MACROECONOMIC ANALYSIS OF THE TAX PROVISIONS OF THE BUDGET RECONCILIATION LEGISLATIVE RECOMMENDATIONS RELATED TO TAX AS ORDERED REPORTED BY THE COMMITTEE ON WAYS AND MEANS ON MAY 14, 2025

Prepared by the Staff of the JOINT COMMITTEE ON TAXATION



May 22, 2025 JCX-25-25

Contents

Page
INTRODUCTION1
MACROECONOMIC ANALYSIS OF THE TAX PROVISIONS OF THE BUDGET RECONCILIATION LEGISLATIVE RECOMMENDATIONS
EFFECTS ON ECONOMIC ACTIVITY AND REVENUES
APPENDIX: DATA, MODELS, AND ASSUMPTIONS USED IN THE ANALYSIS11

INTRODUCTION

Pursuant to House Rule XIII(8)(b), this document,¹ prepared by the staff of the Joint Committee on Taxation ("Joint Committee staff"), provides an analysis of the macroeconomic effects of the tax provisions of the budget reconciliation legislative recommendations as ordered reported by the Committee on Ways and Means on May 14, 2025. The basis for this analysis is the projected change in tax revenues as estimated by the Joint Committee staff.²

¹ This document may be cited as follows: Joint Committee on Taxation, *Macroeconomic Analysis of the Tax Provisions of the Budget Reconciliation Legislative Recommendations Related to Tax as Ordered Reported by the Committee on Ways and Means on May 14, 2025* (JCX-25-25), May 22, 2025. This document can also be found on the Joint Committee on Taxation website at www.jct.gov.

² For projected changes in revenue by provision see Joint Committee on Taxation, *Estimated Revenue Effects of Provisions to Provide for Reconciliation of The Fiscal Year 2025 Budget*, (JCX-22-25R), May 13, 2025 at www.jct.gov.

MACROECONOMIC ANALYSIS OF THE TAX PROVISIONS OF THE BUDGET RECONCILIATION LEGISLATIVE RECOMMENDATIONS

This report, prepared by the staff of the Joint Committee on Taxation ("Joint Committee staff"), provides an analysis of the macroeconomic effects of the budget reconciliation legislative recommendations related to tax as ordered reported by the Committee on Ways and Means on May 14, 2025. The proposed tax provisions include the permanent extension of certain expiring individual provisions of Public Law 115-97 with modification, as well as temporary extension and modification of certain expiring business provisions. The proposal also provides for: additional temporary individual tax reductions through various new deductions; individual and business tax increases through repeal of energy-related tax provisions enacted by Public Law 117-169; new restrictions on some taxpayer benefits; and changes to the taxation of multinational corporations. The basis for this analysis is the conventional revenue effect resulting from the proposal, which the Joint Committee staff estimates to reduce Federal revenues by about \$3,819 billion over the budget window for fiscal years 2025-2034, relative to the present-law baseline.³

The Joint Committee staff estimates that enacting these provisions would increase the average annual growth rate of real Gross Domestic Product ("GDP") by 0.03 percentage points, from 1.83 percent in the present-law baseline to 1.86 percent, over the 2025-2034 budget window. The Joint Committee staff estimates that the macroeconomic effects due to this proposal would increase Federal revenues by about \$103 billion. Relative to the conventional revenue effect of about -\$3,819 billion, the Joint Committee staff estimates that the proposal would have a total revenue effect of about -\$3,716 billion over the budget window.

The Joint Committee staff also estimates that after the budget window, cumulative increases in Federal deficits under the proposal will continue to increase Federal debt as a percentage of GDP relative to the present-law baseline. While the Joint Committee staff estimates that labor supply will continue to be higher than projected in the baseline, the growth in Federal debt will increasingly crowd out private investment, reducing the capital stock relative to the baseline. The long-run effect on real GDP remains positive at first—primarily over the second decade following enactment—driven by labor supply effects. However, by the third decade, the crowding-out effect dominates, and real GDP falls below baseline projections. As a result, the budgetary feedback from the macroeconomic effects of the proposal diminishes over time.

