Supplemental Appendix: "Effects of Domestic Production Tax Incentives on Workers and Firms: Evidence from U.S. Employee-Employer-Matched Tax Filings"

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A. Variable Creation

Specifics of variable creation, including the relevant line items on IRS Forms 1120, 8903, and W-2, are detailed here.

Tax policy variables

Calculation of all tax policy variables uses information from Form 1120 and Form 8903 contained in the SOI stratified annual sample of C corporation tax returns.

$DPAD_{it}$ is the value of the DPAD deduction amount from line 25 of Form 1120.

$TXBL\_INC_{it}$ is the value of taxable income from line 30 of Form 1120.

τ_{it} is the statutory marginal tax rate faced by the firm before the DPAD. This is calculated by comparing taxable income before the DPAD to the statutory corporate rate schedule.

$DPGR_{it}$ is the amount of gross receipts classified as domestic production gross receipts (DGPR) from line 1 of Form 8903.

$GROSS\_RECEIPTS_{it}$ is from line 1c of Form 1120.

$QPAI_{it}$ is the amount of qualified production activities income (QPAI) from line 10b of Form 8903.

$DPAD\_CUT_{it}$ is the reduction in the marginal tax rate due to the DPAD, measured as the deduction amount ($DPAD_{it}$) divided by taxable income before the deduction ($TXBL\_INC_{it}$ + $DPAD_{it}$) times the statutory marginal tax rate faced by the firm (τ_{it}), times 100:

$$DPAD\_CUT_{it} = \left(\frac{DPAD_{it}}{(TXBL\_INC_{it} + DPAD_{it})} \right) * \tau_{it} * 100$$

$DPGR\_SHARE_{ic05}$ is the aggregate share of gross receipts classified as DGPR in a

firm's three-digit SOI industry and size category in 2005. The industry cells are three-digit industries reported to SOI. The twelve asset-size cells are defined to line up with published SOI data and feature cut-points at 0, 0.5, 1, 5, 10, 25, 50, 100, 250, 500, and 2,500 million dollars. The variable is defined as a "leave-one-out" share, excluding the firm itself, for firms in the industry-by-asset-size bin c in year 2005 (denoted as "05") as:

$$DPGR\_SHARE_{ic05} = \frac{\sum_{j \in c, j \neq i} DPGR_{j05}}{\sum_{j \in c, j \neq i} (GROSS\_RECEIPTS_{j05})},$$

where i is the firm and j is other firms in an industry. Variable winsorized at the 1% level.

D_{it} is a dummy variable equal to one if the firm faces the taxable income limitation, defined as $\mathbf{1}(TXBL\_INC_{it} + DPAD_{it} <= QPAI_{it})$.

Outcome variables

Earnings distribution measures are all based on box 5, Medicare Wages, from Form W-2. Variable winsorized at the 1% level.

$Employment_{it}$ is measured as the sum of all W-2s across a given firm in a given year as a share of a million dollars of total assets as of 2004 (line 15 from Schedule L of Form 1120). Variable winsorized at the 1% level.

$Net\ investment_{it}$ is measured as the year-over-year change in tangible capital stock, line 10b column (d) from Schedule L of Form 1120, as a share of total assets as of 2004 (line 15 from Schedule L of Form 1120). Variable winsorized at the 1% level.

Control variables

Calculation of control variables uses information from Form 1120 and follows Yagan (2015).

$Revenue_{it}$ is defined as gross receipts, line 1c of Form 1120. Variable winsorized at the 1% level.

$Profit\ Margin_{it}$ is operating profit divided by revenue. Operating profit is gross receipts less cost of goods and total deductions not accounting for officer compensation, interest, pension contributions, depreciation, and the DPAD divided by gross receipts. This is line 2 minus line 27 plus lines 12, 18, 19, 20, and 25 of Form 1120 divided by line 1c of Form 1120. Variable winsorized at the 1% level.

$Bonus_{mt}$ is a control for the bonus depreciation policy at the three-digit SOI industry m-by-year-t level and is constructed following Zwick and Mahon (2017).

ETI_{mt} is a control for repeal of the regime for extraterritorial income (ETI) at the three-digit SOI industry m-by-year-t level and is constructed following Ohrn (2018).

B. Discussion of taxable income limitation

In this appendix, we provide further discussion of the DPAD's taxable income limitation, in support of the exclusion restriction assumption for two-stage least squares. The taxable income limitation restricts the DPAD deduction amount to 9% of taxable income before accounting for the DPAD. This limit is reached when qualifying income is higher than taxable income, which can occur for a few reasons: 1) firms claim a net operating loss (NOL) carryforward, 2) they claim special deductions not allocated to the DPAD, or 3) firms' income from qualifying activities (Qualifying Production Activities Income or QPAI) is positive while income from other activities is negative. Some firms may be limited due to using an NOL carryfoward and also having a special deduction.[28]

Figure I, Panel C shows that around 40% of firms in our sample are limited in at least one year, but of the firms that are limited, the majority are limited in just one-to-three years: 11% are limited in only one year and 15% are limited in only two or three years. Very few firms are limited in every year, suggesting that the reasons for the limitation are highly idiosyncratic factors, not systematic factors that would also be related to worker outcomes. Appendix Figure F5 plots the share of limited firms from 2005 to 2015 for each of the reasons discussed above (separately including those who claim both NOLs and special deductions). The fraction of firms limited by year ranges from about 7% to about 14%. About 50% of limited firm-years were due to qualifying income exceeding taxable income for reasons other than NOLs or special deductions.

Regarding the presence of special deductions, over our sample period, special deductions are deductions for dividends received. These deductions frequently result in a taxable income limitation since they are not allocable to qualified activities for the purpose of computing the DPAD.

Other examples of idiosyncratic reasons a firm may be limited are an unexpected shock such as the realization of a worthless stock loss or changes in the rules surrounding bonus depreciation, such as occurred during the U.S. financial crisis. These shocks can move a firm

[28]During much of our sample period, a firm experiencing an NOL had the option to either carry that loss backwards to offset previous corporate profits and receive a tax refund—known as an NOL carryback—or the option to carry that loss forward for 20 years to offset future corporate profits—known as an NOL carryfowards. Carryback take-up was typically lower for smaller firms than larger firms (Zwick, 2021).

into a limitation position by reducing taxable income without affecting QPAI.

Firms may also have and use NOL carryforwards for many idiosyncratic reasons. As an example of an unexpected shock to NOL carryforward positions during our sample period, Dobridge (2021) studies the expansion of the NOL carryback period from two years to five years in 2009, during the U.S. financial crisis. This unexpected policy change resulted in a large number of firms carrying back net operating losses for tax refunds instead of retaining the carryforward on their books. Lester (2019), who studies effects of the DPAD on employment and investment, uses firms that were prevented from using the DPAD due to an NOL carryfoward as a control group for firms that took a DPAD deduction. She notes the following: "The literature shows that many firms have an NOL carryforward at some point in a firm's lifecycle (Cooper and Knittel, 2010; Edgerton, 2010) and recent work documents that almost 90% of the largest public companies report an NOL in at least one jurisdiction (Heitzman and Lester, 2021). Thus, the existence and use of a loss carryforward should not imply that the DPAD firms and control firms inherently differ. This difference instead suggests that the DPAD and control firms have simply incurred and used NOL carryforwards at different times."

To investigate whether one particular type of limitation is driving our results, we run specifications where we alter the definition of the limitation variable such that we sequentially classify firm-years limited for a specific reason as unlimited. We present results in Appendix Table G17. Panel A is the baseline specification, Panel B reclassifies firm-years limited due to NOLs as unlimited, Panel C reclassifies firm-years limited due to special deductions as unlimited, Panel D reclassifies firm-years limited due to a combination of NOLs and special deductions as unlimited, and Panel E reclassifies firm-years limited absent those deductions as unlimited. The point estimates are relatively stable across the specifications, alleviating concerns that a specific type of limitation drives the results.

C. Constructing proxies for labor market power using tax data

This appendix contains a summary of the process used to construct measures of labor market power using the tax data. We began with the population of W-2s in 2004, the year prior to the enactment of the DPAD. In particular, these data include the employee's zip code and the employer's EIN. We then link the employer's EIN with JCT's parent-subsidiary bridge, as many firms use multiple EINs to issue W-2s. The bridge links the W-2s to all U.S. employers, including C corporations, S corporations, partnerships, and tax exempts (e.g., governments). Next, we merge the W-2s with a file containing the NAICS code of the employer. Finally, we assign each zip code to its Census commuting zone, and then count the number of employees by employer, commuting zone, and two-digit NAICS code.

To construct a proxy for firm-level labor market power, we begin by constructing an industry-by-commuting zone Herfindahl-Hirschman Index index of employment:

- $HHI_{zk} = \Sigma_i s_{zik}^2$, where z indexes commuting zones, i indexes firms, k indexes two-digit NAICS codes, and s_{zik} is the share of employees in a zone employed by a single firm within a given industry. A larger HHI_{zk} indicates higher employment concentration in a given industry and commuting zone.

We are ultimately interested in creating a measure of a firm's market power across all the geographic zones in which they operate. To do so, we create a measure of the firm's average contribution to HHIs across all the zones in which they operate (defined as all commuting zones z in which a given firm has at least one employee n), as follows:

- $HHI_i^c = \frac{\Sigma_z (s_{zik}^2 / HHI_{zk})}{\Sigma_z I[n_{zi} > 0]}$

We use this measure for sample splits in the regression specification in Appendix Table G9. We define low-HHI and high-HHI observations as firm-years in the bottom and top quartiles of HHI, respectively. A larger HHI_i^c indicates higher firm market power on average across all the geographies in which a firm operates.

