A Sufficient Statistics Approach to Optimal Corporate Taxes*

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Abstract

This paper characterizes the equity–efficiency tradeoff of corporate taxation using a stylized model that draws on the corporate investment and tax incidence literatures. We derive benchmark optimal corporate tax formulas in terms of estimable reduced-form elasticities and welfare weights on workers and firm owners. The elasticity of taxable profits is a sufficient statistic for the efficiency costs of the corporate tax. Higher corporate tax rates are desirable when firm owners have low welfare weights, and less desirable when taxing profits reduces wages. These empirical objects remain central across model extensions, including worker- and firm-level heterogeneity, endogenous occupations, shared firm ownership, tax sheltering, international capital mobility, productivity externalities, monopsony, and linear labor income taxes. We survey the empirical literature and find that existing estimates can support a wide range of optimal tax rates. A quantitative analysis identifies combinations of welfare weights that rationalize the current US 21% corporate tax rate as optimal and provides alternative numerical benchmarks for optimal corporate tax rates.

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1 Introduction

Proponents of corporate taxes claim that they can raise substantial revenue and redistribute income from affluent capital owners. Opponents argue that corporate taxes distort investment and capital accumulation, thereby reducing employment and wages. Empirical and theoretical research supports both points of view: corporate taxes can yield distributional gains at the cost of generating distortions in the economy. How should policymakers trade off equity and efficiency in setting the optimal corporate tax rate? Consider, for example, the 2017 US corporate tax cut. Chodorow-Reich et al. (2025) and Kennedy et al. (2026) find that the reform increased investment, capital accumulation, employment, and wages of high earners, at the cost of decreasing tax revenue and increasing inequality. Which empirical objects should inform whether the post-2017 US corporate tax rate is too high, too low, or about right?

This paper proposes a simple normative framework to characterize the optimal corporate tax as a function of estimable sufficient statistics. The equity-efficiency tradeoff of the corporate tax is formalized using a model that bridges the literatures on corporate investment and corporate tax incidence, two cornerstones of the corporate tax tradition. While the framework is stylized, it provides insights into how corporate taxes should reconcile distributional and efficiency concerns. It also shows which elasticities should inform optimal policy and, therefore, should be targeted by empirical researchers. To the best of our knowledge, we are the first to develop this kind of benchmark for corporate taxation.

We propose a simple model which builds on the static ("long-run") version of the user cost of capital framework (Hall and Jorgenson, 1967), in which a representative capitalist chooses labor and capital to maximize after-tax profits. Production technology exhibits decreasing returns to scale, profits are taxed with a linear corporate tax, and capital expenses are partially deductible from the corporate tax base. A population of workers with heterogeneous costs of working makes extensive-margin labor supply decisions. The labor market is perfectly competitive, so the wage is determined in equilibrium by equating supply with demand. Corporate taxes affect labor demand and, therefore, wages. Pure profits, partial deductibility, restricted policy instruments, and the consequent distortionary effects of corporate taxes constitute realistic departures from the production efficiency benchmark. Therefore, production distortions caused by distortionary corporate taxes could be optimal for addressing distributional considerations.

Using this model, we consider a social planner who chooses the linear corporate tax to maximize social welfare. The analysis yields a closed-form expression for the optimal corporate tax in terms of estimable sufficient statistics. The elasticity of taxable profits with respect to the net-of-corporate tax rate is a sufficient statistic for the efficiency costs of corporate taxation. The planner weighs this efficiency cost against two distributional effects. First, the optimal corporate tax decreases with the capitalist's welfare weight, because a higher corporate tax reduces the capitalist's consumption. Second, the elasticity of wages with respect to the net-of-corporate tax rate affects the optimal corporate tax in proportion to the relative welfare weights on workers and the capitalist because wage changes are net transfers between the capitalist and inframarginal workers. Investment and employment elasticities do not appear in the baseline formulas because their efficiency effects are implicit in the elasticities of taxable profits and wages, and their welfare impacts are second-order because of the envelope theorem.

It is well known that, while avoiding full specification of the underlying structural model, the sufficient statistics approach is still "structural" as the optimal formulas and the sufficient elasticities may depend on the assumptions of the model (Chetty, 2009b; Kleven, 2021). We therefore probe the robustness of the derived formulas by deriving optimal tax formulas under alternative assumptions. We find that the conclusions from the simple model are robust: taxable profits elasticities, welfare weights, and wage incidence elasticities remain central in determining the optimal corporate tax. In some extensions, the optimal tax formula features additional elasticities that account for further fiscal externalities. However, these objects are estimable, so the modified formulas maintain a sufficient statistics form.

The first set of extensions relates to assumptions on the populations of workers and capitalists. First, we relax the assumption that workers' skills and capitalists' technologies are homogeneous, leading to a non-degenerate equilibrium distribution of wages, profits, elasticities, and welfare weights. We obtain a formula that is very similar to the original, with two additional insights. First, the profit elasticity and capitalist welfare weight are replaced by profit-weighted averages across individual capitalists, implying that the required sufficient statistics primarily depend on the effects on high-profit capitalists. Second, the welfare impacts of wage effects now enter additively into the formula: what matters is the sum of wage effects across worker types, weighted by their corresponding welfare weights. This latter result implies that empirically characterizing heterogeneous wage incidence within the firm is crucial for the optimal corporate tax rate (Carbonnier et al., 2022; Risch, 2024; Duan and Moon, 2025; Kennedy et al., 2026). Wage effects are more important when the affected workers have relatively low welfare weights. Conversely, if affected workers have high incomes and, therefore, similar welfare weights to firm owners, wage effects will play a secondary role in determining optimal corporate taxes.

We then consider an extension in which individuals endogenously choose whether to be workers or capitalists, following Scheuer (2014). By the envelope theorem, individuals induced to switch occupations by corporate tax changes do not experience first-order welfare changes. However, they induce fiscal externalities, implying that the relevant notion of the taxable profit elasticity encompasses both intensive and extensive margin responses. A similar extension featuring a fixed population of capitalists with heterogeneous productivities and endogenous firm entry shows that the extensive margin efficiency cost should be weighted by the profit share of the marginal capitalist. If low-profit capitalists are more likely to exit after a corporate tax hike the quantitative role of the extensive margin fiscal externality might be small. Finally, we consider an extension in which workers hold shares of the representative firm, clarifying how the computation of welfare weights should be adjusted in contexts of shared firm ownership.

The second set of extensions considers additional margins by which firms may adjust to corporate tax changes. We first study a case in which the capitalist can shelter profits from the corporate tax base at some private cost. Then, we consider a case with international capital mobility, in which the capitalist has access to foreign investments with potentially higher after-tax returns than its domestic production technology. Both extensions yield the same formulas for the optimal corporate tax as the baseline case. This result reflects standard rationales from the labor income tax literature, which finds that the elasticity of taxable income is sufficient to assess the efficiency costs of labor income taxes (Feldstein, 1999; Chetty, 2009a; Saez et al., 2012). Intuitively, the elasticity of taxable profits incorporates all behavioral responses to the net-of-corporate tax in a reduced-form fashion, including sheltering and international capital mobility, and therefore remains sufficient for assessing the efficiency costs of corporate taxation. These extensions also highlight that the characterization of optimal corporate taxes does not require taking a stance on whether profit shifting strategies have real effects on domestic activity: the optimal tax formulas are the same regardless of whether corporate taxes reduce profits through tax evasion or capital flight.

The third set of extensions considers market failures relevant to the corporate tax debate: productivity externalities from capital accumulation and monopsony power. The resulting optimal tax formulas are nearly identical to the baseline formula, except in how the capitalist's welfare effects are computed. With productivity externalities, the capitalist's utility increases with investment. With monopsony power, wage effects no longer affect the capitalist's utility because the wage becomes a choice variable, so envelope theorem arguments apply to it. Aside from changes in the welfare effects on the capitalist, the sufficient statistics needed to calibrate the formulas are the same as in the baseline case. The real effects of these market failures are implicit in both the elasticities of taxable profits and wages.

A final extension enables the social planner to jointly choose a linear labor income tax together with the corporate tax. The resulting optimal corporate tax formula differs from that of the baseline model because the effects of the corporate tax on wages and employment now generate fiscal externalities. The optimal corporate tax depends on the same sufficient statistics even when labor income taxes are optimized to address redistribution to workers through wages: the taxation of profits is not decoupled from the returns to investment, so the optimal redistribution of profits via corporate taxes needs to consider its effects on the reoptimization of labor income taxes. A further extension featuring organizational form choice (e.g., between C and S corporations) in response to tax differentials between the labor and corporate income tax bases yields similar intuition: firm switches in response to corporate tax hikes generate positive fiscal externalities in labor income tax revenue with no first-order welfare effects.

The final section conducts calibration exercises to illustrate the applicability of our formulas. We first review the empirical literature for the welfare-relevant reduced-form effects. We identify 28 estimates of taxable profit elasticities with respect to net-of-tax rates reported in 18 papers. These estimates range from 0.08 to 4.79, with a median of 0.64. Wage elasticities with respect to net-of-tax rates are scarcer:

we identify 23 estimates from 9 papers. Evidence on wage effects is also mixed, ranging from significant positive effects to precisely estimated zeros. Most of these papers suggest that wage effects increase with workers' income. Our review highlights the need for more evidence on these sufficient statistics. Additional research is needed to explain the sources of dispersion in elasticity estimates, which likely reflect institutional tax features and research design choices.

The first calibration exercise uses the estimates identified in our review to calibrate optimal tax formulas and simulate comparative statics. We caution against strong quantitative interpretation of this calibration because the estimates vary widely, come from diverse settings, and often reflect short-run responses. Nevertheless, these simulations illustrate how the complex interplay between elasticities and welfare weights can rationalize a wide range of optimal corporate taxes. For example, in our baseline parametrization, moving from the 25th percentile of the available estimates of the profit elasticity to the 75th percentile generates a 21 percentage point reduction in the optimal corporate tax rate. Because wage effects primarily affect the optimal tax by affecting the welfare of inframarginal workers, the relationship between optimal corporate taxes and wage elasticities becomes less pronounced when affected workers have relatively low welfare weights, which is likely to be the case when high-income workers' wages react more strongly to changes in corporate taxes. The exercise also confirms that the ability of the corporate tax to redistribute profits is necessary to justify high corporate tax rates. When the welfare weight of the capitalist increases, the optimal corporate tax decreases and may eventually become negative.

Our second calibration exercise uses Kennedy et al. (2026) internally consistent estimates of all the sufficient statistics relevant to our formulas to study the optimality of the US corporate tax. We conduct three complementary exercises. First, we implement an inverse-optimum analysis (Bourguignon and Spadaro, 2012; Lockwood and Weinzierl, 2016; Hendren, 2020) that characterizes combinations of welfare weights that rationalize the current US corporate tax rate of 21% as optimal. Second, we compute optimal corporate taxes for a range of welfare weights. Third, we empirically estimate the welfare weights relevant to the exercise. Together, these exercises suggest substantial room for welfare-improving corporate tax increases, in some cases exceeding the pre-2017 rate of 35%. We probe the sensitivity of our conclusions to the assumptions underlying the baseline analysis.

Related literature Our analysis speaks to an extensive literature studying the effects of corporate taxes on investment, capital, employment, wages, and other outcomes, built on the seminal contributions of Harberger (1962) and Hall and Jorgenson (1967). Surveys include Hassett and Hubbard (2002), Auerbach (2006), Fuest and Neumeier (2023), and Lester and Olbert (2025). Section 4 reviews the empirical tradition in this literature, focusing on the elasticities that the analysis suggests are crucial for calibrating the formulas.[1] We contribute to this literature by providing a normative framework that

[1] We focus mostly on taxable profits, wages, and employment. A large literature estimates the effects of corporate taxes on investment or capital accumulation (e.g., Bustos et al., 2004; Djankov et al., 2010; Yagan, 2015; Zwick and Mahon, 2017;

bridges the user cost of capital tradition with models of corporate tax incidence to assess the implications of these analyses for the optimal corporate tax policy. Our benchmark formulas facilitate the translation of the large and growing body of corporate tax theory and reduced-form evidence into policy guidance.

The main contribution of the paper is the characterization of a simple sufficient statistics benchmark for assessing the equity-efficiency tradeoff of the corporate tax. To the best of our knowledge, we are the first to develop this kind of benchmark for corporate taxation. The analysis and results share similarities with the rich literature on optimal labor income taxes (for surveys, see Piketty and Saez, 2013a and Kaplow, 2024). The typical Mirrleesian setting, however, abstracts from the role of firms and investment in determining wages and the potential effects of taxes on wages in general equilibrium by assuming exogenous wages. Some research in this tradition characterizes optimal labor income tax rates when top incomes generate externalities for the rest of the wage distribution (Piketty et al., 2014; Rothschild and Scheuer, 2016; Lockwood et al., 2017; Jones, 2022; Kleven, 2025). Corporate taxes can be thought of as particular top marginal tax rates, with the effects of corporate taxes on wages being an externality to the rest of the wage distribution. Our analysis extends these intuitions to corporate taxes, incorporating the realistic feature that firm profits make up a large share of top earners' incomes, so firm adjustments should play an important role in mediating the wage externalities. Given this parallel, our results echo central conclusions in the elasticity of taxable income (ETI) literature (Feldstein, 1999; Saez et al., 2012). Mirroring the well-known result that the ETI is sufficient for assessing the efficiency costs of labor income taxes, we show that the elasticity of taxable profits is sufficient for assessing the efficiency costs of corporate taxes. Although we are not the first to note this parallel (e.g., Devereux et al., 2014), our analysis extends this intuition beyond a characterization of the deadweight loss from the corporate tax by deriving the optimal corporate tax that also depends on welfare weights and wage effects.

Relatedly, a long tradition built upon Atkinson and Stiglitz (1976) studies the optimality of savings taxes in the presence of labor income taxation. The typical setting is one in which individuals earn labor income, pay labor income taxes, and then decide how much to consume and save. This literature explores whether taxes on savings can improve welfare given a labor income tax and different assumptions about preferences, rates of return to saving, and initial wealth (Saez, 2002a; Cremer et al., 2003; Diamond and Spinnewijn, 2011; Golosov et al., 2013; Gahvari and Micheletto, 2016) and has recently provided sufficient statistics formulas for optimal savings taxes (Piketty and Saez, 2013b; Saez and Stantcheva, 2018; Ferey et al., 2024; Gerritsen et al., 2025; Hellwig and Werquin, 2025). We claim this tradition does not directly address the problem of optimal corporate taxes for two reasons. First, by considering passive savings and therefore abstracting from the relationship between firms, capital, and wages, this literature

Ohrn, 2018, 2019; Curtis et al., 2022; Chen et al., 2023; Chodorow-Reich et al., 2025; Cloyne et al., 2025). We do not review this literature as investment elasticities are not part of the sufficient statistics highlighted by the model because investment effects are implicitly accounted for by the wage and taxable profit elasticities. This contrasts with some research in dynamic settings which suggests that capital accumulation directly affects welfare (e.g., Pestieau and Possen, 1978; Morrison, 2026).

cannot study the welfare effects of investment and wage incidence. Our analysis considers the investment decisions of firm owners and the link between capital and wages, enabling us to provide formulas more naturally applicable to the taxation of corporate profits. Second, the assumption that all individuals pay the labor income tax before investing is at odds with the observation that some business income never reaches individual income tax bases and, therefore, may only be taxed with corporate taxes (Burman et al., 2017; Bach et al., 2025; Balkir et al., 2025; Bruil et al., 2025; Love, 2025).

Our analysis connects to different strands of research that study the distributional effects of corporate taxes, but whose policy implications have not been systematically studied within a unified framework. The inequality literature has recently documented in different countries that profits and firm ownership are systematically concentrated among top earners, suggesting welfare gains from their redistribution (Cooper et al., 2016; Piketty et al., 2018; Smith et al., 2019, 2023; Kopczuk and Zwick, 2020; Alstadsæter et al., 2025; Bach et al., 2025; Bruil et al., 2025; Palomo et al., 2025). Likewise, the modern corporate tax incidence literature leverages the envelope theorem to argue that reduced form effects on wages and mechanical effects on after-tax profits are sufficient statistics for studying the distribution of the corporate tax burden between workers and firm owners (Suárez Serrato and Zidar, 2016; Fuest et al., 2018; Kennedy et al., 2026). Our analysis informs about the policy implications of both types of analyses by combining these distributional insights with efficiency considerations within a unified welfare framework.

We also relate to theoretical traditions that emphasize the importance of full deductibility rather than optimizing distortionary corporate taxes, particularly the neutrality results of Hall and Jorgenson (1967) and Abel (1983), and the production efficiency tradition of Diamond and Mirrlees (1971a,b), revisited in Jacquet and Lehmann (2025). While our baseline analysis (realistically) assumes partial deductibility, as governments generally do not (and likely cannot) implement perfect expensing schemes, we briefly study the considerations underlying optimal deductibility, connecting our analysis to these traditions. In the absence of labor income taxes, partial deductibility is optimal, as manipulating wages via distortionary corporate taxes relaxes the planner's constraints for optimizing redistribution. This result differs from the usual policy recommendation arising from neutrality results (i.e., full deductibility) because it relies on a different objective function: neutrality maximizes investment but ignores distributional considerations. Likewise, our result does not contradict the production efficiency theorem, which would also suggest that full deductibility is desirable, as the canonical benchmark hinges on the availability of fully flexible tax instruments to optimize redistribution. We recover both results as special cases: full deductibility becomes optimal either when we ignore distributional considerations (as in the neutrality tradition) or when we assume the planner has access to jointly optimized labor income and corporate income taxes that internalize the wage effects of increased investment (as in the production efficiency results).

A large strand of research uses structural dynamic general equilibrium models to study corporate taxation (e.g., Judd, 1985; Chamley, 1986; Conesa et al., 2009; Saez, 2013; Straub and Werning, 2020;

Akcigit et al., 2022; Chen et al., 2023; Dávila and Hébert, 2023; Rotberg and Steinberg, 2024; González et al., 2025; Smith and Miller, 2025). The relationship between our analysis and this scholarship follows the well-known contrast between sufficient statistics and structural analyses (Chetty, 2009b; Kleven, 2021). The structural literature introduces additional mechanisms, sources of heterogeneity, and margins of adjustment, facilitating quantitative and counterfactual analyses. Our paper complements these papers by providing a stylized benchmark that retains key channels of this tradition (in particular, the equilibrium interactions between capital and labor) while providing a more direct connection between the large body of reduced-form empirical research on the effects of corporate taxation and optimal corporate tax policy.

Finally, we focus on the equity-efficiency tradeoff of corporate taxes by characterizing the optimal all-in profit wedge but abstract from other aspects relevant to the design of corporate taxes analyzed in related literature. We do not explore the split between entity- and payout-level taxes. Berg (2025) adopts a sufficient statistics approach to study whether corporate taxation should be implemented with entity- or shareholder-level taxes in the presence of foreign shareholders. Lehmann and Zanoutene (2026) focus on intertemporal distortions related to strategic payouts and tax avoidance. Other papers analyze the desirability of corporate taxes for enforcement purposes in the presence of evasion (Kopczuk and Slemrod, 2006; Best et al., 2015). Finally, Scheuer (2014) studies the optimal taxation of entrepreneurs, abstracting from capital investment but considering fully non-linear tax schedules for labor and entrepreneurial incomes, focusing on examining how instrument flexibility (in terms of the availability of occupation-specific non-linear schedules) matters for production efficiency in the presence of self-selection into entrepreneurship. We see our analysis as complementary to these alternative strands of research.

2 Model and Main Result

The model is static and features a representative capitalist and a population of workers with heterogeneous participation costs who interact in a perfectly competitive labor market. We use this simple model to characterize a benchmark formula for the optimal corporate tax rate as a function of sufficient statistics.

2.1 Setup

Capitalist We consider the simplest version of the user cost of capital model (Hall and Jorgenson, 1967). A representative capitalist is endowed with a production function $F(K, L)$ with decreasing returns to scale, where K is the capital invested in the firm, L is labor, and $F(K, L)$ satisfies $\partial F/\partial K \equiv F_K > 0$, $\partial^2 F/\partial K^2 \equiv F_{KK} < 0$, $\partial F/\partial L \equiv F_L > 0$, and $\partial^2 F/\partial L^2 \equiv F_{LL} < 0$. The capitalist is a price taker in the output market (with the price normalized to 1), the labor market (with w the wage paid to each hired worker), and the capital market (with r the cost of capital). Firm profits are taxed with a linear corporate tax t. A fraction $\theta \in [0, 1)$ of the capital costs can be deducted from the corporate tax base.

The problem of the capitalist is given by:

$$\max_{K,L} \Pi(K,L) = (1-t)\left(F(K,L) - wL\right) - r(1-\theta t)K, \\ = (1-t)\pi(K,L) - (1-\theta)rK, \quad (1)$$

where $\pi(K,L) = F(K,L) - wL - \theta rK$ denotes taxable profits. The first-order conditions (FOCs) with respect to K and L are given by $F_K = \frac{r(1-\theta t)}{1-t}$ and $F_L = w$, respectively. These FOCs characterize capital demand $K^* = K^*(w, 1-t, \theta)$ and labor demand $L^* = L^*(w, 1-t, \theta)$, as a function of the wage w and the policy parameters $(1-t, \theta)$. Given the static nature of the model, we use "capital demand" and "investment" interchangeably. The corporate tax distorts investment if capital costs are partially deductible ($\theta < 1$); when capital costs are fully deductible ($\theta = 1$), the corporate tax distorts neither investment nor employment, and becomes a tax on pure profits. We assume the empirically relevant case of a fixed $\theta < 1$ and briefly discuss optimal deductibility at the end of the section.

The capitalist's indirect utility is given by $U^K = \Pi(K^*, L^*) = (1-t)\pi(K^*, L^*) - (1-\theta)rK^*$. The envelope theorem implies that $dU^K/d(1-t) = \pi(K^*, L^*) - wLe_w^{1-t}$, where $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of the wage w with respect to the net-of-corporate tax rate $1-t$. The capitalist mechanically benefits from an increase in the net-of-tax rate in proportion to the taxable profits. However, the benefit is attenuated by general equilibrium effects on wages: given labor supply, an increase in labor demand raises wages, so $e_w^{1-t} > 0$. We also define the elasticity of taxable profits π with respect to the net-of-tax rate as $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$, a key object to measure fiscal externalities in our results below.

While the model is static, linear utility and the absence of capital adjustment costs give the model a steady-state ("long-run") interpretation, as in Saez and Stantcheva (2018). These model features imply that firms immediately react to tax changes by adjusting to the new steady state, so the solution to the static problem solves the dynamic problem. Our sufficient statistics analysis is therefore more appropriate for weighing the normative implications of long-run estimates of wage and taxable profits elasticities than estimates of short-run effects. Importantly, the reduced-form elasticities highlighted in the analysis below should be thought of as "macro" elasticities that incorporate general equilibrium effects.

The long-run interpretation of the static model comes with two caveats. First, assuming away transitional dynamics in investment is at odds with empirical evidence on the importance of capital adjustment costs for explaining investment decisions (Auerbach and Hassett, 1992; Caballero and Engel, 1999; Winberry, 2021; Chen et al., 2023). Therefore, our analysis fails to speak to the optimal trajectory of corporate taxes because it does not capture investment dynamics that may affect optimal time-varying (e.g., cyclical) policy.[2] Second, our model assumes that the capitalist consumes all after-tax profits, so the net-of-tax rate $1-t$ in our model is the total net-of-tax rate faced by the firm owner. In practice, governments

[2]The lack of consumption smoothing considerations also implies a departure from the Chamley-Judd tradition that emphasizes the intertemporal distortions of the corporate tax via the Euler equation.

often tax business profits first at the entity level when they are accrued, and again when distributed to shareholders as dividends. Within the model, this simplification is without loss of generality, so its analysis applies to both dual ("corporate") and integrated ("pass-through") tax systems. However, more general dynamic models could incorporate mechanisms by which payout taxes may affect investment and welfare differently from entity-level corporate taxes, particularly with respect to strategic intertemporal corporate financing and payout decisions (e.g., Auerbach, 2002; Lehmann and Zanoutene, 2026). One interpretation of our abstraction from entity vs. dividend taxation is that we are considering "traditional view" firms where elasticities with respect to net-of-corporate taxes and net-of-effective equity taxes are isomorphic if payout taxes are fixed.[3] We leave dynamic generalizations of our model to future research.

Workers A population of workers (for simplicity, of size 1) makes extensive margin labor supply decisions. Workers are endowed with a cost of participating in the labor market c that is distributed with CDF H and PDF h, assumed to be smooth, over the support $[0, \bar{c}]$. The baseline model abstracts from the labor income tax system and assumes that workers simply receive a transfer T_0 from the government regardless of whether they work. If a worker works, she gets utility $w + T_0 - c$. If a worker does not work, she gets utility T_0. Workers therefore work whenever $w \geq c$, so the market-level labor supply is given by $L^S(w) = H(w)$. A case with labor income taxes is analyzed in the next section.

Labor market equilibrium The wage w is determined in equilibrium by the market-clearing condition $L^S(w) = L^*(w, 1-t, \theta) \equiv L$, with L denoting equilibrium employment. The equilibrium wage w depends on $1-t$ and θ through their effects on labor demand.

Planner's problem The government chooses $(1-t, T_0)$ to maximize a generalized utilitarian social welfare objective:

$$SWF = (1-L)G(T_0) + L\frac{\int_0^w G(w + T_0 - c)dH(c)}{H(w)} + G(U^K),$$

where G is increasing and concave, thus measuring preferences for redistribution. The government budget constraint is given by $T_0 = t\pi(K^*, L^*)$ because the transfer to workers must be funded by the corporate tax revenue. Let λ be the budget constraint multiplier. Following Saez (2001), average social marginal welfare weights of non-employed workers, employed workers, and the capitalist are defined as follows:

$$g_L^0 = \frac{G'(T_0)}{\lambda}, \qquad g_L^1 = \frac{\int_0^w G'(w + T_0 - c)dH(c)}{L\lambda}, \qquad g_K = \frac{G'(U^K)}{\lambda}.$$

[3] Debates over the traditional and new views on dividend taxation require modeling equilibrium retained earnings from previous operations available for funding new investment (see Auerbach, 2002; Auerbach and Hassett, 2003; Chetty and Saez, 2005; Yagan, 2015; Love, 2022; Moon, 2022; Cortés and Gutiérrez, 2025; Goodman et al., 2025 for discussions). Because our model omits these elements, our analysis is ill-suited to inform optimal dividend taxation debates.

Welfare weights represent the social value of the marginal utility of consumption normalized by the social cost of raising public funds, thus measuring the social value of redistributing one dollar uniformly across a group of individuals. At the social optimum, the planner is indifferent between giving one more dollar to an individual i or having g_i more dollars of public funds, so that $g_i < 1$ ($g_i > 1$) represents welfare gains from redistributing from (towards) individual i. Because of the concavity of G and the endogeneity of labor supply, it must be the case that, in equilibrium, $g_L^0 > g_L^1$.

2.2 Main result

Proposition 1. *At the social optimum, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - g_K \left(1 - a e_w^{1-t}\right) - g_L^1 a e_w^{1-t}}{1 - g_K \left(1 - a e_w^{1-t}\right) + e_\pi^{1-t}}, \tag{2}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, g_K is the welfare weight of the capitalist, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, and $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate.

The proof of this proposition (and all others) can be found in Appendix A. Proposition 1 formalizes the equity-efficiency tradeoff of the corporate tax.[4] The optimal corporate tax t^* increases when g_K is small, as a smaller g_K implies larger equity gains from redistributing profits.[5] The optimal corporate tax t^* also decreases with the wage effect e_w^{1-t} if $g_L^1 > g_K$ (equity loss from redistributing wages to profits) and the elasticity of taxable profits e_π^{1-t} (efficiency cost driven by the fiscal externality). The functional form of t^* resembles standard formulas for optimal linear labor income (e.g., Piketty and Saez, 2013a) and capital income taxes (e.g., Saez and Stantcheva, 2018), but features new terms accounting for corporate taxes' general equilibrium effects on wages. This formula is a closed-form expression for the optimal corporate tax rate in terms of reduced-form sufficient statistics, because structural primitives need not be specified to calibrate it. While the deductibility parameter θ does not directly affect t^*, it does so indirectly through the elasticities e_π^{1-t} and e_w^{1-t}, as θ mediates how distortionary the corporate tax is.