³ Congressional Budget Office, An *Update To The Budget and Economic Outlook: 2025 to 2035*, January 25 2025.

Description of tax provisions

The proposal makes permanent, with modifications, certain individual provisions that were enacted on a temporary basis in Public Law 115-97. Under present law, these provisions generally expire for taxable years beginning after December 31, 2025. These provisions include lowering individual income tax rates on ordinary income, including lowering the top individual statutory income tax rate from 39.6 percent to 37 percent, and eliminating certain individual income tax deductions and credits while increasing others. Other substantial changes to the tax base include eliminating the deduction for personal exemptions while increasing the standard deduction, increasing the maximum amount of the child tax credit while increasing the income range over which individuals may claim it. The increased alternative minimum tax exemption is also extended and made permanent.

Modifications to the individual tax provisions enacted in Public Law 115-97 and permanently extended include an additional inflation adjustment for all ordinary income tax brackets except for the top bracket, an increase in the maximum deduction allowed for State and local taxes from \$10,000 to \$30,000, a limitation on the tax benefit of itemized deductions, and an increase in the qualified business income deduction rate from 20 percent to 23 percent. The estate and gift tax exemption is also increased to \$15 million and indexed for inflation.

The proposal introduces various temporary tax reductions for individuals, generally effective for taxable years beginning after December 31, 2024 and expiring for taxable years beginning after December 31, 2028: an increase in the standard deduction by \$1,000 (\$2,000 for joint filers and \$1,500 for head of household); a new deduction of \$4,000 per individual over 65 years of age; new deductions for qualified tips, overtime compensation, and passenger vehicle loan interest; and a reinstatement of the nonitemizer deduction for charitable contributions in the amount of \$150 (\$300 for joint filers).

The proposal extends and modifies certain business provisions enacted in Public Law 115-97 that are scheduled to expire after December 31,2025. Provisions extended through 2029 include 100 percent bonus depreciation on qualified property, the deduction for domestic research and experimental expenditures, and a modified calculation of adjusted taxable income that increases the deductible amount of net interest expenses. Provisions extended permanently include the deduction for foreign-derived intangible income and global intangible low-taxed income, and the base erosion and anti-abuse tax. The proposal also provides for temporary 100 percent bonus depreciation on qualified production property through 2029, while introducing additional taxes and withholding rules on foreign-headquartered multinational corporations operating domestically.

The proposal increases the employer-provided child care credit, enhances the paid family and medical leave credit, and allows for refundability of the adoption tax credit. The proposal also imposes additional social security number requirements for various individual tax credits. Additionally, the proposal creates tax incentives for various qualified education expenses: it introduces a refundable tax credit for scholarship contributions, it allows certain elementary and secondary school expenses to qualify as 529 account expenses, and it makes permanent the exclusion for employer student loan payments. Several provisions in the proposal provide tax incentives for health-related spending and saving. The proposal establishes CHOICE arrangements, a type of healthcare reimbursement arrangement, that allows more individuals with them to purchase health insurance on an Exchange, and provides a credit for employers with employees enrolled in them. The proposal also generally increases eligibility for and contribution limits for health savings accounts ("HSA"), expands the expenses for which HSAs can be used, and allows spouses of individuals participating in a flexible spending arrangement to contribute to an HSA. Other health-related provisions in the proposal act as a tax increase for some individuals by restricting eligibility for the premium tax credit ("PTC"), disallowing income based special enrollment periods on the Exchanges, requiring additional income and eligibility verification prior to receiving advanced PTCs, and removing limitations on repayments of advanced PTCs.

The proposal increases tax liability for some business and individuals by terminating or phasing out certain energy-related tax provisions enacted by Public Law 117-169. These provisions include tax credits for purchases of new and used electric vehicles for both individual and commercial use, home improvements and residential clean energy expenses, clean energy production and investment, carbon dioxide sequestration, clean hydrogen production, advanced manufacturing, and hydrogen storage and capture. However, the provision of Public Law 117-169 that provides a tax credit for the production of clean fuels is extended, which reduces tax liabilities for some business and individuals. Other tax increases introduced in the proposal increase tax liability on tax-exempt organizations by increasing the income base subject to the unrelated business income tax, or by removing their tax-exempt status.