Note that these data have two sources of incompleteness. First, some entities (approximately 950,000 of the 6,180,000 employer entities) do not have a corresponding match in the NAICS file. Second, approximately 6 million (of the approximately 230 million) W-2s do not have a valid zip code, or do not have a zip code that matches the Census commuting zone data.

D. Adapting the Fuest et al. (2018) incidence measure to our setting

In this appendix, we present an alternative measure of labor earnings incidence in the vein of Fuest, Peichl and Siegloch (2018), who use the following framework to generate a measure of wage incidence:

Workers maximize utility ($U(C, \ell)$) by choosing consumption (C) and leisure (ℓ), where leisure is the total time (Q) not spent working ($\ell = Q - L$) and consumption equals after-tax labor income ($C = (1-t)wL$). The change in indirect utility from a change in the tax rate is then: $dV = L(1-t)dw$.

Firms maximize after-tax profits by choosing capital (K) and labor (L), $\Pi = (1-\tau)[F(K,L) - wL] - (1-\alpha\tau)rK$, where α is the share of deductible capital costs and r is the rental price of capital. The corporate tax base is $T = F(K,L) - wL - \alpha rK$, and Fuest, Peichl and Siegloch (2018) derive the change in profits with respect to a change in the corporate tax rate as $d\Pi = -d\tau T - dwL(1-\tau)$.

The elasticity of taxable income is $\hat{\delta} = \frac{dw}{d(1-\tau)}\frac{(1-\tau)}{w}$, and the wage-incidence (I^w) is the change in indirect utility over the sum of the change in indirect utility and profits: $I^w = \frac{dV}{dV+d\Pi}$. Inserting the values of dV, $d\Pi$, and $\hat{\delta}$, wage incidence can be rewritten as:

$$I^w = \frac{wL\hat{\delta}(1-t)}{(1-\tau)T - wL\hat{\delta}(t-\tau)} \tag{8}$$

In order to apply this formula to our setting, we modify the framework to estimate the wage incidence for workers in a given within-firm wage percentile (p). This is a function of individual workers' wage incomes ($w_i L_i$), workers' tax rates (t_i), firms' taxable incomes (T_j), firms' tax rates (τ_j), and the relevant elasticity ($\hat{\delta}_p$). In this setting, a worker i's change in indirect utility equals $dV_i = L_i(1-t_i)dw_i$. A firm j's profits equal $\Pi_j = (1-\tau_j)[F(K_j, L_j) - \Sigma_i w_i L_i] - (1-\alpha\tau_j)r_j K_j$ and the corporate tax base equals $T = \Sigma_j[F(K_j, L_j) - \Sigma_i w_i L_i - \alpha r_j K_j]$. For workers in each percentile group, we sum the resulting expressions over workers to arrive at percentile-specific incidence measures I_p^w:

$$I_p^w = \frac{\hat{\delta_p} \Sigma_{i \in p} w_i L_i (1 - t_i)}{\Sigma_j (1 - \tau_j) T_j - \Sigma_p \hat{\delta_p} \Sigma_{i \in p} w_i L_i (t_i - \tau_{j, i \in j})} \tag{9}$$

We apply this expression in our setting as follows:

Sample: We begin the exercise using all W-2s associated with firms in our sample in 2014. This is a year well beyond the introduction of the DPAD and the subsequent phase-in. We limit our sample to firms that claimed the DPAD in that year.

Variables:

- $\mathbf{w_i L_i}$: Form W-2 does not report the wage rate or hours worked, but it does report overall earnings, the product of w_i and L_i for a given worker at a given firm.

- $\mathbf{t_i}$: To estimate individual statutory marginal tax rates, we assume workers' taxable incomes are equal to their wage income and randomly assign half of the workers to be married and half single. We then apply the statutory marginal tax rate schedule from 2014.

- $\mathbf{T_j}$: Corporate taxable income is retrieved from line 30 of Form 1120.

- $\tau_\mathbf{j}$: To estimate corporate statutory marginal tax rates, we simply apply the statutory marginal tax rate schedule for corporate income taxes in 2014.

- $\hat{\delta_\mathbf{p}}$: For the median and mean incidence estimates, we use the corresponding full sample estimates of $\hat{\delta}$, converted from our semi-elasticity estimates. However, the primary motivation of our incidence exercise is to compare an approach that explicitly acknowledges the heterogeneity of wage effects of corporate tax cuts with those that only consider the mean or median. To this end, we separately estimate our semi-elasticities for our within-firm wage percentile bins and six firm groups (public firms and private firms in the five quintiles of employee size, where employee size is the number of employees the firm had prior to the introduction of the DPAD in 2004). As a result, for the wage estimates allowing for heterogeneity, $\hat{\delta}$ varies for each group (while it is constant within the mean and median exercises). Because our base specification estimates semi-elasticities, not elasticities, we convert to the implied elasticities by calculating

the implied percent change in the net-of-tax rate $(1-\tau)$ for a one percentage point change in the corporate tax rate, as discussed in Section IV.B.

Numerator: To calculate the numerator for a given group, we sum the after-tax wage incomes of all the individuals in the group, and multiply by the relevant elasticity. The semi-elasticities for public firms are presented in Table III, Panel D, and for the five groups of private firms are presented in Appendix Table G13. Mean and median semi-elasticities for the full sample are presented in Table II, Panel B.

Denominator: The first term in the denominator is the same for the mean, median, and percentile-by-firm-type incidence estimates, and is simply the sum of after-tax corporate income for all firms that took the DPAD in 2014. The second term is the sum, across all workers in all groups, of the pre-tax wage income times the differential in individual and corporate tax rates times the relevant elasticity. This varies across the three measures because $\hat{\delta}_p$ varies across the three measures, however, the pre-tax wage income times the difference between the individual and corporate tax rates is the same in all three measures.

Weighting: We utilize sample weights provided by SOI, recalculated to account for our various sample restrictions, to generate measures of economy-wide tax incidence for C corporations. We apply the SOI weights separately to the numerator and the denominator in the calculation, and then take the ratio of the two in our incidence estimate.

Results: The results of this exercise are presented in Table G16, showing incidence by earnings percentile group and for firm owners. Incidence estimates using semi-elasticity estimates that allow for heterogeneous responses by within-firm percentile and firm-size quantile are presented in column 1. For comparative purposes, incidence estimates using the semi-elasticities estimated on the full sample for mean and median earnings are presented in columns 2 and 3, respectively.

The overall incidence using the heterogeneous measure is 40% compared to 124% and 55% for the mean and median, respectively. In addition to these meaningful differences in the overall wage incidence, the distribution of that incidence also differs meaningfully across the within-firm wage distribution. Notably, the share of incidence flowing to the top 1% of workers is 23% when using the heterogeneous coefficient estimate, whereas the top 1% only accrues about 12% when using the coefficient estimate associated with mean earnings within

a firm and 5% for the median earnings within the firm. Owners who are also employees accrue 2.6%, 0.6%, and 0.3% using the percentile-by-type, mean, and median estimates, respectively. While the magnitudes are different than the results of the exercise in Section V, the high-level conclusion is the same: allowing for differential responses by firm size and across the within-firm wage distribution meaningfully changes the estimated incidence and the distribution of that incidence.

E. Investigating sample composition changes

In this section, we investigate whether extensive margin employment effects or other sample composition changes could be driving our earnings distribution results. For example, one pattern that could affect the distribution is if a widening in the distribution is due to firms hiring new, low-wage employees, which would boost the earnings of employees at the top relative to the bottom.

To examine this possibility, we estimate variants of specification 2 where the dependent variable is the share of new employees joining the firm in year t (or employees exiting the firm in year t) at a particular point in the distribution of incumbent employees in that year. The coefficient of interest in these regressions is interpreted as the percentage point change in the fraction of employees that were hired by a corporation into (or exited the corporation from) a given point in the earnings distribution resulting from a 1 percentage point tax rate reduction due to the DPAD. Results are shown in Appendix Figure F6, Panels A and B.

Taken together, we do not find much evidence that employee entry or exit is driving our earnings distribution results. Still, we note we can not rule out this explanation as the estimates are not precise. New employees were more likely to enter the firm at the bottom of the wage distribution—up to the 10^{th} percentile of earnings of existing employees—but there were a notable level of separations from the bottom of the distribution resulting from the DPAD as well. New employees were somewhat less likely to join at the middle of the within-firm distribution (from the 50^{th} to the 75^{th} percentiles), but there was no change in separations at this level. In terms of hiring into/exits from the top of the distribution (at the 90^{th} percentile and above), we observe the DPAD resulted in similar magnitudes of both hiring and exits at the top.

As another piece of evidence that sample composition changes are not driving our overall effects, we note that the incumbent workers—workers for which there was no sample change—see a similar pattern of larger earnings increases at the top of the distribution than the middle of the distribution as the full sample (Appendix Figure F3, Panel B). In Appendix Table G6, we find that ratios of worker earnings between high- and low-earning incumbent employees (between the 99^{th} and the 1^{st}) and between high- and median-earning incumbent employees

also increase as a result of the DPAD cut, suggesting sample changes are not leading to our overall conclusion that earnings inequality increased after the DPAD.

To further control for sample composition changes, we investigate within-worker effects of the DPAD tax rate change by estimating equation 2 at the worker level, including an individual fixed effect and excluding a firm fixed effect. In this regression, the dependent variable is the natural log of W-2 earnings for a given worker in a given year, analogous to the Fuest, Peichl and Siegloch (2018) analysis of worker heterogeneity in response to German municipal tax increases or the Duan and Moon (Forthcoming) analysis of worker earnings responses to a small business tax cut in Canada.

