



REVENUE FORGONE FROM PAYROLL TAX

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INTRODUCTION

In 2012-13, the ACT Government began a 20-year tax reform program. Under the program, commercial land tax and insurance duty have been abolished, stamp duty and has been progressively reduced, and revenue from these sources has been replaced by progressive increases to general rates.

The ACT Government's analysis on the impact of the tax reform includes analysis on whether the tax reform program has been revenue neutral to date. The analysis finds that over the first 7 years of tax reform, the Government has **forgone** a small amount of revenue, but given the small amount of revenue forgone, the program has been **broadly** revenue neutral to date. The analysis also finds that during this time period, the Government has **forgone** revenue from the residential sector and has raised **additional** revenue from the commercial sector.

The commitment to revenue neutrality primarily relates to replacing inefficient taxes, such as stamp duty and insurance duty, with broad based land taxes such as general rates. Therefore, the conclusions that the Government's tax reform program has been **broadly** revenue neutral to date and the Government has raised **additional** revenue from the commercial sector does not take into account the progressive increases in the payroll tax-free threshold (the threshold).

In 2012-13, the ACT Government has progressively increased the threshold from \$1.5 million per annum to \$2 million per annum in 2018-19. Table 1 presents the threshold by financial year.

Table 1: Payroll tax-free threshold by financial year

Financial year	Payroll tax-free threshold
2011-12	\$1.5 million per annum
2012-13	\$1.75 million per annum
2013-14	\$1.75 million per annum
2014-15	\$1.85 million per annum
2015-16	\$1.85 million per annum
2016-17	\$2 million per annum
2017-18	\$2 million per annum
2018-19	\$2 million per annum

Since payroll tax is a tax on employers whose total wages exceed the threshold and the tax rate applies to total wages that exceed the threshold, the increases to the threshold have resulted in forgone revenue and have reduced the payroll tax burden on the commercial sector. This paper estimates the revenue forgone and the reduced payroll tax burden on the commercial sector from increasing the threshold.

EXECUTIVE SUMMARY

The ACT's Government's analysis on the whether the tax reform program has been revenue neutral to date finds that over the first seven years of tax reform, the Government has raised approximately \$62 million **less** in revenue due to tax reform. It also finds that during the first seven years of tax reform, the Government has **forgone** approximately \$128 million in revenue from the residential sector and has raised an **additional** \$66 million from the commercial sector. Since the revenue neutrality commitment primarily relates to replacing inefficient taxes, such as stamp duty and insurance duty, with broad based land taxes such as general rates, the conclusions from the revenue neutrality analysis do not take into account the progressive increases in the payroll-tax free threshold which have occurred during the same period.

This paper finds that over seven years, the Government has raised approximately \$62 million to \$65 million **less** in revenue due to progressive increases in the payroll-tax free threshold.

Combining the main results from the revenue neutrality analysis with the revenue forgone from payroll tax, the Government has **forgone** approximately \$124 million to \$127 million in revenue from tax reform and increases in the payroll tax-free threshold over these seven years. Furthermore, the Government has raised an **additional** \$1 million to \$4 million from these taxes from the commercial sector over these seven years. This additional revenue is 0.023 per cent to 0.091 per cent of the total revenue raised from the relevant tax lines for the commercial sector over this period to date. Given this, this paper concludes that the total tax burden on the commercial sector has remained largely unchanged over the reform period to date.

METHODOLOGY

To estimate the revenue forgone from increasing the payroll tax threshold, the revenue that has been raised from payroll tax since 2012-13 is compared to the revenue that would have been raised from payroll tax without the threshold increase (the counterfactual).

The Government's ACT Taxation Review "recommended retaining a form of payroll tax to maintain a diversified tax system", but to support businesses in the ACT, the Government increased the payroll tax threshold on 1 July 2012 and 1 July 2016. Given this, the counterfactual is defined as the amount of revenue that would have been raised from payroll tax if the threshold was kept constant from 2011-12 onwards (ACT Government Treasury, 2012, ACT Budget 2012-13 - Chapter 3.2 2012-13 Taxation Reform).

The effect that the increased threshold has on the labour market also needs to be acknowledged. Increases in the threshold would reduce *effective* payroll tax rates, and the effect of this reduction in the labour market depends on the elasticity of labour supply.¹ If labour supply is relatively inelastic, this reduction would increase wages but would lead to a minimal effect on employment. Alternatively, if labour supply is relatively elastic, this reduction would have a minimal effect on wages but would reduce labour costs for employers and increase employment.

