How (Not) to Finance a Fiscal Stimulus

Paul Metzler*
University of Chicago

November 2026

Abstract

This paper studies how the financing instrument affects the aggregate effects of a temporary fiscal transfer. I use a one-asset Heterogeneous Agent New Keynesian model to compare financing via taxes on labor income, capital income, and assets under different monetary and fiscal policy rules. If a government adjusts surpluses to maintain a similar level of government debt, taxing labor income is contractionary, while taxing capital income and assets is expansionary. If the government keeps surpluses constant, all instruments produce sharp initial contractions. Evaluating a fiscal stimulus therefore also requires considering who finances it and how.

*I thank Greg Kaplan for sharing his code. All errors are my own. First version: March 2026.

1 Introduction

The prominent use of fiscal policy as a tool to stabilize business cycle fluctuations has long been viewed skeptically in business cycle models with representative agents, where its effects are limited by households' ability to always smooth consumption intertemporally. This mechanism is at odds with empirical evidence documenting high marginal propensities to consume (MPCs) and substantial demand effects of fiscal policy.[1] Recently, quantitative macroeconomic models featuring household heterogeneity have become a leading tool to analyze business cycle policies. One reason for this is that they can reconcile the empirical evidence with theory, because heterogeneity in income, wealth, and thus MPCs makes fiscal policy non-neutral on aggregate (see Kaplan and Violante 2022 for a review).

While a large literature studies the effects of different expansionary fiscal policies, much less attention has been paid to how such a stimulus should be financed.[2] In a heterogeneous-agent economy, financing is part of the policy itself: different instruments and repayment horizons redistribute across households with different MPCs and therefore change aggregate transmission. To study this issue, I use a Heterogeneous Agent New Keynesian (HANK) model to compare financing schemes that differ in both instrument and timing.

In an economy with household heterogeneity, financing schemes matter because they redistribute across households with different MPCs. A scheme that places more of the burden on households with more liquid wealth has different aggregate effects than one that reduces the net income of low-wealth, high-MPC households. Repayment timing is also important because later repayments can increase the effect of the stimulus on impact while shifting financing costs into the future. A government faces a tradeoff between boosting demand in the short run and distributing the financing burden in the medium run. These aggregate and distributional consequences need to be studied jointly and HANK models provide a unified framework to compare these different financing schemes on a common basis.

My analysis shows that a fiscal transfer shock is not expansionary by construction once its financing is modeled explicitly. The effects depend on who repays it and how quickly. Under a fixed-surplus rule, all financing instruments generate a sharp contraction on impact as taxes must rise immediately while a shrinking tax base amplifies the distortionary effect of financing. Under fixed debt, financing matters more. A labor income tax remains contractionary, while asset and capital income taxation are expansionary because they shift the burden more toward high-wealth, low-MPC households. Using a full-wealth calibration, the effects become much smaller, showing that the results crucially depend on matching the MPC distribution.

2 Model

I consider a continuous-time, one-asset HANK economy with idiosyncratic labor income risk, endogenous labor supply, and monopolistic price setting with quadratic adjustment costs.

[1] Seminal micro evidence on spending responses to tax rebates is provided by Johnson et al. (2006) and Parker et al. (2013). More recent evidence on how spending responses evolve over time is provided by Fagereng et al. (2021).

[2] Related work on how financing and redistribution shape transmission includes Angeletos et al. (2024), Ferrière and Navarro (2025), Bhattarai et al. (2023), and Kaplan et al. (2018).

The government can tax labor income, capital income, and assets to finance lump-sum transfers and interest payments on its debt.

Households. Given an initial state and path of prices, households solve the sequence problem by maximizing the expected discounted value of consumption subject to their budget and a borrowing constraint.

$$v_0(a_0, z_0) = \max_{\{c_t, h_t, a_t\}_{t\geqslant 0}} \mathbb{E}_0 \int_0^\infty e^{-\rho t} u(c_t, h_t)\, dt$$

subject to

$$\dot{a}_t = \left[(1-\tau_t^R)r_t - \tau_t^A\right] a_t + (1-\tau_t^L) w_t z_t h_t + d_t(z_t) + T_t(a_t, z_t) - c_t$$

$$a_t \geqslant \underline{a} \qquad h_t \in \left[0, \bar{h}\right] \qquad (a_0, z_0) \text{ given}$$

where a_t denotes asset holdings, z_t is labor productivity, h_t is hours worked, c_t is consumption, w_t is the wage rate, r_t is the interest rate, τ_t^R and τ_t^L are the tax rates on capital and labor income, τ_t^A is the tax rate on assets, $d_t(z_t)$ is dividend income from firms, and $T_t(a_t, z_t)$ is a lump-sum transfer (which is constant across households in the baseline). A dot over a variable denotes its time derivative.

