DYNAMIC ESTIMATES OF THE MACROECONOMIC EFFECTS OF TAX RATE INCREASES AND OTHER TAX POLICY CHANGES

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EXECUTIVE SUMMARY

In this paper, we use the Diamond–Zodrow computable general equilibrium model of the U.S. economy to simulate the macroeconomic effects of a policy change that would alter the tax system enacted in 2017 under the Tax Cuts and Jobs Act. The policy analyzed would increase the corporate income tax rate to 28 percent, reinstate the corporate AMT, eliminate expensing of most depreciable assets, eliminate the 20 percent deduction for certain pass-through business income, increase the top individual income tax rate to 39.6 percent, and tax capital gains and dividend income at ordinary rates for taxpayers with incomes above $1 million and tax unrealized capital gains at death. In order to focus primarily on the effects of the tax increases considered in isolation, we assume all of the revenues from these tax increases are used to finance an increase in government transfers, a use of revenues that has relatively few distortionary feedback effects on the economy.

The simulation results indicate that although such a change in tax policy would raise significant amounts of revenue, this revenue increase would naturally have economic costs. For example, with implementation of these policy changes, investment in ordinary capital declines by 1.9 percent in the short run, by 1.3 percent ten years after enactment, and by 1.6 percent in the long run. Employment declines by 0.7 percent in the short run, by 0.1 percent ten years after enactment, and is unchanged in the long run. The net effects on GDP are declines of 0.5 percent in the short run, 0.4 percent ten years after enactment, and 0.6 percent in the long run. To capture orders of magnitude, the short run effects in this case, measured at 2023 levels (two years after assumed enactment in 2021), correspond to a decline in GDP of $117 billion, a decline in investment in ordinary capital of $80 billion, and, to a rough approximation, a reduction of 1.0 million jobs, accompanied by an increase in transfer payments of $77 billion. These effects

translate into a reduction of $662 in wage income per household coupled with an increase of $686 in transfers per household two years after enactment of the tax change.

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I. OVERVIEW

Recent months have seen numerous proposals for policy changes that would alter the tax system enacted in 2017 under the Tax Cuts and Jobs Act (TCJA). In this paper, we examine the macroeconomic effects of some typical elements of such proposals, including increases in individual and business rates, coupled with various other proposed tax changes. We do so within the context of the Diamond–Zodrow (DZ) dynamic, overlapping generations, computable general equilibrium (CGE) model of the U.S. economy, which is designed to examine both the short run and the long run macroeconomic effects of tax policy changes.

The paper proceeds as follows. In the following section, we describe the tax policy option that we analyze. Section III provides a brief description of our computable general equilibrium model, while our simulation results are reported in Section IV. The final section summarizes the results and offers some caveats.

II. PROPOSALS ANALYZED

We consider a tax policy change, denoted as Policy P1, which has the following components:

- the CIT rate is increased from its current level of 21 percent to 28 percent
- the corporate alternative minimum tax (AMT) is reinstated
- expensing (100 percent bonus depreciation) of most investments in depreciable assets is eliminated immediately rather than being phased out over 2023–2027 and is replaced with the modified accelerated cost recovery system (MACRS)
- the 20 percent deduction for certain pass-through business income is repealed immediately, rather than expiring after 2025
- the top individual tax rate is increased immediately from its current level of 37 percent to its pre-TCJA level of 39.6 percent, rather than expiring after 2025
- capital gains and dividends are taxed at the same rate as ordinary income for taxpayers with incomes above $1 million and unrealized capital gains are taxed at death
- the increase in tax revenues is used to finance a proportionate increase in all transfer payments other than Social Security benefits

Note that the policy assumes that all revenues are used to finance a proportionate increase in government transfer payments other than Social Security benefits. This assumption allows us to focus primarily on the effects of the tax increases considered in isolation, as using the revenues to finance an increase in government transfers has relatively few distortionary feedback effects on the economy—although the positive income effects of the transfers do cause recipients to work less (consume more leisure), which increases the simulated labor supply effects. Note that a commonly used alternative assumption is that the new tax revenues are used for the first 20 years to finance a reduction in the national debt and after that time period are used to finance a proportionate increase in government transfer payments other than Social Security. For example, that is the use of tax revenues typically assumed by the Joint Committee on Taxation (JCT) (see Diamond and Moomau (2003) for a general discussion) as well as in other recent studies that follow the JCT approach (e.g., Penn-Wharton Budget Model, 2019; Mermin et al., 2020). The "partial debt finance" assumption implies that national saving increases causing interest rates and the cost of capital to decline, which in turn implies that policy simulations involving revenue increases yield more favorable macroeconomic results as the reductions in the national debt free up funds for additional investment that offset some of the reductions in investment and the capital stock (and in labor supply) associated with tax increases when all revenues are used to finance increased government transfers.[1]

