The Macroeconomic Effects of Wealth Redistribution

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Abstract

This paper studies alternative fiscal reforms using a quantitative heterogeneous-agent model with top earnings states and entrepreneurial investment. Reforms that shift the tax burden from capital income to top wealth mitigate the decline in aggregate investment through a wealth redistribution mechanism: higher investments by middle-class households reduce capital misallocation and partially offset the decline in investment among households at the top of the wealth distribution. Middle-class households experience the largest welfare gains from these reforms. I find that eliminating capital income taxation and introducing a top wealth tax can increase aggregate investment. Finally, I show that the optimal tax rate on top wealth is strictly positive.

Keywords: Heterogeneous Agents, Wealth Distribution, Fiscal Policy, Redistribution.

JEL Classification: E21, H23, H24, D61

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1 Introduction

In advanced economies wealth is highly concentrated at the top of the distribution. In the United States the top 1% of households own more than 30% of aggregate household wealth. This concentration has fueled a growing policy debate over whether taxes on top wealth can reduce wealth inequality and enhance social equity by shifting a larger share of the tax burden toward the wealthiest households. What are the macroeconomic and distributional effects of top wealth taxes? Can we design a fiscal reform that reduces inequality and improves economic outcomes for the majority of households? This paper studies the macroeconomic effects of a progressive tax on top wealth and characterizes the conditions under which such a reform can achieve both objectives.

To this end, I develop a quantitative heterogeneous-agent model with top earnings states and entrepreneurial investment. The model incorporates two leading mechanisms emphasized in the literature to account for wealth concentration: superstar earnings and heterogeneous returns to wealth (Castañeda, Díaz-Giménez, and Ríos-Rull (2003), Cagetti and De Nardi (2006)). I also model the tax and transfer system in sufficient detail to broadly match the composition of U.S. government revenues across major tax instruments. Finally, the model is sufficiently rich to capture the extreme upper tail of the wealth distribution, including 100-millionaires and billionaires as observed in the United States. The design of the top wealth tax examined in this paper follows the proposals advanced by Piketty (2014), Saez and Zucman (2019), Saez and Zucman (2022). I consider a progressive wealth tax that applies only to wealth above an exemption threshold, thereby targeting the top 1% of the wealth distribution with tax rates ranging from 1% for households at the lower end of the taxable range to 3% for billionaires.

The first contribution of this paper is to show that, although top wealth taxes generate distortions in investment decisions and reduce capital accumulation, their broader macroeconomic effects depend critically on the overall fiscal incentives. I show that fiscal incentives can be designed to induce an endogenous redistribution of wealth from the top 1% toward middle-class households while simultaneously reducing wealth inequality and fostering aggregate investment. Specifically, in the model, a top wealth tax is very effective at reducing wealth inequality, but it also reduces firms' investment and productive capital leading to lower labor demand and wages. However, I show that reforms combining a top wealth tax with reductions in capital income taxation can partially offset these distortionary effects. In some cases, such reforms can even reverse them, leading to higher investment, greater capital accumulation, higher wages, and a reduction in wealth inequality. The second contribution of the paper is to jointly characterize the optimal tax rates on capital income and top wealth that generate an equivalent amount of government revenue. I show that the optimal policy features a strictly positive tax rate on top wealth combined with lower capital income tax rates.

Wealth redistribution. At an intuitive level, wealth concentration can be reduced through two broad mechanisms: by diminishing the stock of wealth held by those at the top of the distribution or by promoting a more equal distribution of wealth accumulation. The reform proposals I analyze in this paper embody the latter approach. Rather than reducing concentration through the destruction of existing wealth, they aim to foster broad-based wealth accumulation, replacing an equilibrium in which productive assets are concentrated among a small group of households with one in which asset ownership is more widely shared. Such an equilibrium can be achieved through a fiscal reform that combines a top wealth tax with reductions in capital income taxes. Specifically, by reducing taxes on dividends and capital gains, the reform strengthens investment incentives for middle-class households with sufficiently stable and high incomes. At the same time, reductions in corporate income taxation encourage investment in productive capital. In the model, I capture the combined effects of these measures through a reduction in capital income taxation. This policy package replacing capital income taxes with top wealth taxation can generate a powerful mechanism for redistributing wealth ownership from the top of the distribution toward middle-class households. The net effect of the reform on aggregate capital accumulation increases with the size of this wealth redistribution.

I show that reforms that combine top wealth taxes with lower capital income taxes generate heterogeneous responses in saving behavior across the wealth distribution. The reduction in capital income taxation increases the propensity to save, with the largest effects among middle-class households that have sufficient income to accumulate assets but remain below their desired wealth levels and the wealth tax threshold. By contrast, saving incentives increase only modestly for the wealthy and decline for households subject to the top wealth tax. The reform therefore can in principle shift wealth accumulation incentives toward middle-class households while preserving aggregate capital formation. The heterogeneous response of the propensity to save is the key mechanism driving the wealth redistribution at the core of the quantitative results on the macroeconomic effects of fiscal reforms. Note that this "wealth redistribution" mechanism differs fundamentally from the "use it or lose it" mechanism emphasized in Guvenen, Kambourov, Kuruscu, Ocampo, and Chen (2023). The latter mechanism shifts the tax burden from productive to unproductive individuals by substituting capital income taxation with wealth taxes. In contrast, the mechanism analyzed in this paper shifts the tax burden from households with a high propensity to save toward those with a lower propensity to save. The central objective of this reform is to reshape the process of capital accumulation in the economy.

In this paper, I abstract from several implementation challenges that are critical to the effective design of a top wealth tax. These include the retroactive and worldwide application of the tax to mitigate incentives for migration and capital flight, the measurement of net worth, the presence of illiquid assets, and the role of valuation effects. While these issues are of first-order importance for policy design, they lie beyond the scope of the present analysis.

The distributional possibility frontier. In terms of welfare, as measured by households' willingness to pay for the economic outcomes induced by the reform, I show that middle-class households benefit the most from the reform. Households in the bottom 50% of the wealth distribution also experience welfare gains, primarily through higher wages, whereas households in the top 1% incur substantial welfare losses due to the progressive taxation of wealth.

To study the welfare implications of top wealth taxation, I trace out a distributional possibility frontier, defined as the set of possible trade-offs between reductions in wealth inequality and the associated welfare costs generated by top wealth tax policies. The frontier summarizes how different wealth tax schedules affect inequality and households' welfare across the distribution of welfare changes and highlights the equity–efficiency trade-off inherent in top wealth taxation. I construct this frontier by varying the level and progressivity of the wealth tax schedule and recording, for each policy configuration, the resulting equilibrium outcomes in terms of welfare and wealth inequality.

Under a reform that introduces a top wealth tax to finance public spending, larger reductions in wealth inequality are associated with increasing welfare costs, particularly for households at the top and bottom of the distribution. These costs arise not only from the direct taxation of wealth but also from general equilibrium effects, as lower capital accumulation reduces labor demand and equilibrium wages. Consequently, low-wealth households experience welfare losses despite facing little direct tax liability. However, these trade-offs are not policy invariant and depend on the overall structure of tax incentives rather than solely on the wealth tax schedule. Specifically, different combinations of wealth and capital income taxation can shift the distributional possibility frontier, altering the trade-off between reductions in wealth inequality and the associated welfare costs.

I consider a revenue-neutral reform that combines a top wealth tax with reductions in capital income taxation. By strengthening investment incentives and promoting broader-based wealth accumulation, this reform shifts the distributional possibility frontier downward, substantially improving the equity–efficiency trade-off. For any given reduction in wealth inequality, welfare costs are significantly lower, with the largest gains accruing to households outside the top of the distribution through higher wages and higher returns to wealth. The reform therefore achieves a more favorable balance between redistribution and efficiency: it reduces wealth concentration at the top while mitigating the adverse effects on aggregate capital accumulation and labor market outcomes. Welfare effects remain heterogeneous, with losses concentrated among the wealthiest households directly subject to the wealth tax, while gains are primarily experienced by middle-class households and entrepreneurs who benefit from broader wealth accumulation opportunities. These results highlight that the design of the overall fiscal system, and not only the level of wealth taxation, is crucial in determining the welfare consequences of top wealth taxation. These effects warrant greater attention in the policy debate on capital taxation.

Optimal taxation. Next I characterize the optimal composition of capital income taxes and top wealth taxation by solving a revenue-neutral Ramsey problem in which the government jointly chooses the top wealth tax rate and the capital income tax rate to maximize aggregate welfare. Rather than deriving optimal tax rates per se, the objective is to evaluate the relative desirability of alternative tax instruments and quantify the welfare gains from replacing part of capital income taxation with a targeted tax on top wealth. The government faces a fundamental trade-off: a top wealth tax by expanding the tax base toward highly concentrated wealth holdings allows the government to reduce distortions associated with capital income taxation, but it also distorts wealth accumulation incentives and erodes the future tax base. I solve this problem by varying the top wealth tax rate and determining the revenue-neutral capital income tax rate implied by the government budget constraint, taking into account the full transition dynamics of the economy.

The results show that welfare is maximized by introducing a positive top wealth tax combined with a reduction in capital income taxation. Welfare initially increases as the wealth tax rises because the reform allows the government to substitute away from a distortionary tax on capital income toward a targeted tax on the wealthiest households. As a result, the optimal policy implements a top wealth tax with a reduction in capital income taxation. Rather than characterizing a specific tax schedule, this experiment establishes that the optimal wealth tax is strictly positive. The relationship between the two tax instruments is non-monotonic. At sufficiently high wealth tax rates, the distortionary effects of wealth taxation become increasingly important, reducing wealth accumulation and shrinking the tax base. As a result, further increases in the wealth tax eventually require higher capital income taxes to maintain revenue neutrality, limiting the potential for additional redistribution.

The transition dynamics reveal that the reform generates an initial expansion in economic activity as lower capital income taxes increase incentives to save and invest. Over time, the economy converges toward a new steady state with lower capital accumulation due to the higher burden imposed on wealth accumulation. The economy shrinks, but most people benefit. Moreover, this adjustment occurs gradually, allowing households to benefit from the short- and medium-run efficiency gains generated by the tax substitution. The welfare gains from the reform are concentrated among middle-class households, which benefit from higher after-tax returns on saving and stronger incentives to accumulate wealth. In contrast, welfare losses are concentrated among households in the top 1% of the wealth distribution, who bear the direct burden of the wealth tax. Households in the bottom 50% experience quantitatively small welfare effects because they hold limited assets and are therefore only marginally affected by changes in capital income taxation. Overall, the results show that the welfare consequences of wealth taxation depend critically on the broader tax system: a top wealth tax can improve welfare when it is used as part of a reform that reduces reliance on more distortionary capital income taxation.

Literature. This paper contributes to several strands of the literature on the macroeconomic effects of tax reforms and the recent literature on the effects of wealth taxation.

I begin by discussing the papers most directly related to this work. While the existing literature has primarily focused on the normative analysis of income taxation, this paper instead mostly studies the positive effects of top wealth taxes. The literature on wealth taxation remains relatively limited. The starting point of my analysis is a continuous-time version of the benchmark model in the literature also used in Guvenen, Ocampo, and Ozkan (2026). Closely related, Kaymak and Poschke (2016b) are the first to provide a quantitative analysis of the macroeconomic effects of top wealth taxation, concluding that its distortionary effects are substantial. My analysis confirms these findings. However, I also show that the macroeconomic costs of top wealth taxation operate through changes in investment. As a result, it is possible to design fiscal reforms that support a more broad-based capital accumulation and mitigate the decline in aggregate investment or even reverse it. In a similar spirit, other papers analyze the effects of large fiscal reforms. Boar and Midrigan (2022) study optimal income and wealth taxes. Several papers focus on the role of heterogeneous returns to wealth and discuss the difference between capital income taxes and wealth taxes (Guvenen, Kambourov, Kuruscu, Ocampo, and Chen (2023), Boar and Midrigan (2023)). This paper departs from the existing literature in several key respects. First, I study taxes targeted at top wealth, as opposed to broad-based wealth taxes. Second, I show that a joint reform consisting of higher taxes on top wealth and lower taxes on capital income can simultaneously raise aggregate investment while reducing wealth inequality. Third, relative to the existing literature I introduce the concept of wealth redistribution as the key mechanism beyond these economic gains. On the normative side, whereas prior work has examined whether capital income taxation is preferable to broad-based wealth taxation, I show that taxes on top wealth optimally feature a positive rate. Because top wealth taxes apply only to a small fraction of the population, they entail substantially lower distortionary costs than broad-based wealth taxes.

This paper is also related to quantitative work on the effects of progressive tax reforms. Early contributions to this literature are Conesa and Krueger (2006), Bakış, Kaymak, and Poschke (2015), Krueger and Ludwig (2016), Guner, Lopez-Daneri, and Ventura (2016), Heathcote, Storesletten, and Violante (2017), Ferriere, Grübener, Navarro, and Vardishvili (2023). While other papers study the effects of top income tax with entrepreneurs and superstars Brüggemann (2021), Kindermann and Krueger (2022). Finally, Guner, Kaygusuz, and Ventura (2023) study reforms of the welfare state focusing on universal basic income and negative income taxes. Relative to these papers, I study the effectiveness of capital income and top wealth taxes.

Outline. The paper is organized as follows. Section 2 presents the model. Section 3 presents the calibration of the model. Section 4 contains the main results. Section 5 concludes.

2 The model

In this section I present a quantitative heterogeneous agent model of income and wealth inequality. The model features two prominent mechanisms of wealth concentration: entrepreneurs and top earning states. I leverage this model as a laboratory economy in order to study the macroeconomic effects of top wealth taxation.