Overall, the net effect of the changes to the individual income tax under the proposal is to reduce average tax rates on individual income relative to present law by about 2.0 percentage points beginning in 2026. Effective marginal tax rates on wage and pass-through business income are also reduced respectively by about 2.0 and 5.1 percentage points on average over the period 2026-2029, and reduced respectively by about 1.5 and 4.0 percentage points on average over the period 2030-2034.

Increased business deductions, especially for the years prior to 2030 when certain business provisions expire, generally decrease the effective marginal and average tax rates on business income. The repeal of clean electricity production and investment credits, on the other hand, will increase effective marginal and average tax rates for some corporate and noncorporate firms. While the provisions that affect multinational corporations generally reduce corporate income tax liability, a provision that targets foreign-headquartered multinational corporations will permanently increase effective marginal and average tax rates on certain income. The net effect is a reduction in the aggregate effective marginal and average tax rates on income from both the corporate and noncorporate sectors, but a greater reduction for the noncorporate sector and tax increases for some multinational corporations.

EFFECTS ON ECONOMIC ACTIVITY AND REVENUES

The estimates of the effect of this proposal on economic activity and revenues were produced using a weighted average of effects generated by the Joint Committee staff's (1) Macroeconomic Equilibrium Growth ("MEG")⁴ model; (2) Overlapping Generations ("OLG")⁵ model; and (3) Dynamic Stochastic General Equilibrium ("DSGE")⁶ model. As described in the Appendix, each model provides a somewhat different perspective on savings/investment and labor supply responses.

Equal weights for each model were used in computing the average effects reported in this analysis because each model captures important behavioral responses that the others cannot. Specifically, the MEG model assumes myopic foresight, meaning agents do not anticipate long-term economic effects such as changes in Federal debt levels or reductions in the productive capital stock. In contrast, the OLG model explicitly incorporates anticipation of rising Federal debt levels, recognizing that increased debt leads to crowding out of private investment and, consequently, lower wages. The OLG model also models both corporate and noncorporate sectors, allowing for investment shifts in response to tax incentives. Finally, the DSGE model introduces agents with imperfect foresight who accurately foresee and respond to imminent tax policy changes but do not fully anticipate longer-term policy adjustments or their broader economic impacts.

Effects on labor supply

The significant reduction in effective marginal tax rates on ordinary income provides strong incentives for individuals to increase their labor supply. Because this reduction is primarily the result of reversing the present law increase in such rates beginning in 2026 as certain individual provisions of Public Law 115-97 expire, the timing and strength of the labor supply response varies with how much foresight individuals are assumed to have about the future path of marginal tax rates. Individuals in the OLG model fully expect the expiration of temporary tax provisions in the present-law baseline and are therefore surprised by their

⁴ A detailed description of the MEG model may be found in: Joint Committee on Taxation, *Macroeconomic Analysis of Various Proposals to Provide \$500 Billion in Tax Relief* (JCX-4-05), March 1, 2005, and Joint Committee on Taxation, *Overview of the Work of the Staff of the Joint Committee on Taxation to Model the Macroeconomic Effects of Proposes Tax Legislation to Comply with House Rule XIII3(h)(2)* (JCX-105-03), December 22, 2003.

⁵ A detailed description of the OLG model may be found in Rachel Moore and Brandon Pecoraro, "Macroeconomic Implications of Modeling the Internal Revenue Code in a Heterogeneous-Agent Framework," *Economic Modelling*, vol. 87, April 2020, pp. 72-91, Rachel Moore and Brandon Pecoraro, "A Tale of Two Bases: Progressive Income Taxation of Capital and Labor Income," *Public Finance Review*, vol. 49, no. 3, May 2021, pp. 335-391, and Joint Committee on Taxation, *An Overview of a New Overlapping Generations Model with an Example Application in Policy Analysis* (JCX-22R-20), October 22, 2020.