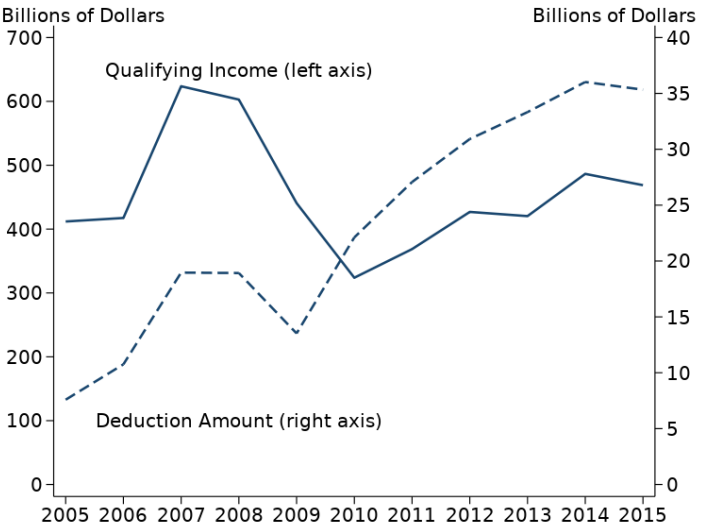
Appendix Figure F7 shows β_1 coefficient estimates from the worker-level regressions for workers in various bins of the overall earnings distribution in 2004, prior to DPAD implementation: 0-5, 5-to-10...to 99 and greater. Panel A shows results for the full sample of workers and Panel B shows results for workers in the bottom two quintiles of firm size, where we would expect to see larger earnings effects based on the larger effects observed for small firms using the baseline regression specification. The separate regressions in Panel A contain a total of about 139 million worker-year observations and the separate regressions in Panel B contain a total of around 2 million worker-year observations.

We see that for the full sample of workers, earnings increase somewhat at the top of the distribution. For workers in the bottom two employment-size quintiles, where we would expect to see the largest earnings effects at the top of the distribution, we see substantially higher average earnings effects than at the bottom or middle of the distribution. Taken together, these results suggest that sample composition changes are not causing the changes we observe in the within-firm earnings distribution.

F. Additional Figures

Figure F1: DPAD deduction rate, qualifying income, and deductions claimed

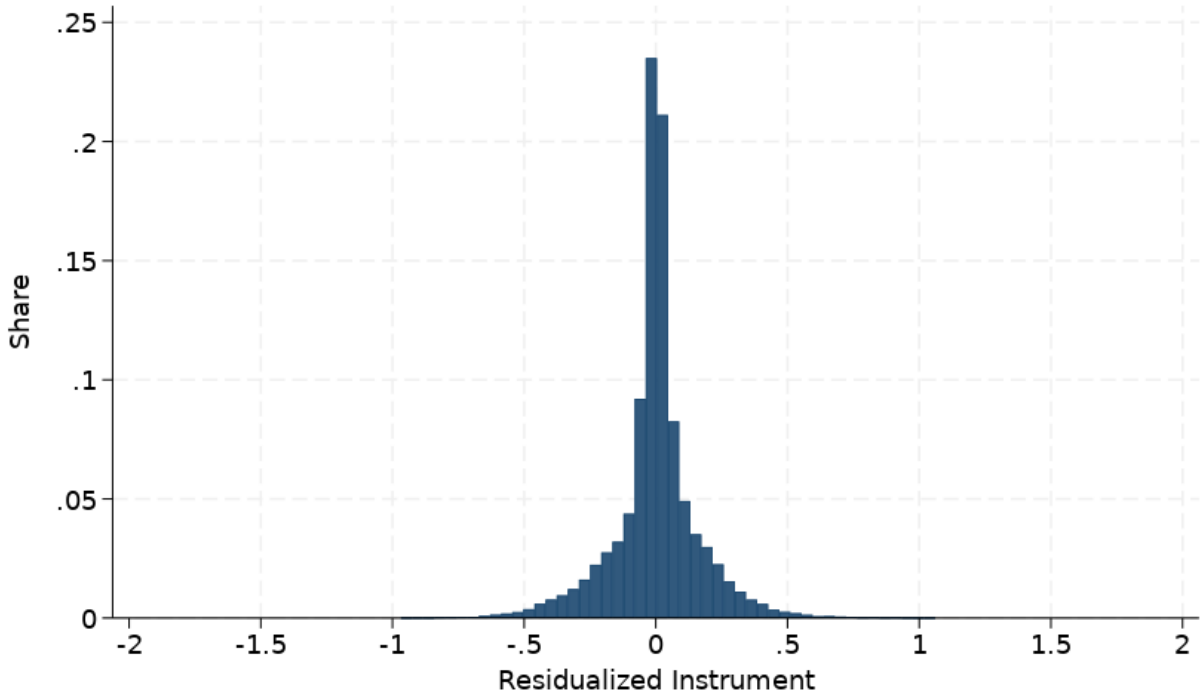
(A) Domestic Production Activities Deduction (DPAD) Rate



(B) Qualified Production Activities Income (QPAI) and DPAD deductions claimed

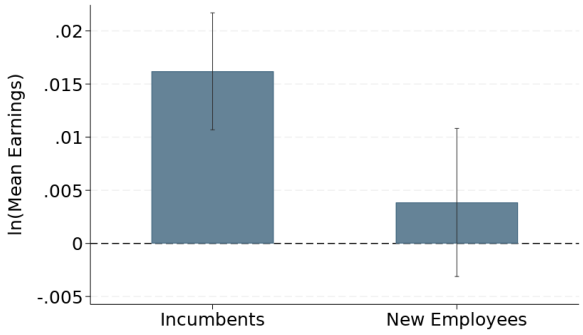
This figure presents trends from 2005 to 2015 in the DPAD deduction rate, DPAD-qualifying income, and DPAD deductions claimed. Panel A shows the phase-in of the Domestic Production Activities Deduction (DPAD) rate from 2005 to 2015. Panel B shows the value of total C corporation income that qualified for the DPAD deduction as well as the total deduction amount claimed. Source: Internal Revenue Service.

Figure F2: Distribution of DPGR share instrument

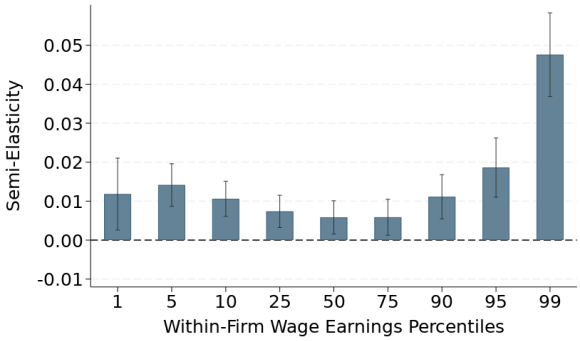


This figure presents the distribution of the residualized DPGR share instrument used in the two-stage least squares empirical strategy discussed in Section III.A. The figure presents residuals from regressing the DPGR share instrument $DPGR\_SHARE_{ic05} * \tau_{it} * DPAD\_PCT_t$ on the controls and fixed effects included in equation (1) over the period 2005 to 2015. The figure demonstrates considerable variation in the residualized instrument.

Figure F3: Effect of the DPAD on earnings of incumbent and new employees



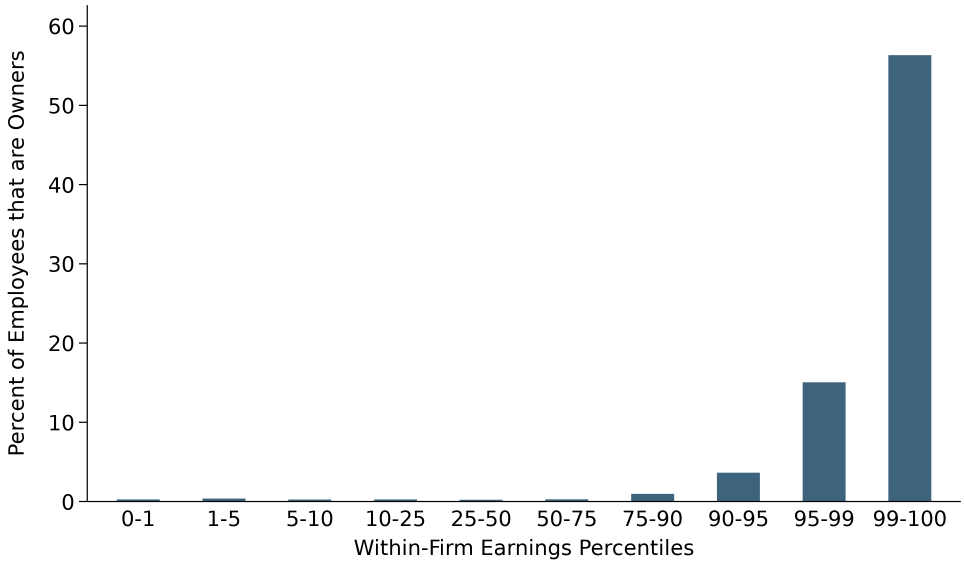
(A) Mean earnings effects for incumbent and new employees