For simplicity of analysis, it is assumed that the increased threshold has not had a significant effect on the labour market. This means that all variables are held constant at their observed values except for the threshold. Some examples of the variables held constant are: employer's total ACT wages, employer's total Australia-wide wages, group's total ACT wages and group's total Australia-wide wages. The observed values of these variables and the different thresholds are used to estimate actual and counterfactual payroll tax revenue.

Employers no longer in the data

Payroll tax is a self-assessed tax. Therefore, payroll tax data only contains employers in the ACT that lodge a return with the ACT Revenue Office because they may be liable to pay payroll tax.

Therefore, increases in the threshold over this time period could result in some employers that are not liable for payroll tax under the actual but would have been liable for payroll tax under the counterfactual no longer being in the data. For these employers their payroll tax liability in the actual is zero but their payroll tax liability in the counterfactual would be greater than zero. This means there would be additional foregone revenue from these employers, and not correcting for this would result in an underestimate of revenue forgone from increasing the threshold.

The sensitivity analysis section later in the paper will discuss the methodology used to correct for employers that are no longer in the data.

¹ *Effective* payroll tax rate is payroll tax liability as a ratio of the tax base (i.e. employer's total ACT wages), as opposed to the statutory payroll tax rate of 6.85 per cent.

PAYROLL TAX

Not all ACT employers are liable for payroll tax. Independent employers are only liable for payroll tax if their total Australia-wide wages exceed the threshold, and employers that are part of a group are only liable for payroll tax if their group's total Australia-wide wages exceeds the threshold.

Employers that are liable to pay payroll tax can be separated into those that can claim the ACT proportion of the threshold and those that cannot.

Employers who cannot claim the ACT proportion of the threshold include employers that are ordinary group employers (OGE) (i.e. are part of a group but are not the designated group employer (DGE)). These employers are liable to pay a flat rate of 6.85 per cent on their total ACT taxable wages.

Employers who can claim the ACT proportion of the threshold include independent employers and DGEs. For independent employers, the employer's total ACT wages and the employer's total Australia-wide wages must be declared to claim the threshold. For DGEs, the group's total ACT wages and the group's Australia-wide wages must be declared to claim the threshold. For these employers, the amount they are liable to pay is calculated by:

1. multiplying the annual threshold by the proportion of days in the financial year for which the independent employer/at least one member of the group was liable to pay ACT or interstate wages;
2. this is then multiplied by the ratio of employer's/group's total ACT wages to employer's/group's total Australia-wide wages to obtain the final threshold amount; and
3. the final threshold amount is subtracted from the employer's total ACT wages, and this is multiplied by the payroll tax rate (6.85 per cent) to obtain payroll tax liability.

Joint payroll tax return

For employers that are part of a group, each employer must lodge a separate payroll tax return. However, the DGE may be approved to lodge a joint payroll tax return on behalf of all stated members of the group, including itself. Lodging separately or jointly does not affect the group's total payroll tax liability.

The following example demonstrates why lodging separately or jointly does not affect the group's total payroll tax liability: company A and B form part of a business group, where company A is the DGE and company B is the OGE, and the proportion of days in the financial year for which at least one member of the group was liable to pay ACT or interstate ways is equal to one. Table 2 provides each company's/employer's total ACT wages and their Australia-wide wages. The table also presents the group's total ACT wages as the sum of company A's and B's total ACT wages at \$600,000, and the group's total Australia-wide wages as the sum of company A's and B's total Australia-wide wages at \$2 million.

Assuming an annual threshold of \$1.5 million, the group's total Australia-wide wages of \$2 million exceeds the threshold. Therefore, employers that are part of the group (Company A and Company B) are liable for payroll tax.

Case 1 in Table 2 presents the calculation for payroll tax liability when the DGE (company A) and the OGE (company B) lodge separate payroll tax returns. Company A can claim the ACT proportion of the threshold since it is the DGE. Table 2 presents the threshold calculation for Company A, where the annual threshold of \$1.5 million is multiplied by the ratio of the group's total ACT wages to group's total Australia-wide wages to obtain the final threshold amount of \$450,000. Table 2 also presents the payroll tax liability calculation for Company A, where the final threshold amount of \$450,000 is subtracted from **company A's total ACT wages** of \$500,000, and this is multiplied by the payroll tax rate (6.85 per cent) to obtain company A's payroll tax liability of \$3,425.

Company B cannot claim the ACT proportion of the threshold since it is the OGE. Therefore, there is no threshold calculation for Company B in Table 2 Case 1. Table 2 presents the payroll tax liability calculation

for Company B, where company B's total ACT wages of \$100,000 is multiplied by the payroll tax rate (6.85 per cent) to obtain company B's payroll tax liability of \$6,850.

