about \$40,000 per year before falling to its lowest level just before the threshold for the second highest tax bracket begins. After this overcompensation increases quickly as incomes rise before levelling out slightly (but still rising) after \$180,000, which is the current threshold at which the top marginal tax rate starts.

This shows that all income levels have been overcompensated but that overcompensation is highest at very high incomes. While someone on \$75,000 per year has been overcompensated by about \$730, someone on \$200,000 has been overcompensated by \$10,700.

GOVERNMENT'S PROPOSED TAX CUT PLAN

The government has said that the proposed second and third stages of its tax cut are to deal with bracket creep – and, in particular, bracket creep for those earning more than \$87,000. As the Finance Minister said:

[W]e have a seven year plan to provide income tax relief to working families. In the first instance, that is focused on providing cost of living pressure relief to low and middle-income earners. We are prioritising low and middle-income earners. We also believe that it is very important to address bracket creep and to simplify the tax system. If we do not address bracket creep, then people earning above \$87,000 a year will end up in the higher income tax brackets and they will go backwards. That is not good for them and it is not good for the economy.²

The Treasurer has also said:

Our plan does three things. It gives immediate relief for low and middle income earners, it deals with bracket creep, particularly for those anchored around middle incomes.³

At face value these two statements might seem at odds since middle (median) income is \$55,000 which is significantly below \$87,000. But these statements are consistent in the sense that the government has in recent times continued to push the idea that

² Cormann (2018) *Mornings on FIVEaa*

³ Morrison (2018b), *Interview with Kieran Gilbert*

middle incomes are the same as full time average incomes, which are \$82,000 per year.

Our analysis of bracket creep shows that the government’s focus on the second highest income tax threshold (which currently starts at \$87,000) is misplaced. This bracket has already been overcompensated. Someone earning \$85,000 has been overcompensated by about \$1,600 per year and someone on \$90,000 has been overcompensated by about \$1,900 per year. Compensation in this bracket continues to rise steeply until the top of the bracket where someone on \$180,000 has been overcompensated by \$10,400 per year.

While all incomes have been overcompensated, the group that comes closest to having the impacts of bracket creep being larger than the income tax cuts is actually income earners in the \$37,000 to \$87,000 tax bracket. If the government is concerned about the impacts of bracket creep it should focus future tax relief on this bracket.

The \$37,000 to \$87,000 tax bracket only gets minor tax relief in the government’s tax plan, with the threshold being lifted from \$37,000 to \$41,000 as part of stage two. Most of the tax cut goes to those on high incomes. This is the group that has already received a large degree of overcompensation.

To show what impact the government’s personal income tax plan will have on bracket creep we can extend the indexation of the bracket creep baseline out to 2024-25, which is the first year that the government’s tax plan will have been fully implemented. We can then compare this with the amount of tax payable under the government’s new tax thresholds.

Table 2 shows the thresholds and rates under the bracket creep baseline in 2024-25 and the thresholds and rates in 2024-25 assuming the government’s tax plan is fully implemented.

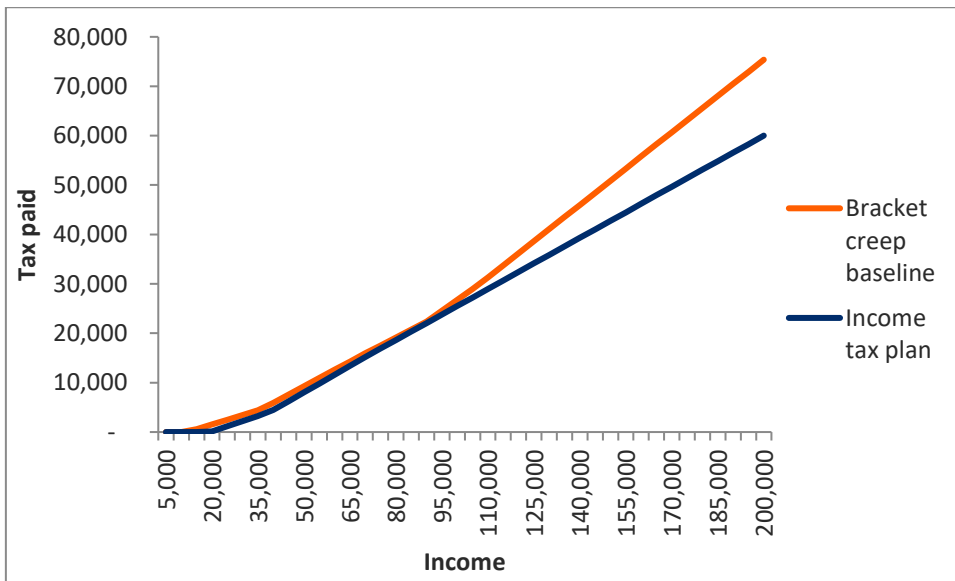
Table 2: Threshold and rate comparison between tax plan and bracket creep baseline in 2024-25

