

Business Uptake of Investment Expensing

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In this report, the authors examine investment expensing and why businesses are not taking advantage of it.

Introduction

As part of a major overhaul of U.S. business taxation, the Tax Cuts and Jobs Act greatly accelerated investment cost recovery. It temporarily allowed 100 percent bonus depreciation, or full expensing, of most equipment investment and permanently increased the amount of investment that can be expensed by small businesses under section 179. The TCJA lifted the cap on section 179 expensing from \$500,000 to \$1 million, raised the income ceiling above which the benefit is phased out from \$2 million to \$2.5 million, and indexed those amounts to inflation.

Expensing can be an important tool to encourage investment. Business income taxes raise the required rate of return for a marginal investment — that is, one that just breaks even after tax — which tends to reduce investment. Allowing taxpayers to accelerate depreciation deductions in relation to the economic rate of depreciation can reduce, eliminate, or even reverse this disincentive for marginal investment.¹

Still, tax return data reveal that not all businesses that are eligible for expensing take advantage of it. In all years, the takeup rate for

bonus depreciation — the average business-level ratio of actual expensing to total eligible investment — is well below 100 percent, and the takeup rate for section 179 expensing is below 50 percent. This report explains this pattern and explores potential reasons for businesses' not using those tax benefits.

There are several reasons why companies might not take full advantage of expensing. First, expensing is less valuable for businesses experiencing losses because net operating loss carryforwards defer the benefit of accelerated cost recovery. Second, tax expensing generally has no effect on accounting profits, so if businesses maximize accounting rather than economic profits, expensing will have less impact.² Third, because the TCJA reduced statutory tax rates on both corporate and passthrough businesses, expensing may provide less stimulus than in the past.

Starting in 2023, bonus depreciation will phase out at 20 percentage points per year through 2026. The impending phaseout makes this an opportune time to assess the measure's effect. This report takes a first step in that direction, updating the work of John Kitchen and Matthew Knittel³ on bonus depreciation and section 179 usage rates before and after the TCJA.

History

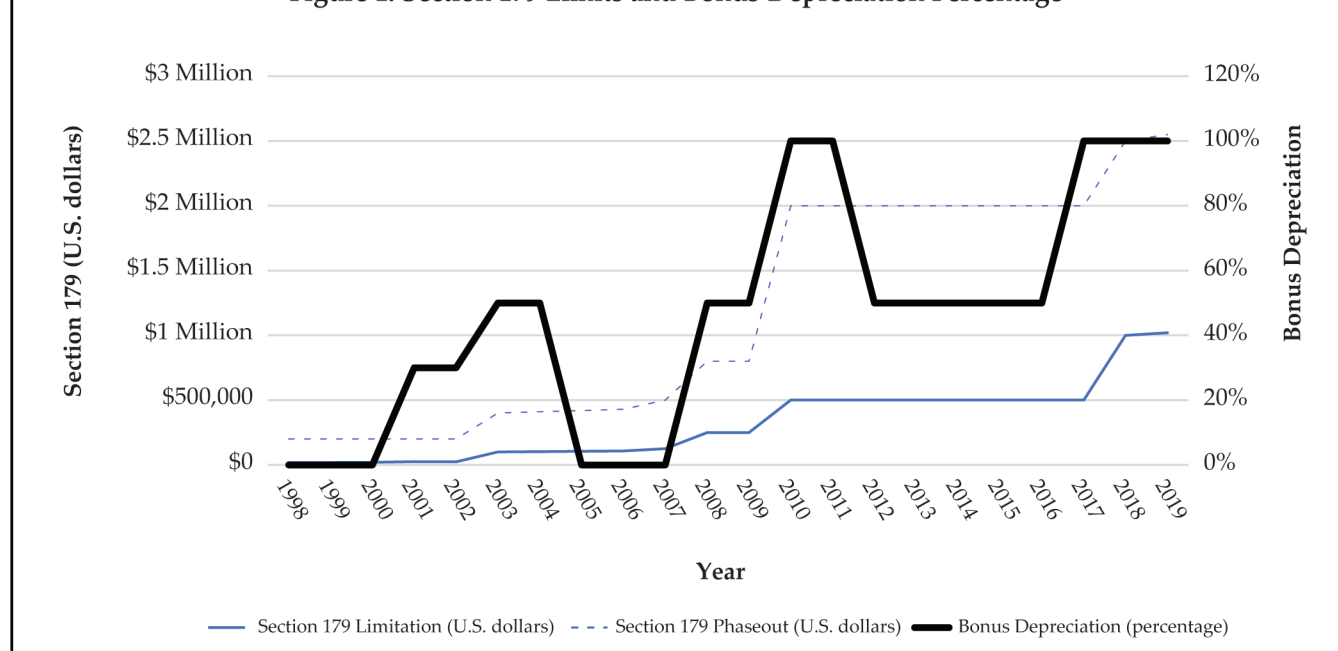
Congress first introduced section 179 with the Economic Recovery and Tax Act of 1981. Section 179 allows taxpayers to deduct the full cost of qualifying investment up to a specified limit.

