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Do firms that pay less company tax create more jobs?

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ABSTRACT

Using data for around 1000 profitable Australian firms, I explore the relationship between effective tax rates and job creation. On average, I find that the relationship is positive — meaning that firms which pay less tax tend to create fewer jobs. About one-third of firms have sufficient deductions and tax offsets to reduce their effective tax rate below 25 percent. On average, these firms shed jobs. By contrast, firms with an effective corporate tax rate above 25 percent created jobs at an average annual rate of 2 percent.

1. Introduction

It is commonly claimed that lower company taxes will lead to higher rates of job creation. Much of the evidence for this proposition is based on macroeconomic models. For example, Kouparitsas et al. (2016) conclude that employment would be between 0.1 and 0.4% higher if the company tax rate were to be reduced to 25 percent. Other modelling has concluded that corporate tax rate reductions would have no impact on aggregate employment (Dixon and Nassios, 2016).

This paper approaches the question from a different angle. Following the methodology of Anderson and Pizzigati (2017) for the United States, I analyse whether firms which pay a lower effective rate of tax have a higher rate of job creation. While some firms claim few deductions and offsets, others are able to reduce their effective tax rate considerably below the statutory rate of 30%. To the extent that such variation is driven by factors unrelated to firms' hiring propensity – such as the aggressiveness of tax practice across firms – such a comparison can be informative about the economy-wide impact of changes to corporate tax rates.

Overall, I find no evidence that firms which pay lower rates of company tax create more jobs. Measuring effective tax rates either as a share of accounting profit or taxable income, I find that profitable firms with an effective tax rate above 25% grew employment, while those with an effective tax rate below 25% shed jobs.

2. Methodology

The main data source is IBIS World, a private market research firm. IBIS World publishes reports for the largest 2000 Australian entities by revenue.[1] These set out in a consistent manner a range of key information, including the firm's profit and loss account and employment figures. Financials are drawn from companies' annual reports lodged with the Australian Securities and Investments Commission or the Australian Stock Exchange. Employment figures are sourced by IBIS World from reports lodged with these two organisations, or with the Workplace Gender Equality Agency.

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[1] These entities include not only proprietary and public companies, but also associations, cooperatives, government bodies, partnerships and trust. These other kinds of entities are dropped from the analysis.

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Table 1
Summary statistics.

	All firms [$N = 989$]	Firms with ATO tax data [$N = 594$]
Average annual employment growth	1.2%	0.9%
Average effective tax rate using accounting profit	21.8%	22.2%
Share of firms with effective tax rate below 25%, using accounting profit	32.4%	27.4%
Average effective tax rate using taxable income	–	24.0%
Share of firms with effective tax rate below 25%, using taxable income	–	33.3%

Note: All results are weighted by the average number of employees.

Table 2
Employment growth.

	Effective tax rate below 25%	Effective tax rate 25% or above
Effective tax rate using accounting profit		
Average annual employment growth	−0.07%	1.9%
Effective tax rate using taxable income		
Average annual employment growth	−1.2%	2.1%

Note: All results are weighted by the average number of employees.

I also compile taxation data from the Australian Taxation Office (ATO), which publishes annually a report known as the *Corporate Tax Transparency: Report of Entity Tax Information*. Available since 2015, these reports set out the taxable income, total income and tax paid by Australian public and foreign owned corporate tax entities with total income over $100 million, and Australian-owned resident private companies with total income over $200 million.

For each firm, I sum total profits in all available years. If this figure is negative, the firm is dropped from the main analysis. To ensure that results are not distorted by small firms, all results are weighted by the average number of employees in a firm.

Employment growth rates represent the average annual growth rate for that firm over the period for which data are available. To account for missing data in some years, these rates are estimated by running a separate regression for each firm of log (employment) on the calendar year. The beta coefficient in this regression reflects average annual employment growth in log points. This is converted to percentage point growth using the usual formula $\exp(\beta) - 1$.

The main tax rate measure is a firm's income tax expense as a percentage of its profit before tax. This is calculated on an annual basis, and averaged over the maximum number of years for which it is available. For those firms that can be matched to the ATO's transparency reports, I also calculate a second tax rate measure: the firm's tax paid as a percentage of taxable income. Taxable income is a firm's total income, less deductions incurred in gaining that income.

There are a number of reasons why these two tax measures will differ. The denominator in the IBIS World measure is accounting profit, while the ATO denominator is taxable income. Taxable income may include franking credits and non-deductible items that increase taxable income relative to accounting profit. It also reflects concessions or deductions such as prior year tax losses that decrease taxable income relative to accounting profit. For a discussion of some of the factors that may affect the gap between accounting profit and taxable income, see Tran (1997).