Given prices and policy rules $(c(a,z), h(a,z))$, define the savings drift as

$$s_t(a, z; c, h) \equiv \left[(1-\tau_t^R)r_t - \tau_t^A\right] a + (1-\tau_t^L) w_t z h + d_t(z) + T_t(a, z) - c$$

The household Hamilton–Jacobi–Bellman (HJB) equation is given by

$$\rho v_t(a,z) = \max_{c,h} \left\{ u(c,h) + \mathcal{A}_{s,t}[v_t](a,z) + \mathcal{A}_z[v_t](a,z) + \partial_t v_t(a,z) \right\}$$

where $\mathcal{A}_{s,t}$ and $\mathcal{A}_z$ are the infinitesimal generators associated with the asset drift and the idiosyncratic productivity process, with $\mathcal{A}_{s,t}$ varying with time. The term $\partial_t v_t(a,z)$ captures the drift in the value function. In the stationary equilibrium, the household HJB is

$$\rho v(a,z) = \max_{c,h} \{ u(c,h) + \mathcal{A}_s[v](a,z) + \mathcal{A}_z[v](a,z) \}$$

In the stationary equilibrium, the generator of the savings drift, $\mathcal{A}_s$, does not vary with time, and the drift of the value function, $\partial_t v_t(a,z)$, is equal to zero. The optimality conditions are

$$u_c\big(c(a,z), h(a,z)\big) = v_a(a,z), \qquad u_h\big(c(a,z), h(a,z)\big) = -(1-\tau^L) w z\, v_a(a,z)$$

Let $g_t(a,z)$ be the distribution of households over assets and idiosyncratic productivities at time t. It evolves according to the Kolmogorov forward equation (KFE)

$$\partial_t g_t = \left(\mathcal{A}_{s,t}^* + \mathcal{A}_z^*\right) g_t$$

where the starred operators are the adjoints of the generators associated with the savings drift and the idiosyncratic productivity process, respectively. In the stationary equilibrium, the distribution does not change over time, so $\partial_t g_t = (\mathcal{A}_s^* + \mathcal{A}_z^*) g_t = 0$.

Firms. There is a competitive final goods producer using a constant elasticity of substitution (CES) technology to combine a continuum of intermediate goods.

$$Y_t = \left(\int_0^1 Y_t(j)^{\frac{\varepsilon-1}{\varepsilon}}\, dj \right)^{\frac{\varepsilon}{\varepsilon-1}}, \qquad Y_t(j) = \left(\frac{P_t(j)}{P_t} \right)^{-\varepsilon} Y_t$$

There is a continuum of monopolistically competitive intermediate goods producers indexed by $j \in [0,1]$. Each intermediate goods producer produces a variety of the intermediate good using a linear technology in labor and sets prices subject to quadratic adjustment costs.

$$Y_t(j) = Z_t N_t(j) \qquad \text{and} \qquad \Theta\left(\frac{\dot{P}_t(j)}{P_t(j)}\right) = \frac{\kappa}{2}\left(\frac{\dot{P}_t(j)}{P_t(j)}\right)^2 P_t Y_t$$

with Z_t being the aggregate productivity and κ controlling the degree of price stickiness. The profit of firm j before adjustment costs is given by

$$\Pi_t(j) = \frac{P_t(j)}{P_t} Y_t(j) - w_t N_t(j)$$

Firms discount profits at the rate r_t. The optimal price-setting problem is

$$\max_{\{P_t(j), N_t(j)\}_{t\geqslant 0}} \int_0^\infty e^{-\int_0^t r_s \, ds} \left[\Pi_t(j) - \Theta\left(\frac{\dot{P}_t(j)}{P_t(j)}\right)\frac{1}{P_t}\right] dt$$

Under symmetry, all firms choose the same inflation rate $\pi_t \equiv \dot{P}_t/P_t$, yielding the New Keynesian Phillips curve

$$\left(r_t - \frac{\dot{Y}_t}{Y_t}\right)(\pi_t - \pi^*) = \frac{\varepsilon}{\kappa}\left(w_t - w^*\right) + \dot{\pi}_t \qquad w^* = \frac{\varepsilon - 1}{\varepsilon}$$

Aggregate profits, Π_t, are rebated as lump-sum payments to households in proportion to labor efficiency, to account for incentive-compatible compensation schemes.

$$d_t(z) = \frac{z}{\bar{z}}\Pi_t \qquad \text{where} \qquad \Pi_t = \int_0^1 \left[\Pi_t(j) - \Theta\left(\frac{\dot{P}_t(j)}{P_t(j)}\right)\frac{1}{P_t}\right] dj$$

Here, $\bar{z} = \mathbb{E}[z]$ is the normalization constant for average labor efficiency.