⁶ A description of an earlier version of the DSGE model may be found in: *Joint Committee on Taxation, Background Information about the Dynamic Stochastic General Equilibrium Model Used by the staff of the Joint Committee on Taxation in the Macroeconomic Analysis of Tax Policy* (JCX-52-06), December 14, 2006.

permanent extension as well as the other modifications made under the proposal. The net increase in aggregate effective labor supply is relatively larger in the first half of the budget window when new temporary provisions reduce the effective marginal tax rate on wage income below what is in the second half of the budget window. Overall, a relatively strong labor supply increase of about 1.0 percent on average over the 10-year budget window is projected within the OLG model. Conversely, individuals in the MEG model expect the lower effective marginal tax rates under Public Law 115-97 to continue indefinitely, so they are not surprised by the proposal when the changes are extended even if they are surprised by the modifications to such provisions as well as the new tax provisions in the proposal. This results in a smaller increase in labor supply of about 0.3 percent on average over the budget window within the MEG model. In the DSGE model, individuals anticipate tax policy changes. The aggregate projected labor supply increase is approximately 0.6 percent on average over the 10-year budget window within the DSGE model.

Based on the projections of all three models, Joint Committee staff estimates that effective labor supply will increase by about 0.6 percent and 0.7 percent, respectively in the first and second halves of the budget window, and by 0.6 percent on average over the entire budget window.

Effects on capital stock

While the proposal reduces the after-tax cost-of-capital for both corporate and noncorporate businesses, the relative reduction differs across entity types, over time, and whether the corporation is domestic or multinational. The proposal's overall investment incentives differ in models that explicitly distinguish between entity types since evaluating the investment response separately in each sector yields different insights than estimating an average response that blends the effects of tax rate changes across each sector. In any case, all models predict an increase in labor supply, further incentivizing a firm's investment decisions by making investment more desirable, as a greater labor supply increases the need for capital.

The projected increase in investment varies further depending on assumptions about how the Federal Reserve conducts monetary policy. Two of the models, the DSGE and MEG models, explicitly incorporate monetary policy but with distinct assumptions regarding its responsiveness. In the DSGE model, the Federal Reserve follows a calibrated Taylor rule, explicitly aiming to maintain inflation close to its target and output near its potential. Consequently, as investment expands and aggregate supply increases, the monetary authority lowers interest rates to prevent disinflationary pressures, further incentivizing investment. This dynamic results in an average increase in the capital stock of 0.3 percent over the 10-year budget window. In contrast, the MEG model does not employ the same calibrated parameters but still adheres to the Taylor principle. In this framework, changes to the capital stock feed back into potential output as well as actual output, which can influence the output gap differently than in the DSGE model. Relative to the present law baseline, a decline in the capital stock decreases potential output and contributes to a persistent output gap. As a result, the central bank gradually raises interest rates to stabilize inflation, which in turn further discourages private investment. This dynamic results in a decrease of the capital stock of approximately 0.9 percent on average over the budget window relative to the present law baseline.

The differences in monetary policy assumptions underscore the relevance of comparisons with the OLG model. The OLG model does not incorporate monetary policy but explicitly models different entity types. Allowing for changes to the relative size of the corporate and noncorporate sector results in aggregate investment effects being somewhat mitigated as investment switches from the corporate to the noncorporate sector, the latter of which receives more favorable treatment on average under the proposal. This, and the absence of any monetary policy effects, causes the OLG model to predict an average increase in the capital stock of 0.2 percent over the budget window relative to the present law baseline.