The elasticity of taxable profits e_π^{1-t} plays a similar role to the elasticity of taxable income (ETI) in optimal labor income taxation (Feldstein, 1999; Saez et al., 2012): it is a sufficient statistic for the efficiency costs of corporate taxes (Devereux et al., 2014). The wage effect e_w^{1-t} is a transfer between the capitalist and workers, so it only affects the optimal corporate tax due to distributional considerations

[4] We also show in Appendix A that, at the social optimum, T_0 is chosen such that $(1-L)g_L^0 + Lg_L^1 = 1$. This is a standard result in optimal tax models with quasi-linear utilities (Piketty and Saez, 2013a). Because $g_L^0 > g_L^1$ in any incentive-compatible equilibrium, it follows that, at the social optimum, $g_L^0 > 1$ and $g_L^1 < 1$.

[5] An increase in t mechanically decreases the capitalist's utility, but this decrease is attenuated by lower equilibrium wages. As wages change due to labor demand feedback, the wage change should be smaller than the mechanical effect and, therefore, the corporate tax increase is expected to reduce the capitalist's utility on net.

when $g_K \neq g_L^1$. The efficiency considerations of wage effects are implicit in e_π^{1-t}. That is why investment and employment elasticities do not appear in equation (2). Their efficiency consequences are implicit in e_π^{1-t}, and these effects have no first-order welfare impacts because of the envelope theorem: capital is optimized by the capitalist, and workers who change employment status are indifferent between statuses.[6]

Our optimal corporate tax formula relates closely to the modern corporate tax incidence literature (Suárez Serrato and Zidar, 2016; Fuest et al., 2018; Kennedy et al., 2026). This literature leverages the envelope theorem to distribute the burden of corporate taxes between workers and capitalists, identifying the mechanical effects of corporate taxes on after-tax profits and the transfer to workers reflected in wage changes as the key sufficient statistics for the analysis. Mechanical after-tax profit changes and wage effects feature in our formula for similar reasons, but are analyzed alongside welfare weights and efficiency costs to comprehensively study their normative implications.[7]

We emphasize that a non-zero optimal corporate tax t^* requires distributional gains: with no equity benefit, the only effect of the corporate tax is to distort production. If G is linear so that $g_K = g_L^1 = 1$, equation (2) implies that $t^* = 0$. Conversely, when $g_K \to 0$, the optimal corporate tax resembles a Laffer rate, adjusted downward by the welfare-weighted wage effect:

$$t^* = \frac{1 - g_L^1 a e_w^{1-t}}{1 + e_\pi^{1-t}}. \tag{3}$$

As a final remark, recall that t represents the all-in wedge of the corporate tax, factoring in both entity- and payout-level taxes: $(1-t) = (1-t_e)\cdot(1-t_p)$. While Proposition 1 provides a general benchmark for t^* that applies to different forms of profit taxation, numerous combinations of t_e and t_p can implement equation (2). The stylized nature of our model prevents us from shedding light on the optimal combination of t_e and t_p for implementing t^*, as this would require modeling either different behavioral responses to the two taxes (e.g., because of dynamic or enforcement considerations) or additional populations which they affect differently (e.g., foreign or institutional shareholders), as in Kopczuk and Slemrod (2006),

[6]The absence of investment elasticities from the formula implies that Proposition 1 remains valid when corporate taxes affect profits not only through capital investment but also, for example, through managerial effort (Smith et al., 2019; Kopczuk and Zwick, 2020). To see why, suppose that, instead of renting capital, the firm owner exerts effort and managerial skills m at some private disutility cost $v(m)$ that cannot be deducted from the corporate tax base and is combined with the labor input to generate revenue according to some function $\widetilde{F}(m, L)$. The problem of the firm owner is:

$$\max_{m,L} \Pi(m, L) = (1-t)(\widetilde{F}(m, L) - wL) - v(m) = (1-t)\pi(m, L) - v(m).$$

The FOCs are given by $\widetilde{F}_L = w$ and $(1-t)\widetilde{F}_m = v_m$. Indirect utility is $U^K = \Pi(m^*, L^*) = (1-t)\pi(m^*, L^*) - v(m^*)$, so that $dU^K/d(1-t) = \pi(m^*, L^*) - wLe_w^{1-t}$. Then, the planner's problem is equivalent and e_π^{1-t} remains sufficient.

[7]Two comments follow. First, the only endogenous price in our model is the wage, so we differ from analyses that consider the distributional impacts of changes in other prices such as output prices, interest rates, and housing prices (Harberger, 1962; Suárez Serrato and Zidar, 2016). Second, while we directly connect with the sufficient statistics approach to tax incidence, our analysis features the same economic mediators highlighted by the structural tradition of Harberger (1962). Corporate tax incidence in the canonical Harberger model depends on a set of structural primitives such as elasticities of substitution and capital intensities. In our model, those primitives are properties of the production function F that, while we do not need to specify them, remain the key mediators of the reduced-form elasticities of taxable profits and wages.

Best et al. (2015), Berg (2025), or Lehmann and Zanoutene (2026). However, our decision not to model entity- and payout-taxes separately does not limit the model's empirical applicability. Suppose we have empirical estimates of e_x^{1-t}, with $x \in \{\pi, w\}$, that were identified from variation in t_e, holding t_p fixed. It follows that $d\log x/d\log(1-t_e) = [d\log x/d\log(1-t)] \cdot [d\log(1-t)/d\log(1-t_e)] = d\log x/d\log(1-t)$.

2.3 Optimal deductibility

The analysis assumes that the fraction θ of the capital costs that can be deducted from the corporate tax base is fixed at a level below 1. Although this assumption reflects real-world policy practice, governments could in principle manipulate θ to optimize welfare. While not the focus of the paper, this subsection briefly discusses the considerations underlying the optimization of θ.

Changing deductibility θ, holding the corporate tax fixed, generates fiscal and welfare effects. Fiscal effects reflect both behavioral and mechanical forces. An increase in θ enhances efficiency by alleviating investment distortions of the corporate tax, thereby affecting profits and wages. Increasing θ also mechanically decreases the tax base, reducing revenue. The net effect on taxable profits is given by:

$$\frac{d\pi}{d\theta} = F_K\frac{dK}{d\theta} + F_L\frac{dL}{d\theta} - w\frac{dL}{d\theta} - L\frac{dw}{d\theta} - rK - \theta r\frac{dK}{d\theta} = \frac{r(1-\theta)}{1-t}\frac{dK}{d\theta} - L\frac{dw}{d\theta} - rK, \tag{4}$$

where the second equality uses the FOCs of the capitalist. The first term is the behavioral effect on investment, which is positive but scaled by $(1-\theta)$, as the effect of investment on taxable profits depends on how much of the investment costs can be deducted. The second term is the wage effect (driven by changes in capital and, therefore, labor demand), and the third term is the mechanical erosion of the tax base. If labor demand is increasing in capital, then $dw/d\theta > 0$, which implies the second and third terms are negative. Therefore, the net fiscal externality of changing θ for a given t is ambiguous.

Regarding welfare effects, the wage effect redistributes towards employed workers, with social welfare changing by $\frac{g_L^1 wLe_w^\theta}{\theta}$, where $e_w^\theta = [dw/d\theta] \cdot [\theta/w]$. Also, the capitalist benefits from the tax base erosion, but the effect is partially attenuated by the wage effect. Concretely, $dU^K/d\theta = trK - \frac{(1-t)wLe_w^\theta}{\theta}$.

Two different traditions in economics suggest that $\theta = 1$ might be optimal. First, the production efficiency tradition provides conditions under which it is never optimal to distort production (Diamond and Mirrlees, 1971a,b; Auerbach and Hines Jr, 2002; Jacquet and Lehmann, 2025). Second, the neutrality results of Hall and Jorgenson (1967) and Abel (1983) suggest it is always optimal to increase θ because investment is maximized and the loss in revenue can be recovered by non-distortionary increases in the corporate tax. However, in our baseline model, full deductibility ($\theta = 1$) is not optimal.

Proposition 2. *At the social optimum, if $e_w^\theta = [dw/d\theta] \cdot [\theta/w] > 0$ and the corporate tax t^* is optimal (joint optimization), the optimal rate of deductibility θ^* is smaller than 1.*

To understand the intuition behind Proposition 2, assume full deductibility ($\theta = 1$) and that the corporate tax t^* is optimal given $\theta = 1$. Consider a marginal decrease in θ. From equation (4), note that the direct effect on capital has no first-order effects on taxable profits because, at baseline, capital costs are fully deductible. Then, taxable profits are only affected by wage changes and the mechanical tax base increase, implying that the fiscal externality of marginally decreasing θ, starting from $\theta = 1$, is positive.

A similar fiscal externality can be achieved by holding $\theta = 1$ fixed and increasing the corporate tax. However, when $\theta = 1$, corporate taxation is non-distortionary so the optimal corporate tax t^* is already "high enough:" the planner can freely choose the corporate tax so that $g_K = 1$ and no further redistribution of profits is desirable.[8] Then, holding $\theta = 1$ fixed and increasing the corporate tax can generate the same fiscal externality as decreasing θ but at a social welfare cost of over-taxing the capitalist. Since t^* was already optimal, this perturbation necessarily decreases social welfare.

On the contrary, can decreasing θ improve welfare? Because the optimal corporate tax t^* sets $g_K = 1$, the mechanical increase in the tax base does not affect welfare, as the increased tax collection is a lump-sum transfer from the (already undistortedly taxed) capitalist to the government. However, the wage decrease increases corporate tax revenue and redistributes from the worker to the capitalist, and this transfer improves welfare: the optimal corporate tax t^* sets $g_K = 1$, while the lack of flexible instruments to redistribute between employed and non-employed workers implies that $g_L^1 < 1$ (see footnote 4). Put simply, a system with $\theta = 1$ and optimal corporate tax t^* is redistributing "too much" from the capitalist and "too much" to the employed workers, so manipulating the wage by decreasing θ can improve overall redistribution. Partial deductibility can be second-best optimal in this restricted policy environment because it indirectly reallocates surplus between employed workers and firm owners.[9]

A larger decrease in θ causes welfare weights to evolve, and the fiscal effects of capital changes cease to be second-order, so further decreases (with the corresponding reoptimization of the corporate tax t^*) are not necessarily welfare-improving. This characterizes the (interior) optimal deductibility parameter θ^* that balances the distributional and fiscal impacts of wage changes, the fiscal impacts of capital changes, and the welfare effects from the tax base change. Appendix A provides two closed-form expressions for θ^*, one that depends on the elasticities $e_w^\theta = [dw/d\theta] \cdot [\theta/w]$ and $e_\pi^\theta = [d\pi/d\theta] \cdot [\theta/\pi]$ (equation (A.4)), and another one that depends on the elasticity $e_K^\theta = [dK/d\theta] \cdot [\theta/K]$ instead of e_π^θ (equation (A.6)). These expressions preserve the sufficient statistics spirit of Proposition 1 as these elasticities can, in principle, be estimated (e.g., House and Shapiro, 2008; Zwick and Mahon, 2017; Ohrn, 2019).

We emphasize that this result does not contradict production efficiency or neutrality arguments in fa-

[8] This idea is rooted in reasoning developed in the ETI literature (Slemrod and Kopczuk, 2002): the elasticity of taxable profits e_π^{1-t} is not a structural parameter, it is rather a function of the deduction rate θ, so when $\theta = 1$, $e_\pi^{1-t} = e_w^{1-t} = 0$. Note that replacing $e_\pi^{1-t} = e_w^{1-t} = 0$ in equation (2) yields $t^* = 1$. However, that conclusion is misleading as the derivation of equation (2) is only valid under positive elasticities. The optimal corporate tax under no productive distortions (chosen so that $g_K = 1$) is below 1 as it allocates a minimum level of consumption to the capitalist (see Appendix A).

[9] This argument for partial deductibility is orthogonal (and, therefore, complementary) to other arguments in the literature that support partial deductibility to limit fraudulent over-reporting of deductions (e.g., Best et al., 2015).

vor of full deductibility. The production efficiency argument hinges on the availability of fully flexible tax instruments and non-distortionary profit taxation (Auerbach and Hines Jr, 2002; Jacquet and Lehmann, 2025). In our baseline model, the planner does not have access to flexible instruments for taxing labor income, and lump-sum taxation of profits is not available. These two restrictions allow for optimal production inefficiencies. In the next section, we show that Proposition 2 does not hold when the planner can jointly set optimal corporate and labor income taxes, further highlighting that the second-best optimality of production efficiency requires flexible tax instruments to optimize redistribution. Regarding the neutrality results from Hall and Jorgenson (1967) and Abel (1983), the difference hinges on the implicit objective function. The usual recommendation of "narrowing the tax base and increasing the tax rate" maximizes investment and revenue, but ignores distributional effects. Our result reveals that neutrality alone is not a sufficient welfare criterion once distributional incidence matters. However, if we ignore distributional concerns by making G linear (so that $g_L^1 = g_K = 1$), equations (A.4) and (A.6) that characterize the optimal θ^* collapse to $\theta^* = 1$, so neutrality can be recovered as a particular case.

3 Extensions

Proposition 1 provides a benchmark for the optimal corporate tax t^* based on estimable reduced-form sufficient statistics. However, sufficient statistics results are, in principle, only valid under the positive framework used to derive them (Chetty, 2009b; Kleven, 2021). We therefore develop several extensions to our baseline framework to assess the robustness and generality of the main result. We treat each extension as an independent departure from the baseline model. Throughout this section, we maintain the assumption that deductibility θ is fixed and smaller than 1.

First, we generalize assumptions of the populations of workers and capitalists. We consider worker- and capitalist-level heterogeneity, endogenous occupations, and shared ownership of firms between workers and capitalists. Second, we study additional margins of adjustment of firms to changes in corporate taxes, focusing on avoidance and evasion responses and international capital mobility. Third, we consider stylized market failures, including productivity externalities from capital accumulation and labor market power. Finally, we consider the interactions with the labor income tax system, characterizing the associated fiscal externalities and briefly discussing the implications of jointly optimizing labor and corporate income taxes.

3.1 Populations of workers and capitalists

Heterogeneity Section 2 assumes a representative capitalist who hires equally productive workers, but real workers and firms are heterogeneous. To study the implications of heterogeneity, we partition workers into I fixed sub-populations with heterogeneous skill levels indexed by $i \in \mathcal{I} = \{1, ..., I\}$. Conditional on skill, workers behave as in the baseline model, with participation costs c distributed with skill-specific

CDF H_i and PDF h_i, and corresponding welfare weights $g^1_{L_i}$ when employed. Likewise, a continuum of capitalists indexed by $j \in \mathcal{J}$ are endowed with heterogeneous production functions $F_j(K, L_1, ..., L_I)$ which may differ arbitrarily, for example, in productivity, factor shares, elasticities of substitution, and returns to scale. This heterogeneity induces variation in taxable profits π_j, welfare weights g^j_K, and taxable profit elasticities $e^{1-t}_{\pi_j}$. All capitalists compete for the same workers in segmented (skill-specific) labor markets subject to perfect competition with skill-specific wages w_i. Total employment of skill type i workers L_i equals total labor demand $\int_{\mathcal{J}} L^j_i dj$, where L^j_i is the j-specific labor demand of workers of skill i. We define the taxable profit share of capitalists of type j as $s_j = \pi_j/\pi$, where $\pi = \int_{\mathcal{J}} \pi_j dj$ denotes aggregate taxable profits. Appendix A describes this extension in greater detail.

Proposition 3. *At the social optimum with heterogeneous workers and capitalists, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - \overline{g}_K + \sum_{i=1}^{I} a_i e^{1-t}_{w_i} \left(\widehat{g}^i_K - g^1_{L_i} \right)}{1 - \overline{g}_K + \sum_{i=1}^{I} a_i e^{1-t}_{w_i} \widehat{g}^i_K + \overline{e}^{1-t}_{\pi}}, \tag{5}$$

where $a_i = w_i L_i/\pi$ is the skill-specific wages-to-taxable profits ratio, $g^1_{L_i}$ is the average welfare weight of employed workers of skill i, $\overline{g}_K = \int_{\mathcal{J}} s_j g^j_K dj$ is the (profit-weighted) average welfare weight of capitalists, $\widehat{g}^i_K = \int_{\mathcal{J}} \frac{L^j_i}{L_i} g^j_K dj$ is the (employment-weighted) average welfare weight of capitalists who hire workers of skill i, $e^{1-t}_{w_i} = [dw_i/d(1-t)] \cdot [(1-t)/w_i]$ is the skill-specific elasticity of wages w_i with respect to the net-of-corporate tax rate, and $\overline{e}^{1-t}_{\pi} = \int_{\mathcal{J}} s_j e^{1-t}_{\pi_j} dj$ is the (profit-weighted) average elasticity of taxable profits with respect to the net-of-corporate tax rate with $e^{1-t}_{\pi_j} = [d\pi_j/d(1-t)] \cdot [(1-t)/\pi_j]$ the type-specific elasticity of taxable profits π_j.

Proposition 3 reflects the same intuition as Proposition 1, with two additional insights. First, the welfare impacts of wage changes enter additively across skill types. This has an important implication: wage incidence impacts the optimal corporate tax t^* especially for workers with relatively large welfare weights (i.e., lower earnings) who are hired by capitalists with relatively low welfare weights (i.e., higher profits). This finding connects with recent empirical work finding that wage incidence varies along the income distribution (Carbonnier et al., 2022; Risch, 2024; Duan and Moon, 2025; Kennedy et al., 2026). Second, the terms pertaining to the representative capitalist in Proposition 1 (the welfare weight g_K and the elasticity of taxable profits e^{1-t}_{π}) are replaced by profit-weighted averages of the individual-level capitalist terms. Therefore, they play the same role as in the baseline case with no heterogeneity. The profit weights reflect the envelope logic developed so far: what matters is the total fiscal externality and, therefore, the efficiency cost of the corporate tax will be higher when responses concentrate in high-taxable profits capitalists, given their larger impact on the aggregate tax base.

The profit-weighted form in which taxable profit elasticities enter equation (5) carries two implications for the interpretation of empirical evidence. First, to the extent that empirical studies measuring elasticities of taxable profits impose sample restrictions to aid identification, we should be concerned with how elasticities reported for the analysis sample compare to profit-weighted averages of elasticities over the full population. Studies identifying effects among low-profit firms may be less relevant for welfare calculations. Second, empirical evidence shows weaker bunching at kinks further up in the tax schedule, suggesting that the taxable profit elasticity declines with firm profitability (Devereux et al., 2014; Boonzaaier et al., 2019; Lediga et al., 2019). This suggests that simple average elasticities can overstate the efficiency cost of corporate taxation relative to the (welfare-relevant) profit-weighted averages.

Endogenous populations Section 2 assumes that the populations of workers and capitalists are fixed. In practice, occupations are endogenous, and selection may depend on tax policy: increases in corporate taxes may encourage capitalists to become workers and vice versa. Therefore, corporate tax policy can affect the number of firms and workers, in addition to the effects on taxable profits and wages.

We consider a model in which individuals choose to be workers or capitalists, as in Scheuer (2014). Individuals are endowed with a two-dimensional parameter (c, α) with an arbitrary joint distribution. As in Section 2, c represents the cost of working as an employee. Conversely, α represents a fixed utility gain derived from being a firm owner (e.g., the utility value of "being your own boss"). For workers, the labor supply decision is the same as in Section 2. For capitalists, profit maximization entails choosing K and L to maximize $\Pi(K, L) + \alpha$, with $\Pi(K, L)$ defined as in Section 2. Because the utility gain α is additively separable from profits and excluded from the tax base, the firm's decisions are equivalent to those of Section 2, yielding indirect utility $U^K(\alpha) = U^K + \alpha = \Pi(K^*, L^*) + \alpha$.

Individuals decide to be workers or capitalists after observing their draw of (c, α), the wage w, and the tax system $(1 - t, T_0)$, and then make decisions conditional on their occupation choice. The endogenous population of capitalists is denoted by $\mathcal{K}$. Details can be found in Appendix A, where we show that, for a given vector $(1 - t, T_0, w)$, four partitions of the (c, α) space define an optimal occupation selection rule, giving shape to the incentive compatibility constraints of the planner's problem.

Proposition 4. *At the social optimum with self-selection, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - \overline{g}_K(1 - ae_w^{1-t}) - g_L^1 ae_w^{1-t} - (T_0/\pi)e_{\mathcal{K}}^{1-t}}{1 - \overline{g}_K(1 - ae_w^{1-t}) + e_\pi^{1-t} + e_{\mathcal{K}}^{1-t}}, \tag{6}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, $\overline{g}_K$ is the average welfare weight of capitalists, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate, and $e_{\mathcal{K}}^{1-t} = [d\mathcal{K}/d(1-t)] \cdot [(1-t)/\mathcal{K}]$ is the elasticity of the population of capitalists $\mathcal{K}$ with respect to the net-of-corporate tax rate.

We highlight two departures from the optimal tax formula of Proposition 1. First, the single welfare weight on the capitalist is replaced by an average, because active capitalists vary in their intrinsic utility from being firm owners α. Second, the optimal corporate tax rate formula features an additional term, $e_{\mathcal{K}}^{1-t}$, representing the elasticity of the population of capitalists with respect to the net-of-corporate tax rate. Equation (6) in Proposition 4 converges to equation (2) in Proposition 1 when $e_{\mathcal{K}}^{1-t} = 0$, i.e., when the population of capitalists is fixed and unresponsive to taxes.

Proposition 4 provides two insights in line with those of Scheuer (2014). First, occupational switching does not generate first-order welfare effects because of the envelope theorem: individuals at the margin of switching occupations are initially indifferent. Second, despite the absence of first-order welfare effects, occupational switching generates fiscal externalities. When a marginal capitalist becomes a worker, the government loses $t\pi$ in corporate tax revenue. Therefore, the sufficient statistic for the efficiency costs of the corporate tax is the elasticity of total taxable profits with respect to the net-of-corporate tax rate, $e_{\pi}^{1-t} + e_{\mathcal{K}}^{1-t}$, which incorporates intensive and extensive margin responses. Moreover, the marginal switcher also receives the transfer to workers T_0. This margin increases the cost for the government, as illustrated in the extra term in the numerator of equation (6).

Appendix A provides an alternative extension of the baseline model, also useful for studying the implications of endogenous firm entry for optimal corporate taxes. In this model, populations of workers and capitalists are fixed, but capitalists face an extensive margin decision: whether to set up firms. This decision is governed by fixed costs of entry and heterogeneous productivities, so that only capitalists with productivity above a certain threshold set up firms. Corporate tax changes affect firm creation by altering the productivity threshold. The lessons from this model echo those from Proposition 4: firm exit has no first-order welfare effects but generates extensive margin fiscal externalities. However, building on the intuition of Proposition 3 about profit-weighted averages, an additional insight emerges: the extensive-margin fiscal externality is proportional to the profit share of the marginal capitalists. In this extension, low-productivity capitalists are the ones at the margin of exiting, consistent with evidence from Sapollnik and Swonder (2025), suggesting that the extensive-margin efficiency cost might be quantitatively modest.

Shared ownership Section 2 assumes that workers have no ownership stakes in the representative firm and therefore do not receive profit distributions. Workers, however, could hold shares or indirectly own the firm, for example, through pension funds. To explore the role of shared ownership, we assume that the representative capitalist owns an exogenous share ω_K of the firm, while workers of type c own exogenous shares ω_c, with $\int \omega_c dH(c) + \omega_K = 1$. We assume workers do not internalize the effect of their labor supply on their profit distributions (i.e., they are passive investors in the representative firm).[10]

Firm ownership does not affect labor supply: the labor supply decision of a worker of type c consists of comparing $w + T_0 - c + \omega_c U^K$ versus $T_0 + \omega_c U^K$, so aggregate labor supply remains $L^S(w) = H(w)$.

[10] This assumption would hold if workers diversified their equity investments away from their employer firms, or were not aware of the firms their pension funds are investing in.

Likewise, partial ownership by the representative capitalist does not affect marginal decisions, as the capital-labor mix that maximizes $\Pi(K, L)$ also maximizes $\omega_K \Pi(K, L)$. Shared ownership, however, affects optimal policy because social welfare is now given by:

$$SWF = (1-L)\frac{\int_w^{\bar{c}} G(T_0 + \omega_c U^K) dH(c)}{1 - H(w)} + L\frac{\int_0^w G(w + T_0 - c + \omega_c U^K) dH(c)}{H(w)} + G(\omega_K U^K),$$

thereby affecting the definitions of welfare weights. Specifically, we can define the average welfare weight of the owners of the firm, weighted by their ownership shares, as:

$$\bar{g} = \frac{\int_w^{\bar{c}} \omega_c G'(T_0 + \omega_c U^K) dH(c) + \int_0^w \omega_c G'(w + T_0 - c + \omega_c U^K) dH(c) + \omega_K G'(\omega_K U^K)}{\lambda}. \tag{7}$$

When $\omega_c = 0$ for all c (so $\omega_K = 1$), then $\bar{g} = g_K$, and we are back to the baseline model in Section 2.

Proposition 5. *At the social optimum with shared ownership, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - \bar{g}\left(1 - a e_w^{1-t}\right) - g_L^1 a e_w^{1-t}}{1 - \bar{g}\left(1 - a e_w^{1-t}\right) + e_\pi^{1-t}}, \tag{8}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, $\bar{g}$ is the average welfare weight of the owners of the firm, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, and $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate.

The formula for the optimal corporate tax t^* in Proposition 5 resembles the one in Proposition 1, except that the capitalists' welfare weight g_K is replaced by the average welfare weight of firm owners $\bar{g}$. The optimal corporate tax t^* still increases when the welfare gains of redistributing profits are larger, but the relevant welfare weight is now different. This result has an important implication: the distributional merits of corporate taxation depend on the distribution of firm ownership. Data challenges make firm ownership difficult to characterize, especially when portfolios are complex and ownership chains include investment funds and holding companies. However, the recent availability of rich tax data on firm ownership has fostered research across countries documenting that firm profits primarily accrue to rich taxpayers, suggesting welfare gains from their redistribution (e.g., Cooper et al., 2016; Smith et al., 2023; Alstadsæter et al., 2025; Bach et al., 2025; Bruil et al., 2025; Palomo et al., 2025).

3.2 Additional margins of adjustment

The baseline model assumes that the capitalist only optimizes domestic capital and labor. This section shows that the baseline result in Proposition 1 holds if we assume that the capitalist can also shelter profits from the tax base or reallocate capital to foreign investments.

Avoidance and evasion Section 2 assumes that profit responses to corporate taxes solely reflect real responses in investment. In practice, taxable profit elasticities e_{π}^{1-t} can also reflect avoidance or evasion strategies unrelated to real investment. Examples include cost misreporting (e.g., Best et al., 2015; Almunia and Lopez-Rodriguez, 2018; Bachas and Soto, 2021; Heiser et al., 2025), consumption of profits without distribution (e.g., Leite, 2024), paper profit shifting to low-tax countries (e.g., Zucman, 2014; Bustos et al., 2025), or the division of large firms into small ones to take advantage of tax benefits for small businesses (e.g., Onji, 2009; Agostini et al., 2018; Liu et al., 2021).

To explore the implications of avoidance and evasion, suppose the capitalist can shelter an amount e of profits with a cost $\phi(e)$, with $\phi_e > 0$ and $\phi_{ee} > 0$. The representative capitalist's problem is now:

$$\begin{aligned} \max_{K,L,e} \Pi(K,L,e) &= (1-t)\left(F(K,L) - wL - e\right) + e - r(1-\theta t)K - \phi(e), \\ &= (1-t)\pi(K,L,e) + e - (1-\theta)rK - \phi(e), \end{aligned}$$

where taxable profits are now given by $\pi(K,L,e) = F(K,L) - wL - \theta rK - e$. The FOCs with respect to K and L are the same as in the baseline case, so labor demand L^* and domestic capital K^* are as in Section 2. Optimal sheltering e^* obeys the standard condition $\phi_e = t$: profits are sheltered until the marginal cost equals the marginal benefit. Because of the envelope theorem, $dU^K/d(1-t)$ is the same as in the baseline case, but now $U^K = \Pi(K^*, L^*, e^*)$. Therefore, the planner's problem is the same as in Section 2 and the optimal corporate tax t^* is still given by Proposition 1.[11] The fact that the elasticity of taxable profits e_{π}^{1-t} remains a sufficient statistic for efficiency costs even with avoidance and evasion aligns with the ETI literature, which establishes that income sheltering does not affect optimal formulas as long as sheltered income does not generate fiscal externalities (Chetty, 2009a).