III. OVERVIEW OF THE DIAMOND–ZODROW MODEL

This section provides a short description of the model used in this analysis.[2] Key parameter values used in the simulations are provided in the appendix. Versions of the model have been used in analyses of tax reforms by the U.S. Department of the Treasury (President's Advisory Panel on Federal Tax Reform, 2005), the Joint Committee on Taxation (2005), and in numerous recent tax policy studies (Diamond and Zodrow, 2007, 2008, 2013, 2014, 2015, 2018, 2020, forthcoming; Diamond, Zodrow, Neubig, and Carroll, 2014; Diamond and Viard, 2008).

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[1] Another approach—not currently possible within our model but the subject of ongoing research—is to model explicitly the increases in government consumption and government investment expenditures financed with the tax increases, an issue that is also discussed by Diamond and Moomau (2003). See Penn-Wharton Budget Model (2020) for a recent example of an analysis that examines the effects of government investment in items such as infrastructure, R&D, health care, and education.

[2] For more details, see Zodrow and Diamond (2013) and Diamond and Zodrow (2015). The model combines various features from other broadly similar CGE models, including those constructed by Auerbach and Kotlikoff (1987), Goulder and Summers (1989), Goulder (1989), Keuschnigg (1990), and Fullerton and Rogers (1993).

The domestic component of the DZ model includes both corporate and non-corporate composite consumption goods and owner-occupied and rental housing. The corporate sector is subject to the corporate income tax and subdivided into domestic and multinational firms as described below, and the "non-corporate" sector—which includes S corporations as well as LLCs, LLPs, partnerships and sole-proprietorships—is taxed on a "pass-through" basis at the individual level. Firms combine labor and several different types of capital to produce their outputs at minimum after-tax costs. The time paths of investment are determined by profit-maximizing firm managers who take into account all business taxes as well as the costs of adjusting their capital stocks, correctly anticipating the macroeconomic changes that will occur after any change in the tax structure. Firms finance their investments with a mix of equity and debt, choosing an optimal debt-asset ratio that balances the costs and benefits of additional debt, including its tax advantages.

On the consumption side, household supplies of labor and saving for capital investment and demands for all housing and non-housing goods are modeled using an overlapping generations structure. A representative individual in each generation (1) spends a fixed amount of time working and in retirement, (2) makes consumption and labor supply choices to maximize lifetime welfare subject to a lifetime budget constraint that includes personal income and other taxes, and (3) makes a fixed "target" bequest.

The government purchases fixed amounts of the composite goods and makes transfer payments, which it finances with the corporate income tax, a progressive tax on labor income after deductions and exemptions, and constant individual-level average marginal tax rates applied to capital income in the form of interest receipts, dividends, and capital gains. The modeling of corporate income tax revenues includes explicit consideration of deductions for depreciation or immediate expensing for both new and old assets (which are treated separately), other production and investment incentives, and state and local income and property taxes. Tax policy in the rest of the world is assumed to remain constant, regardless of the changes enacted in the United States.

The DZ model also includes a simplified foreign or "rest-of-the-world" (RW) sector, with international trade and capital movements between the U.S. and RW. The model includes U.S. and foreign multinational enterprises (MNEs), both parents and subsidiaries, who determine the allocation of highly mobile firm-specific capital (*FSK*) that earns above-normal returns as well as the allocation of less mobile ordinary capital that earns normal returns.[3] *FSK* captures a wide variety of intangibles, including patents, copyrights, designs, or other proprietary technology, R&D spending, new software, unique databases, brand names and trademarks, and goodwill and reputation, which are coupled with unique managerial or organizational skills or knowledge of production processes and distribution networks to create a factor that is assumed to be fixed in total supply and grows at the exogenously specified growth rate, is unique to the firm, and allows it to permanently earn above-normal returns.[4] The model also allows for income shifting by MNEs in response to tax differentials across countries,[5] the use of intermediate goods that are

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[3] The assumption of differential international mobility of capital follows Becker and Fuest (2011); see also Zodrow (2010).