	Bottom bracket	Second bracket	Third bracket	Top bracket
Thresholds under tax plan	\$18,200	\$41,000		\$200,000
Rates under tax plan	19%	32.5%		45%
Thresholds in bracket creep baseline	\$10,757	\$35,853	\$89,629	\$107,555
Rates in bracket creep baseline	17%	30%	42%	47%
Difference in thresholds	\$7,443	\$5,147		\$92,445
Difference in rates	-2%	-2.5%		2%

Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Treasury (2018) Budget 2018-19: Budget Paper No. 1, Australia Institute modelling

Comparing the bracket creep baseline to tax collected under the government’s income tax plan at various income levels we see that all income levels continue to be overcompensated. This is shown in Figure 8.

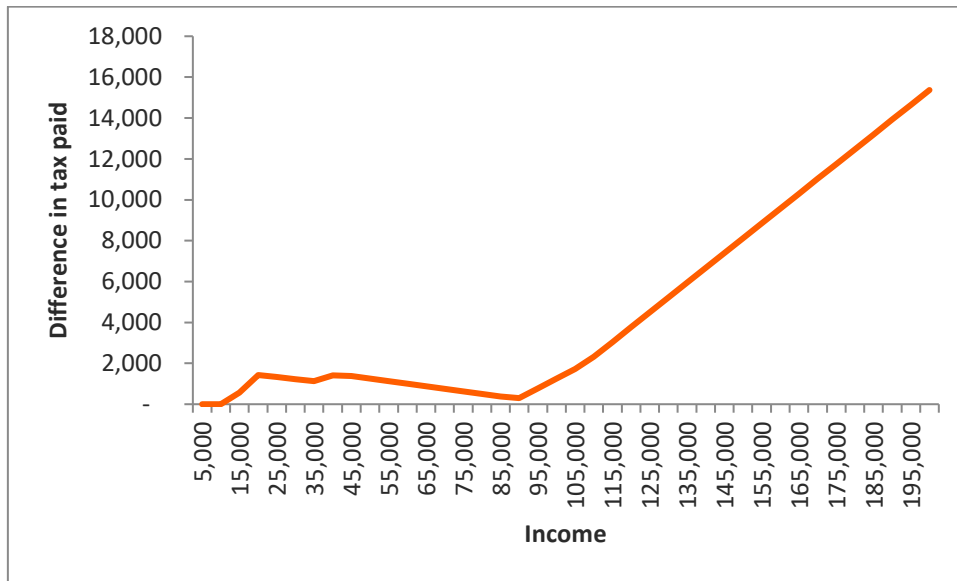
Figure 8 – Comparison of tax paid under tax plan and the bracket creep baseline in 2024-25



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Treasury (2018) Budget 2018-19: Budget Paper No. 1, Australia Institute modelling

If we look at the difference between the tax plan and the bracket creep baseline we can see how much each level of income has been overcompensated. This is shown in Figure 9.