Due to the temporary nature of some of the business deductions, including bonus depreciation, OLG and DSGE predict a stronger capital response, and MEG predicts a less negative response, in the first half of the budget window than in the second half. Changes to multinational corporate taxation result in a large and permanent effective marginal tax increase for foreign-headquartered firms operating domestically. This, and the elimination of energy tax credits, discourage corporate investment in capital. Based on the projections of all three models, the Joint Committee staff estimates that capital stock will increase by about 0.1 percent and decrease by 0.4 percent relative to baseline levels during the first and second halves of the budget window, respectively, averaging to a decrease of 0.1 percent over the entire budget window.

Effects on output

The varied responses in capital, together with differing magnitudes of labor supply increases, drive the overall effect of the proposal on aggregate output. Although all models project an increase in labor supply, the scale of these increases differs notably, and capital responses exhibit considerable heterogeneity. The DSGE model forecasts moderate labor supply increases, with larger capital increases than the other models, resulting in a 0.5 percent average increase in aggregate output relative to baseline levels over the budget window. The OLG model anticipates the largest increase in labor supply, so despite a moderate increase in capital stock, output increases the most, by approximately 0.7 percent. In contrast, the MEG model projects only a modest labor supply increase accompanied by a decline in capital stock, leading to a much smaller increase in aggregate output in the first half of the budget window, which turns to a small decrease in output relative to the present law baseline in the second half of the window. Together, the first and second half effects result in a decrease of 0.1 percent on average over the entire budget window.

Based on information from all three models, the estimated increase in the level of real GDP due to the proposal results primarily from an increase in aggregate effective labor supply in response to the reduction in effective marginal tax rates on ordinary income. The pattern of economic activity over the budget window, namely, front-loaded investment in the first half of the budget window (or less divestment) causing relatively less output growth over baseline levels in the second half, results from the temporary nature of some of the business deductions, and the permanent increase in tax rates on income from foreign-headquartered multinational corporations.

The Joint Committee staff estimates that these provisions would increase the level of real GDP relative to the baseline forecast by about 0.4 percent during the first half of the budget

window, and by about 0.2 percent during the second half of the budget window, averaging out to 0.4 percent over the 10-year budget window.

Most of the positive effect of the proposal on the level of GDP and thus GDP growth is concentrated in the first half of the budget window. This is partially due to temporary provisions already mentioned, but it is also due to strengthening of the crowding-out effect that increasing government debt has on the rate of growth in private investment. In the MEG and OLG models, the growth effect on GDP in the second half of the budget window is negative, which means that the average annual rate in real GDP falls slightly below the baseline rate of 1.83 percent by the end of the budget window in these two models. In the DSGE model, the growth effect on GDP in the second half of the budget makes that the average growth rate of GDP would be higher than the baseline rate by 0.08 percentage points in the first half of the budget window and lower than the baseline rate by about 0.04 percentage points in the second half of the budget window, averaging to a 0.04 percentage point increase over the baseline rate on average over the budget window.

Effects on consumption

Changes in after-tax returns to labor and capital under the proposal create two opposing economic effects. On the one hand, higher after-tax income incentivizes increased consumption (income effect); on the other hand, higher after-tax returns on capital can encourage increased saving, tempering the consumption response (substitution effect). The net outcome for consumption in each model thus depends on the interplay between these two opposing forces.

The reduction in the average tax rate on individual income under the proposal increases the after-tax income of taxpayers on average. This increase in after-tax income is enhanced by an increase in labor supply under the proposal. The DSGE model projects the largest increase in productive capital stock, which increases the wage rates relative to baseline projections. When combined with the estimated increase in labor supply, the DSGE model projects the largest increase in after-tax income across the three models, resulting in the largest estimated increase in consumption over the budget window, about 1.1 percent on average. After-tax income increases the least in the MEG model, and taxpayers substitute away from saving and investment towards consumption, resulting in a moderate estimated consumption increase of about 0.6 percent on average over the budget window. While the OLG model projects the largest increase in labor supply, the projected increase in the capital stock is smaller, which reduces the real wage rate relative to baseline projections. A moderate estimated increase in net income and consumption therefore follows, with an estimated increase in consumption of about 0.7 percent on average over the budget period.