2.1 Households

Households consume goods and services $c_t > 0$ and supply labor $n_t \in [0, 1]$. Time is continuous and there is no aggregate risk. One time period corresponds to a quarter. Households accumulate wealth a_t, face idiosyncratic income risk e_t, a potentially binding borrowing limit, and incomplete markets. Given real wages w_t, the return on wealth r_t net of capital income taxes $\tau_{k,t}$, government transfers Tr_t, income taxes $\mathcal{T}_t(y_t)$ with $y_t := w_t e_t n_t$ and possibly top wealth taxes $\mathcal{T}_t(a_t) \geq 0$, the sequential formulation of the household problem is

$$v_0^w(a_0, e_0) = \max_{c_t, n_t} \ \mathbb{E}_0 \int_0^\infty e^{-\rho t} u(c_t, n_t) dt \tag{1}$$

$$\text{s.t.} \quad \dot{a}_t = y_t - \mathcal{T}_t(y_t) + (1 - \tau_{k,t}) r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t,$$

$$a_t \geq \underline{a}.$$

I use time-varying nonlinear income taxes and wealth taxes. Let $\hat{a}$ be a top wealth threshold and define $x_t := a_t - \hat{a}$. Then, the tax functions are given by

$$\mathcal{T}_t(y_t) := \tau_t(y_t) y_t = (1 - \lambda_{y,t} y_t^{-\gamma_{y,t}}) y_t, \tag{2}$$

$$\mathcal{T}_t(a_t) := 1_{[x_t \geq 0]} \tau_t(x_t) x_t = 1_{[x_t \geq 0]} (1 - \lambda_{x,t} x_t^{-\gamma_{x,t}}) x_t. \tag{3}$$

The parameter λ affects the level of taxes, while the parameter γ controls the progressivity of the tax system.[1] For the utility function $u(c, n)$ I follow the literature and use a separable CRRA functional form with relative risk aversion parameter $\gamma > 0$, inverse of the Frisch elasticity of labor supply ν, and labor disutility parameter $\varphi > 0$. I close the model with a lognormal Ornstein–Uhlenbeck process for earnings e_t augmented with two top earning states with level e_1, e_2, arrival rate λ_e, and exit rate λ_o, and probability to reach the first state θ. The presence of superstars with top earnings states, following the approach of Castañeda, Díaz-Giménez, and Ríos-Rull (2003), Kaymak and Poschke (2016a), Kaymak, Leung, and Poschke (2026), is essential for generating empirically realistic levels of earnings and wealth inequality.

[1] If $\gamma = 0$, the tax rate is constant, while a positive γ delivers a progressive tax. An increase in $1 - \lambda$ raises tax rates for all, while an increase in γ makes tax rates higher at the top of the distribution and lower at the bottom.

I also introduce in the model entrepreneurs and private businesses as in Cagetti and De Nardi (2006). In the economy there is a share $0 < \psi < 1$ of entrepreneurs. I partition the state space accordingly between workers and entrepreneurs such that for workers $(a, e) \in X_W$ and for entrepreneurs $(a, e) \in X_E$. The consumption-saving problem of entrepreneurs is

$$v_0^e(a_0, e_0) = \max_{c_t} \ \mathbb{E}_0 \int_0^\infty e^{-\rho t} u(c_t) dt \tag{4}$$

$$\text{s.t.} \quad \dot{a}_t = y_t - \mathcal{T}_t(y_t) + (1 - \tau_{k,t}) r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t,$$

$$a_t \geq \underline{a}.$$

In this case household earnings are given by business income $y_t = \Pi_t(a_t, e_t)$. Self-employed individuals run private businesses and produce final goods and services by combining capital inputs k_t using a Cobb-Douglas production technology. Specifically, the profit maximization problem of private firms is given by

$$\Pi_t(a_t, e_t) = \max_{0 \leq k_t \leq \lambda_f a_t} z_t k_t^\alpha - (r_t + \delta) k_t. \tag{5}$$

I assume that $\alpha < 1$ is the same as in the corporate sector presented below and such that the technology features decreasing returns to scale. The firm's productivity is given by $z_t = z_c e_t$ where z_c is a common component and e_t reflects the entrepreneur productivity. Importantly, private firms are prevented from operating at their optimal scale because of borrowing constraints, $\lambda_f > 1$ captures the degree of financial frictions in the economy. If $\lambda_f = 1$ there is no borrowing and self-employed can only self-finance their projects, $\lambda_f = \infty$ corresponds to a rental market with no borrowing limit. The first order conditions of the profit maximization problem yields the demand of capital from private businesses

$$k_t = \min\left\{ \left(\frac{\alpha z_t}{r_t + \delta} \right)^{\frac{1}{1-\alpha}}, \lambda_f a_t \right\}. \tag{6}$$

The model features heterogeneous returns to wealth for entrepreneurs: $r_t + \partial \Pi_t(e_t, a_t)/\partial a_t$,. This is an important element of the model because generates an additional mechanism of wealth concentration supported by empirical evidence (Fagereng, Guiso, Malacrino, and Pistaferri (2020)). Moreover, this mechanism interact with the top earnings states creating large fortunes for superstar entrepreneurs. As discussed in the next section, the presence of entrepreneurs is critical in order to generate 100-millionaires and billionaires observed in the US micro data, a feature that a model with only workers cannot replicate. The Online Appendix A reports the recursive formulation of the household problem (1) and (4) and the numerical solution of the corresponding Hamilton-Jacobi-Bellman (HJB) equations.

2.2 Firms

In addition to private firms there is a corporate sector with public firms that produce the final good using capital and labor as inputs. The firms takes prices as given and chooses capital and labor in order to maximize profits given the production technology available. Firms pay payroll taxes with rate $\tau_{n,t}$. The equations that fully characterize the corporate firm problem are

$$Y_t = K_t^{\alpha} N_t^{1-\alpha}, \tag{7}$$

$$w_t(1+\tau_{n,t}) = (1-\alpha)K_t^{\alpha} N_t^{-\alpha}, \tag{8}$$

$$r_t = \alpha K_t^{\alpha-1} N_t^{1-\alpha} - \delta. \tag{9}$$

Firms operate in competitive markets and as a result make zero profits in equilibrium. As for heterogeneous firms the stock of capital depreciates at rate δ.

2.3 Equilibrium

The equilibrium of the economy is given by paths for household decisions $\{c_t, n_t, k_t\}$, aggregate variables $\{C_t, I_t, Y_t, K_t, N_t, G_t\}$, prices $\{r_t, w_t\}$, fiscal policy $\{\tau_{n,t}, \tau_{k,t}, Tr_t, \mathcal{T}_t(y_t), \mathcal{T}_t(a_t)\}$ such that in every period: (i) households solve the utility maximization problem given equilibrium prices, (ii) firms maximize profits given equilibrium prices, (iii) the sequence of density functions $\{f_t\}$ over idiosyncratic states $(a_t, e_t) \in X$ is consistent with the household saving decisions and income risk, (iv) the government budget constraint holds, and (v) financial markets and the labor market clear

$$Tr_t + G_t = \tau_{n,t} w_t N_t + \tau_{k,t} \int_X r_t a_t d\mu_t + \int_X \mathcal{T}_t(y_t) d\mu_t + \int_X \mathcal{T}_t(a_t) d\mu_t, \tag{10}$$

$$K_t + \int_{X_E} k_t d\mu_t = \int_X a_t d\mu_t, \tag{11}$$

$$N_t = \int_{X_W} n_t e_t d\mu_t. \tag{12}$$

I solve the full nonlinear model globally in sequence space using the model's Jacobians as in Auclert, Bardóczy, Rognlie, and Straub (2021) and the finite difference approach of Achdou, Han, Lasry, Lions, and Moll (2022). While this general equilibrium model remains stylized, it is sufficiently rich to capture several important features of the tax and trasnfer system as well as the main mechanisms of wealth concentration studied in the literature, i.e. top earning states and heterogeneous returns with entrepreneurship. In the next sections of the paper I leverage this model to assess the macroeconomic effects of tax reforms for the United States.

3 Parametrization

3.1 Calibration strategy

I calibrate the model to match key features of the distribution of labor earnings and net worth in the United States. The model is calibrated at quarterly frequency. For the distribution of household earnings and wealth I rely on the Survey of Consumer Finances (SCF) in 2004 before the Great Recession and the pandemic.[2]

A set of parameters are calibrated externally using common values in the literature. For the preference parameters I set the CRRA coefficient $\gamma = 1$, the inverse of the Frisch elasticity of labor supply $\nu = 2$, and the labor supply disutility $\varphi = 0.8$. The parameters describing the evolution of the households' income process are also broadly in line with the empirical estimates and values commonly used in the literature. I set the persistence of income shocks to match an annual autocorrelation $e^{-4\nu_e}$ of 0.9. The capital input parameter α is set to 0.33 and the annual depreciation rate δ is equal to 7%. These are all common values in the literature. I calibrate ψ externally to 11% to reproduce the fraction of entrepreneurs in the US economy (Boar and Midrigan (2023)) and set λ_f to 1.2, a standard value in the literature. In the stationary equilibrium I set payroll taxes τ_n to 7.65% and capital income taxes τ_k to 25%.[3] Transfers Tr are calibrated to 2.7% of output, as in Kaymak, Leung, and Poschke (2026). Government expenditures G are determined residually from the government budget constraint. Moreover, I set γ_y and λ_y to values in line with tax estimates in the literature. The values for γ_x, λ_x, and $\hat{a}$ are set in order to generate a wealth tax schedule characterized by a progressive structure, with tax rates ranging from 1% to 3%. Individuals in the top 1% of the wealth distribution face a tax rate of approximately 1.5%, while those in the top 0.1% face a rate of approximately 2.5%. This is the baseline tax reform studied in this paper as discussed in Section 4.1.

The remaining parameters $\rho, e_1, e_2, \lambda_e, \lambda_o, \theta, \sigma_e, z_c$ are internally calibrated to match the average return on wealth and to reproduce key features of the distribution of earnings and wealth in the United States. Specifically, I target an average return on wealth around 5%, the gini coefficients of earnings and wealth, the earning shares of the bottom 50%, top 10%, top 1%, and top 0.1%, the expected duration of staying in the top 1% of the earnings distribution around 3 years (Kopczuk, Saez, and Song (2010)). Therefore, we have 8 parameters with 8 targeted statistics. All moments are jointly targeted in the calibration, although particular parameters are primarily

[2]Specifically, I use the SCF extract from Kaplan, Moll, and Violante (2018). One additional limitation of this data is that the SCF largely excludes billionaires, implying that the observed wealth share for the extreme upper tail is likely understated. To address this issue, I leverage the extended version of the SCF from Guvenen, Kambourov, Kuruscu, Ocampo, and Chen (2023), Vermeulen (2018) allowing us to explicitly incorporating 100-millionaires and billionaires into the empirical distribution of net worth.

[3]The calibration of capital income taxes accounts for corporate income taxes, dividend taxes, and capital gains taxes. In line with the calibration strategy of Guvenen, Kambourov, Kuruscu, Ocampo, and Chen (2023).

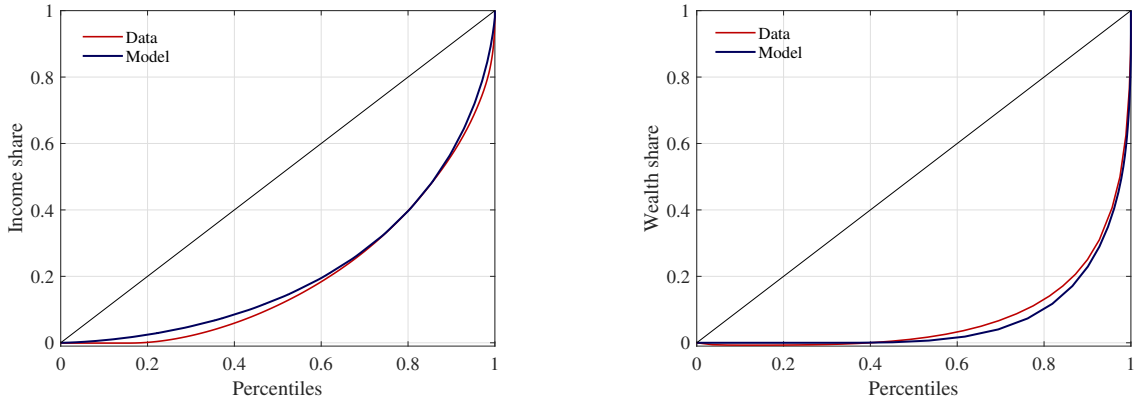
identified by specific moments. The discount factor is mainly identified by the average return on wealth, while the parameters of the income process are mostly determined by the distribution of earnings. Table 1 reports the calibrated parameter values, along with the corresponding calibration strategy and a description of each parameter. I use this calibration as benchmark for the calibration of the model and for the policy experiments.

Table 1: Model parameters

Parameter	Description	Value	Source
Households			
γ	CRRA/Inverse IES	1	External
ρ	Discount rate (p.a.)	0.07	Internally calibrated
ν	Inverse Frisch elasticity	2	External
φ	Labor disutility	0.8	External
$\underline{a}$	Borrowing limit	0	External
ν_e	Mean reversion coeff.	0.0263	External
σ_e	S. D. of innovations	0.23	Internally calibrated
e_1, e_2	Top earnings states	{40,1200}	Internally calibrated
λ_e	Arrival rate top states	0.000005	Internally calibrated
λ_o	Exit rate top states	0.1	Internally calibrated
θ	Probability for e_1	0.6	Internally calibrated
Firms			
δ	Depreciation rate (p.a.)	0.07	External
α	Capital income share	0.33	External
λ_f	Firm leverage	1.2	External
z_c	Firm productivity	2	Internally calibrated
ψ	Entrepreneurs share	0.11	External
Fiscal policy			
τ_n	Payroll taxes	0.0765	External
τ_k	Capital income taxes	0.25	External
Tr	Transfers	0.15	External
γ_y	Income tax progressivity	0.1	External
λ_y	Income tax level	0.77	External
γ_x	Wealth tax progressivity	0.0015	Internally calibrated
λ_x	Wealth tax level	0.99	Internally calibrated
$\hat{a}$	Wealth threshold	860	Internally calibrated

3.2 Model validation

The model provides a good fit of the targeted statistics. Table 2 reports the main steady-state statistics. The model successfully matches key aggregate moments, including the average return on wealth and the Gini coefficients of earnings and wealth. In addition, it provides a close fit to the observed top earnings share, indicating that the calibrated top earnings states are empirically plausible and do not generate excessively high earnings at the top relative to the mean of the distribution. The calibration captures the cross-sectional concentration of top earnings, which are crucial for reproducing the observed distribution of wealth. Table 2 shows that the model closely matches the top wealth shares. These are key statistics not targeted in the calibration.