(B) Earnings distribution effects for incumbents

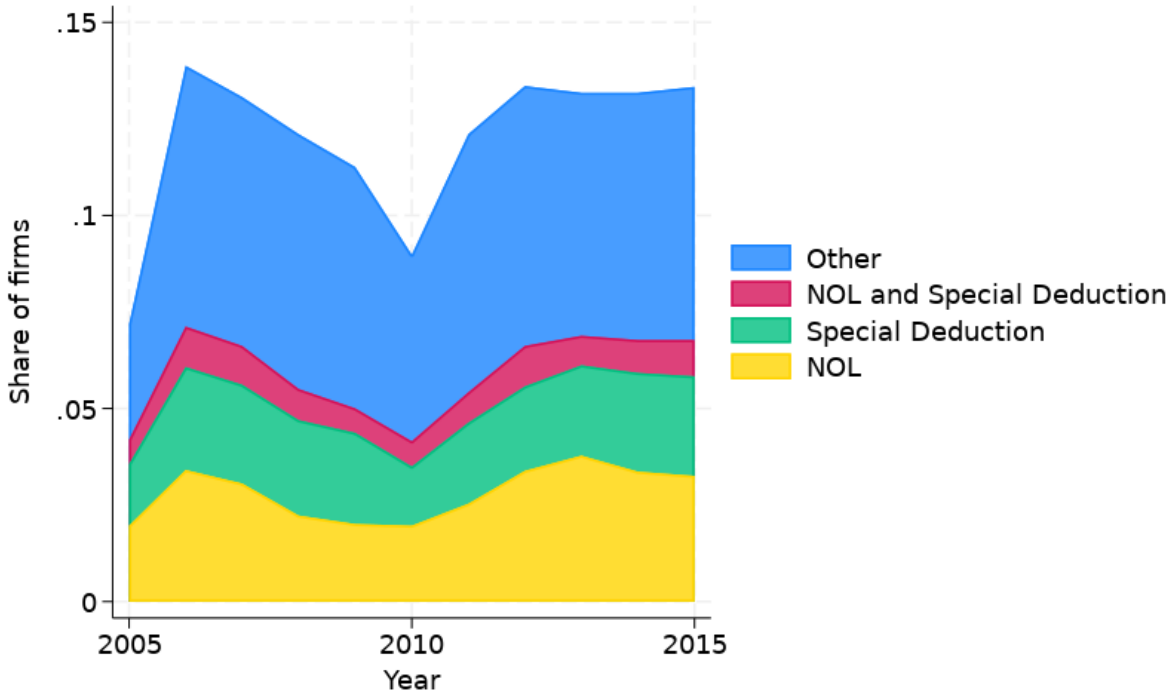
This figure presents estimates of the effect of the DPAD tax rate cut on the earnings of incumbent and new employees of a firm. All figures present coefficient estimates β_1 from the second-stage specification 2 as bars, with lines in the figures indicating the 95% confidence interval. The regression specification is described in detail in Section III.A. Panel A presents estimates of the semi-elasticity of the DPAD tax rate reduction on mean earnings for incumbent employees of a firm in the sample and for new employees in a firm in the sample. Panel B presents coefficient estimates of the semi-elasticity of the DPAD tax rate reduction on the level of earnings at various points of the within-firm earnings distribution for incumbent employees. To construct the incumbent and new employee samples, we use the panel nature of the W-2 and 1120 data. Because W-2s are annual wage filings, we only include employees in our analyses if we can observe them for three consecutive years, so that we can generally be confident the middle-year filing represents a full year of compensation. We define new employees as employees for whom we first observe earnings in the firm in year t, and who remain employed by the firm in $t+1$ and $t+2$. This individual is included in the "new" employee sample in year t, but we assign them their compensation from year $t+1$, the first full year of compensation. That is, when we run our analyses, we construct our dependent variable for year t with the year $t+1$ wage information for employees hired in year t. We define incumbent employees as employees observed in year t that were also employed by the firm in $t-1$ (and are also employed by the firm in $t+1$). We measure their compensation in year t. All firms are included in this analysis, but the last two years of the sample are dropped to reflect the forward-year measurement construction.

Figure F4: Fraction of owners across the within-firm earnings distribution: Firms in the first quintile of employment



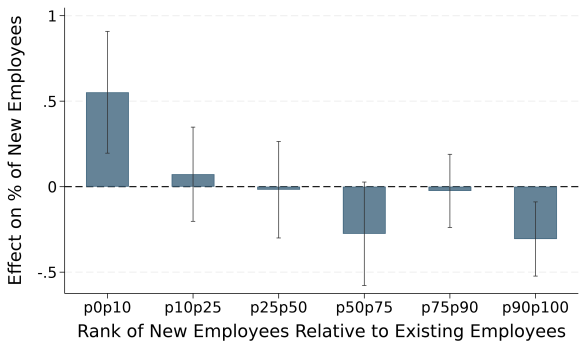
This figure shows the percent of firm owners in various bins of the within-firm earnings distribution for the lowest size quintile of firms in the sample (firms with below about 70 employees), for the sample of firm-years that reveal their owners on Schedule G of the corporate tax return, which is available starting in 2011. In our full sample, we have about 19,000 owner observations who owned 20% or more of one or more C corporations in at least one year from 2011 to 2015. Of these 19,000 owner-year observations, about 13,500 observations are also employees receiving a W-2 from the company they own in that year.

Figure F5: Prevalence of taxable income limitation by reason

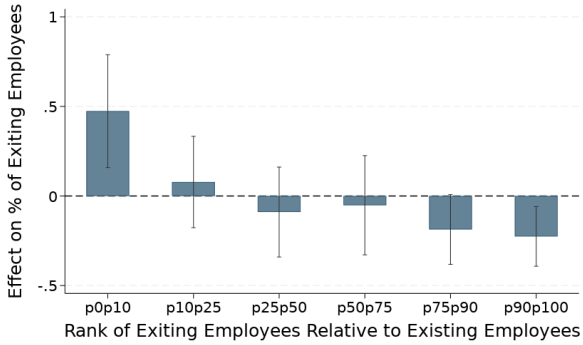


This figure presents statistics on the share of firm-years affected by the taxable income limitation over the sample. The reasons for the limitation are the presence of NOL deductions, special deductions, or both. Other represents the case when firms' income from qualifying activities (Qualifying Production Activities Income or QPAI) is positive while income from other activities is negative. This is discussed in detail in Supplemental Appendix B.

Figure F6: Effect of the DPAD on employee hires and separations at various points in the within-firm earnings distribution



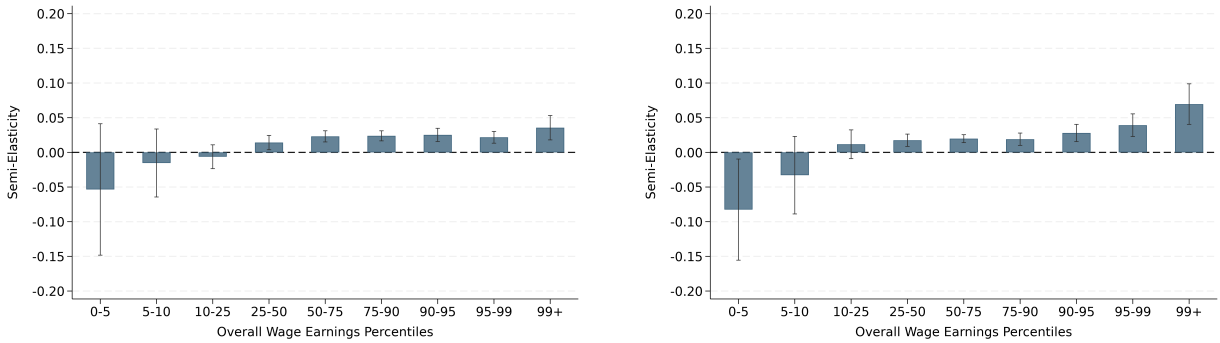
(A) Employee hires in the earnings distribution



(B) Employee separations in the earnings distribution

This figure presents estimates of the effect of the DPAD tax rate cut on employee hires into and separations from various points in the within-firm earnings distribution. The bars shown in the figure indicate coefficient estimates β_1 from the second-stage specification 2 with lines in the figure indicating the 95% confidence interval. The regression specification is described in detail in Section III.A. The dependent variable for regression results shown in Panel A is the share of share of new employees hired into various points of the earnings distribution of existing employees for a given firm i and year t. The dependent variable for regression coefficients presented in Panel B is the share of separating employees that exit from various points of the earnings distribution of existing employees for a given firm i and year t. To construct these dependent variables, we use the panel nature of the W-2 and 1120 data to isolate employees that joined or left the firm in year t. For employees that are hired into the firm, we first observe earnings for them with the firm in year t and retrieve their earnings with the firm in $t+1$, the first full year of compensation. Similarly, we can observe the earnings of incumbent employees as of year t, and limit to those at the firm the year before and year after the earnings measurement to ensure year t is a full year of compensation for incumbents. This allows us to calculate where a new employee in year t, with earnings observed in year $t+1$, fits in the distribution of incumbent employees at a firm in year t. For employees that separate from the firm in year t, we retrieve their earnings in year $t-1$, the last full year of compensation. We can then observe where the earnings of exiting employees in year $t-1$ fit in the distribution of incumbent employees at a firm in year $t-1$.

Figure F7: Worker-level analysis of DPAD earnings effects



(A) All workers

(B) Workers in the bottom two size quintiles

This figure presents worker-level estimates of the effect of the DPAD tax rate cut on worker earnings at various points in the overall worker earnings distribution. The bars shown in the figure indicate coefficient estimates β_1 from a second-stage specification similar to specification 2 with lines in the figure indicating the 95% confidence interval. In contrast to 2, the regression is estimated at the worker-year level, where the dependent variable of interest is the natural log of worker earnings, measured at the worker level each year as W-2 medicare wages. Workers are assigned into percentiles of the overall earnings distribution in 2004, prior to DPAD implementation. All regressions include worker fixed effects and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, and controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income, as detailed in Section III.A. Altogether, the separate regressions in Panel A contain around 139 million worker-year observations. The separate regressions in Panel B contain around 2 million worker-year observations. All the regressions standard errors are clustered at the industry-size level.