Monetary and Fiscal Policy. The central bank sets the nominal interest rate according to a partial-adjustment Taylor rule

$$\frac{di(t)}{dt} = -\theta_\pi\left(i_t - i^* - \phi_\pi(\pi_t - \pi^*)\right)$$

where θ_π controls the speed of adjustment. If $\theta_\pi \to \infty$, this reduces to the standard Taylor rule. The real interest rate is then given by the Fisher equation $r_t = i_t - \pi_t$. Fiscal policy is set to satisfy the government budget constraint

$$\dot{B}_t = r_t B_t - S(t)$$

where B_t is government debt and $S(t)$ is the primary real surplus, given by

$$S(t) = \sum_z \int_a \left[\left(\tau_t^R r_t + \tau_t^A\right) a + \tau_t^L w_t z h(a,z) - T_t(a,z)\right] g_t(a,z)\, da$$

Surpluses are set via a surplus rule that adjusts tax rates in response to deviations of debt from a target level B^*, given by

$$S(t) = S^* + \phi_b(B_t - B^*)$$

where S^* is the steady-state surplus and ϕ_b controls the strength of the feedback, with $\phi_b = 0$ corresponding to fixed surpluses and $\phi_b \to \infty$ corresponding to fixed debt. In each financing

case, one tax rate adjusts to achieve the required primary surplus, while the other two remain at their steady-state values.

Each household receives lump-sum transfers given by

$$T_t(a, z) = \tau_0 Y^* + \Delta T_t \, m(a, z)$$

where $\Delta T_t = 0$ in steady state, so each household receives a fraction τ_0 of steady-state output Y^*. For the temporary transfers in Section 4, $\Delta T_t > 0$ and $m(a, z) \in \{0, 1\}$ indicates whether a household receives the increase. In the untargeted case, $m(a, z) = 1$ for all households.

Equilibrium. A time-varying Recursive Competitive Equilibrium (RCE) consists of

- household value and policy functions $v_t(a, z)$, $s_t(a, z)$, $c_t(a, z)$, and $h_t(a, z)$
- a household distribution $g_t(a, z)$
- aggregate variables B_t, H_t, N_t, Y_t, and Π_t
- relative prices and inflation r_t, w_t, and π_t
- policy variables τ_t^L, τ_t^R, τ_t^A, $T_t(a, z)$, and i_t

such that, for every $t \geqslant 0$,

1. given prices, policy variables, and the stationary value function, $v^*(a, z)$, the time-varying value function $v_t(a, z)$ solves the HJB with terminal condition $\lim_{t\to\infty} v_t(a, z) = v^*(a, z)$
2. given the savings policy function $s_t(a, z)$ and initial distribution $g_0(a, z)$, the distribution $g_t(a, z)$ evolves according to the KFE
3. given r_t, π_t, and Y_t, the real wage w_t satisfies the Phillips curve
4. given r_t, B_t, and fiscal policy variables, the government budget constraint and fiscal surplus rule are satisfied
5. r_t, π_t, and i_t satisfy the Taylor rule and the Fisher equation
6. given w_t, H_t, and π_t, output Y_t, labor demand N_t, and profits Π_t satisfy the firms' optimality conditions and production function
7. given the distribution $g_t(a, z)$ and the policy functions $c_t(a, z)$ and $h_t(a, z)$, the asset and labor markets clear according to

$$H_t = \sum_z \int_a h_t(a, z) g_t(a, z) \, da \quad B_t = \sum_z \int_a a \, g_t(a, z) \, da \quad N_t = \sum_z \int_a z h_t(a, z) g_t(a, z) \, da$$

3 Calibration

I calibrate the model to match key moments for comparing financing schemes: the income process, the wealth distribution, nominal rigidities, and the steady-state fiscal environment. I combine standard parameter values from the HANK literature, mainly following Kaplan and Violante (2022) for the household side and Kaplan et al. (2018) for the rest of the economy.

Household preferences are separable in consumption and labor supply and have constant relative risk aversion, with log utility in consumption and a Frisch elasticity of 0.5.

$$u(c, h) = \log c - \psi \frac{h^{1+1/\nu}}{1 + 1/\nu}$$

where ν is the Frisch elasticity and ψ is the labor disutility weight. Households face a no-borrowing constraint ($\underline{a} = 0$), and the idiosyncratic labor income productivity z_t follows a two-component jump process, analogous to a permanent-transitory process in discrete time (for a discussion, see Kaplan et al. 2018 and Kaplan and Violante 2022):

$$\log z_t = x_{1,t} + x_{2,t}$$

where component $k \in \{1, 2\}$ evolves according to

$$dx_{k,t} = -\psi_k x_{k,t}\, dt + \eta_{k,t}\, dJ_{k,t} \qquad \eta_{k,t} \sim \mathcal{N}(0, \sigma_k^2)$$

where $J_{k,t}$ is a Poisson process with arrival rate λ_k. The calibration of this process closely follows Kaplan and Violante (2022).

The production block is calibrated to imply a 10 percent profit share and a conventional Phillips-curve slope (as in Kaplan et al. 2018). Productivity is normalized so that quarterly steady-state output equals one, and steady-state inflation is set to 2 percent per year.