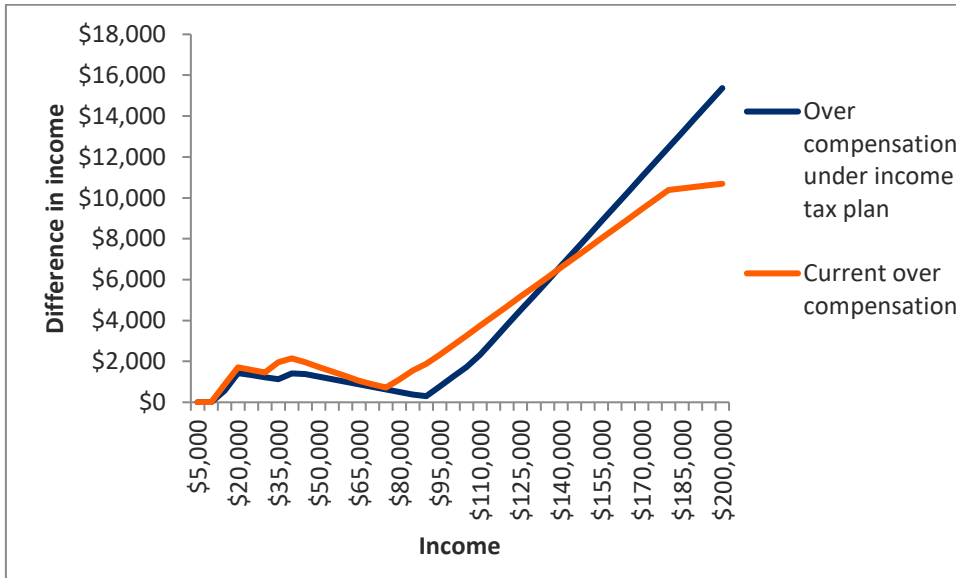
Figure 9 – Difference between bracket creep baseline and tax plan in 2024-25



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Treasury (2018) Budget 2018-19: Budget Paper No. 1, Australia Institute modelling

All income levels continue to be overcompensated but the overcompensation is now lower for incomes below \$140,000 and higher for incomes above \$140,000. Those above \$140,000, who previously had the largest amount of overcompensation, are being compensated even more. Figure 10 compares the difference between current bracket creep overcompensation and overcompensation under the government's tax plan.

Figure 10 – Difference between current bracket creep overcompensation (2017-18) and overcompensation under the tax plan (2024-25)



Source: ABS (2018) 6401.0 - Consumer Price Index, ATO (2017a) Individual income tax rates, ATO (2017b) Individual income tax rates for prior years, Treasury (2018) Budget 2018-19: Budget Paper No. 1, Australia Institute modelling

The government's focus on top end tax relief will have the effect of increasing overcompensation to high income earners.

Conclusion

Australian taxpayers have been overcompensated for bracket creep at all income levels. There is no compelling case for an income tax cut to reduce the impact of bracket creep.

If the government is concerned about future bracket creep, it should focus on the 32.5 per cent tax bracket that currently goes from incomes of \$37,000 to \$87,000. The tax brackets that require the least compensation are the highest and second highest tax brackets. These brackets have gained the largest amounts of overcompensation.

Unfortunately the government's income tax plan gives most of the benefit to those tax brackets that have been most overcompensated. After the government's proposed tax plan is in place, overcompensation will rapidly rise for those earning more than \$140,000. Claims by the government that this income tax plan is designed to reduce the impacts of bracket creep are not supported by the data.

Appendix – Methodology

INDEXING THRESHOLDS TO INFLATION

Bracket creep can be dealt with by indexing income tax thresholds to some measure of inflation, like the consumer price index (CPI). This means that as prices rise people would get an income tax cut in proportion to the increase in prices in the form of increasing tax thresholds. It would also mean that the only time someone's average rate of tax went up would be when their real wage increased. Rising average rates of tax because of increasing real wages is not considered to be bracket creep.

By indexing thresholds to the CPI from a particular start date we're able to eliminate the effects of bracket creep and create a bracket creep baseline which measures how much tax would have been collected if bracket creep was eliminated.

Australia does not deal with bracket creep by indexing income tax thresholds. Instead, the government ostensibly offsets bracket creep through periodic income tax cuts. The amounts and distribution of these tax cuts are not designed to specifically offset bracket creep exactly but cutting income tax has the effect of reducing or entirely accounting for bracket creep.