¹ A marginal investment financed with equity effectively faces the statutory tax rate when tax depreciation matches economic depreciation. By contrast, that same marginal investment faces an effective tax rate of zero when full expensing is allowed.

² See, e.g., the testimony of professor Michelle Hanlon before the Senate Committee on Finance on March 6, 2012, and Jesse Edgerton, "Investment, Accounting, and the Salience of the Corporate Income Tax," National Bureau of Economic Research Working Paper No. 18472 (2012).

³ Kitchen and Knittel, "Business Use of Section 179 Expensing and Bonus Depreciation, 2002-2014," Treasury Office of Tax Analysis Working Paper 10 (Oct. 2016).

Figure 1. Section 179 Limits and Bonus Depreciation Percentage



Qualified properties typically have a tax life of three, five, seven, 10, 15, or 20 years under the modified accelerated cost recovery system. In addition to a maximum deduction, the law includes a limit on total qualifying investment, above which a dollar-for-dollar phaseout applies. For example, in 1998 the allowed deduction was \$18,500 with a phaseout at \$200,000 of qualifying investment. Congress later increased the limitation and phaseout at different times, notably during the Great Recession. The limit stayed at \$500,000 between 2010 and 2017. The TCJA later led to its largest increase, doubling section 179's limit to \$1 million.

Bonus depreciation first appeared in the Job Creation and Worker Assistance Act of 2002, which introduced section 168(k) to stimulate the economy following the 2001 recession (Figure 1). Section 168(k) temporarily allowed businesses to deduct 30 percent of the adjusted basis of qualified property investment.⁴ Like section 179, qualifying properties under section 168(k) usually have a tax life of up to 20 years under a MACRS. The Jobs and Growth Tax Relief Reconciliation Act of 2003 increased the percentage to 50, with

the goal to further increase investment. Bonus depreciation was then allowed to expire in 2004 because the U.S. economy was growing strongly.

After a three-year lapse, the Economic Stabilization Act of 2008 reintroduced 50 percent bonus depreciation in the wake of the Great Recession. Congress later increased the allowance to 100 percent for 2010 and 2011 and then reduced it to 50 percent in 2012. That policy was then extended until the TCJA reintroduced 100 percent expensing through 2022.

Unlike previous expansions of bonus depreciation, the TCJA increased the expensing limits when the economy had been expanding strongly for several years.

There is no consensus on the effect of bonus depreciation on investment in the literature. Until recently, most studies have found very little impact of partial expensing on investment.⁵ Christopher House and Matthew Shapiro, however, observe a large response in investment

⁴ Like section 179, properties allowed usually have a tax life of three, five, seven, 10, 15, or 20 years under a MACRS.

⁵ See, e.g., Kevin A. Hassett and R. Glenn Hubbard, "Tax Policy and Business Investment," in *Handbook of Public Economics* 1293-1343 (2002); Austan Goolsbee, "The Impact of the Corporate Income Tax: Evidence From State Organizational Form Data," 88(11) *J. Pub. Econ.* 2283-2299 (2004); and Darrel Cohen and Jason Cummins, "A Retrospective Evaluation of the Effects of Temporary Partial Expensing," *Fin. Econ. Discussion Series* 1 (2006).

from bonus depreciation, with a stronger effect for long-lived investment compared with short-lived investment.⁶ Using micro-level data, Eric Zwick and James Mahon show that small businesses are almost twice as responsive as big businesses, and that profitability is a key determinant of take-up.⁷ Using variation in expensing policies at the state and industry levels, Eric Ohrn finds a significant effect on investment from the state adoption of bonus depreciation and section 179.⁸ C. Eugene Steuerle notes that bonus depreciation take-up also depends on the business cycle.⁹ Because many businesses have low or negative profits during economic downturns, bonus depreciation is likely to be more effective at stimulating investment during expansions.