Using the IBIS World tax rate measure, variation in tax rates across firms will be due to both deductions and offsets. Using the ATO tax rate measure, variation will be due primarily to offsets. These include the foreign income tax offset and the research and development tax incentive. For a more detailed discussion of the different ways of measuring effective tax rates across firms, see Richardson and Lanis (2007).

3. Results

Table 1 sets out summary statistics. Among this sample of profitable firms, the average tax rate as a percentage of accounting profits is 22%, while the average tax rate as a percentage of taxable income is 24% (reflecting the impact of tax offsets). Across these firms, the average annual rate of employment growth is around 1%.

To test for a relationship, I separate the firms into two groups: those with a tax rate below 25%, and those with a tax rate above 25% (the analysis is not particularly sensitive to the choice of cut-point). Table 2 shows employment growth rates for both groups.

Using either taxes as a percentage of accounting profit or taxable income, the results show that employment growth is higher in firms that pay a higher rate of tax. As a share of accounting profit, firms with an effective tax rate below 25% shed jobs at a rate of 0.07% per year, while firms with a tax rate above 25% had an annual employment growth rate of 1.9%. Measuring tax rates as a share of taxable income, companies with a tax rate below 25% shed jobs at a rate of 1.2% per year, while those with a tax rate above 25% had an annual employment growth rate of 2.1%.

For comparison with the US results of Anderson and Pizzigati (2017), I also split firms into those with an effective tax rate above and below 20%. Using accounting profit – the measure that best matches their results – about one-quarter of firms had an effective tax rate below 20%.

Table 3
Employment growth regressions
Dependent variable: Average annual employment growth.

	[1]	[2]
Effective tax rate using accounting profit	0.0008 [0.004]	
Effective tax rate using taxable income		0.175*** [0.046]
Constant	0.012** [0.005]	−0.032*** [0.012]
R-squared	0.00001	0.24
Sample size	989	594

Note: All results are weighted by the average number of employees. *** and ** denote statistical significance at the 1% and 5% levels, respectively.

Australian firms with an effective tax rate below 20% shed jobs at a rate of 0.1% annually, the same figure as for US firms with an effective tax rate below 20%.[2] Australian firms with an effective tax rate above 20% grew employment at an annual rate of 2.0%, a slightly more rapid rate than the 0.8% annual job growth rate for the US private sector as a whole.

To test for any relationship across the full span of data, I regress average annual employment growth on a firm's tax rate. The results are shown in Table 3. Using either tax rate measure, the coefficient is positive, suggesting that a higher tax rate is associated with a faster rate of job creation. The relationship is statistically significant when tax rates are calculated as a share of taxable income, but not for tax as a share of accounting profit. In neither case do I find evidence supporting the claim that firms which pay a lower rate of company tax create more jobs.

Table 4 presents three additional robustness checks: including industry fixed effects, controlling for firm size, and including unprofitable firms. Across these specifications, the coefficient on the effective tax rate remains positive, suggesting that employment growth rates are higher among firms that pay a higher effective rate of tax.

Table 4
Robustness checks
Dependent variable: Average annual employment growth.

	[1]	[2]	[3]	[4]	[5]	[6]
Effective tax rate using accounting profit	0.001 [0.004]		0.001 [0.004]		0.002 [0.005]	
Effective tax rate using taxable income		0.145*** [0.048]		0.253*** [0.045]		0.188*** [0.040]
Log (average revenue)			−0.110*** [0.003]	−0.014*** [0.002]		
Constant	0.012** [0.005]	−0.025** [0.012]	0.181*** [0.041]	0.168*** [0.031]	0.013** [0.006]	−0.036*** [0.010]
Industry fixed effects?	Yes	Yes	No	No	No	No
Include unprofitable firms	No	No	No	No	Yes	Yes
R-squared	0.05	0.26	0.02	0.10	0.0001	0.03
Sample size	989	594	989	594	1238	690

Note: All results are weighted by the average number of employees. *** and ** denote statistical significance at the 1% and 5% levels, respectively.

4. Conclusion

Across a cross-section of profitable Australian firms, I find no evidence that those which pay a lower effective rate of tax create more jobs. In aggregate, the one-third of Australian companies whose effective corporate tax rate is below 25% shed jobs, while the two-thirds of firms with an effective corporate tax rate of 25% or above were net job creators. These results are robust to the inclusion of controls for firm size and industry fixed effects, as well as to expanding the sample to include unprofitable firms.

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[2] Anderson and Pizzigati (2017) report median job growth during 2008–2016 of −0.74% for firms with an effective tax rate below 20%, and a 6% employment growth rate in the entire US private sector. This translates into annual job growth of −0.1% and 0.8% respectively. The authors do not separately calculate job growth for US firms with an effective tax rate above 20%.

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