Two remarks are in order. First, if we relaxed the assumption that sheltered profits have no fiscal externalities, allowing for profits to be sheltered in tax-preferred forms subject to positive taxes, then the elasticity of taxable profits e_{π}^{1-t} would be an upper bound for the efficiency costs of corporate taxation as fiscal externalities attenuate the revenue cost of profit responses. Therefore, Proposition 1 gives a lower bound for the optimal corporate tax t^* with fiscal externalities. Second, we ignore that profit sheltering may matter for optimal policy if governments have alternative policies to curb it (Slemrod and Kopczuk, 2002). That is, disentangling real, avoidance, and evasion responses may affect the design of policies that increase sheltering costs (e.g., audit programs or third-party reporting) and their corresponding effects on taxable profit elasticities and optimal corporate taxes, as in Keen and Slemrod (2017).

International capital mobility Section 2 assumes that the only source of corporate tax distortions is the incomplete deductibility of capital costs. Another potential distortion is that domestic corporate

[11] The assumption that evasion costs are non-deductible is without loss of generality: the same result holds if $\phi(e)$ can be deducted from the corporate tax base, so $\pi(K,L,e) = F(K,L) - wL - \theta rK - e - \phi(e)$.

taxes may cause reallocation of capital to foreign lower-tax jurisdictions (Hines Jr and Rice, 1994; Gordon and Hines Jr, 2002; Devereux et al., 2008, 2021; Keen and Konrad, 2013).

To explore the implications of capital mobility, we extend the baseline model to include a foreign investment opportunity to which the capitalist can allocate capital. As in Swonder and Vergara (2024), we consider a representative capitalist with a fixed amount of capital $\overline{K}$ who allocates it between the domestic firm and a foreign investment. Capital allocated to the domestic firm can be deducted at rate θ from the domestic corporate tax base at cost r. The foreign investment has an after-tax return $\widetilde{r}$ and, unlike domestic capital expenditures, is not taxable and it cannot be deducted as investment expenses from the domestic corporate tax base. The problem of the capitalist is given by:

$$\begin{aligned}\max_{K,L} \Pi(K,L) &= (1-t)\left(F(K,L)-wL\right)+\left(\overline{K}-K\right)\widetilde{r}+t\theta rK, \\ &= (1-t)\pi(K,L)+\widetilde{r}\overline{K}-(\widetilde{r}-r\theta)K,\end{aligned}$$

where $\pi(K,L)=F(K,L)-wL-\theta rK$. The FOCs with respect to K and L are given by $F_K=\frac{\widetilde{r}-\theta tr}{1-t}$ and $F_L=w$, respectively. If $r=\widetilde{r}$, the FOC with respect to K is the same as in the baseline case. However, we allow r to differ from the international after-tax return $\widetilde{r}$, which implies that the domestic corporate tax may be distortionary even if $\theta=1$. This extension does not directly affect the workers' problem and also does not affect the planner's problem, given that $dU^K/d(1-t)$ remains unchanged because of the envelope theorem. Therefore, as in the profit-sheltering case discussed above, Proposition 1 continues to characterize the optimal corporate tax rate t^*. Sheltering and international capital mobility responses to corporate taxes are captured by the elasticity of taxable profits e_π^{1-t}, so this object remains sufficient for measuring efficiency costs. Again, this result relies on the absence of fiscal externalities. Fiscal externalities could arise from provisions like the Global Intangible Low-Taxed Income (GILTI), which would suggest that the elasticity of domestic taxable profits is an upper bound for the efficiency costs of corporate taxation and that Proposition 1 gives a lower bound for the optimal corporate tax.

This result contrasts with models that suggest that international capital mobility makes capital infinitely elastic, pushing optimal corporate taxes towards zero (Kotlikoff and Summers, 1987). The main reason why t^* can be positive in our model is the assumption of decreasing returns to scale. As the domestic technology becomes linear, domestic capital becomes infinitely elastic. We note, however, that our sufficient statistics representation nests this possibility. A case with linear technologies and infinitely responsive capital would imply that the elasticity of taxable profits e_π^{1-t} is, indeed, infinite. When $e_\pi^{1-t}\to\infty$, Proposition 1 delivers $t^*\to 0$. Therefore, our result generalizes the standard intuition in the international tax competition literature to cases where responses to capital are allowed to be finite.

Two final remarks are in order. First, the fact that both the model with income sheltering and the model with international capital mobility yield the same formulas for the optimal corporate tax implies that the characterization of optimal corporate taxes does not require taking a stance on whether profit shifting strategies have real effects on domestic activity or not, an issue explored in related literature (e.g., Bilicka, 2019; Suárez Serrato, 2019; Bilicka et al., 2022; Tørsløv et al., 2023; Altshuler et al., 2025; Bustos et al., 2025). The formulas are the same regardless of whether corporate taxes reduce profits through tax avoidance and evasion or actual capital flight as the relevant distinctions between these scenarios are implicit in the elasticities of taxable profits and wages.

Second, this extension can reveal the implications of international tax competition for the optimal domestic corporate tax in a small open economy. By definition, the after-tax return of the foreign investment $\widetilde{r}$ depends on international taxes. Foreign corporate tax cuts therefore increase the foreign after-tax return $\widetilde{r}$, decreasing domestic investment. The elasticity of taxable profits e_{π}^{1-t} captures this force, so the formula holds under international tax competition. Assessing how foreign tax changes affect the optimal corporate tax t^* requires more structure, as the effect of changes in $\widetilde{r}$ on the responsiveness of profits and wages to domestic corporate taxes (a second-order effect) depends on structural components such as the curvature of the production function and the degree of capital-labor substitution.

3.3 Market failures

We now consider extensions related to market failures salient to the corporate tax debate. First, we consider a model with productivity externalities, where the capitalist under-invests in capital because she does not internalize that capital accumulation leads to aggregate productivity increases. Second, we consider a model where the capitalist exerts labor market power, generating equilibrium underemployment. In both cases, there are small changes in how the capitalist's welfare effects are computed. However, the elasticities of profits and wages remain sufficient for assessing the real effects of corporate taxes.

Productivity externalities Section 2 abstracts from macro ("long-run") externalities from capital accumulation. For example, investment could generate total factor productivity growth. We explore these externalities using the following reduced-form approach. The capitalist production function is given by $F(K, L; \psi)$, with $F_\psi > 0$, where ψ is a productivity shifter. We assume that productivity increases with the capital stock: $\psi = \psi(K)$, with $\psi_K > 0$. The capitalist does not internalize this productivity effect, so capital accumulation generates a productivity externality. Because the capitalist does not internalize the externality, the individual problem is unchanged. However, the capitalist's envelope condition changes. The capitalist's indirect utility is given by $U^K = \Pi(K^*, L^*) = (1-t)\pi(K^*, L^*; \psi(K^*)) - (1-\theta)rK^*$, so the envelope theorem implies that $dU^K/d(1-t) = \pi(K^*, L^*) - wLe_w^{1-t} + (1-t)F_\psi\psi_K[dK/d(1-t)] = \pi(K^*, L^*) - wLe_w^{1-t} + \pi\mathcal{E}_{1-t}$, where $\mathcal{E}_{1-t} = \frac{(1-t)F_\psi\psi_K}{\pi}\frac{dK}{d(1-t)}$ is the (normalized) productivity externality. In this case, an increase in the net-of-tax rate generates an additional positive welfare effect on the capitalist, given the increase in productivity that is not internalized in the FOCs.

Proposition 6. *Assume that the capitalist does not internalize that $\psi = \psi(K)$. Then, at the social optimum with productivity externalities, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - g_K\left(1 + \mathcal{E}_{1-t} - ae_w^{1-t}\right) - g_L^1 ae_w^{1-t}}{1 - g_K\left(1 + \mathcal{E}_{1-t} - ae_w^{1-t}\right) + e_\pi^{1-t}}, \tag{9}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, g_K is the welfare weight of the capitalist, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate, and $\mathcal{E}_{1-t} = [(1-t)F_\psi \psi_K/\pi] \cdot [dK/d(1-t)]$ is the productivity externality. If the capitalist internalizes that $\psi = \psi(K)$, then the optimal corporate tax t^* is given by equation (2).

Proposition 6 differs from Proposition 1 in the welfare effect on the capitalist. Failure to internalize the externality leads the capitalist to under-invest in capital, lowering her utility. Otherwise, the formula is unchanged, because the elasticities of profits and wages capture the real effects of the sub-optimal level of capital. When the externality is internalized, the envelope theorem yields an optimal corporate tax that coincides with the one in Proposition 1. Because the only difference is the welfare effect on the capitalist, the optimal corporate tax t^* as $g_K \to 0$ is the same as in the baseline case (see equation (3)).

Unlike the baseline case, the optimal corporate tax t^* is not zero in the absence of redistributive preferences. If G is linear so that $g_K = g_L^1 = 1$, then $t^* = \frac{-\mathcal{E}_{1-t}}{e_\pi^{1-t} + ae_w^{1-t} - \mathcal{E}_{1-t}}$. The denominator is positive, as the macro elasticity e_π^{1-t} includes the externality plus the other behavioral effects, so a corrective subsidy to maximize surplus becomes optimal. With distributional motives, the conclusion may differ depending on how the additional surplus from correcting the externality is distributed.

Labor market power Section 2 assumes perfect labor market competition. However, extensive literature shows that labor markets feature imperfect competition in the form of monopsony power (Manning, 2021; Card, 2022; Kline, 2025). Monopsony reflects employer wage-setting power that internalizes upward-sloping labor supplies, so that wages are "marked down" relative to marginal productivities.

We explore the implications of monopsonistic wage-setting by assuming that the representative capitalist internalizes the upward-sloping labor supply curve in the profit maximization problem:

$$\max_{K,L} \Pi(K, L) \quad = \quad (1-t)\left(F(K, L) - w(L)L\right) - r(1-\theta t)K,$$

where $w(L)$ is the inverse labor supply curve, with $\partial w(L)/\partial L \equiv w_L > 0$ and elasticity of labor supply $\eta_w^S = w/w_L L$. The capitalist internalizes that hiring more workers raises wages, which in turn lowers employment. The FOCs with respect to K and L are given by $F_K = \frac{r(1-\theta t)}{1-t}$ and $F_L \frac{\eta_w^S}{1+\eta_w^S} = w$, respectively. With labor market power, wages are below the marginal product of labor in inverse proportion to the labor supply elasticity (Robinson, 1933). In a perfectly competitive market, the firm perceives $\eta_w^S \to \infty$ ($w_L = 0$), nesting the baseline case discussed in Section 2.

Workers' labor supply decisions are the same as in the baseline model, as is the labor market clearing condition and the planner's problem. The only qualitative difference for the planner is that, with monopsony power, we now have that $dU^K/d(1-t) = \pi$, where before it was $\pi - wLe_w^{1-t}$. The reason is that monopsony power makes the wage a choice for the capitalist. The FOCs, therefore, internalize the relationship between wages and employment. As such, the envelope theorem applies to the wage, so changes in the equilibrium wage have no first-order welfare costs for the capitalist.

Proposition 7. *At the social optimum with labor market power, the optimal corporate tax t^* is given by:*

$$t^* = \frac{1 - g_K - g_L^1 a e_w^{1-t}}{1 - g_K + e_\pi^{1-t}}, \tag{10}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, g_K is the welfare weight of the capitalist, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, and $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate.

Like Proposition 6, Proposition 7 differs from Proposition 1 only in the welfare effect on the capitalist. The wage effect no longer affects the capitalist's welfare by the envelope theorem argument above, so the welfare weight g_K is no longer adjusted by e_w^{1-t}. The elasticities of wages e_w^{1-t} and taxable profits e_π^{1-t} remain sufficient for the normative analysis. The labor supply elasticity η_w^S does not enter explicitly into t^*, as its effect is captured by the reduced-form wage elasticity. This parallels the perfectly competitive case, in which the labor supply elasticity mediates wage effects through the labor market clearing condition. Also, as in the case with productivity externalities, the optimal corporate tax is not zero in the absence of redistributive preferences. When G is linear so that $g_K = g_L^1 = 1$, we have that $t^* = \frac{-ae_w^{1-t}}{e_\pi^{1-t}}$.

3.4 Labor income taxes

Section 2 abstracts from labor income taxes. However, corporate tax effects on employment and wages may create fiscal externalities for the labor income tax base, and jointly optimizing corporate and labor income taxes may yield additional insights. We explore these interactions by assuming that the planner imposes a linear tax τ on wages, so workers' utility when working is $w(1-\tau) + T_0 - c$. Because the model considers equally productive workers who earn the same wage w and no intensive-margin labor supply responses, a linear labor income tax system $(T_0, 1-\tau)$ is flexible enough to manipulate workers' participation and utility levels.[12]

[12] The representation of the tax system as an ad valorem tax shapes the analytical expression of the fiscal externality but not the more substantial points raised in this extension.

The labor income tax τ does not directly affect the capitalist, so the profit maximization problem is unchanged conditional on the wage w. The workers' problem changes: labor supply becomes $L^S(w(1-\tau)) = H(w(1-\tau))$. The labor income tax τ affects equilibrium wages through changes in labor supply. The planner chooses $(1-t, T_0, 1-\tau)$ to maximize a generalized utilitarian social welfare objective:

$$SWF = (1-L)G(T_0) + L\frac{\int_0^{w(1-\tau)} G(w(1-\tau) + T_0 - c)dH(c)}{H(w(1-\tau))} + G(U^K),$$

and faces the budget constraint $t\pi(K^*, L^*) + \tau wL = T_0$ with multiplier λ. The labor income tax τ affects labor market participation, as shown by the limits of integration. It also affects the budget constraint, potentially generating fiscal externalities.

Proposition 8. *At the social optimum with linear labor income taxes, the optimal corporate tax t^* for a given labor income tax τ is given by:*

$$t^* = \frac{1 - g_K\left(1 - ae_w^{1-t}\right) - (1-\tau)g_L^1 ae_w^{1-t} - \tau a(e_w^{1-t} + e_L^{1-t})}{1 - g_K\left(1 - ae_w^{1-t}\right) + e_\pi^{1-t}}, \tag{11}$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio, g_L^1 is the average welfare weight of employed workers, g_K is the welfare weight of the capitalist, $e_w^{1-t} = [dw/d(1-t)] \cdot [(1-t)/w]$ is the elasticity of wages w with respect to the net-of-corporate tax rate, $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-corporate tax rate, and $e_L^{1-t} = [dL/d(1-t)] \cdot [(1-t)/L]$ is the elasticity of employment L with respect to the net-of-corporate tax rate. Also, at the social optimum with linear labor income taxes, the optimal labor income tax τ^* for a given corporate tax t is given by:

$$\tau^* = \frac{1 - g_L^1(1 + e_w^{1-\tau}) - te_\pi^{1-\tau}/a + g_K(1-t)e_w^{1-\tau}}{1 - g_L^1(1 + e_w^{1-\tau}) + e_w^{1-\tau} + e_L^{1-\tau}}, \tag{12}$$

where $e_w^{1-\tau} = [dw/d(1-\tau)] \cdot [(1-\tau)/w]$ is the elasticity of wages w with respect to the net-of-labor income tax rate, $e_\pi^{1-\tau} = [d\pi/d(1-\tau)] \cdot [(1-\tau)/\pi]$ is the elasticity of taxable profits π with respect to the net-of-labor income tax rate, and $e_L^{1-\tau} = [dL/d(1-\tau)] \cdot [(1-\tau)/L]$ is the elasticity of employment L with respect to the net-of-labor income tax rate. Finally, at the social optimum with linear labor income taxes, the optimal corporate tax t^* when the labor income tax τ^* is also optimal (joint optimization) satisfies:

$$t^* = \frac{1 - g_K + (1-\tau^*)aD(1 - g_L^1) - a\tau^*\left(e_L^{1-t} + De_L^{1-\tau}\right)}{1 - g_K + e_\pi^{1-t} + De_\pi^{1-\tau}}, \tag{13}$$

where $D = \eta_{1-t}^D/\eta_w^S = -e_w^{1-t}/e_w^{1-\tau} > 0$, with $\eta_{1-t}^D = [\partial L^D/\partial(1-t)] \cdot [(1-t)/L]$ the labor demand elasticity with respect to the net-of-corporate tax rate and $\eta_w^S = [\partial L^S/\partial w(1-\tau)] \cdot [w(1-\tau)/L]$ the labor supply elasticity with respect to the net-of-tax wage.

Proposition 8 offers three complementary insights. First, taking the labor income tax τ as given, equation (11) shows that the optimal corporate tax formula features fiscal externalities: the optimal corporate tax t^* mainly depends on τ because changes in wages and employment due to changes in t^* affect labor income tax revenue.[13] A corporate tax increase decreases labor demand and, therefore, depresses wages and employment, with magnitudes governed by e_w^{1-t} and e_L^{1-t}. Therefore, employment elasticities (or total taxable labor earnings elasticities $e_w^{1-t} + e_L^{1-t}$) are needed to calibrate t^*. The sign of the fiscal externality depends on the sign of the labor income tax rate τ. If workers pay net taxes (i.e., $\tau > 0$), the effects on wages and employment push the optimal corporate tax t^* downwards as corporate tax cuts increase labor income tax revenue. On the contrary, if workers receive in-work benefits (i.e., $\tau < 0$), then wage and employment effects generate net savings for the government. This is another reason why heterogeneous incidence affects optimal corporate taxes, as workers' tax liabilities vary.

Second, Proposition 8 presents a sufficient statistics expression for the optimal labor income tax τ^* when the corporate tax t is fixed (equation (12)). This expression depends on the corporate tax t because of analogous fiscal externalities on the corporate tax base, further underscoring the interaction between instruments: labor income taxes affect labor supply and, therefore, wages and profits. With no corporate taxes and fixed wages ($t = e_w^{1-\tau} = 0$), the formula for τ^* reduces to the well-known Mirrleesian expressions for optimal labor income taxes when labor supply responses are at the extensive margin (Saez, 2002b; Piketty and Saez, 2013a). Therefore, while not the focus of this paper, equation (12) generalizes this standard result to a case that allows for general equilibrium effects of labor income taxes on wages (Rothstein, 2010; Zurla, 2024; Gravoueille, 2025) and externalities in corporate tax revenue.

Third, Proposition 8 provides insights into the joint optimality of corporate and labor income taxes. The planner can use both the labor income tax τ and the corporate tax t to manipulate wages and change social welfare by $(1-\tau)g_L^1 - (1-t)g_K$. Equation (13) characterizes the "residual" role of the optimal corporate tax t^* once the planner has already used an optimal labor income tax system for that purpose. The key for interpreting equation (13) is the new term $D = \eta_{1-t}^D/\eta_w^S = -e_w^{1-t}/e_w^{1-\tau} > 0$, the ratio between the labor demand elasticity with respect to the net-of-corporate tax rate η_{1-t}^D and the labor supply elasticity with respect to the net-of-tax wage η_w^S, also equal to the relative wage incidence effects of both taxes $-e_w^{1-t}/e_w^{1-\tau}$. The term D measures the relative distortion of both taxes and therefore mediates the reoptimization of the optimal labor income tax following marginal changes in the corporate tax. Any change in the corporate tax to redistribute profits will affect equilibrium objects relevant to the optimization of the labor income tax. Therefore, even if the formula for the optimal corporate tax does not consider the direct redistributive effect of wage incidence, it still needs to consider the relative wage effects to compensate for the distortions it imposes on the optimization of the labor income tax.

[13] Equation (11) also shows that τ affects the optimal corporate tax t^* by attenuating the welfare effects on workers driven by wage changes, because workers only retain a fraction $1 - \tau$ of the marginal incidence.

Revisiting optimal deductibility Proposition 8 shows that optimal labor income taxes are not sufficient to restore production efficiency because of the lack of instrument flexibility in the taxation of profits. This conclusion relies on the unavoidable distortions of the corporate tax when $\theta < 1$. To close the circle, we revisit the optimality of θ when the planner has access to optimal labor income taxes.

As a reminder, Proposition 2 says that, in the baseline model with no labor income taxes, optimal deductibility θ^* is below 1 because partial deductibility is second-best optimal to redistribute between employed workers and firm owners. Appendix A shows that full deductibility is in fact optimal when the planner can optimize both corporate and labor income taxes: reducing θ below 1 no longer generates first-order welfare benefits through surplus reallocation because joint optimization of corporate and labor income taxes addresses optimal redistribution.[14] While $\theta < 1$ remains the empirically relevant case, this result further clarifies the connection between our analysis and the production efficiency tradition. It also underscores the importance of the availability of unrestricted tax instruments for production efficiency.

Organizational form choice Allowing for labor income taxes naturally raises the question of how the optimal corporate tax t^* changes if firms can manipulate the organizational form (e.g., in the context of the US system, between C and S corporations) to benefit from tax differentials between labor and capital (Gordon and MacKie-Mason, 1994; Cooper et al., 2016; Clarke and Kopczuk, 2017; Smith et al., 2019, 2022; Kopczuk and Zwick, 2020). We explore this question in Appendix A, where we replace the representative capitalist with a continuum of capitalists with heterogeneous incorporation costs who decide whether to set up their businesses as C corporations (whose profits are taxed under the corporate tax system) or S corporations (whose profits are taxed as labor income). The model delivers endogenous distributions of C and S corporations that are elastic to changes in taxes. The characterization of t^* differs in two ways from that of Proposition 8. First, changes in the distribution of C and S corporations do not generate first-order welfare effects because of the envelope theorem, but do generate fiscal externalities. While switches out of the C corporation sector contribute to the efficiency cost of t^* (giving rise to an elasticity of taxable profits that encompasses both intensive and extensive margins), switches into the S corporation sector have a corresponding positive fiscal externality in the labor income tax base. Second, a new welfare effect arises, as general equilibrium changes in wages driven by changes in the labor demand of C corporations can also affect the utility of inframarginal capitalists organized as S corporations.

4 Calibrating Optimal Corporate Taxes

Sections 2 and 3 provide sufficient statistics formulas for optimal corporate taxes. This section conducts simple calibration exercises of equation (11) (Proposition 8) to illustrate how to apply the formulas. We

[14] We can recover this benchmark with linear taxes because of the lack of both intensive margin responses and wage heterogeneity. In more general models, optimal non-linear labor income taxes are likely required to generate this result.

first survey the empirical literature on the key elasticities with respect to the net-of-tax rate. Given our discussion in Section 2, we exclude papers that use dividend tax variation for identification. We then compute the range of optimal corporate tax rates implied by these estimates and conduct comparative statics. Finally, we use the elasticities of taxable profits, wages, and employment estimated by Kennedy et al. (2026) to study the optimality of the US corporate tax, leveraging the internally consistent, comprehensive set of estimates that share the same institutional context, data, and empirical strategy.

4.1 Survey of empirical literature

We survey the literature for estimates of elasticities of taxable profits, wages, and employment with respect to the net-of-corporate tax rate. Three details bear mentioning. First, the elasticities in the model represent long-run responses, but empirical estimates usually reflect short-run responses. Long-run elasticities are expected to be larger than the short-run elasticities. Second, the elasticities in the model are with respect to the statutory corporate tax rate, but empirical estimates sometimes compute elasticities with respect to effective corporate taxes. Effective tax elasticities are expected to be larger than the statutory ones.[15] Third, in the presence of firm-level heterogeneity, the taxable profit elasticities should be profit-weighted (Proposition 3). However, to the best of our knowledge, no empirical study reports elasticities weighted by taxable profits. Furthermore, sample restrictions imposed to aid identification sometimes restrict attention to firms with relatively low profits, limiting their relevance for our formulas.

Elasticity of taxable profits The theoretical analysis reveals that the elasticity of taxable profits with respect to the net-of-tax rate e_{π}^{1-t} is a sufficient statistic for the efficiency costs of the corporate tax. We identify 18 papers that provide a total of 28 estimates of the elasticity, which are shown in Table 1. We report multiple estimates from the same paper when a paper reports bunching estimates at different kinks or notches of a single tax system; we do not record estimates reported as robustness exercises.[16]

The estimated elasticities range widely, with a minimum estimate of 0.08 and a maximum estimate of 4.79. The median and average estimates are 0.64 and 1.14, respectively, and the 25th and 75th percentiles estimates are 0.18 and 1.37, respectively. Methods vary across papers, but over half of the elasticities are estimated using bunching research designs. All but three papers report elasticities with respect to statutory (rather than effective tax rates), and most focus on samples of small to medium-sized firms, although the sample definition varies widely across studies. Bunching papers with estimates at different

[15] In our framework, the statutory tax rate is the policy choice of the planner. Institutional features and behavioral responses that generate differences between statutory and effective tax rates, such as investment deductions or avoidance and evasion responses, mediate the magnitudes of the elasticities but not their definition. Responses to effective taxes should be stronger, as the effective variation is smaller and, therefore, the proportional response larger.

[16] While Riedl and Rocha-Akis (2012) and Fossen and Steiner (2018) estimate corporate tax effects on taxable profits, we exclude them from the review as they do not report results in the form of elasticities with respect to the net-of-tax rate.

Table 1: Elasticity of Taxable Profits With Respect to the Net-of-Tax Rate e_{π}^{1-t}

Paper	Setting	Methods	Estimate	Bounds
Bach (2017)	France, 2004-2007	Bunching	0.21	[0.20, 0.22]
Bachas and Soto (2021)	Costa Rica, 2008-2014	Bunching	4.79	[4.63, 4.95]
Bachas and Soto (2021)	Costa Rica, 2008-2014	Bunching	2.65	[2.49, 2.81]
Basri et al. (2021)	Indonesia, 2008-2010	Gruber-Saez IV	0.58	[0.19, 0.97]
Boonzaaier et al. (2019)	South Africa, 2010-2013	Bunching	0.17	[0.14, 0.19]
Boonzaaier et al. (2019)	South Africa, 2010-2013	Bunching	0.72	[0.58, 0.86]
Buettner (2003)	Germany, 1980-2000	Event study/DiD	4.56	[2.61, 6.51]
Bukovina et al. (2025)	Slovakia, 2010-2020	Bunching	1.85	[1.83, 1.86]
Bukovina et al. (2025)	Slovakia, 2010-2021	Bunching	1.11	[1.07, 1.14]
Bukovina et al. (2025)	Slovakia, 2010-2022	Bunching	0.19	[0.15, 0.22]
Coles et al. (2022)	USA, 2004-2014	Bunching	0.55	[0.53, 0.57]
Cortés and Gutiérrez (2025)	Canada, 2005-2006	Bunching	0.84	[0.80, 0.88]
Devereux et al. (2014)	UK, 2001-2005	Bunching	0.37	[0.25, 0.49]
Devereux et al. (2014)	UK, 2001-2008	Bunching	0.13	[0.09, 0.17]
Duan and Moon (2025)	Canada, 2011-2017	Triple difference	1.40	-
Dwenger and Steiner (2012)	Germany, 1998-2004	Gruber-Saez IV	0.58	-
Goodman et al. (2025)	USA, 2013-2019	Event study/DiD	0.75	-
Gruber and Rauh (2007)	USA, 1960-2003	Gruber-Saez IV	0.20	[0.05, 0.34]
Kennedy et al. (2026)	USA, 2013-2019	Event study/DiD	0.70	[0.39, 1.01]
Krapf and Staubli (2025)	Switzerland, 2003-2017	Distributed lag	3.50	[1.54, 5.46]
Lediga et al. (2019)	South Africa, 2009-2011	Bunching	0.79	-
Lediga et al. (2019)	South Africa, 2009-2011	Bunching	0.12	-
Lediga et al. (2019)	South Africa, 2012	Bunching	0.08	-
Lediga et al. (2019)	South Africa, 2012-2015	Bunching	1.33	-
Lediga et al. (2019)	South Africa, 2013-2015	Bunching	0.14	-
Lediga et al. (2019)	South Africa, 2013-2015	Bunching	0.12	-
Massenz (2026)	Netherlands, 2007-2018	Bunching	0.08	[0.07, 0.10]
Suárez Serrato and Zidar (2016)	USA, 1980-2010	Long difference	3.50	[-0.32, 7.32]

Summary statistics across 28 estimates
Min 0.08, P25 0.18, Median 0.64, Mean 1.14, P75 1.37, Max 4.79.

Random-effects meta-analysis, 19 estimates with reported standard errors
Pooled mean 1.22, Cross-study variance 1.90, 95% confidence interval [0.58, 1.87].