Expensing Takeup Rates

As Kitchen and Knittel reported, take-up rates of bonus depreciation and section 179 expensing have been well below 100 percent for both C corporations and passthrough businesses.¹⁰ This report updates their analysis and provides additional context.

The data presented here are from stratified samples of tax returns for C corporations, S corporations, partnerships, and individuals (sole proprietorships). Form 4562, "Depreciation and Amortization," which taxpayers use to compute depreciation deductions, reports the total amount claimed for bonus depreciation and section 179 expensing. It also reports (at the class-life level) the amount of investment made in the current year that is depreciated under the normal schedule — that is, the amount of basis that remains after the application of bonus depreciation and section 179. We ensure that the total depreciation deduction for an investment class (as reported in column (g) of lines 19 and 20) is broadly consistent with what would be implied

by the basis reported in column (c). In cases with severe inconsistency, we assume that the depreciation deduction is correct and adjust the investment amount accordingly.¹¹

In Figure 2, the dotted lines represent the share of businesses with eligible investment that take up bonus depreciation, and the solid lines represent the share of qualifying investment for which bonus depreciation was elected. The take-up rate by share of businesses is always substantially lower — between 10 and 30 percentage points — than the investment share rate. There is also more variation in the take-up rate by the investment share, compared with the business share. The data thus indicate that most bonus depreciation is claimed by larger, more profitable businesses, and many smaller businesses do not take advantage of bonus depreciation. Both types of take-up rates are generally higher for C corporations than for passthroughs.

The take-up rate is also influenced by economic conditions, consistent with the value of bonus depreciation being low for businesses with losses or little profit. Take-up between 2008 and 2010 was much lower than for the following years.

Following the implementation of the TCJA in 2018, we observe a drop in the investment share take-up rate for C corporations. This is consistent with the value of bonus depreciation being substantially lower for corporations following the sharp cut in the statutory corporate tax rate from 35 percent to 21 percent. The change in take-up after the TCJA could also reflect interactions between bonus depreciation and other TCJA reforms, such as the global intangible low-taxed income provision and the elimination of NOL carrybacks. The investment share take-up rate for passthroughs also drops slightly in 2018, but then rises to a new high the following year.

Similar to bonus depreciation, section 179 take-up rates are higher for C corporations than for passthroughs (Figure 3). In contrast to bonus depreciation, however, a larger fraction of eligible businesses use section 179, compared with the

⁶ House and Shapiro, "Temporary Investment Tax Incentives: Theory With Evidence From Bonus Depreciation," 98 *Am. Econ. Rev.* 737 (2008).

⁷ Zwick and Mahon, "Tax Policy and Heterogeneous Investment Behavior," 107 *Am. Econ. Rev.* 217 (2017).

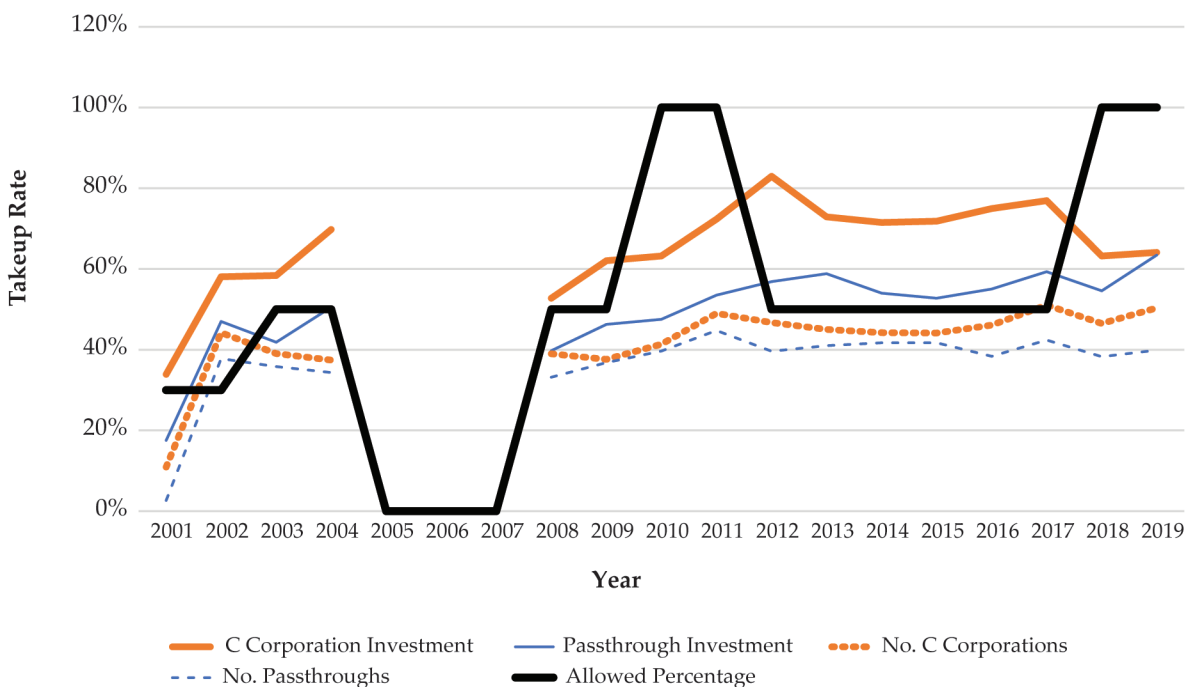
⁸ Ohrn, "The Effect of Tax Incentives on U.S. Manufacturing: Evidence From State Accelerated Depreciation Policies," 180 *J. of Public Econ.* 104084 (2019).