(a) (b)

Figure 1: The distributions of earning and wealth.

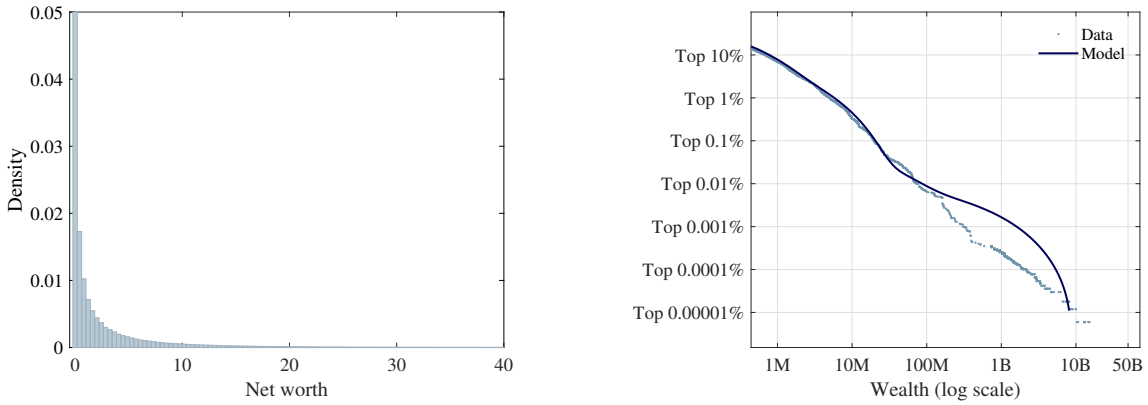
Note: The figure shows the distribution of earnings and wealth in the model and in the data. Panel (a) presents the Lorenz curve for earnings. Panel (b) shows the Lorenz curve for wealth.

Table 2: Steady- state moments

Description	Data	Model	Description	Data	Model
Return to wealth	5%	5%	Top 1% earnings share	16%	11%
Gini wealth	0.85	0.86	Top 0.1% earnings share	6%	3%
Gini earnings	0.59	0.57	Years in top 1%	3	2.5
Top 10% wealth share	75%	77%	Top 0.1% wealth share	16%	19%
Top 1% wealth share	36%	39%	Top 0.01% wealth share	7%	13%

Note: The six moments in the first three lines of the table are targeted in the calibration the other moments in the last two lines of the table are used for model validation.

Figure 2 presents the model-implied wealth distribution. Panel (a) reports the histogram of wealth, with wealth levels expressed relative to average earnings, excluding most of the right tail, while Panel (b) provides a zoomed-in view of the upper tail. The distribution is highly right-skewed and exhibits a Pareto right tail, consistent with the empirical evidence. The model generates the 100-millionaires and billionaires that populate the top 0.01% of the net worth distribution. Moreover, in line with the empirical evidence, the model broadly matches the wealth holdings of ultra-high-net-worth individuals in the top 0.00001% of the wealth distribution. The task is challenging, as standard models struggle to generate individuals with wealth levels exceeding $100 million. The presence and interaction of entrepreneurial investment and superstar states are central to this result. Overall, the model provides a comprehensive representation of top wealth holdings which is key for the analysis in this paper.



(a) (b)

Figure 2: The wealth distribution.

Note: The figure shows the distribution of wealth in the model and in the data. Panel (a) presents the entire distribution. Panel (b) shows the Pareto tail of the distribution.

The presence of private businesses is critical for the model's ability to generate such extreme wealth concentration. This reflects the combination of high earnings from business profits and heterogeneous returns to wealth, as business profits increase with wealth. Moreover, financial constraints require entrepreneurs to partially self-finance their investment projects, creating an additional saving motive for the substantial fraction of households that own and invest in private businesses. Through these mechanisms, successful entrepreneurial ventures enable households to accumulate extremely large fortunes.

In the next section, I leverage the calibrated model to quantify the macroeconomic effects of top wealth taxes in a model that can match the level of wealth concentration up to the top 0.00001%. Accurately representing the upper tail of the wealth distribution is critical, both because these households are the primary targets of wealth taxation and because the associated tax burden can generate significant distortions on investment and capital accumulation.

It is also informative to examine the level and composition of government revenues, given the paper's focus on fiscal reforms that reallocate the tax burden across different tax bases. In particular, the analysis centers on capital income taxation, as the reforms I consider alter the relative taxation of capital income and wealth. In practice, the largest component of capital income tax revenues is the corporate income tax. Moreover, our calibration of τ_k is intended to approximate the federal statutory corporate income tax rate and only marginally capture a broader effective tax rate on all forms of capital income. For these reasons, I measure the importance of capital income taxation by the share of corporate income tax receipts in total government revenues. While this measure does not capture all taxes levied on capital income, it provides the closest empirical counterpart to the tax instrument represented by the calibration of τ_k in the model and therefore offers a consistent benchmark for the quantitative analysis.

Table 3: Public sector statistics

Description	Data	Model	Description	Data	Model
Personal income share	60%	81%	G to output ratio	35%	31%
Corporate income share	8%	9%	Tr to output ratio	2.7%	2.6%
Employer payroll share	15%	9%			

Note: The three moments in the first three lines of the table are the shares of government revenues. Those lines show the tax revenues from different sources divided by the total tax receipts. Authors' calculations based on the U.S. Bureau of Economic Analysis (BEA) National Income and Product Accounts (NIPA).

Table 3 reports the composition of total government revenues by source, distinguishing among personal income taxes, corporate income taxes, and employer payroll taxes. These revenue categories map directly into the tax instruments in the model. Although these moments are not explicitly targeted in the calibration, the model closely reproduces the share of corporate income taxes in total revenues and qualitatively captures the empirical fact that the majority of government revenues are generated by income-based taxes.

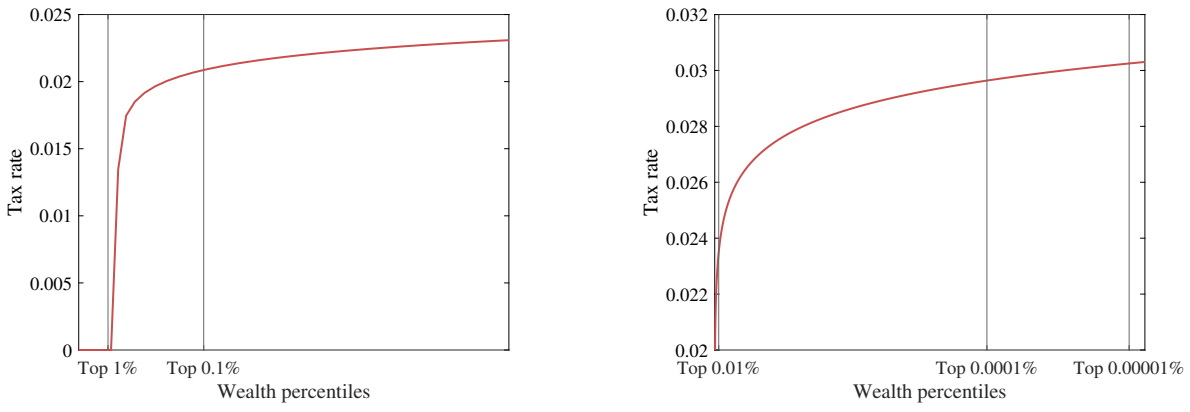
The table also compares the model-implied level of government expenditures with the data, encompassing expenditures at both the federal and the state and local levels. In particular, the model broadly approximates total government spending, but somewhat understates the level of public expenditure. The only expenditure moment directly targeted in the calibration is the size of lump-sum transfers that are common to all households, including programs such as disability and veterans' benefits. The model matches this target closely. Overall, the fit over these dimensions seems reasonable given the purpose of the paper.

4 Quantitative Analysis

In this section I report the main quantitative results of the paper. First, I study the macroeconomic implications of several fiscal reforms that introduce top wealth taxes. Second, I trace out the distributional possibility frontier and examine how it varies across alternative tax mixes.

4.1 Top wealth taxation

I begin the analysis by describing the shape of the top wealth tax function and the fiscal reforms that I analyze. Specifically, I focus on four fiscal reforms. In the first scenario I introduce top wealth taxes to finance public spending. In a second scenario, I conduct a revenue-neutral exercise in which I introduce a top wealth tax while adjusting the capital income tax rate τ_k to keep total tax revenues unchanged. In a third and fourth scenarios, I replicate the revenue-neutral exercise with a linear ($\gamma_x = 0$) top wealth tax of respectively 2% and 1%. These reforms change government revenues either directly through the wealth tax or indirectly through general equilibrium changes in the income tax base. In the first case, public spending adjusts to clear the government budget. The baseline wealth tax schedule is structured as follows: a progressive tax rate varies between 1% to 3%. A rate of approximately 1.5% applies to those in the top 1% and 2.5% applies to those in the top 0.1%.



(a) (b)

Figure 3: The top wealth tax function.

Note: The figure shows the top wealth tax (red line). The vertical lines correspond respectively to the percentiles of the wealth distribution before taxes.

Figure 3 shows the wealth tax function in the baseline economy. Because the model incorporates billionaires, the 99.99th percentile lies substantially farther to the right than the 99th percentile and therefore falls outside the range shown in the panel (a) of Figure 3. The maximum wealth tax rate reaches about 3% for multibillionaires at the very end of the wealth distribution.

Macro effects in the long-run. What are the macroeconomic effects of introducing a tax on top wealth holdings? To what extent can such a tax increase government revenue, or do the resulting behavioral and general equilibrium responses ultimately reduce fiscal revenues? Who gains and who loses from introducing a tax on top wealth holdings? I leverage the quantitative model to answer these questions. In this section, I analyze the long-run effects of a permanent annual wealth tax. Specifically, I compare the stationary equilibrium in the absence of a wealth tax with the stationary equilibrium under a given fiscal reform introducing top wealth taxation.

Table 4: Macroeconomic effects of fiscal reforms

Variables	Reform1	Reform 2	Reform 3	Reform 4
Capital	-5%	-4%	-3.5%	-2%
Employment	-0.6%	-0.7%	-0.6%	-0.4%
Output	-1.7%	-1.5%	-1.4%	-0.8%
Consumption	-2.2%	-1.7%	-1.5%	-0.9%
Tax revenues	$+0.7\%$	0%	0%	0%
Public spending	$+0.7\%$	0%	0%	0%
Wages	-1.7%	-1.2%	-1%	-0.6%
Returns (p.p.)	$+0.43$	$+0.29$	$+0.26$	$+0.15$
Gini wealth	-4%	-4.5%	-4.1%	-2.4%
Top 1% wealth share	-27%	-28%	-24%	-14%
Top 0.1% wealth share	-37%	-37%	-30%	-17%
Top 0.01% wealth share	-38%	-39%	-29%	-16%

Note: The first column reports the description of the variables. Reform 1: introduction of top wealth taxes. Reform 2: revenue-neutral introduction of top wealth taxes adjusting capital income taxes. Reform 3: revenue-neutral introduction of a 2% linear top wealth tax adjusting capital income taxes. Reform 4: revenue-neutral introduction of a 1% linear top wealth tax adjusting capital income taxes. The columns shows the percentage change of the variable due to the fiscal reform. Steady-state comparison. Tax revenues measure the revenues from all taxes.

Table 4 presents the macroeconomic effects of the fiscal reforms. The first column reports the percentage changes in key macroeconomic outcomes following the introduction of a top wealth tax. The wealth tax depresses investment and capital accumulation. This occurs because households in the top 1% are predominantly entrepreneurs who own and accumulate a substantial share of the economy's capital. As a result, the decline in capital accumulation reduces labor demand, leading to lower employment and wages. These adjustments translate into lower aggregate output and consumption. Despite the erosion of the income tax base, government revenues increase, allowing the government to expand public spending.

The output decline is quantitatively significant, amounting to approximately 1.7%. The decline in labor demand and the resulting reduction in labor earnings are the primary drivers of the output losses in the model. I view this estimate as an upper bound, as additional mechanisms may mitigate the decline in labor demand. For example, variable capital utilization or a higher degree of substitutability between capital and labor can dampen the negative effects of the reform on labor demand. However, in the baseline model, these negative effects on labor demand outweigh any positive contribution to aggregate output arising from increased public spending. At the same time, the wealth tax effectively reduces wealth concentration at the top, lowering the Gini coefficient by 4%, or approximately 4 percentage points. The decline in top wealth shares is also substantial. In the Online Appendix B.2 I discuss this in further detail.