Transfers and tax rates determine the steady-state fiscal policy. Assets and capital income are not taxed in the steady state. Labor income is taxed at a flat rate of 20 percent, and households receive 17 percent of steady-state output as lump-sum transfers. The transfers ensure that the imposed borrowing limit is tighter than the natural borrowing limit. Table 1 reports the directly calibrated parameters.

Table 1: Directly Calibrated Parameters

Symbol	Description	Value	Target
Preferences, technology, and policy			
γ	Risk aversion	1.00	Log utility
ν	Frisch elasticity	0.5	
ε	Elasticity of substitution	10	Profit share of 10 percent
κ	Rotemberg price adjustment cost	100	Slope of Phillips curve, $\varepsilon/\kappa = 0.1$
τ_0	Transfer-output ratio	0.17	3 percent primary surplus
τ^L	Labor income tax rate	0.20	
τ^R	Capital income tax rate	0	No tax in steady state
τ^A	Asset tax rate	0	No tax in steady state
π^*	Steady-state inflation	0.005	2 percent inflation p.a.
Income process, following Kaplan and Violante (2022)			
λ_1	Persistent jump arrival rate	0.250	
ψ_1	Persistent mean reversion	0.003	
σ_1^2	Persistent jump variance	0.008	
λ_2	Transitory jump arrival rate	0.250	
ψ_2	Transitory mean reversion	0.347	
σ_2^2	Transitory jump variance	0.478	

I calibrate households' discount rate, labor disutility, the steady-state real interest rate, aggregate effective labor, and total factor productivity internally in order to ensure market clearing, match the targets for aggregate asset holdings, and meet normalization targets. Table 2 reports these values for two calibrations, depending on the targeted aggregate wealth.

Table 2: Internally Calibrated Parameters

Symbol	Description	Value		Target
		Liquid wealth calibration	Full wealth calibration	
r^*	Steady-state real interest rate	0.0041	0.0006	Asset market clearing
N^*	Steady-state effective labor	1.125	1.173	Labor market clearing
ρ	Discount rate	0.0202	0.003	Debt-to-GDP ratio
ψ	Labor disutility weight	0.564	0.531	Aggregate hours $H^* = 1$
Z	Productivity level	0.889	0.852	Normalize quarterly $Y^* = 1$
	Mean Quarterly MPC	0.16	0.03	

Note: The MPC was computed from a $200 transfer over one quarter.

I chose to calibrate my model to match mean liquid wealth (excluding the top 5 percent of the wealth distribution)[3] using data from the 2019 Survey of Consumer Finances. As I analyze the effects of a fiscal stimulus, the central object I need to capture is the MPC. If the MPC is much lower than suggested by empirical evidence, then there is little hope to get substantial aggregate effects of fiscal policy, even with household heterogeneity. As noted in Kaplan and Violante (2022), targeting liquid wealth instead of total wealth, while missing a substantial part of households' total wealth, can help to get empirically realistic MPCs on aggregate. Table 2 reports a mean quarterly MPC of 0.16 under the liquid-wealth calibration, versus 0.03 under the total-wealth calibration. I use the liquid-wealth calibration as my baseline specification and the total-wealth calibration to check the sensitivity of my results. The monetary and fiscal policy configurations used in the transfer analysis are discussed in Section 4.

4 Financing Scheme Analysis

I study the effects of a temporary increase in lump-sum transfers paid directly to households. I consider a shock of $200, paid out with transfers decaying exponentially over time so that they return to their steady-state level within one year. To finance this stimulus, I analyze three instruments available to the fiscal authority: taxes on labor income, capital income, and assets. I assume that households' idiosyncratic labor productivities cannot be observed by the fiscal authority, so households cannot be taxed based on them alone. Thus, any tax used to finance the stimulus is necessarily distortionary. To solve for the impulse response functions, I model the increase in transfers as an MIT shock.