⁹ Steuerle, "Some Ignored Costs of Bonus Depreciation," *Tax Notes*, Mar. 3, 2008, p. 1029.

¹⁰ Kitchen and Knittel, *supra* note 3.

¹¹ We also include listed property investment (Part V of Form 4562). For some businesses, we observe the actual amount of investment; for others, we impute the investment based on the total depreciation for listed property.

Figure 2. Bonus Depreciation Takeup Rates



fraction of eligible investment. This is consistent with small businesses that invest heavily having little or no profit and therefore receiving relatively little benefit from section 179.

There is also an interplay between section 179 and bonus depreciation usage. Section 179 takeup rates dip in 2010-2011 and again post-2017 — the periods during which bonus depreciation rises to 100 percent. Small businesses thus appear to switch from section 179 expensing to bonus depreciation during those periods because they are (approximately) perfect substitutes when 100 percent bonus depreciation is available. Another factor contributing to the earlier dip is the Great Recession, which sharply reduced business profits.

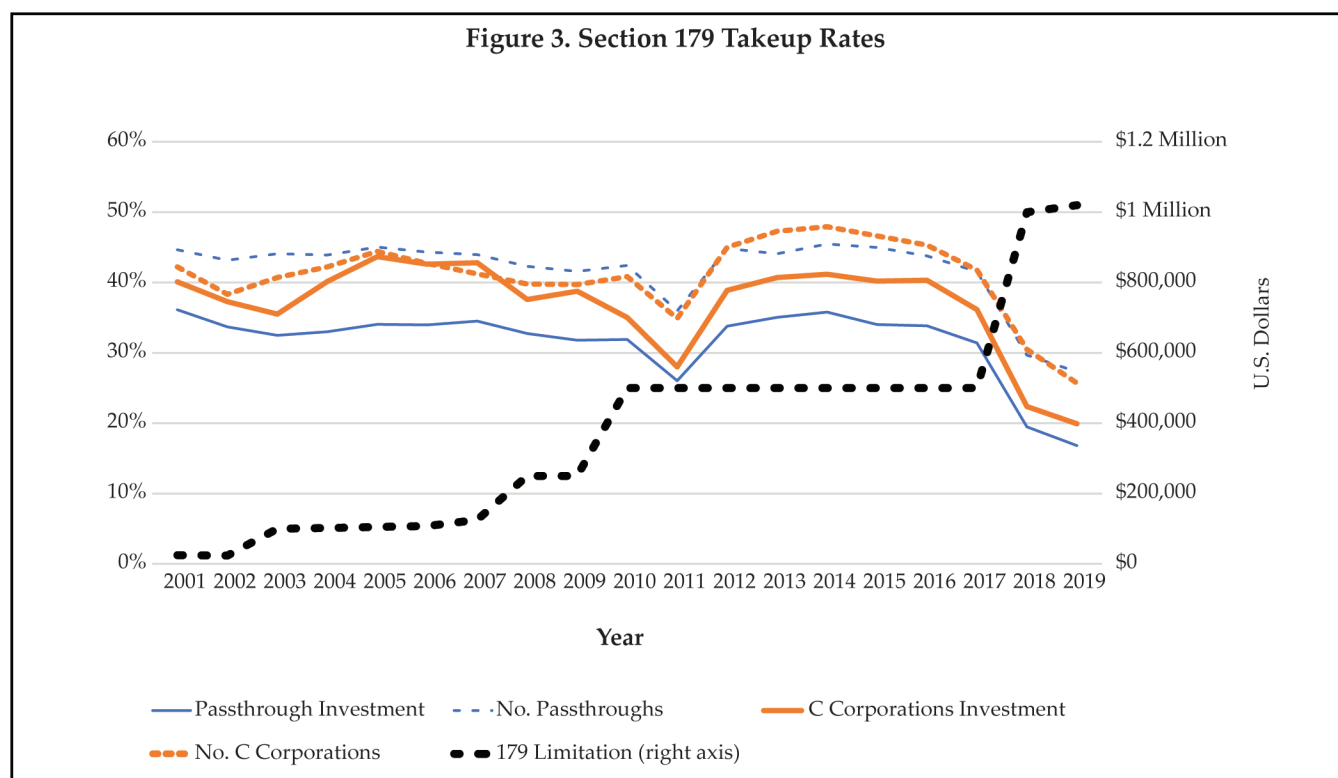
Figures 4 and 5 illuminate the relationship between expensing and profitability for section 179 and bonus depreciation, respectively. In Figure 4, the horizontal axes measure the ratio of net income (adding back any depreciation for property placed in service in the current year) to