G. Additional Tables

Table G1: Mean inflation-adjusted earnings and the share of earnings by within-firm quantile

Within-Firm Earnings	Mean	Share
< 1st Percentile	3,912	0.00
1st - 5th Percentile	5,420	0.01
5th - 10th Percentile	8,354	0.01
10th - 25th Percentile	14,437	0.05
25th - 50th Percentile	24,373	0.15
50th - 75th Percentile	37,751	0.23
75th - 90th Percentile	56,703	0.21
90th - 95th Percentile	81,342	0.10
95th - 99th Percentile	125,518	0.12
> 99th Percentile	413,355	0.11

This table presents the mean level of inflation-adjusted earnings and share of total inflation-adjusted earnings within each within-firm quantile. Dollars are inflation adjusted to 2015 price levels using the chained Consumer Price Index, sourced from the Bureau of Labor Statistics. The data underlying the table are all individual W-2s for each firm-year pair in the analysis sample.

Table G2: Policy variables of interest, summary statistics for analysis sample

	Full Sample		Positive QPAI	
	(1) Phase-In	(2) Post-2009	(3) Phase-In	(4) Post-2009
$DPAD\_CUT_{it}$				
Mean	0.32	0.76	1.16	2.28
SD	0.63	1.21	0.66	0.97
Median	0.00	0.00	1.02	2.71
D_{it} (Limitation Dummy)				
Mean	0.11	0.12	0.39	0.39
SD	0.31	0.33	0.49	0.49
Median	0.00	0.00	0.00	0.00
$DPGR\_SHARE_{ic05}$				
Mean	0.13	0.13	0.21	0.20
SD	0.14	0.14	0.14	0.14
Median	0.09	0.09	0.19	0.19
$DPGR\_SHARE_{ic05} * \tau_{it} * DPAD\_PCT_t$				
Mean	0.14	0.24	0.36	0.58
SD	0.22	0.36	0.26	0.38
Median	0.02	0.02	0.33	0.58

This table presents summary statistics of policy variables used in the analysis. $DPAD\_CUT_{it}$ is a firm's percentage point reduction in the marginal corporate tax rate due to the deduction. D_{it} (Limitation Dummy) is a dummy variable for firms subject to the statutory taxable income limitation on the value of the deduction (as included in the first-stage regression specification 1). $DPGR\_SHARE_{ic05}$ is the aggregate share of gross receipts classified as domestic production gross receipts (DPGR), at the industry-by-size level for 2005. $DPGR\_SHARE_{ic05} * \tau_{it} * DPAD\_PCT_t$ is the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the firm-level statutory marginal tax rate before the DPAD interacted with the statutory deduction rate (as included in the first-stage regression specification 1). All statistics are calculated at the firm-year level. Columns 1 and 3 present firm-year statistics during the phase-in period for the deduction (2005 to 2009) and columns 2 and 4 present firm-year statistics for the 2010 to 2015 period. Columns 1 and 2 present mean, standard deviation, and median values (in rows) for the full sample of firm-years and columns 3 and 4 present mean, standard deviation, and median values (in rows) for firms with positive QPAI (positive DPAD-qualifying net income) in the given sample period. Statistics are derived from SOI data and authors' calculations. Variable definitions, including tax form line numbers, are included in Supplemental Appendix A.

Table G3: Heterogeneous effects of the DPAD rate reduction on the within-firm earnings distribution

	ln of worker earnings at within-firm									
	(1) Mean	(2) p1	(3) p5	(4) p10	(5) p25	(6) Median	(7) p75	(8) p90	(9) p95	(10) p99
Panel A: All Firms (N=73,216)										
$DPAD\_CUT_{it}$	0.015	-0.003	-0.003	0.001	0.008	0.006	0.006	0.007	0.014	0.040
	(0.002)	(0.001)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
Panel B: Small Firms (N=14,663)										
$DPAD\_CUT_{it}$	0.032	0.000	0.004	0.008	0.008	0.009	0.017	0.020	0.038	0.084
	(0.005)	(0.006)	(0.009)	(0.009)	(0.006)	(0.004)	(0.004)	(0.006)	(0.008)	(0.014)
Panel C: Large Firms (N=14,640)										
$DPAD\_CUT_{it}$	0.013	0.001	0.003	0.003	0.008	0.006	0.005	0.007	0.012	0.024
	(0.004)	(0.002)	(0.005)	(0.006)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.007)
Panel D: Public Firms (N=18,320)										
$DPAD\_CUT_{it}$	0.005	-0.002	-0.004	-0.005	-0.003	-0.005	-0.002	-0.001	0.003	0.021
	(0.004)	(0.002)	(0.005)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)
Panel E: Multinational Firms (N=25,621)										
$DPAD\_CUT_{it}$	0.007	-0.004	-0.007	-0.007	-0.001	-0.002	-0.003	-0.000	0.006	0.027
	(0.003)	(0.002)	(0.004)	(0.005)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)

Table G3: Heterogeneous effects of the DPAD rate reduction on the within-firm earnings distribution (continued)

	ln of worker earnings at within-firm									
	(1) Mean	(2) p1	(3) p5	(4) p10	(5) p25	(6) Median	(7) p75	(8) p90	(9) p95	(10) p99
Panel F: High Treatment Intensity (N=19,431)										
$DPAD\_CUT_{it}$	0.014***	-0.002	-0.006	-0.002	0.006	0.006**	0.007***	0.005	0.013***	0.035***
	(0.003)	(0.002)	(0.005)	(0.005)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.006)
Panel G: Low Treatment Intensity (N=19,456)										
$DPAD\_CUT_{it}$	0.014***	-0.001	-0.002	0.001	0.009**	0.006	0.006	0.007	0.011**	0.036***
	(0.003)	(0.003)	(0.005)	(0.005)	(0.004)	(0.003)	(0.003)	(0.004)	(0.005)	(0.008)

This table presents estimates of the semi-elasticity of within-firm earnings with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_Cut_{it}$) across the full within-firm earnings distribution for the full sample of firms and for various firm subsamples. The dependent variables are measured at the firm-year level and are the natural log of earnings at various points in the within-firm earnings distribution. Column 1 presents results for the natural log of mean earnings and columns 2 through 10 present results for the natural log of the 1st percentile of earnings through the 99th. Panel A presents results for all firms. Panels B and C present results for subsamples of small and large firms quintiles split by total employment in 2004. Panel D presents results for publicly traded firms and Panel E presents results for multinational firms. Panels F and G present results for high- and low-DPAD-treatment-intensity subsamples of firms. The regressions are estimated using the second-stage empirical specification 2. The dependent variables are the natural log of earnings at various points in the within-firm earnings distribution and are listed in the first column of the table. The construction of subsamples in Panels B to E is described in Section IV. The DPAD treatment intensity variable is defined as the firm mean of $DPAD\_Cut_{it}$ over the sample period, for firms with positive qualified production activities income (QPAI) in at least one year of the sample. Low- and high-DPAD-intensity firms are defined as firms below and above the median of DPAD treatment intensity, respectively. Standard errors are presented in parentheses below coefficient estimates. Instrumental variables included in the specification are: 1) the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the statutory deduction rate interacted with the firm-level statutory marginal tax rate before the DPAD, and 2) a dummy variable for whether a firm is subject to the DPAD taxable income limitation in a given year. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Variable construction is described in Sections II.B and III.A and more detailed variable descriptions, including tax form line numbers, are found in Supplemental Appendix A. Standard errors are clustered at the industry-size level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G4: Summary statistics by DPAD treatment intensity

	Overall		Low		High	
	(1) Mean	(2) SD	(3) Mean	(4) SD	(5) Mean	(6) SD
Within-Firm Earnings (Thou.)						
Mean	51.3	28.3	52.8	28.5	52.3	24.6
1st Percentile	5.1	1.6	5.1	1.5	5.2	1.5
5th Percentile	8.6	4.8	8.9	4.7	9.1	4.6
10th Percentile	13.1	8.0	13.7	7.9	14.3	7.8
25th Percentile	24.1	13.1	25.2	12.8	26.2	12.1
50th Percentile	38.3	19.1	40.0	18.7	40.1	16.8
75th Percentile	59.0	32.2	60.8	31.0	59.1	26.3
90th Percentile	92.0	62.8	92.8	56.8	89.1	55.7
95th Percentile	126.0	85.6	127.4	84.8	120.1	69.1
99th Percentile	286.0	282.0	285.3	278.8	283.1	257.1
Other Firm Outcomes						
Employment (per million dollars of 2004 assets)	11.504	16.599	9.279	12.560	9.227	10.833
Net Investment (per dollar of 2004 assets)	0.01	0.07	0.01	0.07	0.01	0.07
Levels of Firm Outcomes						
Employment	2,614	8,088	3,375	9,235	3,060	8,444
Net Investment (Millions)	7	55	11	70	7	55
Pre-period Average Assets (Millions)	929	3,539	1,435	4,576	1,209	4,028
Policy Variables						
$DPAD\_CUT_{it}$	0.57	1.02	0.44	0.83	1.69	1.18
$DPGR\_SHARE_{ic05} * \tau_{it} * DPAD\_PCT_t$	0.20	0.31	0.21	0.32	0.45	0.37
D_{it}	0.12	0.32	0.10	0.30	0.33	0.47
N Firms	4,576		1,216		1,217	

This table presents summary statistics for the analysis sample at the firm-year level for outcome and control variables used in the analysis for the full sample of firms as well as the low- and high-DPAD-intensity subsamples of firms. Columns 1 and 2 present means and standard deviations, respectively, for the full analysis sample. Columns 3 and 4 present means and standard deviations, respectively, for firm-years in the low-DPAD-intensity subsample. Columns 5 and 6 present means and standard deviations, respectively, for firm-years in the high-DPAD-intensity subsample. The DPAD treatment intensity variable is defined as the firm mean of $DPAD\_Cut_{it}$ over the sample period, for firms with positive qualified production activities income (QPAI) in at least one year of the sample. Low- and high-DPAD-intensity firms are defined as firms below and above the median of DPAD treatment intensity, respectively. Data are derived from employee-level Form W-2 filings, firm-level corporate tax filings (Form 1120 and related schedules), and authors' calculations. Sample construction is described in Section II.A and the number of observations included in the full sample is 73,216. All percentile estimates are averages of the 10 observations around the percentile cutoff to preserve tax filing confidentiality. Variable construction is described in Sections II.B and III.A and more detailed variable descriptions, including tax form line numbers, are found in Supplemental Appendix A.