[4] The modeling of firm-specific capital generally follows Bettendorf, Devereux, van der Horst, Loretz, and de Mooij (2009), de Mooij and Devereux (2011), Auerbach and Devereux (2018), and McKeehan and Zodrow (2017). Numerous recent analyses have stressed the increasing importance of the combination of intellectual capital and organizational and managerial skill, including an OECD study by Demmou et al., (2019) as well as Hassett and Shapiro (2011), Peters and Taylor (2017), and Ewens et al. (2020). These studies suggest that such firm-specific capital may be 40 percent or more of total capital.

[5] For recent discussions of the controversial issue of the extent of income shifting by US multinationals, see Dharmapala (2014, 2018), Clausing (2020a, b), and Blouin and Robinson (2020).

traded between the affiliates of the MNEs,[6] and international trade in the goods produced by the U.S. and RW MNEs. To simplify the analysis, RW is modeled as consisting entirely of the MNE sector (both US-MNE subsidiaries and RW-MNE parents); we thus effectively assume that the remainder of RW is unaffected by the tax reforms analyzed.

We conclude this brief description of our model by noting that it includes several fundamental assumptions that are typical of such dynamic computable general equilibrium (CGE) models, including those used by the Joint Committee on Taxation (see Auerbach and Grinberg (2017) for a general discussion) and the Congressional Budget Office (Nelson and Phillips, 2019), as well as the models cited above. Specifically, all markets are assumed to be in equilibrium in all periods, and the economy must always begin and end in a steady-state equilibrium, with all of the key macroeconomic variables growing at an exogenous growth rate that equals the sum of the population and productivity growth rates. Note that this implies that tax changes do not affect the long-term growth rate in the economy.

Our model also assumes a full employment equilibrium in the labor market in each period. Thus, any simulated changes in hours worked necessarily reflect changes in labor supply and demand in response to tax-induced changes in prices and incomes—including any increases in government transfers, which, as noted above, reduce labor supply as individuals "consume" more leisure—in the context of a full-employment economy. Note that in the simulation results below, when we report for illustrative purposes a policy-induced decline in "jobs" we do so by converting the simulated decline in hours worked, holding the number of workers constant, into

[6] The inclusion of intermediate goods in the production functions of MNE parent firms and subsidiaries follows Desai, Foley, and Hines (2009).

the equivalent decline in the number of full-time equivalent (FTE) workers, holding hours worked per worker constant.

IV. SIMULATION RESULTS

The results of our simulations of the tax policy change described in Section II are provided below. These results show the percentage changes in the variables listed as a result of the implementation of the policy, relative to a steady state in which the current tax system is left unchanged, which is calculated to approximate the equilibrium under the "current law" assumption that the various phase-outs specified in TCJA occur as planned.

To repeat, Policy P1 combines a 28 percent CIT rate with reinstatement of the corporate AMT, elimination of expensing and the 20 percent deduction for certain pass-through business income, an increase in the top individual income tax rate to 39.6 percent, and the taxes capital gains and dividend income at ordinary rates for taxpayers with incomes above $1 million and taxes unrealized capital gains at death. The resulting revenues are used to finance a proportionate increase in all transfer payments other than Social Security benefits.

The macroeconomic effects of this policy are shown in Table 1. Because the various tax increases on capital income—the rate increase in both the short and long runs and the other three provisions in the short run—reduce the after-tax return to saving and investment and increase the cost of capital to firms, policy P1 reduces saving and investment and, over time, reduces the capital stock. Investment in ordinary capital declines initially (two years after enactment) by 1.9 percent, by 1.3 percent ten years after enactment, and by 1.6 percent in the long run; this effect is only modestly affected by imports of ordinary capital into the United States, which increase in the long run by 0.2 percent. Together these changes imply that the total stock of ordinary capital declines gradually to a level 0.6 percent lower ten years after enactment and 1.2 percent lower in the long run. The increase in the statutory corporate income tax rate results in a reallocation abroad of *FSK*, which declines initially by 2.7 percent, by 3.5 percent 10 years after enactment, and by 2.9 percent in the long run.