The wealth tax generates a substantial amount of revenue, exceeding 1% of output. This raises the question of whether these revenues could be used to replace existing taxes that are potentially more distortionary than a top wealth tax, thereby generating efficiency gains while simultaneously increasing the progressivity of the U.S. fiscal system and reducing wealth inequality. To explore this possibility, I consider an additional revenue-neutral fiscal reform in which the government eliminates part of the capital income taxes. The tax rate on capital income falls to approximately 22%. The second column of Table 4 reports the responses of the main macroeconomic variables to this reform. In this case, the effects are qualitatively similar to those of the first reform. However, the decline in the capital stock and income is mitigated by the efficiency gains from redistributing the fiscal burden across households. Specifically, the reduction in capital income taxes stimulates investment and capital accumulation across the entire wealth distribution, rather than only among top-wealth households. This broad-based increase in wealth accumulation generates efficiency gains that partially offset the distortions induced by top wealth taxation. As a result, output contracts by approximately 1.5%. Moreover, the reduction in wealth inequality is larger than in the first scenario.

Finally, I consider a third reform in which a linear wealth tax partially replaces capital income taxation. Relative to the previous reform, investment and capital accumulation decline by somewhat less. However, the revenues generated by the linear wealth tax permit only a modest reduction in capital income taxation, as the increase in revenues from reducing progressivity are limited. Consequently, the capital income tax rate again converges to approximately 22%, similar to the previous reform. The primary difference in outcomes relative to the second reform therefore stems not from a larger reduction in capital income taxation, but from the fact that a linear wealth tax mitigates distortions affecting ultra-high-net-worth households at the top of the wealth distribution. Quantitatively, however, these effects are small, and the linear and nonlinear wealth taxes generate very similar aggregate outcomes. The distributional effects, as measured by reductions in wealth inequality, are likewise somewhat more muted under the linear wealth tax than under the nonlinear wealth tax. The fourth reform has similar effects.

For the welfare analysis, I use compensating variation to measure households' willingness to pay for the economic outcomes under the policy reform relative to those in the absence of the reform. Specifically, we measure the welfare gain as

$$\mathcal{W}_t(a_t, e_t) = \frac{v_t^p(a_t, e_t) - v_t(a_t, e_t)}{\partial v_t / \partial a_t}$$

where v_t^p is the value function under a policy reform and v_t is the steady-state value function without any reform. The numerator, $v_t^p(a_t, e_t) - v_t(a_t, e_t)$, measures how much better off a household is under the policy reform in terms of lifetime utility. Dividing by the marginal value of assets, $\partial v_t / \partial a_t$, converts this utility gain into units of wealth, so $\mathcal{W}_t(a_t, e_t)$ can be interpreted as the amount of wealth that would make the household just as well off as the policy reform. In this sense, the compensating variation measures the household's willingness to pay for the reform. Table 5 reports the welfare gains across wealth groups.

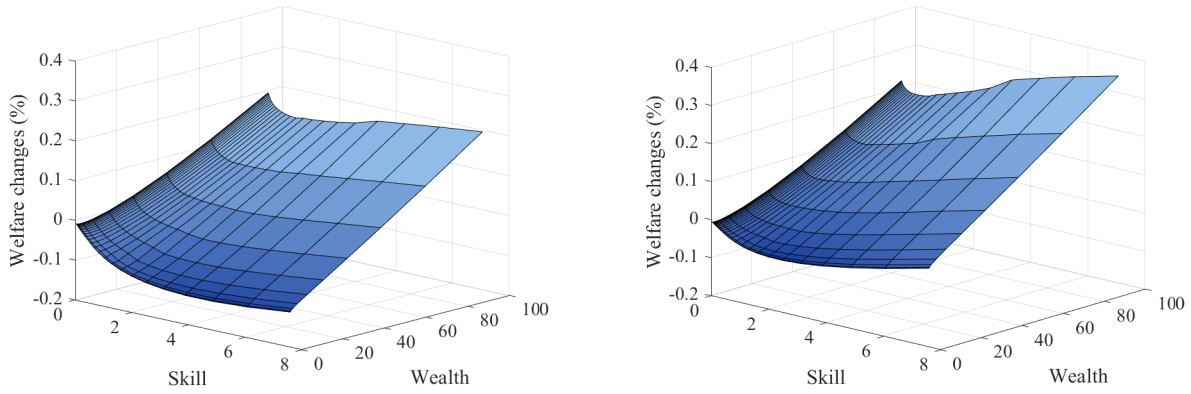
Table 5: Welfare effects of fiscal reforms

Welfare gains	Reform1	Reform 2	Reform 3	Reform 4
Top 1	-27%	-26%	-21%	-10%
Next 9	$+5\%$	$+6.7\%$	$+6.1\%$	$+3.8\%$
Next 40	-1.1%	$+0.8\%$	$+0.8\%$	$+0.5\%$
Bottom 50	-2.4%	-1.5%	-1.3%	-0.8%

Note: The table reports the welfare gains across the wealth distribution measured as percentages of steady-state annual consumption. Reform 1: introduction of top wealth taxes. Reform 2: revenue-neutral introduction of top wealth taxes adjusting capital income taxes. Reform 3: revenue-neutral introduction of a 2% linear top wealth tax adjusting capital income taxes. Reform 4: revenue-neutral introduction of a 1% linear top wealth tax adjusting capital income taxes. The total welfare effect is the sum of the total welfare changes of each group.

I find that the first reform generates a welfare loss. This welfare decline also reflects income losses among households in the bottom 50% and the next 40% of the wealth distribution, which result from lower labor demand. Thus, introducing a wealth tax can potentially impose costs on low-wealth households by reducing employment opportunities. In contrast, the second reform generates welfare gains primarily driven by middle-class households that benefit from a more balanced and broad-based expansion in wealth accumulation. The third reform has quantitatively similar effects, it primarily benefits middle-class households while reducing welfare among households at both the top and the bottom of the wealth distribution. The fourth reform has also very similar effects.

While Table 5 reports the aggregate welfare change for the group relative to aggregate annual consumption, it is also instructive to examine how these welfare changes are distributed across households in the bottom 90% of the wealth distribution. Specifically, Figure 4 reports the distribution of welfare changes across households in the bottom 90% of the wealth distribution, separately by skill level, with welfare changes expressed as a share of average annual consumption. Panel (a) reports the welfare changes in response to the first reform, while Panel (b) reports the corresponding statistics for the second reform. The figure shows that households in the bottom 50% of the wealth distribution experience welfare losses, whereas those in the next 40% of the wealth distribution, the middle class, experience welfare gains. The second reform clearly shifts the cross-sectional distribution of welfare changes upward, particularly among high-skill and middle-class households.



(a) (b)

Figure 4: Welfare changes in the cross-section.

Note: The figure shows the welfare changes as measured by $\mathcal{W}_t$ in the bottom 90% of the wealth distribution by skill level. Welfare gains and losses are expressed as a percentage of annual average consumption. Panel (a) shows the results for Reform 1. Panel (b) shows the results for Reform 2.

Within the bottom 50% of the wealth distribution, welfare changes are heterogeneous across skill groups, with the largest welfare losses concentrated among low-skill households. In contrast, high-skill households in the same segment of the wealth distribution tend to experience welfare gains, reflecting their stronger wealth accumulation and their transition out of the bottom half of the wealth distribution.

Taken together, the results highlight substantial heterogeneity in the welfare effects of the reforms by wealth and skills. While the aggregate welfare changes reported in Table 5 mask important distributional differences, the cross-sectional analysis reveals that the gains and losses are unevenly distributed across households. These findings underscore the importance of accounting for distributional effects when evaluating the welfare consequences of policy reforms.

Dynamic effects. Thus far, I have focused on the long-run effects of introducing top wealth taxes. However, these effects may take considerable time to fully materialize. To provide a more precise characterization of the policy's macroeconomic impact and to shed light on its dynamic adjustment, I also analyze the transition dynamics following the reform. Specifically, I study the economy's adjustment from an initial steady state without a top wealth tax to the new steady state after the tax is introduced. These transition experiments provide an additional set of estimates of the reform's macroeconomic effects while revealing the speed and pattern of adjustment along the transition path.

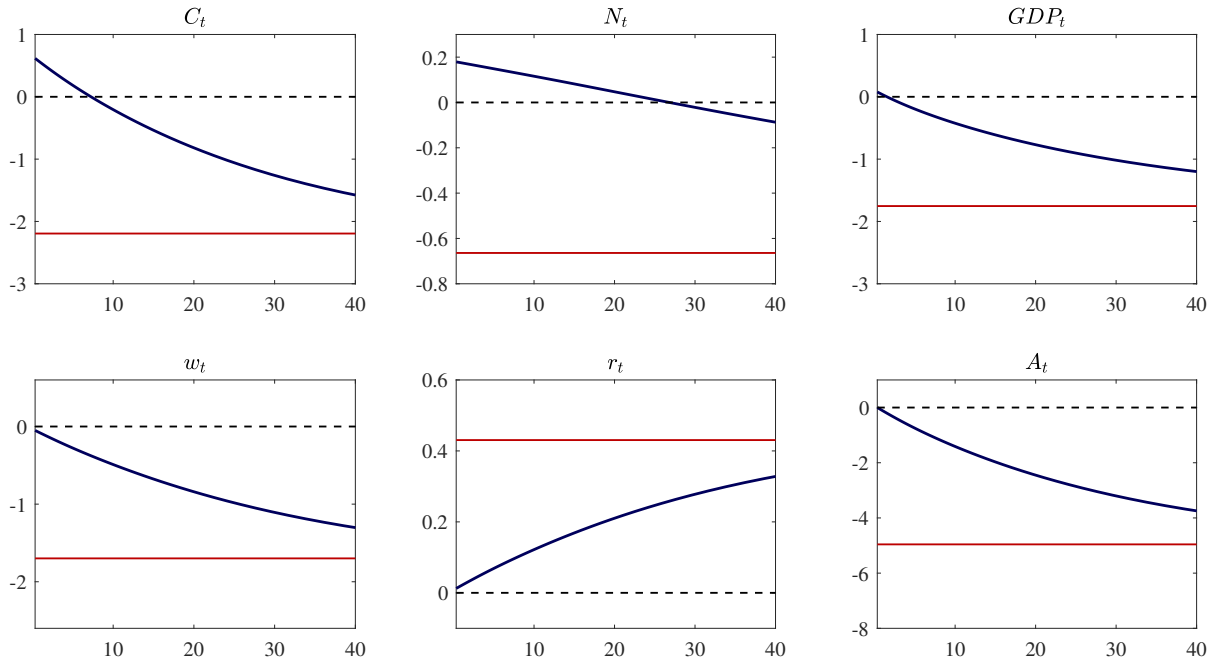


Figure 5: Dynamic responses to the first reform.

Note: The figure shows the responses of macroeconomic variables (blue line) to the introduction of top wealth taxes used to finance public spending. The figure also reports the initial steady-state (dotted black line) and final steady-state (solid red line). Percentage deviations from the initial steady state on the y-axis. Quarters on the x-axis.

Figure 5 reports the transition dynamics following the first reform, which introduces a top wealth tax to finance additional public spending. We examine the economy's adjustment over the first ten years after the reform is implemented. As expected, the declines in aggregate capital and output are more muted than the corresponding long-run effects reported in the previous section (red lines). After ten years, aggregate capital has declined by approximately 4%, while output is about 1% below its pre-reform level. Prices converge more rapidly toward their new steady-state values. By contrast, consumption and employment initially increase, reflecting the short-run benefits associated with higher public spending. These gains gradually dissipate as

the economy converges to its new long-run equilibrium. Overall, although the reform remains distortionary, its macroeconomic costs are substantially more limited over the transition than in the long run. I also report the transition dynamics following the second fiscal reform, which introduces a top wealth tax to finance a revenue-neutral reduction in capital income taxation. The dynamics are qualitatively similar to those of the first reform.

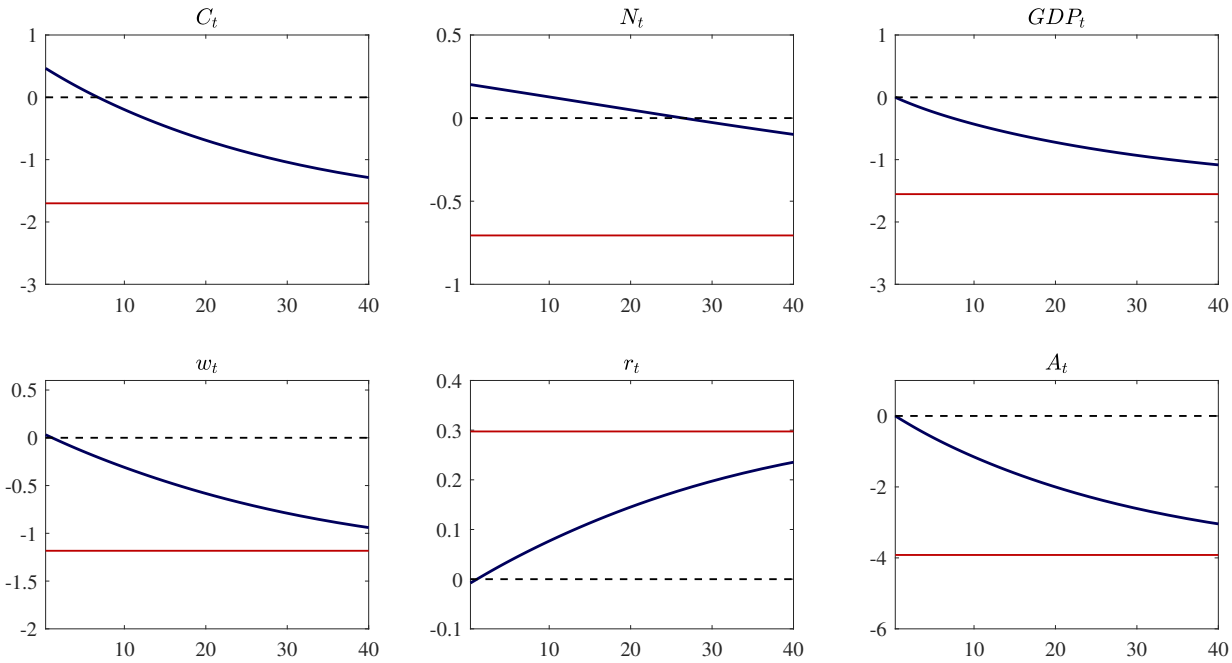


Figure 6: Dynamic responses to the second reform.