Table G5: Firm characteristics by DPAD treatment intensity

	Overall		Low		High	
	(1) Mean	(2) SD	(3) Mean	(4) SD	(5) Mean	(6) SD
Firm Characteristics						
Age	27	10	27	10	28	10
Revenue	927	3,150	1,391	4,085	1,157	3,524
Revenue Growth	1.069	0.235	1.069	0.246	1.075	0.214
As a Share of Assets:						
Employees	9.515	13.199	7.563	9.505	7.385	8.252
Tangible Assets	0.220	0.192	0.214	0.174	0.223	0.159
Cash	0.103	0.134	0.093	0.127	0.093	0.119
Debt	0.572	0.306	0.553	0.283	0.503	0.262
EBITDA	0.13	0.13	0.12	0.11	0.15	0.10
N Firms	4,576		1,216		1,217	

This table presents summary statistics for the analysis sample at the firm-year level for a number of additional variables for the full sample of firms as well as the low- and high-DPAD-intensity subsamples of firms. Columns 1 and 2 present means and standard deviations, respectively, for the full analysis sample. Columns 3 and 4 present means and standard deviations, respectively, for firm-years in the low-DPAD-intensity subsample. Columns 5 and 6 present means and standard deviations, respectively, for firm-years in the high-DPAD-intensity subsample. The DPAD treatment intensity variable is defined as the firm mean of $DPAD\_Cut_{it}$ over the sample period, for firms with positive qualified production activities income (QPAI) in at least one year of the sample. Low- and high-DPAD-intensity firms are defined as firms below and above the median of DPAD treatment intensity, respectively. Data are derived from employee-level Form W-2 filings, firm-level corporate tax filings (Form 1120 and related schedules), and authors' calculations. Sample construction is described in Section II.A and the number of observations included in the full sample is 73,216. All percentile estimates are averages of the 10 observations around the percentile cutoff to preserve tax filing confidentiality. Firm age is calculated using date of incorporation. Revenue is gross receipts reported on line 1c of Form 1120. Assets are reported on Schedule L line 15(d). Tangible assets are reported on Schedule L line 10(a) less line 10(b). Cash is line 1(d) of Form 1120 Schedule L. Debt is calculated as the sum of Schedule L lines 16(d)-21(d). EBITDA is calculated from Form 1120 as net income (line 28) plus depreciation (line 20), net interest expense (line 18 less line 5), taxes paid (line 17), and the DPAD (line 25). Revenue growth is calculated as the percent change in revenue.

Table G6: The DPAD and within-firm earnings ratios

	(1) ln(p75/p25)	(2) ln(p90/p10)	(3) ln(p95/p5)	(4) ln(p99/p1)	(5) ln(p95/p50)	(6) ln(p99/p50)
Panel A: All Employees (N=73,216)						
$DPAD\_CUT_{it}$	-0.002	0.005	0.016***	0.043***	0.008***	0.034***
	(0.002)	(0.003)	(0.004)	(0.005)	(0.002)	(0.004)
Panel B: Incumbent Employees (N=67,881)						
$DPAD\_CUT_{it}$	-0.001	0.001	0.004	0.036***	0.013***	0.042***
	(0.002)	(0.003)	(0.004)	(0.007)	(0.003)	(0.005)

This table presents estimates of the semi-elasticity of the ratio of within-firm earnings at different points in the earnings distribution with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_CUT_{it}$). Results are estimated using the second-stage empirical specification 2. Outcome variables presented in columns 1 to 6 are the natural log of the ratios of the 75th to 25th percentile of within-firm earnings, the 90th to the 10th percentile, the 95th to the 5th percentile, the 99th to the 1st percentile, the 95th to the 50th percentile, and the 99th to the 50th percentile, respectively. Panel A presents results for earnings ratios of the full sample of workers within a firm-year and Panel B presents results for earnings ratios of incumbent workers within a firm-year. Standard errors are presented in parentheses below coefficient estimates. Instrumental variables included in the specification are: 1) the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the statutory deduction rate interacted with the firm-level statutory marginal tax rate before the DPAD, and 2) a dummy variable for whether a firm is subject to the DPAD taxable income limitation in a given year. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Standard errors are clustered at the industry-size level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G7: Summary statistics by firm size

	Overall		Small		Large	
	(1) Mean	(2) SD	(3) Mean	(4) SD	(5) Mean	(6) SD
Within-Firm Earnings (Thou.)						
Mean	51.3	28.3	50.1	28.0	52.6	30.4
1st Percentile	5.1	1.6	5.5	2.1	4.9	1.2
5th Percentile	8.6	4.8	8.8	5.2	8.5	4.7
10th Percentile	13.1	8.0	12.8	7.9	13.3	8.6
25th Percentile	24.1	13.1	23.0	12.2	24.6	14.8
50th Percentile	38.3	19.1	36.7	17.6	39.3	21.4
75th Percentile	59.0	32.2	56.8	31.8	60.4	33.3
90th Percentile	92.0	62.8	92.3	68.8	92.5	61.2
95th Percentile	126.0	85.6	135.5	102.2	123.4	78.7
99th Percentile	286.0	282.0	311.5	335.1	262.3	229.8
Other Firm Outcomes						
Employment (per million dollars of assets)	11.504	16.599	15.625	20.615	10.148	16.438
Net Investment (per dollar of assets)	0.012	0.072	0.007	0.077	0.014	0.064
Levels of Firm Outcomes						
Employment	2,614	8,088	74	276	11,255	15,110
Net Investment (Millions)	7	55	1	17	27	110
Pre-period Average Assets (Millions)	929	3,539	59	906	4,026	6,887
Policy Variables						
$DPAD\_CUT_{it}$	0.57	1.02	0.36	0.86	0.71	1.07
$DPGR\_SHARE_{ic05} * \tau_{it} * DPAD\_PCT_t$	0.20	0.31	0.11	0.19	0.28	0.41
D_{it}	0.12	0.32	0.08	0.27	0.14	0.34
N Firms	4,576		917		915	

This table presents summary statistics for the analysis sample at the firm-year level for outcome and control variables used in the analysis for the full sample of firms as well as small and large firms in the sample. Columns 1 and 2 present means and standard deviations, respectively, for the full analysis sample. Columns 3 and 4 present means and standard deviations, respectively, for firm-years in the first quintile of the employee-size distribution as of 2004. Columns 5 and 6 present means and standard deviations, respectively, for firm-years in the fifth quintile of the employee-size distribution as of 2004. Data are derived from employee-level Form W-2 filings, firm-level corporate tax filings (Form 1120 and related schedules), and authors' calculations. Sample construction is described in Section II.A and the number of observations included in the full sample is 73,216. All percentile estimates are averages of the 10 observations around the percentile cutoff to preserve tax filing confidentiality. Variable construction is described in Sections II.B and III.A and more detailed variable descriptions, including tax form line numbers, are found in Supplemental Appendix A.

Table G8: Firm characteristics by firm size

	Overall		Small		Large	
	(1) Mean	(2) SD	(3) Mean	(4) SD	(5) Mean	(6) SD
Firm Characteristics						
Age	27	10	28	10	26	11
Revenue	927	3,150	77	673	3,808	6,057
Revenue Growth	1.069	0.235	1.064	0.249	1.066	0.204
As a Share of Assets:						
Employees	9.515	13.199	13.094	16.481	8.206	12.737
Tangible Assets	0.220	0.192	0.210	0.211	0.218	0.180
Cash	0.103	0.134	0.134	0.158	0.063	0.089
Debt	0.572	0.306	0.570	0.323	0.612	0.269
EBITDA	0.13	0.13	0.15	0.15	0.13	0.11
N Firms	4,576		917		915	

This table presents summary statistics for the analysis sample at the firm-year level for a number of additional variables for the full sample of firms as well as small and large firms in the sample. Columns 1 and 2 present means and standard deviations, respectively, for the full analysis sample. Columns 3 and 4 present means and standard deviations, respectively, for firm-years in the first quintile of the employee-size distribution as of 2004. Columns 5 and 6 present means and standard deviations, respectively, for firm-years in the fifth quintile of the employee-size distribution as of 2004. Data are derived from employee-level Form W-2 filings, firm-level corporate tax filings (Form 1120 and related schedules), and authors' calculations. Sample construction is described in Section II.A and the number of observations included in the full sample is 73,216. All percentile estimates are averages of the 10 observations around the percentile cutoff to preserve tax filing confidentiality. Firm age is calculated using date of incorporation. Revenue is gross receipts reported on line 1c of Form 1120. Assets are reported on Schedule L line 15(d). Tangible assets are reported on Schedule L line 10(a) less line 10(b). Cash is line 1(d) of Form 1120 Schedule L. Debt is calculated as the sum of Schedule L lines 16(d)-21(d). EBITDA is calculated from Form 1120 as net income (line 28) plus depreciation (line 20), net interest expense (line 18 less line 5), taxes paid (line 17), and the DPAD (line 25). Revenue growth is calculated as the percent change in revenue.