The sum of company A's and B's payroll tax liability provides the group's total payroll tax liability in Table 2 Case 1 as \$10,275.

Case 2 in Table 2 presents the calculation for payroll tax liability when the DGE (company A) lodges a joint payroll tax return on behalf of itself and the OGE (company B). Table 2 presents the threshold calculation for Case 2, which is equivalent to the calculation for Case 1: the annual threshold of \$1.5 million is multiplied by the ratio of the group's total ACT wages to group's total Australia-wide wages to obtain the final threshold amount of \$450,000. Table 2 also presents the payroll tax liability calculation for the group, where the final threshold amount of \$450,000 is subtracted from the **group's total ACT wages** of \$600,000, and this is multiplied by the payroll tax rate (6.85% per cent) to obtain the group's total payroll tax liability of \$10,275.

Table 2 shows that the group's total payroll tax liability in Case 1 (DGE and OGE lodge separate payroll tax returns) is equal to the group's total payroll tax liability in Case 2 (DGE lodges a joint payroll tax return on behalf of itself and the OGE). In summary, lodging separately or jointly does not affect the group's total payroll tax liability since the **employer's ACT wage amount** is used to calculate payroll tax liability for the DGE and OGE in Case 1, and the **group's ACT wage amount** is used to calculate payroll tax liability for the group in Case 2.

Table 2: Example that lodging separately or jointly does not affect the group's total payroll tax liability

	Company A (DGE)	Company B (OGE)
Total ACT wages	\$500,000	\$100,000
Total Australia-wide wages	\$1,300,000	\$700,000
Group’s total ACT wages	\$500,000 + \$100,000 = \$600,000	
Group’s total Australia-wide wages	\$1,300,000 + \$700,000 = \$2,000,000	
Case 1: DGE and OGE lodge separate payroll tax returns		
	Company A (DGE)	Company B (OGE)
Threshold calculation	$\left(\frac{\$500,000 + \$100,000}{\$1,300,000 + \$700,000}\right) \times \$1,500,000 = \$450,000$	Cannot claim the ACT proportion of the threshold
Payroll tax liability	$(\$500,000 - \$450,000) \times 0.0685 = \$3,425$	$\$100,000 \times 0.0685 = \$6,850$
Group’s total payroll tax liability	\$3,425 + \$6,850 = \$10,275	
Case 2: DGE lodges a joint payroll tax return on behalf of itself and the OGE		
Threshold calculation	$\left(\frac{\$500,000 + \$100,000}{\$1,300,000 + \$700,000}\right) \times \$1,500,000 = \$450,000$	
Group’s total payroll tax liability	$(\$600,000 - \$450,000) \times 0.0685 = \$10,275$	

DATA

The data used for this analysis is ACT Government unit record payroll tax data from 2006-07 to 2018-19.

Payroll tax is a self-assessed tax. Therefore, the unit record data only contains employers in the ACT that lodge a return with the ACT Revenue Office because they may be liable to pay payroll tax.

For each of these employers, the data includes information on the financial year, client account identification (which is a unique identifier for employers), an indicator variable which denotes whether the data has been reconciled or not, an indicator variable which denotes whether the employer is a member of a group or an independent employer, a variable which has a unique identifier for all employers within a group (group ID), an indicator variable which denotes employer status code (DGE, joint return lodger, independent employer, OGE), employer's total ACT wages, employer's total Australia-wide wages, group's total ACT wages and group's total Australia-wide wages.

Number of employers

Table 3 presents the number of employers in the 2012-13 to 2018-19 data, after deleting duplicated taxpayer data from the extracted data set. Table 3 shows that the number of employers in the data is gradually increasing from 2012-13 to 2015-16 and gradually declines from 2015-16 onwards. The decline in the number of employers from 2015-16 onwards is due to incomplete data from the current extraction of payroll tax data. Given the decline from 2015-16 is small, the data is suitable for analysis.

Table 3: Number of employers in the data by financial year

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Number of employers in the data	3,355	3,461	3,661	3,800	3,797	3,676	3,615

Reconciled data

Table 4 presents the percentage of employers in the 2012-13 to 2018-19 data for which the data can be reconciled. This means that there is evidence to verify that the payroll tax and the figures for the wage amounts are accurate.

Table 4 shows that a high percentage of employers in the data for 2012-13 to 2015-16 and for 2017-18 to 2018-19 have data that can be reconciled. Therefore, the estimate for actual payroll tax revenue should be close to audited figures for these years. The table shows that for 2016-17 the percentage of employers in the data that have reconciled data is lower.

Given the high percentage of employers in the data with reconciled data for all years except one, the data is suitable for analysis.