potential expensing.¹² A value of zero means the business has zero income before depreciation for current-year investment, and a value of one means a business has exactly enough income to use the entire potential section 179 deduction in the current year. Negative values indicate that the business is incurring losses even without the deduction for depreciation for current-year investment. The size of the dots is proportional to the total investment for each bin of businesses. The left panel studies C corporations and the right panel studies passthroughs.

We restrict the sample to businesses with small enough investment that they are in the phase-in region of section 179, meaning that all their equipment investment is section 179 eligible. The figure is pooled over the years 1999-2017, excluding 2011 (when 100 percent depreciation was in effect). Thus, the data are restricted to years

¹²For C corporations, we also subtract the full NOL stock available to the corporation entering the year when computing net income. For S corporations and partnerships, we include both ordinary income and separately stated income (including rental income) from Schedule K. For individuals, we include only the income and deductions from Schedule C, Schedule F, and Schedule E rental and royalty activities.

Figure 3. Section 179 Takeup Rates



in which section 179 was (typically) more generous than bonus depreciation.

For both C corporations and passthroughs, Figure 4 shows a clear relationship between net income and the amount of section 179 takeup.¹³ Takeup is just over 10 percent for businesses in a loss position but increases rapidly as income rises, reaching a plateau at 60 to 70 percent for C corporations and 50 to 60 percent for passthroughs, once businesses have enough income to fully support the section 179 deduction.

Figure 5 performs a similar exercise for bonus depreciation. Again, the horizontal axis describes the ratio of potential bonus depreciation to income,¹⁴ and we restrict attention to businesses with enough equipment investment to be ineligible for section 179.