The decline in the stocks of ordinary capital and *FSK* gradually reduce the productivity of labor over time and thus real wages, which fall by 0.6 percent in the long run, while labor compensation falls by 0.6 percent initially, by 0.3 percent ten years after enactment, and by 0.6 percent in the long run. Employment falls initially by 0.7 percent, but the decline moderates over time to 0.1 percent 10 years after enactment and no effect in the long run. Recall that our model assumes full employment (accounting for all supply and demand factors in the model), so that these declines reflect a reduction in hours worked in response to the policy-induced changes in wages and incomes, including the increases in transfer payments, holding the number of employees constant. Suppose instead that labor hours worked per individual were held constant. In that case, focusing on employment effects over the ten-year budget window immediately following reform, the declines in hours worked would be equivalent to declines in employment of approximately just over 1.0 million FTE jobs two years and five years after enactment, and a decline of 0.1 million FTE jobs ten years after enactment. In terms of the duration of the reduction in employment over the first ten years after enactment, the average annual reduction in employment would be equivalent to a loss of roughly 0.6 million jobs, or 5.7 million total "job years" lost over the ten-year interval.[7]

[7] For example, the loss of a job upon enactment of the tax change that was reversed eight years after enactment would result in the loss of eight "job years."

The additional tax revenues, which reflect a static ten-year revenue gain of $1.7 trillion over 2021–2030,[8] finance larger transfers, which increase initially by 12.1 percent, by 6.3 percent ten years after enactment, and by 5.3 percent in the long run.[9]

The declines in the ordinary capital stock, *FSK,* and (to a much smaller extent) employment imply that GDP declines as well, by 0.5 percent initially, by 0.4 percent 10 years after enactment, and by 0.6 percent in the long run. Consumption also declines, but by less than GDP since the declines in investment are disproportionately large; consumption declines initially by 0.1 percent, by 0.2 percent ten years after enactment, and by 0.4 percent in the long run.[10]

Finally, we note that the relatively large declines in the U.S. stock of relatively mobile *FSK* cited above, which arise primarily due to the increase in the U.S. statutory corporate income tax rate, imply that the effects of the tax change are disproportionately large in the multinational sector that utilizes *FSK.* For example, in the multinational sector of the model, investment in ordinary capital declines by 3.2 percent ten years after enactment (rather than by 1.3 percent for the economy as a whole) and by 3.9 percent in the long run (rather than by 1.6 percent). Although the employment effects in the multinational sector are quite similar to those in the

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[8] Our static revenue estimates draw on the estimates provided by the Tax Policy Center (Mermin et al., 2020) and the American Enterprise Institute (Pomerleau, DeBacker, and Evans, 2020, and Pomerleau and Seiter, 2020).

[9] Interest rates decline initially and lower interest payments on the national debt allow a relatively large increase in transfer payments; this effect diminishes with time as interest rates return to near their initial levels.

[10] For purposes of comparison, we also simulated the same tax change under the assumption that revenues are used to finance a reduction in the deficit for 20 years before being used to finance a reduction in transfers (the partial debt finance approach used by JCT and others as discussed above). This alternative assumption regarding the use of revenues reduces the negative macroeconomic effects of the tax change, as debt reduction frees up funds for domestic investment. For example, in the long run, investment in ordinary capital and the stock of ordinary capital increase by 1.6 percent and 1.4 percent rather than declining by 1.6 percent and 1.2 percent, respectively, the real wage increases by 1.4 percent rather than falling by 0.6 percent, and GDP declines by 0.4 percent rather than by 0.6 percent.

overall economy, output in the multinational sector declines by 0.8 percent ten years after enactment (rather than by 0.4 percent in the economy as a whole), and by 1.1 percent in the long run (rather than by 0.6 percent).

Table 1. Macroeconomic Effects of Policy P1

(Percentage changes in aggregate variables, relative to steady state with no reform)

Variable % Change in Year:	**2***	**5****	**10*****	**20**	**50**	**LR**
GDP	-0.5	-0.8	-0.4	-0.5	-0.6	-0.6
Consumption	-0.1	-0.5	-0.2	-0.4	-0.4	-0.4
Investment in ordinary *K* in US	-1.9	-1.9	-1.3	-1.4	-1.5	-1.6
Imports of ordinary *K* into US	-0.4	-0.4	-0.4	-0.3	-0.1	0.2
Stock of ordinary *K* in US	-0.1	-0.4	-0.6	-0.8	-1.1	-1.2
Stock of *FSK* in US	-2.7	-3.8	-3.5	-3.3	-3.1	-2.9
Employment (hours worked)****	-0.7	-0.6	-0.1	-0.1	0.0	0.0
Labor compensation	-0.6	-0.6	-0.3	-0.4	-0.6	-0.6
Real wage	0.1	0.1	-0.3	-0.4	-0.5	-0.6
Government transfers (not incl. SS)	12.1	11.6	6.3	5.9	5.5	5.3