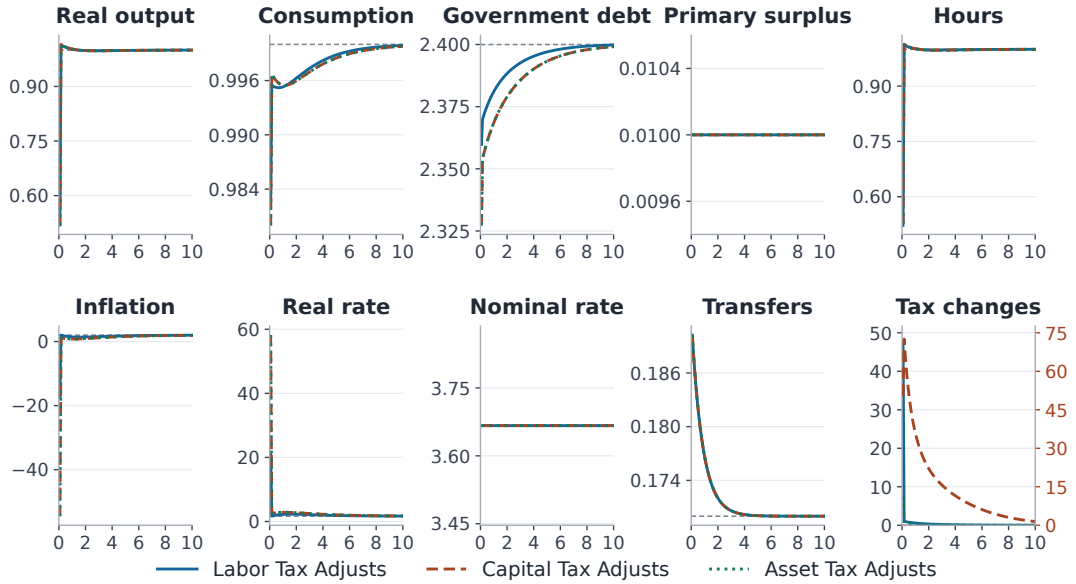
Table 3: Policy Variable Calibration

Symbol	Description	Policy Configuration		
		Fixed surplus	Fixed debt	Combined adjustment
ϕ_b	Surplus-rule feedback on debt	0	∞	0.1
θ_π	Interest-rate adjustment speed	n.a.	n.a.	0.5
ϕ_π	Taylor-rule inflation response	0	0	1.1

[3] See Kaplan and Violante (2022) for a discussion of matching the right tail of the wealth distribution.

I consider three policy configurations, shown in Table 3, focusing mainly on the fiscal side of the model. In the first, the primary surplus is fixed, so adjustment occurs through debt. In the second, debt is fixed, so adjustment occurs through the primary surplus. In both cases, monetary policy does not react to inflation, so the nominal interest rate remains at its long-run level. In the third, monetary policy responds to inflation, while fiscal adjustment occurs through both surpluses and debt.

Figure 1: Baseline Economy, Fixed Surplus Financing

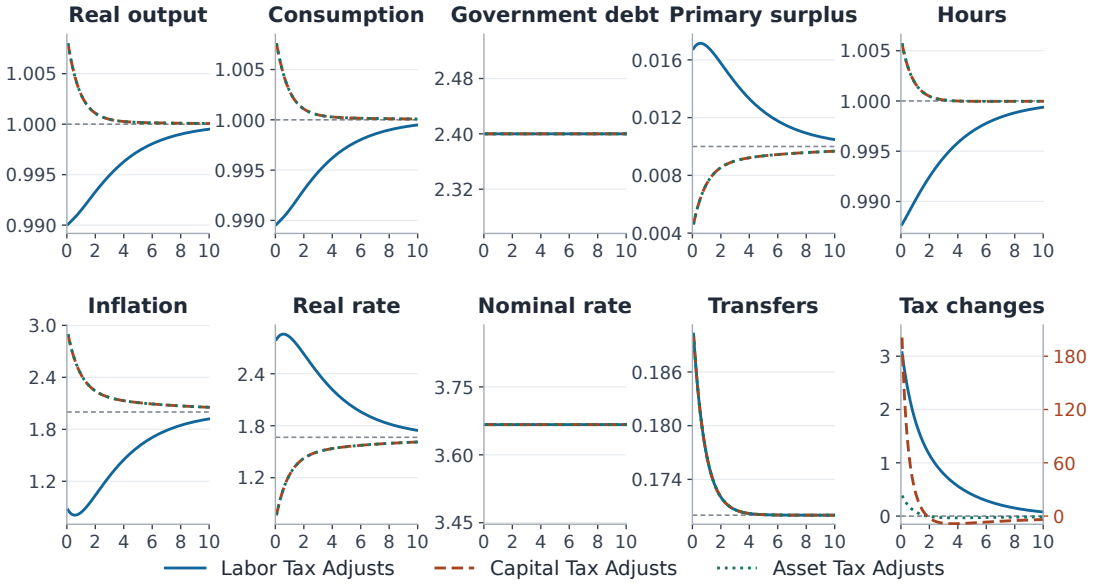


Notes: Time is measured in quarters. Inflation and the nominal and real interest rates are measured in percent p.a. Tax changes are measured in percentage points. All other variables are in levels. Steady-state output is $Y^* = 1$. Capital income tax scales are on the right axis.