Table 4: Reconciled data by financial year

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Percentage of employers in the data that have reconciled data	87.57%	87.37%	87.60%	86.39%	59.47%	78.86%	70.73%

Joint return lodger

As discussed above in the payroll tax section, if a DGE lodges a joint payroll tax return on behalf of all stated members of the group, including itself, it is a joint return lodger (JRL). Instead of having the employer's total ACT wages in the employer's total ACT wages field, the JRL would have the group's total ACT wages in the employer's total ACT wages field, and this would be used to calculate payroll tax liability for the group.

If a DGE is a JRL in a financial year, the OGEs of that group should not be included in the data for that financial year, or if they are included, their wage fields should be blank. This would ensure payroll tax liability is not double counted.

Of 2,386 JRLs in the data, approximately 54 per cent of them (1,280) have other members of their group included in the data for the same financial year.

Of the JRLs that have other members of their business group included in the data for the same financial year, approximately 95 per cent of the other members have the employer's total ACT wage amount as blanks, and payroll tax liability will not be double counted for these employers. Given the small percentage of other members that have values for the employer's total ACT wage amount, payroll tax liability will not be double counted to a significant degree.

Employer status code

As explained above in the payroll tax section, the calculation of payroll tax liability depends on whether an employer is a DGE/JRL, OGE or an independent employer. The data has an indicator variable called employer status code which denotes which one these categories an employer falls under.

Table 5 presents the number of employers in the data by financial year and employer status code for 2012-13 to 2018-19. The table shows that due to data limitations, the information on employer status code is not available for between 12 per cent to 19 per cent of employers in these financial years. Note, the 2017 system change for recording and storing payroll tax data rectified the missing information on employer status code, and therefore, information on employer status code is available for all employers in 2017-18 and 2018-19 data.

Since payroll tax liability cannot be calculated for employers that are missing information on employer status code, these employers are excluded from the analysis.

The implications of excluding these employers depends on their employer status code. As noted in the payroll tax section earlier, if all these employers are OGEs, they cannot claim the ACT proportion of the threshold and would be liable to pay a flat rate of 6.85 per cent on their ACT taxable wages. This means that the threshold change would not affect the payroll tax liability of these employers, and therefore, the additional payroll tax revenue forgone from them would be zero. Table 5 shows that the number of OGEs from 2012-13 to 2015-16 is much lower than the number of OGEs in 2017-18 and 2018-19. However, the number of DGE/JRLs and independent employers from 2012-13 to 2015-16 is close to the numbers in 2017-18 and 2018-19. This implies that the employers for which employer status code is not available in 2012-13 to 2015-16 are likely OGEs and therefore excluding them from the analysis will not affect the resulting payroll tax revenue forgone in these years.

For 2016-17, Table 5 shows that the employers with missing information on employer status code are likely independent employers, given the much lower number of independent employers in this year. As noted in the payroll tax section earlier, independent employers can claim the ACT proportion of the threshold. This means that the threshold change would reduce the payroll tax liability for these employers, and therefore, excluding them will result in an underestimate of payroll tax revenue forgone in 2016-17. However, given that revenue forgone will be underestimated for only one year out of seven, excluding these employers will not significantly affect total revenue forgone and will not affect the paper's conclusion.

Table 4: Number of employers in the data by financial year and employer status code

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
DGE/JRL	1,013	1,054	1,107	1,128	1,106	1,107	1,117
OGE	650	681	726	748	1,166	1,249	1,241
Independent employer	1,265	1,289	1,374	1,407	823	1,320	1,257
Information on employer status code is not available	427	437	454	517	702	0	0
Percentage of employers in the data that do not have information on employer status code	12.73%	12.63%	12.40%	13.61%	18.49%	0.00%	0.00%

Number of days liable to pay wages

As noted in the payroll tax section above, the annual threshold is multiplied by the proportion of days in the financial year for which the independent employer/at least one member of the group was liable to pay ACT or interstate wages.

Due to data limitations, the following information is not available: the number of days in the financial year for which the independent employer/at least one member of the group is liable to pay ACT or interstate wages; and the numbers of days in the financial year for which an employer is liable for payroll tax both as an independent employer and group employer, for different periods in the same financial year.

Therefore, analysis assumes: the proportion of days in the financial year for which an independent employer/at least one member of the group) is liable to pay (as a member of the group) ACT or interstate wages is equal to 1; and employers are liable for payroll tax as an independent employer or group employer for the entire financial year based on their employer status code classification in the data.

Since these assumptions are used to calculate both actual and counterfactual payroll tax revenue (i.e. the annual threshold is multiplied by 1 in both cases), the difference between actual and counterfactual payroll tax revenue will isolate the impact of the threshold increase.