Policy P1 increases the CIT rate to 28 percent, reinstates the corporate AMT, eliminates expensing and the 20 percent pass-through deduction, and increases the top individual income tax rate to 39.6 percent. Revenues finance a proportionate increase in all transfer payments other than Social Security benefits.

*Expressed in terms of dollar values in 2023 (assuming enactment in 2021, with 4.1% steady state growth between 2021 and 2023), these changes would reflect a reduction of $117 billion in GDP and a reduction in $80 billion in investment in ordinary capital. Policy P1 results in a reduction of $662 in wage income per household, coupled with an increase of $686 in transfers per household.

**Expressed in terms of dollar values in 2026 (assuming enactment in 2021, with 10.5% steady state growth between 2021 and 2026), these changes would reflect a reduction of $190 billion in GDP and a reduction in $83 billion in investment in ordinary capital. Policy P1 results in a reduction of $662 in wage income per household, coupled with an increase of $767 in transfers per household.

***Expressed in terms of dollar values in 2031 (assuming enactment in 2021, with 22.0% steady state growth between 2021 and 2031), these changes would reflect a reduction of $119 billion in GDP and a reduction in $66 billion in investment in ordinary capital. Policy P1 results in a reduction of $371 in wage income per household, coupled with an increase of $351 in transfers per household.

****As discussed in the text, the model assumes full employment. However, if instead labor hours worked per individual were held constant, the declines in hours worked would be equivalent to a decline in employment of approximately 1.0 million FTE jobs in 2022, 1.0 million FTE jobs in 2026, and 0.1 million jobs in 2031. In terms of the duration of the reduction in employment over the first ten years after enactment, average annual jobs lost would be 0.6 million jobs, or 5.7 million total "job years" lost over the ten-year interval.

Note: The net effect of the policy is captured by the "equivalent variation (EV)," the amount that would have to be given to households to make them indifferent to the policy change. The EV varies from a loss of 2.2 percent to a gain of 0.2 percent of remaining lifetime resources for all generations alive at the time of enactment (with younger generations faring better) and equals a loss of 0.1 percent of lifetime resources in the long run.

V. CONCLUSION

In this paper, we use the Diamond–Zodrow computable general equilibrium model of the U.S. economy to simulate the macroeconomic effects of tax policy changes relative to the tax system enacted under the Tax Cuts and Jobs Act in 2017. The policy involves increases in the corporate tax rate to 28 percent, coupled with reinstatement of the corporate AMT, elimination of expensing of most depreciable assets and the 20 percent deduction for certain pass-through business income, and an increase in the top individual income tax rate to 39.6 percent. In order to focus primarily on the effects of the tax increases considered in isolation, we assume that the revenues are used to finance an increase in government transfers, as this use of revenues has relatively few distortionary feedback effects on the economy (although the positive income effects of the transfers do cause recipients to work less (consume more leisure), which increases the simulated labor supply effects of the three policies).

The simulation results indicate that although such tax policy changes would raise significant amounts of revenues, these revenue increases would naturally have economic costs, and these costs increase with the size of the corporate income tax rate increase. For example, when these policy changes are implemented in the model, investment in ordinary capital declines by 1.9 percent in the short run, by 1.3 percent ten years after enactment, and by 1.6 percent in the long run. Employment declines by 0.7 percent in the short run, by 0.1 percent ten years after enactment, and is unchanged in the long run. Because our model assumes full employment, these employment declines reflect a reduction in hours worked in response to the policy-induced changes in wages and incomes, including the increases in transfer payments, holding the number of employees constant. Suppose instead that labor hours worked per individual were held constant. In that case, focusing on employment effects over the ten-year budget window immediately following reform, the declines in hours worked would be equivalent to declines in employment of approximately just over 1.0 million FTE jobs two years and five years after enactment, and a decline of 0.1 million FTE jobs ten years after enactment. In terms of the duration of the reduction in employment over the first ten years after enactment, the average annual reduction in employment would be equivalent to a loss of roughly 0.6 million jobs, or 5.7 million total "job years" lost over the ten-year interval.