Note: The figure shows the responses of macroeconomic variables (blue line) to the introduction of top wealth taxes used to partially replace capital income taxes. The figure also reports the initial steady-state (dotted black line) and final steady-state (solid red line). Percentage deviations from the initial steady state on the y-axis. Quarters on the x-axis.

Figure 6 reports the responses of the main macroeconomic variables following the introduction of a top wealth tax combined with the partial elimination of capital income taxes. Under this reform, aggregate capital decreases throughout the transition, leading to lower aggregate consumption and weaker economic growth. As in the previous reform, the transition dynamics are considerably more muted than the corresponding long-run effects. The economy adjusts gradually toward its new steady state, with the largest macroeconomic losses materializing only over time. Turning to the distributional effects, both reforms lead to substantial reductions in wealth inequality. The wealth Gini coefficient declines by approximately 1% after five years and by around 2% after ten years under both policy scenarios. These results indicate that the reforms generate meaningful distributional improvements already in the short run, well before the economy converges to its new steady state.

4.2 Distributional possibility frontier

In this section, I trace out a distributional possibility frontier for top wealth taxation adapting the approach of Fu, Kaplan, Moll, and Violante (2020). I systematically vary the progressivity and level of the wealth tax schedule and quantify the resulting equilibrium outcomes in terms of welfare losses and wealth inequality. The frontier traces the set of feasible inequality–welfare trade-offs generated by alternative top wealth tax policies. I begin the analysis by examining the effects of the first fiscal reform, which introduces a top wealth tax to finance public spending. Figure 7 plots the distributional possibility frontier associated with this reform. Specifically, it reports the welfare losses at the 90th percentile of the distribution of welfare costs, alongside the median welfare effect. Households at the 10th percentile, by contrast, experience welfare gains under the policy and are therefore omitted from the figure. The distributional possibility frontier is markedly steeper for households at the 90th percentile, reflecting substantial welfare losses as inequality declines and top wealth tax rates increase. In contrast, welfare losses for the median household remain relatively modest, resulting in a much flatter frontier.

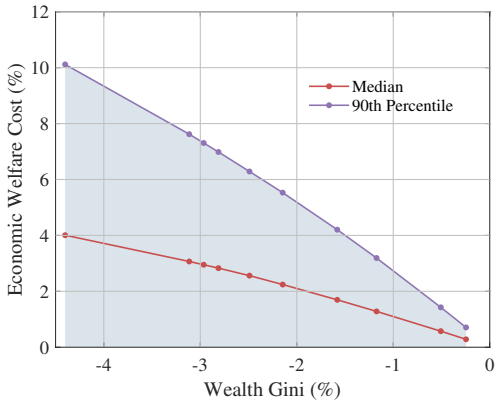


Figure 7: The distributional possibility frontier.

Note: The figure shows the welfare costs associated to the introduction of top wealth taxes of the 50th percentile (red line) and 90th percentile (purple line) of the distribution of welfare changes. Welfare is measured relative to annual average consumption. The x-axis reports the percentage changes in the Gini coefficient of net worth.

The distributional possibility frontier highlights the fundamental trade-off between equity and efficiency induced by top wealth taxation. Policies that achieve larger reductions in wealth inequality also generate larger welfare losses, reflecting the distortions associated with a less concentrated distribution of wealth. Aggregate capital accumulation declines, reducing firms' demand for labor and, consequently, equilibrium wages. Importantly, however, this trade-off varies substantially across the welfare distribution. For households at the top, the frontier is steep, implying that further reductions in inequality come at rapidly increasing welfare costs. In contrast, the frontier for the median household is considerably flatter, indicating that sizable reductions in inequality can be achieved with relatively modest welfare losses.

To better understand the distribution of gains and losses, it is instructive to examine welfare changes across the state space. In particular, I study how welfare effects vary by households' labor market skills e_t and wealth holdings a_t. I find substantial heterogeneity in the welfare effects of the fiscal reform across the wealth distribution. In contrast, I find limited evidence of heterogeneous effects across labor market skill levels, except among households in the very top states, where skill and wealth are highly correlated. As expected, the largest welfare losses are concentrated among households at the very top of the wealth distribution, reflecting the direct impact of the wealth tax on their balance sheets. These households experience a reduction in the return to accumulated wealth and bear the bulk of the tax burden. Importantly, however, this group represents only about 1% of the population, implying that aggregate welfare losses cannot be understood solely through the direct incidence of the tax on the wealthiest households.

A substantial fraction of the remaining welfare losses is instead borne by households in the bottom quartile of the wealth distribution. Although these households are largely unaffected by the tax itself, they are exposed to its general equilibrium consequences. By reducing productive capital and labor demand the reform lowers wages. Since labor income constitutes the primary source of earnings for low-wealth households, they are disproportionately affected by this decline in wages, despite facing little or no direct tax liability. Thus, while the reform is targeted at wealthy households, part of its efficiency cost is transmitted to households at the bottom of the wealth distribution through lower labor market opportunities and reduced earnings.

The welfare effects are markedly different for households in the upper middle section of the wealth distribution. These households hold positive asset positions but remain below the wealth tax threshold. As a result, they benefit from the redistributive component of the reform without directly paying the tax. Welfare increases among these households because of the reduction in labor supply and the higher return to wealth induced by the reform. Together, these forces generate positive welfare effects for households that are actively accumulating assets but are not yet subject to the wealth tax. These households hold sufficient assets to benefit from changes in equilibrium prices and returns. In this sense, they constitute the primary beneficiaries of the reform and drive the welfare gains.

This pattern highlights that the incidence of top wealth taxation extends well beyond the households directly targeted by the policy. The reform generates losses both at the very top, through the direct taxation of wealth, and at the bottom, through general equilibrium effects in the labor market. At the same time, a subset of upper-middle-class households experiences welfare gains because they benefit from higher returns on wealth while avoiding the direct tax burden. However, these beneficiaries represent a relatively small and affluent segment of the population. Consequently, the welfare effects of top wealth taxation are highly heterogeneous, reflecting the interaction between direct redistribution, wealth accumulation dynamics, and general equilibrium adjustments in capital and labor markets.

Is it possible to design a fiscal reform that reduces wealth inequality through top wealth taxation while generating welfare gains for the majority of the population? To address this question, I consider a second reform that combines the introduction of a top wealth tax with a reduction in capital income taxation between 25% and 20%. As before, public spending adjusts to clear the government budget. The objective of this reform is to stimulate investment by firms and wealth accumulation among middle-class households by lowering the tax burden on their asset income. The main objective of this reform is to alter the mechanism through which capital accumulation operates in the economy. Rather than relying on a small fraction of households at the top of the wealth distribution to drive aggregate capital accumulation, the reform promotes a broader-based accumulation of wealth across the population. By encouraging investment and asset accumulation among middle-class households, the reform partially offsets the reduction in capital associated with the decline in top wealth concentration, while generating a more inclusive distribution of wealth ownership.

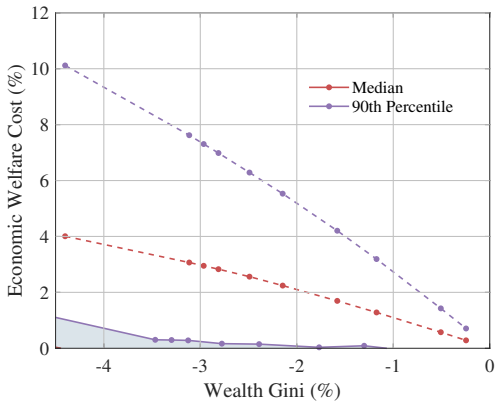


Figure 8: The distributional possibility frontier with wealth redistribution.

Note: The figure shows the welfare costs associated to the introduction of top wealth taxes of the 50th percentile (red line) and 90th percentile (purple line) of the distribution of welfare changes. Welfare is measured relative to annual average consumption. The x-axis reports the percentage changes in the Gini coefficient of net worth.

Figure 8 shows that this reform shifts the distributional possibility frontier downward, substantially improving the equity–efficiency trade-off. Relative to the baseline reform, the magnitude of the shift is sizeable: for any given reduction in inequality, the associated welfare costs are significantly lower. The improvement reflects the ability of the reform to partially offset the decline in aggregate capital accumulation induced by wealth taxation by encouraging investment and wealth accumulation among households below the top of the distribution. Additionally, the reform mitigates the decline in wages and labor earnings associated with the baseline reform. As a result, most of the welfare gains relative to the baseline reform (shown by the dashed lines) accrue to households at the bottom of the wealth distribution, who benefit from the improved labor market conditions. By contrast, the ultra-wealthy remain worse off due

to the direct effects of the wealth tax on their asset holdings. Notably, for the median household, the distributional possibility frontier disappears, becoming nearly flat, indicating that substantial reductions in inequality can be achieved without any additional welfare costs. As a result, the reform achieves a more favorable combination of redistribution and aggregate efficiency. For example, reducing the wealth Gini coefficient by 3% requires a welfare cost of 8% at the 90th percentile of the distribution under the baseline reform. This cost falls to zero under the second reform, which also reduces capital income taxes, representing an 100 percent reduction in the welfare cost for the households most adversely affected.

If we examine the welfare gains and losses across the wealth distribution, we find a pattern that is broadly similar to the one described for the baseline reform, in which top wealth taxes are used to finance public spending. Welfare losses remain concentrated among households at the very top of the wealth distribution, reflecting the direct incidence of the wealth tax on their asset holdings and the reduction in the after-tax return to wealth. However, as in the baseline reform, the majority of households are not directly affected by the tax burden and instead experience welfare changes through the general equilibrium adjustments induced by the reform. A key difference relative to the baseline reform is that the efficiency costs associated with these general equilibrium adjustments are substantially mitigated. By reallocating resources toward broader-based wealth accumulation, the reform stimulates investment among households below the top of the distribution and partially offsets the decline in aggregate capital caused by the reduction in top wealth concentration. As a result, households in the middle and lower portions of the wealth distribution experience stronger welfare gains relative to the baseline reform, benefiting from both improved labor market outcomes and increased opportunities for asset accumulation.

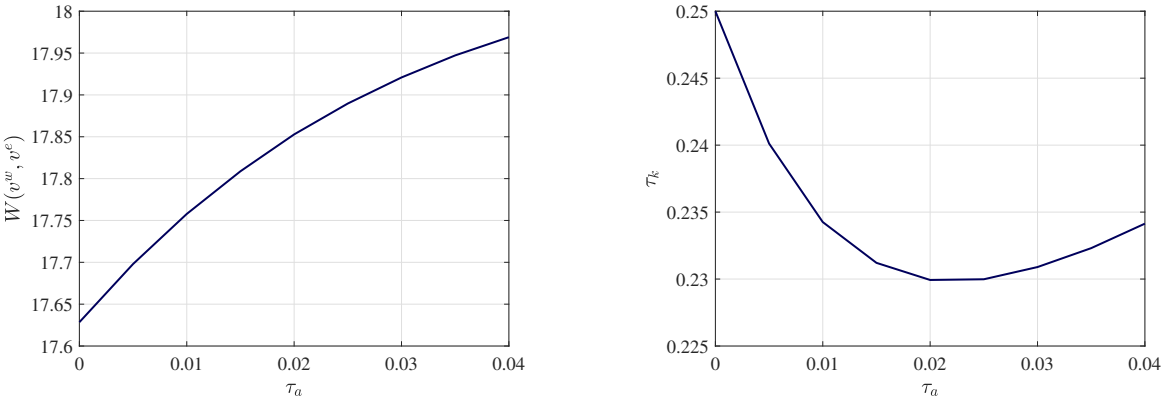
Finally, it is worth emphasizing that the welfare effects of the reform differ substantially between workers and entrepreneurs. This distinction arises because entrepreneurs are not directly exposed to the decline in labor income generated by the general equilibrium effects of the reform. In contrast to workers, whose earnings depend primarily on wages and who therefore experience welfare losses when labor demand and equilibrium wages decline, entrepreneurs derive income from business ownership and capital returns. As a result, the negative wage effects associated with lower aggregate capital accumulation do not directly reduce their income. In fact, among small entrepreneurs located at the bottom of the wealth distribution, the reform generates welfare gains rather than losses, as these households benefit from the broader redistribution of wealth and improved opportunities for asset accumulation. The welfare losses are instead concentrated among low-wealth workers, who rely predominantly on labor income and are more exposed to the decline in equilibrium wages. On the other hand, entrepreneurs are the ones who suffer the most the direct impact of wealth taxes. This heterogeneity highlights the importance of accounting for differences in households' sources of income when evaluating the distributional consequences of top wealth taxation and its general equilibrium effects.