Calculation of payroll tax liability

As explained in the payroll tax section above, not all ACT employers are liable for payroll tax, and employers that are liable for payroll tax can be separated into those that can claim the ACT proportion of the threshold and those that cannot. Furthermore, for employers that can claim the ACT proportion of the threshold, employer's/group's total ACT wages and employer's/group's total Australia-wide wages must be declared to claim the threshold. If these wages types are not declared (wage fields are blank/missing) this indicates that the employer is not claiming the threshold.

Given these complexities, Table 6 details how payroll tax liability is calculated for each employer status code classification. The columns of Table 6 denote the four wage types and the calculation of payroll tax liability. The rows of Table 6 denote three possible scenarios/cases which can occur in the data under each employer status code classification.

Table 5: Payroll tax liability calculation

	Employer's total ACT wages	Employer's total Australia-wide wages	Group's total ACT wages	Group's total Australia-wide wages	Payroll tax liability calculation
DGE/JRL					
Case 1	E_{ACT}	N/A	G_{ACT}	$G_{AUS} > t$	$[E_{ACT} - \left(\frac{G_{ACT}}{G_{AUS}} \times t\right)] \times r$
Case 2	E_{ACT}	N/A	G_{ACT}	$G_{AUS} \leq t$	0
Case 3	E_{ACT}	N/A	G_{ACT} or G_{AUS} is missing		$E_{ACT} \times r$
OGE					
Case 1	E_{ACT}	N/A	N/A	$G_{AUS} > t$	$E_{ACT} \times r$
Case 2	E_{ACT}	N/A	N/A	$G_{AUS} \leq t$	0
Case 3	E_{ACT}	N/A	N/A	G_{AUS} is missing	$E_{ACT} \times r$
Independent employer					
Case 1	E_{ACT}	$E_{AUS} > t$	N/A	N/A	$[E_{ACT} - \left(\frac{E_{ACT}}{E_{AUS}} \times t\right)] \times r$
Case 2	E_{ACT}	$E_{AUS} \leq t$	N/A	N/A	0
Case 3	E_{ACT}	E_{AUS} is missing	N/A	N/A	$E_{ACT} \times r$

Table 6 shows that for a DGE under Case 1, employer's total ACT wages is E_{ACT} , group's total ACT wages is G_{ACT} and group's total Australia-wide wages is G_{AUS} . In this case group's total Australia-wide wages G_{AUS} is greater than the threshold t ($G_{AUS} > t$), therefore, this DGE is liable for payroll tax. To calculate payroll tax liability for a DGE in this case, the annual threshold t is multiplied by the ratio of group's total ACT wages to group's total Australia-wide wages $\frac{G_{ACT}}{G_{AUS}}$ to obtain the final threshold amount. The final threshold amount is then subtracted from the employer's total ACT wages E_{ACT} , and this is multiplied by the payroll tax rate r to obtain payroll tax liability for a DGE under Case 1 as $[E_{ACT} - (\frac{G_{ACT}}{G_{AUS}} \times t)] \times r$.

Case 2 for a DGE is equivalent to Case 1, except under Case 2 group's total Australia-wide wages G_{AUS} is less than or equal to the threshold t ($G_{AUS} \leq t$), therefore, this DGE is not liable for payroll tax and payroll tax liability is zero, as shown in Table 6.

For a DGE under Case 3, employer's total ACT wages is E_{ACT} but either group's total ACT wages G_{ACT} or group's total Australia-wide wages G_{AUS} is missing (i.e. is a blank field in the data). As mentioned above, for a DGE to claim the ACT proportion of the threshold, group's total ACT wages G_{ACT} and group's total Australia-wide wages G_{AUS} must be declared. Since one or both of these wage types are not declared under Case 3, this indicates that this DGE is not claiming the threshold. Therefore, for a DGE under Case 3,

the employer's total ACT wages E_{ACT} is multiplied by the payroll tax rate r to obtain a payroll tax liability of $E_{ACT} \times r$.

Note, as mentioned in the data section for JRLs, if a DGE is a JRL, instead of having the employer's total ACT wages in the employer's total ACT wages field, the JRL would have the group's total ACT wages in the employer's total ACT wages field, and this would be used to calculate payroll tax liability for the group (refer to Table 2 for an example on how payroll tax liability for a group is calculated when a joint payroll tax return is lodged). Therefore, the calculation of payroll tax liability for a JRL is equivalent to the calculation for a DGE, the only difference being that the resulting payroll tax liability for a JRL is the payroll tax liability for the group instead of the payroll tax liability for the employer.