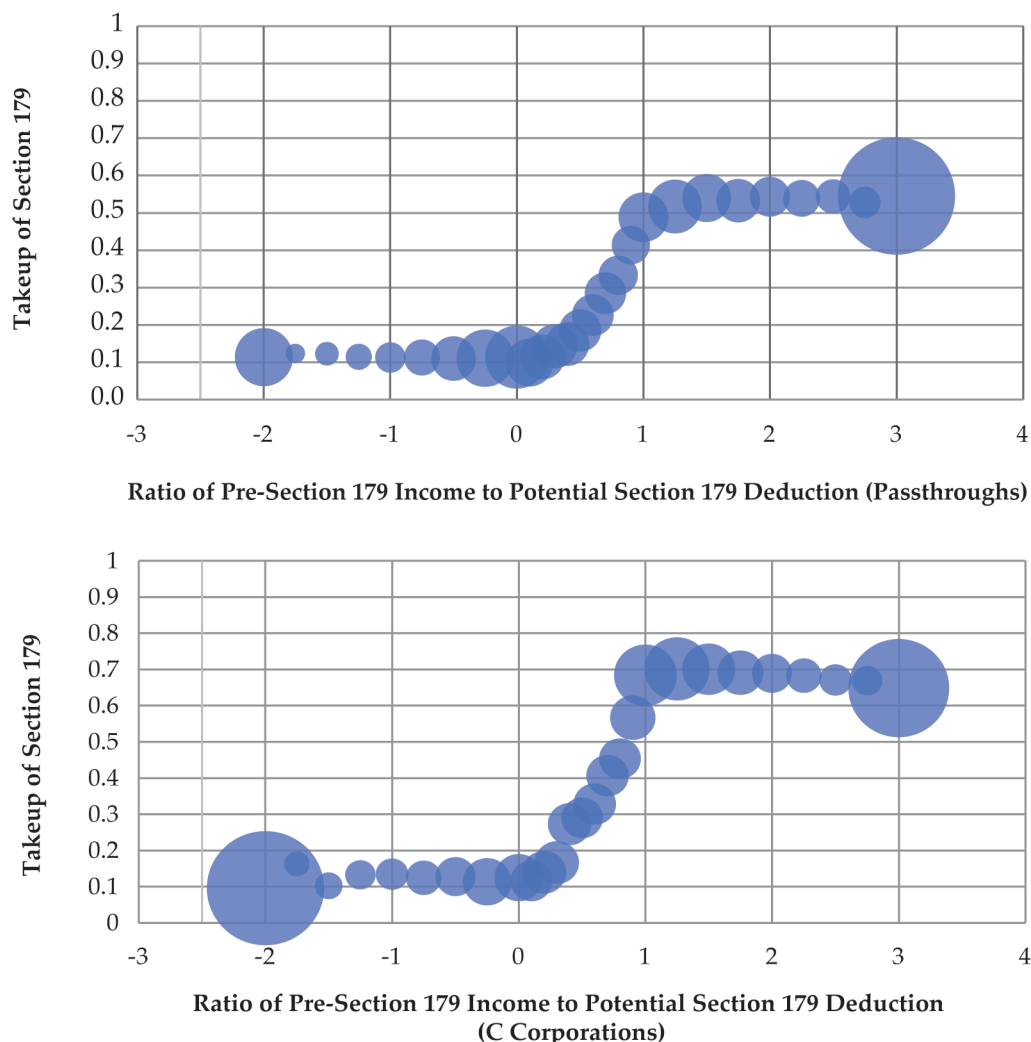
We find broadly similar results for bonus depreciation concerning section 179 expensing. Takeup increases when businesses have larger income in relation to the underlying deduction. For both C corporations and passthroughs, takeup is 40 percent to 50 percent for businesses in a loss position and approximately 80 percent for businesses with more than enough income to support the bonus depreciation deduction in the current year. The kinks at zero and one are clearly visible in the passthrough series, although the series for C corporations is somewhat noisier because the effective sample size is much smaller. There are many more businesses with relatively small amounts of investment than there are with investments beyond the section 179 limits. Also, investment by C corporations is concentrated in a relatively small number of businesses, reducing the effective sample size even further.

In the case of bonus depreciation, we might have expected a more fundamental divergence between C corporations and passthroughs if the imperfect takeup is motivated by the inability to use tax losses immediately. While C corporation losses generate NOLs that must be carried forward (or, in some years, back) to offset income

¹³ We stress that, while section 179 imposes a business income limit (i.e., the section 179 deduction is not allowed to be larger than pre-179 business income), that is not mechanically driving the results in this figure. In computing takeup, we use the section 179 deduction that would be allowed in the absence of that limitation, as would be reported on line 9 of Form 4562.

¹⁴ The numerator of this ratio is the potential deduction for bonus depreciation, not the amount of investment against which bonus depreciation would be applied.

Figure 4. Section 179 Takeup Rate and Profitability



in other years, active passthrough losses can generally offset other unrelated income of the owners of that entity.¹⁵ However, the relationship between business income and bonus depreciation takeup is qualitatively similar between C corporations and passthroughs. The presence of passive owners — whose losses can be used only to offset passive income — is one potential explanation for this behavior.