Figure 1 presents the aggregate effects of the fiscal shock under the fixed-surplus rule for the three financing instruments. In all three cases, output contracts sharply on impact, then recovers quickly to levels close to steady state and converges more slowly thereafter. The fiscal "stimulus" is therefore strongly contractionary under all financing schemes. Although output returns to steady state almost immediately after the shock and remains above it for the rest of the first quarter, this does not offset the drop of almost 50 percent on impact. The contraction is driven by the distortionary effects of financing: to keep the primary surplus at its steady-state level, the government must raise taxes. This lowers either the net real wage, under labor income taxation, or the net interest rate, under capital income or asset taxation. In the former case, households reduce labor supply and consumption, which also lowers savings through lower income. In the latter case, households front-load consumption because the lower net interest rate enters their Euler equation. In both cases, the tax base shrinks, creating a cascading spiral because the government must raise taxes even further. The core problem is that the government commits to a surplus that is too expensive to finance. Lower overall demand puts downward pressure on prices, but firms cut prices less than they would like because they have to pay large adjustment costs. Thus, inflation falls sharply on impact and then rises above the steady-state

rate as demand recovers gradually. The initial contractions are similar across all three financing instruments, so the choice among them matters little.

Figure 2: Baseline Economy, Fixed Debt Financing



Notes: Time is measured in quarters. Inflation and the nominal and real interest rates are measured in percent p.a. Tax changes are measured in percentage points. All other variables are in levels. Steady-state output is $Y^* = 1$. Capital income tax scales are on the right axis.

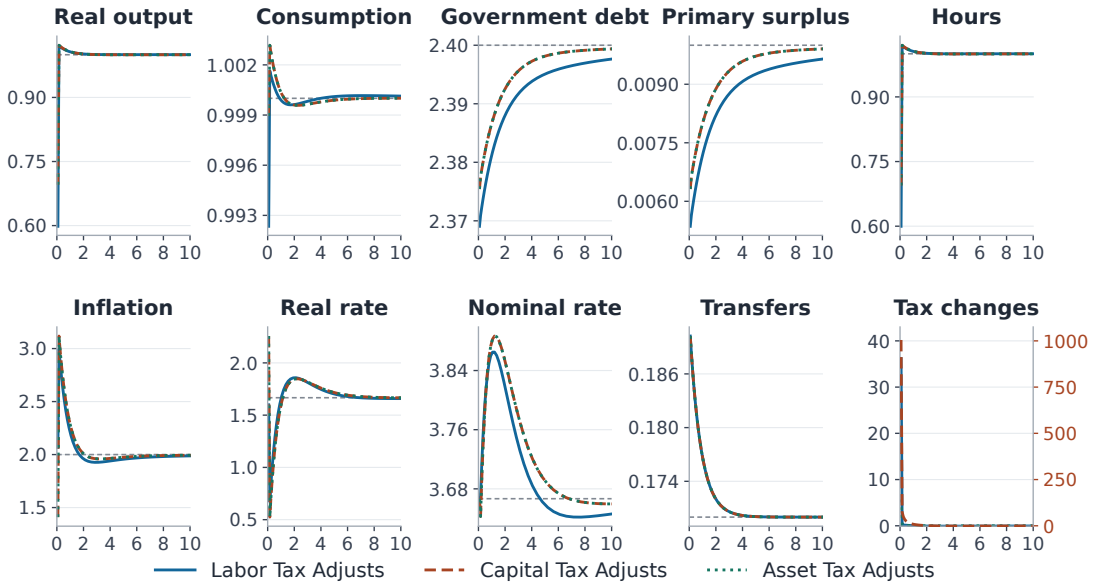
Figure 2 presents the results under the fixed-debt rule. Labor income taxation reduces output, while taxes on assets or capital income increase it. The responses are smaller than under the fixed-surplus policy, and the choice of financing instrument matters more. Financing via labor income taxes remains contractionary because households receive higher transfers and reduce labor supply. The reduction in labor supply requires higher labor taxes, which offset the redistributive benefit of the transfer. By contrast, asset and capital income taxation are expansionary because they place more of the financing burden on households with greater liquid wealth, which is more closely related to MPCs than labor productivity. The resulting increase in demand raises inflation, and, with the nominal rate fixed, the real interest rate falls, which also reduces the government's debt-service burden.[4] Although the expansionary effects of asset and capital income taxation fade relatively quickly, the contraction from financing through labor income taxes remains visible even after 10 quarters.

An important feature is that asset and capital income taxes deliver the same allocation whenever $\tau_t^A = r_t \times \tau_t^R$, since households then face the same after-tax return. Because the implied capital income tax rates are above 100 percent for much of the first quarter (see the right-hand side axis), while the asset tax stays below 50 basis points, I focus on the asset tax in the remaining exercises.

Figure 3 shows the results under the policy configuration in which the central bank adjusts the nominal interest rate gradually to respond to inflation and the fiscal authority adjusts both debt and the primary surplus.

[4]This policy configuration remains expansionary as long as the central bank does not react too strongly to inflation.