Table 6 also provides the three possible cases in the data for OGEs and independent employers. The three cases for OGEs and independent employers are not discussed in detail, since they are similar to the three cases discussed above for DGEs.

ANALYSIS

Table 7 presents the estimates for actual and counterfactual payroll tax revenue.

The actual estimates in Table 7 apply the threshold changes that have occurred since 2012-13. Table 1 provides the annual threshold amounts by financial year.

Actual payroll tax revenue is estimated using the unit record data rather than using figures from the consolidated annual financial reports. This maintains consistency with the counterfactual, so the difference between actual and counterfactual payroll tax revenue fully reflects the difference due to the threshold increases, as opposed to difference in data and/or methodology.

Table 7 also presents total territory payroll tax revenue figures from consolidated annual financial statements. Total territory figures are presented instead of general government sector figures, since the general government sector figures includes payroll tax payments made by ACT Government internal agencies (e.g. Chief Minister, Treasury and Economic Development Directorate). ACT Government internal agencies are not included in the payroll tax data, therefore, comparison between estimated actual payroll tax revenue and audited figures uses total territory figures.

Table 7 shows that estimated actual payroll tax revenue is close to audited figures for all years except 2016-17. As explained above in the data section, this is because 2016-17 data has a lower percentage of employers with reconciled data, 60 per cent instead of 71 to 88 per cent for other years. Therefore, estimated actual payroll tax revenue for 2016-17 will not be close to audited figures.

The counterfactual estimates in Table 7 apply settings that would have occurred without the progressive increases to the threshold, where the threshold would have been frozen at the 2011-12 level (\$1.5 million per annum) for all employers in the payroll tax data.

The ACT threshold was \$1.25 million per annum from 2001-02 to 2007-08 and increased to \$1.5 million per annum in 2008-09. The increase to the threshold on 2008-09 coincides with changes to the threshold in NSW. From 1 July 2008 to 1 July 2013, NSW's threshold of \$600,000 was indexed annually in line with movements in the Sydney Consumer Price Index (CPI).² NSW introduced this measure to provide tax relief to businesses by allowing for the impact of inflation on their wage bill (NSW Government Treasury, 2008). The next threshold increase in NSW occurred on 1 July 2018, where the threshold was increased to \$850,000. Given this, the assumption that the ACT threshold would have been frozen at the 2011-12 level for the majority of 2012-13 to 2018-19 is an appropriate assumption.

The difference in payroll tax revenue in Table 7 is the difference between estimated actual and counterfactual payroll tax revenue. Table 7 shows that the changes to the threshold have resulted in a **decrease** in tax revenue by approximately \$62 million over 7 years.

² The threshold for 2008/09 was \$623,000 and for 2013-14 was \$750,000.

Table 6: Estimates of payroll tax revenue with and without the threshold increase (\$'000)³

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Actual payroll tax revenue	311,786	313,385	345,165	399,567	292,850	472,044	496,580	2,631,377
Total territory payroll tax revenue from consolidated annual financial statements	310,000	318,000	346,000	411,000	437,000	473,000	536,000	2,831,000
Counterfactual payroll tax revenue	317,949	319,534	354,214	409,409	298,179	485,518	509,052	2,693,855
Difference in payroll tax revenue	-6,163	-6,149	-9,049	-9,842	-5,329	-13,474	-12,472	-62,478

³ Numbers are rounded to the nearest thousand.

RESULTS

The estimates in Table 7 show that over seven years, the Government has raised approximately \$62 million **less** in revenue due to progressive increases in the threshold.

The ACT's Government's analysis on the whether the tax reform program has been revenue neutral to date finds that over the first seven years of tax reform, the Government has raised approximately \$62 million **less** in revenue due to tax reform.⁴ It also finds that during the first seven years of tax reform, the Government has **forgone** approximately \$128 million in revenue from the residential sector and has raised an **additional** \$66 million from the commercial sector. As mentioned in the introduction, the revenue neutrality commitment primarily relates to replacing inefficient taxes, such as stamp duty and insurance duty, with broad based land taxes such as general rates. Therefore, the conclusions from the revenue neutrality analysis do not take into account the progressive increases in the payroll-tax free threshold, which have resulted in additional forgone revenue and have reduced the payroll tax burden on the commercial sector.

Analysis in this paper incorporates the changes made to the payroll-tax free threshold. Over 2012-13 to 2018-19, the Government has raised approximately \$62 million **less** in revenue due to tax reform and approximately \$62 million **less** in revenue due to increases in the payroll-tax free threshold. Therefore, the Government has **forgone** approximately \$124 million in revenue over these seven years.