In Australia's system, bracket creep increases every time you get a pay rise and decreases every time you get an income tax cut. Determining if bracket creep has occurred therefore requires working out if bracket creep over a period has outpaced income tax cuts.

Discussions about bracket creep typically neglect the effect of previous tax cuts. Every tax cut reduces the impact of bracket creep. Any proper analysis of bracket creep will look at both the impact of inflation-based wage rises and the impact of income tax cuts.

PICKING A START DATE

The different ways in which bracket creep and income tax cuts are applied means that calculations of the impact of bracket creep depend on which time period is measured. Because bracket creep happens in small increments in a continuous way but income tax cuts happen periodically in large increments, there is the opportunity to change the measured size of the impact of bracket creep by cherry picking the starting point.

For example if you wanted to show that bracket creep was a large problem you could pick a starting point that happened just after an income tax cut. This means that the reduction in the impact of bracket creep from the income tax cut is excluded from the analysis. Alternatively if you wanted to show that bracket creep was not a problem you could pick a starting point that was just before an income tax cut. In this way you put right at the front of the analysis the benefit of the income tax cut and effectively ignore previous bracket creep the income tax cut might be compensating for.

The other way to alter the measured size of the impact of bracket creep is to restrict the time period that you're measuring bracket creep over. The longer the time period, the more likely it is to be a good representation of the periods between income tax cuts.

This report takes seriously the issue of the start date. The date chosen, 2000-01, is over the longest period possible in an attempt to capture both the periods between income tax cuts and the tax cuts themselves.

The other important issue when selecting a starting date is to understand that not all income tax cuts can be seen as reducing the impact of bracket creep. On rare occasions, income tax cuts are part of a larger tax swap. This occurs when income tax is reduced as compensation for the increase or creation of another tax. A good example of this was the introduction of the Goods and Services Tax (GST) on 1st July 2000.

To compensate for the introduction of a 10 per cent GST the government also cut income tax. This income tax cut cannot be seen as compensation for bracket creep as it was compensating for the GST. Due to this tax swap it is not practical to measure the impacts of bracket creep before 2000-01.

There has been one further tax swap since the GST. It occurred in 2012-13 with the introduction of the carbon price. Income tax was cut as part of the carbon price compensation package. Again the government overcompensated which makes disaggregating what part of the income tax cut was compensation for the carbon price and what part was compensation for bracket creep very difficult.

This problem was resolved when the carbon price was removed in 2014 but the income tax cut was not repealed. The income tax cut is no longer compensating for the carbon price and instead serves as compensation for bracket creep.

This analysis uses 2000-01 as its starting date. We cannot reliably go back further than the GST tax swap. An 18 year period captures a long period of bracket creep and a significant number of income tax cuts.

THE ISSUE OF RATES

The other issue that complicates measuring bracket creep is changes in the rate of tax. Most tax cuts over the past 18 years have changed the thresholds but there have been some changes in the rate of tax. A cut in the rate of tax is also compensation for bracket creep. Accounting for this is more difficult because measuring a baseline for bracket creep involves indexing thresholds to inflation.

This is overcome by comparing tax paid under the bracket creep baseline with current tax paid using dollars at various incomes. A cut in income tax rates will show up as a fall in the amount of tax paid and so changes in rates can be compared with indexed thresholds.

LITO AND THE MEDICARE LEVY

This analysis includes the Low Income Tax Offset (LITO) and the Medicare levy. Both of these affect income taxes. The LITO acts as a tax refund for low income earners. It reduces the amount of tax paid at low income levels.

The Medicare levy increases the amount of tax paid on top of people's marginal rates. The Medicare levy has increased from 1.5 per cent to two per cent since 2000-01. This increase has been included in our calculations.

Both the LITO and the Medicare levy have their own thresholds which add further complexity. For the purpose of this analysis, when constructing the bracket creep baseline the rates that applied in 2000-01 are used but rather than indexing the thresholds, which would be very difficult, we have used the current thresholds in 2017-18. This simplification is unlikely to have a large impact and will mainly affect incomes below \$25,000.

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