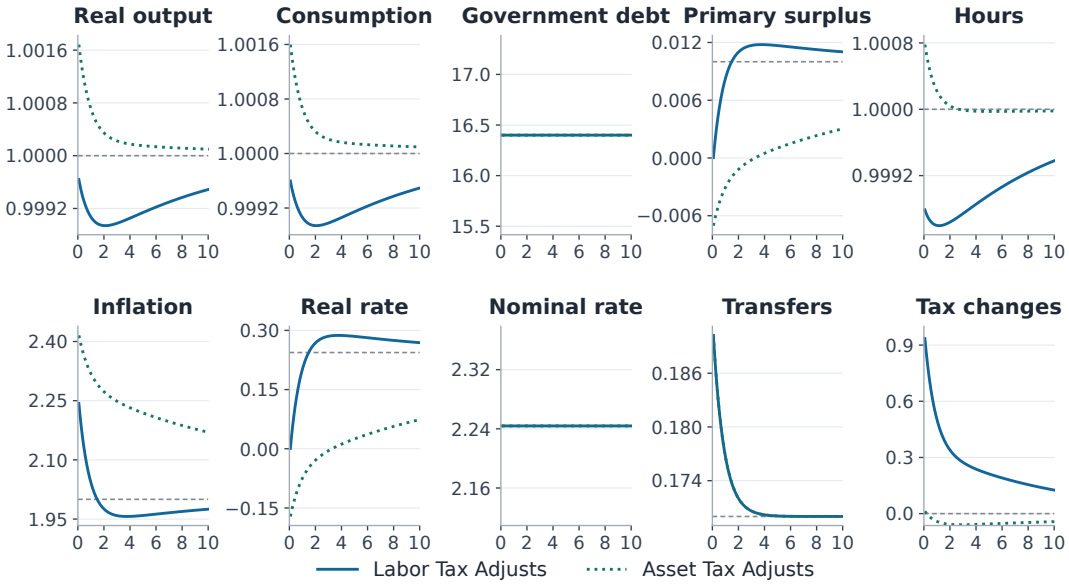
Figure 3: Baseline Economy, Combined Debt and Surplus Adjustment



Notes: Time is measured in quarters. Inflation and the nominal and real interest rates are measured in percent p.a. Tax changes are measured in percentage points. All other variables are in levels. Steady-state output is $Y^* = 1$. Capital income tax scales are on the right axis.

As in the case with fixed surpluses, any of the three financing instruments produces a strong contractionary response. In this case, the fiscal feedback parameter ϕ_b only allows for a modest decrease in the primary surplus. Since the increase in transfers would otherwise decrease the surplus much more than that, higher tax revenue is required to keep the surplus close to its desired level. The resulting tax increases distort incentives to work or save, depending on the financing instrument.

Figure 4: Full Wealth Calibration, Fixed Debt Financing

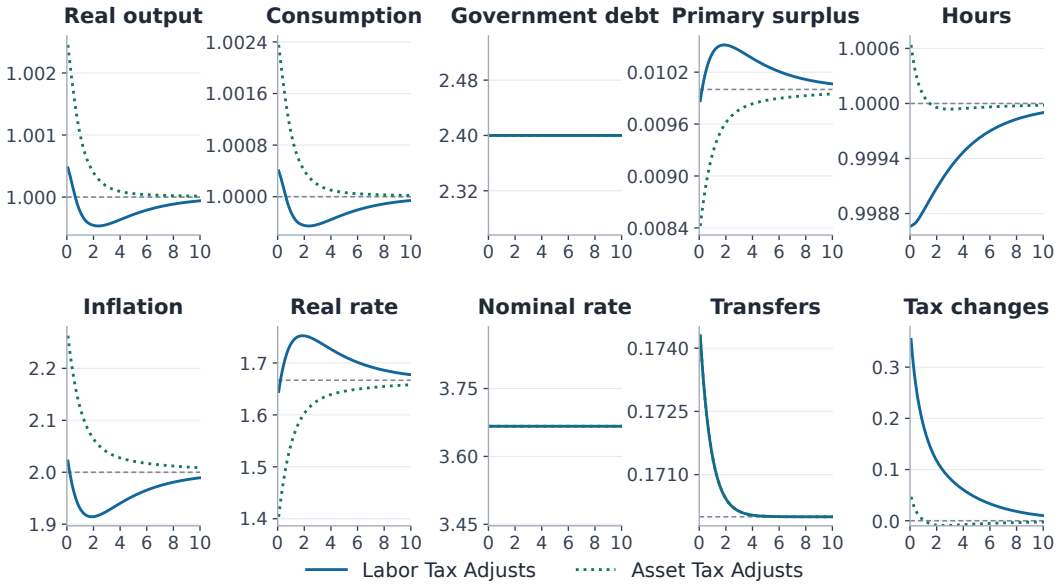


Notes: Time is measured in quarters. Inflation and interest rates are measured in percent p.a. Tax changes are measured in percentage points. All other variables are in levels. Steady-state output is $Y^* = 1$.