4.3 Optimal taxation

Is the optimal tax policy characterized by a top wealth tax combined with lower capital income taxes? If so, what are the associated welfare gains, and which wealth groups benefit? This section examines these questions. To this end, I simplify the structure of the top wealth tax by restricting it to a proportional tax on wealth above the exemption threshold. I then ask the following question: what is the optimal tax mix when the social planner can jointly choose the capital income tax rate τ_k and the top wealth tax rate τ_a subject to the constraint that it raises enough revenues as in the steady state before the reform? To compute the optimal fiscal policy, I follow the approach of Dyrda and Pedroni (2023), Ferriere, Grübener, Navarro, and Vardishvili (2023). In the computations I take transitions into account. Let $\theta = (\tau_k, \tau_a) \in \Theta$ with the policy space denoted by Θ. Given welfare $W(v^w, v^e)$ the Ramsey problem is to

$$\max_{\theta_t \in \Theta} W(v^w, v^e) = \max_{\theta_t \in \Theta} \int_{X_W} v^w(a_t, e_t; \{\theta_t\}) d\mu + \int_{X_E} v^e(a_t, e_t; \{\theta_t\}) d\mu$$

subject to equilibrium allocation rules $\mathcal{A}_t(\{\theta_t\})$ and equilibrium price rules $\mathcal{P}_t(\{\theta_t\})$, where v are the value functions at time $t = 0$ and μ the steady-state distribution of idiosyncratic states at time $t = 0$. Solving the Ramsey problem as formulated reduces the policy search to a one-dimensional space: I optimize over the wealth tax rate τ_a, while the capital income tax rate τ_k is determined residually by the government budget constraint at each date. Therefore, we restrict attention to revenue-neutral reforms, ensuring that all policy comparisons are conducted holding government revenues fixed. To solve this problem, I employ a numerical algorithm for global optimization. Specifically, I conduct a global search, I draw policies across the policy space Θ. For each policy, I compute the stationary equilibrium and the transition to this new steady state solving the full nonlinear model, then using the first period in the transition I evaluate the associated welfare $W(v^w, v^e)$. The policies $\{\theta_t^*\}$ that yield the highest levels of welfare are then selected as the global optimum. In this exercise, I characterize welfare-improving tax reforms by comparing the welfare effects of taxing capital income and imposing a tax on top wealth. The main objective is not to derive optimal tax rates but rather to use a welfare criterion to evaluate and rank alternative fiscal reforms. This approach allows me to isolate the relative desirability of different tax instruments based on their welfare consequences. It is important to emphasize the underlying trade-offs and incentives. The government effectively chooses between the distortions associated with wealth taxation and those arising from capital income taxation. The tax composition affects agents' incentives to accumulate capital across the wealth distribution and, consequently, it redistributes wealth across households. On the one hand, introducing a top wealth tax expands available revenues, allowing the government to reduce capital income taxation. On the other hand, wealth taxation distorts capital accumulation incentives and reduces the tax base for both capital income and wealth taxation.



(a) (b)

Figure 9: The welfare function and the optimal policy.

Note: Panel (a) in the figure shows the welfare function, while panel (b) plots all the possible tax policies in the feasible set Θ at the new steady state. Wealth tax rate τ_a on the x-axis.

Figure 9 presents the results of our grid search. Panel (a) plots the welfare criterion as a function of the wealth tax rate, while Panel (b) displays the set of feasible policy combinations $\theta = (\tau_k, \tau_a)$. The first observation is that welfare is monotonically increasing over the feasible policy space Θ. However, the welfare function is also concave, indicating that the marginal benefits from increasing the top wealth tax rate and reducing capital income taxation are diminishing. This result implies that, within the range of feasible policies, the marginal welfare cost of raising revenue through capital income taxation exceeds the marginal welfare cost of raising the same amount of revenue through a top wealth tax. The welfare gains from introducing a top wealth tax therefore arise from a tax-mix reform that substitutes away from distortionary capital income taxation toward a tax base concentrated among ultra-wealthy households. The optimal reform is constrained by an implementability condition: the wealth tax rate cannot exceed household current income and make disposable income too negative. Beyond this threshold, household budget constraints become infeasible, and a competitive equilibrium no longer exists. As a result, I select $\tau_a = 4\%$ and $\tau_k = 23\%$ as the optimal policy, i.e. the highest wealth tax rate within the feasible set. Panel (b) shows that the revenue-neutral mapping is not monotonic. The capital income tax rate initially declines as the wealth tax rate increases, reflecting the government's ability to substitute away from capital income taxation toward wealth taxation. However, the capital income tax rate reaches a minimum and begins to increase again when the wealth tax rate becomes sufficiently high. This reversal reflects the erosion of the tax base caused by the distortionary effects of higher wealth taxation, which reduces the revenues generated by the wealth tax and requires a partial adjustment through higher capital income taxation to satisfy the government budget constraint. There is a limit to the wealth redistribution mechanism through revenue-neutral reforms. Wealth taxes above 2% tend to erode the tax base.

At low levels of the wealth tax, the reform generates substantial efficiency gains because it allows the government to replace part of a highly distortionary capital income tax with a tax on a concentrated wealth base. The decline in the capital income tax rate as the wealth tax increases reflects this substitution mechanism. Initially, increases in the wealth tax generate additional revenues that allow the government to reduce reliance on capital income taxation. Capital income taxation directly reduces the after-tax return to saving and investment, affecting households' intertemporal choices and entrepreneurs' incentives to accumulate productive assets. In contrast, a top wealth tax applies only to households with wealth above a threshold and therefore has a more limited impact on the broader population. By shifting the revenue burden from capital income taxation toward wealth taxation, the government reduces distortions affecting capital accumulation for a large fraction of households while generating additional resources from high-wealth households. This tax substitution explains why welfare increases as the wealth tax rate rises over the initial part of the policy space.

However, the relationship between the two tax instruments is not monotonic. As the wealth tax becomes sufficiently high, its distortionary effects become increasingly important. In particular, a higher wealth tax reduces households' incentives to accumulate assets and affects entrepreneurs' decisions regarding investment and capital formation. Because wealth is endogenous in the model, the tax base responds to the policy itself: higher wealth taxation reduces future wealth accumulation, which lowers the amount of taxable wealth available to the government. This endogenous response of the tax base explains why the capital income tax rate eventually reaches a minimum and begins to increase. At sufficiently high wealth tax rates, the government cannot continue financing expenditure solely through wealth taxation because the shrinking tax base limits revenue collection. The welfare function reflects these competing forces. At low and intermediate wealth tax rates, the gains from reducing capital income taxation dominate the costs associated with wealth taxation. The marginal welfare benefit of expanding the wealth tax base is positive because the reform reduces more severe distortions elsewhere in the tax system. As the wealth tax rate increases further, however, the marginal benefits decline because the wealth tax becomes increasingly distortionary and its revenue capacity deteriorates. Ultimately, the optimal policy is determined by the interaction between these forces and the feasibility constraint imposed by household budget constraints.

Overall, the results highlight that the welfare effects of wealth and capital income taxation cannot be evaluated in isolation. A top wealth tax is valuable in this environment precisely because it allows the government to redesign the tax system. The optimal tax mix between capital income taxes and top wealth taxes emerges from the gains of wealth redistribution. A broad based capital accumulation partially offset the reduction in aggregate investment from top wealth taxes. Overall, the economy shrinks, but most people benefit. In particular, 55% of households support the reform.

I next turn to the analysis of the optimal policy by examining its transition dynamics and the distribution of the associated welfare gains across households. Figure 10 illustrates the transition dynamics of the main macroeconomic aggregates following the fiscal reform. On impact, the reduction in the capital income tax stimulates economic activity by increasing the after-tax return to saving and investment. Over time, however, the economy gradually converges to a new steady state characterized by a lower capital stock and lower output as the higher wealth tax depresses wealth accumulation. However, this adjustment is remarkably slow, implying that households benefit from a prolonged period during which the gains from lower capital income taxation outweigh the adverse effects of the wealth tax.

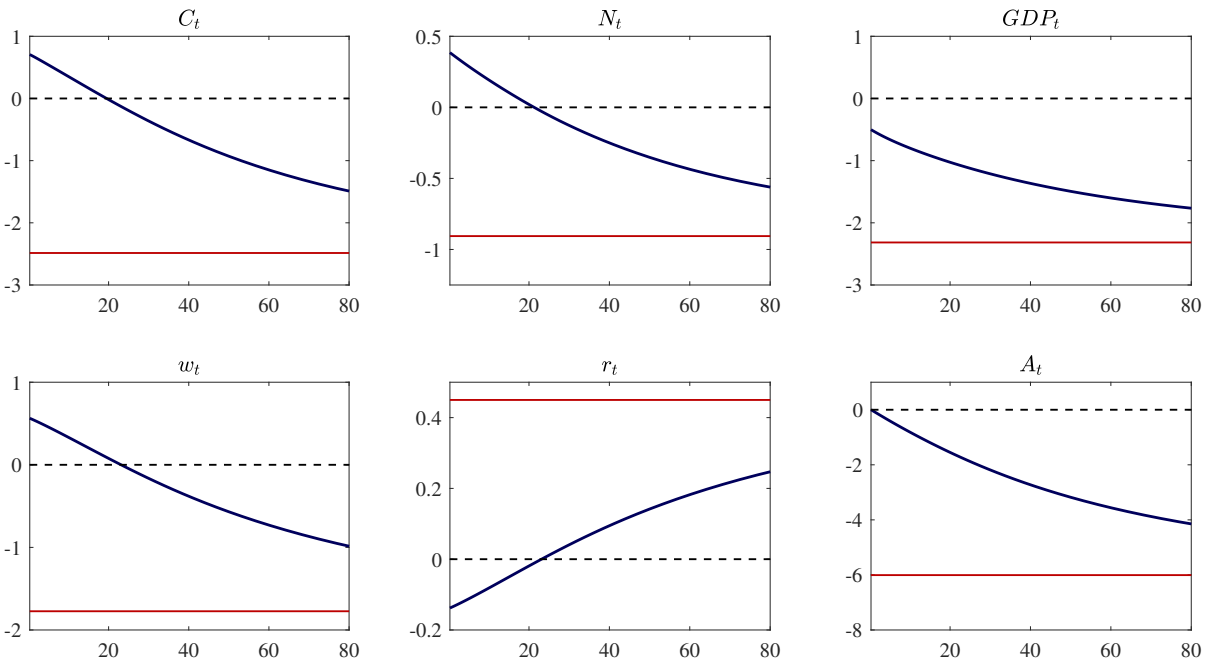


Figure 10: Dynamic responses to optimal policy.

Note: The figure shows the responses of macroeconomic variables (blue line) to the introduction of top wealth taxes used to replace capital income taxes. The figure also reports the initial steady-state (dotted black line) and final steady-state (solid red line). Percentage deviations from the initial steady state on the y-axis. Quarters on the x-axis.

The welfare gains are concentrated among middle-class households, whereas the welfare losses are borne almost exclusively by households in the top 1% of the wealth distribution. By contrast, households in the bottom 50% experience welfare effects that are quantitatively close to zero. The reduction in capital income taxation primarily benefits households with sufficient assets to accumulate wealth, while the poorest households, who hold little or no taxable wealth and derive limited income from capital, are largely unaffected. The burden of the reform is concentrated among the wealthiest households, who are directly subject to the top wealth tax.

4.4 Wealth redistribution

In this section, I consider a reform that introduces a top wealth tax while reducing the capital income tax sufficiently to fully offset the adverse effect of wealth taxation on the aggregate capital stock. In this sense, I analyze a complete shift in the tax incentives governing wealth accumulation. Rather than allowing wealth accumulation to remain concentrated among households at the top of the distribution, the reform promotes broad-based wealth accumulation by lowering the tax burden on capital income. This experiment highlights the mechanism of wealth redistribution that we study throughout this paper. Specifically, while the reduction in capital income taxation strengthens saving and investment incentives across all wealth groups, the progressive wealth tax weakens saving incentives for households at the top of the wealth distribution.

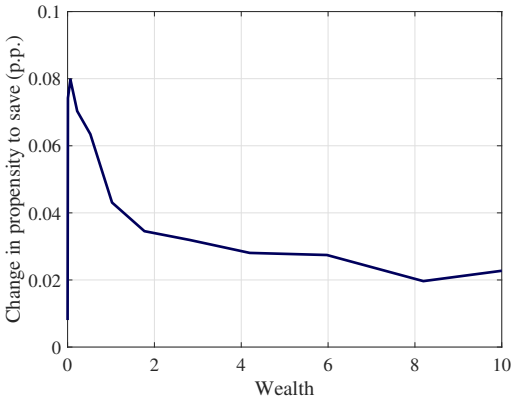


Figure 11: Changes in the propensity to save across wealth groups.

Note: The figure shows the responses of the propensity to save (blue line) to the introduction of top wealth taxes used to reduce capital income taxes across the wealth distribution. For reference the 90th wealth percentile is 4. The propensity to save is defined as $da_t/(y_t + a_t)$ where y_t is earnings and a_t wealth.

Figure 11 illustrates the net effect of this reform on household saving behavior. The increase in the propensity to save is concentrated in the middle section of the wealth distribution, with the largest gains occurring between the 50th and 90th wealth percentiles (corresponding to wealth values between 0.15 and 6 in the figure). By contrast, saving incentives increase moderately for the top 10% of the distribution and decline only among the wealthiest households subject to the top wealth tax. The reform therefore reallocates incentives to accumulate wealth away from the very top of the distribution and toward middle-wealth households and the upper class, fostering a broader pattern of wealth accumulation while preserving aggregate capital formation.

Overall, these results demonstrate that the composition of capital taxation is as important as its overall level. Replacing part of the capital income tax with a targeted top wealth tax broadens wealth accumulation by strengthening saving incentives for middle-wealth households while concentrating the tax burden on the wealthiest agents.

Understanding these results requires examining the structure of the household saving policy functions. In the model, each household is characterized by an endogenous target level of wealth that depends on its income, preferences, and the economic environment. This target determines the household's desired long-run asset position. When current wealth lies below the target, the household has a strong incentive to accumulate assets by saving a relatively large fraction of its disposable income. Conversely, when wealth exceeds the target, the household optimally reduces its asset holdings by consuming more than its current income, thereby decumulating wealth over time. As a result, the saving policy function is naturally state-dependent, with the propensity to save declining as households approach their desired wealth level. The key mechanism is that both the incentives and the capacity to accumulate wealth vary systematically with households' initial asset positions. In particular, middle-wealth households exhibit the largest behavioral responses to changes in tax incentives and asset returns. These households have sufficiently high and stable incomes to generate positive savings, yet they remain sufficiently distant from their desired wealth targets that the marginal value of additional asset accumulation is high. Consequently, improvements in the after-tax return to saving or reductions in the tax burden substantially strengthen their incentives to save, leading to significant increases in wealth accumulation.