Based on the projections of all three models, Joint Committee staff estimates that consumption will increase by about 0.7 percent and 0.8 percent relative to baseline levels during the first and second halves of the budget window, respectively, averaging to about 0.8 percent over the entire budget window.

Budgetary effects

The overall macroeconomic response to the proposal estimated by the Joint Committee staff is projected to increase Federal revenues by \$103 billion over the 2025-2034 budget window. This macroeconomic response partially offsets the conventional revenue effect of the proposal to reduce Federal revenues. Details of this estimate are presented in Table 2.

Second and third decade effects

Growing government debt and crowding out

The Joint Committee staff estimates that enactment of the proposal will result in a permanent decrease in receipts relative to the present-law baseline, increasing the path of Federal debt as a percentage of GDP beyond the budget window. As more savings are directed away from private investment toward Federal debt service, the Federal government will have to pay increasingly higher interest rates to attract funds. The extent to which an increase in government debt can ultimately crowd out private investment is somewhat mitigated by foreign investors and monetary policy responses and by how much individuals in the United States alter their saving behavior in anticipation of future government debt. The MEG model, which does not have to assume a counterfactual policy change to model fiscally unsustainable policy, estimates the most crowding out with capital increasingly falling below baseline levels starting within and continuing after the budget window. Crowding out is delayed in the OLG model, with capital estimated to fall below baseline levels at the end of the budget window. In the DSGE model, the monetary policy response allows estimated private capital to remain above baseline levels after the budget window. When the models are considered jointly, however, the aggregate capital stock is estimated to fall below baseline levels in the first decade after the budget window.

Economic and budgetary effects

The Joint Committee staff estimates that the proposal will result in a permanent reduction in the path of the aggregate capital stock relative to baseline projections after the budget window. While aggregate effective labor supply is expected to remain above baseline projections, GDP is estimated to fall below baseline levels by the end of the decade following the budget window, and revenue feedback from the proposal over this period is estimated to fall. In addition, the Joint Committee staff estimates that the proposal will result in an increasingly negative effect on the annual growth rate of real GDP on average over the decades following the budget window, primarily due to the crowding-out effect.

There is substantial uncertainty about how future Congresses, foreign governments, and investors will react to growing deficits. Therefore, the projected long-term effects extending beyond the 10-year budget window depend significantly on assumptions made regarding these issues, particularly the timing of achieving fiscal sustainability. As described in more detail in the Appendix, the three Joint Committee staff macroeconomic models have different approaches to modeling a policy that results in growing government debt. In both the OLG and DSGE models, long-run fiscal balance is achieved in the second decade following enactment, which means decisions that forward-looking agents make in the second decade past the budget window can be influenced by the expectation that the growth of Federal debt will be stabilized. The

MEG model does not require a fiscal balance assumption, but because the proposal generates a persistent increase in long-run deficits, it cannot produce estimates beyond the second decade after the budget window. For this reason, Joint Committee staff only report qualitative results for the first decade after the budget window.

	Fiscal Years		
	2025-29	2030-34	2025-34
Output	0.4%	0.2%	0.4%
Business Capital	0.1%	-0.4%	-0.1%
Labor	0.6%	0.7%	0.6%
Consumption	0.7%	0.8%	0.8%

 Table 1.-Percent Change in Economic Outcomes Relative to Present Law

Table 2Projected Budgetary Effects of the Proposal	
(Billions of Dollars)	

	Fiscal Years		
	2025-29	2030-34	2025-34
Conventional Revenue Estimate	-2,213.9	-1,605.1	-3,819.0
Macroeconomic Revenue Feedback	36.8	66.0	102.8
Total Revenue Effect ¹	-2,177.1	-1,539.1	-3,716.1

¹ Totals may not add due to rounding.