Notes: This table shows estimates of elasticities of pre-tax taxable profits with respect to net-of-tax rates reported in related literature. All values, including point estimates and bounds, were directly reported in the cited papers. For Bukovina et al. (2025) and Coles et al. (2022), we use elasticities with respect to statutory net-of-tax rates, rather than headline estimates with respect to effective net-of-tax rates. Summary statistics are calculated with equal weighting. Meta-analysis details are reported in Table B.1 of Appendix B.

segments of the profit distribution document lower elasticities at kinks further up in the distribution.[17]

To address the dispersion and varying precision of the reviewed estimates, we conduct a random-effects meta-analysis of the 19 estimates for which standard errors are available, modeling each estimate as a noisy measurement of a context-specific true elasticity, and assuming that context-specific true elasticities themselves are drawn from a common normal distribution.[18] We estimate a pooled mean and cross-study variance of 1.22 and 1.90, respectively, which correspond to a 95% confidence interval of $[0.58, 1.87]$. The

[17]The distribution of estimates across the papers we reviewed is similar to, albeit somewhat more dispersed than, the distribution reported in Agostini et al. (2026), which calculates elasticities of taxable profits in 15 countries using administrative data and the same bunching research design. Their estimates range from 0.08 to 1.9, with a mean, P25, P50, and P75 of 0.81, 0.34, 0.74, and 1.21, respectively.

[18]Point estimates with reported standard errors were larger on average (1.41) than point estimates without reported standard errors (0.59), mechanically pushing the meta-analysis mean upwards relative to the unweighted mean.

large cross-study variance estimate implies that nearly all of the observed variation across estimates reflects differences in the underlying parameters rather than sampling noise. Table B.1 of Appendix B gives additional details regarding the meta-analysis.

These estimates span a wide range of countries, which differ in their economic development and tax institutions. Figure B.1 of Appendix B presents correlations between the estimates reported in Table 1 and the degree of capital expensing (deductibility), initial corporate tax rates, openness to trade (as measured by average tariff rates), log GDP per capita, and log population. None of these relationships is statistically significant, though we cannot rule out economically significant relationships given the small number of observations. Elasticities in countries with lower capital deductibility and lower tariffs tend to be larger. We leave a more systematic analysis of variation in taxable profit elasticities to future work.

Elasticity of wages The theoretical analysis also highlights the importance of the elasticity of wages with respect to the net-of-tax rate e_w^{1-t}. Because the model abstracts from intensive margin labor supply decisions, this elasticity is equivalent to an elasticity of labor earnings (wages times hours) conditional on employment. We identified 9 papers that provide 23 estimates of this elasticity, which are shown in Table 2. Three papers report estimates of the effects of corporate taxes on wages at multiple points in the within-firm earnings distribution. Except for Dobridge et al. (2021) and Ohrn (2023), the reviewed papers report elasticities with respect to statutory taxes.[19]

Fewer studies estimate net-of-tax elasticities of wages than of taxable profits, and the estimates reflect a narrower range of methods and countries. For median wages, Fuest et al. (2018), Ljungqvist and Smolyansky (2018), and Dobridge et al. (2021) find elasticities of 0.39, 0.34, and 0.33, respectively, but Kennedy et al. (2026) report precisely estimated zero effects. Regarding average wages, Suárez Serrato and Zidar (2016), Dobridge et al. (2021), Risch (2024), and Duan and Moon (2025) find elasticities of 0.58, 0.72, 0.24, and 0.27, while Margolin (2024) reports precisely estimated zero effects. Some of these studies suggest heterogeneity in wage effects across the within-firm income distribution. Dobridge et al. (2021) and Kennedy et al. (2026) estimate much larger wage effects for top earners than for typical earners. Kennedy et al. (2026) find the largest effects for the five highest-paid workers within the firm, whom they call "executives," consistent with Ohrn (2023). Risch (2024) finds that the estimated effect on average earnings is almost exclusively driven by the top 20% of workers, with median wages being unresponsive to tax changes. By contrast, Duan and Moon (2025) find weaker effects for workers in the top tercile of the within-firm earnings distribution.[20] Further research is necessary to understand the economic determinants of corporate tax wage incidence, with a particular focus on worker-level heterogeneity.

[19] As above, we exclude papers for which we cannot easily translate estimated effects of tax reforms into elasticities with respect to the net-of-tax rate. These include Hassett and Mathur (2006), Arulampalam et al. (2012), Clausing (2013), Liu and Altshuler (2013), Garrett et al. (2020), Carbonnier et al. (2022), Andreani et al. (2025), and Roberts (2025).

[20] Carbonnier et al. (2022) also finds that average wage gains from tax cuts are driven by large gains for high earners. By contrast, Roberts (2025) finds no evidence of heterogeneity in wage effects of a US investment tax incentive.

Table 2: Elasticity of Wages with Respect to the Net-of-Tax Rate e_w^{1-t}

Wage distribution moment	Setting	Methods	Estimate	Bounds
Dobridge et al. (2021)				
Average	USA, 1999–2015	DiD/IV	0.72	–
P1	USA, 1999–2015	DiD/IV	-0.07	–
P5	USA, 1999–2015	DiD/IV	0.20	–
P10	USA, 1999–2015	DiD/IV	0.26	–
P25	USA, 1999–2015	DiD/IV	0.26	–
P50	USA, 1999–2015	DiD/IV	0.33	–
P75	USA, 1999–2015	DiD/IV	0.39	–
P90	USA, 1999–2015	DiD/IV	0.59	–
P95	USA, 1999–2015	DiD/IV	0.85	–
P99	USA, 1999–2015	DiD/IV	1.77	–
Duan and Moon (2025)				
Average	Canada, 2011–2017	Triple difference	0.27	–
Bottom tercile	Canada, 2011–2017	Triple difference	0.21	–
Middle tercile	Canada, 2011–2017	Triple difference	0.37	–
Top tercile	Canada, 2011–2017	Triple difference	0.15	–
Fuest et al. (2018)				
Median	Germany, 1999–2008	Event study/DiD	0.39	[0.14, 0.64]
Kennedy et al. (2026)				
Median	USA, 2013–2019	Event study/DiD	-0.03	[-0.10, 0.05]
95th percentile	USA, 2013–2019	Event study/DiD	0.22	[0.11, 0.34]
Executives	USA, 2013–2019	Event study/DiD	0.47	[0.31, 0.62]
Ljungqvist and Smolyansky (2018)				
Average	USA, 1969–2010	Event study/DiD	0.34	[0.20, 0.47]
Margolin (2024)				
Average	France, 2009–2019	Gruber-Saez IV	0.01	[0.00, 0.02]
Ohrn (2023)				
Executives	USA, 1998–2012	Event study/DiD	2.77	–
Risch (2024)				
Average	USA, 2008–2016	Event study/DiD	0.24	–
Suárez Serrato and Zidar (2016)				
Average	USA, 1980–2010	Long difference	0.58	[-0.07, 1.23]

Notes: This table shows estimates of elasticities of wages and earnings (conditional on employment) with respect to net-of-tax rates reported in related literature. With the exception of Dobridge et al. (2021), Ohrn (2023), and Risch (2024), all values, including point estimates and bounds, were directly reported in the cited papers. Dobridge et al. (2021) and Ohrn (2023) estimate the effects of Defense Production Activities Deductions-induced corporate tax relief and report results per percentage point of tax cut. We divide these results by the change in the log net-of-tax rate starting from a baseline tax rate of 35%. Risch (2024) estimates the effects of a tax reform reducing the top marginal tax rate paid by S corporation owners by 4.6 percentage points, relative to a state and federal combined pre-reform rate of 41.5% (35% federal tax rate and 6.5% average state tax rate). We divide the difference-in-differences effects on log wages by the log net of tax rate change to arrive at elasticity estimates reported above.

Elasticity of employment With labor income taxes, Proposition 8 reveals that employment elasticities also affect optimal corporate taxes.[21] The total labor income tax fiscal externality in equation (11) combines wage and employment effects, so it can also be approximated by the total payroll cost elasticity.[22] We reviewed 8 papers providing employment or payroll estimates, displayed in Table 3. Ljungqvist

[21] Organizational form switching may also induce fiscal externalities. While several papers study whether tax-induced organizational form switching is quantitatively important (Nelson, 1991; Carroll and Joulfaian, 1997; Gordon and Slemrod, 2000; Auten et al., 2016; Nelson, 2016; Clarke and Kopczuk, 2017; Kopczuk and Zwick, 2020; Smith et al., 2022), we are not aware of studies that report elasticities of organizational form switching with respect to the net-of-tax rate. Therefore, we abstract from this margin in the calibrations below, but see the topic as worthy of further empirical research.

[22] In principle, the total payroll elasticity should equal $e_w^{1-t} + e_L^{1-t}$. This identity may not hold exactly, as it depends on the earnings levels of the workers who change employment. This equivalence could break down even in the absence of heterogeneous wage incidence if wage and payroll elasticities are estimated among different samples; for example, Risch

Table 3: Elasticity of Employment and Payroll Costs With Respect to the Net-of-Tax Rate

Paper	Setting	Methods	Estimate	Bounds
Panel A. Elasticity of employment e_L^{1-t}				
Dobridge et al. (2021)	USA, 1999–2015	DiD/IV	0.07	-
Duan and Moon (2025)	Canada, 2011-2017	Triple difference	0.35	-
Giroud and Rauh (2019)	USA, 1977-2011	Event study/DiD	0.41	[0.31, 0.51]
Kennedy et al. (2026)	USA, 2013-2019	Event study/DiD	0.23	[0.07, 0.40]
Ljungqvist and Smolyansky (2018)	USA, 1969-2010	Event study/DiD	0.22	[0.10, 0.34]
Risch (2024)	USA, 2008-2016	Event study/DiD	0.05	-
Suárez Serrato and Zidar (2016)	USA, 1980-2010	Long difference	2.20	[0.41, 3.99]
Panel B. Elasticity of total payroll costs $e_w^{1-t} + e_L^{1-t}$				
Dobridge et al. (2021)	USA, 1999–2015	DiD/IV	0.79	-
Duan and Moon (2025)	Canada, 2011-2017	Triple difference	0.47	-
Kennedy et al. (2026)	USA, 2013-2019	Event study/DiD	0.37	[0.20, 0.54]
Risch (2024)	USA, 2008-2016	Event study/DiD	0.17	-
Margolin (2024)	France, 2009-2019	Gruber-Saez IV	0.74	[0.72, 0.76]

Notes: This table shows estimates of elasticities of employment and payroll costs with respect to net-of-tax rates reported in related literature. With the exception of Suárez Serrato and Zidar (2016), Dobridge et al. (2021), and Risch (2024), all values displayed in the table, including point estimates and bounds, were directly reported in the cited papers. Suárez Serrato and Zidar (2016) provide estimates of population growth with respect to an apportioned business tax rate, and report in their Table 1 that apportionment weights on payroll, property, and sales are 22.7%, 22.8%, and 54.5%, respectively. Assuming conservatively that, on average, businesses have 10% of their sales in the same state as their payroll and property, we divide Suárez Serrato and Zidar (2016) estimates by $1/(0.227 + 0.228 + (0.545 \times 0.1)) \approx 2$ to arrive at the elasticity estimates reported in the above table. Dobridge et al. (2021) estimate the effects of Defense Production Activities Deductions-induced corporate tax relief and report results per percentage point of tax cut. We divide these results by the change in the log net-of-tax rate starting from a baseline tax rate of 35%. Risch (2024) estimates the effects of a tax reform reducing the top marginal tax rate paid by S corporation owners by 4.6 percentage points, relative to a state and federal combined pre-reform rate of 41.5% (35% federal tax rate and 6.5% average state tax rate). We divide the difference-in-differences effects on log wages by the log net of tax rate change to arrive at the elasticity estimates reported in the above table.

and Smolyansky (2018), Giroud and Rauh (2019), Duan and Moon (2025), and Kennedy et al. (2026) find employment elasticities of 0.22, 0.41, 0.35, and 0.23, respectively. Dobridge et al. (2021) and Risch (2024) find lower elasticities of 0.07 and 0.05, while Suárez Serrato and Zidar (2016) find a larger elasticity of 2.20. The payroll elasticities available in Margolin (2024), Risch (2024), Duan and Moon (2025), and Kennedy et al. (2026) range from 0.17 to 0.79.[23]

4.2 Exercise 1: Calibrating optimal corporate taxes

We calibrate equation (11) using the elasticities reported in Tables 1, 2, and 3 and conduct comparative statics with respect to optimal tax formula inputs. We acknowledge that the estimates originate from distinct institutional contexts, reforms, datasets, samples, and research designs, and therefore may not be comparable. We also recognize that these estimates often reflect short-run responses, and are based on samples of firms that do not represent the full distribution of profits. Therefore, magnitudes should be interpreted with caution, and this exercise should be read merely as illustrating the economics of the

(2024) and Duan and Moon (2025) estimate average wage effects at the worker level but estimate payroll effects at the firm level. We are not aware of studies reporting heterogeneity in employment or payroll effects by within-firm earnings level.

[23] Liu and Altshuler (2013), Lester (2019), and Carbonnier et al. (2022) also estimate employment or payroll cost effects but they do not report the estimates in the elasticity form necessary for our normative analysis.

formula. The second calibration exercise below focuses on a set of internally consistent estimates that generate more rigorous and interpretable quantitative insights.

To calibrate the right-hand-side of equation (11), we choose values for the net-of-tax elasticities of profits e_{π}^{1-t}, wages e_{w}^{1-t}, and employment e_{L}^{1-t}; welfare weights on workers g_L^1 and the capitalist g_K; the wages-to-taxable profits ratio a; and the labor income tax rate τ. We define a baseline vector of values and then conduct numerical comparative statics for each of its components. Elasticities are set at the median values of the reviewed estimates: $e_{\pi}^{1-t} = 0.64$ (Table 1), $e_{w}^{1-t} = 0.30$ (Table 2), and $e_{L}^{1-t} = 0.23$ (Table 3). This exercise abstracts from within-firm heterogeneity in wage incidence and therefore focuses on estimates of e_{w}^{1-t} for median or average workers. We set $g_L^1 = 1$ at baseline and vary it from 0 to 2 in comparative statics. Likewise, we assume that $g_K = 0$ at baseline but conduct comparative statics assuming values between 0 and 1. We set the relative tax base parameter $a = 1.35$ using Internal Revenue Service Statistics of Income tables as the ratio of total taxable compensation of employees to total taxable profits of corporate businesses.[24] Finally, to calibrate τ, we use the Piketty et al. (2018) micro-files and estimate an empirical average marginal tax rate on labor income of $\tau = 0.303$ (see Appendix C for details). At the baseline values, the optimal corporate tax t^* (including both entity and payout taxes) is 30.6%, but Figures 1, 2, B.2, and B.3, show that t^* can be highly sensitive to the choice of inputs.

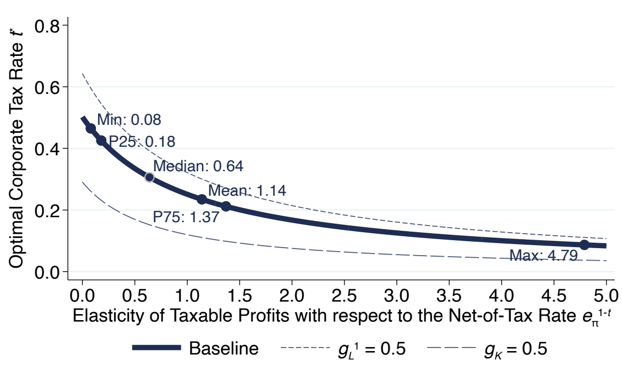
Figure 1 shows comparative statics with respect to the elasticity of taxable profits e_{π}^{1-t} and the wage elasticity e_{w}^{1-t}. Panel A of Figure 1 shows that t^* decreases nonlinearly with e_{π}^{1-t}. Moving to the 25th percentile estimate in Table 1 of 0.18 increases t^* to 42.5%. Conversely, moving to the 75th percentile estimate in Table 1 of 1.37 decreases t^* to 21.2% and assuming the maximum value in Table 1 of 4.79 further decreases t^* to 8.7%. Panels A.I and A.II of Figure 1 show that assuming different values for g_L^1, g_K, and e_{w}^{1-t} when conducting the comparative static with respect to e_{π}^{1-t} affects the levels of t^* in the expected direction, but not the relationship (slope) between e_{π}^{1-t} and t^*. Panel B of Figure 1 shows comparative statics with respect to the wage elasticity e_{w}^{1-t}. t^* also decreases with e_{w}^{1-t}, but the pattern is linear. When e_{w}^{1-t} approaches zero, t^* increases to 55.3% given the smaller welfare gains for workers and the smaller fiscal externality. In contrast, when e_{w}^{1-t} grows large, t^* may substantially decrease and eventually approach zero. Panels B.I and B.II of Figure 1 show that changing the values of g_L^1, g_K, and e_{π}^{1-t} when conducting the comparative static with respect to e_{w}^{1-t} affects both the levels of t^* and the slope of the relationship. When cutting g_L^1 by half, t^* is substantial even if e_{w}^{1-t} is large because the welfare effect on workers mediates the displayed pattern. This further underscores the importance of within-firm heterogeneity in wage incidence for calibrating optimal corporate taxes, because wage elasticities must

[24] Data are from Corporation Income Tax Returns Complete Report Table 2.3. from 2022, the most recent year for which data are available. Taxable compensation of employees is the sum of salaries and wages, employee benefit programs, and pensions and profit sharing programs. Comparative statics are not sensitive to the inclusion of non-wage compensation in the numerator of a. Taxable profits of corporate businesses correspond to total corporate net income less deductions. While the formula applies more broadly to different organizational forms, we tailor the calibration of a to the corporate sector as the distinction between labor and profit income is less subject to measurement error in aggregate statistics.

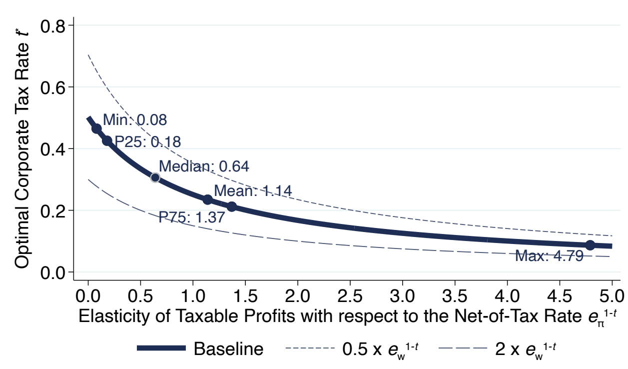
Figure 1: Comparative Statics with Respect to Elasticities e_{π}^{1-t} and e_{w}^{1-t}

A. Comparative Statics with Respect to the Taxable Profits Elasticity e_{π}^{1-t}

I. For different welfare weights

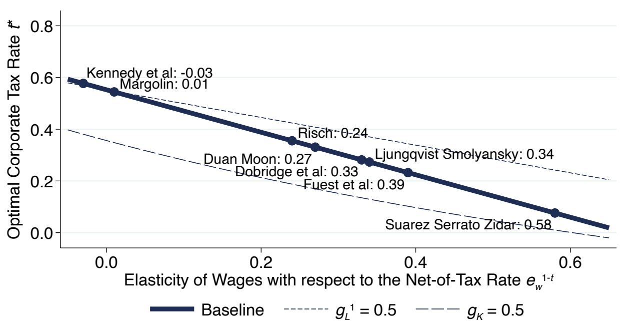


II. For different wage elasticities

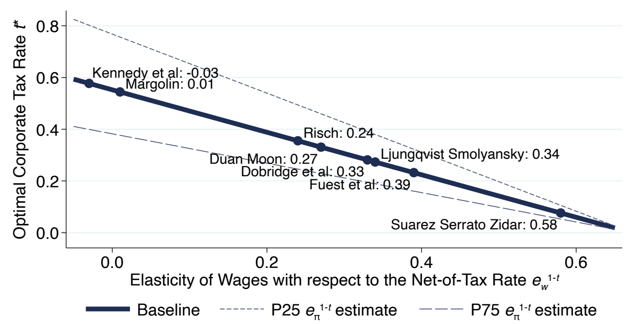


B. Comparative Statics with Respect to the Wage Elasticity e_{w}^{1-t}

I. For different welfare weights



II. For different profits elasticities



Notes: This figure plots calibrated optimal corporate taxes based on equation (11). Comparative statics are conducted departing from the baseline set of inputs given by $(e_{\pi}^{1-t}, e_{w}^{1-t}, e_{L}^{1-t}, g_L^1, g_K, a, \tau) = (0.64, 0.30, 0.23, 1, 0, 1.35, 0.303)$ (see Section 4 for details). Panel A conducts comparative statics with respect to e_{π}^{1-t}. Panel B conducts comparative statics with respect to e_{w}^{1-t}. Panel A highlights values of e_{π}^{1-t} based on Table 1, while Panel B highlights values of e_{w}^{1-t} based on Table 2. The different curves in Panel A.I and Panel B.I conduct the comparative static with respect to e_{π}^{1-t} and e_{w}^{1-t} assuming different values for g_L^1 and g_K. The different curves in Panel A.II conduct the comparative static with respect to e_{π}^{1-t} assuming different values for e_{w}^{1-t}. The different curves in Panel B.II conduct the comparative static with respect to e_{w}^{1-t} assuming different values for e_{π}^{1-t}.

be weighted by welfare weights that likely differ across the within-firm wage distribution.

Figure 2 shows comparative statics with respect to the welfare weights on workers g_L^1 and capitalists g_K. Panel A of Figure 2 shows that t^* linearly decreases with g_L^1, ranging from $t^* = 47.8\%$ when $g_L^1 = 0$ to $t^* = 13.4\%$ when $g_L^1 = 2$. This underscores the importance of understanding which workers benefit from corporate tax cuts for assessing the optimal level of t^*. As illustrated in Panel A.II of Figure 2, this is particularly true when e_{w}^{1-t} grows large, where the range of values for t^* widens from $t^* = 40.3\%$ when $g_L^1 = 0$ to $t^* = -28.4\%$ when $g_L^1 = 2$. Panel B of Figure 2 shows that t^* non-linearly decreases with g_K. This exercise shows clearly that the desirability of redistributing profits is needed to justify high corporate taxes: when the distributional gains from doing so vanish (as g_K goes to 1), t^* decreases and eventually becomes negative. Changing the values of e_{π}^{1-t} and e_{w}^{1-t} significantly affects the mapping between g_K and t^*, as they change the relative importance of mechanical, welfare, and behavioral effects.

Figure 2: Comparative Statics with Respect to Welfare Weights g_L^1 and g_K

Notes: This figure plots calibrated optimal corporate taxes based on equation (11). Comparative statics are conducted departing from the baseline set of inputs given by $(e_\pi^{1-t}, e_w^{1-t}, e_L^{1-t}, g_L^1, g_K, a, \tau) = (0.64, 0.30, 0.23, 1, 0, 1.35, 0.303)$ (see Section 4 for details). Panel A conducts comparative statics with respect to g_L^1. Panel B conducts comparative statics with respect to g_K. The different curves in Panel A.I and Panel B.I conduct the comparative static with respect to g_L^1 and g_K assuming different values for e_π^{1-t}. The different curves in Panel A.II and Panel B.II conduct the comparative static with respect to g_L^1 and g_K assuming different values for e_w^{1-t}.

Figure B.2 of Appendix B shows comparative statics with respect to the labor income tax rate τ. t^* decreases with τ because the fiscal externality in labor income taxes increases. When moving from $\tau = 30\%$ to $\tau = 0\%$, t^* rises to 36.3%. Negative values of τ further increase t^*.[25] Finally, Figure B.3 of Appendix B shows that t^* is decreasing in a. This is especially true when workers have large welfare weights, as this parameter scales the welfare effects of wage changes compared to the profit responses.

4.3 Exercise 2: Analyzing the US corporate tax

The previous exercise shows how different inputs affect the optimal corporate tax. However, it may be inappropriate to draw quantitative conclusions from this exercise because the contexts underlying the wide array of wage and profit elasticities are unlikely to be comparable. Our second exercise provides interpretable quantitative insights by leveraging the internally consistent estimates in Kennedy et al.

[25] The comparative static assumes a fixed labor income tax τ. We do not provide results on the joint optimality of t and τ as that would require calibrating elasticities of profits, wages, and employment with respect to net-of-labor income taxes.

(2026) from their analysis of the 2017 US corporate tax cut. We conduct three analyses. First, we implement an inverse optimum analysis (Bourguignon and Spadaro, 2012; Lockwood and Weinzierl, 2016; Hendren, 2020) to characterize combinations of welfare weights that render the current US corporate tax of 21% optimal. Second, we calibrate optimal corporate taxes for different welfare weights. Third, we empirically approximate the welfare weights to deliver concrete optimal tax benchmarks. The analyses are complementary: the inverse optimum exercise assesses the desirability of local tax reforms, while the optimal calibration characterizes a globally optimal tax rate under the assumption that Kennedy et al. (2026) elasticities remain valid in the optimum. All three exercises analyze the entity-level corporate tax rate assuming the other features of the tax code are fixed.[26]

Inputs Kennedy et al. (2026) leverage the 2017 federal corporate tax cut in the US, which reduced the entity-level tax rate from 35% to 21%. They use administrative tax records and a difference-in-differences research design comparing C-corporations (treated firms) with S-corporations (control firms), as in Yagan (2015).[27] Our analysis uses their estimates of elasticities of taxable profits e_{π}^{1-t}, wages e_{w}^{1-t}, and employment e_{L}^{1-t}, and descriptive statistics to compute the relative tax base parameter a. There are two limitations of using these estimates to calibrate our formulas. First, outcomes are measured up to two years after the reform, so they represent short-run responses. Second, they are estimated using a sample that excludes small firms and large multinationals, and are aggregated using standard regression variance-based weights, so they do not correspond to population-level profit-weighted averages.

Kennedy et al. (2026) estimate a taxable profit elasticity of $e_{\pi}^{1-t} = 0.7$ and an employment elasticity of $e_{L}^{1-t} = 0.23$. They report precise zero effects on wages across the wage distribution, except for the top 5% of workers. We therefore consider the top 5% of workers as the only group of workers affected by the reform; we treat them as a single group with homogeneous welfare weight $g_{L}^{1,Top}$.[28] Because Kennedy et al. (2026) only report values for the 95th percentile and top 5 workers, we approximate the effect on the top 5% of workers by averaging the elasticities at the 95th percentile (lower bound) and the top 5 workers (upper bound), giving $e_{w}^{1-t} = 0.5 \cdot 0.22 + 0.5 \cdot 0.47 = 0.345$. We compute the top 5% labor income to taxable profits ratio $a = 0.13$ analogously.[29] We conduct sensitivity analyses in Appendix B.

[26] Recall from the discussions in Sections 2 and 3 that, despite being assumed fixed, some relevant features of the tax system (e.g., deductibility) need not be calibrated as their role is implicit in the reduced-form sufficient statistics.

[27] The 2017 reform introduced additional tax changes, such as reforms to expensing and the taxation of foreign income, but Kennedy et al. (2026) argue their analysis isolates the effects of the corporate tax change.

[28] One caveat is that the employment elasticity e_{L}^{1-t} is not reported separately for different wage groups. We assume that the average employment effects are representative of the top 5% of workers.

[29] Table 1 of Kennedy et al. (2026) shows that the average pre-tax operating profits of their sample of C corporations in 2016 were $60.9 million, which we translate to taxable profits by subtracting a (deductible) cost of capital measure. Table 1 reports that C corporations have $39 million on average in assets. Appendix B.2. of Kennedy et al. (2026) calibrates a C corporation debt share of 0.326, a debt cost of 0.03, an equity cost of 0.089, an average deductibility rate of 0.74 on eligible capital, and a share of eligible capital of 0.6. This yields average taxable profits of $60.9 - 0.74×0.6×[(0.326×0.03)+((1-0.326)×0.089)]×$39 = $59.7 million. The same Table 1 reports average earnings of the p95 of workers and the top 5 workers of $178 thousand and $393 thousand, respectively, yielding a within-firm average of $285.5 thousand. Also from Table 1 of

C corporations, the focus of Kennedy et al. (2026), face both an entity-level tax t_e (commonly referred to as the corporate tax) and a payout tax t_p, with the total tax wedge given by $1 - t = (1 - t_e)(1 - t_p)$. Below we analyze the optimal entity-level corporate tax taking the payout tax as given. Our baseline analysis conservatively assumes $t_p = 20\%$, the maximum statutory dividend tax rate. In practice, not all profits are distributed and taxed at this rate: Kennedy et al. (2026) estimate an effective payout tax rate of 2.5%. We therefore use lower payout taxes in sensitivity analyses. Finally, we proceed as in the exercise above and calibrate $\tau = 0.303$ based on Piketty et al. (2018) (see Appendix C).