Table G9: Heterogeneous effects of the DPAD on the within-firm earnings distribution: Financial constraints and labor market power

	ln of worker earnings at within-firm									
	(1) Mean	(2) p1	(3) p5	(4) p10	(5) p25	(6) Median	(7) p75	(8) p90	(9) p95	(10) p99
Panel A: High-Cash Firms (N=17,842)										
$DPAD\_CUT_{it}$	0.015***	-0.009**	-0.009	-0.008	0.006	0.008**	0.005	0.005	0.013**	0.031***
	(0.004)	(0.004)	(0.007)	(0.007)	(0.005)	(0.004)	(0.004)	(0.004)	(0.005)	(0.010)
Panel B: Low-Cash Firms(N=17,799)										
$DPAD\_CUT_{it}$	0.013***	-0.001	-0.004	0.003	0.007	0.006	0.004	0.002	0.008	0.036***
	(0.004)	(0.003)	(0.006)	(0.006)	(0.004)	(0.003)	(0.004)	(0.005)	(0.005)	(0.007)
Panel C: High-HHI Firms (N=18,320)										
$DPAD\_CUT_{it}$	0.010***	-0.004	-0.010**	-0.002	0.007	0.005	0.003	0.002	0.006	0.025***
	(0.003)	(0.002)	(0.005)	(0.005)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)
Panel D: Low-HHI Firms (N=18,279)										
$DPAD\_CUT_{it}$	0.007	-0.008**	-0.005	-0.011	-0.007	-0.005	-0.001	0.001	0.009	0.030***
	(0.004)	(0.004)	(0.006)	(0.006)	(0.005)	(0.004)	(0.004)	(0.005)	(0.006)	(0.010)

This table presents estimates of the semi-elasticity of within-firm earnings with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_Cut_{it}$) for subsamples of high- and low-cash firms as well as high- and low-HHI firms (i.e., firms with high and low labor market power). The regressions are estimated using the second-stage empirical specification 2 as described in Section III.A. The dependent variables are the natural log of earnings at various points in the within-firm earnings distribution. Column 1 presents results for the natural log of mean earnings and columns 2 through 10 present results for the natural log of the 1^{st} percentile of earnings through the 99^{th}. Variable creation is described in Section A. Panels A and B present results for high-cash firms and low-cash firms, respectively. Panels C and D present results for high-HHI firms and low-HHI firms, respectively. The construction of subsamples is described in Section IV.C and Supplemental Appendix C describes the creation of the firm-level HHI variable. Standard errors are presented in parentheses below coefficient estimates. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Standard errors are clustered at the industry-size level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G10: Effects of the DPAD rate reduction on gross investment

	(1) Gross Inv to Assets
Panel A: All Firms (N=73,216)	
$DPAD\_CUT_{it}$	0.000
	(0.001)
Panel B: Small Firms (N=14,663)	
$DPAD\_CUT_{it}$	0.002
	(0.003)
Panel C: Large Firms (N=14,640)	
$DPAD\_CUT_{it}$	0.001
	(0.001)
Panel D: Public Firms (N=18,320)	
$DPAD\_CUT_{it}$	0.004***
	(0.001)
Panel E: Multinational Firms (N=25,621)	
$DPAD\_CUT_{it}$	0.003***
	(0.001)

This table presents estimates of the effect of a one percentage point reduction in the marginal corporate tax rate due to the DPAD ($DPAD\_Cut_{it}$) on firm gross investment. Gross investment is measured as the sum of all property placed in service, reported on Form 4562, as a share of assets in 2004. The coefficients are estimated using the second-stage empirical specification 2 as described in Section III.A. The dependent variables are measured at the firm-year level. Panel A presents results for the full firm sample, Panels B and C present results for subsamples of small and large firms quintiles by total employment in 2004. Panel D presents results for publicly traded firms and Panel E presents results for multinational firms. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G11: Effects of the DPAD rate reduction on other firm outcomes

	(1) W2 earnings	(2) Tax	(3) Pre-tax	(4) After-tax	(5) EBITDA per worker
$DPAD\_CUT_{it}$	0.026***	0.011***	0.081***	0.070***	0.015***
	(0.003)	(0.000)	(0.005)	(0.005)	(0.002)
Observations	73,216	73,216	73,216	73,216	73,216

This table presents estimates of the effect of a one percentage point reduction in the marginal corporate tax rate due to the DPAD ($DPAD\_Cut_{it}$) on other firm outcomes. The coefficients are estimated using the second-stage empirical specification 2 as described in Section III.A. The dependent variables are measured at the firm-year level. Outcome variables presented in columns 1 to 4 are scaled by pre-treatment assets, as of 2004. Column 1 presents results for total W-2 earnings, measured as the sum of all earnings reported on Form W2 for the firm-year. Column 2 presents results for total taxes paid, measured as line 31 of Form 1120. Column 3 presents results for pre-tax income, measured as gross profit reported on Form 1120 line 3. Column 4 presents results for after-tax income, measured as pre-tax income less tax. Column 5 presents results for earnings before interest, taxes and depreciation (EBITDA), calculated from Form 1120 as net income (line 28) plus depreciation (line 20), net interest expense (line 18 less line 5), taxes paid (line 17), and the DPAD (line 25). EBITDA is scaled by the count of W-2s for each-firm year. All variables are winsorized at the 1% level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G12: Firm-level wage deductions as reported on Form 1120

	ln of		
	(1) Total	(2) Non-Officer	(3) Officer
$DPAD\_CUT_{it}$	0.064***	0.062***	0.090***
	(0.006)	(0.006)	(0.007)
Observations	73,155	73,042	65,524

This table presents estimates of the semi-elasticity of total firm wage deductions (column 1), officer wage deductions (column 2), and non-officer wage deductions (column 3) as reported on Form 1120, with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_CUT_{it}$). Officer wage deductions are measured as line 12 from Form 1120. Non-officer wage deductions are measured as the sum of lines 13 from Form 1120 plus line 3 from Schedule A of Form 1120. Total wage deductions are measured as measured as the sum of officer and non-officer wage deductions. The dependent variables in the regressions are the natural log of the deduction category. Results are estimated using the second-stage empirical specification 2. Standard errors are presented in parentheses below coefficient estimates. Instrumental variables included in the specification are: 1) the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the statutory deduction rate interacted with the firm-level statutory marginal tax rate before the DPAD, and 2) a dummy variable for whether a firm is subject to the DPAD taxable income limitation in a given year. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Standard errors are clustered at the industry-size level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G13: Earnings effects for private firms by within-firm earnings percentile, by firm employment size quintile

	ln of worker earnings at within-firm									
	(1) Mean	(2) p1	(3) p5	(4) p10	(5) p25	(6) Median	(7) p75	(8) p90	(9) p95	(10) p99
Panel A: Bottom quintile (N=13,913)										
$DPAD\_CUT_{it}$	0.036***	0.002	0.004	0.008	0.011	0.011***	0.021***	0.024***	0.044***	0.095***
	(0.005)	(0.006)	(0.009)	(0.008)	(0.006)	(0.004)	(0.004)	(0.006)	(0.008)	(0.014)
Panel B: Second (N=13,088)										
$DPAD\_CUT_{it}$	0.020***	-0.013***	-0.014	-0.006	0.009	0.011***	0.011***	0.009	0.019***	0.050***
	(0.005)	(0.004)	(0.008)	(0.007)	(0.005)	(0.004)	(0.004)	(0.005)	(0.006)	(0.011)
Panel C: Third (N=11,995)										
$DPAD\_CUT_{it}$	0.021***	-0.001	0.000	0.007	0.017***	0.015***	0.011***	0.009**	0.017***	0.050***
	(0.003)	(0.003)	(0.005)	(0.006)	(0.005)	(0.003)	(0.003)	(0.004)	(0.004)	(0.010)
Panel D: Fourth (N=10,384)										
$DPAD\_CUT_{it}$	0.010***	-0.001	0.002	0.010	0.009	0.004	0.002	0.004	0.008	0.024***
	(0.004)	(0.003)	(0.006)	(0.007)	(0.006)	(0.005)	(0.004)	(0.004)	(0.004)	(0.007)
Panel E: Top Quintile (N=5,475)										
$DPAD\_CUT_{it}$	0.028***	0.006	0.016**	0.022***	0.028***	0.021***	0.016***	0.019***	0.025***	0.041***
	(0.007)	(0.003)	(0.007)	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)	(0.008)	(0.013)

This table presents estimates of the semi-elasticity of within-firm earnings with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_CUT_{it}$), at various points in the within-firm earnings distribution, for privately owned firms in the five firm size quintiles as calculated by total firm employment in 2004. Private firms are defined as those that never report publicly held status on Schedule M-3 in the sample period. Each cell in the table reports the coefficient β from the second-stage empirical specification 2. Column 1 presents results for the natural log of mean earnings and columns 2 through 10 present results for the natural log of the 1st percentile of earnings through the 99th. The dependent variables are the natural log of earnings at various points in the within-firm earnings distribution. Standard errors are presented in parentheses below coefficient estimates. Panels A to E present results for the bottom to the top firm size quintiles. Instrumental variables included in the specification are: 1) the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the statutory deduction rate interacted with the firm-level statutory marginal tax rate before the DPAD, and 2) a dummy variable for whether a firm is subject to the DPAD taxable income limitation in a given year. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Standard errors are clustered at the industry-size level. ***, **, and * indicate significance at the 1%, 5% and 10% level, respectively.