By contrast, households at the top of the wealth distribution display considerably weaker responses. Although they possess ample financial resources, these households have already accumulated asset holdings that are close to their desired long-run wealth levels. At this stage, the marginal utility gain from additional wealth accumulation is relatively small, implying that changes in the return to saving or in tax incentives generate only modest adjustments in their saving behavior. Consequently, the changes in the propensity to save after the policy change is considerably lower for wealthy households than for those in the middle of the wealth distribution. At the opposite end of the distribution, low-wealth households also respond relatively little, although for a fundamentally different reason. Their limited asset accumulation reflects low levels of disposable income rather than a lack of incentives. As a result, these households are unable to adjust their portfolios as strongly as middle-wealth households in response to policy changes.

Taken together, these differences in saving policy functions account for the heterogeneous effects of tax incentives and asset returns across the wealth distribution. The interaction between income, current wealth, and endogenous wealth targets generates substantial variation in the propensity to save. Households that are sufficiently affluent to accumulate assets but remain far from their target wealth levels exhibit the strongest responses to changes in economic incentives, whereas households that are either constrained by low income or already close to their desired wealth positions respond much less. This mechanism is central to understanding the aggregate effects of tax reforms and the overall response of savings.

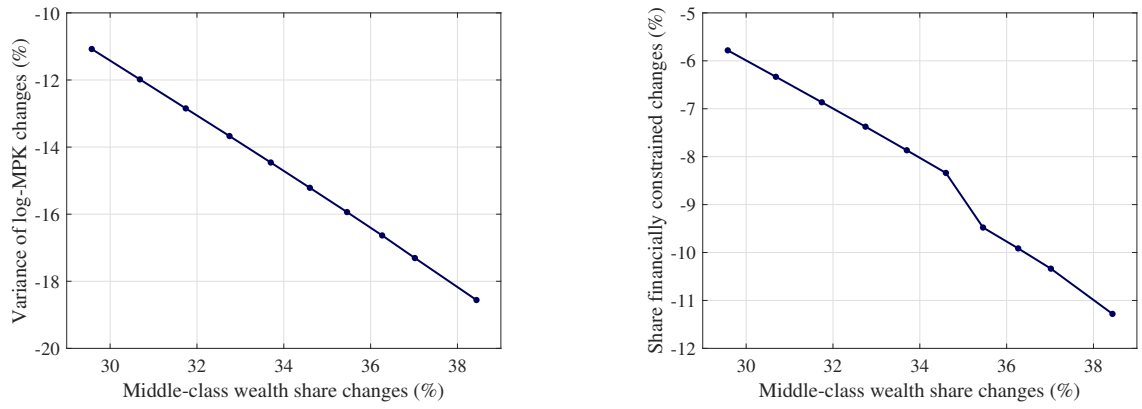
The macroeconomic effects of replacing capital income taxation with a top wealth tax depend critically on the extent of wealth redistribution induced by the reform. For completeness, this section reports the full set of results across alternative policy configurations. Specifically, I consider the introduction of a top wealth tax while varying the capital income tax rate from 25% to 0%. Public spending adjusts to clear the government budget. As the capital income tax rate is reduced, the reform generates progressively larger wealth redistribution, reflected in an increase in the wealth share held by households between the 50th and 90th percentiles of the wealth distribution. As discussed above, this redistribution partially offsets the adverse effect of the top wealth tax on capital accumulation among the ultra-wealthy households. Consequently, the aggregate decline in capital accumulation is attenuated, mitigating the macroeconomic costs associated with the introduction of a top wealth tax.

Figure 12: Changes in aggregate wealth and wealth redistribution.

Note: The figure shows the responses of aggregate capital and middle-class wealth share to the introduction of a top wealth tax combined with reductions in capital income taxes of increasing size. Response of the wealth share of households between the 50th and 90th wealth percentiles on the x-axis.

Figure 12 plots the percentage change in steady-state wealth against the percentage change in the wealth share of middle-class households across fiscal reforms that combine the same top wealth tax with progressively larger reductions in the capital income tax rate. The figure reveals a clear positive relationship between the extent of wealth redistribution and aggregate investment. As the capital income tax cut becomes larger, the reform generates greater redistribution toward middle-class households, which progressively offsets the adverse effect of the top wealth tax on capital accumulation by ultra-wealthy households. Consequently, the negative effect of the reform on long-run investment is substantially attenuated and eventually becomes negligible as the extent of wealth redistribution increases. In order to substantially attenuate the negative effects of the reform on aggregate investment the capital income tax rate should be reduced by around 15 percentage points. Overall, these experiments demonstrate that wealth redistribution has substantial macroeconomic effects.

One might ask whether wealth redistribution inadvertently exacerbates capital misallocation by reallocating capital away from highly productive, superstar entrepreneurs toward less productive entrepreneurs in the middle class. I show that, under financial constraints, wealth redistribution instead reduces capital misallocation by relaxing borrowing constraints for high-productivity entrepreneurs who initially operate with inefficiently low levels of capital because they are financially constrained.



(a) (b)

Figure 13: Capital misallocation and wealth redistribution.

Note: The figure shows the responses of misallocation measures and middle-class wealth share to the introduction of a top wealth tax combined with reductions in capital income taxes of increasing size. Response of the wealth share of households between the 50th and 90th wealth percentiles on the x-axis. Panel (a) in the figure shows the percentage changes in the variance of log-MPK, while panel (b) plots the percentage changes in the share of financially constrained firms.

Panel (a) of Figure 13 plots the variance of log MPKs. As the wealth share of the middle class increases through the wealth redistribution mechanism, the dispersion of MPKs declines, indicating a reduction in capital misallocation. Panel (b) shows that, at the same time, the fraction of financially constrained entrepreneurs falls. By redistributing wealth across households, the policy relaxes borrowing constraints for entrepreneurs with initially low wealth, enabling highly productive but financially constrained entrepreneurs to accumulate more capital. As capital is reallocated toward more productive firms, aggregate capital misallocation declines. These efficiency gains are not large enough to offset the distortionary effects of the reforms, but they partially mitigate the resulting decline in aggregate output.

Overall, the main takeaway from this section is that fiscal incentives play a central role in shaping wealth accumulation and its distribution across households. While a broader distribution of wealth is often thought to come at the expense of productive investment, the analysis shows that this need not be the case. A more broad-based accumulation of capital can relax financial constraints for productive entrepreneurs, improve the allocation of capital, and mitigate the negative effects of the tax distortions at the top.

4.5 Narrow top wealth tax

In this section, I examine a narrowly targeted wealth tax that applies to 100-millionaires and billionaires in the top 0.01% of the wealth distribution. Specifically, I consider top wealth tax rates ranging from 2% to 3% imposed only on households with wealth exceeding $100 million. These experiments provide a more comprehensive assessment of the macroeconomic effects of top wealth taxation and complement the analysis presented in the previous sections.

Table 6: Macroeconomic effects of fiscal reforms

Variables	Reform1	Reform 2	Reform 3	Reform 4
Capital	-1.5%	0%	-0.3%	0%
Employment	-0.2%	-0.1%	-0.2%	-0.1%
Output	-0.5%	-0.1%	-0.2%	-0.1%
Consumption	-0.9%	-0.1%	-0.3%	-0.1%
Tax revenues	$+0.6\%$	0%	0%	0%
Public spending	$+0.6\%$	0%	0%	0%
Wages	-0.7%	0%	-0.1%	0%
Returns (p.p.)	$+0.17$	0	$+0.02$	0
Gini wealth	-1.6%	-0.9%	-1.4%	-0.9%
Top 1% wealth share	-12%	-6%	-10%	-6%
Top 0.1% wealth share	-30%	-15%	-25%	-15%
Top 0.01% wealth share	-42%	-21%	-34%	-21%

Note: The first column reports the description of the variables. Reform 1: introduction of top wealth taxes. Reform 2: revenue-neutral introduction of top wealth taxes adjusting capital income taxes. Reform 3: revenue-neutral introduction of a 2% linear top wealth tax adjusting capital income taxes. Reform 4: revenue-neutral introduction of a 1% linear top wealth tax adjusting capital income taxes. The columns shows the percentage change of the variable due to the fiscal reform. Steady-state comparison. Tax revenues measure the revenues from all taxes.

Table 6 reports the effects on the main macroeconomic variables of the same fiscal reforms analyzed in Section 4.1. The only difference is that the wealth tax schedule now applies to a much narrow segment of the population. The first reform shows that the effects are more moderate than those of the baseline reform analyzed in Section 4.1. Under the second reform, we observe virtually no changes in aggregate macroeconomic outcomes, while inequality declines. The third reform features a wealth tax that most closely resembles the proposal put forward by Zucman (2026). We observe more pronounced effects on inequality, accompanied by slightly larger distortions in aggregate macroeconomic outcomes.

Table 7 reports the welfare effects of fiscal reforms featuring a narrow wealth tax. The qualitative pattern of welfare gains is similar to that documented in Section 4.1. However, the magnitude of these gains is more limited, particularly among households in the top 1% of the wealth distribution. While the upper middle class tends to benefit less, households between the 50th and 90th wealth percentiles are slightly better off under the narrow wealth tax than under the baseline wealth tax due to the lower distortions. Among all the reforms considered, the one that maximizes the welfare of the middle class is the third reform, which introduces a 2% wealth tax on households with wealth above $100 million.

Table 7: Welfare effects of fiscal reforms

Welfare gains	Reform1	Reform 2	Reform 3	Reform 4
Top 1	-15%	-5.2%	-10%	-5.2%
Next 9	$+2\%$	$+1.8\%$	$+2.8\%$	$+1.8\%$
Next 40	-0.5%	$+1\%$	$+1.2\%$	$+1\%$
Bottom 50	-1%	-0.06%	-0.05%	-0.06%

Note: The table reports the welfare gains across the wealth distribution measured as percentages of steady-state annual consumption. Reform 1: introduction of top wealth taxes. Reform 2: revenue-neutral introduction of top wealth taxes adjusting capital income taxes. Reform 3: revenue-neutral introduction of a 2% linear top wealth tax adjusting capital income taxes. Reform 4: revenue-neutral introduction of a 1% linear top wealth tax adjusting capital income taxes. The total welfare effect is the sum of the total welfare changes of each group.

Overall, the analysis of narrow wealth tax reforms highlights the importance of the tax base in shaping the equity-efficiency trade-off. Compared with the broader wealth tax considered in the previous sections, targeting a smaller group of ultra-high-wealth households generates more moderate macroeconomic distortions while preserving substantial reductions in inequality. The welfare losses are generally smaller than under the baseline reform, while the distributional effects remain significant and are particularly favorable for middle-class households. Among the reforms considered, the policy that levies a 2% wealth tax on households with wealth above $100 million delivers the largest welfare gains for the middle class, illustrating the potential for narrowly targeted wealth taxation to achieve meaningful redistributive objectives with limited aggregate economic costs. It is important to emphasize that these favorable macroeconomic outcomes arise only when the reduction in capital income taxation offsets the decline in aggregate investment. The redistribution of wealth plays a central role in generating these results. The policy debate should devote greater attention to these policy measures.

5 Conclusions

This paper analyzes the macroeconomic effects of top wealth taxation, with particular emphasis on the role of general equilibrium feedback effects and the distributional consequences of alternative fiscal reforms. I study how wealth taxation affects capital accumulation, labor market outcomes, and the distribution of welfare across households, highlighting the importance of accounting for endogenous adjustments in wealth dynamics and wages. I carefully examine the costs and benefits of wealth redistribution through the tax system, with particular emphasis on the trade-off between top wealth taxation and capital income taxation.

First, I show that the effects of wealth taxation depend on the broader fiscal system. A reform combining a top wealth tax with lower capital income taxes can redistribute wealth ownership toward middle-class households by strengthening their saving incentives while preserving investment and growth. The second contribution of this paper is to characterize the distributional possibility frontier, which captures the trade-off between reductions in wealth inequality and welfare costs. I show that this trade-off is not determined by the wealth tax schedule alone: replacing capital income taxes with a targeted wealth tax shifts the frontier, allowing greater inequality reduction at lower welfare costs. Finally, I characterize the optimal tax mix and show that the welfare-maximizing policy features a positive top wealth tax combined with lower capital income taxes, with welfare gains concentrated among middle-class households and losses concentrated among the top 1%.

Overall, the main takeaway is that top wealth taxes, when implemented in isolation, are distortionary and generate economic costs. However, these costs can be substantially reduced by designing complementary policies that promote a broader redistribution of wealth. Such a reform not only generates sizable welfare gains for middle-class households but also achieves a substantial reduction in wealth inequality, illustrating the potential for fiscal reforms that combine taxes at the top with incentives that support broad-based capital accumulation.