Welfare weights interpretation The results in the exercises below require interpreting the welfare weights on capitalists g_K and top workers $g_L^{1,Top}$. Recall that the welfare weight across all workers (regardless of wage or employment status) averages to one at the social optimum. Therefore, under optimal taxes, welfare weights can be interpreted as the social value of the marginal utility of consumption relative to the average worker in the economy. In simple terms, the marginal utility of firm owners and the top 5% workers are valued at a fraction g_K and $g_L^{1,Top}$, respectively, as highly as the marginal utility of the average worker by the social planner. With preferences for redistribution (i.e., concave G), individuals who are better-off than average workers have welfare weights below 1. After presenting the results, we provide empirical guidance on the magnitudes of the welfare weights g_K and $g_L^{1,Top}$ to guide interpretation.

Inverse optimum Following equation (11), the optimal (entity-level) corporate tax t_e^* with fiscal externalities from the top 5% of workers, given a payout tax t_p and a labor income tax τ, is given by:

$$1 - t^* = (1 - t_e^*)(1 - t_p) = 1 - \frac{1 - g_K\left(1 - ae_w^{1-t}\right) - (1-\tau)g_L^{1,Top}ae_w^{1-t} - \tau a(e_w^{1-t} + e_L^{1-t})}{1 - g_K\left(1 - ae_w^{1-t}\right) + e_\pi^{1-t}}. \quad (14)$$

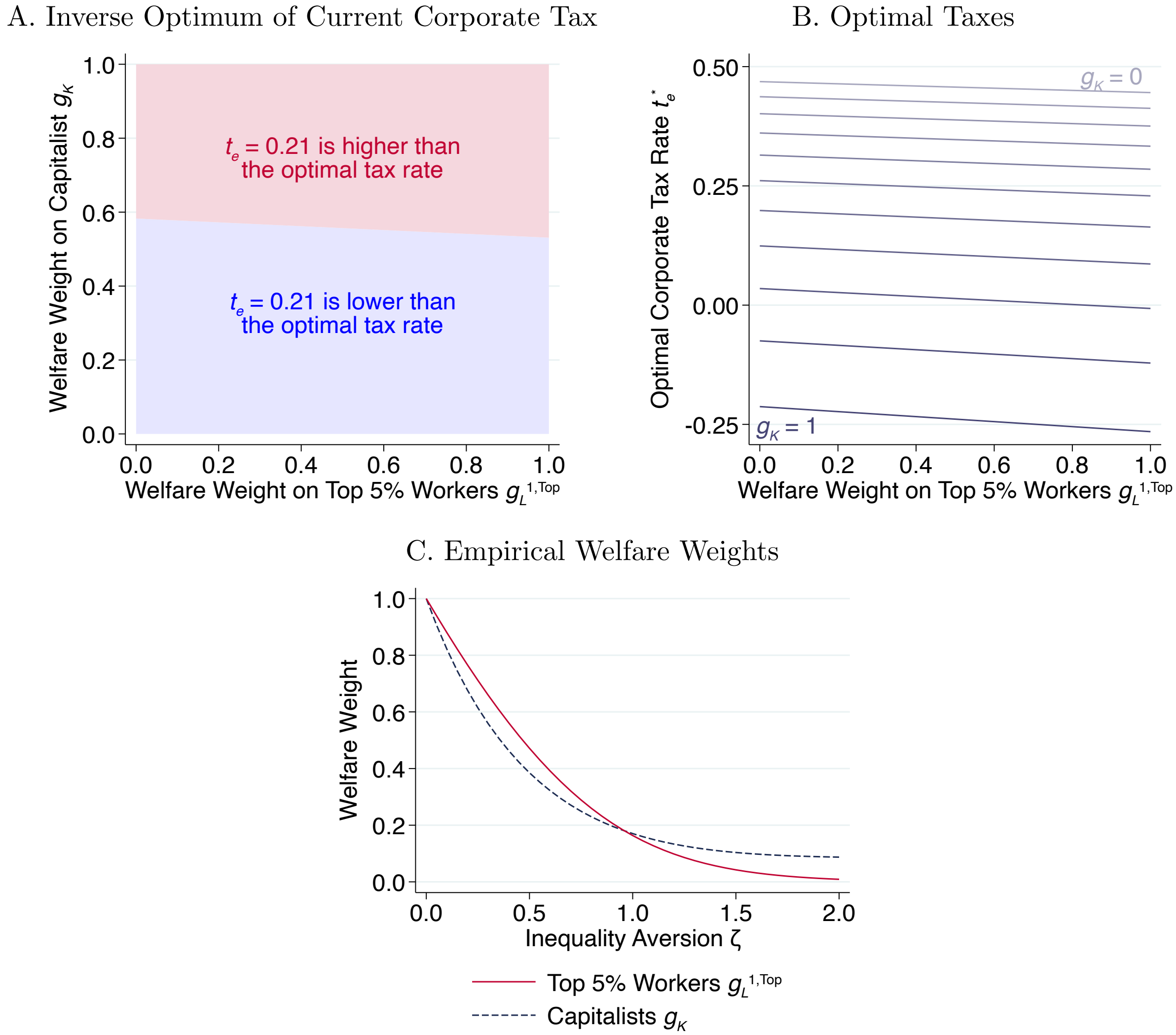
By plugging-in values for $(e_\pi^{1-t}, e_w^{1-t}, e_L^{1-t}, t_p, a, \tau)$, we can infer combinations of g_K and $g_L^{1,Top}$ that make the current rate $t_e = 0.21$ optimal. Manipulating terms in equation (14) we can write:

$$g_K = \frac{1 + e_\pi^{1-t}}{1 - ae_w^{1-t}} - \frac{e_\pi^{1-t} + \tau a(e_w^{1-t} + e_L^{1-t})}{(1-t_e)(1-t_p)(1-ae_w^{1-t})} - \frac{(1-\tau)ae_w^{1-t}}{(1-t_e)(1-t_p)(1-ae_w^{1-t})}g_L^{1,Top} \equiv \rho_0 + \rho_1 g_L^{1,Top}, \quad (15)$$

with (ρ_0, ρ_1) constant given parameters. The linear function $g_K = \rho_0 + \rho_1 g_L^{1,Top}$ shown in equation (15) defines pairs of welfare weights for which the current corporate tax rate is optimal. The 21% corporate tax rate is not optimal for any combination of welfare weights that does not satisfy this relationship. If $g_K > \rho_0 + \rho_1 g_L^{1,Top}$, 21% is above the optimal rate because it over-taxes capitalists, so locally decreasing t_e is welfare improving. Conversely, if $g_K < \rho_0 + \rho_1 g_L^{1,Top}$, 21% is below the optimal rate because there are welfare gains from taxing capitalists more, so locally increasing t_e is welfare improving.

Kennedy et al. (2026), the average number of employees in the C corporation sample in 2016 was 544. Then, we have that $a = (\$285,500 \times 544 \times 0.05)/\$59.7$ million $= 0.13$.

Figure 3: Quantitative Analysis of the US Corporate Tax



Notes: This figure shows the results of the quantitative analysis of the US corporate tax based on the results presented in Kennedy et al. (2026), described in Section 4. Panel A shows an inverse-optimum analysis. The line dividing the red and blue regions represents the combination of the welfare weights on top 5% workers $g_L^{1,Top}$ and capitalists g_K that rationalize the current corporate tax as optimal, following the mapping characterized in equation (15). Computations use $(e_\pi^{1-t}, e_w^{1-t}, e_L^{1-t}, t_p, a, \tau) = (0.7, 0.345, 0.23, 0.2, 0.13, 0.303)$ and $t_e = 0.21$, which imply that any combination of g_K and $g_L^{1,Top}$ satisfying $g_K = 0.58 - 0.05 g_L^{1,Top}$ render the current corporate tax $t_e = 0.21$ optimal. If $g_K > 0.58 - 0.05 g_L^{1,Top}$ (red region), then $t_e = 0.21$ is above the optimal level. If $g_K < 0.58 - 0.05 g_L^{1,Top}$ (blue region), then $t_e = 0.21$ is below the optimal level. Panel B calculates optimal corporate taxes for different values of the welfare weights on capitalists g_K and top 5% workers $g_L^{1,Top}$, using the same inputs as Panel A. The welfare weight on capitalists increases from $g_K = 0$ to $g_K = 1$ as the lines go from dark to light in 0.1 increments. Panel C plots empirical welfare weights for capitalist and top 5% workers computed using data from Piketty et al. (2018), Kennedy et al. (2026), and the SCF, assuming that the social welfare function is given by $G(x) = \frac{x^{1-\zeta}}{1-\zeta}$, for different values of the inequality aversion parameter ζ.

We calibrate the function $g_K = \rho_0 + \rho_1 g_L^{1,Top}$ of equation (15) using the values discussed above, yielding $(\rho_0, \rho_1) = (0.58, -0.05)$. Panel A of Figure 3 illustrates this result. The x- and y-axes present grids for $g_L^{1,Top}$ and g_K, respectively. The line dividing the red and blue areas corresponds to the relationship $g_K = 0.58 - 0.05 g_L^{1,Top}$, i.e., the welfare weights that make a corporate tax of 21% optimal. The red area shows combinations with $g_K > 0.58 - 0.05 g_L^{1,Top}$, so that a corporate tax of 21% is higher than optimal. The blue area shows combinations with $g_K < 0.58 - 0.05 g_L^{1,Top}$, so that a corporate tax of 21% is lower than optimal. To interpret the figure, assume that the marginal utility of the top 5% of workers with higher earnings is valued as highly as the marginal utility of the average worker in the economy ($g_L^{1,Top} = 1$). In this case, an entity-level corporate tax of 21% would be optimal if $g_K = 0.53$. Decreasing the welfare weight on the top 5% workers $g_L^{1,Top}$ slightly increases the capitalists' welfare weight g_K needed for rationalizing $t_e = 21\%$ as optimal: when $g_L^{1,Top} = 0.5$, the critical g_K is 0.56; when $g_L^{1,Top} = 0$, the critical g_K is 0.58. Below we further discuss plausible magnitudes of g_K and $g_L^{1,Top}$.

Figures B.4 and B.5 of Appendix B replicate Panel A of Figure 3 with different assumptions. Varying the wage elasticity e_w^{1-t} matters little (see Panels A and B of Figure B.4) because few workers are affected and, therefore, wage effects are less important than profit effects. In contrast, Panel C of Figure B.4 shows that the case for the corporate tax weakens when assuming all workers are affected by the tax change (instead of only the top 5%) by using average wages and aggregate employment to calculate a, especially considering that the average welfare weight across all workers g_L^1 is likely larger than that of the top 5% workers $g_L^{1,Top}$. The critical g_K decreases to 0.39 when $g_L^1 = 0.5$, and to 0.24 when $g_L^1 = 1$. This again illustrates the importance of identifying which workers are affected, as that governs the relative tax base adjustment and the calibration of the welfare weights.

Varying the profit elasticity e_π^{1-t} based on the confidence interval bounds reported in Kennedy et al. (2026) has important effects on the result (see Panels A and B of Figure B.5). When $g_L^{1,Top} = 0.5$, the critical g_K increases to 0.75 for $e_\pi^{1-t} = 0.39$, and decreases to 0.37 for $e_\pi^{1-t} = 1.01$. Finally, assuming lower effective payout rates ($t_p = 2.5\%$, the rate calibrated by Kennedy et al., 2026, and $t_p = 11.25\%$, the midpoint of 2.5% and 20%) also affects the restrictions on g_K (see Panels C and D of Figure B.5). When $g_L^{1,Top} = 0.5$, the critical g_K increases to 0.68 and 0.78 when t_p is set to 11.25% and 2.5%, respectively. Intuitively, if payout taxes are lower, the entity-level tax represents a larger share of the all-in wedge. Lower payout taxes mechanically push for higher entity-level taxes conditional on an all-in wedge t^*.

Optimal corporate tax The inverse optimum assesses directions of reforms by characterizing the sign of the planner's FOC at given sufficient statistics, welfare weights, and tax rates. The following exercise moves beyond the local analysis and provides a global characterization of the US optimal corporate tax under the assumption that the elasticities from Kennedy et al. (2026) are valid under the optimal tax system, an assumption not required for the inverse optimum. Concretely, we use equation (14) to compute t_e^* for various welfare weights g_K and $g_L^{1,Top}$ using the inputs discussed above.[30]

Panel B of Figure 3 shows the results. The x-axis displays a grid for the top 5% worker welfare weight $g_L^{1,Top}$ and the y-axis reports the optimal entity-level corporate tax t_e^* for different capitalist welfare weights g_K. Each line assumes a different value for g_K, ranging from 0 to 1 in increments of 0.1. The

[30]Equation (11) characterizes t^*. Then, we can recover $t_e^* = 1 - \frac{1-t^*}{1-t_p}$.

optimal tax is highly sensitive to the capitalist's welfare weight g_K: for a given $g_L^{1,Top}$, the optimal entity-level corporate tax is consistently 70 percentage points higher when $g_K = 0$ (with $t_e^* \approx 45\%$) than when $g_K = 1$ (with t_e^* below -20%). On the contrary, the optimal corporate tax is not very sensitive to $g_L^{1,Top}$, again, because few workers were affected by the reform. Therefore, wage effects are secondary to profit effects. As in the previous analysis, Figures B.6 and B.7 of Appendix B show that optimal taxes are lower when the corporate tax affects all workers, and are larger when e_π^{1-t} and t_p are lower.

Empirical welfare weights The inverse optimum analysis specifies welfare weights of capitalists g_K and the top 5% of workers $g_L^{1,Top}$ for which a corporate tax $t_e = 21\%$ is optimal. The optimal tax analysis computes the optimal tax t_e^* for different welfare weight combinations. Interpretation of both sets of results hinges on the magnitudes of these welfare weights. We conclude by quantifying them, using data from Piketty et al. (2018), Kennedy et al. (2026), and the Survey of Consumer Finances (SCF).

We assume that the social welfare function has a standard CRRA structure $G(x) = \frac{x^{1-\zeta}}{1-\zeta}$, where ζ governs the concavity of G and, therefore, the degree of inequality aversion. Under this specification, the welfare weight of an individual with utility x is $x^{-\zeta}/\lambda$, with λ the government budget constraint multiplier. We present results for different values of ζ, noting that $\zeta = 0$ implies no redistributive preferences ($g_K = g_L^{1,Top} = 1$). We retrieve population post-tax incomes by income group from Piketty et al. (2018) and compute the average welfare weight of the economy as $g^{Av} = \left[\sum_{i=1}^{I} \omega_i x_i^{-\zeta}\right]/\lambda$, where x_i is the average post-tax income in group i with population share ω_i. For precision, we split the population into deciles, except for the top decile, where we use percentiles. This yields a total of $I = 19$ groups, with $\omega_i = 0.1$ for $i \in \{1, ..., 9\}$ (i.e., the bottom 9 deciles) and $\omega_i = 0.01$ for $i \in \{10, ..., 19\}$ (i.e., the top 10 percentiles). By setting $g^{Av} = 1$, we can recover λ and calibrate the other welfare weights.

To calibrate g_K, we use the SCF to compute the share of total C corporation ownership of each income group (see Appendix C for details). Our estimates suggest that top earners hold the vast majority of C corporation stock (see Table B.2 of Appendix B), in line with Kennedy et al. (2026).[31] Denoting the C corporation ownership of each group as ω_i^C, we compute $g_K = \left[\sum_i^I \omega_i^C x_i^{-\zeta}\right]/\lambda$. Finally, average earnings of the top 5% of workers in Kennedy et al. (2026) (in 2024 dollars) are \$383.4 thousand, which yields $g_L^{1,Top} = ((1-\tau)383.4 + T_0)^{-\zeta}/\lambda$, where τ and T_0 are given by our empirical labor income tax system based on Piketty et al. (2018) (see Appendix C for details). With these expressions, given a value of ζ, we can pin down values for g_K and $g_L^{1,Top}$ and, ultimately, the optimal entity-level corporate tax t_e^*.

Panel C of Figure 3 plots g_K and $g_L^{1,Top}$ as a function of the inequality aversion parameter ζ. Welfare weights quickly decrease with ζ because C corporation owners and the top 5% of workers are much more affluent than average workers. g_K decreases faster at lower levels of ζ but converges to higher asymptotes than $g_L^{1,Top}$ because of Jensen's inequality: while C corporation owners have higher after-tax incomes on

[31] We compute that the top 1%, next 9%, and bottom 90% own 41.3%, 40%, and 18.7% of C corporations, while Table 9 of Kennedy et al. (2026) report 41%, 38%, and 21%, respectively.

Table 4: Optimal Entity-Level Corporate Tax t_e^* (%)

Inequality aversion ζ		g_K	$g_L^{1,Top}$	Payout tax $t_p = 20\%$ Taxable profit elasticity e_π^{1-t}			Payout tax $t_p = 11.25\%$ Taxable profit elasticity e_π^{1-t}			Payout tax $t_p = 2.5\%$ Taxable profit elasticity e_π^{1-t}		
				0.39	0.70	1.01	0.39	0.70	1.01	0.39	0.70	1.01
$\zeta = 0$	(no inequality aversion)	1.00	1.00	-27.6	-26.5	-26.1	-15.0	-14.0	-13.6	-4.7	-3.8	-3.4
$\zeta = 0.31$	(21% optimal rate at baseline)	0.55	0.60	37.6	**21.0**	11.4	43.7	28.8	20.2	48.8	35.2	27.3
$\zeta = 0.5$	(0.5 × log inequality aversion)	0.39	0.41	48.0	31.0	20.4	53.1	37.8	28.3	57.3	43.4	34.7
$\zeta = 1$	(log inequality aversion)	0.17	0.13	57.6	40.9	29.9	61.8	46.7	36.8	65.2	51.5	42.4
$\zeta = 2$	(2 × log inequality aversion)	0.09	0.01	60.5	44.1	33.0	64.4	49.6	39.6	67.6	54.1	45.0

Notes: This table presents calibrated optimal entity-level corporate taxes t_e^* for the US based on equation (14) using $(e_w^{1-t}, e_L^{1-t}, a, \tau) = (0.345, 0.23, 0.13, 0.303)$. The different entries represent permutations of the elasticity of taxable profits e_π^{1-t}, the payout tax t_p, and the inequality aversion parameter ζ used to estimate the welfare weights g_K and $g_L^{1,Top}$, displayed in columns two and three. The bold cell corresponds to the inequality aversion parameter that, under the baseline parametrization, yields $t_e^* = 21\%$.

average, the concavity of G implies that $\mathbb{E}[G'(x)] > G'(\mathbb{E}[x])$, with the gap increasing in ζ. At $\zeta = 1$, a standard logarithmic benchmark for the social welfare function, both welfare weights are below 0.2.

Table 4 summarizes the optimal tax rates t_e^* for different values of ζ, e_π^{1-t}, and t_p. These numbers should be interpreted with caution, as they assume fixed elasticities and welfare weights at the optimum. Without preferences for redistribution ($\zeta = 0$), the optimal tax is a corporate subsidy that compensates for positive payout taxes and exploits fiscal externalities in the labor income tax base. The optimal entity-level corporate tax t_e^* increases with ζ, typically exceeding both the current rate 21% and the pre-2017 rate of 35% when ζ is higher than 0.5. The second row shows that redistributive preferences must be less than a third of the logarithmic benchmark ($\zeta = 0.31$) for the current US corporate tax rate to be optimal under our baseline sufficient statistics parametrization.[32] As expected, the optimal tax rate is sensitive to the elasticity of taxable profits, but that sensitivity is substantially attenuated when payout taxes are low. If entity-level corporate taxes are the only taxes paid by C corporation owners (as suggested by the low effective payout taxes estimated by Kennedy et al., 2026 and the related literature discussed in the introduction), optimal entity-level taxes might be large even if profit elasticities are large because of their distributional effects. Table B.3 of Appendix B shows that optimal taxes vary little with the elasticity of wages e_w^{1-t} but decrease when assuming that the wage effects affect all workers.

[32]Note that the welfare weights when $\zeta = 0.31$ satisfy $g_K = 0.58 - 0.05 g_L^{1,Top}$, consistent with the inverse optimum analysis under the baseline parametrization that characterizes the set of welfare weights that make the current US tax optimal.

5 Conclusion

This paper derives simple sufficient statistics formulas for optimal corporate taxes that incorporate equity and efficiency considerations. The formulas reveal the sufficiency of taxable profit elasticities for assessing the efficiency costs of corporate taxation and make explicit the importance of the potential for equity gains from redistributing profits for justifying positive corporate taxes. The formulas also highlight the importance of wage incidence effects given their welfare impacts on affected workers, and of employment elasticities given their fiscal externalities. While the results stem from a stylized model, they are shown to be stable under several empirically relevant model extensions. To the best of our knowledge, this is the first paper to provide closed-form formulas for optimal corporate taxes based on a framework that links the literature on corporate investment with the literature on corporate tax incidence, with results that connect the rich empirical literature on corporate taxation to optimal policy. We hope that these formulas become a normative benchmark that can be extended to more general settings in future research.

Our analysis provides a unified normative framework for interpreting empirical evidence and identifies which elasticities should be targeted in empirical research. Our literature review underscores the need for more evidence and analyses of the reasons for the observed dispersion in elasticity estimates, as these elasticities likely depend on the institutional background (e.g., capital expensing policies and state capacity), characteristics of the data, and the research design. Our analysis also highlights the importance of characterizing worker-level heterogeneity in wage incidence and the distribution of firm ownership.

The calibration of the formulas with the available evidence and the corresponding comparative statics illustrates how the complex interplay between elasticities and welfare weights can support a wide range of plausible values for the optimal corporate tax. An internally consistent analysis of the current US corporate tax suggests room for welfare-improving corporate tax increases. Different calibrations suggest that entity-level optimal corporate taxes in the US are above the current level of 21%.

Our analysis does not incorporate all the elements that should be considered when designing the corporate tax system. In particular, our analysis is silent on the optimal implementation of corporate income taxes between entity-level and payout-level instruments. For example, corporate taxes can be useful for enforcement and revenue, especially when state capacity is weak, ownership is complex and opaque, and it is difficult to levy payout taxes on certain shareholders (e.g., foreign or institutional shareholders). Also, corporate taxes and payout taxation upon distribution may induce intertemporal distortions based, for example, on tax planning strategies that strategically use retained earnings and distributions. Finally, the real effects may differ between instruments if firms behave according to the "new view" of dividend taxation. Understanding the implications of these (and other) mechanisms absent from our model for the desirability of the corporate tax is a fruitful avenue for future research.

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A Sufficient Statistics Approach to Optimal Corporate Taxes

Online Appendix

Appendix Contents

A Proofs

A.1 Proposition 1

Using $L = H(w)$, the Lagrangian is given by:

$$\mathcal{L} = (1-L)G(T_0) + \int_0^w G(w + T_0 - c)dH(c) + G(U^K) + \lambda \left[t\pi(K^*, L^*) - T_0\right], \tag{A.1}$$

where λ is the budget constraint multiplier. The FOC w.r.t. T_0 is given by:

$$\frac{d\mathcal{L}}{dT_0} = (1-L)G'(T_0) + \int_0^w G'(w + T_0 - c)dH(c) - \lambda = 0,$$

which implies that, at the optimum, T_0 is chosen so that $(1-L)g_L^0 + Lg_L^1 = 1$.

The FOC w.r.t. $1-t$ is given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-t)} &= -\frac{dL}{d(1-t)}G(T_0) + G(T_0)h(w)\frac{dw}{d(1-t)} + \frac{dw}{d(1-t)}\int_0^w G'(w + T_0 - c)dH(c) \\ &\quad + G'(U^K)\left(\pi(K^*, L^*) - wLe_w^{1-t}\right) + \lambda\left[-\pi(K^*, L^*) + t\frac{d\pi}{d(1-t)}\right] = 0. \end{aligned} \tag{A.2}$$

In equilibrium, $L = H(w)$, so $dL = h(w)dw$, so the first two terms cancel out (envelope theorem). Define $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$. Then, the FOC can be rewritten as:

$$\frac{g_L^1 wLe_w^{1-t}}{1-t} - g_K wLe_w^{1-t} + \pi\left(g_K - 1 + \frac{te_\pi^{1-t}}{1-t}\right) = 0.$$

Solving for t^* yields:

$$t^* = \frac{1 - g_K\left(1 - ae_w^{1-t}\right) - g_L^1 ae_w^{1-t}}{1 - g_K\left(1 - ae_w^{1-t}\right) + e_\pi^{1-t}},$$

where $a = wL/\pi$.

A.2 Proposition 2

We have that $dU^K/d\theta = trK^* - \frac{1-t}{\theta}wLe_w^\theta$, where $e_w^\theta = [dw/d\theta] \cdot [\theta/w]$. Then, from equation (A.1), we have that the FOC w.r.t. θ is given by:

$$\frac{d\mathcal{L}}{d\theta} = \frac{dw}{d\theta}\int_0^w G'(w + T_0 - c)dH(c) + G'(U^K)\left(trK^* - \frac{1-t}{\theta}wLe_w^\theta\right) + \lambda t\frac{d\pi}{d\theta} = 0, \tag{A.3}$$

where we omitted derivatives with respect to L and the integration limit since, as in Proposition 1, they cancel out because of the envelope theorem. Using the welfare weight definitions, and assuming an interior solution, solving for θ^* yields:

$$\theta^* = \frac{-ae_w^\theta\left(g_L^1 - g_K(1-t)\right) - te_\pi^\theta}{g_K(trK/\pi)}, \tag{A.4}$$

where $e_\pi^\theta = [d\pi/d\theta]\cdot[\theta/\pi]$.

To test whether the solution is interior, we use equation (4) to write the LHS of equation (A.3) as:

$$\frac{wL}{\theta}e_w^\theta\left(g_L^1 - (1-t)g_K - t\right) + g_K trK + t\left(\frac{K}{\theta}e_K^\theta\frac{r(1-\theta)}{1-t} - rK\right), \tag{A.5}$$

where $e_K^\theta = d\log K/d\log\theta$. An interior solution is guaranteed if the expression in equation (A.5) is negative when $\theta = 1$ and the corporate tax is optimal given $\theta = 1$.

First, we characterize the optimal corporate tax t^* when $\theta = 1$. With $\theta = 1$, $e_\pi^{1-t} = e_w^{1-t} = 0$. Then, equation (A.2) yields $g_K = 1$. Replacing $\theta = 1$ and $g_K = 1$ in equation (A.5) yields $\frac{wL}{\theta}e_w^\theta\left(g_L^1 - 1\right)$. Endogenous labor supply and the optimality condition for T_0 in Proposition 1 imply that, at the social optimum, $g_L^1 < 1$. Then, the expression in equation (A.5) is negative if $e_w^\theta > 0$, when $\theta = 1$ and the corporate tax is optimal given $\theta = 1$, so it is optimal to decrease the deduction rate from $\theta = 1$, guaranteeing an interior solution. Finally, solving for θ^* when setting (A.5) to zero yields:

$$\theta^* = \frac{wLe_w^\theta\left(g_L^1 - (1-t)g_K - t\right) + \frac{tKe_K^\theta r}{1-t}}{trK(1-g_K) + \frac{tKe_K^\theta r}{1-t}}. \tag{A.6}$$

A.3 Model with heterogeneity and Proposition 3

Index workers by $i \in \mathcal{I} = \{1, ..., I\}$ (representing different fixed skill types) with exogenous sizes N_i. Conditional on skill, workers behave as in the baseline model with participation costs distributed with skill-specific CDF H_i and PDF h_i. Labor markets are segmented, so there is a unique wage by skill w_i and the skill-specific labor supplies are given by $N_iH_i(w_i)$. Index a continuum of capitalists by $j \in \mathcal{J}$, who are endowed with arbitrarily heterogeneous production functions $F_j(K, L_1, ..., L_I)$. For simplicity, we assume both populations are of size 1, i.e., $\sum_i N_i = 1$ and $\int_{\mathcal{J}} dj = 1$. The problem for a firm of type j is analogous to the one in the baseline model, i.e., they take wages $(w_1, ..., w_I)$ as given and solve:

$$\begin{aligned}\max_{K,\{L_i\}_{i=1}^I} \Pi_j(K, L_1, ..., L_I) &= (1-t)\left(F_j(K, L_1, ..., L_I) - \sum_{i=1}^I w_iL_i\right) - r(1-\theta t)K, \\ &= (1-t)\pi(K, L_1, ..., L_I) - (1-\theta)rK,\end{aligned}$$

where $\pi_j(K, L_1, ..., L_I) = F_j(K, L_1, ..., L_I) - \sum_{i=1}^I w_iL_i - \theta rK$ are taxable profits. Let $F_x^j = \partial F_j/\partial x$, for $x \in \{K, L_1, ..., L_I\}$. Then, the FOCs resemble the ones from the baseline model $F_K^j = \frac{r(1-\theta t)}{1-t}$

and $F^j_{L_i} = w_i$ for all $i \in \mathcal{I}$, which in turn implicitly define optimal input demands that, to economize notation, we denote by K^j and L^j_i for all $i \in \mathcal{I}$. Indirect utility is given by $U^K_j = \Pi(K^j, L^j_1, ..., L^j_I)$, so $dU^K_j/d(1-t) = \pi_j - \sum_{i=1}^I w_i L^j_i e^{1-t}_{w_i}$, with $\pi_j = \pi_j(K^j, L^j_1, ..., L^j_I)$ and $e^{1-t}_{w_i} = [dw_i/d(1-t)] \cdot [(1-t)/w_i]$.