Furthermore, the Government has raised an **additional** \$66 million from the commercial sector due to tax reform and has **forgone** \$62 million from the commercial sector due to increases in the payroll-tax free threshold. Therefore, the Government has raised an **additional** \$4 million from the commercial sector over these seven years. This additional revenue is 0.091 per cent of the total revenue raised from the relevant tax lines for the commercial sector over this period to date. Given this, the total tax burden on the commercial sector has remained largely unchanged over the reform period to date.

Table 7 also presents the difference in payroll tax revenue by financial year. Excluding 2016-17 due to data limitations, the difference in payroll tax revenue is generally decreasing from 2012-13 to 2018-19. The reason behind this is the **progressive** increases in the threshold, where large decreases in the difference in payroll tax revenue coincides with threshold increases. From Table 1, in 2012-13 and 2013-14 the threshold was \$1.75 million per annum and the difference in payroll tax revenue is approximately the same for these two years at -\$6 million. In 2014-15 the threshold was increased to \$1.85 million per annum, and this coincides with a decrease in the difference in payroll tax revenue to approximately -\$9 million in 2014-15. The threshold remained constant at \$1.85 million in 2015-16, and therefore, the difference in payroll tax revenue remains constant at approximately -\$9 million in 2015-16. In 2016-17 the threshold was increased again to \$2 million per annum and remained constant at \$2 million for the remaining years; this threshold increase also coincides with a decrease in the difference in payroll tax revenue to approximately -\$12 million to -\$13 million in 2017-18 and 2018-19 (excluding 2016-17 due to a lower percentage of reconciled data in this year).

⁴ From the main results.

SENSITIVITY ANALYSIS

As discussed in sections above, payroll tax is a self-assessed tax, and therefore, payroll tax data only contains employers in the ACT that lodge a return with the ACT Revenue Office because they may be liable to pay payroll tax.

With increases in the threshold over this time period, some employers that are no longer liable for payroll tax but would have been in the counterfactual may no longer be in the data. For example, in 2011-12 the threshold was \$1.5 million per annum there are 140 employers in the data with total Australia-wide wages greater than \$1.5 million and less than or equal to \$2 million.⁵ However, in 2018-19 with a \$2 million per annum threshold, there are 74 employers in the data with total Australia-wide wages greater than \$1.5 million and less than or equal to \$2 million.⁶ This may indicate that some employers that are no longer liable for payroll tax due to the higher threshold but would have been liable for payroll tax in the counterfactual under the lower threshold are no longer in the data.

However, an alternative possibility is that this decrease in the data could be caused by structural change in the ACT economy over this time period (unrelated to the change in the threshold), which could have resulted in fewer 'small' employers (i.e. fewer employers with Australia-wide wages between threshold values). To examine whether such a structural change may have occurred in the ACT economy during this time, Table 8 uses data from the Australian Bureau of Statistics (ABS) to present the number of ACT businesses by Australia-wide employment size for June 2012 and June 2019 (ABS, 2019, 8165.0 - Counts of Australian Businesses including Entries and Exits). The table shows that from June 2012 to June 2019, the number of ACT businesses within each employment size increased, and these increases are higher in absolute and percentage terms for ACT businesses with smaller employment sizes. This shows that over this time period, changes in the ACT economy resulted in a higher number of small employers.

Table 7: Count of ACT business by Australia-wide employment size

Australia-wide employment size	June 2012	June 2019	Increase	Percentage increase
Non- Employing	15,158	17,768	2,610	17%
1-19 Employees	10,074	11,433	1,359	13%
20-199 Employees	770	835	65	8%
200+ Employees	30	31	1	3%
Total⁷	26,032	30,075	4,043	16%

This implies that the decrease in the number of employers with lower Australia-wide wages (i.e. Australia-wide wages between \$1.5 million and \$2 million) is probably being caused by the higher threshold, as opposed to changes in the ACT economy (unrelated to the change in the threshold). Therefore, the exclusion of these employers from the data should be corrected for to ensure revenue forgone from increasing in the threshold is not underestimated.

⁵ Australia-wide wages here refers to group's total Australia-wide wages for DGEs/JRLs and OGEs and employer's total Australia-wide wages for independent employers.

⁶ Australia-wide wages here refers to group's total Australia-wide wages for DGEs/JRLs and OGEs and employer's total Australia-wide wages for independent employers.

⁷ Counts presented by employment size ranges will not always sum to the total due to ABS's data perturbation method.