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Online Appendix for "The Macroeconomic Effects of Wealth Redistribution"

Valerio Pieroni

A HJB equations

Here I discuss the recursive formulation of the household dynamic program where I take a discrete-state approximation of the income process. Let $e_2 > e_1$ and define normal inocme states as the set $N = \{e : e < e_1\}$. Let v_t denote the value function and $e' \in N$ with distribution $F_e(e'|e)$. I begin by describing the HJB equation for workers with normal income states

$$\rho v_t^w(a,e) = \max_{c_t,n_t} \Big\{ u(c_t,n_t) + \frac{\partial v_t^w}{\partial a}(y_t - \mathcal{T}_t(y_t) + (1-\tau_{k,t})r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t) + \frac{\partial v_t^w}{\partial t} + \lambda_e \sum_{j=1}^{2} \theta_j (v_t^w(a,e_j) - v_t^w(a,e)) + \int (v_t^w(a,e') - v_t^w(a,e)) dF_e(e'|e) \Big\}.$$

The HJB of employed households enjoying a top earning state is given by

$$\rho v_t^w(a,e) = \max_{c_t,n_t} \Big\{ u(c_t,n_t) + \frac{\partial v_t^w}{\partial a}(y_t - \mathcal{T}_t(y_t) + (1-\tau_{k,t})r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t) + \frac{\partial v_t^w}{\partial t} + \lambda_o \sum_{j=1}^{2} 1_{[e=e_j]} \int (v_t^w(a,e') - v_t^w(a,e_j)) d\Phi_e(e') \Big\}.$$

where Φ_e is the distribution associated to the stationary distribution of normal income states ϕ_e. Entrepreneurs with normal inocme states solve the following HJB

$$\rho v_t^e(a,e) = \max_{c_t} \Big\{ u(c_t) + \frac{\partial v_t^e}{\partial a}(y_t - \mathcal{T}_t(y_t) + (1-\tau_{k,t})r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t) + \frac{\partial v_t^e}{\partial t} + \lambda_e \sum_{j=1}^{2} \theta_j (v_t^e(a,e_j) - v_t^e(a,e)) + \int (v_t^e(a,e') - v_t^e(a,e)) dF_e(e'|e) \Big\}.$$

The HJB of superstar entrepreneurs is given by

$$\rho v_t^e(a,e) = \max_{c_t} \Big\{ u(c_t) + \frac{\partial v_t^e}{\partial a}(y_t - \mathcal{T}_t(y_t) + (1-\tau_{k,t})r_t a_t - \mathcal{T}_t(a_t) + Tr_t - c_t) + \frac{\partial v_t^e}{\partial t} + \lambda_o \sum_{j=1}^{2} 1_{[e=e_j]} \int (v_t^e(a,e') - v_t^e(a,e_j)) d\Phi_e(e') \Big\}.$$

B Additional results

B.1 Wealth taxes vs income taxes

In this section, I ask whether inequality can be reduced by increasing the progressivity of income taxes instead of imposing taxes on top wealth. To address this question, I conduct a counterfactual exercise in which I increase the progressivity of the income tax schedule to generate a 1% reduction in the Gini coefficient of wealth. By comparing the macroeconomic outcomes across the different reforms, I can assess the effectiveness of top income taxation in reducing wealth inequality. Figure A.1 illustrates the impact of the reform on the tax schedule. The reform implies a substantial increase in tax rates at the top of the income distribution, with the largest changes concentrated among the top 10% and, in particular, the top 1% of earners.

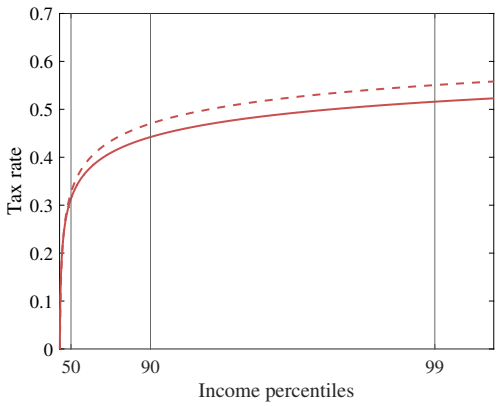


Figure A.1: The top income tax function.

Note: The figure shows the top income taxes (red line). The vertical lines correspond respectively to the percentiles of the income distribution before taxes.

Income taxes are less efficient than wealth taxes at the top of the distribution because the two tax bases capture different dimensions of economic status in a heterogeneous-agent economy with persistent idiosyncratic income risk. Individuals at the top of the current income distribution are those who have recently experienced a sequence of favorable productivity realizations and are therefore highly productive at the time the tax is levied. By contrast, the top of the wealth distribution reflects the accumulation of past earnings. As a result, many wealthy individuals were highly productive in the past but need not be highly productive today, since productivity shocks are persistent rather than permanent. Consequently, a top wealth tax shifts part of the tax burden away from currently high-productivity individuals and toward households with accumulated assets but lower current productivity, reducing the distortion to contemporaneous labor supply relative to an equivalent increase in top income tax rates.

Table A.1 reports the macroeconomic effects of the increase in top income taxation. Higher income taxes reduce labor supply by increasing the distortion on wages. The resulting contraction in labor supply lowers aggregate output, labor demand falls leading to a decline in equilibrium wages. At the same time, the higher tax burden on labor income weakens saving incentives, reducing investment and capital accumulation. Overall, the magnitude of these effects is comparable to that under a top wealth tax, although the output loss is more modest, at approximately 1.5%. Also the decline in employment relative to the output contraction is more modest than under wealth taxation. While the contractionary effects on the economy are quantitatively similar to those of the top wealth tax, the effects on wealth inequality are substantially smaller. In contrast to a top wealth tax, the reform is largely ineffective at reducing wealth concentration. The wealth Gini coefficient changes only marginally, and although top wealth shares decline, the effects are quantitatively small relative to those generated by top wealth taxation. These findings suggest that taxing wealth is substantially more effective than taxing income at reducing wealth inequality.

Table A.1: Effects of fiscal reform with income taxes

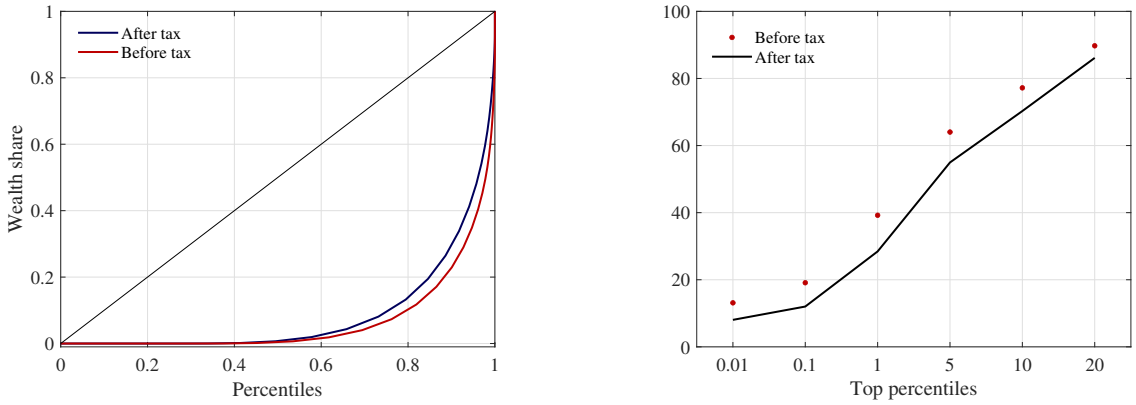
Variables	Reform	Variables	Reform
Capital	-3%	Gini wealth	-1%
Employment	-0.4%	Top 1% wealth share	-5%
Output	-1.5%	Top 0.1% wealth share	-9%
Consumption	-3.5%	Top 0.01% wealth share	-12%
Tax revenues	$+2.5\%$	Welfare top 1	-1%
Public spending	$+2.7\%$	Welfare next 9	-6%
Wages	-0.8%	Welfare next 40	-8%
Returns (p.p.)	$+0.21$	Welfare bottom 50	-2%

Note: The first and third columns report the description of the variables. Reform: introduction of top income taxes to finance public spending. The columns shows the percentage change of the variable due to the fiscal reform. Steady-state comparison. Tax revenues measure the total tax revenue including income taxes.

The welfare consequences also differ across the wealth distribution. Households at the top experience welfare losses due to the higher income tax burden. Meanwhile, households in the middle and lower parts of the wealth distribution are adversely affected by the decline in wages and employment induced by the contraction in labor supply. Because top income taxation generates larger labor market distortions than wealth taxation, it imposes higher welfare costs on low-wealth households. By contrast, the wealthiest households prefer the income tax reform.

B.2 After-tax inequality

In this section, I examine in greater detail the effects of top wealth taxation on the distribution of net worth, with particular emphasis on top wealth shares. The analysis considers the fiscal reform that introduces a tax on top wealth holdings while leaving capital income taxes and all other taxes unchanged.



(a) (b)

Figure A.2: Wealth inequality after taxation.

Note: Panel (a) in the figure shows the wealth distribution before and after wealth taxes. Panel (b) plots the wealth shares of selected top percentiles of net worth before and after the wealth tax.

Panel (a) of Figure A.2 presents the Lorenz curves for the distributions of wealth before and after the reform. The introduction of top wealth taxation shifts the Lorenz curve inward, indicating a reduction in wealth inequality. Panel (b) focuses on the upper tail of the wealth distribution by reporting the wealth shares held by selected top percentiles before and after the reform. The decline in wealth concentration is particularly pronounced within the top 1% of the distribution, consistent with the fact that these households are the primary targets of the tax. Specifically, the wealth share of the top 0.1% declines from approximately 20% to 10%, while the share of the top 1% falls from nearly 40% to about 30%. These results indicate that top wealth taxation can substantially reduce the concentration of wealth at the upper end of the distribution. The reduction in top wealth shares is driven by the direct effect of the tax on the accumulation of wealth among high-net-worth households. By lowering the after-tax return on wealth above the exemption threshold, the reform slows the pace of wealth accumulation at the top of the distribution relative to the rest of the population. As a result, wealth becomes more evenly distributed even though the broader tax system remains unchanged. These findings highlight that a targeted wealth tax can have sizable distributional effects, particularly at the very top of the wealth distribution, where wealth is most concentrated.

B.3 Robust welfare metric

In this section, I revisit the distributional possibility frontier using an alternative measure of welfare. Specifically, I define welfare as the asset-equivalent variation: the amount of assets that would make an individual indifferent between the economic outcomes under the policy and those under the counterfactual scenario without the policy. In particular, let v_t^p denote the value function under the fiscal reform and v_t the value function without any fiscal reform. The asset equivalent variation ω_t is implicitly defined by

$$v_t^p(a_t, e_t) = v_t(a_t + \omega_t, e_t).$$

I use the distribution of ω_t to measure welfare changes instead of $\mathcal{W}_t$ and reproduce the distributional possibility frontier. Figure A.3 shows the quantitative results for the reform that introduces top wealth taxes to finance public spending.

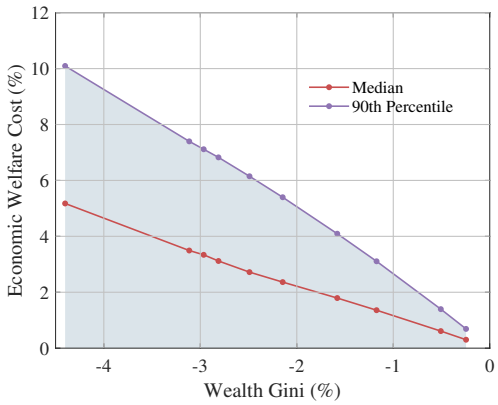


Figure A.3: The distributional possibility frontier.

Note: The figure shows the welfare costs associated to the introduction of top wealth taxes of the 50th percentile (red line) and 90th percentile (purple line) of the distribution of welfare changes. Welfare is measured relative to annual average consumption. The x-axis reports the percentage changes in the Gini coefficient of net worth.

The distributional possibility frontier is qualitatively similar under this alternative welfare measure. Quantitatively, the welfare losses at the 90th percentile are nearly identical to those reported in the baseline specification, while those for the median household are slightly larger. Likewise, the slope of the frontier evaluated at the 90th percentile closely matches the baseline results. In contrast, the slope for the median household is somewhat steeper, indicating a stronger sensitivity of median welfare to changes along the frontier under the asset-equivalent welfare measure. Overall, the results obtained under the $\mathcal{W}_t$ welfare measure are robust to the choice of welfare metric. Although the asset-equivalent measure yields modest quantitative differences for the median, the qualitative conclusions and the overall shape of the distributional possibility frontier remain largely unchanged.

Figure A.4 presents the results for the reforms that jointly vary the wealth tax and the capital income tax. As with the first reform, the results are both qualitatively and quantitatively similar to those obtained under the $\mathcal{W}_t$ welfare measure. The interpretation remains unchanged. The reduction in the capital income tax partially offsets the adverse macroeconomic effects of higher top wealth taxation, substantially mitigating the efficiency costs of the reform. As a result, the trade-off between efficiency and equity largely disappears, with the reform generating welfare gains for the vast majority of households.

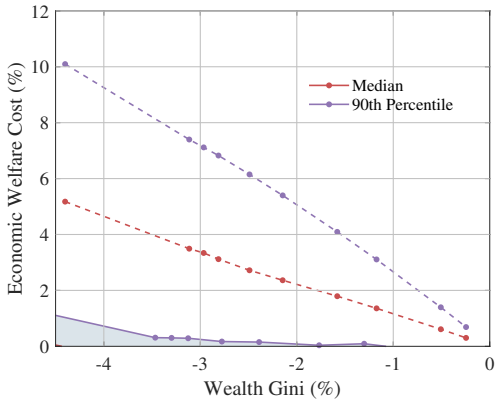


Figure A.4: The distributional possibility frontier with wealth redistribution.

Note: The figure shows the welfare costs associated to the introduction of top wealth taxes of the 50th percentile (red line) and 90th percentile (purple line) of the distribution of welfare changes. Welfare is measured relative to annual average consumption. The x-axis reports the percentage changes in the Gini coefficient of net worth.

Overall, the results presented in this section reinforce the main conclusions of the paper. The distributional possibility frontier is robust to alternative welfare measures, with only modest quantitative differences and no meaningful change in its qualitative properties. Similarly, the findings remain largely unchanged when considering reforms that jointly vary the wealth tax and the capital income tax. In particular, reducing the capital income tax offsets a substantial share of the adverse macroeconomic effects associated with higher top wealth taxation, thereby weakening the efficiency–equity trade-off. Across specifications, the central economic mechanisms remain unchanged, providing additional support for the robustness of the paper's main results.