Figure 4 repeats the fixed-debt policy configuration using the full-wealth calibration. The ranking of the financing instruments in terms of output stays the same, but the responses are smaller in magnitude, as suggested by the MPC statistic. Going from the baseline to the full-wealth calibration changes the output response on impact from -1 to -0.04 percent under labor income taxation and from 0.8 to 0.17 percent under asset taxation. The policy is budget-neutral for most households. Therefore, the effect of the policy is more evenly distributed, and the adverse effects of the labor income tax are less pronounced, even accounting for the smaller magnitude. The responses are more persistent in this economy, particularly for inflation and the real interest rate, because most households are able to smooth their consumption intertemporally.

Finally, I consider the case of targeted transfers. As seen before, a transfer to the broader population might be too costly to finance if the distortionary effects are substantial. A transfer targeted at households with high MPCs could therefore be more effective because it is cheaper to finance. For this exercise, I assume that the fiscal authority can observe households' idiosyncratic productivity and provide the lump-sum transfer to the 20 percent of households with the lowest labor productivity. I consider only the fixed-debt policy, as before.

Figure 5: Targeted Transfers, Fixed Debt Financing



Notes: Time is measured in quarters. Inflation and interest rates are measured in percent p.a. Tax changes are measured in percentage points. All other variables are in levels. Steady-state output is $Y^* = 1$.

Figure 5 presents the results of this exercise. Under labor income taxation, the transfer is initially expansionary but becomes contractionary after approximately one quarter. Under asset taxation, the initial expansion is larger than under labor income taxation, and the transfer remains expansionary throughout. Relative to the total amount transferred, targeted transfers generate a more expansionary output response than untargeted transfers. Targeting can therefore help mitigate the distortionary effects of taxation by reducing the required tax revenue. However, because far fewer households receive the transfer, the aggregate effects are smaller, indicating that there are more households who would benefit from the fiscal stimulus.

5 Conclusion

This paper shows that the effect of a fiscal stimulus through transfers depends on how the policy is financed and when the repayment occurs. In the HANK model I used, financing is a central part of fiscal policy design because different instruments or repayment timings distribute the burden across households with different MPCs. When the government keeps its debt (close to) fixed, financing through labor income taxes performs worst, as measured by the output response. Capital income and asset taxes implement the same allocation and produce a more expansionary response than labor income taxation. When the government implements a rule with fixed surpluses, the shock is sharply contractionary due to households' increased desire to save or work less, shrinking the tax base and creating a vicious cycle. Thus, the distortionary effects of taxation can substantially dampen the aggregate response, even for small fiscal transfers. A key part of the calibration is the aggregate wealth level. A calibration targeting liquid wealth gets much stronger responses due to better matching the MPC distribution, independent of the financing scheme. Overall, the paper shows that fiscal transfers must be evaluated jointly with their financing. What matters is not only who receives the transfer, but also who pays for it, how, and over what horizon.

However, the liquid wealth calibration misses a substantial part of households' wealth, as most of it is held illiquidly. Therefore, further research could analyze the effects of different financing schemes in a two-asset model, which can match both aggregate wealth and the MPC distribution. In such an environment, wealth taxes would require households with low liquid wealth to pay (substantial) adjustment costs to use their illiquid wealth to pay the tax. Further, a tax on liquid wealth could incentivize households to hold even less liquid wealth, increasing their exposure to income shocks.

References

Angeletos, George-Marios, Chen Lian, and Christian K. Wolf. 2024. "Can Deficits Finance Themselves?" *Econometrica* 92 (5): 1351–1390.

Bhattarai, Saroj, Jae Won Lee, and Choongryul Yang. 2023. "Redistribution and the Monetary-Fiscal Policy Mix." *Quantitative Economics* 14 (3): 817–853.

Fagereng, Andreas, Martin B. Holm, and Gisle J. Natvik. 2021. "MPC Heterogeneity and Household Balance Sheets." *American Economic Journal: Macroeconomics* 13 (4): 1–54.

Ferrière, Axelle and Gaston Navarro. 2025. "The Heterogeneous Effects of Government Spending: It's All About Taxes." *The Review of Economic Studies* 92 (2): 1061–1125.

Johnson, David S., Jonathan A. Parker, and Nicholas S. Souleles. 2006. "Household Expenditure and the Income Tax Rebates of 2001." *American Economic Review* 96 (5): 1589–1610.

Kaplan, Greg, Benjamin Moll, and Giovanni L. Violante. 2018. "Monetary Policy According to HANK." *American Economic Review* 108 (3): 697–743.

Kaplan, Greg and Giovanni L. Violante. 2022. "The Marginal Propensity to Consume in Heterogeneous-Agent Models." *Annual Review of Economics* 14 (1): 747–775.

Parker, Jonathan A., Nicholas S. Souleles, David S. Johnson, and Robert McClelland. 2013. "Consumer Spending and the Economic Stimulus Payments of 2008." *American Economic Review* 103 (6): 2530–2553.