Table G14: Details of DPAD labor incidence calculations, by earnings percentile group and ownership status

Panel A: Total firm tax savings due to DPAD in 2014 ($Billions)

Calculated using a firm's predicted deduction magnitude by group (1)	*Calculated using a firm's predicted deduction magnitude for the mean and median* (2)
16.24	16.79

Panel B: DPAD worker earnings gain in 2014, by workers' percentile of the within-firm earnings distribution and ownership status

	Calculated using "percentile-by-firm-type" earnings semi-elasticities		*Calculated using the mean earnings semi-elasticitiy*		*Calculated using the estimated median earnings semi-elasticitiy*	
Within-firm earnings percentile and ownership status	Total DPAD worker earnings gain ($Billions) (1)	Total DPAD worker earnings gain (percent of total firm DPAD tax savings) (2)	Total DPAD worker earnings gain ($Billions) (3)	Total DPAD worker earnings gain (percent of total firm DPAD tax savings) (4)	Total DPAD worker earnings gain ($Billions) (5)	Total DPAD worker earnings gain (percent of total firm DPAD tax savings) (6)
0-5	-0.02	-0.1	0.18	**1.1**	0.07	**0.4**
5-10	-0.05	-0.3	0.35	**2.1**	0.14	**0.8**
10-25	-0.16	-1.0	1.93	**11.5**	0.76	**4.5**
25-50	0.65	4.0	5.35	**31.9**	2.10	**12.5**
50-75	-0.12	-0.8	7.96	**47.4**	3.13	**18.6**
75-90	0.40	2.5	6.99	**41.6**	2.75	**16.4**
90-95	0.56	3.4	3.29	**19.6**	1.29	**7.7**
95-99	1.90	11.7	4.13	**24.6**	1.63	**9.7**
99+	6.16	**37.9**	3.95	**23.5**	1.55	**9.2**
Owner-workers	0.84	**5.1**	0.23	**1.4**	0.09	**0.5**
Total:	10.16	62.5	34.36	204.6	13.51	80.5
Total, statistically significant DPAD earnings gains:	7.00	**43.1**	34.36	**204.6**	13.51	**80.5**

This table presents details for the calculation of incidence presented in Figure IV. The calculation is described in detail in Section V.A. Panel A presents the total estimated firm tax savings due to the DPAD in 2014 in billions of dollars, calculated using a firm's predicted deduction magnitude by group in column 1, for the "percentile-by-firm-type" calculations ($15.96 billion) and calculated using a firm's predicted magnitude for the mean and median elasticity estimate in column 1, for the mean and median calculations ($16.24 billion). Panel B presents estimates of the dollar value of total DPAD worker earnings benefits in 2014, calculated using the "percentile-by-type", mean, and median semi-elasticity of earnings coefficients in columns 1, 3, and 5, respectively, for workers in various within-firm earnings percentile groups. Columns 2, 4 and 6 show the total worker earnings benefit for workers in various within-firm earnings percentile groups as a percent of the total firm tax savings due to the DPAD in 2014. Effects that are statistically different from zero are in bold. The bottom of the table presents the total earnings benefit in billions of dollars and as a percent of total tax savings, for all the estimates and for estimates that are statistically different from zero as described in Section V.A.

Table G15: DPAD-related earnings gains by firm type and earnings percentile group ($Billions)

Within-firm earnings percentile and ownership status	*Total DPAD worker earnings gains ($Billions)*	*Public firms ($Billions)*	*Private firms in the five employment-size quintiles*				
			Bottom quintile ($Billions)	*Second quintile ($Billions)*	*Third quintile ($Billions)*	*Fourth quintile ($Billions)*	*Top quintile ($Billions)*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
0-5	-0.02	-0.02	0.00	-0.01	0.00	0.00	0.01
5-10	-0.05	-0.07	0.00	-0.01	0.00	0.00	0.03
10-25	-0.16	-0.50	0.03	-0.03	0.03	0.07	0.24
25-50	0.65	-0.77	0.10	0.10	0.18	0.17	0.87
50-75	-0.12	-1.81	0.15	0.19	0.22	0.11	1.01
75-90	0.40	-0.87	0.24	0.16	0.14	0.04	0.70
90-95	0.56	-0.12	0.13	0.06	0.06	0.04	0.39
95-99	1.90	0.60	0.29	0.15	0.13	0.11	0.63
99+	6.16	4.39	0.32	0.19	0.24	0.21	0.80
Owner-workers	0.84	0.03	0.55	0.12	0.09	0.03	0.02
Total	10.16	0.85	1.80	0.93	1.09	0.79	4.70

This table presents details on estimated earnings gains for workers in each of the six firm types used in the calculation of "percentile-by-type" incidence, presented in Figure IV, for workers in various within-firm earnings percentile groups. The calculation is described in detail in Section V.A. Column 1 presents estimates of the dollar value of total DPAD worker earnings gains in 2014, in billions of dollars, for workers in various within-firm earnings percentile group. This is the total DPAD worker earnings benefit presented in Column 1 of Appendix Table G14. Columns 2 to 7 show how these earnings gains are distributed among workers of the six firm types included in our calculation: public firms and private firms in the five employment-size quintiles, measured as of 2004.

Table G16: Labor incidence calculations in the vein of Fuest, Peichl and Siegloch (2018), by earnings percentile group and ownership status

Within-firm earnings percentile and ownership status	*Incidence calculated using "percentile-by-type" earnings semi-elasticities (in percent)*	*Incidence calculated using the mean earnings semi-elasticity (in percent)*	*Incidence calculated using the median earnings semi-elasticity (in percent)*
	(1)	(2)	(3)
0-5	-0.1	0.8	0.4
5-10	-0.2	1.4	0.6
10-25	-0.6	7.5	3.3
25-50	3.4	20.3	9.0
50-75	-0.3	29.8	13.2
75-90	1.9	25.7	11.4
90-95	2.5	11.8	5.2
95-99	8.0	14.1	6.3
99+	22.8	11.6	5.2
Owner-employees	2.6	0.6	0.3
Total:	**40.2**	**123.8**	**55.0**

This table presents details for incidence calculated in the vein of Fuest, Peichl and Siegloch (2018), for workers in various within-firm earnings percentile groups and by ownership status. The procedure for calculating incidence is described in detail in Supplemental Appendix D. Column 1 presents incidence (in percent) calculated using "percentile-by-type" semi-elasticity of earnings coefficients. Column 2 presents incidence (in percent) calculated using mean semi-elasticity of earnings coefficients. Column 3 presents incidence (in percent) calculated using median semi-elasticity of earnings coefficients. Calculations take into account SOI sampling weights to be interpreted as economy-wide incidence measures.

Table G17: Earnings effects using alternative measures of limitation instrument

	ln of worker earnings at within-firm									
	(1) Mean	(2) p1	(3) p5	(4) p10	(5) p25	(6) Median	(7) p75	(8) p90	(9) p95	(10) p99
Panel A: Baseline										
$DPAD\_CUT_{it}$	0.015***	-0.003	-0.003	0.001	0.008***	0.006***	0.006***	0.007***	0.014***	0.040***
	(0.002)	(0.001)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
Panel B: D_i excludes type 1										
$DPAD\_CUT_{it}$	0.019***	-0.004**	-0.004	0.002	0.010***	0.008***	0.009***	0.009***	0.019***	0.047***
	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.005)
Panel C: D_i excludes type 2										
$DPAD\_CUT_{it}$	0.020***	-0.004**	-0.004	0.002	0.010***	0.009***	0.008***	0.010***	0.020***	0.055***
	(0.003)	(0.002)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.006)
Panel D: D_i excludes type 3										
$DPAD\_CUT_{it}$	0.021***	-0.004**	-0.003	0.002	0.010***	0.009***	0.009***	0.009***	0.020***	0.054***
	(0.003)	(0.002)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)
Panel E: D_i excludes type 4										
$DPAD\_CUT_{it}$	0.019***	-0.002	-0.000	0.003	0.010***	0.008***	0.008***	0.008***	0.018***	0.050***
	(0.003)	(0.002)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)

This table presents estimates of the semi-elasticity of within-firm earnings with respect to a one percentage point reduction in the marginal tax rate due to the DPAD ($DPAD\_CUT_{it}$), at various points in the within-firm earnings distribution. Private firms are defined as those that never report publicly held status on Schedule M-3 in the sample period. Each cell in the table reports the coefficient β from the second-stage empirical specification 2. Column 1 presents results for the natural log of mean earnings and columns 2 through 10 present results for the natural log of the 1st percentile of earnings through the 99th percentile. The dependent variables are the natural log of earnings at various points in the within-firm earnings distribution. Standard errors are presented in parentheses below coefficient estimates. Instrumental variables included in the specification are: 1) the leave-one-out industry-by-size average DPGR share of total receipts in 2005 interacted with the statutory deduction rate interacted with the firm-level statutory marginal tax rate before the DPAD, and 2) a dummy variable for whether a firm is subject to the DPAD taxable income limitation in a given year. Panels B to E vary the construction of the limitation instrument to account for the four types of limitations presented in Appendix Figure F5. Each classifies $D_i = 0$ for all firm-year observations of the indicated excluded type. All regressions include firm and two-digit SOI industry-by-year fixed effects as well as controls for quartiles of revenue and profit margin as of 2004 interacted with year dummies, as well as controls for the implementation of bonus depreciation and for the repeal of the regime for extraterritorial income. Standard errors are clustered at the industry-size level. *, **, and *** indicate significance at the 1%, 5% and 10% level respectively.

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