All capitalists compete for the same workers in segmented competitive labor markets, leading to labor market clearing conditions $N_i H_i(w_i) = \int_{\mathcal{J}} L^j_i dj = L_i$, for all $i \in \mathcal{I}$.

The government chooses $(1-t, T_0)$ to maximize a generalized utilitarian social welfare objective:

$$SWF = \left(1 - \sum_{i=1}^I L_i\right) G(T_0) + \sum_{i=1}^I L_i \frac{\int_0^{w_i} G(w_i + T_0 - c) dH_i(c)}{H_i(w_i)} + \int_{\mathcal{J}} G(U^K_j) dj,$$

subject to the budget constraint $t \int_{\mathcal{J}} \pi_j dj = T_0$ with multiplier λ. The welfare weights in this case are given by:

$$g^0_L = \frac{G'(T_0)}{\lambda}, \qquad g^1_{L_i} = \frac{N_i \int_0^{w_i} G'(w_i + T_0 - c) dH_i(c)}{L_i \lambda}, \qquad g^j_K = \frac{G'(U^K_j)}{\lambda}.$$

Using $L_i = N_i H(w_i)$, the Lagrangian is given by:

$$\mathcal{L} = \left(1 - \sum_{i=1}^I L_i\right) G(T_0) + \sum_{i=1}^I N_i \int_0^{w_i} G(w_i + T_0 - c) dH_i(c) + \int_{\mathcal{J}} G(U^K_j) dj + \lambda \left[t \int_{\mathcal{J}} \pi_j dj - T_0\right].$$

The FOC w.r.t. $1-t$ is given by:

$$\frac{d\mathcal{L}}{d(1-t)} = -\sum_{i=1}^I \frac{dL_i}{d(1-t)} G(T_0) + \sum_{i=1}^I N_i G(T_0) h_i(w_i) \frac{dw_i}{d(1-t)} + \sum_{i=1}^I \frac{dw_i}{d(1-t)} N_i \int_0^{w_i} G'(w_i + T_0 - c) dH_i(c) + \int_{\mathcal{J}} G'(U^K_j) \left(\pi_j - \sum_{i=1}^I w_i L^j_i e^{1-t}_{w_i}\right) dj + \lambda \left[-\int_{\mathcal{J}} \pi_j dj + t \int_{\mathcal{J}} \frac{d\pi_j}{d(1-t)}\right] = 0.$$

The first two terms cancel out because of the same envelope argument developed in the proofs above. Let aggregate profits be $\pi = \int_{\mathcal{J}} \pi_j dj$. Also, define $e^{1-t}_{\pi_j} = [d\pi_j/d(1-t)] \cdot [(1-t)/\pi_j]$. Then, the FOC can be rewritten as:

$$\frac{\sum_{i=1}^I g^1_{L_i} w_i L_i e^{1-t}_{w_i}}{1-t} + \int_{\mathcal{J}} g^j_K \left(\pi_j - \sum_{i=1}^I w_i L^j_i e^{1-t}_{w_i}\right) dj - \pi + \frac{t \int_{\mathcal{J}} \pi_j e^{1-t}_{\pi_j}}{1-t} = 0.$$

Let $s_j = \pi_j/\pi$ be the profit share of capitalist j and define $\overline{g}_K = \int_{\mathcal{J}} s_j g^j_K dj$ and $\overline{e}^{1-t}_{\pi} = \int_{\mathcal{J}} s_j e^{1-t}_{\pi_j} dj$.

Also, define $a_i = w_i L_i/\pi$ and $\widehat{g}_K^i = \int_{\mathcal{J}} \frac{L_i^j}{L_i} g_K^j dj$. Then, solving for t^* yields:

$$t^* = \frac{1 - \overline{g}_K + \sum_{i=1}^{I} a_i e_{w_i}^{1-t} \left(\widehat{g}_K^i - g_{L_i}^1\right)}{1 - \overline{g}_K + \sum_{i=1}^{I} a_i e_{w_i}^{1-t} \widehat{g}_K^i + \overline{e}_\pi^{1-t}}.$$

A.4 Model with self-selection and Proposition 4

Consider a unit mass of individuals endowed with a two-dimensional parameter (c, α). As in Section 2, c represents the cost of working (if being a worker). On the other hand, α represents a fixed utility gain derived from being a firm owner. Conditional on being a worker, the labor supply decision is the same as in Section 2. Conditional on being a capitalist, the profit maximization problem consists of choosing K and L to maximize $\Pi(K, L) + \alpha$, with $\Pi(K, L)$ defined as in Section 2 (equation (1)). Because α is additively separable and excluded from the corporate tax base, the optimal decisions conditional on being a capitalist are equivalent to those of Section 2, yielding indirect utility $U^K(\alpha) = U^K + \alpha = \Pi(K^*, L^*) + \alpha$.

To characterize the occupation decision, we note that, for a given tax system $(1-t, T_0)$ and equilibrium wage w, there are four relevant partitions of the (c, α) space that define an optimal occupation selection rule. As in the baseline model, individuals with $c \leq w$ prefer to work rather than being a non-employed worker, while individuals with $c > w$ prefer non-employment to work. Then, it follows that, if $c \leq w$, an individual self-selects into being a worker if $w - c + T_0 \geq U^K + \alpha$, and, if $c > w$, an individual self-selects into being a worker if $T_0 \geq U^K + \alpha$. Then, the share of workers and capitalists depends on the joint distribution of (c, α). We characterize this joint distribution by the marginal CDF of c, denoted by H, and a conditional CDF of α given c over the support $[\underline{\alpha}, \overline{\alpha}]$, denoted by P_c, so that the population of workers $\mathcal{W}$ is given by:

$$\mathcal{W} = \underbrace{\int_0^w \left(\int_{\underline{\alpha}}^{w-c+T_0-U^K} dP_c(\alpha)\right) dH(c)}_{\text{Self-select into being worker and work}} + \underbrace{\int_w^{\overline{c}} \left(\int_{\underline{\alpha}}^{T_0-U^K} dP_c(\alpha)\right) dH(c)}_{\text{Self-select into being worker and do not work}},$$

while the population of capitalists $\mathcal{K}$ is given by $\mathcal{K} = 1 - \mathcal{W}$. We still denote by L the employment at the firm-level, while total employment is given by $\mathcal{K}L \equiv \mathcal{W}_1$. Note that in the baseline model $L = \mathcal{W}_1$.

The planner's problem is:

$$\begin{aligned} SWF \quad = \quad & \int_w^{\overline{c}} \left(\int_{\underline{\alpha}}^{T_0-U^K} G(T_0) dP_c(\alpha)\right) dH(c) + \int_0^w \left(\int_{\underline{\alpha}}^{w-c+T_0-U^K} G(w + T_0 - c) dP_c(\alpha)\right) dH(c) \\ & + \int_0^w \left(\int_{w-c+T_0-U^K}^{\overline{\alpha}} G(U^K(\alpha)) dP_c(\alpha)\right) dH(c) + \int_w^{\overline{c}} \left(\int_{T_0-U^K}^{\overline{\alpha}} G(U^K(\alpha)) dP_c(\alpha)\right) dH(c), \end{aligned}$$

and the budget constraint now becomes $\mathcal{W}T_0 = \mathcal{K}t\pi(K^*, L^*)$.

Setting up the Lagrangian and solving for the FOC w.r.t. $1-t$ yields:

$$\begin{aligned}
\frac{d\mathcal{L}}{d(1-t)} = & -\int_w^{\overline{c}} \frac{dU^K}{d(1-t)} G(T_0) p_c(T_0 - U^K) dH(c) - \int_{\underline{\alpha}}^{T_0 - U^K} \frac{dw}{d(1-t)} G(T_0) dP_w(\alpha) \\
& + \int_0^w \left(\frac{dw}{d(1-t)} - \frac{dU^K}{d(1-t)} \right) G(w + T_0 - c) p_c(w - c + T_0 - U^K) dH(c) \\
& + \int_{\underline{\alpha}}^{T_0 - U^K} \frac{dw}{d(1-t)} G(T_0) dP_w(\alpha) + \frac{dw}{d(1-t)} \int_0^w \left(\int_{\underline{\alpha}}^{w-c+T_0-U^K} G'(w + T_0 - c) dP_c(\alpha) \right) dH(c) \\
& - \int_0^w \left(\frac{dw}{d(1-t)} - \frac{dU^K}{d(1-t)} \right) G(w + T_0 - c) p_c(w - c + T_0 - U^K) dH(c) \\
& + \frac{dw}{d(1-t)} \int_{T_0 - U^K}^{\overline{\alpha}} G(U^K(\alpha)) dP_w(\alpha) \\
& + \int_w^{\overline{c}} \frac{dU^K}{d(1-t)} G(T_0) p_c(T_0 - U^K) dH(c) - \frac{dw}{d(1-t)} \int_{T_0 - U^K}^{\overline{\alpha}} G(U^K(\alpha)) dP_w(\alpha) \\
& + \left(\pi(K^*, L^*) - wLe_w^{1-t} \right) \int_0^w \left(\int_{w-c+T_0-U^K}^{\overline{\alpha}} G'(U^K(\alpha)) dP_c(\alpha) \right) dH(c) \\
& + \left(\pi(K^*, L^*) - wLe_w^{1-t} \right) \int_w^{\overline{c}} \left(\int_{T_0-U^K}^{\overline{\alpha}} G'(U^K(\alpha)) dP_c(\alpha) \right) dH(c) \\
& \lambda \left(\mathcal{K} t \frac{d\pi}{d(1-t)} - \mathcal{K} \pi(K^*, L^*) + \frac{d\mathcal{K}}{d(1-t)} \left(t\pi(K^*, L^*) + T_0 \right) \right) = 0.
\end{aligned}$$

Note that most of the "Leibniz" terms cancel out as a consequence of the envelope theorem: marginal transitions between employment and non-employment, and between being a worker and a capitalist have no first-order welfare effects, as marginal individuals are indifferent between states. It follows that the FOC can be simplified to:

$$\frac{g_L^1 w \mathcal{K} L e_w^{1-t}}{1-t} + \mathcal{K}(\pi - wLe_w^{1-t}) \overline{g}_K + \frac{\mathcal{K} t \pi e_\pi^{1-t}}{1-t} - \mathcal{K}\pi + \frac{\mathcal{K} e_{\mathcal{K}}^{1-t} (t\pi + T_0)}{1-t} = 0,$$

where $e_{\mathcal{K}}^{1-t} = [d\mathcal{K}/d(1-t)] \cdot [(1-t)/\mathcal{K}]$ is the elasticity of the mass of capitalists with respect to the net-of-tax rate, and:

$$\overline{g}_K = \frac{\int_0^w \left(\int_{w-c+T_0-U^K}^{\overline{\alpha}} G'(U^K(\alpha)) dP_c(\alpha) \right) dH(c) + \int_w^{\overline{c}} \left(\int_{T_0-U^K}^{\overline{\alpha}} G'(U^K(\alpha)) dP_c(\alpha) \right) dH(c)}{\mathcal{K}\lambda}$$

is the average welfare weight across capitalists. Solving for t^* yields:

$$t^* = \frac{1 - \overline{g}_K(1 - ae_w^{1-t}) - g_L^1 a e_w^{1-t} - (T_0/\pi) e_{\mathcal{K}}^{1-t}}{1 - \overline{g}_K(1 - ae_w^{1-t}) + e_\pi^{1-t} + e_{\mathcal{K}}^{1-t}},$$

where $a = wL/\pi$.

A.5 Model with endogenous firm entry

Consider fixed populations of workers and capitalists, both of size 1. The population of workers behaves as in the baseline model. The continuum of capitalists of mass 1 vary in productivity ψ, distributed with CDF P and PDF p over the support $\Psi = [\underline{\psi}, \overline{\psi}]$. Their revenue (production) functions are given by $F(K, L; \psi)$, with $F_\psi > 0$. Capitalists decide whether to set up a firm. To do so, they pay a fixed cost $\xi > 0$. Conditional on setting up a firm, they behave as in the baseline model with productivity-specific demands (K_ψ, L_ψ) and, therefore, productivity-specific taxable profits π_ψ and indirect utilities $U^K(\psi) = \Pi(K_\psi, L_\psi; \psi) - \xi$. Because $F_\psi > 0$, it follows that $dU^K(\psi)/d\psi > 0$. Capitalists set up firms whenever $U^K(\psi) > 0$. Assuming the interesting case with $U^K\left(\underline{\psi}\right) < 0$ and $U^K\left(\overline{\psi}\right) > 0$, it follows there is a productivity threshold ψ^* such that capitalists set up firms only when $\psi \geq \psi^*$, with ψ^* implicitly characterized by $U^K(\psi^*) = 0$ or $(1-t)\pi(K_{\psi^*}, L_{\psi^*}; \psi^*) - (1-\theta)rK_{\psi^*} = \xi$. Implicit function theorem arguments plus the envelope theorem imply that, when $dU^K(\psi)/d(1-t) > 0$, then $d\psi^*/d(1-t) < 0$, as increasing the net-of-tax rate makes the marginal passive capitalist set up a firm (i.e., there is a lower participation threshold). Define by $\mathcal{K} = 1 - P(\psi^*)$ the mass of active capitalists. Also, define $L = \int_{\psi^*}^{\overline{\psi}} L_\psi dP(\psi)$.

Using $L = H(w)$, the Lagrangian is given by:

$$\begin{aligned} \mathcal{L} \;=\;& (1-L)G(T_0) + \int_0^w G(w + T_0 - c)dH(c) + (1-\mathcal{K})G(0) + \int_{\psi^*}^{\overline{\psi}} G(U^K(\psi))dP(\psi) \\ & + \lambda\left[t\int_{\psi^*}^{\overline{\psi}} \pi_\psi dP(\psi) - T_0\right], \end{aligned}$$

where λ is the budget constraint multiplier. The FOC w.r.t. $1-t$ is given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-t)} \;=\;& -\frac{dL}{d(1-t)}G(T_0) + G(T_0)h(w)\frac{dw}{d(1-t)} + \frac{dw}{d(1-t)}\int_0^w G'(w+T_0-c)dH(c) \\ & -\frac{d\mathcal{K}}{d(1-t)}G(0) - G(0)p(\psi^*)\frac{d\psi^*}{d(1-t)} + \int_{\psi^*}^{\overline{\psi}} G'(U^K(\psi))\left(\pi_\psi - wL_\psi e_w^{1-t}\right)dP(\psi) \\ & +\lambda\left[-\int_{\psi^*}^{\overline{\psi}} \pi_\psi dP(\psi) + t\int_{\psi^*}^{\overline{\psi}} \frac{d\pi_\psi}{d(1-t)}dP(\psi) - t\pi_{\psi^*}p(\psi^*)\frac{d\psi^*}{d(1-t)}\right] = 0. \end{aligned}$$

The first two terms in the first line cancel out by a similar argument to the previous propositions. Note that $d\mathcal{K}/d(1-t) = -p(\psi^*)[d\psi^*/d(1-t)]$, so the first two terms in the second line also cancel out. This is also a consequence of the envelope theorem: marginal capitalists are indifferent between setting up firms and not doing so. Let $s_\psi = \pi_\psi p(\psi)/\pi$ be the profit share of firms of type ψ, with $\pi = \int_{\psi^*}^{\overline{\psi}} \pi_\psi dP(\psi)$ be aggregate profits. It follows that the FOC can be simplified to:

$$\frac{g_L^1 wLe_w^{1-t}}{1-t} - \int_{\psi^*}^{\overline{\psi}} g_K^{\psi} wL_{\psi} e_w^{1-t} dP(\psi) + \int_{\psi^*}^{\overline{\psi}} \pi_{\psi} \left(g_K^{\psi} - 1 + \frac{te_{\pi_{\psi}}^{1-t}}{1-t} \right) dP(\psi) + \frac{t\mathcal{K}\pi_{\psi^*} e_{\mathcal{K}}^{1-t}}{1-t} = 0,$$

where $g_K^{\psi} = G'(U^K(\psi))/\lambda$ and $e_{\mathcal{K}}^{1-t} = [d\mathcal{K}/d(1-t)] \cdot [(1-t)/\mathcal{K}]$. Let $\widehat{g}_K = \int_{\psi^*}^{\overline{\psi}} \frac{L_{\psi}}{L} g_K^{\psi} dP(\psi)$, $\overline{g}_K = \int_{\psi^*}^{\overline{\psi}} s_{\psi} g_K^{\psi} d\psi$, and $\overline{e}_{\pi}^{1-t} = \int_{\psi^*}^{\overline{\psi}} s_{\psi} e_{\pi_{\psi}}^{1-t} d\psi$, with $e_{\pi_{\psi}}^{1-t} = [d\pi_{\psi}/d(1-t)] \cdot [(1-t)/\pi_{\psi}]$. Solving for t^* yields:

$$t^* = \frac{1 - \overline{g}_K + ae_w^{1-t}(\widehat{g}_K - g_L^1)}{1 - \overline{g}_K + ae_w^{1-t}\widehat{g}_K + \overline{e}_{\pi}^{1-t} + \beta^* e_{\mathcal{K}}^{1-t}},$$

where $a = wL/\pi$ and $\beta^* = \pi_{\psi^*}/(\pi/\mathcal{K})$ is the ratio of the profit of the marginal switcher relative to the average profit among active capitalists.

A.6 Proposition 5

Using $L = H(w)$, the Lagrangian is given by:

$$\mathcal{L} = \int_w^{\overline{c}} G(T_0 + \omega_c U^K) dH(c) + \int_0^w G(w + T_0 - c + \omega_c U^K) dH(c) + G(\omega_K U^K) + \lambda \left[t\pi(K^*, L^*) - T_0 \right],$$

where λ is the budget constraint multiplier. The FOC w.r.t. $1-t$ is given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-t)} &= -\frac{dw}{d(1-t)} G(T_0 + \omega_w U^K) h(w) + \frac{dw}{d(1-t)} G(T_0 + \omega_w U^K) h(w) \\ &+ \int_w^{\overline{c}} G'(T_0 + \omega_c U^K) \omega_c \frac{dU^K}{d(1-t)} dH(c) + \int_0^w G'(w + T_0 - c + \omega_c U^K) \left(\frac{dw}{d(1-t)} + \omega_c \frac{dU^K}{d(1-t)} \right) dH(c) \\ &+ G'(\omega_K U^K) \omega_K \frac{dU^K}{d(1-t)} + \lambda \left[-\pi(K^*, L^*) + t \frac{d\pi}{d(1-t)} \right] = 0. \end{aligned}$$

Using the average welfare weight of firm owners, properly aggregated using their ownership shares $\overline{g}$ (defined in equation (7)), the FOC can be simplified to:

$$\frac{g_L^1 wLe_w^{1-t}}{1-t} - \overline{g} wLe_w^{1-t} + \pi \left(\overline{g} - 1 + \frac{te_{\pi}^{1-t}}{1-t} \right) = 0.$$

Solving for t^* yields:

$$t^* = \frac{1 - \overline{g} \left(1 - ae_w^{1-t} \right) - g_L^1 ae_w^{1-t}}{1 - \overline{g} \left(1 - ae_w^{1-t} \right) + e_{\pi}^{1-t}},$$

where $a = wL/\pi$.

A.7 Proposition 6

Using $L = H(w)$, the Lagrangian is given by:

$$\mathcal{L} = (1-L)G(T_0) + \int_0^w G(w + T_0 - c)dH(c) + G(U^K) + \lambda \left[t\pi(K^*, L^*) - T_0\right].$$

The FOC w.r.t. $1-t$ is given by:

$$\begin{aligned}\frac{d\mathcal{L}}{d(1-t)} &= -\frac{dL}{d(1-t)}G(T_0) + G(T_0)h(w)\frac{dw}{d(1-t)} + \frac{dw}{d(1-t)}\int_0^w G'(w+T_0-c)dH(c) \\ &\quad + G'(U^K)\left(\pi(K^*, L^*) - wLe_w^{1-t} + \pi\mathcal{E}_{1-t}\right) + \lambda\left[-\pi(K^*, L^*) + t\frac{d\pi}{d(1-t)}\right] = 0,\end{aligned}$$

where $\mathcal{E}_{1-t} = \frac{(1-t)F_\psi \psi_K}{\pi}\frac{dK}{d(1-t)}$ is the productivity externality.

A similar argument to the one above allows us to cancel out the first two terms. Let $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot [(1-t)/\pi]$. Then, the FOC can be rewritten as:

$$\frac{g_L^1 wLe_w^{1-t}}{1-t} - g_K\left(wLe_w^{1-t} - \pi\mathcal{E}_{1-t}\right) + \pi\left(g_K - 1 + \frac{te_\pi^{1-t}}{1-t}\right) = 0.$$

Solving for t^* yields:

$$t^* = \frac{1 - g_K\left(1 + \mathcal{E}_{1-t} - ae_w^{1-t}\right) - g_L^1 ae_w^{1-t}}{1 - g_K\left(1 + \mathcal{E}_{1-t} - ae_w^{1-t}\right) + e_\pi^{1-t}},$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio. If the capitalist internalizes the externality, then $dU^K/d(1-t) = \pi - wLe_w^{1-t}$, and t^* is the same as in Proposition 1.

A.8 Proposition 7

Using $L = H(w)$, the Lagrangian is given by:

$$\mathcal{L} = (1-L)G(T_0) + \int_0^w G(w + T_0 - c)dH(c) + G(U^K) + \lambda \left[t\pi(K^*, L^*) - T_0\right].$$

The FOC w.r.t. $1-t$ is given by:

$$\begin{aligned}\frac{d\mathcal{L}}{d(1-t)} &= -\frac{dL}{d(1-t)}G(T_0) + G(T_0)h(w)\frac{dw}{d(1-t)} + \frac{dw}{d(1-t)}\int_0^w G'(w+T_0-c)dH(c) \\ &\quad + G'(U^K)\pi(K^*, L^*) + \lambda\left[-\pi(K^*, L^*) + t\frac{d\pi}{d(1-t)}\right] = 0.\end{aligned}$$

A similar argument to the one above allows us to cancel out the first two terms. Let $e_\pi^{1-t} = [d\pi/d(1-t)] \cdot$

$[(1-t)/\pi]$. Then, the FOC can be rewritten as:

$$\frac{g_L^1 wLe_w^{1-t}}{1-t} + \pi \left(g_K - 1 + \frac{te_\pi^{1-t}}{1-t} \right) = 0.$$

Solving for t^* yields:

$$t^* = \frac{1 - g_K - g_L^1 ae_w^{1-t}}{1 - g_K + e_\pi^{1-t}},$$

where $a = wL/\pi$ is the wages-to-taxable profits ratio.

A.9 Proposition 8

The Lagrangian of the government is given by:

$$\begin{aligned} \mathcal{L} &= (1-L)G(T_0) + \int_0^{w(1-\tau)} G(w(1-\tau) + T_0 - c)dH(c) + G(U^K) \\ &\quad + \lambda \left[t\pi(K^*, L^*) + \tau wL - T_0 \right]. \end{aligned}$$

The FOC with respect to $1-t$ is now given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-t)} &= -\frac{dL}{d(1-t)} G(T_0) + G(T_0)h(w(1-\tau))\frac{dw}{d(1-t)}(1-\tau) \\ &\quad + (1-\tau)\frac{dw}{d(1-t)} \int_0^{w(1-\tau)} G'(w(1-\tau) + T_0 - c)dH(c) + G'(U^K)\left(\pi(K^*, L^*) - wLe_w^{1-t}\right) \\ &\quad + \lambda \left[-\pi(K^*, L^*) + t\frac{d\pi}{d(1-t)} + \tau \left(\frac{dw}{d(1-t)} L + \frac{dL}{d(1-t)} w \right) \right] = 0. \end{aligned} \tag{A.7}$$

Again, the first two terms cancel out (envelope theorem), so the expression can be rewritten as:

$$\frac{(1-\tau)g_L^1 wLe_w^{1-t}}{1-t} - g_K wLe_w^{1-t} + \pi \left(g_K - 1 + \frac{te_\pi^{1-t}}{1-t} \right) + \frac{\tau wL(e_w^{1-t} + e_L^{1-t})}{1-t} = 0.$$

Solving for t^* yields:

$$t^* = \frac{1 - g_K \left(1 - ae_w^{1-t}\right) - (1-\tau)g_L^1 ae_w^{1-t} - \tau a(e_w^{1-t} + e_L^{1-t})}{1 - g_K \left(1 - ae_w^{1-t}\right) + e_\pi^{1-t}}.$$

The FOC w.r.t. $1-\tau$ is given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-\tau)} &= w\left(e_w^{1-\tau} + 1\right) \int_0^{w(1-\tau)} G'(w(1-\tau) + T_0 - c)dH(c) - G'(U^K)\frac{1-t}{1-\tau} wLe_w^{1-\tau} \\ &\quad + \lambda t\frac{d\pi}{d(1-\tau)} - \lambda wL + \lambda\tau \left(w\frac{dL}{d(1-\tau)} + L\frac{dw}{d(1-\tau)} \right) = 0, \end{aligned} \tag{A.8}$$

which can be written as:

$$\left(e_w^{1-\tau}+1\right)g_L^1 - g_K\frac{1-t}{1-\tau}e_w^{1-\tau}+\frac{t}{a(1-\tau)}e_\pi^{1-\tau}-1+\frac{\tau}{1-\tau}\left(e_w^{1-\tau}+e_L^{1-\tau}\right)=0,$$

which yields:

$$\tau^* = \frac{1-g_L^1(1+e_w^{1-\tau})-te_\pi^{1-\tau}/a+g_K(1-t)e_w^{1-\tau}}{1-g_L^1(1+e_w^{1-\tau})+e_w^{1-\tau}+e_L^{1-\tau}}.$$

Finally, from the FOC w.r.t. $1-t$, we have that:

$$ae_w^{1-t}\left[(1-\tau)g_L^1-(1-t)g_K\right]=(1-t)(1-g_K)-te_\pi^{1-t}-\tau a\left(e_w^{1-t}+e_L^{1-t}\right),$$

and, from the FOC w.r.t. $1-\tau$, we have that:

$$ae_w^{1-\tau}\left[(1-\tau)g_L^1-(1-t)g_K\right]=a(1-\tau)(1-g_L^1)-te_\pi^{1-\tau}-a\tau\left(e_w^{1-\tau}+e_L^{1-\tau}\right).$$

Combining both equations and solving for t^* yields:

$$t^*=\frac{1-g_K+(1-\tau^*)aD(1-g_L^1)-a\tau^*\left(e_L^{1-t}+De_L^{1-\tau}\right)}{1-g_K+e_\pi^{1-t}+De_\pi^{1-\tau}},$$

where $D=-e_w^{1-t}/e_w^{1-\tau}$.