APPENDIX: DATA, MODELS, AND ASSUMPTIONS USED IN THE ANALYSIS

The Joint Committee staff analyzed the proposal using the MEG, DSGE, and OLG models. All three models start with the standard, neoclassical production framework in which the amount of output is determined by the quantity and productivity of labor and capital used by firms. Both individuals and firms are assumed to make decisions based on current and expected characteristics of the economy, including wages, prices, interest rates, tax rates, and government spending levels. In particular, labor supply is determined by individuals' preferences for consumption of goods and leisure, as well as current and future after-tax income and wealth. Similarly, the capital stock is determined by investors' expectations of after-tax returns to capital, which depend on anticipated gross receipts, costs of factor inputs, and tax rates. The underlying structure of the MEG model relies more on reduced-form behavioral response equations, while the OLG and DSGE models are built on theoretical microeconomic foundations.

The degree to which the Joint Committee staff relies more heavily on the results of one model versus the others depends on the specifics of the policy being analyzed. The MEG model incorporates labor supply responses of three income groups, each with representative primary and secondary workers. Separate marginal and average tax rates are used for each of these six labor types, as well as for all major individual and business income tax sources. The availability of investment capital to firms is determined by individuals' savings decisions, which depend on the after-tax rate of return on investment as well as on foreign capital flows. Monetary policy conducted by the Federal Reserve Board is explicitly modeled, with delayed price and quantity adjustments in response to changes in economic conditions. The myopic expectation framework in the MEG model represents the extreme case of the degree of foresight individuals have about future economic conditions, in which individuals expect that current economic conditions will persist permanently. Individuals in the MEG model expect that current tax policy never expires.

At the other end of the foresight spectrum, in the OLG model, individuals are assumed to make consumption, labor supply, and residential decisions to maximize their expected lifetime well-being given the resources they can foresee will be available to them. They are assumed to have complete information, or "perfect foresight," about aggregate economic conditions, such as wages, prices, interest rates, tax policy, and government spending, while they have uncertainty over their own length of life and idiosyncratic labor productivity. In each year, the OLG model simulates 76 "generations," each with two household demographic types (married or single), seven permanent labor skill types, and 20 wealth endowment types. Each household demographic, skill, and endowment type combination face age- and skill-dependent income risk, which allows for wage mobility around empirical lifecycle profiles for each household demographic and skill type. Individuals in each household optimally choose their labor supply from a discrete set of options—unemployed, part time, or full time. For married households, that labor supply decision is made jointly by primary and secondary earners. This indivisible labor assumption implies that the aggregate labor supply elasticity is endogenous and depends on the

distribution of reservation wages⁷ across households. Tax liability on household income is determined by an internal tax calculator that incorporates key aspects of income tax law.

The OLG model includes a business sector with distinct corporate and noncorporate entities that produce output at profit maximizing levels under perfect foresight by choosing the optimal amount of labor and private capital to be used in production.

In the DSGE model, there are two types of households, Ricardian "savers" households and non-Ricardian "non-saver" households, where only the former have the ability to make investment decisions. As in the OLG model, these two types of households make consumption and labor supply decisions to maximize their discounted present value of lifetime wellbeing. While labor supplied by household type differs in productivity, high-productivity Ricardian households are substitutable with low-productivity non-Ricardian households in the production process. As with the MEG model, the DSGE model incorporates a monetary policy reaction function, which responds to deviations in output and inflation from their long-run values. The DSGE model also features nominal rigidities in goods prices, allowing for the equilibrium quantity of goods purchased to be relatively more demand-determined in the shortrun than in a flexible price model. Lastly, the DSGE model has a stochastic feature that captures some of the effects of uncertainty about future fiscal policy on the modeling outcome, representing a less extreme foresight assumption than either of the other models. In any given period, agents within the model are assumed to know policy variables two years into the future, and thereafter expect them to follow a random walk.

Both the OLG and DSGE models allow for foreign entities to purchase a portion of new debt issued by the Federal government, thereby reducing the crowding-out effect relative to that of a closed-economy model. Although debt may be held abroad, there is no additional income or investment shifting beyond what is estimated conventionally.