It is still somewhat puzzling that highly profitable businesses do not fully take advantage

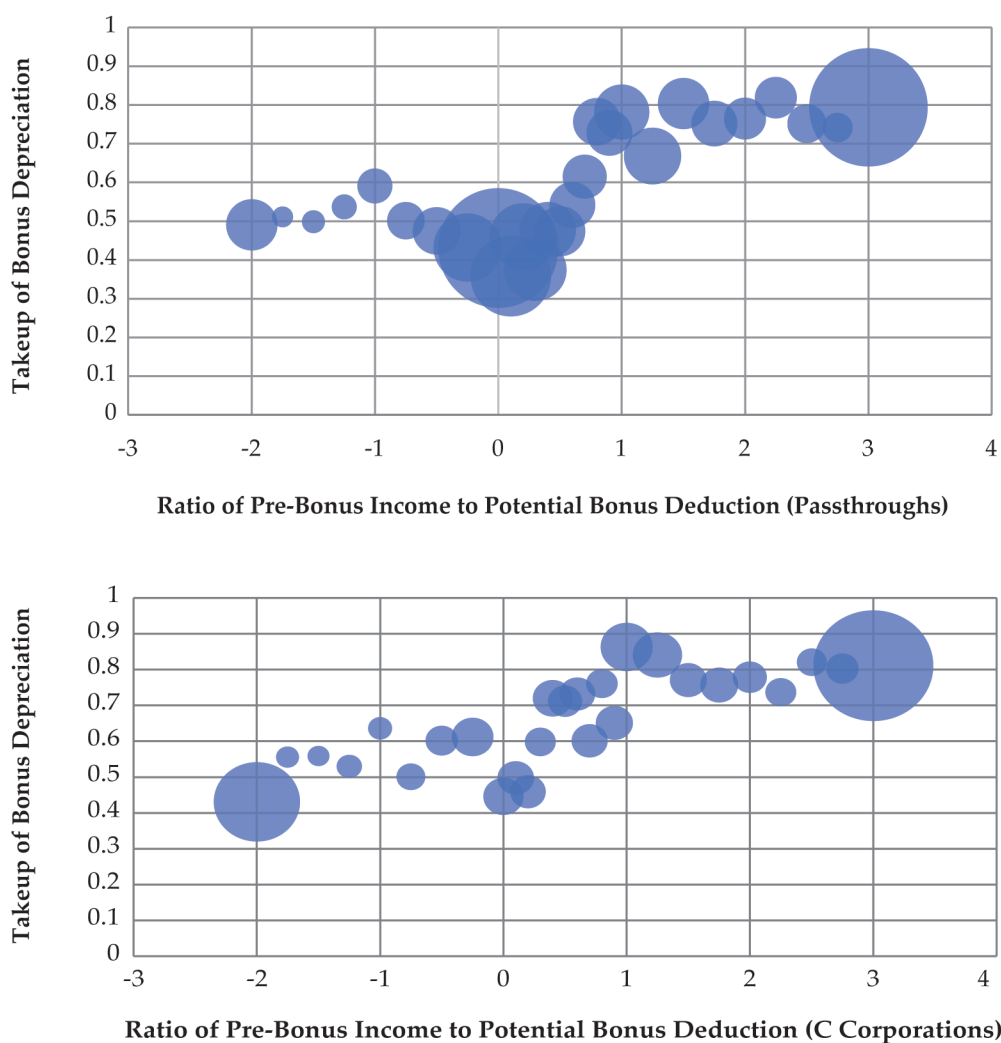
of section 179 and bonus depreciation. One possible explanation for large corporations is that managers care more about accounting profits than tax profits and decide to smooth out depreciation, even when expensing is allowed.

Conclusion

Takeup rates for bonus depreciation and section 179 expensing are well below 100 percent, even for businesses with sufficient profits to benefit from the deduction. The average takeup rate for bonus depreciation among sufficiently profitable businesses is about 80 percent, compared with 60 percent for section 179 expensing. But the scheduled phaseout of bonus

¹⁵ For instance, Lucas Goodman, Elena Patel, and Molly Saunders-Scott, "Implications of Tax Loss Asymmetry for Owners of S-Corporations," SSRN (June 9, 2021), finds that owners of S corporations can use most of their active losses in the year when they are generated, and 87 percent within five years.

Figure 5. Bonus Depreciation Takeup Rate and Profitability



depreciation beginning in 2023 should increase usage rates for section 179.

The impending phaseout of bonus depreciation will unequivocally increase marginal tax rates on equipment investment, but the extent to which it will reduce equipment investment remains in question. Past studies of

bonus depreciation have shown a wide range of investment elasticities. The business cycle is also an important influence on takeup rates for expensing, with many more businesses using bonus depreciation or section 179 during expansions than during recessions because of changes in profitability. ■