The net effects on GDP are declines of 0.5 percent in the short run, 0.3 percent ten years after enactment, and 0.4 percent in the long run. To capture orders of magnitude, the short run effects of the tax change, measured at 2023 levels (two years after assumed enactment in 2021), correspond to a decline in GDP of $107 billion, a decline in investment in ordinary capital of $70 billion, and, to a rough approximation, a reduction of 1.0 million jobs, accompanied by an increase in transfer payments of $65 billion. These effects translate into a reduction of $638 in wage income per household coupled with an increase of $585 in transfers per household two years after enactment of the tax change.

We conclude with some caveats. In our view, dynamic, overlapping generations computable general equilibrium models of the type used in this analysis are one of the best tools available to analyze the real economic effects of tax policy changes such as those analyzed in this study. In particular, such models provide a rich structure based on fundamental economic theory that captures many of the complex and interacting effects of changes in tax policy, including their dynamic and intergenerational effects, in a comprehensive general equilibrium framework. Nevertheless, it is clear that the estimated effects of the policies presented in this report reflect the results of particular simulations within the context of a specific model. The results of any study that attempts to model the effects of corporate and individual income tax changes in today's highly complex and internationally integrated economy are subject to uncertainty, and this report is no exception. In particular, such results always depend on the details of the policy proposed and how they are modeled, including how the revenues are used, the structural assumptions that characterize the model, and the specific model parameters that are utilized in the simulations.

APPENDIX

In this Appendix, we provide a listing of the parameter values used in our simulations; see Gunning, Diamond and Zodrow (2008) for a discussion of the choices of parameter values in CGE models.

Table A1. Parameter Values Used in the DZ Model

Symbol	Description	Value
Utility Function Parameters		
ρ	Rate of time preference	0.015
σ_U	Intertemporal elasticity of substitution (EOS)	0.50
σ_C	Intratemporal EOS	0.80
σ_H	EOS between composite good, housing	0.30
σ_N	EOS between corporate composite good and noncorporate good	2.00
σ_{NS}	EOS between subsidized and nonsubsidized noncorporate good	2.00
σ_M	EOS between M-sector and C-sector corporate goods	2.00
σ_I	EOS between domestic and foreign produced goods	5.00
σ_R	EOS between rental and owner-occupied housing	1.50
α_C	Utility weight on the composite consumption good	0.73
α_H	Utility weight on non-housing consumption good	0.48
α_{NS}	Utility weight on subsidized non-corporate consumption good	0.50
α_N	Utility weight on composite corporate good	0.62
α_M	Utility weight on M-sector corporate good	0.42
α_R	Utility weight on owner-occupied housing	0.76
α_{LE}	Leisure share parameter of time endowment	0.20

Production Function Parameters		
ε_C, ε_M	EOS for C-sector and M-sector corporate goods	1.00
ε_N	EOS for noncorporate good	1.00
ε_H, ε_R	EOS for owner and rental housing	1.00
γ_C	Capital shares for C-sector corporate goods	0.27
γ_N	Capital share for noncorporate good	0.30
γ_H, γ_R	Capital share for owner and rental housing	0.98
$\beta_X, \beta_N, \beta_H$	Capital stock adjustment cost parameters	5.0, 10
ζ	Dividend payout ratio in corporate sector	0.40
b_C, b_N, b_H, b_R	Debt-asset ratios	0.35,0.40
β_d	Cost of excessive debt parameter	0.30
γ_{KM}	Capital share parameter in M-sector composite *KEL* factor	0.27
γ_{MK}	*KEL* share parameter in M-sector production function	0.66
γ_{MI}	Intermediate good share in M-sector production function	0.05
	Other Parameters	
ε_K	Portfolio elasticity for ordinary capital	0.50
ε_{FSK}	Portfolio elasticity for firm-specific capital	3.0
f_{IS}	Share of profits shifted abroad as a fraction of corporate profits	0.30
n	Exogenous growth rate (population plus productivity)	2.0

DISCLAIMER

This study uses the Diamond–Zodrow model, a dynamic computable general equilibrium model copyrighted by Tax Policy Advisers, LLC, in which the authors have an ownership interest. The terms of this arrangement have been reviewed and approved by Rice University in accordance with its conflict-of-interest policies.

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