To correct for this, an iterative method is used. Employers dropping out of the data set in 2012-13 due to the threshold increasing from \$1.5 million to \$1.75 million are identified as: all employers in the 2011-12 data with Australia-wide wages between \$1.5 million and \$1.75 million (2011-12 subsample) that are not employers in the 2012-13 data.⁸ Therefore, the correction assumes that employers in the 2011-12 subsample that are not in 2012-13 data are dropping out of the data due to the threshold increase, and without this increase, they would be liable for payroll tax in 2012-13. While it could be argued that some of these employers would have not survived to 2012-13 assuming all would have survived allows for the entry of new employers and/or growth in the number of employers (as shown in Table 8). This method is repeated over the remaining years to generate a sequence of employers that are dropping out of the data set due to progressively higher thresholds.⁹

For this sequence of employers, their 2011-12 ACT/Australia wage amounts are indexed by ACT's/Australia's wage price index (WPI) to determine wage amounts from 2012-13 to 2018-19.¹⁰ These wage amounts are then used to calculate actual and counterfactual payroll tax revenue from 2012-13 to 2018-19 for the sequence of employers, using the method described in the analysis section above.

Note that due the indexation of wages amounts, some of these employers will have Australia-wide wages above the actual threshold in a relevant year and will therefore be liable for payroll tax in the estimated actual but not in the true actual. To ensure revenue forgone is not overestimated, the estimated actual is used to calculate revenue forgone, as opposed to assuming actual payroll tax revenue from all these employers is zero.

Table 9 presents the estimates for actual and counterfactual payroll tax revenue from employers dropping out of the data set. As described in data section, there is a decline in the number of employers from 2015-16 onwards due to incomplete data from the current extraction of payroll tax data. This means that estimated actual and counterfactual revenue in Table 9 will not exhibit a consistent upward trend from 2015-16 onwards.

Table 9 shows that the changes to the threshold have resulted in an additional \$3 million of forgone revenue over 7 years.

⁸ Australia-wide wages between \$1.5 million and \$1.75 million means Australia-wide wages greater than \$1.5 million and less than or equal to \$1.75 million. Not employers in the 2012-13 data means they are either not in the 2012-13 data or have not declared wage amounts in that year.

⁹ For example, employers dropping out the data set in 2018-19 due to the threshold increasing from \$1.5 million to \$2 million are identified as: all employers in the 2011-12 data with Australia-wide wages between \$1.5 million and \$2 million that are not employers in the 2018-19 data.

¹⁰ Indexed using ABS, 2020, 6345.0 - Wage Price Index.

Table 9: Additional payroll tax revenue forgone from the attrition of employers (\$'000)¹¹

Year	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Actual payroll tax revenue from the attrition of employers	126	140	141	285	244	208	382	1,526
Counterfactual payroll tax revenue from the attrition of employers	210	271	341	578	1,207	924	1,150	4,681
Difference in payroll tax revenue from the attrition of employers	-84	-131	-200	-293	-963	-716	-768	-3,155

¹¹ Numbers are rounded to the nearest thousand.

CONCLUSION

The ACT Government's analysis on the impact of the tax reform includes analysis on whether the tax reform program has been revenue neutral to date. The main analysis finds that over the first 7 years of tax reform, the Government has **forgone** \$62 million of revenue. The analysis also finds that during this time period, the Government has **forgone** \$128 million of revenue from the residential sector and has raised \$66 million of **additional** revenue from the commercial sector.

However, since the revenue neutrality commitment primarily relates to replacing inefficient taxes, such as stamp duty and insurance duty, with broad based land taxes such as general rates, the conclusions from the revenue neutrality analysis does not take into account the revenue forgone and the lower payroll tax burden on the commercial sector from the progressive increases in the payroll tax-free threshold.

This paper estimates the revenue forgone from increasing the threshold by comparing the revenue that has been raised from payroll tax since 2012-13 to the revenue that would have been raised from payroll tax without threshold increases. The results show that over the 7 years analysed, the Government has **forgone** \$62 million to \$65 million due to the progressive increases in the threshold.

Therefore, the Government has **forgone** a total of \$124 million to \$127 million from 2012-13 to 2018-19 due to tax reform and the increases in the payroll tax-free threshold. Furthermore, the Government has **forgone** \$128 million from the residential sector and raised an **additional** \$1 million to \$4 million from the commercial sector due to tax reform and the increases in the payroll tax-free threshold.

In conclusion, the paper finds that tax reform and increases in the payroll tax-free threshold has resulted in a small **increase** in the **total** tax burden for the commercial sector by approximately \$1 million to \$4 million over 2012-13 to 2018-19. The increase in the total tax burden is a small proportion (0.023 to 0.091 per cent) of the total revenue raised from the relevant tax lines for the commercial sector over this period. On this basis, the paper concludes that the the total tax burden for the commercial sector has remained largely unchanged over the reform period to date.

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