Moreover, since $L^S(w(1-\tau))=H(w(1-\tau))=L^*(w,1-t)=L$, we have that when $1-\tau$ is fixed:

$$\begin{aligned} d\log L^* &= -\underbrace{\frac{\partial \log L^*}{\partial \log w}}_{\eta_w^D}d\log w+\underbrace{\frac{\partial \log L^*}{\partial \log(1-t)}}_{\eta_{1-t}^D}d\log(1-t),\\ d\log L^S &= \underbrace{\frac{\partial \log L^S}{\partial \log(w(1-\tau))}}_{\eta_w^S}d\log w. \end{aligned}$$

So $d\log L^*=d\log L^S$ implies:

$$e_w^{1-t}=\frac{d\log w}{d\log(1-t)}=\frac{\eta_{1-t}^D}{\eta_w^D+\eta_w^S}.$$

Similarly, holding $1-t$ fixed, we have that:

$$d\log L^* = -\underbrace{\frac{\partial \log L^*}{\partial \log w}}_{\eta_w^D}d\log w,$$

$$d\log L^S \quad = \quad \underbrace{\frac{\partial \log L^S}{\partial \log(w(1-\tau))}}_{\eta_w^S} \left(d\log w + d\log(1-\tau)\right).$$

So $d\log L^* = d\log L^S$ implies:

$$e_w^{1-\tau} = \frac{d\log w}{d\log(1-\tau)} = -\frac{\eta_w^S}{\eta_w^D + \eta_w^S}.$$

It follows that $D = \eta_{1-t}^D/\eta_w^S$.

A.10 Revisiting optimal deductibility

With linear labor income taxes, equation (A.7) evaluated at $\theta = 1$ also yields $g_K = 1$. Also, $d\pi/d(1-\tau) = -(1-t)wLe_w^{1-\tau}/(1-\tau)$, so that the FOC w.r.t. $1-\tau$ (equation (A.8)) evaluated at $\theta = 1$ (and, therefore, $g_K = 1$) yields:

$$\begin{aligned} & (1-\tau)\frac{dw}{d(1-\tau)}Lg_L^1 + wLg_L^1 - (1-t)L\frac{dw}{d(1-\tau)} - wL - tL\frac{dw}{d(1-\tau)} + \tau w\frac{dL}{d(1-\tau)} + \tau L\frac{dw}{d(1-\tau)} \\ = \quad & L(g_L^1 - 1)\left[w + (1-\tau)\frac{dw}{d(1-\tau)}\right] + \tau w\frac{dL}{d(1-\tau)} = 0. \end{aligned}$$

We also note that the employment effects can be written as a function of the wage effects. In particular, $dL/d(1-\tau) = h(w(1-\tau))(w + (1-\tau)(dw/d(1-\tau))$. Then the optimal labor income tax rate implies:

$$\left[L(g_L^1 - 1) + \tau w h(w(1-\tau))\right]\left[w + (1-\tau)\frac{dw}{d(1-\tau)}\right] = 0.$$

Assuming the labor income tax changes the participation margin, so that $w + (1-\tau)[dw/d(1-\tau)] \neq 0$, it follows that, under the optimal labor income tax system:

$$L(g_L^1 - 1) + \tau w h(w(1-\tau)) = 0. \tag{A.9}$$

Now, we consider the local perturbation of θ starting from $\theta = 1$. The FOC w.r.t. θ is given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d\theta} \quad = \quad & (1-\tau)\frac{dw}{d\theta}\int_0^{w(1-\tau)} G'((1-\tau)w + T_0 - c)dH(c) + G'(U^K)\left(trK^* - \frac{1-t}{\theta}wLe_w^\theta\right) \\ & + \lambda t\frac{d\pi}{d\theta} + \lambda\tau\left(w\frac{dL}{d\theta} + L\frac{dw}{d\theta}\right). \end{aligned}$$

As in Proposition 2, starting from $\theta = 1$, the expression reduces to:

$$(1-\tau)\frac{dw}{d\theta}Lg_L^1 - L\frac{dw}{d\theta} + \tau w\frac{dL}{d\theta} + \tau L\frac{dw}{d\theta} = 0.$$

Using a similar logic to above, we have that $dL/d\theta = h(w(1-\tau))(1-\tau)(dw/d\theta)$. Then, we have that the previous expression can be written as:

$$\frac{dw}{d\theta}\left[(1-\tau)Lg_L^1 - L + \tau w(1-\tau)h(w(1-\tau)) + \tau L\right] = (1-\tau)\frac{dw}{d\theta}\left[L(g_L^1 - 1) + \tau w h(w(1-\tau)\right].$$

Replacing the expression in (A.9) yields that the FOC w.r.t. θ is zero when evaluated at $\theta = 1$, meaning that full expensing is optimal in this case.

A.11 Organizational form switching

We replace the representative capitalist with a continuum of capitalists of size 1 who decide whether they want to set up their businesses as C corporations or S corporations. C corporations pay the corporate tax t, while S corporations pay the labor income tax τ. Capitalists are endowed with an incorporation scalar cost (or benefit) α representing their (additive) disutility of setting up the business as an S corporation, distributed with CDF P and PDF p over the support $[\underline{\alpha}, \overline{\alpha}]$. Apart from the incorporation cost α, capitalists are homogeneous and behave as described in Section 2. The indirect utility of being a C or S corporation before accounting for the incorporation costs α is given by:

$$\begin{aligned} U_C^K &= (1-t)\pi(K^*(w, 1-t, \theta), L^*(w, 1-t, \theta)) - (1-\theta)rK^*(w, 1-t, \theta), \\ U_S^K &= (1-\tau)\pi(K^*(w, 1-\tau, \theta), L^*(w, 1-\tau, \theta)) - (1-\theta)rK^*(w, 1-\tau, \theta), \end{aligned}$$

respectively, where we made explicit that the optimal demand functions vary between organizational forms because of the differences in taxes. It follows that a capitalist will choose to operate as an S corporation whenever $U_S^K - \alpha \geq U_C^K$. Then, the number of S corporations is given by $S \equiv P(U_S^K - U_C^K)$ and the number of C corporations is given by $C \equiv 1 - S = 1 - P(U_S^K - U_C^K)$. Define $\pi_C = \pi(K^*(w, 1-t, \theta), L^*(w, 1-t, \theta))$ and $\pi_S = \pi(K^*(w, 1-\tau, \theta), L^*(w, 1-\tau, \theta))$. If the distribution P is smooth, there are well-defined finite elasticities $e_C^x = [dC/dx] \cdot [x/C]$ and $e_S^x = [dS/dx] \cdot [x/S]$, for $x \in \{1-t, 1-\tau\}$, as changes in net-of-taxes will affect the object $U_S^K - U_C^K$, with $e_C^x = -(S/C)e_S^x$. The modeling choice of α affecting the S corporation utility is without loss of generality, as in any discrete choice problem of this sort, the preference shock only identifies the differences in utilities.

The workers' problem is equivalent to the case developed in Section 3 with labor income taxes. The main difference, however, is that the labor market clearing condition is now given by $H(w(1-\tau)) = CL^*(w, 1-t, \theta) + SL^*(w, 1-\tau, \theta)$. Define $L_C = L^*(w, 1-t, \theta)$ and $L_S = L^*(w, 1-\tau, \theta)$ as the individual labor demands of each organizational form, with $CL_C + SL_S = L$. Unlike other extensions, both corporate and labor income taxes affect labor demand. Implicit in this equilibrium condition is the assumption that workers are indifferent between working in a C or an S corporation and, therefore, all firms participate in the same labor market regardless of the organizational choice.

The government chooses $(1-t, T_0, 1-\tau)$ to maximize a generalized utilitarian social welfare objective:

$$\begin{aligned} SWF &= (1-L)G(T_0) + L\frac{\int_0^{w(1-\tau)} G(w(1-\tau)+T_0-c)dH(c)}{H(w(1-\tau))} \\ &\quad +CG(U_C^K) + S\frac{\int_0^{U_S^K-U_C^K} G(U_S^K-\alpha)dP(\alpha)}{P(U_S^K-U_C^K)}, \end{aligned}$$

subject to the budget constraint $tC\pi_C + \tau S\pi_S + \tau wL = T_0$ with multiplier λ. Implicit in this formulation is the assumption that the planner observes the organizational form chosen by capitalists but α is private information. Consequently, we allow the government to assign different welfare weights to different types of capitalists. The welfare weights in this case are given by:

$$\begin{aligned} g_L^0 &= \frac{G'(T_0)}{\lambda}, & g_L^1 &= \frac{\int_0^{w(1-\tau)} G'(w(1-\tau)+T_0-c)dH(c)}{L\lambda}, \\ g_K^C &= \frac{G'(U_C^K)}{\lambda}, & g_K^S &= \frac{\int_{\underline{\alpha}}^{U_S^K-U_C^K} G'(U_S^K-\alpha)dP(\alpha)}{S\lambda}. \end{aligned}$$

The Lagrangian of the government is given by:

$$\begin{aligned} \mathcal{L} &= (1-L)G(T_0) + \int_0^{w(1-\tau)} G(w(1-\tau)+T_0-c)dH(c) + CG(U_C^K) \\ &\quad + \int_{\underline{\alpha}}^{U_S^K-U_C^K} G(U_S^K-\alpha)dP(\alpha) + \lambda\left[tC\pi_C + \tau S\pi_S + \tau wL - T_0\right]. \end{aligned}$$

The FOC with respect to $1-t$ is now given by:

$$\begin{aligned} \frac{d\mathcal{L}}{d(1-t)} &= -\frac{dL}{d(1-t)}G(T_0) + G(T_0)h(w(1-\tau))\frac{dw}{d(1-t)}(1-\tau) \\ &\quad +(1-\tau)\frac{dw}{d(1-t)}\int_0^{w(1-\tau)} G'(w(1-\tau)+T_0-c)dH(c) \\ &\quad +CG'(U_C^K)\left(\pi_C - wL_C e_w^{1-t}\right) - \int_{\underline{\alpha}}^{U_S^K-U_C^K} G'(U_S^K-\alpha)dP(\alpha)wL_S e_w^{1-t}\frac{1-\tau}{1-t} \\ &\quad +\lambda\left[-C\pi_C + t\frac{dC}{d(1-t)}\pi_C + tC\frac{d\pi_C}{d(1-t)} + \tau\frac{dS}{d(1-t)}\pi_S + \tau S\frac{d\pi_S}{d(1-t)}\right. \\ &\quad \left. +\tau\left(\frac{dw}{d(1-t)}L + \frac{dL}{d(1-t)}w\right)\right] = 0. \end{aligned}$$

Again, the first two terms cancel out because of the envelope theorem. Grouping terms and using the elasticity and welfare weights definitions, the expression can be written as:

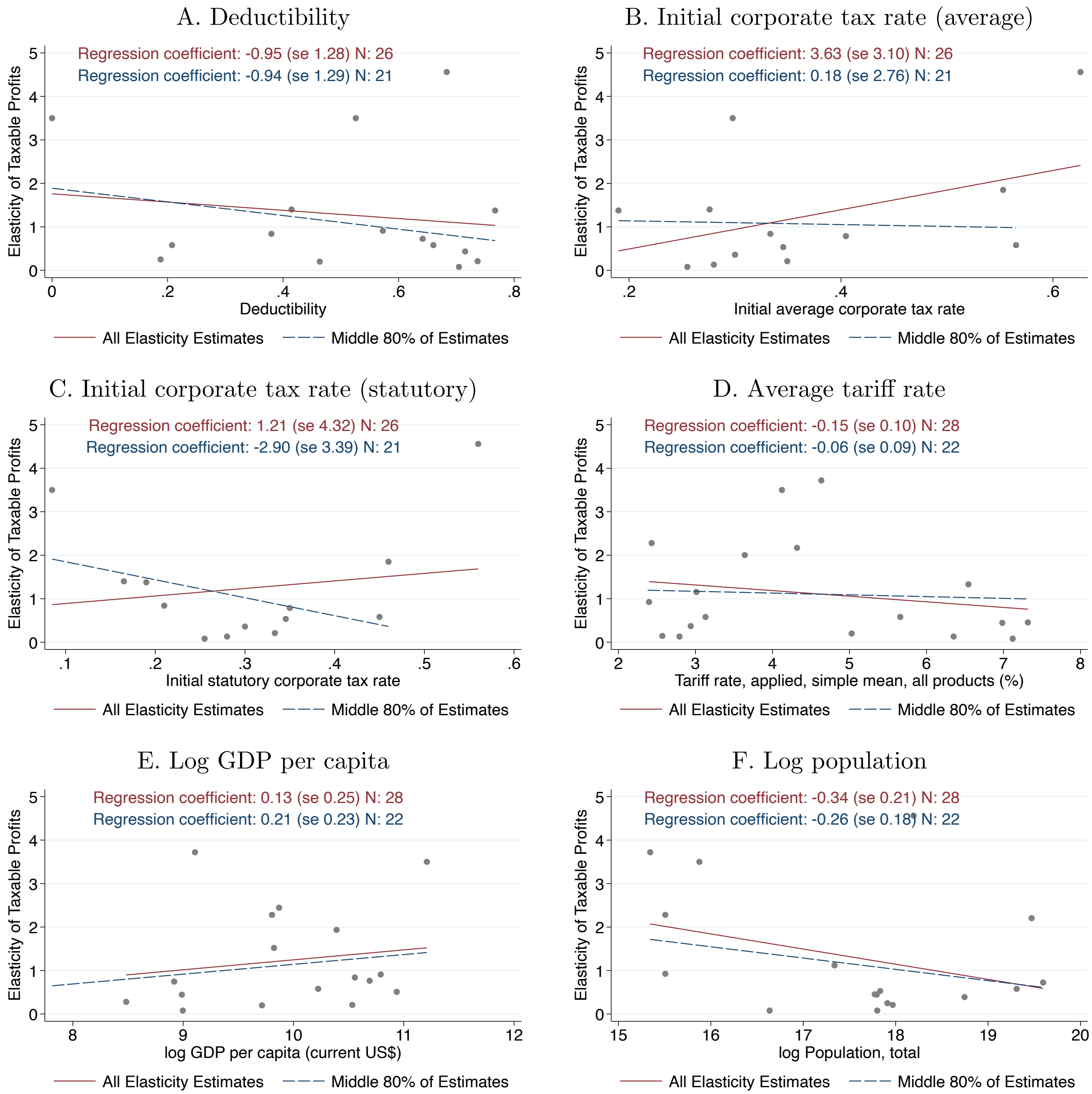
$$\begin{aligned} &\frac{(1-\tau)a_L g_L^1 e_w^{1-t}}{1-t} + g_K^C\left(1 - a_C e_w^{1-t}\right) - \frac{g_K^S a_S e_w^{1-t}(1-\tau)}{1-t} - 1 \\ &+\frac{t\left(e_C^{1-t} + e_{\pi_C}^{1-t}\right)}{1-t} + \frac{\tau b_S\left(e_S^{1-t} + e_{\pi_S}^{1-t}\right)}{1-t} + \frac{\tau a_L\left(e_w^{1-t} + e_L^{1-t}\right)}{1-t} = 0, \end{aligned}$$

where $a_L = wL/C\pi_C$, $a_C = wL_C/\pi_C$, $a_S = SL_S w/C\pi_C$, and $b_S = S\pi_S/C\pi_C$. Solving for t^* yields:

$$t^* = \frac{1 - g_K^C\left(1 - a_C e_w^{1-t}\right) - (1-\tau)e_w^{1-t}\left(a_L g_L^1 - a_S g_K^S\right) - \tau\left(a_L\left(e_w^{1-t} + e_L^{1-t}\right) + b_S\left(e_S^{1-t} + e_{\pi_S}^{1-t}\right)\right)}{1 - g_K^C\left(1 - a_C e_w^{1-t}\right) + e_{\pi_C}^{1-t} + e_C^{1-t}}.$$

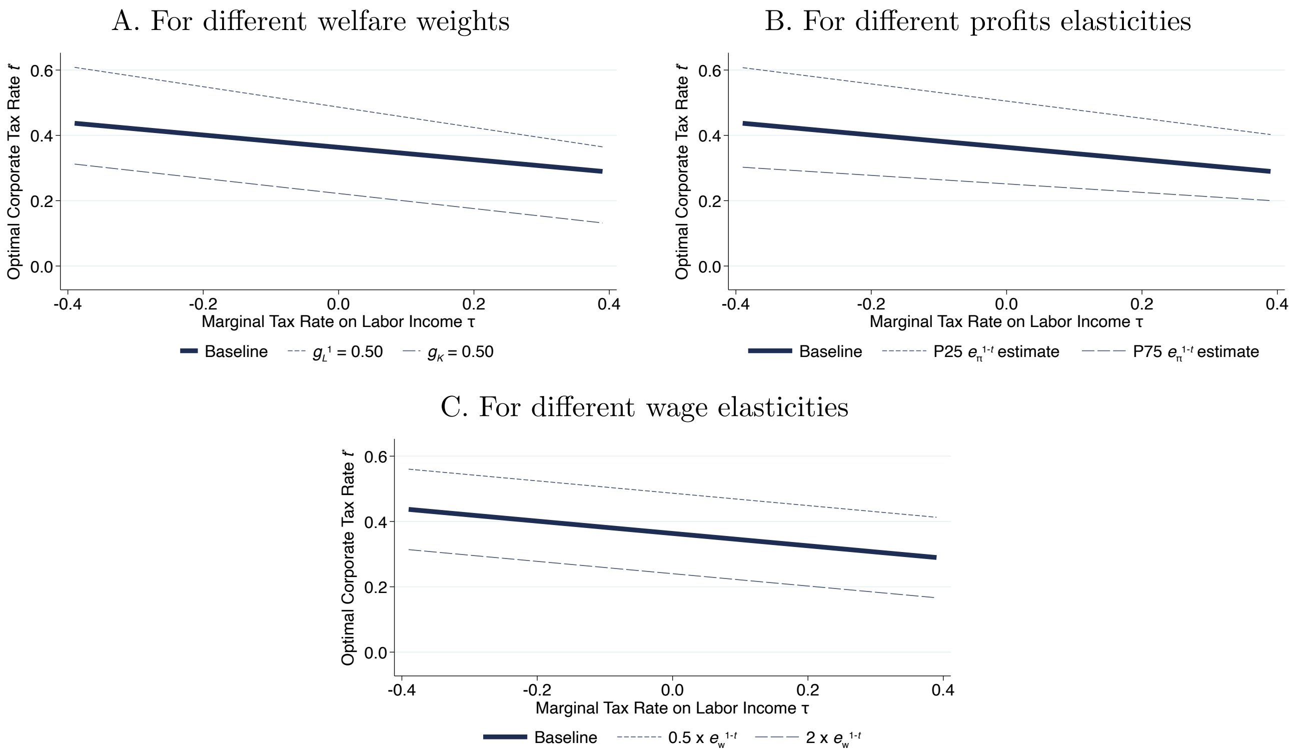
B Additional Exhibits

Figure B.1: Relationships Between the Elasticity of Taxable Profits and Country Characteristics



Notes: This figure shows binned scatter plots of the elasticity of taxable profits estimates from Table 1 against selected country characteristics. Each row in our data set is an estimate, and the x-axis variable for each plot is an average of the relevant covariate over the study period. Solid lines are lines of best fit from fitting a regression of elasticity estimates on the covariate in the full data set, whereas dashed lines are from fitting the same regression among the middle 80% of estimates. Data on features of the tax system are sourced from the Oxford Centre for Business Taxation database (Panels A-C) while other data are sourced from the World Bank's World Development Indicators DataBank (Panels D-F). "Deductibility" is the average across buildings, machinery, and intangibles of the present discounted value of depreciation allowances per unit of investment (5% discount rate), computed from each country-year's depreciation schedule following Hall and Jorgenson (1967) formulas.

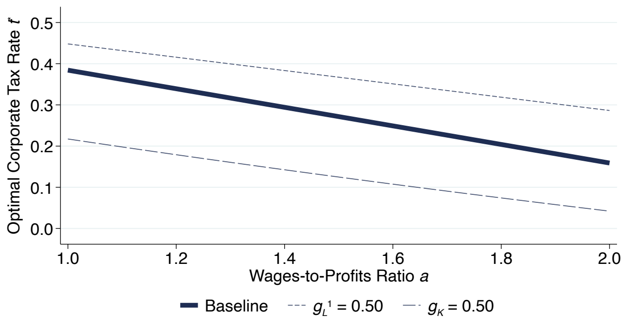
Figure B.2: Comparative Statics with Respect to the Marginal Tax Rate on Labor Income τ



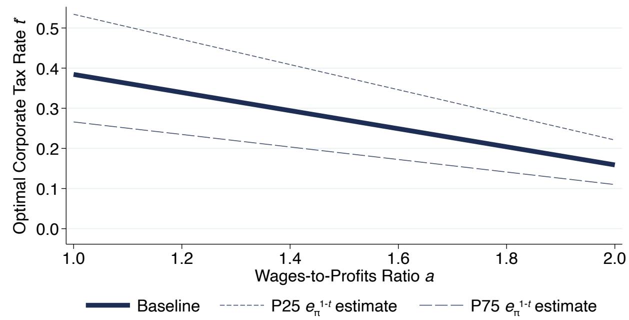
Notes: This figure plots calibrated optimal corporate taxes based on equation (11). Comparative statics with respect to τ are conducted departing from the baseline set of inputs given by $(e_{\pi}^{1-t}, e_{w}^{1-t}, e_{L}^{1-t}, g_{L}^{1}, g_{K}, a, \tau) = (0.64, 0.30, 0.23, 1, 0, 1.35, 0.303)$ (see Section 4 for details). The different curves in Panel A conduct the comparative static with respect to τ assuming different values for g_{L}^{1} and g_{K}. The different curves in Panel B conduct the comparative static with respect to τ assuming different values for e_{π}^{1-t}. The different curves in Panel C conduct the comparative static with respect to τ assuming different values for e_{w}^{1-t}.

Figure B.3: Comparative Statics with Respect to the Wages-to-Taxable Profits Ratio a

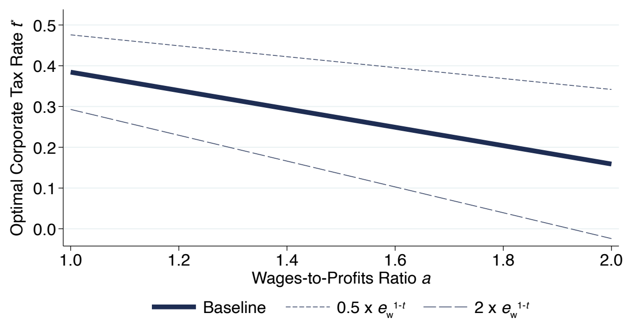
A. For different welfare weights



B. For different profits elasticities

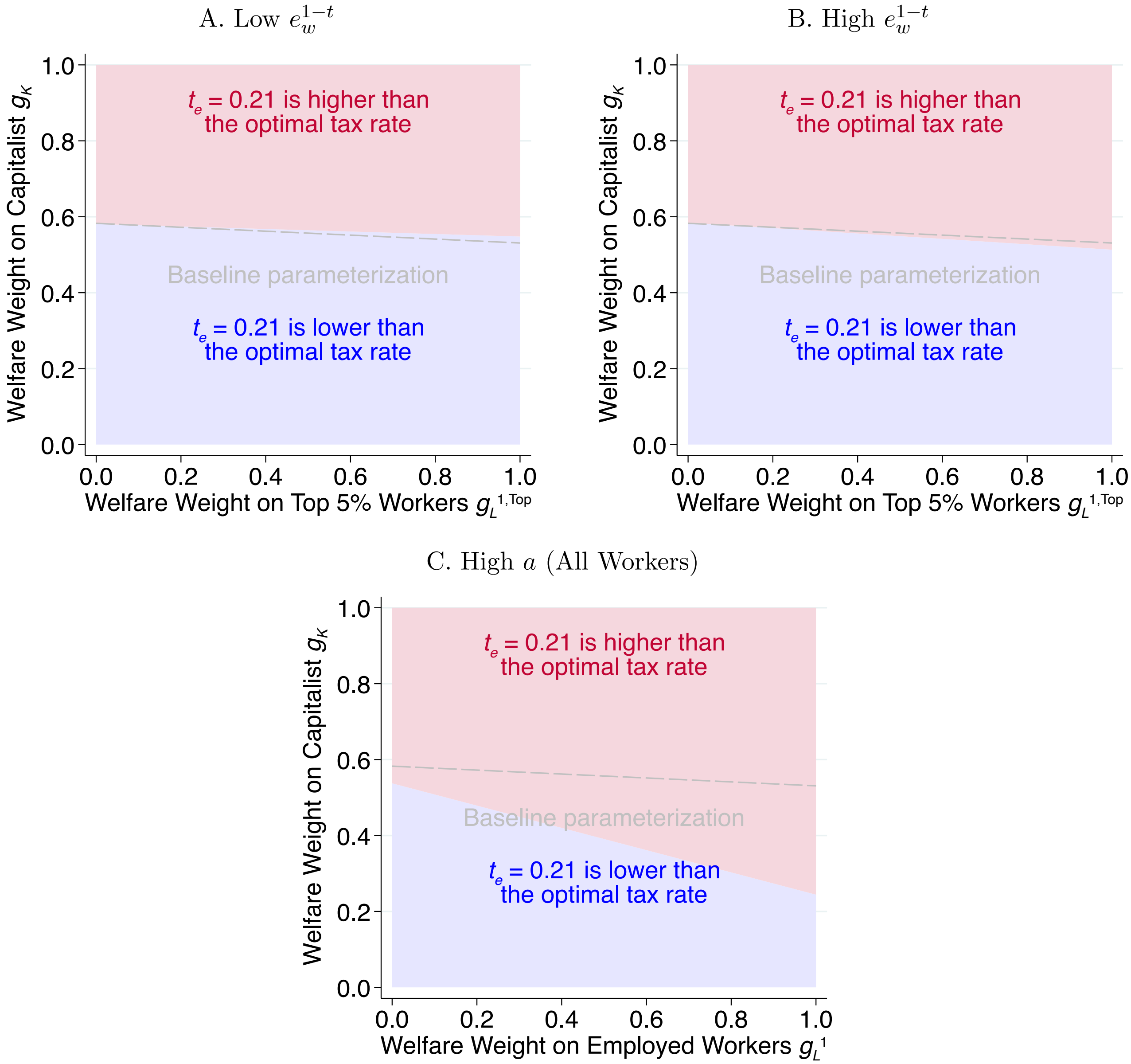


C. For different wage elasticities



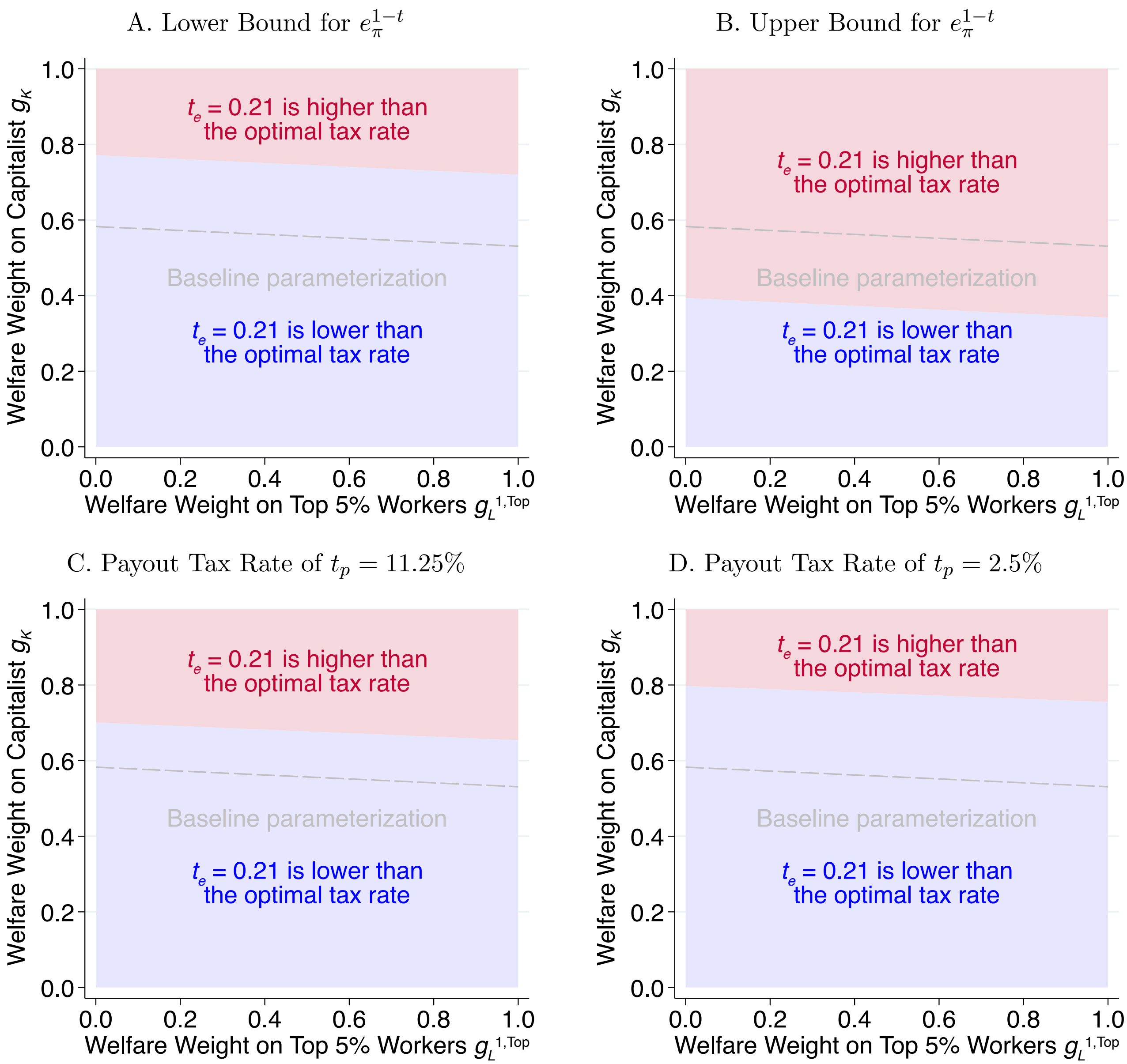
Notes: This figure plots calibrated optimal corporate taxes based on equation (11). Comparative statics with respect to a are conducted departing from the baseline set of inputs given by $(e_\pi^{1-t}, e_w^{1-t}, e_L^{1-t}, g_L^1, g_K, a, \tau) = (0.64, 0.30, 0.23, 1, 0, 1.35, 0.303)$ (see Section 4 for details). The different curves in Panel A conduct the comparative static with respect to a assuming different values for g_L^1 and g_K. The different curves in Panel B conduct the comparative static with respect to a assuming different values for e_π^{1-t}. The different curves in Panel C conduct the comparative static with respect to a assuming different values for e_w^{1-t}.