In both the OLG and DSGE models, the ability of individuals to foresee changes in fiscal conditions means that individuals in the models will be unable to make optimal economic decisions if they can foresee a permanently unstable economic future, thus preventing the models from completing their simulations. This problem arises in a situation where deficits or surpluses are expected to indefinitely increase faster than the rate of growth of GDP, which is a characteristic under present law as well as the proposal. Thus, these models need to make counter-factual "fiscal balance" assumptions about the expected path of debt. For purposes of analyzing the policy described in this report, counter-factual policy assumptions are delayed until the third decade after enactment, to reduce influence on simulated behavior in the budget window.⁸

For purposes of the simulations in this report, fiscal balance is achieved in the OLG model by allowing government consumption to adjust in 2047 as necessary to stabilize the debt-

⁷ A "reservation wage" is the lowest after-tax wage at which an individual is willing to work.

⁸ See Rachel Moore and Brandon Pecoraro, "Dynamic Scoring: An Assessment of Fiscal Closing Assumptions," *Public Finance Review*, vol. 48, no. 3, April 2020, pp. 340-353.

to-GDP ratio. Fiscal balance is achieved in the DSGE model by allowing government consumption to slowly begin adjusting in 2047 to eventually stabilize the debt-to-GDP ratio in the long-run.

The estimates of growth and budget effects from this proposal were produced using an average of the effects generated by the MEG, OLG, and DSGE models with equal weights. As described above, each model provides a somewhat different perspective on savings/investment and labor responses. The MEG model allows simulation of the proposal as drafted, with no offsetting fiscal balance assumption. The OLG model provides detailed focus on household heterogeneity, while the DSGE model captures the variation in behavioral responses by savers and non-savers. It also adds imperfect foresight to the analysis, an assumption sitting between the perfect foresight assumption of the OLG model and the myopic foresight in the MEG model.

Each major tax bill potentially presents a unique combination of changes in the definition of the taxable base and tax rates for different sources of income. Because the Joint Committee staff uses these models to facilitate analysis of tax policy, and to estimate the revenue consequences of the macroeconomic effects of tax policy, the Joint Committee staff has devoted a considerable amount of time and attention to modeling the specific types of income flows affected by proposals, to the extent allowed by other sets of assumptions within each macroeconomic model. Information about the effects of the proposal described in this report on average tax rates and effective marginal tax rates on each source of income, and on after-tax returns to capital and labor, is obtained from various Joint Committee staff tax models⁹ (used in the production of conventional revenue estimates) to characterize the effects of the bill within each of the models.

⁹ Descriptions of the Joint Committee staff's conventional estimating models may be found in The Joint Committee on Taxation Revenue Estimating Process, January 28, 2025, JCX-48-23, Estimating Changes in the Federal Individual Income Tax: Description of the Individual Tax Model For 2023, October 30, 2023, and other documents at <u>www.jct.gov</u> under "Estimating Methodology." Further descriptions of the Joint Committee Staff's macroeconomic estimating methodology may be found in Overview of JCT Methodology For Analyzing The Macroeconomic Effects of Proposed Changes in Tax Law, December 12, 2024.

		Income	<u>Substitution</u>
Household			
Labor Supply Elasticities			
Low income primary		-0.1	0.2
Other primary		-0.1	0.1
Low income secondary		-0.3	0.8
Other secondary		-0.2	0.6
Wage-weighted population average		-0.1	0.2
Annual rate of time preference	0.015		
Intertemporal elasticity of substitution	0.438		
Production			
Business Capital share	0.412		

Table A-1. Key Parameters in the MEG Model

Household	
Annual rate of time preference	0.060
Aggregate leisure share of time endowment	0.305
Intratemporal elasticity of substitution (consumption and housing)	0.487
Production	
Private Capital share	0.350
Public Capital share	0.078

Table A-2. Key Parameters in the OLG Model

Household		
Annual rate of time preference	0.030	
Intertemporal elasticity of substitution	0.500	
Frisch elasticity of labor supply	0.400	
Fraction of non-savers	0.406	
Production		
Capital share	0.360	
Intermediate firm markup	0.111	

Table A-3. Key Parameters in the DSGE Model