Figure B.4: Inverse Optimum Analysis of the Current US Corporate Tax: Alternative Parameterizations for the Wage Elasticity and the Wage-to-Taxable Profits Ratio



Notes: This figure replicates the results of the inverse-optimum analysis of the current US corporate tax based on the results presented in Kennedy et al. (2026) described in Section 4 presented in Panel A of Figure 3 for different values of e_w^{1-t} and a. The line dividing the red and blue regions represents combinations of the welfare weights on top 5% workers g_L^1 and capitalists g_K that rationalize the current corporate tax as optimal, following the $g_K(g_L^1)$ mapping characterized in equation (15). Computations use $(e_\pi^{1-t}, e_L^{1-t}, t_p, \tau) = (0.7, 0.23, 0.2, 0.303)$ and $t_e = 0.21$. The baseline values of e_w^{1-t} and a underlying Panel A of Figure 3 come from averaging incomes and elasticities for the within-firm 95th percentile and the within-firm top 5 workers. Panels A and B show alternative versions of this figure using the wage elasticity of each respective group, with the "low e_w^{1-t}" scenario using the within-firm 95th percentile elasticity ($e_w^{1-t} = 0.22$) and the "high e_w^{1-t}" scenario using that of the within-firm top 5 workers ($e_w^{1-t} = 0.47$). Panel C shows an alternative exercise in which we calculate the relative tax base parameter a using the average wage and total firm sizes reported in Table 1 of Kennedy et al. (2026), rather than those of the top 5% of workers, which gives $a = 0.61$.

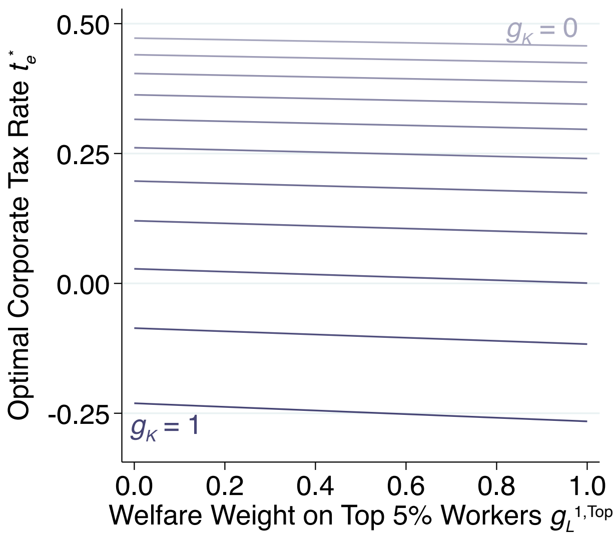
Figure B.5: Inverse Optimum Analysis of the Current US Corporate Tax: Alternative Parameterizations for the Taxable Profits Elasticity and Payout Taxes



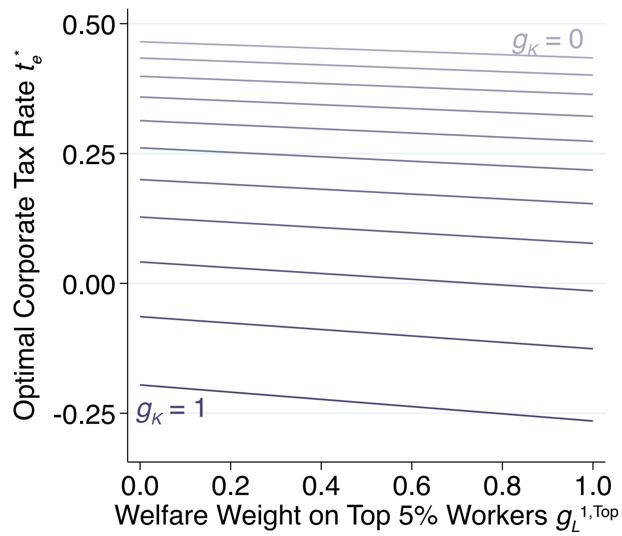
Notes: This figure replicates the results of the inverse-optimum analysis of the current US corporate tax based on the results presented in Kennedy et al. (2026) described in Section 4 presented in Panel A of Figure 3 for different values of e_π^{1-t} and t_p. The line dividing the red and blue regions represents combinations of the welfare weights on top 5% workers g_L^1 and capitalists g_K that rationalize the current corporate tax as optimal, following the $g_K(g_L^1)$ mapping characterized in equation (15). Computations use $(e_w^{1-t}, e_L^{1-t}, a, \tau) = (0.345, 0.23, 0.13, 0.303)$ and $t_e = 0.21$. For comparison, the gray lines reproduce the frontier presented in Figure 3 that uses $(e_\pi^{1-t}, t_p) = (0.7, 0.2)$. Panels A and B set $t_p = 0.2$ and consider two values for $e_\pi^{1-t} \in \{0.39, 1.01\}$, which are the bounds for the taxable profit elasticity reported in Kennedy et al. (2026). Panels C and D set $e_\pi^{1-t} = 0.7$ and consider two values for $t_p \in \{0.025, 0.1125\}$. The effective payout tax rate reported in Kennedy et al. (2026) is 2.5%, and 11.25% is the midpoint between the effective payout tax rate and our baseline assumed payout tax rate of 20%.

Figure B.6: Optimal Entity-Level US Corporate Taxes: Alternative Parameterizations for the Wage Elasticity and the Wage-to-Taxable Profits Ratio

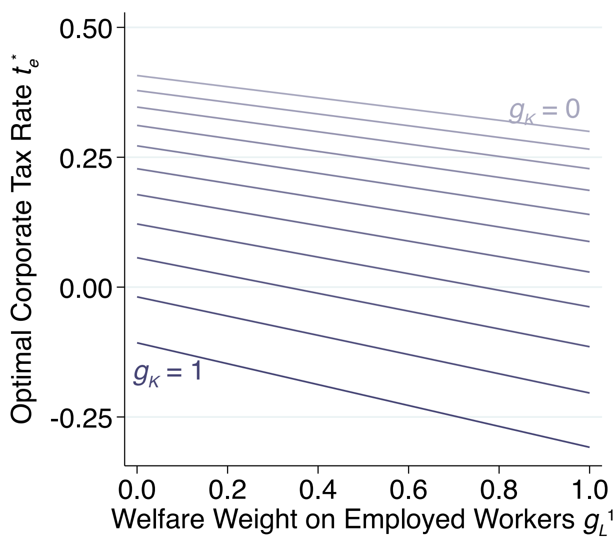
A. Low e_w^{1-t}



B. High e_w^{1-t}

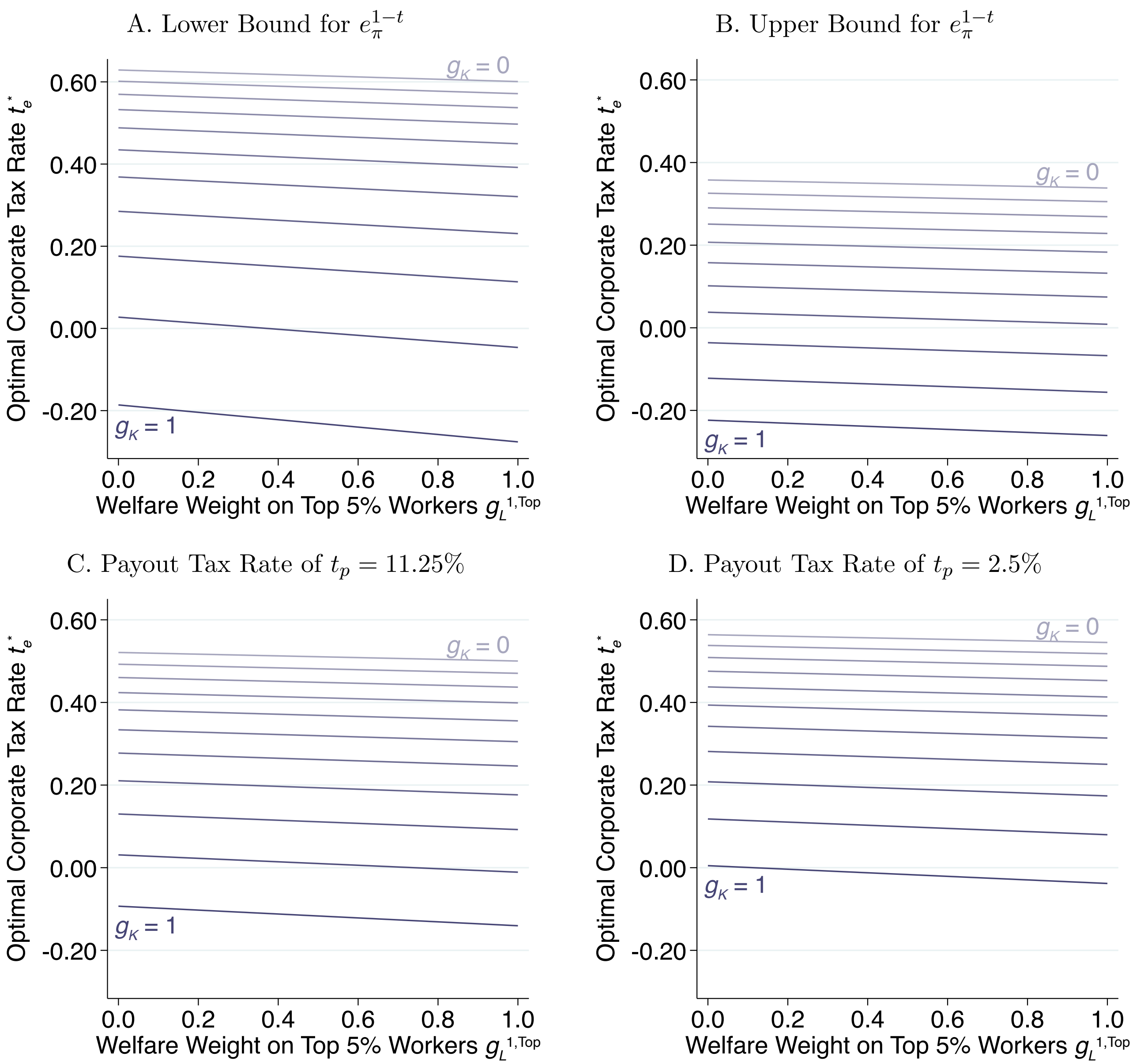


C. High a (All Workers)



Notes: This figure computes optimal entity-level corporate taxes using estimates from Kennedy et al. (2026) for different welfare weights on capitalists g_K and top 5% workers $g_L^{1,Top}$. The welfare weight on capitalists increases as the lines go from dark to light. Computations use $(e_\pi^{1-t}, e_L^{1-t}, t_p, \tau) = (0.7, 0.23, 0.2, 0.303)$ and $t_e = 0.21$. The baseline values of e_w^{1-t} and a underlying Panel B of Figure 3 come from averaging incomes and elasticities for the within-firm 95th percentile and the within-firm top 5 workers. Panels A and B show alternative versions of this figure using the wage elasticity of each respective group, with the "low e_w^{1-t}" scenario using the within-firm 95th percentile elasticity ($e_w^{1-t} = 0.22$) and the "high e_w^{1-t}" scenario using that of the within-firm top 5 workers ($e_w^{1-t} = 0.47$). Panel C shows an alternative exercise in which we calculate the relative tax base parameter a using the average wage and total firm sizes reported in Table 1 of Kennedy et al. (2026), rather than those of the top 5% of workers, which gives $a = 0.61$.

Figure B.7: Optimal Entity-Level US Corporate Taxes: Alternative Parameterizations for the Taxable Profits Elasticity and Payout Taxes



Notes: This figure computes optimal entity-level corporate taxes using estimates from Kennedy et al. (2026) for different welfare weights on capitalists g_K and top 5% workers $g_L^{1,Top}$. The welfare weight on capitalists increases as the lines go from dark to light. Panels A and B set $t_p = 0.2$ and consider two values for $e_\pi^{1-t} \in \{0.39, 1.01\}$, which are the bounds for the taxable profit elasticity reported in Kennedy et al. (2026). Panels C and D set $e_\pi^{1-t} = 0.7$ and consider two values for $t_p \in \{0.025, 0.1125\}$. The effective payout tax rate reported in Kennedy et al. (2026) is 2.5%, and 11.25% is the midpoint between the effective payout tax rate and our baseline assumed payout tax rate of 20%.

Table B.1: Meta-Analysis of Elasticity of Taxable Profits Estimates

Study	Estimate (1)	95% CI Lower (2)	95% CI Upper (3)	Weight (%) (4)
Bach (2017)	0.21	0.20	0.22	5.68
Bachas and Soto (2021)	4.79	4.63	4.95	5.66
Bachas and Soto (2021)	2.65	2.49	2.81	5.66
Basri et al. (2021)	0.58	0.19	0.97	5.57
Boonzaaier et al. (2019)	0.17	0.14	0.19	5.68
Boonzaaier et al. (2019)	0.72	0.58	0.86	5.67
Buettner (2003)	4.56	2.61	6.51	3.74
Bukovina et al. (2025)	1.85	1.84	1.86	5.68
Bukovina et al. (2025)	1.11	1.08	1.14	5.68
Bukovina et al. (2025)	0.19	0.16	0.22	5.68
Coles et al. (2022)	0.55	0.53	0.57	5.68
Cortés and Gutiérrez (2025)	0.84	0.80	0.88	5.68
Devereux et al. (2014)	0.37	0.25	0.49	5.67
Devereux et al. (2014)	0.13	0.09	0.17	5.68
Gruber and Rauh (2007)	0.20	0.05	0.34	5.67
Kennedy et al. (2026)	0.70	0.39	1.01	5.61
Krapf and Staubli (2025)	3.50	1.54	5.46	3.73
Massenz (2026)	0.08	0.07	0.09	5.68
Suárez Serrato and Zidar (2016)	3.50	-0.32	7.32	1.90
Pooled mean	1.22	0.58	1.87	
Cross-study variance	1.90			
Heterogeneity share (%)	99.99			
Estimates	19			
Studies	14			

Notes: Columns (1)-(3) reproduce estimates and standard errors (when available) from Table 1. Weights, pooled mean, cross-study variance, and heterogeneity shares are calculated from a random effects meta-analysis. Letting i index estimates in Table 1, we specify a model for true elasticities θ_i and estimates $\hat{\theta}$ with $\theta_i \sim \mathcal{N}(\mu, \tau^2)$ and $\hat{\theta}_i \mid \theta_i \sim \mathcal{N}(\theta_i, \sigma_i^2)$, implying $\hat{\theta}_i \sim \mathcal{N}(\mu, \sigma^2 + \tau^2)$. We estimate μ and τ^2 by restricted maximum likelihood. Weights in Column (4) are calculated as $\omega_i = 1/(\hat{\sigma}_i^2 + \hat{\tau}_i^2)$, where $\hat{\sigma}_i^2$ the standard error for estimate i. The pooled mean reported at the bottom of the table is an estimate of μ and is calculated as the weighted average of point estimates using weights in Column (4). Cross-study variance is an estimate of τ^2, and heterogeneity share is the share of total variance in observed estimates attributable to between-study heterogeneity rather than within-study sampling error.

Table B.2: Distribution of C Corporation Ownership

Income group	Total (%)	Average by centile (%)
P0-10	0.79	0.08
P10-20	0.23	0.02
P20-30	0.57	0.06
P30-40	0.76	0.08
P40-50	0.99	0.10
P50-60	1.49	0.15
P60-70	1.67	0.17
P70-80	4.33	0.43
P80-90	7.85	0.79
P90-91	1.14	0.11
P91-92	1.45	1.45
P92-93	1.35	1.35
P93-94	1.60	1.60
P94-95	5.63	5.63
P95-96	3.56	3.56
P96-97	4.19	4.19
P97-98	8.53	8.53
P98-99	12.56	12.56
P99-100	41.30	41.30

Notes: This table shows the share of total C corporation equity owned by each of 19 income groups in 2016 according to data from the Survey of Consumer Finances (SCF). The "Total" column shows each group's total share of C corporation equity, while the "Average by centile" column divides the total share by the number of centiles in each bin. Income groups are defined by ranking units according to the bulletin `income` concept. Our measure of C corporation equity is constructed following Smith et al. (2023) (see Appendix C for details).

Table B.3: Optimal Entity-Level Corporate Tax t_e^* (%): Robustness

			Payout tax $t_p = 20\%$			Payout tax $t_p = 11.25\%$			Payout tax $t_p = 2.5\%$		
			Taxable profit elasticity e_π^{1-t}			Taxable profit elasticity e_π^{1-t}			Taxable profit elasticity e_π^{1-t}		
Inequality aversion ζ	g_K	$g_L^{1,Top}$	0.39	0.70	1.01	0.39	0.70	1.01	0.39	0.70	1.01
Panel A. Baseline parametrization											
$\zeta = 0$ (no inequality aversion)	1.00	1.00	-27.6	-26.5	-26.1	-15.0	-14.0	-13.6	-4.7	-3.8	-3.4
$\zeta = 0.31$ (21% optimal rate at baseline)	0.55	0.60	37.6	**21.0**	11.4	43.7	28.8	20.2	48.8	35.2	27.3
$\zeta = 0.5$ (0.5 × log inequality aversion)	0.39	0.41	48.0	31.0	20.4	53.1	37.8	28.3	57.3	43.4	34.7
$\zeta = 1$ (log inequality aversion)	0.17	0.13	57.6	40.9	29.9	61.8	46.7	36.8	65.2	51.5	42.4
$\zeta = 2$ (2 × log inequality aversion)	0.09	0.01	60.5	44.1	33.0	64.4	49.6	39.6	67.6	54.1	45.0
Panel B. Low wage elasticity $e_w^{1-t} = 0.22$											
$\zeta = 0$ (no inequality aversion)	1.00	1.00	-27.7	-26.6	-26.1	-15.1	-14.1	-13.7	-4.8	-3.8	-3.5
$\zeta = 0.31$ (21% optimal rate at baseline)	0.55	0.60	38.6	21.7	11.9	44.6	29.4	20.6	49.6	35.7	27.7
$\zeta = 0.5$ (0.5 × log inequality aversion)	0.39	0.41	48.8	31.5	20.8	53.8	38.3	28.6	58.0	43.8	35.0
$\zeta = 1$ (log inequality aversion)	0.17	0.13	58.1	41.3	30.2	62.2	47.1	37.1	65.6	51.8	42.7
$\zeta = 2$ (2 × log inequality aversion)	0.09	0.01	60.9	44.4	33.3	64.8	49.9	39.8	67.9	54.4	45.2
Panel C. High wage elasticity $e_w^{1-t} = 0.47$											
$\zeta = 0$ (no inequality aversion)	1.00	1.00	-27.5	-26.5	-26.1	-14.9	-14.0	-13.6	-4.6	-3.8	-3.4
$\zeta = 0.31$ (21% optimal rate at baseline)	0.55	0.60	36.6	20.4	11.0	42.8	28.3	19.8	47.9	34.7	27.0
$\zeta = 0.5$ (0.5 × log inequality aversion)	0.39	0.41	47.1	30.4	20.0	52.4	37.3	27.9	56.6	42.9	34.4
$\zeta = 1$ (log inequality aversion)	0.17	0.13	57.0	40.5	29.5	61.3	46.4	36.5	64.7	51.2	42.2
$\zeta = 2$ (2 × log inequality aversion)	0.09	0.01	60.1	43.8	32.7	64.0	49.3	39.4	67.2	53.9	44.8
Panel D. High wage bill to taxable profits ratio $a = 0.61$											
$\zeta = 0$ (no inequality aversion)	1.00	1.00	-33.8	-30.8	-29.3	-20.6	-17.9	-16.6	-9.8	-7.3	-6.1
$\zeta = 0.31$ (21% optimal rate at baseline)	0.55	0.93	17.2	6.8	0.6	25.3	16.0	10.4	32.0	23.5	18.4
$\zeta = 0.5$ (0.5 × log inequality aversion)	0.39	0.85	28.6	16.7	9.1	35.7	24.9	18.1	41.4	31.7	25.5
$\zeta = 1$ (log inequality aversion)	0.17	0.53	42.9	29.5	20.5	48.6	36.4	28.3	53.2	42.1	34.7
$\zeta = 2$ (2 × log inequality aversion)	0.09	0.09	51.8	37.2	27.2	56.5	43.4	34.4	60.4	48.5	40.3

Notes: This table presents calibrated optimal entity-level corporate taxes t_e^* for the US based on equation (14), as in Table 4. Panel A reproduces optimal taxes shown in Table 4 for reference, calculated under a baseline parametrization with $(e_w^{1-t}, e_L^{1-t}, a, \tau) = (0.345, 0.23, 0.13, 0.303)$. Panels B and C change the wage elasticity from its baseline value $e_w^{1-t} = 0.345$ to the wage elasticities of workers at the 95th percentile of the within-firm earnings distribution and "executives", respectively. Panel D considers a scenario in which all workers, not just those in the top 5% of the within-firm earnings distribution, experience wage responses corresponding to our baseline value of $e_w^{1-t} = 0.345$. In this scenario, we change the relative tax base parameter a to be the product of the average, rather than top 5%, wage with the average total firm size, rather than 5% of the average firm size, divided by average taxable profits. To calculate the welfare weight on employed workers in Panel D, we calculate post-tax income using inflation-adjusted average worker earnings reported in Kennedy et al. (2026) and the empirical tax system computed using Piketty et al. (2018) (see Appendix C for details). The bold cell corresponds to the inequality aversion parameter that, under the baseline parametrization, yields $t_e^* = 21\%$.

C Data

Distributional National Accounts micro-files. We use Piketty et al. (2018) public micro-files, downloaded from the paper's webpage, in our calibration exercises in Section 4. We use the files to estimate an empirical linear tax system defined by a marginal labor income tax rate τ and a universal transfer T_0, and to calibrate empirical welfare weights.

For the empirical linear tax rate estimation, we pool the 2016–2020 datasets (properly adjusted for inflation) and focus on working-age households where all members are between 30 and 60 years old and are primarily labor income earners (with a share of labor income over total income above 95%). Then, we consider pre-tax labor income as personal factor labor income (`flinc`) and total taxes net of transfers as the sum of federal personal income taxes (`ditaf`), state personal income taxes (`ditas`), sales and excise taxes (`salestax`), and contributions for government social insurance other than pension, UI, and DI (`othercontrib`), minus social assistance benefits in cash (`dicab`) and social transfers in kind (`inkindinc`). We then estimate a (properly weighted) linear regression of net taxes on pre-tax labor income, for workers earning less than a million dollars, flexibly controlling for family structure (marriage status $\times$ number of kids). The estimated coefficient on pre-tax income yields the estimate of $\tau = 0.303$, and the intercept recovers a lump-sum transfer in 2024 dollars of $T_0 = \$12,247$.

In our empirical welfare weights calculations, we use the files to compute the budget constraint multiplier λ and an "empirical" capitalist welfare weight g_K. We use the post-tax income concept `poinc` to allocate individuals into 19 income groups indexed by i (P0-10, P10-20, ..., P80-90, P90-91, P91-92, ..., P99-100) and calculate the average post-tax income in each group in 2024 dollars. Fixing inequality aversion ζ and the average welfare weight in the economy $g^{Av} = 1$, we can recover λ. To calculate the welfare weight of the capitalist, we take the C corporation ownership share-weighted average of the income bin-specific average post-tax incomes to the $-\zeta$th power. C corporation ownership shares for each income group are reported in Table B.2 of Appendix B, and calculated using the Survey of Consumer Finances (SCF) as described below.

Survey of Consumer Finances We use the 2016 SCF micro-file to calculate the distribution of C-corporation ownership across the income distribution. We define income groups using the `income` bulletin variable, and follow Smith et al. (2023) Appendix D in calculating C corporation wealth as follows.

We disaggregate private business (the `bus` concept in bulletin files) in two steps. First, we separately calculate the market values of survey participants' largest two actively-managed businesses. Second, we use actively-managed business organizational form questions X3119, X3219 and organizational form-specific non-actively managed business questions to allocate shares in respondents' largest actively-managed businesses and all non-actively managed businesses across C-corporation and pass-through categories. Finally, we calculate the C corporation share of identifiable private business equity and allocate the remainder (actively-managed businesses smaller than the second- or third-largest business) proportionally across organizational forms. In 2016, the calculation at the micro-level is:

$$\begin{aligned}
\text{Actvly-mgd. bus. 1 mkt. val.} &= \max(0, X3129) + \max(0, X3124) - \max(0, X3126) \times (X3127 = 5) \\
&\quad + \max(0, X3121) \times \text{inlist}(X3122, 1, 6), \\
\text{Actvly-mgd. bus. 2 mkt. val.} &= \max(0, X3229) + \max(0, X3224) - \max(0, X3226) \times (X3227 = 5) \\
&\quad + \max(0, X3221) \times \text{inlist}(X3222, 1, 6), \\
\text{Private C-corp. (prelim.)} &= \text{Actvly-mgd. bus. 1 mkt. val.} \times (X3119 = 4) \\
&\quad + \text{Actvly-mgd. bus. 2 mkt. val.} \times (X3219 = 4) + \max(0, X3420), \\
\text{Pass-through (prelim.)} &= \texttt{bus} - \text{Private C-corp. (prelim.)} - \max(0, X3335), \\
\text{Private C-corp.} = \texttt{privccorw} &= \text{Private C-corp. (prelim.)} + \\
&\quad \frac{\text{Private C-corp. (prelim.)}}{\text{Private C-corp. (prelim.)} + \text{Pass-through (prelim.)}} \times \max(0, X3335).
\end{aligned}$$

Using the above measure of private C corporation equity, we calculate total C corporation equity as

$$\text{C corporation equity} = \texttt{stocks} + \texttt{privccorw} + \texttt{stmutf} + (0.5 \times \texttt{comutf}) + (0.5 \times \texttt{omutf}) + \texttt{trusts\_equity}$$

where `stocks`, `stmutf`, `comutf`, and `omutf` are bulletin concepts representing directly-held stocks, stock mutual funds, combination mutual funds, and other mutual funds, respectively.